

**U.S. FISH AND WILDLIFE SERVICE
DEPARTMENT OF THE INTERIOR**

**Environmental Assessment for White-tailed Deer and Elk Hunting at
Seedskaadee National Wildlife Refuge, Wyoming**

Date: February 15, 2019

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 CFR 1500-1509) and Department of the Interior (43 CFR 46; 516 DM 8) and U.S. Fish and Wildlife Service (550 FW 3) regulations and policies. NEPA requires examination of the effects of proposed actions on the natural and human environment.

Proposed Action:

The U.S. Fish and Wildlife Service (Service) is proposing to open approximately 24,437 acres to white-tailed deer and elk hunting in designated areas of the Seedskaadee National Wildlife Refuge (Refuge) in Sweetwater County, Wyoming, in accordance with the Refuge's White-tailed Deer and Elk Hunt Plan and state regulations. Hunting seasons usually occur between September 1 and mid- February. Figure 1 shows the proposed open and closed areas for white-tailed deer and elk hunting.

This proposal provides a recreational experience to the public while maintaining a sustainable white-tailed deer and elk population. Refuge staff would coordinate with the Wyoming Game and Fish Department (WGFD) to initiate and manage a public hunting program for white-tailed deer and elk on the Refuge. The estimated cost to operate a white-tailed deer and elk hunt program is \$10,000 annually for labor and materials to update and print maps, maintain signs, coordinate with the WGFD, and conduct law enforcement patrols. Currently, sufficient resources are available to administer the expanded program to include these additional species.

The mission and goals of the National Wildlife Refuge System (NWRS), the purposes of an individual refuge, Service policy, and laws and international treaties guide national wildlife refuges. Relevant guidance includes the National Wildlife Refuge System Administration Act of 1966, as amended by the National Wildlife Refuge System Improvement Act of 1997, Refuge Recreation Act of 1962, and selected portions of the Code of Federal Regulations and Fish and Wildlife Service Manual. Additional applicable statutes, executive orders, and regulations are located in Appendix A.

The Refuge prepared a White-tailed Deer and Elk Hunt Plan (Appendix B), which is presented in this document as the Proposed Action. This proposal offers increased opportunities for public hunting and fulfills the Service's mandate under the National Wildlife Refuge System Improvement Act of 1997.

The primary objective of the white-tailed deer and elk hunting program on the Refuge is to increase the dispersal of white-tailed deer and elk onto adjacent lands where they would be available to more hunters, and to harvest a percentage of the population on the Refuge. Reducing the white-tailed deer and elk populations would improve habitat conditions by lessening the impacts of ungulate browsing on narrow leaf cottonwood and willow stands. The white-tailed deer and elk hunt program would also provide a new hunting opportunity for hunters.

State, Federal, and Refuge-Specific Regulations

White-tailed deer and elk hunting on Seedskaadee National Wildlife Refuge (NWR) shall be in accordance with state, federal, and refuge-specific regulations. All state licenses, tags, and permits would be required.

Refuge-specific regulations that would be in effect under the proposed action include:

- We prohibit all hunting between Highway 28 and 0.8 miles (1.28 km) north of refuge headquarters on the west side of the Green River. We post the boundary for this area with refuge signs stating “No Hunting Zone”.
- We only allow hunters to retrieve downed game from closed areas with consent from a refuge employee or State game warden.
- You must unload and either case or dismantle all firearms (see §27.42(b) of this chapter) when transporting them in a vehicle or boat under power.
- The Refuge is open to the public 1/2 hour before legal sunrise to 1/2 hour after legal sunset.

The above regulations for Seedskaadee NWR are listed under Big Game Hunting in 50CFR, and will be published in the Federal Register as part of the 2019-2020 Refuge-Specific Hunting and Sport Fishing Regulations.

Mitigation Measures to Avoid Conflicts

- Certain areas are closed to hunting to protect refuge facilities, reduce user and or management conflicts, and to provide resting and feeding habitat for migratory birds. Areas closed to hunting are clearly posted with signs.

A Compatibility Determination (Appendix C) and the U.S. Fish and Wildlife Service Intra-Service ESA Section 7 Evaluation (Appendix D) were prepared for the White-tailed Deer and Elk Hunt Plan. The refuge manager, appropriate regional office authorities and the Mountain Prairie Regional Director of the Service have reviewed these documents. The Service has determined that the White-tailed Deer and Elk Hunt Plan is compatible with the purposes of Seedskaadee NWR and the mission of the NWRS.

The white-tailed deer and elk hunt program complies with the requirements and provisions of each of the aforementioned applicable authorities. Hunting on the Refuge provides recreational hunting opportunities for present and future generations of Americans, while providing a management tool to maintain population levels and sustain quality habitat for endangered species and other native wildlife. This activity does not compromise the Refuge’s ability to fulfill its

purpose for establishment or primary objectives - providing a resting and feeding area for migratory waterfowl and habitat for other native species.

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 2019-2020 Refuge-Specific Hunting and Sport Fishing Regulations. The Service cannot open a refuge to hunting until a final rule has been published in the Federal Register formally opening the Refuge to hunting ([link to FR notice for rule](#)).

Background

Seedskadee NWR is located in southwestern Wyoming, 37 miles northwest of the City of Green River. The Refuge is managed by the Service as a component of the NWRS. The entire refuge is within Sweetwater County, Wyoming and within the Green River Basin. Geographically, the Refuge is long and narrow, and bisected throughout its length by the Green River. The north boundary of the Refuge is seven miles downstream from Fontenelle Dam. From here, the Refuge extends 37 miles downstream and ranges in width from one to two miles.

Seedskadee NWR was established in 1965 pursuant to:

- Fish and Wildlife Coordination Act (16 U.S.C. 661-667e)
- Colorado River Storage Project Act (43 U.S.C. 620g)
- Migratory Bird Conservation Act (16 U.S.C. 715d)

Refuge Purpose(s):

... for use as an inviolate sanctuary, or for any other management purpose, for migratory birds. 16 U.S.C. § 715d (Migratory Bird Conservation Act)”

... shall be administered by him [Secretary of the Interior] directly or in accordance with cooperative agreements ... and in accordance with such rules and regulations for the conservation, maintenance, and management of wildlife, resources thereof, and its habitat thereon, ..." 16 U.S.C. § 664 (Fish and Wildlife Coordination Act) "

... to acquire lands necessary for the construction, operation, and maintenance ..." of "... (1) public recreational facilities on lands withdrawn or acquired ..." for the Colorado River project in order to "... conserve the scenery, the natural, historic, and archeological objects, and the wildlife on said lands, and to provide for public use and enjoyment of the same and of the water areas created by these projects ... and (2) facilities to mitigate losses of and improve conditions for, the propagation of fish and wildlife." The Secretary may "... dispose of ..." the facilities "... to Federal ... agencies ... upon such terms and conditions as will best promote their development and operation in the public interest." 43 U.S.C. § 620g (Colorado River Storage Act)

The mission of the NWRS, as outlined by the National Wildlife Refuge System Administration Act (NWRSA), as amended by the National Wildlife Refuge System Improvement Act (16 U.S.C. 668dd et seq.), is to:

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

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

- Provide for the conservation of fish, wildlife, and plants, and their habitats within the NWRS;
- Ensure that the biological integrity, diversity, and environmental health of the NWRS are maintained for the benefit of present and future generations of Americans;
- Ensure that the mission of the NWRS described at 16 U.S.C. 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 NWRS are located;
- Assist in the maintenance of adequate water quantity and water quality to fulfill the mission of the NWRS and the purposes of each refuge;
- Recognize compatible wildlife-dependent recreational uses as the priority general public uses of the NWRS through which the American public can develop an appreciation for fish and wildlife;
- Ensure that opportunities are provided within the NWRS 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 NWRS.

Purpose and Need for the Proposed Action:

The purpose of this proposed action is to provide compatible wildlife-dependent recreational opportunities on Seedskadee NWR and improve habitat conditions. The need of the proposed action is to meet the Service’s priorities and mandates as outlined by the NWRSA to “recognize compatible wildlife-dependent recreational uses as the priority general uses of the NWRS” and “ensure that opportunities are provided within the NWRS for compatible wildlife-dependent recreational uses.” 16 U.S.C. 668dd(a)(4))

Additional needs of the proposed action include:

- To provide quality recreational hunting opportunities consistent with refuge goals and objectives.

- To manage the elk and white-tailed deer population levels in order to achieve the Comprehensive Conservation Plan (USFWS, 2002) habitat restoration goal to, ‘Protect and restore riparian habitats along the Green River to provide for the annual needs of migratory birds and native wildlife utilizing the Green River Basin.’
- To reduce ungulate overuse of forage and habitat on the Refuge and on adjacent lands.

As proposed, the hunting of white-tailed deer and elk on the Refuge, including cumulative effects of neighboring hunts on surrounding public lands, would not conflict with the stated objectives of the Refuge.

Alternatives Considered:

The Service considered two alternatives: Alternative A, (No Action) and Alternative B (Proposed Action). There are no unresolved conflicts about the proposed action with respect to the alternative uses of available resources, because, based upon input from interested parties, there is agreement that the proposed action is sufficient (43 CFR 46.310).

Alternative A – Continue Implementing CCP completed in 2002 [No Action Alternative]

Currently, the refuge is open to hunting of mule deer, pronghorn antelope, sage grouse, cottontail rabbit, ducks, Canada geese, red fox, raccoon, white-tailed jackrabbit, coots, mourning doves, sora/Virginia rails, and snipe. A special hunt for moose occurs every 2 to 5 years to reduce populations and avoid habitat damage due to over browsing.

Certain areas are closed to hunting to protect Refuge facilities and to provide resting and feeding habitat for migratory birds. Areas closed to hunting are clearly posted with signs. A voluntary avoidance program was instituted in 1997 to reduce hunter disturbance of wintering trumpeter swans.

Alternative A meets most of the purposes and needs of the 2002 CCP’s proposed action. However, Alternative A does not meet the main purpose of the proposed action: expand large ungulate hunting opportunities on the refuge.

Alternative B – Expand Hunting Opportunities to Include Elk and White-Tailed Deer [Preferred Alternative]

Under Alternative B, the Refuge would expand the number of upland species that may be hunted within the Refuge boundary to include elk and white-tailed deer. Hunting of elk and white-tailed deer would be allowed in the Refuge in compliance with State and Federal hunting regulations.

Alternative B meets the purposes and needs of the CCP’s proposed action, as well as the purpose and need of this EA’s proposed action, which is to expand hunting opportunities on the Refuge.

Affected Environment:

Seedskaadee NWR currently consists of 25,985 acres in Sweetwater County, Wyoming. Habitat on the Refuge is classified as high desert plain and can be separated into four broad types: riverine, wetlands (marsh and wet meadow), riparian (shrub and forested), and upland (sagebrush

and mixed low stature shrublands). The proposed action is located in all refuge habitat types (Figure 1).

Tables 1-6 provides additional, brief descriptions of each resource affected by the proposed action.

For more information regarding the affected environment, please see *Section III. Refuge and Resource Descriptions* of the Refuge’s Comprehensive Conservation Plan, which can be found here: <https://www.fws.gov/mountain-prairie/refuges/sdk.php>.

Environmental Consequences of the Actions:

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

Tables 1-5 provide:

1. A brief description of the affected resources in the proposed action area;
2. Impacts of the alternatives on those resources, including direct and indirect effects.

Table 6 provides a brief description of the cumulative impacts of the alternatives.

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.

For more information on the environmental consequences of the proposed action, see the Draft Comprehensive Conservation Plan and Environmental Assessment (USFWS, 2001) which can be found here: [This hyperlink leads to the Seedskadee NWR comprehensive conservation plan](#)

TABLE 1. AFFECTED NATURAL RESOURCES AND ANTICIPATED IMPACTS OF THE ALTERNATIVES

NATURAL RESOURCES		
AFFECTED RESOURCE	ANTICIPATED DIRECT AND INDIRECT IMPACTS	
	ALTERNATIVE A	ALTERNATIVE B

NATURAL RESOURCES		
AFFECTED RESOURCE	ANTICIPATED DIRECT AND INDIRECT IMPACTS	
<p>White-tailed Deer Although white-tailed deer are not as common as mule deer on the Refuge, their numbers are increasing and hunting opportunities will be available. Current herd size ranges from 50 to 75 animals.</p> <p>The increase in white-tailed deer numbers is a concern for the Refuge from a habitat quality standpoint and maintaining a desired balance between mule and white-tailed deer numbers.</p> <p>Seedsdakee NWR falls within WGFD Hunt Area 131 for deer. The WGFD reports 43 white-tailed deer were harvested in Hunt Area 131 in 2017.</p>	<p>Studies have shown that white-tailed deer may out-compete or dominate mule deer in river bottom habitats (Garton 2001). White-tailed deer have essentially replaced mule deer on some refuges such as Lacreek NWR in South Dakota (Koerner 2012). Mule deer are the predominant native deer species and hunting mule deer while not allowing hunting on the newly establishing white-tailed deer population may add an additional advantage.</p> <p>Allowing hunting of white-tailed deer may reduce the possibility of mule deer being replaced by or out-competed by white-tailed deer.</p>	<p>The Refuge anticipates that opening the Refuge to white-tailed deer hunting would result in the take of 5 white-tailed deer annually.</p> <p>This action would reduce the number and concentration of white-tailed deer found on the Refuge, would improve habitat conditions, reduce the likelihood of disease transmission and of mule deer being out-competed, and reduce the occurrence of deer/vehicle collisions.</p> <p>Monitoring of the population, coordination with the WGFD, hunter participation, and WGFD established bag limits, would ensure the population would not be adversely affected by managed hunting. If populations, habitat, or hunter success rates adversely impact refuge resources; modifications to the hunt program would be addressed.</p>
<p>Elk In the last several years elk have become an abundant big game species on the Refuge, with wintering elk numbers increasing in recent years. Currently herd size ranges from 75 to 100 animals.</p> <p>The wildlife-friendly interior fencing used for grazing management or perimeter boundary fencing does not restrict movement of the elk population across refuge boundaries.</p> <p>Seedsdakee NWR falls in the junction of three Hunt Areas for elk; Areas 98, 100, 102. These Hunt Areas are split at Highway 28 and Highway 372. The WGFD reports the following elk harvest for 2017: Hunt Area 98 - 240 elk</p>	<p>As the wintering elk population on the Refuge continues to increase, or if elk change their migratory patterns and begin to calve or summer along the Green River, the carrying capacity would rapidly be exceeded and significant damage to migratory bird habitat may result. Eventually the habitat would not be able to support a healthy population, exceeding carrying capacity. Elk foraging on adjacent private lands used for grazing and agriculture and for other wildlife would also increase to socially unacceptable levels.</p>	<p>The proposed action would allow compatible wildlife dependent recreation through hunting while reducing the number and concentration of elk wintering on the Refuge. This action would improve habitat conditions, reduce depredation of hay and crops on adjacent private lands, reduce the likelihood of disease transmission, and reduce the occurrence of elk/vehicle collisions.</p> <p>Refuge staff anticipate that opening the Refuge to elk hunting would result in the take of between 5-10 elk the first year, and 1-5 elk harvested annually thereafter due to dispersal of animals off the Refuge.</p>

NATURAL RESOURCES		
AFFECTED RESOURCE	ANTICIPATED DIRECT AND INDIRECT IMPACTS	
<p>harvested. Hunt Area 100 - 467 elk harvested. Hunt Area 102 - 272 elk harvested.</p>		<p>The reduction in elk numbers that inhabit winter range on the Refuge would reduce the browse impact on establishment and long-term health of willow stands, helping to achieve habitat objectives.</p> <p>The growing elk population is adequate to provide hunting opportunities while maintaining elk on the Refuge for other priority public uses such as wildlife observation and photography. These conditions, coupled with continued monitoring of the population, coordination with the WGFD, hunter participation, and WGFD established bag limits, would ensure the population would not be adversely affected by managed hunting. If populations, habitat, or hunter success rates adversely impact refuge resources; modifications to the hunt program would be addressed.</p>
<p>Other Wildlife and Aquatic Species</p> <p>Southwest Wyoming, in which the Refuge is located, has a number of regionally important migration corridors and crucial winter range for mule deer and pronghorn. (Sawyer et al. 2005). The Green and the Big Sandy rivers that flow through Seedskadee NWR form natural migration corridors for wildlife from the mountains through the sage desert. Breeding birds leaving the Wind River Mountains follow the Green and Colorado rivers south towards their wintering areas. Over 50 Neotropical migrant species rely on the north-south riparian forest corridors of the Colorado and Green rivers for feeding, resting or breeding.</p>	<p>Hunting seasons usually occur between September 1 and mid-February. All hunting on the Refuge occurs after the waterfowl production season. The active breeding season for most birds (with the exception of winter breeding raptors) is within April-July. Hunting does not occur within this period therefore no conflict occurs. Normally, refuge wetlands ice over by mid-November. The Green River remains ice free for about 20 miles below Fontenelle Dam due to the influence of the dam. Trumpeter swans, common goldeneyes, and a number of other waterfowl species utilize the open water portions of the River. Below Highway 28, where the majority of the elk reside, the Green River typically freezes over by late November.</p>	<p>Same as Alternative A, plus:</p> <p>There would be some disturbance to other wildlife species resulting from hunting of elk. However, it would not rise to the level of materially detracting from or interfering with refuge purposes and the NWRS mission, and would not be considered significant for this EA.</p> <p>Increased hunting may result in additional short-term disturbance to wildlife over a larger area, since additional species would be open to hunting. This includes temporary displacement of waterfowl, and other resident wildlife from foot traffic moving through the area.</p> <p>Additional disturbance to trumpeter swans by elk or white-</p>

NATURAL RESOURCES		
AFFECTED RESOURCE	ANTICIPATED DIRECT AND INDIRECT IMPACTS	
<p>Trumpeter swans were reintroduced to the Green River drainage through the trumpeter swan range expansion program. A total of 70 cygnets and adults have been released on Seedskaadee NWR from various capture sites. Trumpeters use the Refuge for migration, breeding and as wintering habitat.</p> <p>During winter, the open river water that exists between Fontenelle Dam and Highway 28 provides good foraging and loafing habitat when all other wetland areas are frozen. The upper portion of the Refuge currently provides one of the only reliable wintering sites for trumpeter swans outside of the Yellowstone National Park area. Wintering trumpeter swan numbers have steadily increased since the initial re-introductions.</p>	<p>A voluntary avoidance program was initiated in 1997 to reduce visitor disturbance to trumpeter swans. Hunters, along with all other visitors are asked to voluntarily limit disturbance to trumpeter swans by staying 400 yards or more away. The Refuge's website, social media posts, and signage are used to educate the visiting public.</p> <p>Winter is a critical time for swans that rely exclusively on food resources located in the open water (non-frozen) sections of the Green River to meet their energy demands. The River also provides a critical resting (loafing) area for wintering waterfowl and raptors. Fewer disturbances help swans, waterfowl, and raptors to reduce their overall energy demands.</p>	<p>tailed deer hunters is expected to be minimal.</p> <p>The proposed hunting would cause few biological conflicts with other wildlife species. Some disturbance of other animals is unavoidable when people are on the Refuge and when they are using firearms. However, most of the current and potential refuge lands were, or are, open for private or public hunting, and are open to the public for hiking, bird watching and similar activities now. Public hunting on refuge lands would not change the situation very much unless hunting pressure increases markedly. If that happens, the Refuge would take measures--such as having a permit or lottery system or allowing hunting only on certain days of the week--to reduce the number of hunters.</p>
<p>Threatened and Endangered Species</p> <p>Yellow-billed cuckoo (distinct population segment) is a candidate species that migrates through and breeds in willow and cottonwood forests along rivers and streams on the Refuge in small numbers. Populations are in decline primarily as a result of destruction of their streamside habitat. It has been well over a decade since a yellow billed cuckoo has been documented on the Refuge.</p> <p>Four endangered Colorado River Fish species (bonytail, Colorado pike minnow, humpback chub, and razorback sucker) may occur, and have critical habitat designated in Sweetwater County. The refuge lies directly upstream from known stream habitats inhabited by these listed species. However, there are no known records of these species</p>	<p>Yellow-billed Cuckoo: Yellow-billed cuckoos visit the Refuge in May to early August and do not overlap with big game hunting seasons.</p> <p>Colorado River Fish Species (bonytail, Colorado pike minnow, humpback chub, and razorback sucker): The refuge lies directly upstream from known stream habitats inhabited by these listed species. However, there are no known records of these species ever occurring at the site of the Refuge. Wyoming Game and Fish Department fisheries personnel have done some electroshocking and have never detected any of these species. Prior to the construction of the Fontenelle Dam, they may have occurred, as far north as Green River, but this is unknown. Habitat and hydrologic conditions needed by these species no longer occur at the present site</p>	<p>Same as Alternative A, plus:</p> <p>Should the cuckoo be found within the Refuge boundary, it is expected that the White-tailed Deer and Elk Hunt Plan would have no effect on habitat the species is found in.</p> <p>Refuge staff will make every effort to maximize protection of endangered species and other non-target wildlife. High visibility law enforcement activities, as well as covert operations, would be conducted to dissuade hunters from affecting wildlife other than the target species. Special Refuge Regulations would be in effect to minimize disturbance and to protect flora and fauna in the area.</p>

NATURAL RESOURCES		
AFFECTED RESOURCE	ANTICIPATED DIRECT AND INDIRECT IMPACTS	
<p>ever occurring at the site of the Refuge.</p> <p>Ute ladies' tresses (threatened) could occur in the area but have not been found on the Refuge or on nearby lands to date.</p>	<p>of the Refuge. Should these species occasionally use the Green River within the Refuge boundary, it is expected that existing hunts would have no effect on habitats frequented by these fish.</p> <p>Ute ladies-tresses orchid: While the Refuge lies in between areas known to have populations of this listed species (Colorado and Montana), there are no known populations of this species on the Refuge. An orchid survey, within suitable orchid habitat, performed during the blooming period of this species in the Refuge (2000) failed to locate this plant within the Refuge, as have ongoing informal surveys by refuge staff. Should the orchid be found within the Refuge boundary, it is expected that ongoing hunts would have no effect on habitat the species is found in.</p>	
<p>Riverine-Riparian</p> <p>Riverine habitats encompass those sites occupied by the active river channel that are directly influenced by the seasonal hydrology of the Green River. Riverine habitats include two components denoting the presence or absence of flowing water. Permanent water sites (1,254 acres) encompass only the active river channel and feature flowing water. The remainder of the habitat (140 acres) is gravel bars, sandbars, mud flats, and other similar sites that occur within the active river channel are not submerged, and which do not support permanent vegetation.</p> <p>The river provides habitat for waterfowl, raptors, other birds such as gulls and shorebirds, and aquatic species including fish. Due to the influence of Fontenelle Dam, portions of the Green River remain ice-free, providing important</p>	<p>Current browse monitoring conducted on the Refuge indicates that browsing pressure on riparian habitats within the Refuge are at unsustainable levels.</p> <p>If the elk and white-tailed deer populations on the Refuge continue to increase and/or segments of the elk population change their migratory habits and establish year-round residency, eventually the habitat would not be able to support a healthy population, exceeding carrying capacity.</p>	<p>Same as Alternative A, plus:</p> <p>A reduction in elk and white-tailed deer numbers that inhabit the Refuge would reduce their impact on establishment and long-term health of cottonwood and willow stands, helping to achieve CCP habitat objectives.</p>

NATURAL RESOURCES		
AFFECTED RESOURCE	ANTICIPATED DIRECT AND INDIRECT IMPACTS	
wintering habitat for trumpeter swans, bald eagles, and waterfowl.		

TABLE 2. AFFECTED VISITOR USE AND EXPERIENCE AND ANTICIPATED IMPACTS OF THE ALTERNATIVES

VISITOR USE AND EXPERIENCE		
AFFECTED RESOURCE	ANTICIPATED DIRECT AND INDIRECT IMPACTS	
	ALTERNATIVE A	ALTERNATIVE B
<p>Compatible Wildlife-Dependent Recreation Seedskaadee NWR offers visitors a wide variety of self-guided and dispersed recreation opportunities. Hunting, fishing, wildlife observation and photography, and environmental education and interpretation are the six priority general public uses of the NWRs. The refuge has a general brochure/leaflet that contains a refuge map, describes facilities, and states general refuge regulations. Brochures are available at the Refuge headquarters.</p> <p>There are an estimated 3,000 hunter visits on refuge complex lands, while annual visitation may average 16,000 or more visits.</p> <p>An estimated 50 to 70 percent of the Refuge's visitors are from southwestern Wyoming. The remaining out-of-state visitors are comprised of three primary groups: those who are visiting wildlife refuges in the west; those who are passing by the Refuge on their way to Yellowstone or Grand Teton National Parks; and anglers/hunters from Utah and Colorado.</p> <p>Visitor estimates indicate that wildlife observation is the most popular public use on the Refuge. Most wildlife observation activity occurs along the</p>	<p>Minimal conflicts exist between sport fishermen, large ungulate hunters, and upland/small game hunters. Overlap of hunting area usage between migratory bird hunters and big game hunters sometimes occurs, but is minimal due to the dissimilar nature of these activities and the areas of the Refuge where these activities may be expected to occur.</p> <p>Seedskaadee NWR area has been a popular hunting area for many years prior to establishment of the Refuge. The refuge hunting program is designed to provide for the use of refuge lands within a framework designed to protect wildlife populations and provide for public safety. The continuance of these traditional uses has been widely supported by the public both before and since the establishment of the Refuge. It is expected that this support would continue.</p>	<p>Same as Alternative A, plus:</p> <p>The demand for non-consumptive wildlife-oriented use on Seedskaadee NWR continues to grow. Conflicts between hunters and non-consumptive users may occur as future uses are allowed. Providing non-consumptive users access to wildlife viewing area, notifications of when users are entering a hunting area, and even closing a hunting area to non-consumptive users if appropriate would reduce conflicts. Restrictions on hunting methods and restrictions on hunting near designated public use facilities and trails should aid in reducing potential conflicts between hunters and non-consumptive users. Should serious conflicts arise, considerations would be given to changes in time and space scheduling and/or zoning. Decisions will be based on minimizing impacts to various user groups, and best management practices for wildlife.</p>

VISITOR USE AND EXPERIENCE		
AFFECTED RESOURCE	ANTICIPATED DIRECT AND INDIRECT IMPACTS	
	ALTERNATIVE A	ALTERNATIVE B
<p>wildlife auto tour route and river corridor. The auto tour is on the west side of the Green River and passes by the Hawley wetland unit, refuge headquarters, and Hamp wetland unit. Much of the optimum wildlife watching opportunities occur in the River bottom, which is easily viewed from the auto tour route and many other open designated roads. Foot travel is permitted throughout the Refuge and affords exceptional opportunities for individuals wanting to hike and explore off-road areas.</p> <p>Hunting seasons usually occur between September 1 and mid- February. Hunting is permitted for select game species in accordance with State regulations. A special hunt for moose occurs every 2 to 5 years to reduce populations and avoid habitat damage due to over browsing. Certain areas are closed to hunting to protect refuge facilities and to provide resting and feeding habitat for migratory birds. Areas closed to hunting are clearly posted with signs.</p>		

TABLE 3. AFFECTED CULTURAL RESOURCES AND ANTICIPATED IMPACTS OF THE ALTERNATIVES

CULTURAL RESOURCES		
AFFECTED RESOURCE	ANTICIPATED DIRECT AND INDIRECT IMPACTS	
	ALTERNATIVE A	ALTERNATIVE B
<p>The western Wyoming Basin and the vicinity of Seedskaadee NWR has a sequence of uninterrupted human use, dating to at least the period of the Folsom cultural complex (~10,400 to 10,800 years before present (B.P.)), and perhaps even earlier. At least one surface find attributed to the Clovis cultural</p>	<p>Because of the temporary and superficial use of refuge habitats during hunting activities, and because there would be is no ground disturbance or changes to access, infrastructure, or other existing environmental conditions, there are no direct impacts to</p>	<p>Same as Alternative A, plus:</p> <p>Any future activities undertaken in association with or as a result of implementation of the proposed action (such as, for example, installation of fencing or posting, and development of parking areas) would be subject to further review</p>

CULTURAL RESOURCES		
AFFECTED RESOURCE	ANTICIPATED DIRECT AND INDIRECT IMPACTS	
	ALTERNATIVE A	ALTERNATIVE B
<p>complex (~10,600 to 11,900 B.P.) has been documented in the region (Frison 1978; Miller and Kornfeld 1996; Service 2002). Numerous precontact archaeological resources (including campsites, hearths and fire-cracked rock concentrations, lithic scatters, isolates, etc.) have been documented on the Refuge.</p> <p>Within the past 150 years, the fur trade and pioneer migrations west brought Europeans through the region, resulting in the eventual establishment of trading centers, private land ownership, and the towns and population centers we are familiar with today. Congress has designated the Oregon and Mormon trails, which cross Seedskadee NWR, as National Historic Trails. Ruts from these trails are still visible in places on the Refuge. The Pony Express Trail also crosses Seedskadee NWR. The Lombard Ferry, named after William Lombard (who operated ferries at the site in 1889), was probably the main crossing of the Green River used by Oregon Trail emigrants (Service 2002). The remains of numerous homesteads and other historic resources (including sheep camps, corrals, bridges, debris and trash scatters, isolates, etc.) are also located on the Refuge and along the Green River.</p> <p>At least 109 sites (including both precontact and historic resources) have been formally documented on the Refuge. At least 14 of these sites have been recommended or determined eligible for the NRHP, while at least 18 sites remain unevaluated, undetermined, or unresolved with regard to National Register eligibility.</p>	<p>cultural resources from visitors engaged in hunting activities.</p>	<p>and consideration on an individual basis under Section 106 of the National Historic Preservation Act.</p>

CULTURAL RESOURCES		
AFFECTED RESOURCE	ANTICIPATED DIRECT AND INDIRECT IMPACTS	
	ALTERNATIVE A	ALTERNATIVE B
Section 106 compliance was completed in association with the proposed action presented in this document.		

TABLE 4. AFFECTED REFUGE MANAGEMENT AND OPERATIONS AND ANTICIPATED IMPACTS OF THE ALTERNATIVES

REFUGE MANAGEMENT & OPERATIONS		
AFFECTED RESOURCE	ANTICIPATED DIRECT AND INDIRECT IMPACTS	
	ALTERNATIVE A	ALTERNATIVE B
<p>Facilities and Infrastructure The current refuge road system consists of 77 miles of designated roads within the Refuge boundary. Twenty miles are classified as administrative roads and 57 miles are classified as open public roads. There are many two-tracks, trails, and roads created prior to the Refuge's establishment that are not official refuge roads.</p> <p>The refuge also has the following recreational facilities to orient visitors and provide for public use: 4 primitive boat launches; 24 walk-over and walkthrough structures along the Refuge's perimeter fence; nine-mile auto tour road; one wetland interpretive overlook; the Lombard Ferry Historic Site (interpretive); 14 information sites; and an orientation kiosk at refuge headquarters. Accessible rest rooms are available at the Refuge headquarters.</p>	<p>The refuge is currently open to big game hunting in an established hunt area. Parking areas, information kiosks, and signs are located on the Refuge to facilitate existing hunting program.</p> <p>Fall maintenance activities that occur during hunting seasons may include prescribed burns, maintenance of fences, gates, signs, water control structures, and roads. These activities are managed to not interfere with hunting opportunities while allowing needed work to be accomplished.</p> <p>Some research activities may extend into the fall and would be separated from hunting areas when possible. Waterfowl surveys, water level monitoring, and other habitat surveys may occur during hunting seasons. Safety briefings for staff and researchers working in hunting areas would make them aware of hunting times and locations. All non-law enforcement operation persons working in areas open to hunting season activities must</p>	<p>Same as Alternative A, plus: No new facilities are expected to be required as a result of the additional hunting opportunities for white-tailed deer and elk.</p>

REFUGE MANAGEMENT & OPERATIONS		
AFFECTED RESOURCE	ANTICIPATED DIRECT AND INDIRECT IMPACTS	
	ALTERNATIVE A	ALTERNATIVE B
	<p>wear approved hunter safety vests and hats.</p> <p>Haying and grazing practices do occur on the Refuge and in the hunting area for management purposes. Permittees would be made aware of the conflicts that may occur during the hunting season.</p>	
<p>Administration Refuge staff would prepare the annual refuge hunting regulations brochure, make changes to the White-tailed Deer and Elk Hunt Plan and regulations as needed, edit the hunting leaflet annually, post and replace appropriate signage, respond to public inquiries about the hunt program, and conduct hunter use surveys.</p> <p>Currently there is a refuge complex Federal Wildlife Officer stationed at Seedskadee NWR. Additionally, the local State Conservation Officer and Sweetwater County Sheriff's Office provide additional assistance when requested.</p> <p>In addition to staff expenses, the Refuge would incur costs for signs, vehicle maintenance, road repair and maintenance, leaflet printing, and miscellaneous supplies.</p>	<p>At the present level of hunting use there are adequate refuge resources to implement the hunting program. Law enforcement is the primary tool necessary to ensure proper and safe administration of this use.</p> <p>Funding required for administering and managing the hunt totals \$10,000 in FY 19 dollars.</p>	<p>Same as Alternative A, plus:</p> <p>Existing refuge staff would administer the hunting program. The refuge manager would set station priorities to assure that required support staff is adequate. As this hunt program evolves over the years, refuge-specific regulations, systems of control to limit number of hunters, and fee costs may occur or change at the Refuge manager's discretion.</p> <p>High visibility law enforcement activities, as well as covert operations, would be conducted to dissuade hunters from affecting wildlife other than the target species. Special Refuge Regulations will be in effect to minimize disturbance and to protect flora and fauna in the area.</p>

TABLE 5. AFFECTED SOCIOECONOMICS AND ANTICIPATED IMPACTS OF THE ALTERNATIVES

SOCIOECONOMICS		
AFFECTED ENVIRONMENT	ANTICIPATED DIRECT AND INDIRECT IMPACTS	
	ALTERNATIVE A	ALTERNATIVE B
<p>Local and Regional Economies In 1950, the populations of the cities closest to Seedskadee NWR</p>		

SOCIOECONOMICS		
AFFECTED ENVIRONMENT	ANTICIPATED DIRECT AND INDIRECT IMPACTS	
	ALTERNATIVE A	ALTERNATIVE B
<p>were 10,857 (Rock Springs), 3,187 (Green River), and 1,667 (Kemmerer). In 2017, the population estimates for these cities were 23,350 (Rock Springs), 12,070 (Green River), and 2,771 (Kemmerer). Between 2010 and 2017 the population of Rock Springs grew by 1.4%, while the population of Green River decreased by -3.6%.</p> <p>In 2010, Wyoming's population was 563,626. Between 2010 and 2017, the state population grew at a rate of 2.5% to its current population of 577,737. The population is projected by the U.S. Bureau of Economic Analysis to grow slowly over the next 10-20 years.</p> <p>The region's economy is a product of history and environment. Principal sources of employment and income are mineral extraction and processing industries, tourism, service industries, government employment, and agricultural—primarily ranching, and transportation. The population density of Wyoming is low at 4.9 persons per square mile. People live in isolated ranches or relatively smaller cities and towns and are accustomed to traveling long distances for work, recreation, and shopping.</p>	<p>The local economy benefits from hunters and other outdoor sports enthusiasts that come to the area to engage in outdoor recreational opportunities at Seedskaadee NWR. These visitors spend dollars locally on lodging, food, gas, and miscellaneous purchasing in Green River and the surrounding area.</p>	<p>The local economy would benefit from additional hunters coming to the area to hunt white-tailed deer and elk on Seedskaadee NWR. Hunters would spend dollars locally on lodging, food, gas, and miscellaneous purchasing in Green River and the surrounding area. White-tailed deer and elk hunting visitation is anticipated to result in 25 visits to the Refuge with each visit representing \$38.40 in expenditures (Carver and Caudill, 2013). Total expenditures associated with 25 visits associated with white-tailed deer and elk hunting would total approximately \$960.00. These revenues represent a negligible/minor impact in the context of the Sweetwater County economy dominated by mining, quarrying, and oil and gas extraction.</p>
<p>Ranching Practices</p> <p>White-tailed deer and elk forage on adjacent private lands used for grazing, causing depredation of grazing pasture off the Refuge.</p>	<p>Under this alternative, white-tailed deer and elk depredation of forage in adjacent private property would continue and would likely increase every year.</p>	<p>Hunting to bring white-tailed deer and elk numbers down would result in positive impacts to the ranching economy.</p>
<p>Environmental Justice</p> <p>Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, requires</p>	<p>To date, the Service has not identified any high and adverse environmental or human health impacts from refuge activities.</p>	<p>The Service has not identified any potential high and adverse environmental or human health impacts from this proposed action. The Service has identified no</p>

SOCIOECONOMICS		
AFFECTED ENVIRONMENT	ANTICIPATED DIRECT AND INDIRECT IMPACTS	
	ALTERNATIVE A	ALTERNATIVE B
all Federal agencies to incorporate environmental justice into their missions by identifying and addressing disproportionately high or adverse human health or environmental effects of their programs and policies on minorities and low-income populations and communities.	Similarly, the Service has not identified minority or low-income communities within the area of influence of the refuge activities.	minority or low-income communities within the impact area. Minority or low income communities would not be disproportionately affected by any impacts from this proposed action or any of the alternatives.

Cumulative Impact Analysis:

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

For more information on the national cumulative impacts of the Service’s hunting and fishing program on the NWRs, see “Cumulative Impacts Report 2019-2020 National Wildlife Refuge Proposed Hunting and Sport Fishing Openings” which can be found here: [\[link to report\]](#).

TABLE 6. ANTICIPATED CUMULATIVE IMPACTS OF THE ALTERNATIVES

NATURAL RESOURCES		
Other Past, Present, and Reasonably Foreseeable Activity Impacting Affected Environment	Descriptions of Anticipated Cumulative Impacts	
	ALTERNATIVE A	ALTERNATIVE B
Hunting/Fishing <i>Local Analysis</i> Seedskaadee NWR falls within WGFD Hunt Area 131 for deer. The WGFD reports that in 2017 a total of 43 white-tailed deer were harvested in Hunt Area 131. As a result of implementing the new hunt, it is anticipated that five more white-tailed deer would be harvested annually in Hunt Area 131. Seedskaadee NWR falls in the junction of three Hunt Areas for elk, Areas 98, 100, 102. These	Resident Wildlife – white-tailed deer and elk Refuges, including Seedskaadee NWR, conduct hunting programs within the framework of State and Federal regulations. Population estimates of huntable species are developed at a regional, state, flyway, and continental scale. Hunting frameworks and harvest limits are set based upon these estimates. Currently, Seedskaadee NWR does not allow hunting of white-tailed deer and elk. The refuge will continue to support white-tailed deer and elk that move	Resident Wildlife – white-tailed deer and elk Same as Alternative A, plus: For white-tailed deer and elk hunting at Seedskaadee NWR, we will adopt the WGFD regulations set for these species and hunt areas. Elk and deer are managed by the WGFD in Hunt Areas that include a much larger area than Seedskaadee NWR itself. Elk and deer freely move on and off Seedskaadee NWR and seasonally through the Hunt Area. Regular coordination between the Refuge and the WGFD will continue.

NATURAL RESOURCES	
Other Past, Present, and Reasonably Foreseeable Activity Impacting Affected Environment	Descriptions of Anticipated Cumulative Impacts
	<div>ALTERNATIVE A</div> <div>ALTERNATIVE B</div>
<p>Hunt Areas are split at Highway 28 and Highway 372. The WGFD reports the following elk harvest for 2017: Hunt Area 98 - 240 elk harvested, Hunt Area 100 - 467 elk harvested, and Hunt Area 102 - 272 elk harvested. As a result of implementing the new hunt, it is anticipated that five more elk would be harvested annually in within these three Hunt Areas.</p> <p><i>Regional Analysis</i></p> <p>Seedskaadee National Wildlife Refuge is surrounded by a significant acreage administered by the Bureau of Land Management. Most of BLM lands, with a few exceptions such as campgrounds, are open to hunting of all species according to WGFD regulations.</p> <p>Hunting opportunities are also available at nearby refuges including Cokeville Meadows NWR and Pathfinder NWR. This action would be consistent with hunting opportunities on other refuge lands within the Refuge complex, Cokeville Meadows and Pathfinder NWRs specifically, and align with State regulations.</p> <p>It is believed that white-tailed deer were not historically present in Wyoming west of the Continental Divide, where Seedskaadee NWR is located. Over the last 30 years, small numbers of white-tailed deer have established themselves in suitable refuge habitats, primarily along the river valleys. It is believed that differences in behavior between white-tailed deer and mule deer give an advantage to white-tailed deer and allow their</p>	<div> <p>on and off the Refuge and across the landscape. At the local level, the Refuge adds slightly to cumulative impacts on the resident wildlife, and a negligible amount to regional and statewide populations. Wildlife management of populations is important to ensure the health of the ecosystem, and the Refuge's hunt program provides minor, additional beneficial impacts to the cumulative impacts of wildlife management in the State of Wyoming.</p> </div> <div> <p>Anticipated annual white-tailed deer and elk harvest on Seedskaadee NWR and other national wildlife refuges open to deer and elk hunting is an extremely small percentage of the state's annual harvest and just a fraction of the national population. The WGFD reports that 17,956 white-tailed deer were harvested in the State of Wyoming in 2017. It is estimated that five white-tailed deer will be harvested at Seedskaadee NWR once opened. The WGFD reports that 24,535 elk were harvested in the State of Wyoming in 2017. It is estimated that five elk will be harvested at Seedskaadee NWR once opened.</p> </div>

NATURAL RESOURCES		
Other Past, Present, and Reasonably Foreseeable Activity Impacting Affected Environment	Descriptions of Anticipated Cumulative Impacts	
	ALTERNATIVE A	ALTERNATIVE B
<p>populations to expand at the expense of native mule deer.</p> <p>Elk have been historically found across the Region, with numbers significantly reduced from unregulated harvest by the early 1900s. Populations have rebounded across Wyoming, with most herds currently above population objectives set by the WGFD. New habitats such as at Seedskaadee NWR, are being utilized by elk.</p>		
<p>Development and Population Increase In 2010, Wyoming's population was 563,626. Between 2010 and 2018 the state population grew at a rate of 2.5% to its current population of 577,737. The population is projected by the U.S. Bureau of Economic Analysis to grow slowly over the next 10-20 years.</p> <p>Between 2010 and 2017 regional growth grew slightly in Rock Springs by 1.4%, while decreasing in other areas of the region such as Green River, where population decreased by -3.6%.</p> <p>Sweetwater County is rich in natural and mineral resources. Trona or natural soda ash is the primary driver of the economy and 5 trona mines are located south of Seedskaadee NWR. Extraction is done with limited surface disturbance through extensive underground honeycomb system of mine tunnels. It has been estimated that there is over 60 more years remaining at the current extraction rate.</p>	<p>The projected slight growth in the regional population over the next 10-20 years is not expected to place substantial stress upon the resident big game populations of the Green River Basin or WGFD Steamboat Hunt Area.</p> <p>Because the Refuge uses an adaptive management approach for its hunt program, reviewing the hunt program annually and revising annually (if necessary), the Service's hunt program can be adjusted to ensure that it does not contribute further to the cumulative impacts of population growth and development on large ungulates.</p> <p>Currently there is no mineral extraction occurring on Seedskaadee NWR. The refuge does not own all of the mineral rights, as some private landowners separated and sold the mineral rights before lands were acquired by the Refuge. Surrounding the Refuge, federal, state, and private lands have active, ongoing, and possibly increasing mineral extraction occurring in the future. Disturbance to habitats and wildlife occurs off the Refuge from this activity. Significant planning efforts have been coordinated by</p>	<p>Same as Alternative A, but including white-tailed deer and elk populations subject to similar cumulative effects from development and population increase.</p>

NATURAL RESOURCES		
Other Past, Present, and Reasonably Foreseeable Activity Impacting Affected Environment	Descriptions of Anticipated Cumulative Impacts	
	ALTERNATIVE A	ALTERNATIVE B
<p>Active oil and natural gas leases start on BLM administered lands at the Refuge's northern boundary. Increasing lease sales by the BLM indicate increasing development for oil and natural gas extraction in the future. Significant extraction of gravel on BLM and private lands to the south of the Refuge is ongoing.</p> <p>In 2018, the first large solar array of 640 acres was installed on private land south of the Refuge and it is likely this development will increase in the future if this first solar array proves to be profitable.</p> <p>Livestock grazing of cattle and sheep on public and private lands has also been a significant part of the local and State economy for over 100 years and will likely continue well into the future.</p>	<p>the County, State, Federal, and private organizations to avoid and/or minimize impacts to significant wildlife habitats.</p>	
<p>Land Uses</p> <p>Livestock grazing of cattle and sheep has occurred on public and private lands for over 100 years on and near the Refuge. It contributes significantly to the local economy. A few center irrigation pivots have been developed south of the Refuge. The green alfalfa is attractive to both white-tailed deer and elk.</p>	<p>The refuge uses an adaptive management approach for its hunt program to ensure that the refuge only mitigates and doesn't add to the impacts to agricultural land uses. For example, the Refuge adjusts its season dates, bag limits, shooting hours, and other options to ensure that huntable large ungulate populations don't become over-abundant on the refuge and lead to increased mortality due to the spread of disease. These wildlife population management options are currently not available to manage the refuge's white-tailed deer and elk populations.</p> <p>Refuge staff coordinates and works with the WGFD to minimize damage to adjacent private hay fields from large ungulate grazing.</p>	<p>Same as Alternative A, plus:</p> <p>The refuge would also use adaptive management for its white-tailed deer and elk hunt program to ensure that the Refuge continues to mitigate and not add to the impacts to agricultural land use. Similarly, adjusting season dates, bag limits, shooting hours, and other options would also be applied to white-tailed deer and elk hunts to ensure that these species populations don't become over-abundant on the refuge and lead to increased mortality due to the spread of disease.</p>

NATURAL RESOURCES		
Other Past, Present, and Reasonably Foreseeable Activity Impacting Affected Environment	Descriptions of Anticipated Cumulative Impacts	
	ALTERNATIVE A	ALTERNATIVE B
<p>Climate Change</p> <p>Ecological stressors are expected to affect a variety of natural processes and associated resources into the future. The most substantial concern at the Refuge is potential reduction of water in the Green River and surrounding landscape, which may decrease the amount of water that reaches the Refuge. A long term reduction in snow accumulation in the Wind River and Wyoming Range Mountains at the headwaters of the Green River would lower storage in Fontenelle Reservoir and lower ground water levels above and below the reservoir. Annual precipitation at Seedskaadee NWR averages 7 inches in this cold desert environment. Increasing the length and severity of droughts would negatively affect the habitat for a variety of species in the sage steppe. These changes may dramatically reduce the amount and quality of sage-steppe, riverine, riparian, and wetland habitat available for migratory birds, as well as white-tailed deer and elk that are hunted. As a result, wildlife would be forced into reduced amounts of available habitat. Concentrating wildlife into smaller areas has the potential to more readily allow disease to spread within overwintering wildlife populations resulting in increased mortality.</p>	<p>Impacts from climate change on the refuge wildlife and habitats are not certain. However, we expect that maintaining the hunt program in its current format and scope would not add to the cumulative impacts of climate change because the refuge uses an adaptive management approach for its hunt program. The ongoing hunt program is consistently monitored and reviewed, and revised (as necessary) annually in coordination with the WGFD.</p>	<p>Same as Alternative A, plus:</p> <p>We expect that expanding the refuge's hunt program to include elk and white-tailed deer would not add to the existing cumulative impacts of climate change.</p> <p>An expanded refuge hunt program would continue to be modified, as necessary, following an adaptive management approach. It would similarly be monitored, reviewed, and, if necessary, revised consistently in coordination with the WGFD.</p> <p>The refuge's hunt program would adjust as necessary to ensure that it does not contribute further to the cumulative impacts of climate change on resident wildlife and migratory birds.</p>

Monitoring:

In cooperation with the WGFD, wildlife populations would continue to be monitored. Responding to complaints concerning wildlife damages, and surveillance and monitoring for wildlife disease would continue, as well as law enforcement patrols and investigations.

Continued monitoring of the population, hunter participation, and WGFD established bag limits, would ensure the population would not be adversely affected by managed hunting. If populations, habitat, or hunter success rates adversely impact refuge resources, modifications to the hunt program would be addressed.

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 (EIS) or a Finding of No Significant Impact (FONSI).

The white-tailed deer and elk hunt program would not result in unacceptable impacts to the Refuge resources. Regulations for harvest are set at the State level for big game. Refuge harvest levels are incorporated in the population and harvest management strategies at the State levels and would be a small percentage of total harvest. Harvest on the Refuge would not significantly impact attainment of State population goals and harvest objectives. Impacts associated with hunting to hunted and non-hunted species on the Refuge would not materially detract from or interfere with the purposes for which the Refuge was established or the NWRS mission.

Proposed Action:

The proposed action helps meet the purpose and needs of the Service as described above, because it provides additional hunting opportunities on the Refuge and improves habitat conditions, thereby lessening the impacts of ungulate browsing on establishment and long-term health of willow stands. The white-tailed deer and elk hunt would also provide a new hunting opportunity for hunters. The Service has determined that the proposed action is compatible with the purposes of the Seedskadee NWR and the mission of the NWRS (Appendix C).

References:

- Carver, E.; Caudill, J. 2013. Banking On Nature: The Economic Benefits to Local Communities of National Wildlife Refuge Visitation. Washington, DC: U.S. Fish and Wildlife Service, Division of Economics. 373 pages.
- Frison, G. C. 1978. Prehistoric Hunters of the High Plains. Academic Press, New York, New York, USA.
- Garton, Edward. 2001. Proceedings 2001 Deer and Elk Workshop. Evidence For Competition between Mule deer and White-tailed deer in North Central Washington during the Past 19 years. Fish and Wildlife Department, University of Idaho, Moscow, ID.
- Koerner, Tom. 2012. Project Leader, Seedskadee/Cokeville Meadows National Wildlife Refuge Complex. Personal communication.
- Miller, J. C. and M. Kornfeld. 1996. Salvage Excavations of 48SW4141 Dodge Bottom Interpretive Road Sweetwater County, Wyoming. Technical Report No. 13 Department of Anthropology, University of Wyoming, Laramie, Wyoming.

Sawyer, H., Lindzey, F. and McWhirter, D. 2005. Mule deer and pronghorn migration in western Wyoming. *Wildlife Society Bulletin* 2005, 33(4):1266–1273.

U.S. Fish and Wildlife Service, 2001. Draft Comprehensive Conservation Plan and Environmental Assessment—Seedskaadee National Wildlife Refuge, Wyoming. Lakewood, Colorado: U.S. Department of the Interior, Fish and Wildlife Service, Mountain-Prairie Region. 250 pages.

U.S. Fish and Wildlife Service, September 2002. Comprehensive Conservation Plan—Seedskaadee National Wildlife Refuge, Wyoming. Lakewood, Colorado: U.S. Department of the Interior, Fish and Wildlife Service, Mountain-Prairie Region. 190 pages.

List of Preparers:

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Allison Parrish	Zone Archeologist MT/UT/WY	Mountain-Prairie Regional Office (Bozeman, Montana)
Amy Thornburg	Deputy Refuge Supervisor	Mountain-Prairie Regional Office (Lakewood, Colorado)

State Coordination:

On June 20, 2018, the Service received an email communication from WGFD Director, Scott Talbot, expressing support for the current public access provided at Seedskaadee NWR and encouraging consideration of additional access for white-tailed deer and elk hunting. The WGFD supports opening the Refuge to white-tailed deer and elk hunting in accordance with state regulations. WGFD has offered to assist the Service in initiating and managing the white-tailed deer and elk hunt program.

In accordance with Section 106 of the National Historic Preservation Act of 1977 and its governing regulations (36 CFR Part 800), the Service reviewed the proposed action for direct and indirect impacts to previously documented and as-of-yet-unidentified historic resources, and determined that the proposed undertaking has no potential to effect historic properties. The Wyoming State Historic Preservation Office was notified of this determination on February 7, 2019.

Tribal Consultation:

The Service invited representatives of the following nine Tribal governments, as well as Tribal Historic Preservation Officers, to participate in government-to-government consultation concerning the proposed action and content of this EA: Eastern Shoshone, Shoshone-Bannock, Northern Arapaho Tribe, Cheyenne and Arapaho Tribes, Ute, Apache Tribe of Oklahoma, Comanche, Fort Belknap Indian Community, Confederated Tribes of the Goshute Reservation.

Public Outreach:

Refuge staff held scoping meetings with the WGFD and other partners and the public when initiating the Draft Comprehensive Conservation Plan for Seedskadee NWR to discuss the potential issues surrounding these species and hunting programs. The WGFD and others have been supportive of the current Seedskadee NWR hunting program, and including white-tailed deer and elk in future hunts.

During the 30-day public review and comment period, we will accept comments in writing, in person, electronically, or in any other form the public wishes to present comments or information. Upon close of the comment period, all comments and information will be reviewed and considered. The Final EA will address the comments submitted.

Determination:

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

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

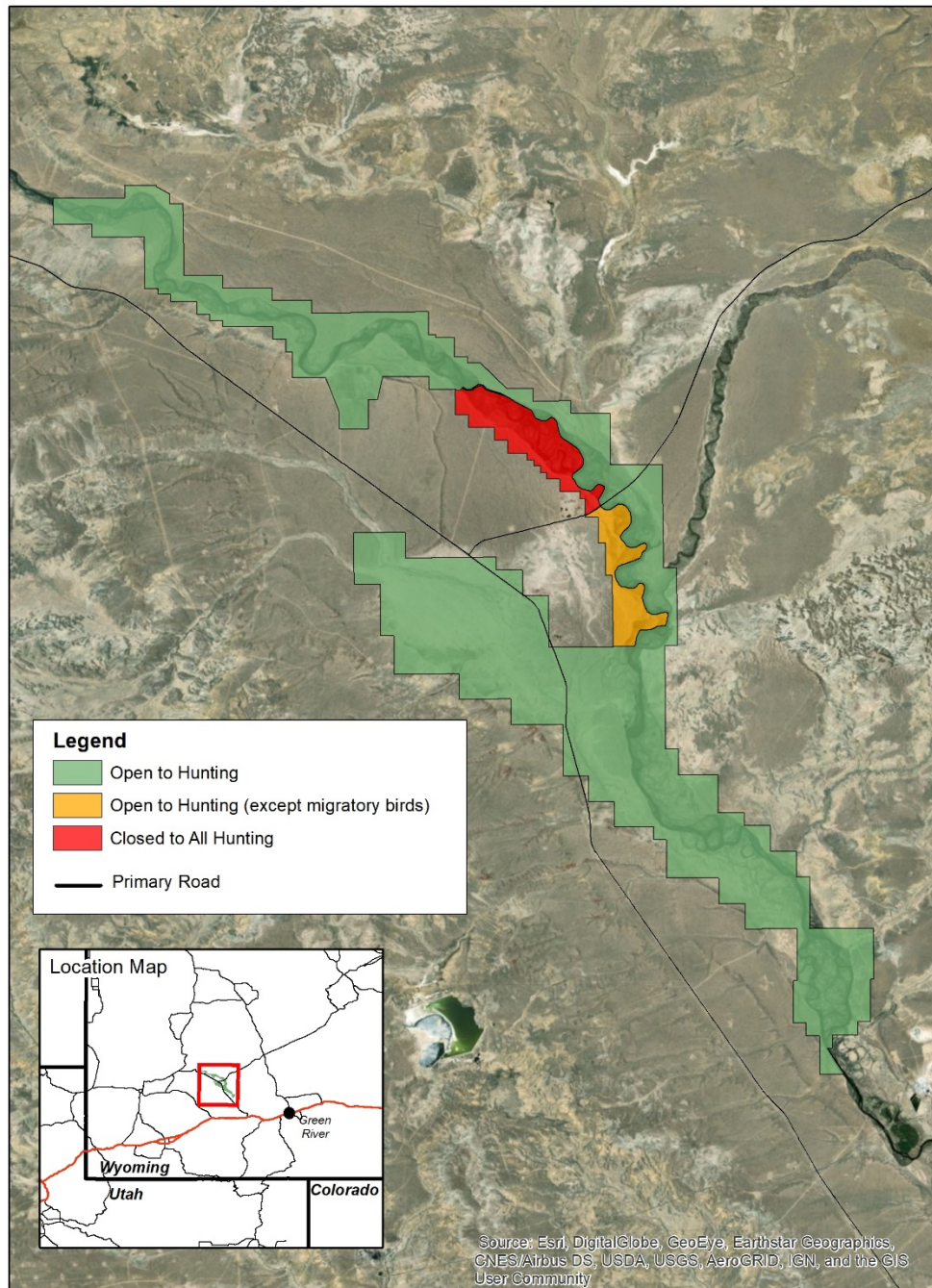
Preparer Signature: _____ Date: _____

Name/Title/Organization: _____

Reviewer Signature: _____ Date: _____

Name/Title/Organization: _____

Figure 1. Existing and proposed hunt units.



APPENDIX A

OTHER APPLICABLE STATUTES, EXECUTIVE ORDERS & REGULATIONS

OTHER APPLICABLE STATUTES, EXECUTIVE ORDERS & REGULATIONS
<p>Cultural Resources</p> <p>American Indian Religious Freedom Act, as amended, 42 U.S.C. 1996 – 1996a; 43 CFR Part 7</p> <p>Antiquities Act of 1906, 16 U.S.C. 431-433; 43 CFR Part 3</p> <p>Archaeological Resources Protection Act of 1979, 16 U.S.C. 470aa – 470mm; 18 CFR Part 1312; 32 CFR Part 229; 36 CFR Part 296; 43 CFR Part 7</p> <p>National Historic Preservation Act of 1966, as amended, 16 U.S.C. 470-470x-6; 36 CFR Parts 60, 63, 78, 79, 800, 801, and 810</p> <p>Paleontological Resources Protection Act, 16 U.S.C. 470aaa – 470aaa-11</p> <p>Native American Graves Protection and Repatriation Act, 25 U.S.C. 3001-3013; 43 CFR Part 10</p> <p>Executive Order 11593 – Protection and Enhancement of the Cultural Environment, 36 Fed. Reg. 8921 (1971)</p> <p>Executive Order 13007 – Indian Sacred Sites, 61 Fed. Reg. 26771 (1996)</p>
<p>Fish & Wildlife</p> <p>Bald and Golden Eagle Protection Act, as amended, 16 U.S.C. 668-668c, 50 CFR 22</p> <p>Endangered Species Act of 1973, as amended, 16 U.S.C. 1531-1544; 36 CFR Part 13; 50 CFR Parts 10, 17, 23, 81, 217, 222, 225, 402, and 450</p> <p>Fish and Wildlife Act of 1956, 16 U.S.C. 742 a-m</p> <p>Lacey Act, as amended, 16 U.S.C. 3371 et seq.; 15 CFR Parts 10, 11, 12, 14, 300, and 904</p> <p>Migratory Bird Treaty Act, as amended, 16 U.S.C. 703-712; 50 CFR Parts 10, 12, 20, and 21</p> <p>Executive Order 13186 – Responsibilities of Federal Agencies to Protect Migratory Birds, 66 Fed. Reg. 3853 (2001)</p>
<p>Natural Resources</p> <p>Clean Air Act, as amended, 42 U.S.C. 7401-7671q; 40 CFR Parts 23, 50, 51, 52, 58, 60, 61, 82, and 93; 48 CFR Part 23</p> <p>Wilderness Act, 16 U.S.C. 1131 et seq.</p> <p>Wild and Scenic Rivers Act, 16 U.S.C. 1271 et seq.</p> <p>Executive Order 13112 – Invasive Species, 64 Fed. Reg. 6183 (1999)</p>
<p>Water Resources</p> <p>Coastal Zone Management Act of 1972, 16 U.S.C.</p>

1451 et seq.; 15 CFR Parts 923, 930, 933

Federal Water Pollution Control Act of 1972 (commonly referred to as Clean Water Act), 33 U.S.C. 1251 et seq.; 33 CFR Parts 320-330; 40 CFR Parts 110, 112, 116, 117, 230-232, 323, and 328

Rivers and Harbors Act of 1899, as amended, 33 U.S.C. 401 et seq.; 33 CFR Parts 114, 115, 116, 321, 322, and 333

Safe Drinking Water Act of 1974, 42 U.S.C. 300f et seq.; 40 CFR Parts 141-148

Executive Order 11988 – Floodplain Management, 42 Fed. Reg. 26951 (1977)

Executive Order 11990 – Protection of Wetlands, 42 Fed. Reg. 26961 (1977)

APPENDIX B

Seedskaadee National Wildlife Refuge White-tailed Deer and Elk Hunt Plan

February 1, 2019

U.S. Fish and Wildlife Service

**Seedskaadee National Wildlife Refuge
PO Box 700
Green River, WY 82935**

Submitted By:
Project Leader

Signature

Date

Concurrence:
Refuge Supervisor

Signature

Date

Approved:
Regional Chief, National Wildlife Refuge System

Signature

Date

SEEDSKADEE NATIONAL WILDLIFE REFUGE WHITE-TAILED DEER AND ELK HUNT PLAN

I. Introduction

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

Seedskadee National Wildlife Refuge (NWR) was established in 1965 pursuant to:

- Fish and Wildlife Coordination Act (16 U.S.C. 661-667e)
- Colorado River Storage Project Act (43 U.S.C. 620g)
- Migratory Bird Conservation Act (16 U.S.C. 715d)

Refuge Purpose(s):

... for use as an inviolate sanctuary, or for any other management purpose, for migratory birds. 16 U.S.C. § 715d (Migratory Bird Conservation Act)"

... shall be administered by him [Secretary of the Interior] directly or in accordance with cooperative agreements ... and in accordance with such rules and regulations for the conservation, maintenance, and management of wildlife, resources thereof, and its habitat thereon, ..." 16 U.S.C. § 664 (Fish and Wildlife Coordination Act) "

... to acquire lands necessary for the construction, operation, and maintenance ..." of "... (1) public recreational facilities on lands withdrawn or acquired ..." for the Colorado River project in order to "... conserve the scenery, the natural, historic, and archeological objects, and the wildlife on said lands, and to provide for public use and enjoyment of the same and of the water areas created by these projects ... and (2) facilities to mitigate losses of and improve conditions for, the propagation of fish and wildlife." The Secretary may "... dispose of ..." the facilities "... to Federal ... agencies ... upon such terms and conditions as will best promote their development and operation in the public interest." 43 U.S.C. § 620g (Colorado River Storage Act)

Seedskadee NWR is located in southwestern Wyoming, 37 miles northwest of the City of Green River. The refuge is managed by the Service as a component of the Refuge System. The entire refuge is within Sweetwater County, Wyoming and within the Green River Basin. Geographically, the Refuge is long and narrow, and bisected throughout its length by the Green River. The north boundary of the Refuge is seven miles downstream from Fontenelle Dam. From here, the Refuge extends 37 miles downstream and ranges in width from one to two miles.

The mission of the NWRS, as outlined by the National Wildlife Refuge System Administration Act (NWRSA), as amended by the National Wildlife Refuge System Improvement Act (16 U.S.C. 668dd et seq.), is to:

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

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

- Provide for the conservation of fish, wildlife, and plants, and their habitats within the NWRS;
- Ensure that the biological integrity, diversity, and environmental health of the NWRS are maintained for the benefit of present and future generations of Americans;
- Ensure that the mission of the NWRS described at 16 U.S.C. 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 NWRS are located;
- Assist in the maintenance of adequate water quantity and water quality to fulfill the mission of the NWRS and the purposes of each refuge;
- Recognize compatible wildlife-dependent recreational uses as the priority general public uses of the NWRS through which the American public can develop an appreciation for fish and wildlife;
- Ensure that opportunities are provided within the NWRS 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 National Wildlife Refuge System.

Hunting is a priority public use of the National Wildlife Refuge System. Hunting originally opened on Seedskadee NWR in 1969, and in accordance with the Refuge Hunting Plan (1986) and Refuge Comprehensive Conservation Plan (2002). Hunting is currently allowed on the Refuge in accordance with 50 CFR 32.55 for big game (mule deer, pronghorn, and moose), upland game bird and small game (sage grouse, cottontail rabbit, skunk, fox, jackrabbit and raccoon) and migratory game bird (duck, coot, dark goose, merganser, dove, snipe, and rail). This Compatibility Determination supports the amended 2019 Hunting Plan for Seedskadee NWR to expand hunting to include white-tailed deer and elk.

Seedskadee NWR is open to recreational public hunting in accordance with State of Wyoming seasons and regulations established for each area. This wildlife dependent, priority public use would allow for the additional hunting opportunity of white-tailed deer and elk on those portions of the Refuge open to public hunting (Figure 1).

There are an estimated 3,000 hunter visits on refuge complex lands, while annual visitation may average 16,000 or more visits.

II. Statement of Objectives

The objectives of a white-tailed deer and elk hunting program on Seedskaadee NWR are to provide:

- The public with a recreational experience on more refuge lands and increase opportunities for hunters.
- Wildlife-dependent public recreation as mandated by and according to Service law and policy.
- Increase dispersal of elk onto adjacent lands where they would be available to more hunters, and to harvest a percentage of the population on the Refuge, thereby lessening the impacts to all native species, including migratory birds.
- Improved habitat conditions, reducing the impact on establishment and long-term health of cottonwood and willow stands.

Hunting is consistent with the Refuge's Comprehensive Conservation Plan (USFWS, 2002) objective to manage elk and deer population levels to achieve the CCP's larger habitat restoration goal to, 'Protect and restore riparian habitats along the Green River to provide for the annual needs of migratory birds and native wildlife utilizing the Green River Basin.'

III. Description of Hunting Program

A. Areas to be Opened to Hunting

Hunting of certain species is an existing use that occurs in designated areas of the Refuge. Approximately 24,437 acres are currently open to hunting. Currently, two closed areas exist on the Refuge. Approximately 1,089 acres are closed to migratory bird hunting below Highway 28. A second area of approximately 1,548 acres is closed to all hunting and protects refuge buildings and primary wetland impoundments. This amended hunting opportunity would be allowed on fee-title lands within the boundaries of Seedskaadee NWR (Figure 1).

B. Species to be Taken, Hunting periods, Hunting Access

BIG GAME HUNTING: White-tailed deer and elk. Season dates for authorized species are consistent with Wyoming Game and Fish Department (WGFD) regulated hunting seasons for Big Game.

Bag limits and harvest methods for authorized species are consistent with WGFD rules and regulations for big game hunting and specific refuge rules and regulations as published in the Federal Register and Refuge Hunting Brochures.

Firearms, muzzleloader, and archery hunting all occur on the Refuge. Hunters make use of boat ramps and parking lots at various locations on the Refuge, and also park along existing roadways.

C. Hunter Permit Requirements (if applicable)

Hunters will be required to possess all required state licenses, tags, and permits. See “Hunter Permit Application and/or Registration Procedures” below.

D. Consultation and Coordination with the State

Discussions between refuge staff and the WGFD concerning establishing populations of white-tailed deer and elk, began over a decade ago. Refuge staff meet with area WGFD employees a number of times each year to talk about our hunting and fishing programs, coordinate environmental education activities, and plan and complete fish and wildlife habitat improvement projects. The refuge will adopt WGFD regulations for hunting white-tailed deer and elk, aligning with their management goals. The WGFD is in agreement with the Refuge’s Hunt Plan including white-tailed deer and elk, as it will help meet their goals and objectives as well as the Refuge’s goals.

E. Law Enforcement

Enforcement of refuge violations normally associated with management of a National Wildlife Refuge is the responsibility of commissioned Federal Wildlife Officers. Currently there is a refuge complex Federal Wildlife Officer stationed at Seedskadee NWR. Other officers, Special Agents, State Conservation Officer and Sweetwater County Sheriff’s Office provide additional assistance when requested.

The following methods are used to control and enforce hunting regulations:

- Refuge and hunt area boundaries will be clearly posted;
- The refuge will provide a brochure that shows hunt areas;
- Seedskadee NWR law enforcement staff will randomly check hunters for compliance with Federal and State Laws.
- High visibility law enforcement activities as well as covert operations would be conducted to dissuade hunters from impacting wildlife other than the target species.
- Refuge-Specific Regulations will be in effect to minimize disturbance and to protect flora and fauna in the area.

F. Funding and Staffing Requirements

The cost to operate a white-tailed deer and elk hunt program is estimated to be \$10,000 annually for labor and materials to update and print maps, maintain signs, coordinate with the WGFD, and conduct law enforcement patrols.

Existing refuge staff would administer the hunting program. The refuge manager would set station priorities to assure that required support staff is adequate. As this hunt program evolves over the years, refuge-specific regulations, systems of control to limit number of hunters, and fee costs may occur or change at the Refuge manager’s discretion.

Refuge staff would prepare the annual refuge hunting regulations brochure, make changes to the White-tailed Deer and Elk Hunt Plan and regulations as needed, edit the hunting leaflet annually,

post and replace appropriate signage, respond to public inquiries about the hunt program, and conduct hunter use surveys. In addition to staff expenses, the Refuge would incur costs for signs, vehicle maintenance, road repair and maintenance, leaflet printing, and miscellaneous supplies.

Currently, sufficient resources are available to administer the expanded program to include additional species. It is anticipated that funding would continue to be sufficient to continue the hunting program at Seedskadee NWR in the future.

IV. Conduct of the Hunting Program

A. Hunter Permit Application, Selection, and/or Registration Procedures (if applicable)

White-tailed deer and elk hunters wanting to hunt these species at Seedskadee NWR must possess a valid license for the species hunted, which is issued by the WGFD. Application and selection is made through the WGFD application system.

B. Refuge-Specific Hunting Regulations

Listed below are refuge-specific regulations that pertain to hunting big game on Seedskadee NWR as of the date of this plan. These regulations may be modified as conditions change or if refuge expansion continues/occurs.

- We prohibit all hunting between Highway 28 and 0.8 miles (1.28 km) north of the Refuge headquarters on the west side of the Green River. We post the boundary for this area with refuge signs stating “No Hunting Zone”.
- We only allow hunters to retrieve downed game from closed areas with consent from a refuge employee or State game warden.
- You must unload and either case or dismantle all firearms (see §27.42(b) of this chapter) when transporting them in a vehicle or boat under power.
- We open the Refuge to the general public from 1/2 hour before legal sunrise to 1/2 hour after legal sunset.

C. Relevant State Regulations

White-tailed deer and elk hunters using a firearm and born on or after January 1, 1966 must have completed and can demonstrate they have obtained a certificate of competency and safety in the use of handling firearms. Attendance and successful completion of a hunter safety course offered by an association or governmental agency approved by the WGFD satisfies the requirement.

V. Public Engagement

A. Outreach for Announcing and Publicizing the Hunting Program

The refuge maintains a mailing list, for news release purposes, to local newspapers, radio, and websites. Special announcements and articles may be released in conjunction with hunting seasons. In addition, information about the hunt will be available at Seedskadee NWR headquarters and or on the Seedskadee NWR website.

B. Anticipated Public Reaction to the Hunting Program

Numerous requests have been made by the public and WGFD to allow white-tailed deer and elk hunting on Seedskadee NWR. Based on the comments received during the CCP (2002) the Service anticipates public support for the white-tailed deer and elk hunting program. Hunting has been allowed on Seedskadee NWR for more than 50 years and little negative public reaction is expected. Hunting is an important economic and recreational use of Wyoming's natural resources. Some individuals may have concern with white-tailed deer and elk hunting in areas where trumpeter swans may be present.

C. How Hunters Will Be Informed of Relevant Rules and Regulations

General information regarding hunting and other wildlife-dependent public uses can be obtained by contacting Seedskadee NWR headquarters by phone at (307)875-2187, mail at PO Box 700, Green River, WY 82935, or stopping in at the Refuge Headquarters during normal business hours. Information about the Refuge's hunt program can be obtained online at:

[This hyperlink leads to more information about the Refuge's hunt program](#)

VI. Compatibility Determination

Hunting and all associated program activities proposed in this plan are compatible with the purposes of the Refuge. See attached Compatibility Determination on Seedskadee National Wildlife Refuge for recreational hunting – white-tailed deer and elk.

APPENDIX C

**Compatibility Determination
On
Seedskaadee National Wildlife Refuge**

Use: Recreational Hunting – white-tailed deer and elk

Refuge Name: Seedskaadee National Wildlife Refuge

Establishing and Acquisition Authorities:

- Fish and Wildlife Coordination Act (16 U.S.C. 661-667e)
- Colorado River Storage Project Act (43 U.S.C. 620g)
- Migratory Bird Conservation Act (16 U.S.C. 715d)

Refuge Purpose(s):

- “...shall be administered by him/her (Secretary of the Interior) directly or in accordance with cooperative agreements...and in accordance with such rules and regulations for the conservation, maintenance and management of wildlife, resources thereof, and its habitat thereon,” 16 U.S.C. 664 (Fish and Wildlife Coordination Act)
- “In connection with the development of the Colorado River Storage Project (CRSP) and of the participating projects, the Secretary is authorized and directed to investigate, plan, construct, operate, and maintain (1) public recreational facilities on lands withdrawn or acquired...” for the Colorado River Storage Project or participating projects in order to “...conserve the scenery, the natural, historic, and archaeologic objects, and the wildlife on said lands, and to provide for public use and enjoyment of the same and of the water areas created by these projects by such means as are consistent with primary purposes of said projects...and (2) facilities to mitigate losses of and improve conditions for, the propagation of fish and wildlife.” The Secretary may “. . .dispose of . . .” the facilities “. . . to Federal...agencies...upon such terms and conditions as will best promote their development and operation in the public interest.” 43 U.S.C. 620g (Colorado River Storage Act)
- “use as an inviolate sanctuary, or for any other management purpose, for migratory birds” 16 U.S.C. 715d (Migratory Bird Conservation Act)

Though the Refuge has acquisition authorities under the Migratory Bird Conservation Act (MBCA), no funds have been expended on acquisition of refuge lands. Thus, while this is a purpose under MBCA, the Refuge does not have to adhere to the 60/40 inviolate sanctuary requirements for hunting activities.

National Wildlife Refuge System Mission:

The mission of the Refuge System 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.

Description of Use:

What is the use? Is the use a wildlife-dependent public use?

Hunting is a priority public use of the National Wildlife Refuge System. Hunting originally opened on Seedskadee NWR in 1969, and in accordance with the Refuge Hunting Plan (1986) and Refuge Comprehensive Conservation Plan (2002). Hunting is currently allowed on the Refuge in accordance with 50 CFR 32.55 for big game (mule deer, pronghorn, and moose), upland game bird and small game (sage grouse, cottontail rabbit, skunk, fox, jackrabbit and raccoon) and migratory game bird (duck, coot, dark goose, merganser, dove, snipe, and rail). This Compatibility Determination supports the amended 2019 Hunting Plan for Seedskadee NWR to expand hunting to include white-tailed deer and elk.

Seedskadee NWR is open to recreational public hunting in accordance with State of Wyoming seasons and regulations established for each area. This wildlife dependent, priority public use would allow for the additional hunting opportunity of white-tailed deer and elk on those portions of the Refuge open to public hunting (Figure 1).

There are an estimated 3,000 hunter visits on refuge complex lands, while annual visitation may average 16,000 or more visits.

Where would the use be conducted?

Hunting of certain species is an existing use that occurs in designated areas of the Refuge. Approximately 24,437 acres are currently open to hunting. Currently, two closed areas exist on the Refuge. Approximately 1,089 acres are closed to migratory bird hunting below Highway 28. A second area of approximately 1,548 acres is closed to all hunting and protects refuge buildings and primary wetland impoundments. This amended hunting opportunity would be allowed on fee-title lands within the boundaries of Seedskadee NWR (Figure 1).

When would the use be conducted?

Season dates for authorized species are consistent with Wyoming Game and Fish Department (WGFD) regulated hunting seasons for Big Game.

How would the use be conducted?

Bag limits and harvest methods for authorized species are consistent with WGFD rules and regulations for big game hunting and specific refuge rules and regulations as published in the Federal Register and Refuge Hunting Brochures.

Firearms, muzzleloader, and archery hunting all occur on the Refuge. Hunters make use of boat ramps and parking lots at various locations on the Refuge, and also park along existing roadways.

Parking areas, interpretive panels, and signs and other structures would need to be maintained to facilitate this program.

Why is this use being proposed?

Hunting is a priority general public use of the Refuge System that is also an important wildlife management tool. The Service recognizes hunting as a healthy, traditional outdoor pastime, deeply rooted in the American heritage (USFWS, 2006). Hunting can instill a unique understanding and appreciation of wildlife, their behavior, and their habitat needs. Hunting programs can promote understanding and appreciation of natural resources and their management on lands and waters in the National Wildlife Refuge System.

Big Game (Elk)

During different times of the year elk are found on the Refuge, though they are most commonly found in meadow and riparian areas of the Refuge. In the last several years they have become a very abundant big game species on Seedskaadee NWR, with wintering elk numbers increasing on the Refuge in recent years. Currently herd size ranges from 75 to 100 animals.

The primary objective of the elk hunt is to increase the dispersal of elk onto adjacent lands where they would be available to more hunters, and to harvest a percentage of the population on the Refuge, thereby lessening the impacts to all native species, including migratory birds. The elk hunt would also provide a new, quality hunting opportunity for hunters. It is advisable to take management action before the elk population reaches a point where it does long-term damage to the environment, adversely affects other native flora and fauna species and impacts adjacent landowners.

The reduction in elk numbers that inhabit the Refuge would reduce the impact on establishment and long-term health of cottonwood and willow stands, maintaining or improving habitat conditions for many species increasing habitat objectives. If the elk population on the Refuge continues to increase, eventually the habitat would not be able to support a healthy population, exceeding carrying capacity. Elk foraging on adjacent private lands used for grazing and agriculture and for other wildlife would also increase. The current browse monitoring conducted on the Refuge indicates that browsing pressure on riparian habitats within the Refuge are at unsustainable levels and this pressure needs to be reduced to improve habitat health.

Movement of the elk population across refuge boundaries is not restricted by the wildlife-friendly interior fencing used for grazing management, perimeter boundary fencing, or by terrain or topography. The growing elk population is adequate to provide high-quality hunting opportunities while maintaining elk on the Refuge for other priority public uses. These conditions, coupled with continued monitoring of the population, coordination with the WGFD, hunter participation, and WGFD established bag limits, would ensure the population would not be adversely affected by managed hunting. If populations, habitat, or hunter success rates adversely impact refuge resources; modifications to the hunt program would be addressed.

Big Game (White-tailed Deer)

Seedskaadee NWR has been open to mule deer hunting since 1969. Mule deer primarily inhabit the Green River bottomlands or riparian zone and portions of shrub-steppe uplands throughout the Refuge. Mule deer may be present on Seedskaadee NWR during the spring, summer, fall, and winter months. Mule deer hunting is popular within the hunt management unit established by WGFD. Monitoring of the population, coordination with the WGFD, hunter participation, and WGFD established bag limits has ensured the population has not be adversely affected by managed hunting.

Although, white-tailed deer are not as common as mule deer on the Refuge, their numbers are increasing and hunting opportunities will be available. White-tailed deer were not historically found on Seedskaadee NWR and have now become established here. Current herd size ranges from 50 to 75 animals. White-tailed deer are known to out-compete or dominate mule deer in the river bottom habitats. The increase in white-tailed deer numbers is a concern for the Refuge and the WGFD from a habitat quality standpoint and keeping a balance between mule and white-tailed deer numbers. Monitoring of the population, coordination with the WGFD, hunter participation, and WGFD established bag limits, would ensure the population would not be adversely affected by managed hunting. If populations, habitat, or hunter success rates adversely impact refuge resources; modifications to the hunt program would be addressed.

In addition to the biological reasoning, numerous requests have been made by the public and WGFD to allow white-tailed deer and elk hunting on Seedskaadee NWR. This action would provide the public with additional hunting opportunities on public lands in Wyoming. Public hunting opportunities are also available nearby on a significant amount of adjacent Bureau of Land Management administered lands. This action would be consistent with hunting opportunities on other refuge lands within the Refuge complex, Cokeville Meadows and Pathfinder NWRs specifically, and align with State regulations.

Availability of Resources:

What resources are needed to properly (considering quality and compatibility) and safely administer use?

The present refuge hunting program is designed to be administered with minimal refuge resources. Refuge regulations mirror state regulations in large part, which allows WGFD Conservation Officers to assist in law enforcement. Refuge staff would prepare the annual refuge hunting regulations brochure, make changes to the White-tailed Deer and Elk Hunt Plan and regulations as needed, edit the hunting leaflet annually, respond to public inquiries about the hunt program, and conduct hunter use surveys and conduct law enforcement patrols and hunter contacts. There is a small amount of vehicle and road repair and maintenance, mowing, leaflet/brochure printing and other upkeep performed that is funded as part of regular refuge management activities. Approximately \$10,000 annually is required for labor and materials to update and print maps, and maintain signs. Currently, sufficient resources are available to administer the expanded program to include additional species.

Are existing refuge resources adequate to properly and safely administer the use?

At the present level of hunting use there are adequate refuge resources to implement the hunting program. Law enforcement is the primary tool necessary to ensure proper and safe administration of this use. Currently there is a refuge complex Federal Wildlife Officer stationed at Seedskaadee NWR. Additionally, the local State Conservation Officer and Sweetwater County Sheriff's Office provide additional assistance when requested.

Anticipated Impacts of the Use:

Short and Long-term Impacts:

Accommodating this wildlife-dependent use is expected to result in minimal impacts. Although hunting causes mortality to wildlife, season dates and bag limits are set with the long-term health of populations in mind. Temporary disturbance would exist to wildlife in the vicinity of the activity. Closed areas would minimize conflicts between hunters and other visitors, and provides a safety zone around administrative areas.

Opening additional areas for hunting would increase opportunities for hunters. However, the lands proposed for this opportunity have been open for public hunting for many years and the increase in hunter activity is not expected to be significant.

Other Uses and Public Safety:

Hunting is not expected to adversely affect other refuge uses or public safety. No conflicts of consequence are expected between sport fishermen, big game and upland/small game hunters. Overlap of hunting area usage between sport fishermen, migratory bird hunters, and big game hunters may occur, but is expected to be minimal due to the dissimilar nature of these activities and the areas of the Refuge where these activities may be expected to occur.

The demand for non-consumptive wildlife-oriented use on Seedskaadee NWR continues to grow. Conflicts between hunters and non-consumptive users may occur. Providing non-consumptive users access to wildlife viewing areas as described in the White-tailed Deer and Elk Hunt Plan, notifications of when users are entering a hunting area, and even closing a hunting area to non-consumptive users if appropriate would reduce conflicts. In addition, restrictions on hunting methods and restrictions on hunting near designated public use facilities and trails should aid in reducing potential conflicts between hunters and non-consumptive users.

If public use levels on Seedskaadee NWR expand across time, unanticipated conflicts between user groups may occur. The refuge's Visitor Services programs would be adjusted as needed to eliminate or minimize each problem and provide a quality wildlife-dependent recreational opportunity, which includes promoting public safety. Experience on many national wildlife refuges has proven that time and space zoning (e.g., establishment of separate use areas, use periods, and restrictions on the number of users) is an effective tool in eliminating conflicts between user groups. Decisions will be based on minimizing impacts to various user groups, and best management practices for wildlife. Overall, the cumulative impacts of hunting on other wildlife-dependent recreation or public safety at Seedskaadee NWR are expected to be minor.

Seedskaadee NWR has been a popular hunting area for many years. The refuge hunting program is designed to provide for the use of refuge lands within a framework designed to protect wildlife populations and provide for public safety. The continuance of these traditional uses has been widely supported by the public both before and since the establishment of the Refuge. It is expected that this support would continue.

Public Review and Comment:

Public review and comment will be solicited through public posting of notices at the Refuge headquarters, notices in local newspapers and on refuge website and through other refuge and WGFD digital media sites.

Determination (check one below):

- ☐ Use is Not Compatible
☒ Use is Compatible with the Following Stipulations

Stipulations Necessary to Ensure Compatibility:

1. Hunting must be in accordance with Federal and State regulations.
2. Hunting on Seedskaadee NWR will take place in a manner that will minimize disturbance to migrating waterbirds.
3. Hunting will be evaluated to provide a safe hunt (reduce conflicts between hunt seasons).
4. The refuge deer, pronghorn, elk and moose hunts will be coordinated with the Wyoming Game and Fish Department to determine the number of permits to manage the populations.
5. Monitor all hunting uses to assure they do not interfere with and are compatible with other wildlife-dependent recreational activities.
6. During critical wintering periods for waterbirds or for the protection of special wildlife species/habitats, areas may be closed and access limited to minimize any wildlife disturbances.
7. Refuge areas closed to hunting must be periodically re-evaluated to ensure adequate habitat for migrating, feeding, and resting waterfowl and other wildlife is available. A closed area inclusive of some portion of the main stem of the Green River must be in effect to ensure compatibility of the hunting program.

Justification:

In view of the above and with the stipulations previously described, hunting would not materially interfere with or detract from the Refuge System mission or purposes of the Refuge. Hunting is a priority public use of the Refuge System, and providing a hunting program contributes to achieving one of the Refuge goals. Disturbance of wildlife would occur, but limitations on hunting mean areas of the Refuge would be free of disturbance. Hunting is not expected to adversely affect the biological integrity, diversity, and environmental health of the Refuge or the Refuge System.

The Service and the State of Wyoming consider hunting an acceptable and desirable form of public use and wildlife-dependent recreation. Hunting is considered an educational and recreational opportunity to increase the public's awareness of wise stewardship and management of wildlife resources in the public's trust. Recreational public hunting is a historic wildlife dependent use of the Refuge system and is one of the six priority public uses established by Executive Order 12996 (March 25, 1996) and legislatively authorized by the National Wildlife Refuge System Improvement Act of 1997 (Public Law 105-57).

Infrastructure is already in place to support hunting programs, and current staffing levels and funding are adequate. Special regulations are in place to minimize negative impacts to the Refuges and associated wildlife. Wyoming state law further controls hunter activities. Hunting is a legitimate wildlife management tool that can be used to control wildlife populations. Hunting harvests a small percentage of the renewable resources, which is in accordance with wildlife-management objectives and principles.

Signature: Refuge Manager _____
Date

Review: Refuge Supervisor _____
Date

Concurrence: Regional Chief _____
Date

Mandatory 10- or 15-year Re-Evaluation Date: February 2024

Seedskaadee National Wildlife Refuge Hunting Plan. 1986.

U.S. Fish and Wildlife Service. 2002. Seedskaadee National Wildlife Refuge Comprehensive Conservation Plan.

U. S. Fish and Wildlife Service. 2006. Wildlife-Dependent Recreation: Hunting. 605 FW 2. National Wildlife Refuge System, Department of Interior. Available URL: <http://www.fws.gov/policy/605fw2.html>.

APPENDIX D

Intra-Service Section 7 Biological Evaluation Form – Region 6

Originating Person: Tom Koerner, Project Leader

Date Submitted: 2/1/2019

Telephone Number: (307) 875-2187

- I. Service Program and Geographic Area or Station Name:** Seedskadee NWR
- II. Flexible Funding Program:** N/A
- III. Location:** Region 6, Mountain-Prairie Region, Fee-title lands of Seedskadee NWR – Sweetwater County, Southwest Wyoming. Seedskadee NWR headquarters is located on State Highway 372 approximately 25 miles northwest of the town of Green River and 27 miles southeast of the Fontenelle Dam in the Green River Basin of Wyoming.
- IV. Species/Critical Habitat:**
- Colorado River Fish
Bonytail (*Gila elegans*), Federal Status: Endangered
Colorado Pikeminnow (*Ptychocheilus lucius*), Federal Status: Endangered
Humpback Chub (*Gila cypha*), Federal Status: Endangered
Razorback Sucker (*Xyrauchen texanus*), Federal Status: Endangered
- Ute Ladies'-tresses, (*Spiranthes diluvialis*) Federal Status: Threatened
Yellow-billed Cuckoo, (*Coccyzus americanus*), Federal Status: Threatened
- V. Project Description:** The Service proposes to open white-tailed deer and elk hunting on Seedskadee NWR in accordance with Wyoming Game and Fish Department seasons, rules and regulations.
- VI. Determination of Effects:**

(A) Description of Effects

Colorado River Fish (Bonytail, Colorado Pike minnow, Humpback Chub, Razorback Sucker): The endangered bonytail (*Gila elegans*), Colorado pike minnow (*Ptychocheilus lucius*), humpback chub (*Gila cypha*), and razorback sucker (*Xyrauchen texanus*) inhabit the Colorado River and the Green River from the confluence with the Colorado River upstream to near the Willow Creek confluence (Swallow Canyon). The main stem Green River and its tributary, the Yampa, contain the largest known riverine populations of Colorado pike minnow and razorback sucker. Humpback chub have a limited, discontinuous distribution in canyon-bound habitats and persist in small numbers in Desolation and Whirlpool Canyons. The bonytail is extremely rare throughout the Upper Basin.

The refuge lies directly upstream from known stream habitats inhabited by these listed species. However, there are no known records of these species ever occurring at the site of the Refuge. Wyoming Game and Fish Department fisheries personnel have done some electroshocking and

have never detected any of these species. Prior to the construction of the Fontenelle Dam, they may have occurred, as far north as Green River, but this is unknown. Habitat and hydrologic conditions needed by these species no longer occur at the present site of the Refuge.

Should these species occasionally use the Green River within the Refuge boundary, it is expected that the hunting plan amendments would have no effect on habitats frequented by these fish.

Ute ladies-tresses orchid: While the Refuge lies in between areas known to have populations of this listed species (Colorado and Montana), there are no known populations of this species on the Refuge. An orchid survey, within suitable orchid habitat, performed during the blooming period of this species in the Refuge (2000) failed to locate this plant within the Refuge, as have ongoing informal surveys by refuge staff.

Should the orchid be found within the Refuge boundary, it is expected that the hunting plan amendments would have no effect on habitat the species is found in.

Yellow-billed Cuckoo: This species relies on healthy riparian habitats such as found in proposed critical habitat areas on the lower half of the Refuge.

Should the cuckoo be found within the Refuge boundary, it is expected that the hunting plan amendments would have no effect on habitat the species is found in. Additionally, yellow-billed cuckoos visit the Refuge in May to early August and would not overlap with big game hunting seasons.

(B) Determination

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

No concurrence from ESFO required.

Bonytail (*Gila elegans*), Federal Status: Endangered
Colorado Pikeminnow (*Ptychocheilus lucius*), Federal Status: Endangered
Humpback Chub (*Gila cypha*), Federal Status: Endangered
Razorback Sucker (*Xyrauchen texanus*), Federal Status: Endangered
Ute Ladies'-tresses, (*Spiranthes diluvialis*) Federal Status: Threatened
Yellow-billed Cuckoo, (*Coccyzus americanus*), Federal Status: Threatened

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

Concurrence from ESFO required.

May Affect but 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 but 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 the adverse effects are likely but the project is designated to assist with recovery of listed species and/or designated critical habitat.

Concurrence from the ESFO required 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.

Concurrence from ESFO required. _____

Signature _____
[Supervisor at originating station]

Date _____

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

A. Concurrence: _____

Nonconcurrence: _____ Explanation of nonconcurrence:

B. Formal Consultation Required (List species or critical habitat unit): _____

C. Effects are addressed in the Programmatic Consultation On R6's Recovery Program (no further consultation needed): _____

D. Conference required (List species or critical habitat unit): _____

Name of Reviewing ES Official: _____