

Final Environmental Assessment

Hunting on Kirwin National Wildlife Refuge

July 2020

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Final Environmental Assessment for Hunting on Kirwin National Wildlife Refuge

Date: July 2020

This environmental assessment (EA) was prepared to evaluate the effects associated with the proposed action and complies with the National Environmental Policy Act (NEPA) in accordance with Council on Environmental Quality regulations (40 Code of Federal Regulations [CFR] 1500–1508) and Department of the Interior (43 CFR 46; 516 DM 8) and United States (U.S.) Fish and Wildlife Service (Service) (550 FW 3) regulations and policies. NEPA requires examination of the effects of proposed actions on the natural and human environment.

1.0 Introduction

1.1 Proposed Action

The Service has proposed to open or expand hunting opportunities for upland game including state-defined furbearers (fox, raccoon, badger, bobcat, mink, muskrat, weasel, opossum, and striped skunk), coyotes, grey squirrels, jackrabbits, migratory birds (crow, rail, and woodcock), and turkeys on the Kirwin National Wildlife Refuge (NWR) in accordance with the refuge’s proposed Kirwin National Wildlife Refuge 2020 Hunting and Fishing Plan. The refuge is located in north-central Kansas, near Phillipsburg in Phillips County (Figure 1).



Figure 1. National Wildlife Refuge Locations in Kansas.

The proposed action is a step-down management plan that is an extension of the refuge's 2006 comprehensive conservation plan (CCP), which can be found here: www.fws.gov/mountain-prairie/refuges/refugesUpdate/completedPlanPDFs_F-L/kw_2006_ccpfinal_all.pdf. The action supports a national effort to expand hunting opportunities on public lands (Secretarial Orders 3347 and 3356). Hunting opportunities were evaluated during the development of the CCP and have been occurring for many years on the refuge with little to no biological concerns. Existing hunting uses on the refuge would continue, and additional hunting opportunities are proposed in this EA (Figure 2). Trapping and running wildlife are not evaluated in the hunting plan and therefore are not analyzed in this EA. Hunting opportunities were approved as public use activities at the completion of the CCP, but a more detailed plan (Proposed Action Alternative below) is required before additional hunting opportunities can be implemented.

Hunting on the refuge is permitted on approximately 5,800 refuge acres, in accordance with the applicable federal and state regulations. The refuge's hunting and fishing plan and associated EA propose to:

Open Hunting Opportunities for New Species: upland game (furbearers including fox, raccoon, badger, bobcat, mink, muskrat, weasel, opossum, and striped skunk), grey squirrels, jackrabbits, and migratory birds (crow, rail, and woodcock)

- No new hunting acres are being proposed.
- Regulations for proposed opportunities would vary by unit (open and closed areas).
- Proposed revisions to season dates include new seasons associated with new species occurring during a period of September 1 through April 30.
- Changes to the administration are being proposed (for example, the Service would control hunts but would coordinate with state programs).

Expand Hunting Opportunities: archery-only season for turkey

- Archery-only turkey hunting allowed on 2,095 acres is being proposed.
- Regulations for proposed opportunities would vary by unit (open and closed areas).
- No revision to season dates is being proposed. The refuge would remain open to hunting September 1 through April 30.
- No revision to the bag limit is being proposed (except associated with new hunts and new species).
- No changes to the administration of hunting are being proposed (besides new hunts mentioned above).
- No changes to opportunities for targeted demographics are being proposed. Youth and disabled seasons for other species are already allowed.

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 is made at the conclusion of the public comment period for the EA and the Draft 2020–2021 Refuge-Specific Hunting and Sport Fishing Regulations. The Service cannot open a refuge

to hunting until a final rule has been published in the Federal Register formally opening the refuge to hunting.

1.2 Background

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

The refuge was established under the following authorities and for these purposes:

- “. . . for use as an inviolate sanctuary, or for any other management purpose, for migratory birds” (Migratory Bird Conservation Act 1929 [16 U.S. Code 715d]).
- “. . . for the development, advancement, management, conservation, and protection of fish and wildlife resources” (Fish and Wildlife Act of 1956 [16 U.S. Code 742fa4]).
- “. . . for the benefit of the Service, in performing its activities and services” (Fish and Wildlife Act of 1956 [16 U.S. Code 742fb1]).
- NWRSA, as amended
- Improvement Act

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

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

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

- provide for the conservation of fish, wildlife, plants, and their habitats within the Refuge System;
- ensure that the biological integrity, diversity, and environmental health of the Refuge System are maintained for the benefit of present and future generations of Americans;
- ensure that the mission of the Refuge System described at 16 U.S. Code 668dd(a)(2) and the purposes of each refuge are carried out;
- ensure effective coordination, interaction, and cooperation with owners of land adjoining refuges and the fish and wildlife agency of the states in which the units of the Refuge System are located;
- assist in the maintenance of adequate water quantity and water quality to fulfill the mission of the Refuge System and the purposes of each refuge;

- recognize compatible wildlife-dependent recreational uses as the priority public uses of the Refuge System through which the American public can develop an appreciation for fish and wildlife;
- ensure that opportunities are provided within the Refuge System for compatible wildlife-dependent recreational uses; and
- monitor the status and trends of fish, wildlife, and plants in each refuge.

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

The refuge has special designations demonstrating its importance to natural resource conservation:

- Solomon-River Grasslands Research Natural Area (1967); and
- American Bird Conservancy Important Bird Area Program (2002) (www.landscape.org/focus/understand/audubon_iba/).

The refuge supports habitat used by several federal-listed and state-listed species and other resources of conservation concern. The abundant and diverse resources of the refuge are a draw for multiple public use activities. Therefore, management promotes a wildlife-first mission and a balance of compatible wildlife-dependent public use opportunities.

In considering hunting regulations, primary factors in decision-making on the refuge were public safety and the protection of species of conservation concern. With these in mind, the following information is relevant and provides context in evaluating proposed actions. Public lands comprise 0.74 percent of Kansas (Kansas Department of Wildlife, Parks and Tourism [KDWPT] 2018), which is a relatively small wildlife protection area that provides multiple public use opportunities. While the refuge is a popular destination in Kansas, many different visitor uses occur within the boundaries. There are no fees or registration associated with visiting the refuge, and it is open to public access with the exception of indicated closures (such as signs) for species, habitat, or public protection. This 10,778-acre refuge supports diverse wildlife habitat, including grasslands, wooded riparian areas, open water, and wetlands. Therefore, different hunting and other public use opportunities exist and have the potential to be in close proximity. Also, several commercial hunting operations surround the refuge providing additional opportunities for public use and revenue for the local communities.

The refuge is widely recognized as a premiere fishing destination each spring. Many professional photographers visit the refuge on a regular basis in pursuit of picturesque wildlife and the general appreciation of natural resources and scenic views. Peak visitation usually occurs in spring and fall during bird migration and when the best fishing occurs. Annual visitation has recently been estimated at 40,000 to 90,000 people, not including public outreach events and environmental educational programs that occur annually.

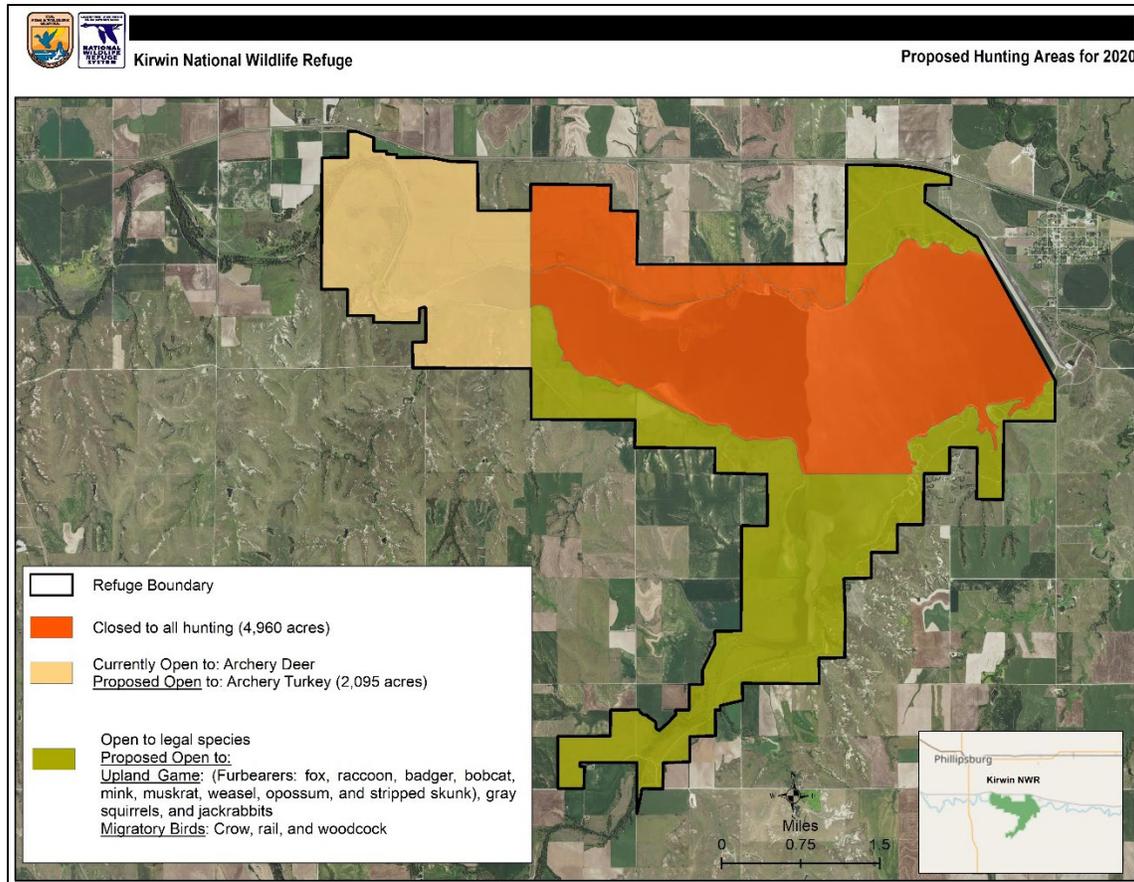


Figure 2. Current and Proposed Hunting Opportunities at Kirwin National Wildlife Refuge.

1.3 Purpose and Need for the Proposed Action

The purpose of this proposed action is to expand compatible wildlife-dependent recreational opportunities on the refuge. The need of the proposed action is to meet the Service’s priorities and mandates as outlined by the NWRSAA to “recognize compatible wildlife-dependent recreational uses as the priority general uses of the Refuge System” and “ensure that opportunities are provided within the Refuge System for compatible wildlife-dependent recreational uses” (16 U.S. Code 668dd[a][4]). The focus of this proposal is to provide new and expanded opportunities to hunt upland game that include state-defined furbearers (fox, raccoon, badger, bobcat, mink, muskrat, weasel, opossum, and striped skunk), coyotes, grey squirrels, jackrabbits, migratory birds (crow, rail, and woodcock), and turkeys (Figure 2).

The Service received a great deal of feedback on proposed activities during the development of the CCP. Collectively, the public comments and discussions with interested parties demonstrated the need for an appropriate balance of consumptive and nonconsumptive compatible uses and interests associated with the refuge. The Service stated, “When evaluating public use activities on the refuge, we applied an objective approach by placing discussions within the context of Refuge System laws, policies, and guidance. Key considerations were the Refuge System mission, priorities found in the Improvement Act, and the purposes of the refuge. Applying these principles included, but was not limited to, (1) reducing risk to threatened, endangered, and

protected species; (2) considering the safety of refuge staff and the public, which is mission critical; and (3) carrying out actions that ensure compliance with laws and regulations.” In accordance with the recent CCP in expanding hunting opportunities, the Service considers the potential effects on other wildlife using refuge land; multiple co-occurring public use activities; and impacts on wildlife populations and habitat by expanding hunting opportunities to include refuge lands. The proposed actions support accomplishment of hunting goals and objectives as part of the 2006 CCP (www.fws.gov/mountain-prairie/refuges/refugesUpdate/completedPlanPDFs_F-L/krw_2006_ccpfinal_all.pdf).

2.0 Alternatives

2.1 Alternatives Considered

Alternative A – Expand Hunting Opportunities – Proposed Action Alternative

The Service has prepared a hunting and fishing plan that is presented in this document as the Proposed Action Alternative. Hunting opportunities are provided for new species and methods of use and seasons on the refuge.

Open hunting opportunities for new species:

Upland game (furbearers including fox, raccoon, badger, bobcat, mink, muskrat, weasel, opossum, and striped skunk), grey squirrels, jackrabbits, and migratory birds (crow, rail, and woodcock).

- No new hunting acres are being proposed.
- Regulations for proposed opportunities would vary by unit (open and closed areas).
- Proposed revisions to season dates include new seasons associated with new species occurring during a period of September 1 through April 30.
- Changes to the administration are being proposed (for example, the Service would control hunts but would coordinate with state programs).

Expand hunting opportunities:

Archery-only season for turkey.

- Archery-only turkey hunting allowed on 2,095 acres is being proposed.
- Regulations for proposed opportunities would vary by unit (open and closed areas).
- No revision to season dates is being proposed. The refuge would remain open to hunting September 1 through April 30.
- No revision to the bag limit is being proposed (except associated with new hunts and new species that would follow state-established bag limits).
- No changes to the administration of the hunt are being proposed (besides new hunts mentioned above).
- No changes to opportunities for targeted demographics are being proposed. Youth and disabled seasons for other species are currently allowed.

For clarification, the use of the term “special hunt” is used below in accordance with how the state recognizes special hunts. The Service usually considers a hunt to be a special hunt if it occurs outside of a regular season. The special hunts proposed below occur within regular state seasons but may differ in the time (days, months) regularly allowed.

No Changes are Being Proposed to the Following:

Methods of Take (Overall)

- No changes are proposed for the following prohibited methods of take: centerfire rifle, rimfire rifle, pistol or handgun, muzzle-loading rifle, trapping, running coyote or furbearers, and hunting from vehicles. These activities remain prohibited. The refuge requires nontoxic ammunition (shot) to be used for all shotgun hunting. Archery equipment is allowed in concurrence with state regulations. The refuge does not allow falconry as a method of take for any species. Specific methods of take by species, or group of species, are identified under “Species to Be Taken” and regulations described in more detail below.

Areas to Be Opened or Closed to Hunting

- Parts of the refuge are posted as hunting areas and are shown on the map in the brochure (also see Figure 2). Hunting is not permitted outside the hunt area or from across roads, trails, or parking areas.
- Refuge hunting areas are open for hunting activities occurring September 1 through April 30, as described in the hunting and fishing plan.

Hunting Hours

- While the refuge is open 24 hours per day, hunting hours are only during daylight when game is visible. Legal hunting hours are one half hour before sunrise to one half hour after sunset for some species like deer or furbearers. Access and set up time prior to legal hunting hours is allowed. Hunting hours are established by state regulations unless special circumstances require changes that would be posted at the time of these changes. There is no extended waiting or excessive setup time allowed during hunt closed hours each day; this would be considered camping, which is not permitted.

Parking, Camping, Fires, and Boating

- Motorized vehicles are permitted only on developed roads and parking areas. Driving off roads or on roads marked as closed by signs or barriers is prohibited. Parking in front of gates or on bridges or water-control structures is prohibited.
- Overnight camping is prohibited.
- Fires of any type are prohibited.
- The use of boats, canoes, and other watercraft is permitted 24 hours per day from April 1 to October 1 on designated areas of the reservoir, with the possibility to be open after October 1 if the water level in the reservoir is at or above 1,722 feet. Permitted watercraft use may continue throughout the winter, or until the pool elevation drops below 1,722 feet.

Refuge and Cultural Resources

- All government property, including natural items such as antlers, plants, historic, and archaeological features are protected by federal law. Searching for or removal of objects of antiquity or other value is strictly prohibited.

Closures

- The refuge supports many species of conservation concern. All areas on the refuge may be closed to hunting for the protection of whooping cranes or other species, habitat, or the public as determined by the Service. Closed area signs apply to all public use activities. The Service may close hunting of species on the refuge if there is a concern about a long-term decline or sudden decline in the population at regional, state, or larger scales, though the state traditionally adjusts hunting regulations based on population trends.

Species to Be Taken – Migratory Gamebirds (State-Defined)

- The Service proposes to continue to allow the current migratory gamebirds hunted on the refuge, but would add crow, woodcock, and rail. Migratory gamebirds may be hunted during state-established seasons starting September 1 through April 30 (all hunting is prohibited on the refuge from May through August). Hunting sandhill crane is not permitted under either alternative. Methods of take for approved species are archery equipment or shotgun no larger than 10 gauge. Shotguns must not be capable of holding more than three shells while hunting migratory gamebirds.

Species to Be Taken – Upland Gamebird (Pheasant, Greater Prairie Chicken, and Quail [Bobwhite])

- Maintain current hunting regulations. Overall, permitted methods of take would be archery equipment and shotgun no larger than 10 gauge with nontoxic ammunition (shot) only in concurrence with state regulations.

Species to Be Taken – Small Game (Squirrel and Rabbit)

- The refuge is currently open to hunting of fox, squirrel, and cottontail rabbit.
- Methods of take permitted are archery equipment and shotgun no larger than 10 gauge with nontoxic ammunition (shot) in concurrence with state regulations.
- All methods of take are the same under both alternatives.
- Use of bait is prohibited.
- Use of decoys and calls is permitted, consistent with state regulations and refuges in Kansas.
- Maintain current seasons for the refuge (state seasons that start before September would be allowed starting September 1 and running through the legal season or until April 30, whichever comes first, excluding May through August).
- *Note:* Cottontail are common, but squirrel and jackrabbit have been fairly uncommon on the refuge in the last decade.

Changes are Being Proposed to the Following:

Methods of Take (Overall)

- A new method of take is proposed for hunting turkey in an area that did not permit turkey hunting before. Archery equipment would be allowed for turkey in the archery deer-hunting unit on the western portion of the refuge.
- For all deer-hunting opportunities, the Service is authorized to maintain control and flexibility in limiting the number of hunters and access permits, the days of hunting, and the methods of take with the use of programs. Administration would be coordinated with the state.

Species to Be Taken – Turkey

- Turkey hunting would be allowed in the archery deer-hunting unit, a change from current conditions. This area includes the area west of Solomon Bend and Quillback Cove (2,095-acre hunt unit).
- For all turkey hunting opportunities, the Service is authorized to maintain control and flexibility in limiting the number of hunters and access permits, the days of hunting, and the methods of take with the use of programs. Administration would be coordinated with the state.
- Methods of take include archery equipment and shotgun no larger than 10 gauge (nontoxic ammunition [shot] only) in concurrence with state regulations.
- Use of a dog for turkey hunting is not permitted.

Species to Be Taken – Coyote

- Coyote hunting would be permitted, a change from current conditions.
- Hunting would be permitted September through February when refuge hunt areas are open within the fall and winter hunting seasons.
- Limit of take in concurrence with state regulations (currently no limit).
- Methods of take permitted are archery equipment and shotgun no larger than 10 gauge (nontoxic ammunition [shot] only) in concurrence with state regulations.
- The use of electronic calls is permitted.
- No use of vehicles, radios, dogs, or bait.

Species to Be Taken – Upland Game (Known as Furbearer Under State-Defined Kansas Statute 115-25-11 Hunted Species That Include: Badger, Bobcat, Red Fox, Grey Fox, Swift Fox, Mink, Muskrat, Opossum, Raccoon, Striped Stripped Skunk, and Weasel)

- New upland game (state-defined furbearers) species permitted to be hunted on the refuge include badger, bobcat, fox, mink, muskrat, opossum, raccoon, striped skunk, and weasel.
- At any time, the Service may limit hunting opportunities to special hunts or programs to maintain control of the furbearer species allowed to be taken, number of access permits, the days of hunting, and methods of take. Otherwise, the Service would allow the state-defined limits (currently none) and the season described below.

- State-defined season excluding February 16 through August. Currently, state-defined as November 13 to February 15.
- The use of electronic calls is permitted.
- No hunting at night. The refuge is open for hunting one half hour before sunrise to one half hour after sunset following state-permitted take hours for each game species that is authorized for harvest on the refuge. Under state regulations, some species have legal take one half hour after sunset to one half hour before sunrise; however, the refuge would maintain closure to all nighttime hunting.
- Methods of take permitted are archery equipment and shotgun no larger than 10 gauge (nontoxic ammunition [shot] only) in concurrence with state regulations.
- No use of dogs would be allowed to pursue or chase the species specified in this section on the refuge.
- *Note:* Raccoons and striped skunks are common furbearers on the refuge. Daytime observations of other furbearers are not common in the recent decade. Although weasels have never been reported on the refuge, they are still a legal species for take by hunting.

Species to Be Taken – Migratory Gamebirds (State-Defined)

- Rail, woodcock, and crow are new species of migratory gamebirds that may be hunted.
 - Limited season to align with state-specified seasons (starting in September), but extending only through April 30 for crow. The refuge is closed to all hunting May through August.
 - Methods of take permitted are archery equipment and shotgun no larger than 10 gauge (nontoxic ammunition [shot] only) in concurrence with state regulations and incapable of holding more than three shells.
 - Take limits are concurrence with state regulations.
 - *Note:* Crows are not common on the refuge and are only occasionally seen in winter.
 - *Note:* Woodcock have not been seen on the refuge.
 - *Note:* Sora and Virginia rail do use vegetated wetland areas on the refuge. However, annual varying water levels typically increase or reduce the amount of habitat available.

As a result of public comment, state input, and guidance through the CCP development, the factors in the bulleted list below were considered in development of the proposed alternative.

- Management of the refuge will support native flora and fauna mentioned throughout the CCP (2006).
- Hunting activities would be closed in specific hunt units to protect the federally endangered whooping crane as determined by the Service. However, the Service would consider some exceptions related to special, controlled, permitted hunts, such as the limited use of archery in specially designated hunting areas (such as deer).

Under the proposed alternative, the Service would largely support the actions above but with minor changes to satisfy new efforts to improve alignment with state hunting regulations while preserving wildlife-compatible uses. For example, some newly proposed hunting regulations cover species that are rarely observed or not particularly abundant for hunting on the refuge, such as crow, mink, and badger. In these cases, refuge hunting effects on those species' populations would be negligible. Migratory bird, upland game (including furbearer), and turkey hunting opportunities are expanded, but limited in area, season, and method of take. Further, refuge closures are permitted for the protection of species, habitat, and the public as determined by the Service. The area proposed for new hunts are the same as the current hunt area (see Figure 4), which is nearly within the area approved in the CCP. A slight boundary adjustment would be made largely to facilitate administration of multiple public uses and to promote public safety.

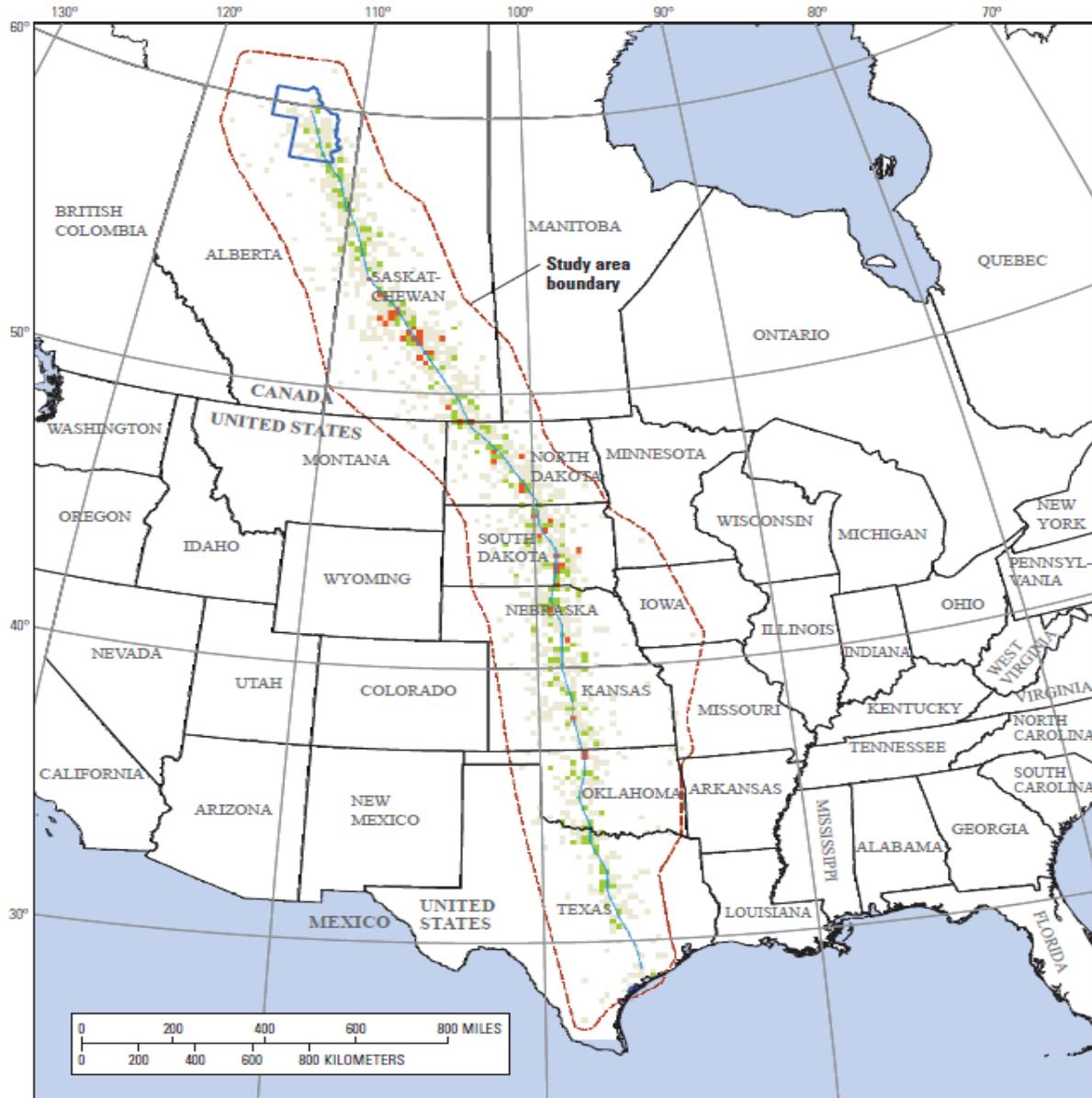
Mitigation Measures to Avoid Conflicts

Under the Proposed Action Alternative, expanded hunting opportunities would attract hunters not currently using the refuge. Outdoor experiences on refuges often lead to a greater appreciation for natural resources and conservation action. After thoughtful consideration, the Service has determined that the hunting and fishing plan is compatible with the purposes of the refuge and mission of the Refuge System.

The Service is able to establish regulations for individual species or portions of the refuge depending on conflicts with other wildlife-dependent priority uses. Hunting may be permanently or periodically closed to species or to areas of the refuge if the Service determines it is needed for wildlife, habitat, or public protection. Hunting opportunities are limited, such as in season, area, and methods of take to provide safe recreational experiences that are compatible with habitat goals and objectives and state and federal regulations. Implementation of the hunting and fishing plan would support applicable federal, refuge, and state regulations, and evaluation of mitigation measures would be conducted regularly.

Biological Conflicts

The Service reduces biological conflicts with regulations, management, and proactive adjustments in real time as needed. Hunting activities would be limited or not allowed where there are significant biological concerns, conflicts, or a high probability of a negative impact to species of conservation concern. Monitoring of species, habitat, and environmental conditions conducted by the state, Service, and other partners would be periodically reviewed to determine if any negative impacts to natural resources are occurring because of public use. Areas on the refuge are closed to hunting to provide sanctuary, and temporary closures and limitations in seasons and methods of take reduce hunting pressure and increase protection during specific wildlife events. For example, closures occur for the primary bird breeding season in the spring and early summer and also for the protection of whooping cranes during migration, potentially fall and spring because the refuge is identified as an extended-use core intensity site in Kansas for this species (Figure 3). Many of the proposed hunting opportunities occur in late fall and winter in upland habitat when upland-associated wildlife abundance and diversity are low relative to breeding and peak migration seasons and are limited to the refuge hunt unit during open hours (not at night).



Base map from Esri and is used herein under license (500 meter resolution).
 Universal Transverse Mercator projection, zones 13-14 N
 North American Datum of 1983 (NAD 83)

EXPLANATION

- Whooping crane migration corridor
- Low intensity
- Core intensity
- Extended-use core intensity
- Centerline

Figure 3. Site Use and Intensity of Areas within the Migration Corridor of the Aransas-Wood Buffalo Population of Whooping Cranes are Depicted, Adapted from Pearse et al. (2015).

Note: The refuge is identified as an extended-use core intensity site in Kansas, which may cause temporary closures on the refuge when these birds are present.

Refuge lands and management support many federally listed species. Below are species identified as federally threatened, endangered, or under a proposed listing or under review status for Phillips County, Kansas.

- Whooping crane (*Grus americana*): An endangered species listed for Phillips County, Kansas uses the refuge habitats during spring and fall migration (primary spring occurrence between March–April and fall occurrence between October–November).
- Interior least tern (*Sterna antillarum*): An endangered species listed for Phillips County, Kansas. It is an occasional visitor to the refuge. Nesting has been confirmed in the past with young produced in 1974, 1976, and 1980. Most of the suitable nesting habitat is on the east end of the reservoir. Fledging and dispersal activities mainly occur July to August when the refuge is closed to hunting activities.
- Piping plover (*Charadrius melodus*): A threatened species in Kansas, but the species occasionally stops at the refuge during migration. Peak population migration in spring is mid-April and, in fall, most birds arrive on the wintering grounds by August. Therefore, occurrence on the refuge would typically take place during closure of hunting activities.
- Red knot (*Calidris canutus rufa*): A threatened species wherever it is found. It has not been observed on the refuge. Reports of occurrence throughout the Midwest have been from mid-April through June and August through September. Hunting is closed on the refuge for most of the migration period. In September (when hunting activities are permitted), desired habitat conditions are not common.
- Northern long-eared bat (*Myotis septentrionalis*): A threatened species listed for possibly occurring in Phillips County, but on the western edge of its range. This bat overwinters in caves and mines, which do not occur on the refuge. It is thought that potential use on the refuge might be for roost sites (under tree bark, in hollow trees) along riparian areas or for foraging for insects. Most known reports are in north-central Kansas, but there are no known maternity roost trees or hibernacula on the refuge. Refuge management would be mindful of conservation measures under the interim 4(d) rule, including “cutting or destroying knowingly occupied roost trees during the pup season (June 1–July 31) will be avoided.” This period of use occurs when the refuge is closed to hunting.
- Lesser prairie chicken (*Tympanuchus pallidicinctus*): The status of this species is under review across its range, which includes Phillips County and the refuge. Occurrence on the refuge is rare and is not observed every year, unlike the greater prairie chicken. Historic range distribution of greater and lesser prairie chickens overlapped in areas south of the refuge.

An Endangered Species Act Section 7 consultation would be conducted before the hunting and fishing plan is approved or finalized. Other species in review as part of the Endangered Species Act process in the area of the refuge include:

- Monarch butterfly: Petitioned, 12-month finding planned for fiscal year 2021. Monarchs are common on the refuge, especially during fall migration in September. Often, 300 to 400 monarchs are tagged on the refuge at that time.
- Regal fritillary: Petitioned, 12-month finding planned for fiscal year 2022. This species does occur on the refuge, but it is not as common as the monarch.

- Tri-colored bat: Petitioned, 12-month finding planned for fiscal year 2021. This species is not known to occur on the refuge. A bat survey has been conducted on the refuge.
- Little brown bat: Discretionary status review, fiscal year 2023. A bat survey has not been conducted on the Refuge. If it occurs, then it is most likely on the refuge in summer when trees and water (insects) would be desirable habitat components.
- Golden-winged warbler: Petitioned, 12-month finding planned for fiscal year 2023. This has been reported as an accidental species on the refuge.

An Endangered Species Act Section 7 consultation would be conducted before the hunting and fishing plan is approved or finalized. These species would not be part of the Section 7 consultation associated with the current plan but might influence management decisions in the future, depending on status and protection determinations.

Public Use Conflicts

The Service reduces potential public use conflicts among hunting activities and other compatible recreational uses on the refuge through the designation of open and closed areas to hunting and with implementation of state, federal, and refuge-specific regulations. Areas administratively open to hunting are shown on refuge hunt and fish brochures and signs show areas closed. In addition, limitations in hunt seasons and methods of take further promote public safety and an appropriate balance of multiple hunting activities and other compatible visitor opportunities. Overall, it is not anticipated that conflicts under this alternative would be greatly changed from current conditions, largely because some hunting has already been permitted in upland and wetland habitats on the refuge hunt units from September 1 to April 30. If conflicts occur, the Service expects those instances to generally be minor, temporary, and limited to local impacts.

Administrative Use Conflicts

The greatest potential for administrative use conflicts relates to the implementation of refuge habitat management activities in areas and seasons open to hunting. In instances of prescribed burning, the Service checks the area for visitors and monitors access roads during the burn activity. Water and other management activities and refuge monitoring may cause temporary closures of an area to hunting or cause temporary interruption to visitor use activities.

Management activities that are unusual and conducted over a long time period (such as construction), are typically posted to the refuge web site or otherwise communicated to the public (by phone, news release, or temporary signage).

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

Alternative B – Current Hunting Opportunities – No Action Alternative

Hunting opportunities already exist on the refuge (Figure 4). Hunting is permitted on 5,734 acres of refuge lands that do not include the lake acres in some areas so the total area open to hunting varies annually because the pool elevations in the reservoir vary annually. Hunting of waterfowl (teal, ducks, coots, mergansers, and geese), pheasant, greater prairie chicken, quail, dove, fox squirrel, deer, turkey, and cottontail rabbit is currently allowed (and would continue to be) during regular state seasons that occur within the period of September 1 through April 30, in accordance

with applicable federal and state regulations. Light Goose Spring Conservation Order season is open on the refuge from February 17 to April 30 each year.

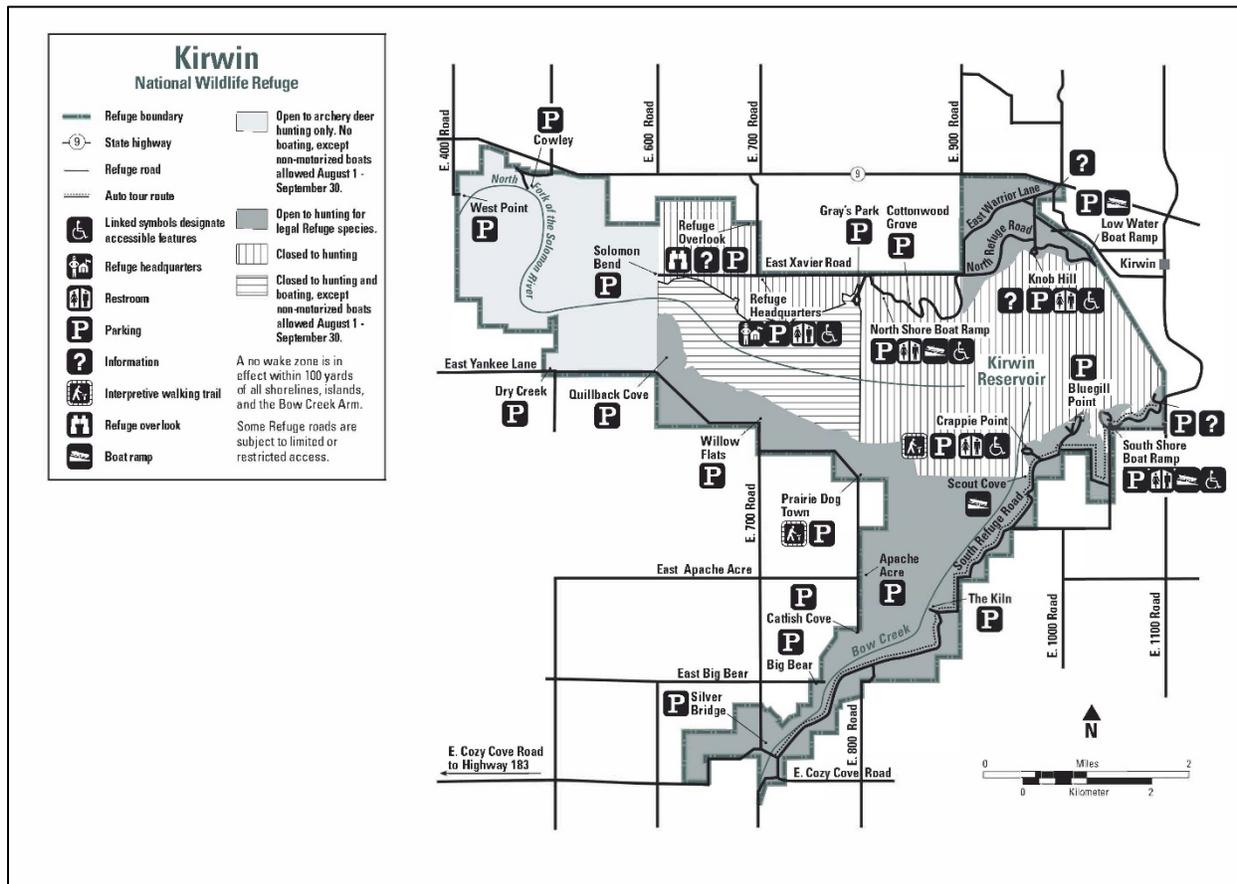


Figure 4. Hunting and Closed Areas on Kirwin National Wildlife Refuge, Reflective of 2019 Conditions.

Prohibited hunting activities including the use of rifles, pistols, and falconry would remain prohibited under both alternatives. Current regulations do not afford opportunities to hunt furbearers, coyotes, jackrabbits, grey squirrels, or three additional migratory birds: woodcocks, rail, and crows. Hunting is an approved use of the refuge as described in the CCP, but a step-down management plan with more detail (Proposed Action Bear Alternative) is needed for implementation of any changes to the current hunting opportunities. Therefore, these above-listed species are currently not legal game animals on the refuge in accordance with Service policy.

Besides hunting, many other public uses occur on the refuge that are generally associated with environmental education, interpretation, natural resource observation, and photography. These uses would continue under both alternatives, but the hunting area would be shared with increased hunting opportunities from September 1 through April 30.

Refuge management activities, such as prescribed burning, prescribed grazing, wetland water-level manipulation, invasive species control, rest, and habitat reconstruction and restoration,

would continue under both alternatives using strategies consistent with recent CCP habitat-based goals and objectives (2006).

Alternative(s) Considered but Dismissed from Further Consideration

The Service allows hunting of greater prairie chicken on the refuge. Recent trends in harvest do cause some concern about the population status and may invoke closure discussions in the future (see harvest trends below in Figure 5; KDWPT 2019c) the refuge is near (one county south) the state-closed southwest prairie chicken unit. Historically, lesser and greater prairie chicken distribution ranges overlapped the refuge. Currently, lesser prairie chicken status is under review, which may affect the future of hunting prairie chickens on the refuge. Refuge habitat management supports native plant communities and conditions preferred by prairie chickens, encouraging future prairie chicken use of the refuge.

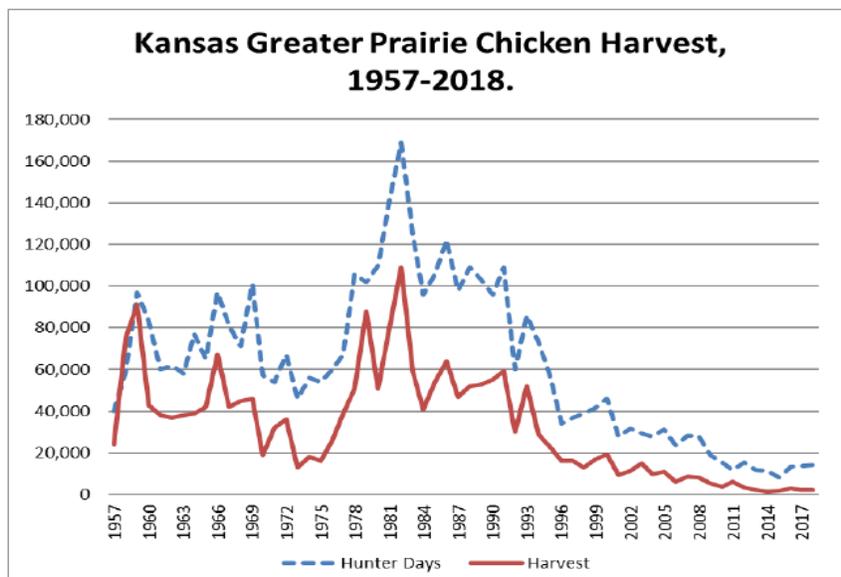


Figure 5. Greater Prairie Chicken Harvest in Kansas (KDWPT 2019c).

3.0 Affected Environment and Environmental Consequences

3.1 Affected Environment

This overlay refuge consists of approximately 10,778 acres in Phillips County, Kansas (see Figure 4). The refuge is primarily a prairie grassland, cropland, open water, shoreline, wetland, and wooded riparian complex. The Service does not regulate water levels because the water is managed by the Bureau of Reclamation and the Kirwin Irrigation District to support water recreation activities and cropping.

The larger landscape setting is dominated by agricultural uses, both cropland and rangeland. In recent decades, corn and wheat fields are common around the refuge and rangeland is primarily for cattle. Hunting activities occur on, in areas next to, and near refuge lands. Waterfowl and big game hunting are common on surrounding private lands.

For more detailed information regarding the affected environment, refer to Chapter 3 (Refuge Resources and Description) of the refuge's CCP (2006), which can be found here: www.fws.gov/mountain-prairie/refuges/refugesUpdate/completedPlanPDFs_F-L/krw_2006_ccpfinal_all.pdf.

Tables 1 through 6 provides brief descriptions of each resource affected by the proposed action.

3.2 Environmental Consequences of the Action

This section analyzes the environmental consequences of the action on each affected resource, including direct and indirect effects. This EA only includes the written analyses of the environmental consequences on a resource when the impacts on that resource could be more than negligible and therefore considered an "affected resource." Any resources that would have a less than negligible impact by the proposed action have been dismissed from further evaluation.

Tables 1 through 5 provide:

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

Table 6 provides a brief description of the cumulative impacts of the proposed action and any alternatives.

Impact Types:

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

The refuge's completed EA, which can found at www.fws.gov/mountain-prairie/refuges/refugesUpdate/completedPlanPDFs_F-L/krw_2006_ccpfinal_all.pdf, was included in the development of a CCP (2006). The CCP and associated EA public comments were considered in development of the refuge hunting and fishing plan and this EA. This EA provides details and specific analyses of the proposed action, a step-down plan of the CCP.

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

| <p>Affected Resources</p> | <p><u>Alternative A (Proposed Action)</u> <i>Hunting opportunities would be opened or expanded for upland game including furbearers, coyotes, grey squirrels, jackrabbits, migratory birds, and turkeys on Kirwin NWR.</i></p> | <p><u>Alternative B (No Action)</u> <i>Hunting opportunities would continue at existing levels at Kirwin NWR.</i></p> |
|---|---|---|
| <p>Turkey</p> | | |
| <p>Turkey populations have increased on the refuge since establishment but are not considered abundant. According to personal communications with the state, turkey populations have seen regional (the refuge is in the northcentral turkey unit) and statewide declines in 2018 based on roadside survey data (KDWPT 2019b; see Figure 6). However, state hunting regulations are typically adjusted to manage changes in population status and trends.</p> | <p><i>Archery turkey estimated take: fewer than 15 annually, at least at current population levels in the archery-only unit. The Service would allow turkey hunting but maintains the ability to limit hunting. The Service would have the ability to address concerns of population trends or compatibility issues. Hunting would be limited to the refuge hunt in the archery-only unit to the fall season. Hunting of deer is already permitted within the hunt unit during this time. Impacts would be negligible.</i></p> | <p>This alternative would have neutral effects on the population because hunting is permitted under current conditions and very few turkeys can be found on the refuge.</p> |
| <p>Coyote</p> | | |
| <p>Coyote are common on the refuge. Coyotes are often seen foraging on birds on the frozen marshes in winter, small rodents, and other resident species in the summer.</p> <p>The 2015 Kansas Summer Roadside Survey Report (KDWPT 2015) shows increasing trends of coyote statewide (Figure 7). Furthermore, the coyote hunter activity report estimates 2,710 hunters pursuing coyote with 7 percent of the statewide harvest occurring in the northern high plains area (that includes the refuge) in 2018–2019 (KDWPT 2019c).</p> | <p><i>Refuge harvest estimate: Based on an estimated average of 0.40 coyote per day over a 240-day refuge season, projected refuge harvest is estimated at 96 coyotes. We do not expect coyote hunting would occur every day of the season, nor do coyote hunters want to pursue this species unless the weather is favorable to harvest a coyote without using a rifle or pistol that are illegal weapons on the refuge. Also, considering the refuge hunt limitations (such as no use of vehicles or artificial lights, no dogs, and the hours) and the relatively small size of the hunt areas, it is expected that the actual take would be fewer than 25 animals annually.</i></p> | <p>This alternative would have neutral effects on the population because hunting is not permitted under current conditions.</p> |

| Affected Resources | <u>Alternative A (Proposed Action)</u> <i>Hunting opportunities would be opened or expanded for upland game including furbearers, coyotes, grey squirrels, jackrabbits, migratory birds, and turkeys on Kirwin NWR.</i> | <u>Alternative B (No Action)</u> <i>Hunting opportunities would continue at existing levels at Kirwin NWR.</i> |
|--|--|---|
| Small Game | | |
| <p>Cottontails are common on the refuge and statewide harvest appears to be stable (KDWPT 2019c).</p> <p>Both species of squirrel and black-tailed jackrabbit are not very abundant on the refuge. However, statewide squirrel and black-tailed jackrabbit observations have both shown a steady increase from 1998 to 2008 (KDWPT 2008). Yet harvest based on hunter activity data show a steady decline in squirrel harvest (KDWPT 2019c; see statewide harvest below) and jackrabbit harvest in the Northern High Plains area estimate 250 total animals with fewer than 300 hunters perusing this species (KDWPT 2019c), suggesting that opening the hunting season for these species would have a very low cumulative impact.</p> | <p>Hunting would continue to be allowed with the addition of grey squirrel and black-tailed jackrabbit. With new species and expanded opportunities, there is potential for hunting impact to be slightly more than the No Action Alternative. Still, effects on regional and state populations are expected to be negligible (see under cumulative impacts).</p> | <p>Hunting is currently permitted and has not had adverse impacts on local populations.</p> |
| Upland Game (State-Defined Furbearers) | | |
| <p>(Hunted species: badger, bobcat, red fox, grey fox, swift fox, mink, muskrat, opossum, raccoon, striped skunk, and weasel.)</p> <p>Furbearers that seem most common or abundant on the refuge are raccoon and striped skunk. It is possible that bobcats are common, but sightings are uncommon during daylight hours. Mink are rarely seen on the refuge and opossum sightings are uncommon. Badger and muskrat are only seen occasionally during daylight hours.</p> <p>The 2015 Kansas Summer Roadside Survey Report (KDWPT 2015) show increasing trends of furbearer species statewide based on roadside indexes from 1986 to 2015 (Figures 8, 9, and 10).</p> | <p><i>Refuge harvest estimate:</i> Hunter participation in fur harvest is estimated at 22.2 percent (n = 1,398) of all fur harvest license holders (5,627 in the 2017–2018 season). Other refuges in Kansas have reported low rates of furbearer hunting in recent years and similar participation is expected. Considering low abundance of many furbearer species and refuge hunt limitations (such as hours, weapons, and no dogs), the potential take would likely be negligible in proportion to regional or state numbers.</p> | <p>This alternative would have neutral effects on the population because hunting is not permitted under current conditions.</p> |

| Affected Resources | <u>Alternative A (Proposed Action)</u> <i>Hunting opportunities would be opened or expanded for upland game including furbearers, coyotes, grey squirrels, jackrabbits, migratory birds, and turkeys on Kirwin NWR.</i> | <u>Alternative B (No Action)</u> <i>Hunting opportunities would continue at existing levels at Kirwin NWR.</i> |
|---|---|---|
| | State-defined hunted furbearer species that are most common on the refuge might have a greater likelihood of being affected by hunting include raccoon, bobcat, and striped skunk. Populations of these furbearer species are generally stable or increasing statewide. If a slight decline in local populations occurs, it may have positive impacts on bird populations (such as decreased predation on eggs as a food source) and other prey species that occur on the refuge. Also, the Service maintains the ability to limit hunting, in part, to have the ability to address concerns about declining population trends or compatibility issues. | |
| Upland Gamebird (Pheasant, Bobwhite) | | |
| Ring-necked pheasant and bobwhite quail are common on the refuge. Numbers for many wildlife species decreased in the region following an extended extreme drought period (2011–2012). Statewide survey data from 2019 are depicted in Figures 11 and 12 for pheasant and bobwhite, respectively. Results of the Kansas 2019 Pheasant Crowing Survey by region (the refuge is in the Northern High Plains) are presented below in Figure 13 (KDWPT 2019a) and upland bird brood counts (KDWPT 2019b). The refuge occurs in the Northern High Plains. In Kansas, these surveys are an indication of breeding production potential because winters often are mild and do not adversely affect populations. | No change under the proposed alternative. | Hunting of pheasant and bobwhite already occurs on the refuge. The refuge is located in a region with some of the highest densities of pheasant and bobwhite in Kansas. |

| Affected Resources | <u>Alternative A (Proposed Action)</u> <i>Hunting opportunities would be opened or expanded for upland game including furbearers, coyotes, grey squirrels, jackrabbits, migratory birds, and turkeys on Kirwin NWR.</i> | <u>Alternative B (No Action)</u> <i>Hunting opportunities would continue at existing levels at Kirwin NWR.</i> |
|---|---|--|
| Crow | | |
| <p>American crows are widespread and long-term population trends continue to increase nationally and worldwide (Verbeek and Caffrey 2002; https://birdsna.org/Species-Account/bna/species/amecro/introduction). However, crows are not often observed on the refuge during the hunting season.</p> | <p>Under the proposed alternative, permitted hunting of crows is expected to have negligible impacts because they are uncommon during the hunting season.</p> | <p>This alternative would have neutral effects on the population because hunting is not permitted under current conditions.</p> |
| Other Wildlife and Aquatic Species | | |
| <p>The refuge is widely known for supporting an abundance and diversity of wildlife species in northcentral Kansas. Overall peak numbers of migratory birds occur in spring and fall, but high numbers of individual species or groups vary within that period. Many species occurring on the refuge are of conservation concern, and several of these occur during the breeding season. Some species associated with the open water area of the refuge occur year-round, while others for only parts of the life cycle. More detailed descriptions are available in the refuge CCP (2006).</p> | <p>Impacts described under the Proposed Action Alternative also apply to the No Action Alternative. Though the area and season of combined hunting opportunities is not different between alternatives, there could be disturbance related to increased human presence and noise associated with hunting. However, the Service maintains the ability to mitigate potential conflicts through limitations of hunting access permits, days of hunting, and methods of take for many opportunities permitted under this alternative. With the frequency of hunting activity likely increasing under this alternative, the Service expects minor impacts on nontarget wildlife on parts of the refuge during the hunting season.</p> <p>Minor to moderate beneficial impacts are anticipated with respect to declines in predators of many nongame species, and increased exposure to outdoor experiences that have the potential to include observations and educational opportunities related to nongame species.</p> | <p>The entire refuge is not open to hunting in part to provide sanctuary for wildlife and to allow multiple outdoor experiences to appreciate wildlife and other natural resources. The largest concentrations of waterfowl occur within the closed areas that cover the main lake and the western portions of the lake.</p> <p>Many migratory songbirds breed and winter on the refuge, but preferred habitat conditions are available in areas closed to hunting. Some hunting is limited in October and November when neotropical birds and whooping cranes migrate through the area.</p> |

| <p style="text-align: center;">Affected Resources</p> | <p style="text-align: center;"><u>Alternative A (Proposed Action)</u></p> <p><i>Hunting opportunities would be opened or expanded for upland game including furbearers, coyotes, grey squirrels, jackrabbits, migratory birds, and turkeys on Kirwin NWR.</i></p> | <p style="text-align: center;"><u>Alternative B (No Action)</u></p> <p><i>Hunting opportunities would continue at existing levels at Kirwin NWR.</i></p> |
|--|--|--|
| | | <p>With many birding activities occurring throughout the year, observations of significant adverse long-term impacts from hunting on nongame wildlife are not known to have been reported by the public or refuge staff. Otherwise, those reports have been few and impacts seem temporary or limited.</p> <p>In the area open to hunting, allowable seasons are limited and disturbances are largely temporary. The spring conservation order allows hunting light geese from February through April and hunting is allowed on the refuge. However, very few hunters pursue this species on the refuge during the conservation order so the impacts to nongame wildlife are limited.</p> <p>The Service has the ability to close areas for the protection of wildlife to mitigate possible conflicts. This has been demonstrated in closing areas to protect nesting eagles and migrating whooping cranes. Furthermore, federal regulations are enforced for the protection of wildlife and the public.</p> |

| <p style="text-align: center;">Affected Resources</p> | <p style="text-align: center;"><u>Alternative A (Proposed Action)</u></p> <p><i>Hunting opportunities would be opened or expanded for upland game including furbearers, coyotes, grey squirrels, jackrabbits, migratory birds, and turkeys on Kirwin NWR.</i></p> | <p style="text-align: center;"><u>Alternative B (No Action)</u></p> <p><i>Hunting opportunities would continue at existing levels at Kirwin NWR.</i></p> |
|---|---|---|
| <p>Threatened and Endangered Species and Other Special Status Species</p> | | |
| <p>The following species are threatened, endangered, proposed to be listed, or have a status under review in Phillips County: whooping crane (endangered), interior least tern (endangered), piping plover (threatened), red knot (threatened), northern long-eared bat (threatened), and lesser prairie chicken (status under review).</p> <p>The northern long-eared bat is not known to occur on the refuge. Lesser prairie chicken may have historically occurred on the refuge, but there have been no known occurrences in recent decades. Current management is providing habitat conditions that would encourage future use by prairie chicken species that may include the lesser prairie chicken.</p> <p>Interior least tern use the water areas on the refuge in low numbers during the breeding season. Main occurrence time for least terns is June through August.</p> <p>Piping plover have been observed on the shoreline near hunt areas during migration seasons. Peak migration for piping plover in spring is mid-April, so there could be hunting activity until May 1. It is unlikely that there would be any fall conflicts with hunting activities because most birds arrive on the wintering grounds by August.</p> <p>Red knot is another possible species that might occur on the refuge in wetland or along the shoreline of the reservoir. Occurrence of red knot passing through Kansas has been from mid-April to June and from August to September.</p> | <p>Impacts of hunting vary as a result of the permitted number of hunters, the hunt area, the season, hours, and methods of take. Shooting impacts include noise disturbance and take. Noise can have impacts beyond the hunt areas and take has associated risk of being incidental or accidental take. Therefore, mitigating actions may be necessary for the protection of listed species when they are using the refuge at a time when hunting season is open.</p> <p>Overall, current and proposed hunting activities are limited similarly in terms of area (hunt unit) and time (no hunting permitted May through August). The Service has the authority to close areas to hunting for the protection of listed species, such as whooping crane use within a hunt unit, to reduce possible effects of accidental take to insignificant or acceptable risk levels. In addition, state and refuge employees continue to educate hunters on identification of whooping cranes and other species to improve the potential to avoid accidental take. Other indirect measures that reduce accidental take include the use of nontoxic ammunition (shot), closure during the primary nesting season, and the ability of management to adapt to the current needs associated with areas open to hunting and the potential negative impacts on threatened and endangered species.</p> | <p>A Section 7 consultation determined that current management consistent with the CCP would affect but not likely adversely affect species and critical habitat (USFWS 2006). Since CCP approval, whooping crane populations and use of the refuge have continued to increase with the presence of hunting and other public use activities, and there have been no incidences of take.</p> |

| <p style="text-align: center;">Affected Resources</p> | <p style="text-align: center;"><u>Alternative A (Proposed Action)</u></p> <p><i>Hunting opportunities would be opened or expanded for upland game including furbearers, coyotes, grey squirrels, jackrabbits, migratory birds, and turkeys on Kirwin NWR.</i></p> | <p style="text-align: center;"><u>Alternative B (No Action)</u></p> <p><i>Hunting opportunities would continue at existing levels at Kirwin NWR.</i></p> |
|---|--|--|
| <p>Whooping cranes represent the greatest concern of any listed species in terms of risk associated with hunting seasons. It is one of the rarest species in North America, and the Aransas-Wood Buffalo population is the only naturally migrating population of whooping cranes in the world. There are slightly more than 500 individuals in the population (USFWS 2018–2019 winter survey estimate). Long-term temporal shifts in migration have been reported, occurring earlier in spring and later in fall (Jorgensen and Bomberger Brown 2017), which can coincide with many of the fall hunting seasons that extend into December, and the spring light goose conservation order. Past habitat use on the refuge has occurred mostly in the areas closed to hunting.</p> | <p>Impacts of hunting on listed species, especially using the refuge from September through April, have the potential to increase with increased hunting opportunities under the proposed action. However, mitigation measures mentioned above are applied under this alternative as well and are expected to limit impacts of hunting to acceptable risk levels (minor). The main noticeable difference between alternatives may be the increased noise and human presence factors associated with the proposed alternative.</p> <p>Close monitoring of whooping crane use of the refuge during migration (recovery plan action) would continue and actions would be adjusted for the protection (and recovery) of the species.</p> | |
| <p>Vegetation</p> | | |
| <p>There are no plants that are listed as threatened or endangered on the refuge. Detailed vegetation descriptions are included in the refuge CCP (USFWS 2006).</p> <p>Another concern is that hunting activities may introduce or increase the cover and distribution of invasive or exotic species throughout the hunting area, and with increased vehicle traffic through the refuge.</p> | <p>The hunting area and breeding season months when hunting is not permitted on the refuge remain the same under both alternatives. However, with an expected increase in the number of hunters using the refuge under this alternative, there is a higher potential for impacts of trampling, formation of trails, and spread of invasive species, but these impacts are expected to be dispersed due to the nature of hunting activity and temporary due to the limited hunting season. Moderate, beneficial impacts to vegetation may result with less deer browsing.</p> | <p>Negligible effects on vegetation have occurred from trampling by hunters, partly because of the area and time limited to hunting. However, it is not known if hunting impacts have influenced the spread of invasive species on the refuge.</p> |

| <p style="text-align: center;">Affected Resources</p> | <p style="text-align: center;"><u>Alternative A (Proposed Action)</u></p> <p><i>Hunting opportunities would be opened or expanded for upland game including furbearers, coyotes, grey squirrels, jackrabbits, migratory birds, and turkeys on Kirwin NWR.</i></p> | <p style="text-align: center;"><u>Alternative B (No Action)</u></p> <p><i>Hunting opportunities would continue at existing levels at Kirwin NWR.</i></p> |
|--|--|---|
| | <p>Hunting of species that dig burrows (badger) and influence vegetation coverage (muskrat) could have impacts on vegetation, habitat, and other wildlife that use the burrows and muskrat houses. However, these species are not considered abundant on the refuge and mortality of badger and muskrat is expected to be low in number due to proposed hunting limitations (such as refuge hunting hours, no trapping, only certain areas and months). Therefore, vegetation impacts associated with hunting of badger and muskrat are expected to be negligible.</p> | |

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

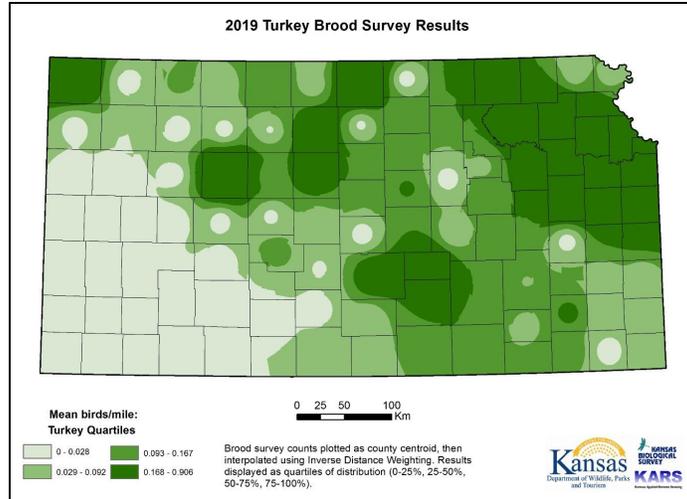


Figure 6. Relative Turkey Densities Estimated from Brood Survey Routes in Kansas, 2019 (KDWPT 2019b).

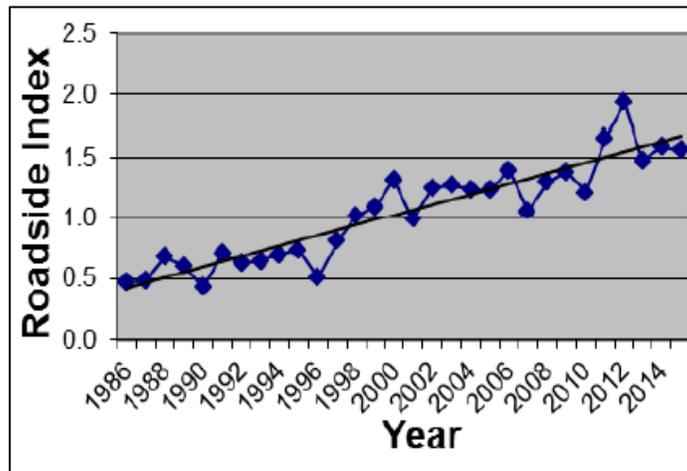


Figure 7. Coyote Population Trend Based on Roadside Surveys Completed across Kansas (KDWPT 2019c).

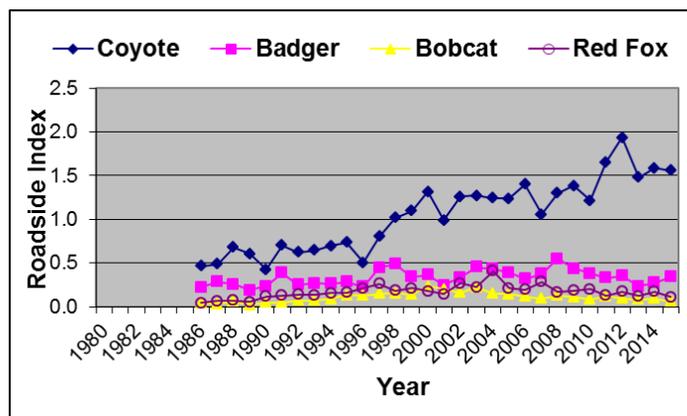


Figure 8. Population Trends of Coyote, Badger, Bobcat, and Red Fox in Kansas Based on Annual Roadside Indices (KDWPT 2015).

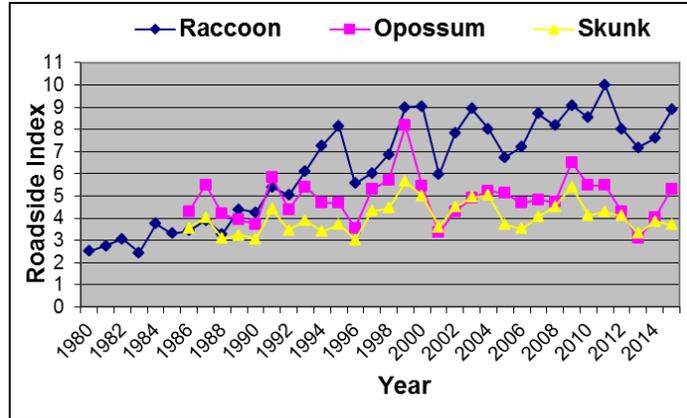


Figure 9. Population Trends for Raccoon, Opossum, and Skunk in Kansas Based on Annual Roadside Indices (KDWPT 2015).

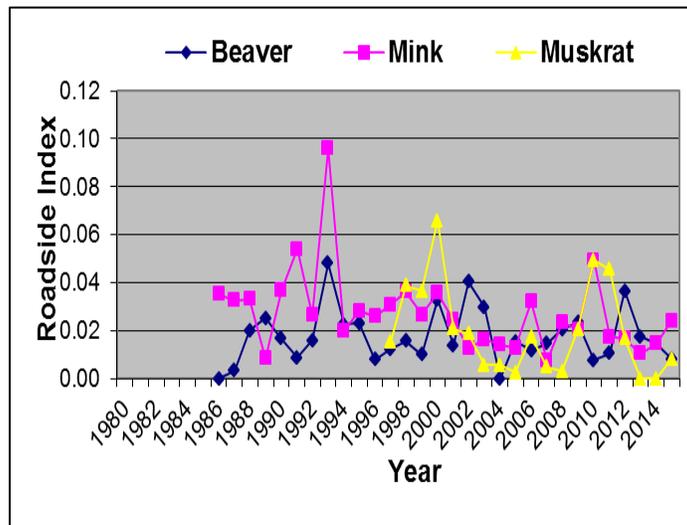


Figure 10. Population Trends for Beaver (Would Not be Hunted on the Refuge), Mink, and Muskrat in Kansas Based on Annual Roadside Indices (KDWPT 2015).

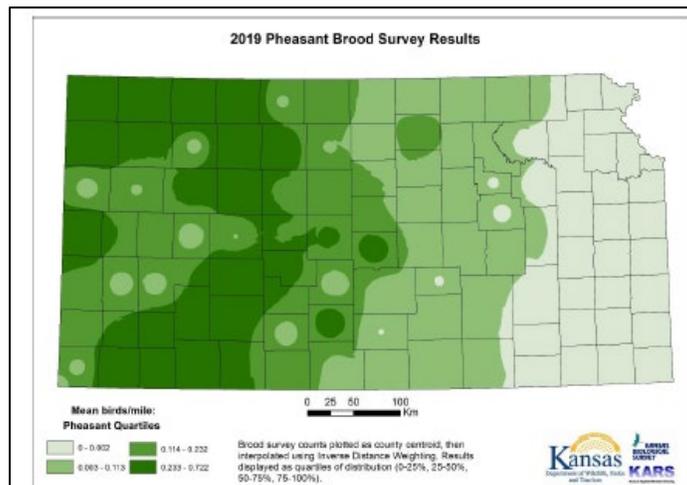


Figure 11. Relative Ring-Necked Pheasant Densities Estimated from Brood Survey Routes in Kansas, 2019 (KDPWT 2019b).

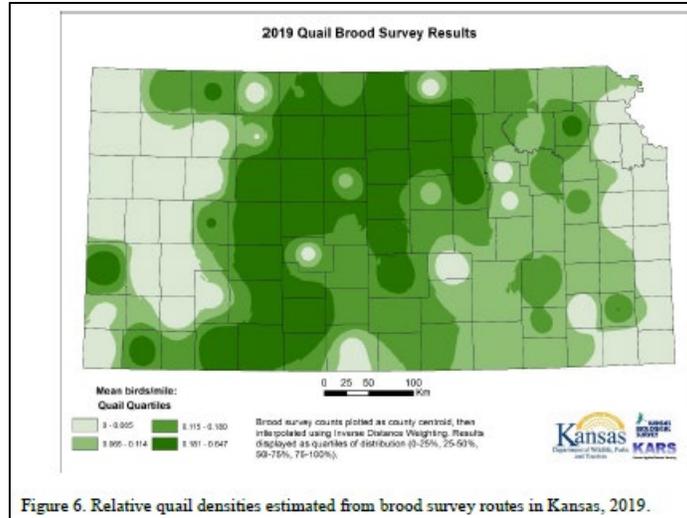


Figure 6. Relative quail densities estimated from brood survey routes in Kansas, 2019.

Figure 12. Relative Bobwhite Quail Densities Estimated from Brood Survey Routes in Kansas, 2019 (KDWPT 2019b).

Note: The refuge is in the Smoky Hills region and surveys indicate high densities occur within the vicinity of the refuge (KDWPT 2019b).

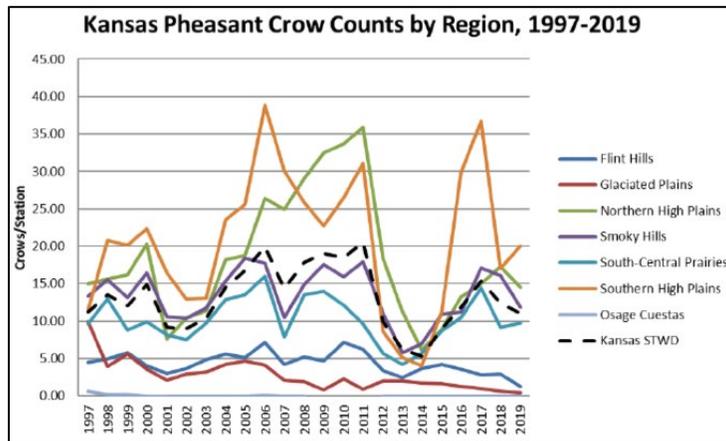


Figure 13. Kansas Pheasant Crow Counts by Regions.

Note: The refuge is in the Northern High Plains.

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

| <p style="text-align: center;">Affected Resources</p> | <p style="text-align: center;"><u>Alternative A (Proposed Action)</u></p> <p style="text-align: center;"><i>Hunting opportunities would be opened or expanded for upland game including furbearers, coyotes, grey squirrels, jackrabbits, migratory birds, and turkeys on Kirwin NWR.</i></p> | <p style="text-align: center;"><u>Alternative B (No Action)</u></p> <p style="text-align: center;"><i>Hunting opportunities would continue at existing levels at Kirwin NWR.</i></p> |
|--|---|--|
| <p>National wildlife refuges are public lands for all people and future generations to enjoy, and less than 1 percent of Kansas is public lands. Therefore, management decisions have significance within and beyond state boundaries. The refuge is visited by residents, nonresidents from across the United States, and those from other countries.</p> <p>Based on a 2011 survey, 1.2 million Kansas residents and nonresidents 16 years or older participated in wildlife-related recreation in Kansas (USFWS 2011). Of the participants sampled, wildlife watching was, by far, of the greatest interest compared to hunting activities (Figure 14). Most wildlife watching activities occurred near home. Of those participating in wildlife watching away from home, observation of wildlife was of greatest interest, followed by wildlife photography (Figure 15).</p> <p>The refuge’s primary responsibility is natural resource conservation, but it also supports compatible wildlife-based recreational opportunities. Therefore, a careful balance of these management priorities is desired. It is estimated that 10,788 visitors use the refuge in a year. The refuge is open to public access, except beyond area closed signs. Yet, outside a planned refuge public use or educational event, a large percentage of visitors spend most of their time in vehicles, viewing and photographing wildlife from the roads. The most recent visitor-use surveys conducted at the refuge showed general satisfaction. Currently, hunting of waterfowl, upland bird hunting, and archery deer hunting seem to capture the greatest public interest.</p> | <p>The proposed new hunt species, area, and season limitations align with CCP goals and objectives and resolve to balance or avoid conflicts among compatible wildlife-dependent recreational activities. For example, some hunting activities have limited seasons to allow both hunting and nonconsumptive public uses. Birdwatching and photography are also extremely common activities on the refuge. Neotropical migrants and many other birds occur in hunt areas especially during October and November. Therefore, special hunts, or use of other state-supported hunting programs, in September and January promotes wildlife conservation and the occurrence of both hunting and nonconsumptive uses. These state-supported hunting programs also support recreational opportunities for different hunter groups (such as archery-only and shotgun).</p> | <p>Visitor use and experience have been described in the CCP (USFWS 2006), which has an EA. Public input showed few conflicts between consumptive and nonconsumptive uses. Under current conditions, noise and visual impacts related to hunting are temporary. While shooting occurs on surrounding private lands, the impacts of noise on and off the refuge are short term and temporary, occurring in the early morning hours during the hunting season.</p> |

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

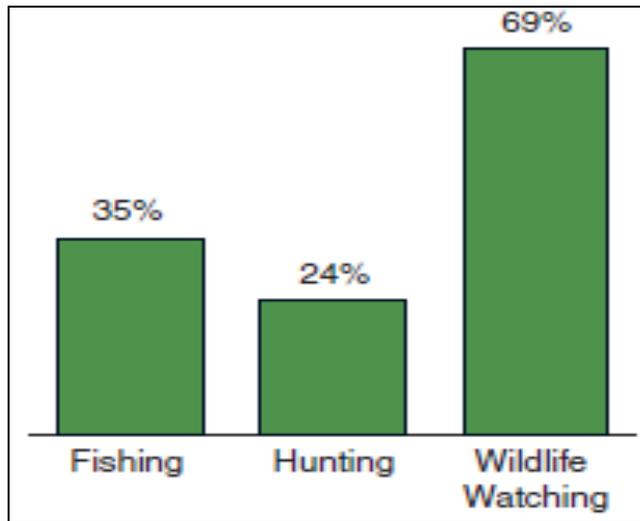


Figure 14. Proportional Recreational Activity of 1.2 Million Participants in a Kansas Survey in 2011.

| Away-From-Home Wildlife-Watching Participation in Kansas (State residents and nonresidents 16 years old and older) | |
|--|---------------------|
| Participants, total | 169 thousand |
| Observe wildlife | 158 thousand |
| Photograph wildlife | 60 thousand |
| Feed wildlife | ... |
| Days, total | 1.0 million |
| Observe wildlife | 927 thousand |
| Photograph wildlife | 253 thousand |
| Feed wildlife | ... |
| ... Sample size too small (less than 10) to report data reliably. | |
| Note: Detail does not add to total because of multiple responses. | |
| Source: Table 25. | |

Figure 15. Away-from-Home Wildlife-Watching Participation in Kansas in 2011.

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

| <p style="text-align: center;">Affected Resources</p> | <p style="text-align: center;"><u>Alternative A (Proposed Action)</u></p> <p style="text-align: center;"><i>Hunting opportunities would be opened or expanded for upland game including furbearers, coyotes, grey squirrels, jackrabbits, migratory birds, and turkeys on Kirwin NWR.</i></p> | <p style="text-align: center;"><u>Alternative B (No Action)</u></p> <p style="text-align: center;"><i>Hunting opportunities would continue at existing levels at Kirwin NWR.</i></p> |
|---|---|---|
| <p>Cultural resources were described in the CCP (USFWS 2006). In recent years, compliance checks of areas have been conducted as part of refuge management. There have been no known impacts to cultural resources as a result of hunting activities.</p> | <p>Because of the temporary and superficial use of refuge habitats during hunting activities, there should be no direct or indirect impacts to cultural resources under this alternative from visitors engaged in hunting activities, as delineated in the hunting and fishing plan. The Service has determined that, in accordance with the implementing regulations for section 106 of the National Historic Preservation Act (36 CFR 800), “the undertaking is a type of activity that does not have the potential to cause effects on historic properties, assuming such historic properties were present, [and] the agency official has no further obligations under section 106 or 36 CFR 800.3(a)(1).”</p> | <p>Under this alternative, there would be no change to existing environmental conditions; subsequently, no direct or indirect impacts to cultural resources are anticipated under this alternative.</p> |

Key: CCP = Comprehensive Conservation Plan; CFR = Code of Federal Regulations; NWR = National Wildlife Refuge

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

| <p>Affected Resources</p> | <p><u>Alternative A (Proposed Action)</u> <i>Hunting opportunities would be opened or expanded for upland game including furbearers, coyotes, grey squirrels, jackrabbits, migratory birds, and turkeys on Kirwin NWR.</i></p> | <p><u>Alternative B (No Action)</u> <i>Hunting opportunities would continue at existing levels at Kirwin NWR.</i></p> |
|---|--|---|
| <p>Land Use</p> | | |
| <p>Refuge operations are most affected by management of multiple consumptive and nonconsumptive recreational uses in conjunction with the protection of species and associated habitat. With high interest in birding, nature-based photography, observation, and hunting opportunities, different perspectives remain, and balancing interests would continue to be a challenge. Many federal and state threatened, endangered, proposed, or in-review species use refuge resources, as well as many other species of conservation concern. As populations, habitat conditions, and status change at many spatial scales, shifts would occur in the balance of species needs and human-related impacts. Management would continue to provide habitat conditions in areas closed and open to hunting to support focal species of conservation concern, consistent with the CCP biological goals and objectives (under any alternative).</p> <p>Signs, brochures, and other forms of communication (such as, the Internet) would continue to be necessary requirements of operations for the protection of wildlife, habitat, and the public (and Service staff). These strategies are not only needed to communicate federal and state regulations, but also for educational opportunities (for example, to educate the public of the status and identification of protected species, the requirements of native species and those of conservation concern, and the potential for invasive species control or prevention in the spread of exotic species).</p> <p>Weather conditions influence road maintenance requirements; however, many roads on and surrounding the refuge are the responsibility of the county or township (not Service-owned roads).</p> | <p>Habitat management activities would be similar under both alternatives (USFWS 2006), but there may be increased conflicts under the proposed action with greater hunting opportunities.</p> <p>The types of impacts under this alternative would be similar to current conditions, but the frequency and number of impacts might increase. For example, it is presumed that management would have to allocate more resources to enforce federal and state regulations that require the control of incidental spread of introduced and invasive species. With higher public use, there may be increased maintenance needs associated with parking lots, hunt units, road maintenance, and communication requirements (such as brochures in kiosks). Also, under this alternative, there would be a decreased ability to assess and monitor refuge resources and implementation of management strategies without interference of public use activities. It is expected that refuge operations and public use experiences would both be periodically affected with increased public use opportunities.</p> | <p>Most known impacts of the hunt and fish program on refuge lands and property are generally minor. Occasional violations occur, such as illegal take of fish and wildlife, camping, littering, and destruction of property (such as fences and signs). Also, hunting activities increase the potential for the spread of invasive species via vehicles, clothes and footwear, equipment, and travel. This affects refuge operations in efforts to control invasive and introduced species. Invasive species management causes great cost to the Service in staff time, budget, and loss of habitat. However, more important is the loss of native plant community, typically for extended periods of time.</p> <p>Current hunting opportunities do not suggest that significant issues with hunter traffic and other public use activities have occurred.</p> |

| <p style="text-align: center;">Affected Resources</p> | <p style="text-align: center;"><u>Alternative A (Proposed Action)</u></p> <p style="text-align: center;"><i>Hunting opportunities would be opened or expanded for upland game including furbearers, coyotes, grey squirrels, jackrabbits, migratory birds, and turkeys on Kirwin NWR.</i></p> | <p style="text-align: center;"><u>Alternative B (No Action)</u></p> <p style="text-align: center;"><i>Hunting opportunities would continue at existing levels at Kirwin NWR.</i></p> |
|---|---|---|
| Administration | | |
| <p>The administrative organization, number of staff, and budget of the refuge have changed since described in the CCP (USFWS 2006). The refuge is now complexed with the Rainwater Basin Wetland Management District in Nebraska.</p> <p>On the refuge, there has been a noticeable decrease in the number of staff. However, there is a full-time law enforcement officer on the refuge who promotes safety through education and enforcement of regulations. The district has one biologist responsible for assessing wildlife and habitat conditions and making biological recommendations for use in management decision-making for both the district and the refuge. The refuge has a visitor use specialist who supports multiple use activities, public use events, educational programs, and various forms of public communications (such as website updates). All employees on the refuge (seven permanent, full-time) contribute to the recreational activities associated with the refuge through maintenance of infrastructure, visitor use interactions (such as phone, visitor center administration), and hunting program implementation (open and closed area signage).</p> | <p>Similar activities are involved for both alternatives. However, under the proposed alternative, it is estimated that law enforcement activity may require 30 to 35 hours per week during the hunting seasons. There would be more time and money spent with public communications and the coordination and administration with the state regarding new hunting opportunities. Monitoring would involve assessment of more species, but much of the information would be used from state surveys and volunteer efforts (such as roadside wildlife surveys).</p> | <p>Hunting activities require a lot of time and money. It is estimated that law enforcement may involve about 15 hours per week from September 1 through April 30. Transportation costs associated with law enforcement are estimated at nearly \$200 per week but fluctuate with fuel and maintenance costs. Operation of open and closed signs and communication related to the protection of whooping cranes (or other species of concern or public safety) requires an estimated 8 to 10 hours in a season. Monitoring and management of whooping cranes are not all hunting related; it is also of interest to nonconsumptive uses and required for biological purposes (such as Recovery Act Action).</p> |

| <p style="text-align: center;">Affected Resources</p> | <p style="text-align: center;"><u>Alternative A (Proposed Action)</u></p> <p><i>Hunting opportunities would be opened or expanded for upland game including furbearers, coyotes, grey squirrels, jackrabbits, migratory birds, and turkeys on Kirwin NWR.</i></p> | <p style="text-align: center;"><u>Alternative B (No Action)</u></p> <p><i>Hunting opportunities would continue at existing levels at Kirwin NWR.</i></p> |
|--|--|--|
| | | <p>However, more time is spent checking whooping cranes with hunting, an estimated 2 hours per week during migration. Many hours are required to provide information to the public (such as by phone, website, visitor's center, brochures, news releases) throughout the hunting season. Costs are associated with printing hunting information for kiosks and the visitor center, and with maintenance of refuge infrastructure (such as roads, parking lots, facilities). Monitoring related to other species (such as waterfowl) involves at least 150 hours per year.</p> |

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

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

| <p>Affected Resources</p> | <p><u>Alternative A (Proposed Action)</u> <i>Hunting opportunities would be opened or expanded for upland game including furbearers, coyotes, grey squirrels, jackrabbits, migratory birds, and turkeys on Kirwin NWR.</i></p> | <p><u>Alternative B (No Action)</u> <i>Hunting opportunities would continue at existing levels at Kirwin NWR.</i></p> |
|--|--|--|
| <p>Local and Regional Economies</p> | | |
| <p>As part of the CCP (USFWS 2006) development, socioeconomic factors were described. However, it is likely that some parameters have changed since that time.</p> <p>A report examined economic contributions of recreational visits to national wildlife refuges in 2017 and found about 86 percent of recreational activity expenditures were related to nonconsumptive uses on refuges (Caudill and Carver 2019). Most of those expenditures (83 percent) came from visitors traveling more than 50 miles. Overall, expenditures from recreational activities on refuges totaled about \$229 million in tax revenue at the local, county, and state.</p> <p>A survey of participation in wildlife-based recreational activities in Kansas reported \$208 million in wildlife-watching expenditures and \$401 million in hunting expenditures (USFWS 2011; Figure 16). Figure 17 shows comparative hunting expenditures further defined by the type of hunting.</p> | <p>Based on the available information, an increase in wildlife-based recreational opportunities is expected to provide improved benefits to the local, regional, and state economy compared to current conditions. However, in a landscape dominated by agricultural land use, the relative benefits to the overall state economy are likely minor. Compared to current conditions, with more hunt-related experiences offered on the refuge, there would be potentially more visitation expenditures in the area and an increase in the number of state permit sales.</p> | <p>Based on the available information, little to no change in wildlife-based recreational opportunities are expected under current conditions. In comparison to the proposed alternative, there would be potentially fewer benefits to the local, regional, and state economy due to fewer visitation expenditures in the area and a lower number in state hunting permit sales.</p> |
| <p>Environmental Justice</p> | | |
| <p>Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, requires all federal agencies to incorporate environmental justice into their missions by finding and addressing disproportionately high or adverse human health or environmental effects of their programs and policies on minorities and low-income populations and communities.</p> | <p>Within the spirit and intent of Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations, and Low-Income Populations, no actions being considered in this EA would disproportionately place any adverse environmental, economic, social, or health effects on minority or low-income populations when compared with the public.</p> | <p>Impacts would be the same as described under the Proposed Action Alternative.</p> |

| <p style="text-align: center;">Affected Resources</p> | <p style="text-align: center;"><u>Alternative A (Proposed Action)</u></p> <p style="text-align: center;"><i>Hunting opportunities would be opened or expanded for upland game including furbearers, coyotes, grey squirrels, jackrabbits, migratory birds, and turkeys on Kirwin NWR.</i></p> | <p style="text-align: center;"><u>Alternative B (No Action)</u></p> <p style="text-align: center;"><i>Hunting opportunities would continue at existing levels at Kirwin NWR.</i></p> |
|---|--|---|
| <p>According to the Kansas Health Institute (Hunt and Panas 2018), population growth in Kansas from 2000 to 2016 has been among minority populations, an increase of 52.5 percent. Projected growth of minority populations, barring any unexpected impacts on current population patterns, is expected to increase even more.</p> <p>The minority, income, and poverty data shown in Figure 18 is provided to help improve the understanding of Kansas demographics.</p> <p>Based on 2014 data, Kansas had an overall poverty rate of 13.6 percent (ranked 31 in the United States) (Figure 19), while county information (2015 data) suggests that Phillips County has lower poverty rates than the statewide mean (Figure 20).</p> | <p>The Service is committed to ensuring that all members of the public have equal access to the Nation’s fish and wildlife resources, as well as equal access to information that would enable them to take part meaningfully in activities and policy shaping.</p> | |

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

| Wildlife-Watching Expenditures in Kansas (State residents and nonresidents 16 years old and older) | |
|--|---------------|
| Total | \$208 million |
| Trip-related | \$46 million |
| Equipment | \$57 million |
| Wildlife watching | \$51 million |
| Auxiliary and special | \$6 million |
| Other | \$106 million |
| Source: Table 31. | |
| Hunting Expenditures in Kansas (State residents and nonresidents 16 years old and older) | |
| Total | \$401 million |
| Trip-related | \$150 million |
| Equipment | \$72 million |
| Hunting | \$62 million |
| Auxiliary and special | \$10 million |
| Other | \$180 million |
| Source: Table 20. | |

Figure 16. Wildlife-Watching and Hunting Expenditures in Kansas.

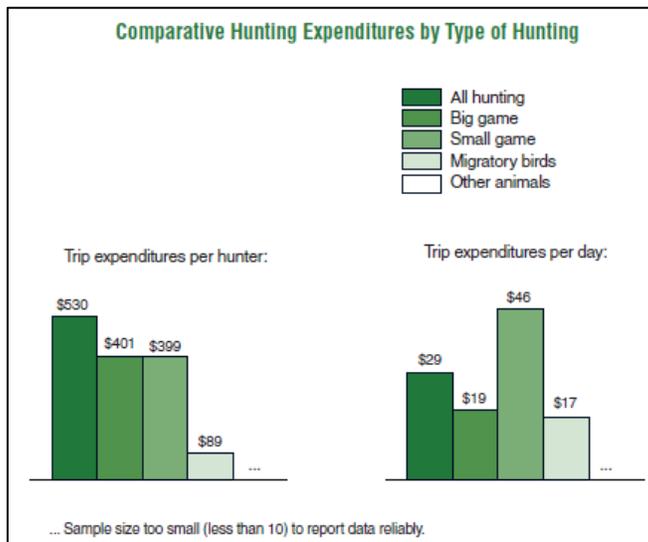


Figure 17. Comparative Hunting Expenditures by Type of Hunting.

| Kansas | 2016 | 2036 | 2016–2036 % Change | 2066 | 2016–2066 % Change |
|---------------------------------------|-----------|-----------|-----------------------|-----------|-----------------------|
| Total Population | 2,907,289 | 3,220,161 | 10.8% | 3,637,037 | 25.1% |
| Age Group | | | | | |
| Age 14 and under | 595,053 | 627,855 | 5.5% | 694,996 | 16.8% |
| Age 15 to 24 | 417,031 | 424,321 | 1.7% | 472,809 | 13.4% |
| Age 25 to 64 | 1,458,212 | 1,523,208 | 4.5% | 1,728,517 | 18.5% |
| Age 65 and over | 436,993 | 644,778 | 47.5% | 740,715 | 69.5% |
| Race/Ethnicity | | | | | |
| White, Non-Hispanic | 2,254,581 | 2,118,722 | -6.0% | 1,765,981 | -21.7% |
| Black, Non-Hispanic | 192,710 | 235,597 | 22.3% | 271,921 | 41.1% |
| Other/Multiple Races, Non-Hispanic | 121,517 | 185,141 | 52.4% | 289,622 | 138.3% |
| Hispanic, Any Race | 338,481 | 680,701 | 101.1% | 1,309,513 | 286.9% |

Source: 2016 Kansas Population Projections by Race and Ethnicity, Center for Economic Development and Business Research at Wichita State University.

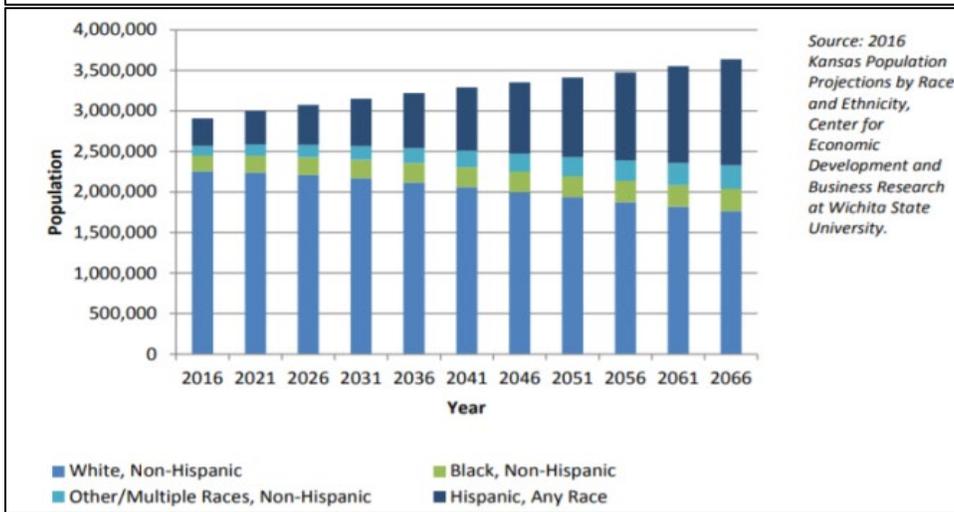


Figure 18. Population Projections by Total Population, Age, Group, and Race and Ethnicity in Kansas, 2016–2066.

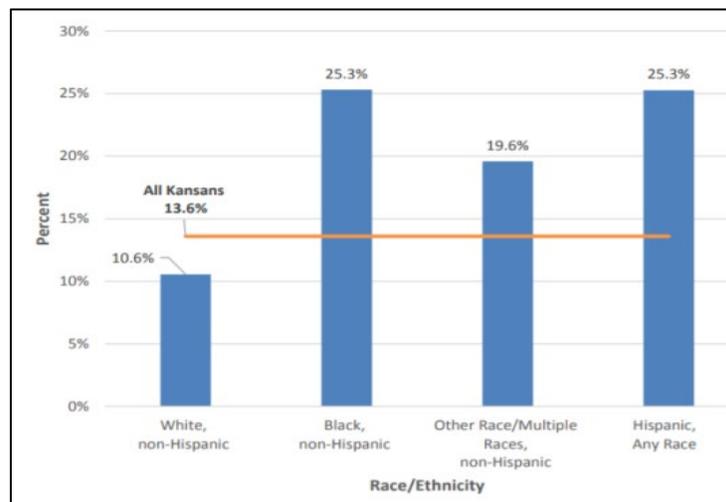


Figure 19. Five-Year Mean Poverty Levels by Race and Ethnicity.

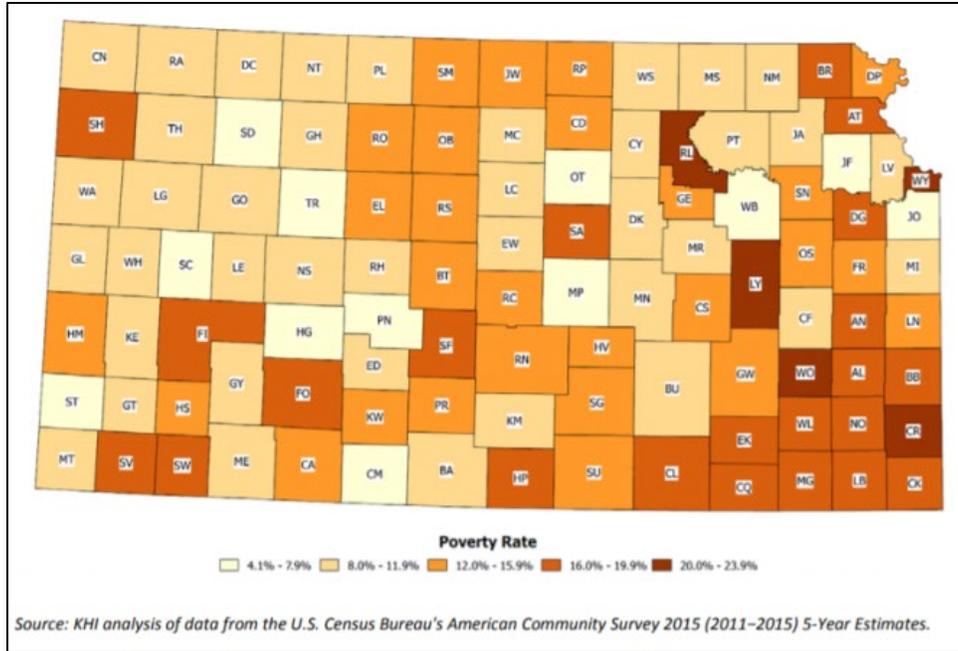


Figure 20. Poverty Rate by County in Kansas, 2015.

3.3 Cumulative Impact Analysis

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

Table 6. Anticipated Cumulative Impacts of the Proposed Action and Any Alternatives.

| Other Past, Present, and Reasonably Foreseeable Activity Impacting Affected Environment | Descriptions of Anticipated Cumulative Impacts |
|---|---|
| Hunting | |
| <p>Trends of harvest in Kansas follow for many species (KDWPT 2018, 2018b, 2019c).</p> <p>The first modern deer-hunting season in Kansas was held in 1965 (Figure 21). Kansas statewide deer harvest show the largest harvest occurred in 2000 (111,159) and the lowest occurred in 1965 (1,504).</p> <p>KDWPT reported an increase in archery take of deer from 2010 to 2017 (Figure 22) but identified crossbow as a legal weapon during the archery season a contentious issue.</p> <p>Kansas statewide squirrel harvest estimates show a declining rate of harvest (Figure 23), yet the roadside surveys show a stable or increasing population (KDWPT 2018c).</p> <p>Kansas statewide cottontail harvest estimates show a declining rate of harvest, yet the roadside surveys indicate a stable or increasing population (KDWPT 2019c).</p> <p>Kansas statewide cottontail harvest estimates show a declining rate of harvest (Figure 24), yet the roadside surveys indicate a stable or increasing population (KDWPT 2019c).</p> <p>For furbearer species, Figure 25 shows harvest participation data during the 2017-2018 harvest season (KDPWT 2018c).</p> <p>Kansas pheasant and bobwhite harvest trends are shown in Figures 26 and 27 (KDPWT 2019c).</p> | <p>Similar to other national wildlife refuges, the refuge conducts hunting programs within the framework of state and federal regulations. Population estimates of hunted species are developed at multiple spatial scales and used to determine take limits, hunting seasons, and methods of take. The proposed refuge hunting program rules would be the same as, or more restrictive than, hunting regulations throughout the State of Kansas. The refuge will regularly coordinate with the state and support hunting regulations that are the same as or more restrictive than the state for the protection of natural resources and the public.</p> <p>The proportion of harvest on the refuge would be a very small portion of the total annual state and regional harvest. Examples below.</p> <p>Regional and state estimates are provided below (KDWPT 2018b, 2019c).</p> <p>Deer (Figures 21 and 22)</p> <p>For 2017–2018 season:</p> <p>Total permits issued = 182,632</p> <p>Success rate = 49.6 percent</p> <p>Total state harvest = 79,567</p> <p>Total harvest in unit 3 = 4,266</p> <p><i>Estimated refuge harvest</i> = No changes are proposed to deer hunting. Harvest on the refuge is low relative to state and regional harvest numbers and therefore negligible.</p> |

| Other Past, Present, and Reasonably Foreseeable Activity Impacting Affected Environment | Descriptions of Anticipated Cumulative Impacts |
|---|---|
| (Hunting continued) | <p>Coyote</p> <p>For 2018–2019 Northern High Plains unit (KDPWT 2018):</p> <p>Est. total hunters = 2,710</p> <p>Est. total days = 17,343</p> <p>Est. total harvest = 7,421 +/- 4,541</p> <p>Est. season days per hunter = 6.4</p> <p>Est. season bags per hunter = 2.74</p> <p>Est. average bags per day = 0.40</p> <p><i>Estimated refuge harvest</i> = Based on an estimated average 0.40 coyote per day over a 240-day refuge season, projected refuge harvest is estimated at 96 coyotes. We do not expect coyote hunting to occur every day of the season, nor would coyote hunters want to pursue this species unless the weather is favorable to harvest a coyote without using a rifle or pistol, which are illegal weapons on the refuge. Also, considering the refuge hunt limitations (such as no use of vehicles or artificial lights, no dogs, and the hours) and the relatively small size of the hunt areas, it is expected that the actual take would be fewer than 25 animals annually.</p> <p>Small Game: Squirrel (Figure 23)</p> <p>For 2018–2019, Northern High Plains unit:</p> <p>Est. total hunters = 83 (10,756 in Kansas)</p> <p>Est. total days = 1,793 (71,082 in Kansas)</p> <p>Est. total harvest = 292 +/- 2,649 (67,664 +/-10,133 in Kansas)</p> <p>Est. season days per hunter = 21.5 (6.61 in Kansas)</p> <p>Est. season bags per hunter = 3.5 (6.29 in Kansas)</p> <p>Est. average bags per day = 0.24 (1.23 in Kansas)</p> <p><i>Estimated refuge harvest</i> = Based on an estimated average of 0.24 squirrel per day over a 181-day refuge season, potential harvest is about 43 squirrels annually. In reality, hunting could not occur every day of the season. In recent years, there has been little to no interest in squirrel hunting on the refuge (staff interactions with public), and squirrels are not very common on the refuge. Also, considering the refuge has limited squirrel habitat, it is expected that the actual take would be much fewer than estimated. This level of take would have negligible impacts on regional and statewide harvest populations.</p> |

| Other Past, Present, and Reasonably Foreseeable Activity Impacting Affected Environment | Descriptions of Anticipated Cumulative Impacts |
|---|--|
| (Hunting continued) | <p><i>Small Game: Cottontail (Figure 24)</i></p> <p>For 2018–2019 Northern High Plains unit:</p> <p>Est. total hunters = 1,376 (13,841 hunters in Kansas)</p> <p>Est. total days = 8,422 (79,337 days in Kansas)</p> <p>Est. total harvest = 5,128 +/- 2,155 (63,203 harvest in Kansas)</p> <p>Est. season days per hunter = 6.12 (5.73 in Kansas)</p> <p>Est. season bags per hunter = 3.73 (4.57 in Kansas)</p> <p>Est. average bags per day = 0.80 (0.96 in Kansas)</p> <p><i>Estimated refuge harvest</i> = Rabbit season is year-long in Kansas so the hunt days are based on the days that would be open to hunting. Based on an estimated average 0.80 cottontail per day over a 242-day refuge season, potential harvest is estimated at 194 cottontails annually. In reality, it is not expected that cottontail hunting would occur every day of the season. Also, considering the refuge hunt limitations (such as no trapping), it is expected that the actual take would be much fewer. This level of take has negligible impacts on regional and statewide harvest numbers.</p> <p><i>Small Game: Jackrabbit</i></p> <p>For 2018–2019 Northern High Plains unit,</p> <p>Est. total hunters = 292</p> <p>Est. total days = 2,710</p> <p>Est. total harvest = 250</p> <p>Est. season days/hunter = 9.29</p> <p>Est. season bag/hunter = 0.86</p> <p>Est. average bag/day = 0.43</p> <p><i>Estimated refuge harvest</i> = Rabbit season is yearlong in Kansas, so the hunt days are based on the days that would be open to hunting. Based on an estimated average 0.43 jackrabbits per day over a 242-day refuge season, potential harvest is estimated at 104 jackrabbits. In reality, it is not expected that hunting could occur every day of the season. Also, considering the refuge hunt limitations (such as no trapping, the hours, etc.), it is expected that the actual take would be much fewer. This level of take has negligible impacts on regional and statewide harvest numbers.</p> |

| Other Past, Present, and Reasonably Foreseeable Activity Impacting Affected Environment | Descriptions of Anticipated Cumulative Impacts |
|---|---|
| (Hunting continued) | <p><i>Upland Game: Furbearers (Figure 25)</i> <i>Estimated refuge harvest</i> = Hunter participation in fur harvest is estimated at 22.2 percent (n=1,398) of all fur harvest license holders (5,627 in the 2017–2018 season). Other refuges in Kansas have reported low rates of furbearer hunting in recent years and similar participation is expected. Considering low abundance of many furbearer species and refuge hunt limitations (such as hours, weapons, and no dogs), the potential take would likely be negligible in proportion to regional or state numbers (see Figure 22).</p> <p><i>Upland Game Bird: Pheasant (Figure 26)</i> For 2018–2019 Northern High Plains Unit: Est. total hunters = 16,468 (80,421 in Kansas) Est. total days = 79,587 (337,069 in Kansas) Est. total harvest = 87,675 +/- 10,937 (343,947 in Kansas) Est. season days per hunter = 4.83 (4.19 for Kansas) Est. season bags per hunter = 4.12 (4.28 for Kansas) Est. average bags per day = 1.16 (1.11 for Kansas) <i>Estimated refuge harvest</i> = Based on an estimated average 1.16 pheasant per day over an 85-day refuge season (including youth), potential harvest is about 99 pheasants. Also, considering refuge hunt limitations (such as area), it is expected that the actual take would be much fewer. This level of take has negligible impacts on regional and statewide harvest numbers.</p> <p><i>Upland Game Bird: Quail (Figure 27)</i> For 2018–2019 Northern High Plains unit: Est. total hunters = 6,921 (66,038 in Kansas) Est. total days = 34,4361 (30,131 in Kansas) Est. total harvest = 57,325 +/- 10,487 (488,489 in Kansas) Est. season days per hunter = 4.98 (4.56 in Kansas) Est. season bags per hunter = 8.28 (7.40 in Kansas) Est. average bags per day = 1.39 (1.50 in Kansas) <i>Estimated refuge harvest</i> = Based on an estimated average 1.39 bags per day over an 85-day refuge season (including youth), potential harvest is about 118 bobwhites. Also, considering refuge hunt limitations (such as area), it is expected that the actual take would be much fewer. This level of take has negligible impacts on regional and statewide harvest numbers.</p> |

| Other Past, Present, and Reasonably Foreseeable Activity Impacting Affected Environment | Descriptions of Anticipated Cumulative Impacts |
|---|---|
| (Hunting continued) | <p><i>Migratory Birds</i></p> <p>Crow is a new migratory bird species proposed to be hunted under the Proposed Action Alternative. American crow are widespread and long-term population trends continue to increase nationally and worldwide (Verbeek and Caffrey 2002; https://birdsna.org/Species-Account/bna/species/amecro/introduction). Harvest of crow on the refuge would be negligible in the context of cumulative impacts to the population at regional and larger landscape scales. Most of the harvest is in the southeast portion of Kansas.</p> <p>Data for 2018–2019 for the Northern High Plains unit is not available so statewide data is shown below (KDWPT 2019c).</p> <p>Est. total hunters = 2,001 Est. total days = 5,878 Est. total harvest = 14,133 +/- 4,809 Est. season days per hunter = 2.94 Est. season bags per hunter = 7.06 Est. average bags per day = 2.68</p> <p>Rail is a new migratory bird species proposed to be hunted under the Proposed Action Alternative. Both sora and Virginia rail occur on the refuge and flyway-wide populations appear to be stable. Data for 2018–2019 for the Northern High Plains unit is not available so statewide data is shown below (KDWPT 2019c).</p> <p>Est. total hunters = 83 Est. total days = 208 Est. total harvest = 83 +/- 1,059 Est. season days per hunter = 2.5 Est. season bags per hunter = 1.00 Est. average bags per day = 1.00</p> <p><i>Woodcock</i> is a new migratory bird species proposed to be hunted under the Proposed Action Alternative. There are no known observations of woodcock on the refuge. Data for 2018–2019 for the Northern High Plains unit is not available so statewide data is used below (KDWPT 2019c), which shows very few participants and very low harvest, presumably on the eastern side of Kansas.</p> <p>Est. total hunters = 83 Est. total days = 250 Est. total harvest = 83 Est. season days per hunter = 3.00 Est. season bags per hunter = 1.00 Est. average bags per day = 0.38</p> |

| Other Past, Present, and Reasonably Foreseeable Activity Impacting Affected Environment | Descriptions of Anticipated Cumulative Impacts |
|---|---|
| Other Wildlife-Dependent Recreation | |
| <p>There are roads and trails on and around the refuge that contribute to cumulative impacts. The wildlife-dependent recreation accounts for 98 percent of the use at the refuge. Consumptive use accounts for an estimated 46 percent of the use.</p> <p>As mentioned elsewhere in the EA, interior roads fragment the refuge and any increase in use may contribute to wildlife disturbance due to more frequent traffic and human activity.</p> | <p>Roads and trails on the refuge contribute to cumulative impacts on the environment. Roads and trails fragment habitat, increasing the potential for the spread of invasive species and human-wildlife interaction (thereby disturbance). However, many roads are township or county roads, or those associated with oil and gas activities, and are not maintained by the refuge. No newly developed roads or trails are planned under the proposed alternative.</p> |
| Development and Population Increase | |
| <p>According to the Kansas Health Institute (Hunt and Panas 2018), population growth in Kansas from 2000 to 2016 has been slow relative to U.S. rates. In general, Kansas demographics show a trend of becoming older, more urban, and more diverse (Hunt and Panas 2018). Information from the Kansas Health Institute Report is provided below. The National Center for Health Statistics' April 1, 2000 bridged-race population estimates, the June 2017 vintage, and the July 2016 bridged-raced population estimates show declines in humans for northwest Kansas (Figure 28).</p> | <p>It is uncertain how projected population and development trends in Kansas would influence species and hunting impacts. Because most growth is expected to occur in urban areas, it is unlikely that local development would affect areas around the refuge in the near future. The refuge is located in a rural landscape dominated by agricultural activities. However, urban expansion may adversely affect natural resources surrounding cities through additional decreases in the availability of habitat and increasing demands on water resources.</p> <p>Increases in the number of visitors would likely be experienced with increasing populations. Currently, for example, resident hunters from Wichita visit the refuge for use opportunities. Impacts would in part be influenced by changing societal interests and other developments (such as transportation and equipment).</p> <p>The use of an adaptive management approach allows the refuge to periodically review and adjust the hunt and fish program to ensure that it does not contribute to the cumulative impacts of population growth and development on species.</p> |
| Agricultural Land Uses | |
| <p>Land use in the region is dominated by agricultural activities. Wildlife have benefited from agricultural activities as a source of forage and habitat. However, increased concentration of wildlife has the potential to facilitate depredation of crops, the spread of disease, and adverse impacts of contamination.</p> | <p>Increased hunting under the proposed alternative may not impact local agricultural uses, in part due to common off-refuge hunting, and the current refuge hunt area remains unchanged.</p> |

| Other Past, Present, and Reasonably Foreseeable Activity Impacting Affected Environment | Descriptions of Anticipated Cumulative Impacts |
|---|--|
| Use of Lead Ammunition | |
| <p>The Service requires nontoxic ammunition (shot) only and does not allow rifles or handguns. Nationally, instances of lead mortality in birds (scavengers) have been linked to contamination resulting from toxic shot and ammunition in prey (Golden et al. 2016). There is high use of refuge lands by bald eagles. For example, point-in-time eagle counts in winter have exceeded 150 on the refuge, mostly attracted to the high numbers of migratory and wintering waterfowl that concentrate as ice forms. It is not unusual to observe more than 40 to 60 bald eagles foraging on the refuge in winter. Also, nesting eagles have been documented on the refuge in recent years.</p> | <p>No impact because the Service requires nontoxic ammunition (shot) only.</p> |
| Climate Change | |
| <p>It is reported that temporal shifts are occurring in species' migration patterns in response to climate change and available food resources at higher latitudes. Of relevance to this EA and hunting and fishing plan are reports of temporal shifts in migration of the whooping cranes (Jorgensen and Bomberger Brown 2017).</p> <p>Climate change refers to the increasing changes in the measures of climate over a long period of time, including precipitation, temperature, and wind patterns (USGS 2019). Although climate change is a naturally occurring phenomenon and temperature and precipitation changes are anticipated, there are many unknowns. Consequently, we do not fully understand the potential impacts that climate change may have on terrestrial and aquatic habitats and the associated wildlife species.</p> | <p>Using available and emerging science, the Service continues to assess predictions of these complex effects and use an adaptive management approach to ensure that it does not add to the impacts of climate change on the environment. Hunt programs and mitigation measures would adapt with changing conditions to conserve natural resources and balance compatible recreational uses.</p> |

| Other Past, Present, and Reasonably Foreseeable Activity Impacting Affected Environment | Descriptions of Anticipated Cumulative Impacts |
|--|---|
| <p>Based on the National Oceanic and Atmospheric Administration’s summary of potential climate change effects on Kansas (Frankson et al. 2017; https://statesummaries.ncics.org/chapter/ks/), Kansas may experience warmer winter and spring temperatures. The number of cold (minimum temperature below zero degrees Fahrenheit) nights may decrease. Annual precipitation predictions are uncertain. The intensity of droughts is expected to increase; however, deluge events may also become more frequent.</p> | |

Key: EA = Environmental Assessment; KDWPT = Kansas Department of Wildlife, Parks, and Tourism; U.S. = United States

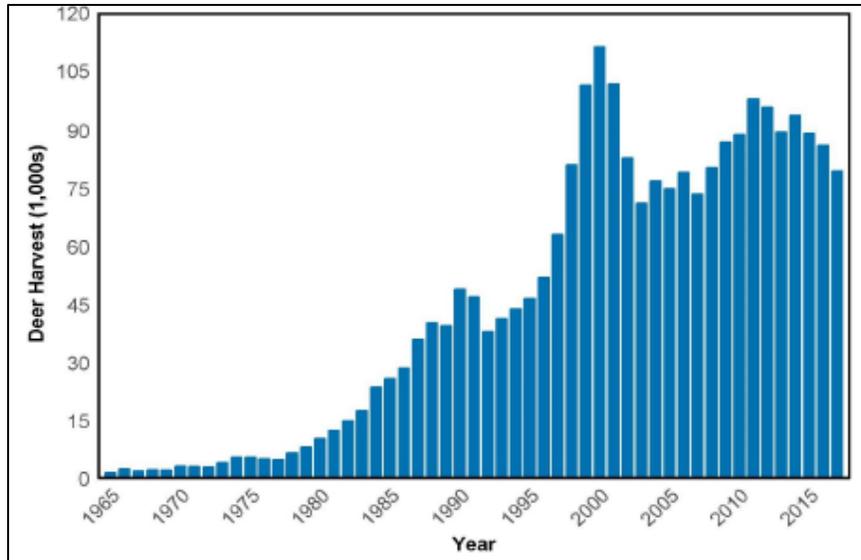


Figure 21. Statewide Deer Harvest Trends from 1965–2015.

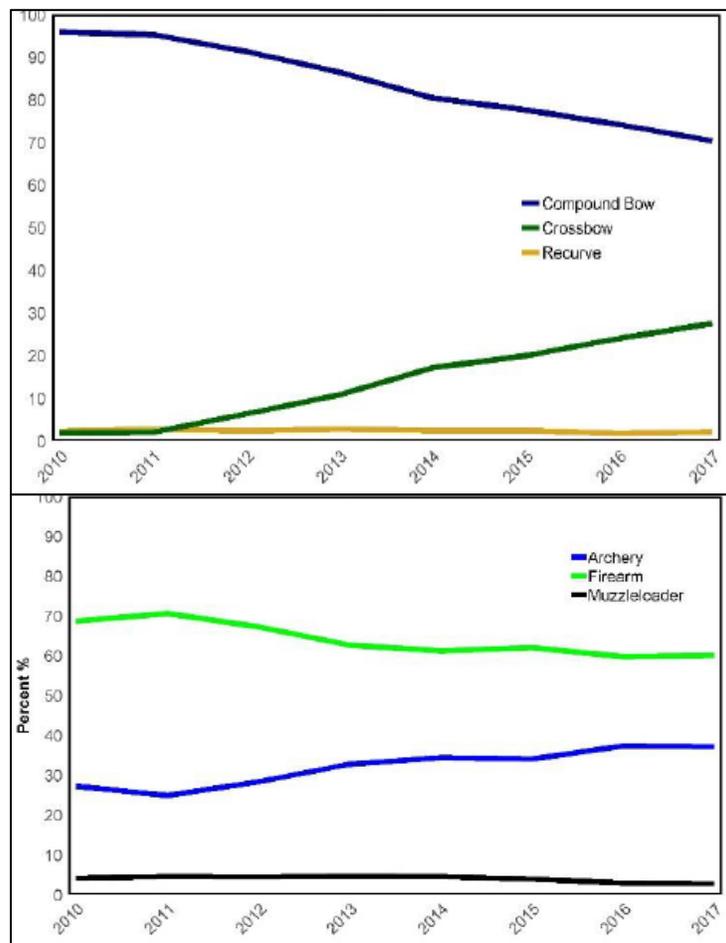


Figure 22. Kansas Deer Harvest by Weapon Category (Bottom) and for Archery-Only (Top).

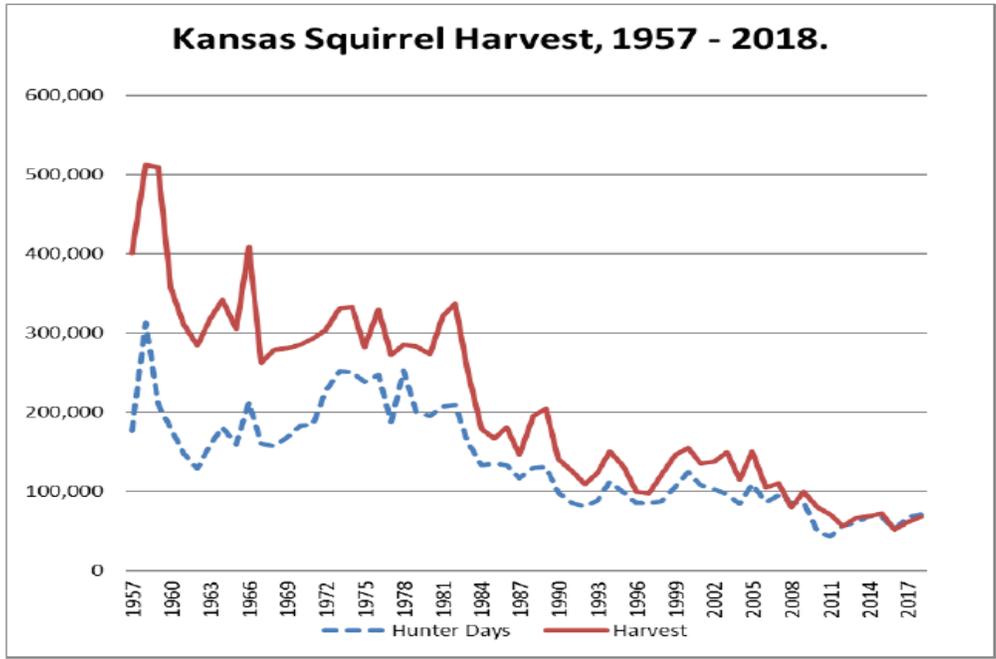


Figure 23. Kansas Statewide Squirrel Harvest Estimates from 1957–2018.

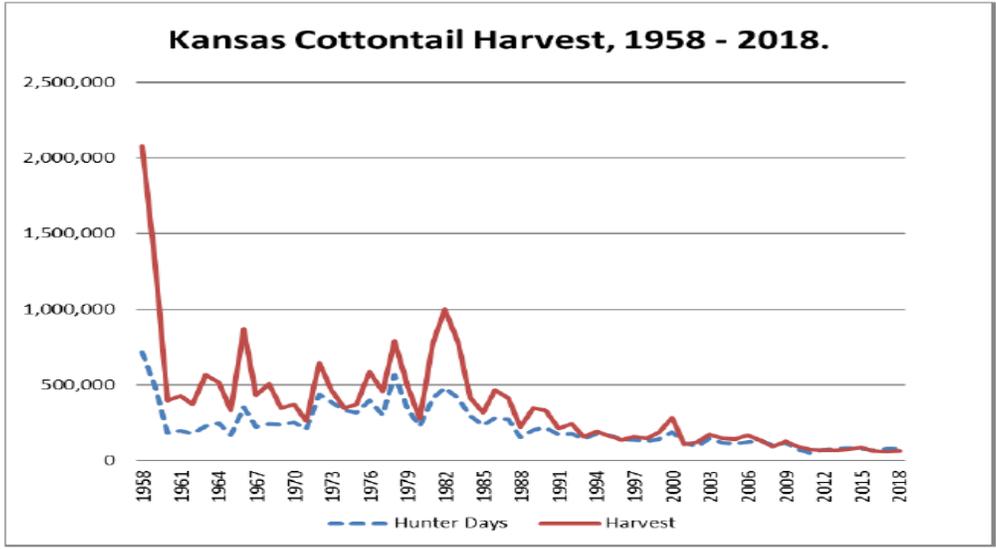


Figure 24. Kansas Statewide Cottontail Harvest from 1958–2018.

| Species | Survey Respondents Who Pursued | Estimated Harvest | Harvest/100 Days | Maximum Est. Harvest |
|-----------|--------------------------------|-------------------|------------------|----------------------|
| Badger | 35 | 91 | 13.8 | 2 |
| Bobcat | 310 | 728 | 10.1 | 7 |
| Red Fox | 44 | 122 | 10.3 | 20 |
| Gray Fox | 19 | 4 | 0.2 | 1 |
| Swift Fox | 11 | 4 | 1.5 | 1 |
| Opossum | 55 | 980 | 32.4 | 40 |
| Raccoon | 218 | 10,378 | 109.8 | 100 |
| Skunk | 22 | 153 | 60.6 | 6 |

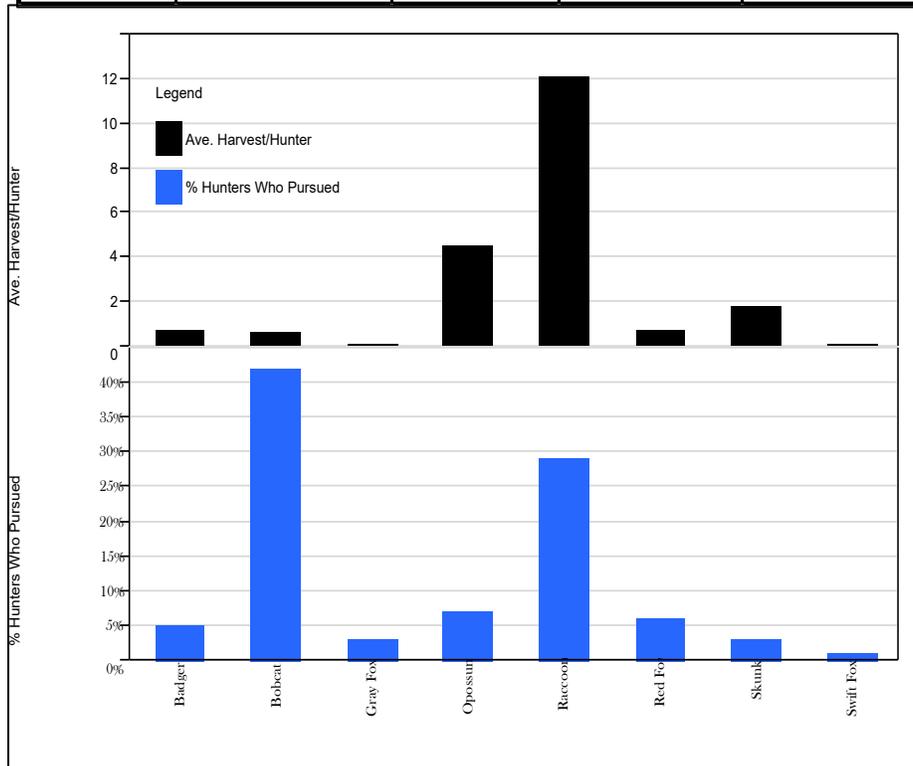


Figure 25. Harvest Participation and Activity Levels for Hunters in Kansas during the 2017–2018 Harvest Season (KDPWT 2018c).

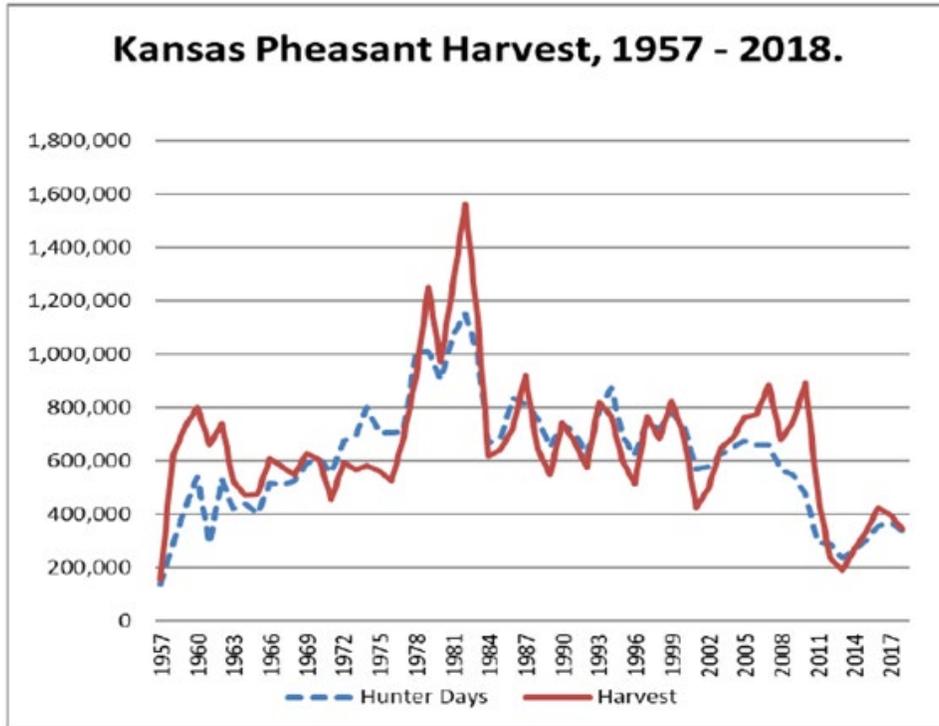


Figure 26. Kansas Pheasant Harvest Appears to Follow Population Changes as do the Hunter Participation Days (KDPWT 2019c).

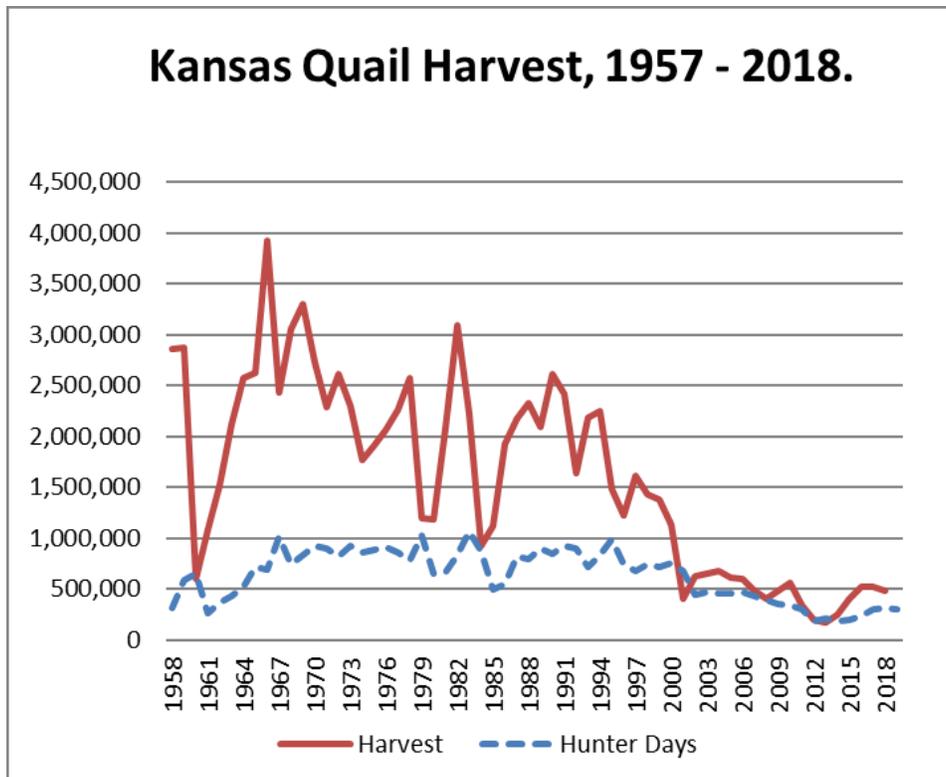


Figure 27. Kansas Quail Harvest and Hunter Participation Days (KDPWT 2019c).

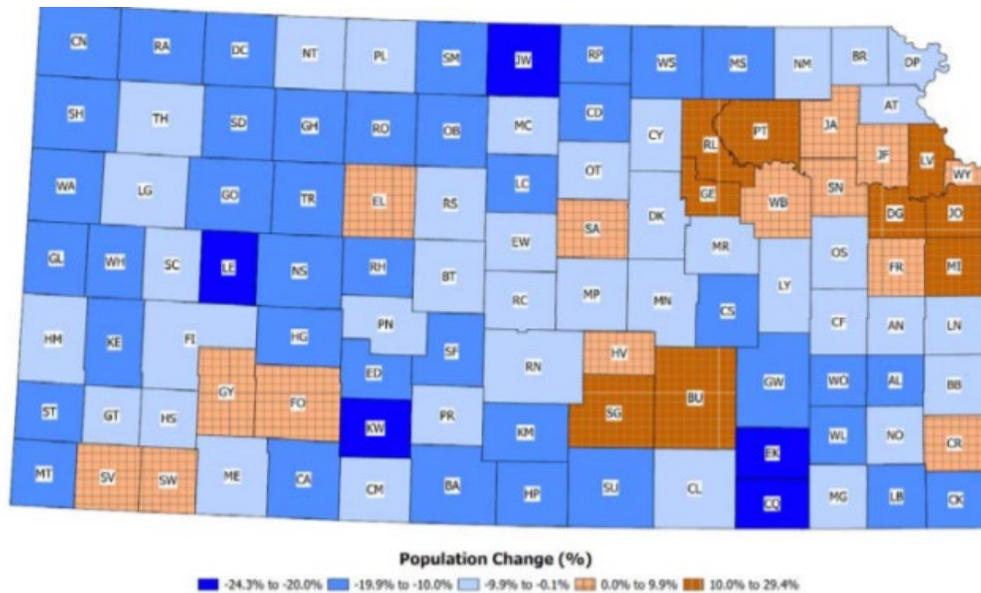


Figure 28. Population Change in Kansas.

3.4 Additional Mitigation Measures and Conditions

Mitigation measures include:

- closing areas to hunting and the public use due to recurrence of prohibited activities, such as public contact water use—monitoring equipment;
- limiting hunting opportunities or access to areas to allow the recovery or improvement of refuge or local species populations or habitat conditions;
- adjusting hunting opportunities to address concerns related to disease or contaminants;
- adjusting hunting opportunities to address safety concerns or conflicts associated with multiple hunting uses, nonconsumptive uses, and Service staff activities; and
- rectifying impacts by repairing, rehabilitating, or restoring the affected environment.

3.5 Monitoring

The State of Kansas conducts and uses surveys to facilitate decision-making related to hunting activities (www.ksoutdoors.com/Services/Research-Publications/Wildlife-Research-Surveys). The refuge would rely heavily on the same information, such as what was used in this proposed EA and hunting and fishing plan. Local or refuge-specific information would be used to supplement statewide surveys or reports.

3.6 Summary of Analysis

The purpose of this EA is to briefly provide sufficient evidence and analysis for determining whether to prepare an environmental impact statement or a finding of no significant impact.

Alternative A – Proposed Action Alternative

As described above, the impacts of this alternative are that comparatively more use opportunities would be available for hunting. There would be increased number of species allowed to be hunted, as well as associated seasons and methods of take to satisfy different hunting user groups. Under the new proposed action, the refuge would expand opportunities to hunt more species that include coyotes, state-defined furbearers, grey squirrels, jackrabbits, crows, rails, and woodcocks. New hunting experiences would include archery-only hunting area for turkey (currently, this area only allows archery deer), and a youth and disabled season for archery deer hunting. Again, the challenge of balancing multiple consumptive and nonconsumptive uses, all while supporting the conservation of natural resources, would persist. However, refuge hunting mitigation measures and periodic assessments would allow adjustments in hunt and fish activities under both alternatives. In the years since CCP approval (2006), current conditions have offered hunting opportunities as whooping cranes and other threatened and endangered species continue to safely increase use of the refuge. This trend would be expected to continue.

This alternative meets the purpose and needs of the Service as described above but with expanded wildlife-dependent recreation opportunities. We expect these other hunting opportunities to have similar negligible impacts to cultural resources. However, administratively, it would take more time, resources, and staff and has the potential to create more conflicts between user groups on the refuge, specifically wildlife observation and photography and hunting groups. With limitations to hunting area and seasons, and with the use of temporary closures, opportunities on the refuge for these compatible uses would continue.

The Service has determined that the proposed action is compatible with the purposes of the refuge and the mission of the Refuge System. The final compatibility determination is located at <https://www.fws.gov/mountain-prairie/huntfish.php#> and in Appendix B.

Alternative B – No Action Alternative

As described above, the impacts of this alternative would continue to provide the same opportunities for hunters that have occurred in the past. Current conditions do not allow opportunities to hunt coyotes, state-defined furbearers, grey squirrels, jackrabbits, crows, rails, or woodcocks. The challenge of balancing multiple consumptive and nonconsumptive uses, all while supporting the conservation of natural resources, would persist. However, refuge hunting mitigation measures and periodic assessments would allow adjustments in hunt and fish activities under both alternatives. In the years since CCP approval (2006), current conditions have offered hunting opportunities as whooping cranes continue to safely increase use of the refuge. This trend would be expected to continue based on use areas and in publicly accessible areas.

This alternative meets the purpose and needs of the Service as described above, except it limits additional potential wildlife-dependent recreation opportunities. Hunting typically causes very little threat to cultural resources on the refuge. Administratively, it would take less time and resources and staff and create fewer conflicts between user groups on the refuge.

3.7 List of Sources, Agencies, and Persons Consulted

- KDWPT; Pratt, Kansas
- Barbara Boyle, Refuge Supervisor, USFWS U.S. Department of the Interior Region 5

- Aaron Mize, Hunt and Fish Coordinator, U.S. Department of the Interior Regions 5 and 7
- Bernardo Garza, NEPA/Hunting & Sport Fishing Coordinator; U.S. Department of the Interior Regions 5 and 7
- Toni Griffin, Landscape Architect, U.S. Department of the Interior Regions 5 and 7
- Brad Krohn, Project Leader, USFWS Rainwater Basin Wetland Management District (WMD)/Kirwin NWR, NE/KS
- Jeff Drahot, Biologist, USFWS Rainwater Basin WMD/Kirwin NWR, NE/KS

The Service Ecological Services program Kansas field supervisor was contacted via phone and follow-up email about the Kansas NWR Complex hunting and fishing plans on October 31, 2019. The national wildlife refuges made a request to review the list of species threatened, endangered, proposed, and under review as part of the Environmental Assessment Section 7 consultation rule associated with the hunting and fishing plans. The Section 7 consultation is provided in Appendix C.

3.8 List of Preparers

Kirwin NWR staff, Rainwater Basin WMD staff (complex), and regional office planners and editors contributed to the development of this EA as mentioned above.

- Toni Griffin, Landscape Architect, U.S. Department of the Interior Regions 5 and 7
- Brad Krohn, Project Leader, USFWS Rainwater Basin WMD/Kirwin NWR, NE/KS
- Jeff Drahot, Biologist, USFWS Rainwater Basin WMD/Kirwin NWR, NE/KS

3.9 State Coordination

Representatives of the Kansas NWR Complex (Flint Hills, Quivira, and Marais des Cygnes NWRs) met with the Secretary of KDWP and a KDWP Wildlife Research Supervisor Migratory Bird Specialist about potential future hunting opportunities on the refuges on October 30, 2019 in Hartford, Kansas. The state shared organization and public interests and responded to the proposed hunting opportunities (operations and regulations) at the meeting and in follow-up verbal and written communications with the Kansas NWR Complex and Kirwin NWR. The Service asked about recommendations and review of hunt programs, specifically special hunts and the use of state-coordinated programs. The Service specifically asked the state about including the refuge and refuge complex in state hunt registration and administered programs to ensure consistency and coordination. The Service agreed with state recommendations to improve the alignment with state and among refuges in the refuge complex. Overall, the state was supportive of the Service's proposals to expanded hunting opportunities and both agencies confirmed the continuance of a strong partnership to support these efforts. The state regional office reviewed and concurred with the refuge-specific regulations. We have and will continue to consult and coordinate on specific aspects of the hunting and fishing plan. The state is in agreement with the refuge and refuge complex hunting and fishing plan(s) because the plan(s) help meet state objectives.

3.10 Tribal Consultation

The Service mailed an invitation for comments to all tribes potentially affected by initiating an EA to expand hunting opportunities at the refuge. The Service extended an invitation to engage in government-to-government consultation in accordance with Executive Order 13175. There were no comments or responses from tribes for any plan concerning Kirwin NWR.

3.11 Public Outreach

Public scoping opportunities and input from tribes, state, and local individuals and agencies, nongovernment organizations, and Service staff occurred as part of a recently developed CCP. KDWPT participated as part of the planning team. Comments throughout the planning process were considered in development of the hunting and fishing plan.

On April 1, 2020, the Service made the Draft Kirwin NWR Hunting and Fishing Plan and associated EA available to the public for a 30-day public review and comment period. The Draft Kirwin NWR Hunting and Fishing Plan and associated EA were amended and the 30-day public review and comment period was extended through May 27, 2020. The draft hunting and fishing plan and associated EA were available at www.fws.gov/mountain-prairie/huntfish.php#. Hard copies were also available upon request.

The Service received comments from seventeen individuals and two organizations. One commenter expressed support for expanding the fishing opportunities by allowing motorized boating in an area currently closed to motorized boats on Kirwin NWR. Fifteen commenters expressed opposition to the proposed expansion of fishing opportunities by allowing motorized boating in an area currently closed to motorized boats on Kirwin NWR. One individual and two organizations were partially opposed to the proposed expanded opportunities for both hunting and fishing. Opposition from the two organizations pertained to the hunting of coyote, bobcat, and locally rare or uncommon species, and largely considered conflicts with the refuge's frequent nonconsumptive users and any increased potential disturbance of whooping cranes. The majority of comments received were local opposition to the proposed expansion of fishing opportunities, and the potential overutilization of the lake and associated impacts on fish populations within the reservoir. The discussion of comments we received follow by topic below.

Comments and Agency Response

Comment (1): A couple comments expressed general opposition to any hunting on the national wildlife refuge. These and other comments voiced that hunting was antithetical to the purposes of a refuge.

Response: The NWRSA, as amended, stipulates that hunting (along with fishing, wildlife observation and photography, and environmental education and interpretation), if found to be compatible, is a legitimate and priority general public use of a refuge and should be facilitated. The Service has adopted policies and regulations implementing the requirements of the NWRSA that refuge managers comply with when considering hunting and fishing programs. The need for the proposed action also meets the Service's implementation of Secretarial Order 3347 *Conservation Stewardship and Outdoor Recreation* and Secretarial Order 3356 *Hunting, Fishing, Recreational Shooting, and Wildlife Conservation Opportunities and Coordination with States, Tribes, and Territories* by expanding hunting opportunities and aligning Service regulation with state regulations.

We allow hunting of resident wildlife on national wildlife refuges only if such activity has been determined compatible with the established purpose(s) of the refuge and the mission of the Refuge System as required by the NWRSA. Hunting of resident wildlife on national wildlife refuges generally occurs consistent with state regulations, including seasons and bag limits. Refuge-specific hunting regulations can be more restrictive (but not more liberal) than state regulations and often are more restrictive in order to help meet specific refuge objectives. These objectives may include resident wildlife population and habitat objectives, limiting disturbance impacts to wildlife, maintaining high-quality opportunities for hunting and other wildlife-dependent recreation, eliminating or minimizing conflicts with other public uses and/or refuge management activities, and protecting public safety.

Each refuge manager makes a decision on hunting on that particular refuge after rigorous examination of available information. Developing or referencing a CCP, a 15-year plan for the refuge, is generally the first step taken by a refuge manager. Our policy for managing units of the Refuge System is to manage all refuges in accordance with an approved CCP, which, when implemented, will achieve refuge purposes; help fulfill the Refuge System mission; maintain and, where appropriate, restore the ecological integrity of each refuge and the Refuge System; help achieve the goals of the National Wilderness Preservation System; and meet other mandates. The CCP guides management decisions and sets forth goals, objectives, and strategies to accomplish these ends. Following the development or referencing of a CCP, refuge managers develop or reference step-down plans, which would include a hunting plan. After completing the step-down plan, the process to open a refuge for hunting requires compliance with the National Environmental Policy Act (NEPA; 42 U.S. Code 4321 et seq.), which may include conducting an environmental assessment accompanied by the appropriate decision documentation (record of decision, finding of no significant impact, or environmental action memorandum or statement). The remaining requirements to open a refuge for hunting include an evaluation of section 7 of the Endangered Species Act of 1973, as amended (16 U.S. Code 1531 et seq.), copies of letters requesting state and/or tribal involvement, and draft refuge-specific regulatory language. We make available the CCP, hunting plan, and NEPA documents, and request public comments on them, as well as on any proposed rule, before we allow hunting on a refuge or other Refuge System lands.

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

The word “refuge” includes the idea of providing a haven of safety for wildlife, and as such, hunting might seem an inconsistent use of the Refuge System. However, the NWRSA stipulates that hunting, if found compatible, is a legitimate and priority general public use of a refuge. Furthermore, we manage refuges to support healthy wildlife populations that, in many cases, produce harvestable surpluses that are a renewable resource. As practiced on refuges, hunting and fishing do not pose a threat to wildlife populations. It is important to note that taking certain individuals through hunting does not necessarily reduce a population overall, as hunting can simply replace other types of mortality. In some cases, however, we use hunting as a management tool with the explicit goal of reducing a population; this is often the case with exotic and/or invasive species that threaten ecosystem stability. Therefore, facilitating hunting opportunities is an important aspect of the Service's roles and responsibilities as outlined in the legislation establishing the Refuge System, and the Service will continue to facilitate these

opportunities where compatible with the purpose of the specific refuge and the mission of the Refuge System.

Not all refuges are inviolate sanctuaries. If we acquired a refuge as an inviolate sanctuary, we may open up to 40 percent of that refuge's area for hunting of migratory game birds (16 U.S. Code 668dd[d][1][A]). However, if we acquired a refuge without the stipulation that it be an inviolate sanctuary, we may open 100 percent of the refuge's area for hunting. The Improvement Act (16 U.S. Code 742l) amended Section 6 of the NWRSA to provide for the opening of all or any portion of an inviolate sanctuary to the taking of migratory birds if taking is determined to be beneficial to the species. Such opening of more than 40 percent of the refuge to hunting is determined by species. This amendment refers to inviolate sanctuaries created in the past or to be created in the future; it has no application to areas acquired for other management purposes.

We did not make any changes to the hunting and fishing plan as a result of these comments.

Comment (2): One commenter pointed out there are current hunting and fishing opportunities on this refuge and other public lands, such as U.S. Forest Service lands, Bureau of Land Management lands, and state areas; therefore, the proposed additional hunting opportunities on national wildlife refuges in Kansas is not necessary.

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

We did not make any changes to the hunting plan or environmental assessment as a result of these comments.

Comment (3): Several commenters felt that predators (coyotes, bobcats) should not be hunted on refuges due to their biological importance in refuge ecosystems, and that the cumulative impacts of hunting these species was not thoroughly analyzed by the Service. Commenters stated bobcat density estimates vary and are poorly understood, and that bobcats are limited by available prey, competition, predation, and are susceptible to disease. For these reasons, the commenters felt that “trophy hunting” of these species is inappropriate. They also felt that hunting of these species is unethical and the common methods of take for these species, including baiting, hounding, and trapping are unsportsmanlike.

Response: Refuge managers consider predator management decisions on a case-by-case basis. As with all species, a refuge manager makes a decision about managing predator populations, including allowing predatory species to be hunted, only after careful examination to ensure the action would comply with relevant laws, policies, and directives. The NWRSA, as amended, directs the Service to manage refuges for “biological integrity, diversity, and environmental health” and mandates that “regulations permitting hunting or fishing of fish and resident wildlife within the System shall be, to the extent practicable, consistent with state fish and wildlife laws, regulations, and management plans” (16 U.S. Code 668dd[m]). Opportunities for hunting predators, as described in the regulations, are to bring greater consistency with state fish and wildlife laws, regulations, and management plans. For refuges, hunting decisions are only made after careful consideration by the refuge manager to ensure that such actions would not threaten the integrity, diversity, and overall health of the ecosystem and were compatible with both the

purpose of the refuge and the mission of the Refuge System. Finally, both the NEPA process and the rulemaking process provide the opportunity for public to provide comments and any additional information on impacts of our actions. We considered the additional information provided from the public on this issue during these public comment periods and determined that they did not affect our initial determinations that these small and minor opportunities for hunting predators on Kirwin NWR had no more than minor impacts on the population health of these species or other wildlife at the local, regional, or national level.

Most of the predator species listed, if allowed to be hunted on a refuge, are only allowed to be hunted with restrictions, such as in number, area, time, and methods of take. Trapping is not an option in the proposed hunting and fishing plan. Baiting is prohibited on all refuges outside Alaska (50 Code of Federal Regulations 32.2[h]), unless specifically authorized under station-specific regulations, and authorization of baiting is uncommon. The use of dogs for hounding is prohibited on refuges (50 Code of Federal Regulations 26.21[b]) unless authorized by station-specific regulations. Many refuges only authorize the use of dogs for retrieval of migratory birds, upland game birds, and small game, and most refuges require authorized dogs to be under the immediate control of the hunter at all times, or leashed unless actively retrieving an animal.

Comment (4): One commenter felt while the environmental assessment provides some discussion of population trends for raccoons and coyotes, it provides no estimates of population numbers or trends of other “furbearer” species, or any other analysis of these species’ ability to withstand additional hunting pressure. The Service has a legal duty to ensure that the biological integrity, diversity, and environmental health of the system are maintained for the benefit of present and future generations of Americans (16 U.S. Code 668dd[a][1], [4]). The Service cannot act consistent with that duty when authorizing the exploitation of ecologically important predator species like bobcats, especially given the myriad other threats they face and the lack of data on their current populations.

The commenter also felt the draft environmental assessment’s analysis of impacts to furbearers is deficient because it provides no analysis of how new hunting opportunities on the refuge could impact the other species to be targeted. It also fails to consider an alternative that would not expand hunting to ecologically important predators, such as bobcats, and it provides no cumulative impacts of furbearer hunting on the refuge when combined with hunting elsewhere in the state or country.

Response: The NWRSA, as amended, mandates that “regulations permitting hunting or fishing of fish and resident wildlife within the System shall be, to the extent practicable, consistent with state fish and wildlife laws, regulations, and management plans” (16 U.S. Code 668dd[m]). Opportunities for hunting predators, as described in the regulations, are to bring greater consistency with state fish and wildlife laws, regulations, and management plans. For refuges, hunting decisions are only made after careful consideration by the refuge manager to ensure that such actions would not threaten the integrity, diversity, and overall health of the ecosystem and were compatible with both the purpose of the refuge and the mission of the Refuge System. In the EA for Kirwin NWR, population trends were provided on furbearer and other species besides raccoons and coyotes. Some of the trends provided were for the appropriate region of north-central Kansas, which showed stable to increasing trends following severe drought. Statewide trends, which are also stable to increasing, are provided in Figure 3

The majority of annual harvest of bobcats in Kansas is a result of trapping, which is not a method of take being proposed at Kirwin NWR. For furbearer species, the proposed hunting opportunities limit the hunted area (less than 40 percent of refuge lands), time (season and hours; no hunting at night), and methods of take (e.g., no trapping or baiting). Collectively, these restrictions limit take and, therefore, impacts associated with other hunted species and/or with population trends at different landscape scales. Additionally, furbearer species have access to hunted and non-hunted lands both on and off the refuge (for example, bobcats have average home range size of 2–4 square miles for females and about twice as large for males (www.ksoutdoors.com/Hunting/Furharvesting/Furbearers/Bobcat, accessed 5-21-2020)).

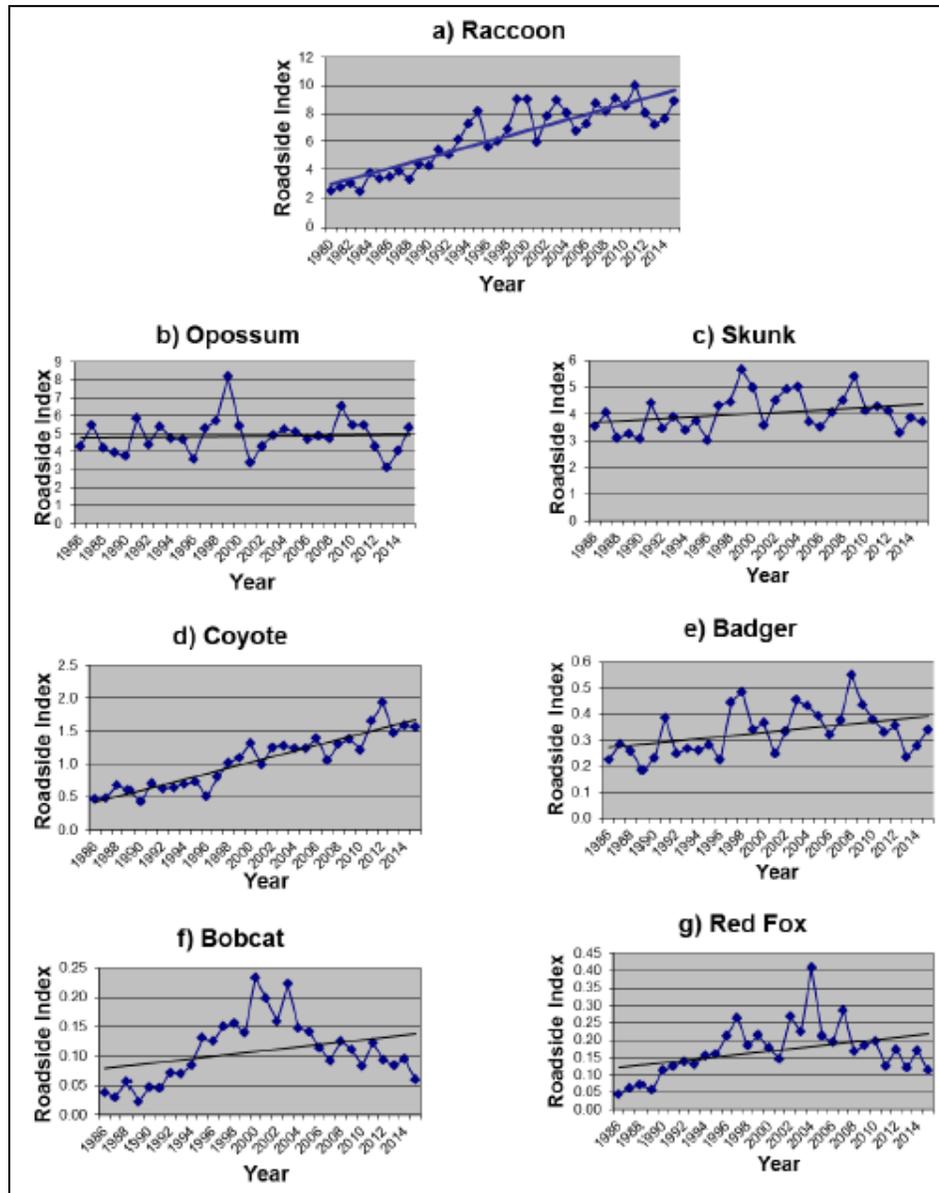


Figure 29. Population Trend of Various Furbearer Species Based on Annual Roadside Indices

Comment (5): One commenter expressed an opinion that skunks and opossums are not desirable game species and are largely nocturnal, making hunting of these species an unlikely means of population control. The commenter also felt muskrat, mink, fox, badger, and bobcats either are uncommon on the refuge or are nocturnal, and thus either not likely to be desirable quarry for hunters or, if hunted, not found. The commenter asserted a change in regulation is not required to control burgeoning populations or to fulfill an urgent popular demand for an open season on these species.

Response: The NWRSAA (16 U.S. Code 668dd [a][4]), as amended, stipulates that hunting (along with fishing, wildlife observation and photography, and environmental education and interpretation), if found compatible, is a legitimate and priority general public use of a refuge and should be facilitated. The Service has adopted policies and regulations implementing the requirements of the NWRSAA that refuge managers comply with when considering hunting and fishing programs. The need for the proposed action also meets the Service's implementation of Secretarial Order 3347 *Conservation Stewardship and Outdoor Recreation* and Secretarial Order 3356 *Hunting, Fishing, Recreational Shooting, and Wildlife Conservation Opportunities and Coordination with States, Tribes, and Territories* by expanding hunting opportunities and aligning Service regulation with state regulations.

We did not make any changes to the hunting and fishing plan or EA as a result of these comments.

Comment (6): One commenter expressed concern of the use of lead in ammunition and/or fishing tackle. The Service (Kirwin NWR is representative of the Service) was praised for supporting the use of nontoxic ammunition. The commenter stated science demonstrates harm that lead poisoning causes eagles and other wildlife, and provided a website with supporting documentation (www.diversity.box.com/s/63lkfzz46uprpu67sfk31on118ixnj4f), requesting that these studies be included in the official record for this project. The commenter felt the draft environmental assessment acknowledged potential impacts from lead poisoning but failed to take the "hard look" required under NEPA.

Response: The proposed hunting opportunities on Kirwin NWR only allow use of nontoxic ammunition. Adverse environmental impacts of lead are acknowledged in the EA. The Service continues to educate hunters and anglers on the impacts of lead on the environment, and particularly on human health and safety concerns of ingesting animals harvested with lead ammunition. At a national scale, the Service continues to phase-out the use of lead ammunition and tackle on lands in cooperation with our state partners. Fishing on Kirwin NWR has been allowed since 1954 when the Bureau of Reclamation established the irrigation reservoir. The Service proposes expansion of fishing opportunities on the refuge by motorized boat; however, the area is already open for fishing with non-motorized boat and from the bank of the reservoir. We encourage anglers to voluntarily use nontoxic tackle for all harvest activities. Lead alternatives to both ammunition and tackle are becoming more widely available and used by hunters and anglers, however, they remain more expensive.

Kirwin NWR supports lead alternatives and recommends the use nontoxic tackle on the refuge. We have added opportunities to educate the public on the effects of lead on natural resources to the hunting and fishing plan and EA as a result of these comments.

Comment (7): There were several comments from local residents expressing general concern against proposed expansion of fishing opportunities, focused on negative impacts to the reservoir fisheries, which is managed by the KDWPT.

Response: In passing the Improvement Act, Congress reaffirmed that the Refuge System was created to conserve fish, wildlife, plants, and their habitats, and would facilitate opportunities for Americans to participate in compatible wildlife-dependent recreation, including hunting and fishing on Refuge System lands. We prioritize wildlife-dependent recreation, including hunting and fishing, when doing so is compatible with the purpose of the refuge and the mission of the Refuge System.

Fishing is a priority public use as listed in the Improvement Act and has been found compatible at Kirwin NWR. Opportunities for fishing will be provided based on refuge goals and objectives and in accordance with state regulations.

Based on the biological impacts addressed in the final EA, the Service determined recreational fishing will not materially interfere with the habitat goals and objectives or purposes for refuge establishment. The refuge has been open to fishing from bank and by boat since establishment in 1954.

Congress, through the NWRSA, as amended, envisioned that hunting, fishing, wildlife observation and photography, and environmental education and interpretation would all be treated as priority public uses of the Refuge System. Therefore, the Service facilitates all of these uses on refuges, as long as they are found compatible with the purposes of the specific refuge and the mission of the Refuge System. There are several other compatible public uses enjoyed by the public on Kirwin NWR and providing an expanded fishing opportunity is not expected to impact federal trust species. Boating is not a priority public use; however, it does facilitate the six priority public uses. By specifying areas, time of year, no wake zones, and implementing a seasonal boat closure, boating is determined to be a compatible use. Based on biological impacts described in the final EA and the final CCP, it is determined that boating in support of the six priority public uses within the Kirwin NWR would not materially interfere with or detract from the purpose for which the refuge was established.

There will be no changes to the seasonal boat closure (October 1 to April 1) when water elevations are below 1,722 feet elevation. Access to the lake by both motorized and non-motorized boats already exists. The proposed new fishing opportunities will address the removal of the current buoy line, which is difficult for the refuge to maintain and enforce on the fluctuating elevation of the irrigation reservoir. The reservoir does freeze over in the winter months and is inaccessible to motorized boats when the water elevations are low. The refuge maintains the authority to close any particular area of the refuge to conserve and protect federal trust species including threatened and endangered species or for purposes of public safety.

We did not make any changes to the hunting and fishing plan or EA as a result of these comments.

3.12 Determination

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

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

Preparer Signature: _____ Date: _____

Name/Title/Organization: Brad Krohn, Refuge Manager, Kirwin NWR, Kirwin, KS

Reviewer Signature: _____ Date: _____

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

3.13 References

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APPENDIX A OTHER APPLICABLE STATUTES, EXECUTIVE ORDERS, AND REGULATIONS

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

Key: CFR = Code of Federal Regulations

APPENDIX B COMPATIBILITY DETERMINATION

FINAL COMPATIBILITY DETERMINATION FOR HUNTING AND FISHING ON KIRWIN NATIONAL WILDLIFE REFUGE

Use: Expanded hunting and fishing

Refuge Name: Kirwin National Wildlife Refuge

Establishing and Acquisition Authorities:

- Fish and Wildlife Act of 1956 (16 United States [U.S.] Code 742f[a][4])
- Fish and Wildlife Act of 1956 (16 U.S. Code 742f[b][1])

Refuge Purpose(s):

Kirwin National Wildlife Refuge (NWR) was established in 1954 to provide habitat for and facilitate the management of the Nation's migratory bird resources.

“... 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, ...in behalf of the National Migratory Bird Management Program” 16 U.S. Code 664 (Fish and Wildlife Coordination Act).

National Wildlife Refuge System Mission:

The mission of the National Wildlife Refuge System (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 U.S. for the benefit of present and future generations of Americans.

Description of Use:

What is the use?

Hunting and fishing are activities conducted by the public under regulation authority of the National Wildlife Refuge System Improvement Act of 1997 (Improvement Act); these activities are considered a priority public use. This compatibility determination (CD) updates and supersedes previous related CDs and is being completed as part of the 2020 Kirwin NWR Hunting and Fishing Plan and the associated environmental assessment (EA). This CD will reevaluate hunting and fishing opportunities in addition to the existing approved hunting and fishing uses on the refuge.

Hunting expansion includes archery hunting for turkey. Additional species to be hunted include small game (grey squirrel, jackrabbit), state-defined furbearers (coyote, fox, raccoon, badger, bobcat, mink, muskrat, weasel, opossum, raccoon and striped skunk), and migratory birds (woodcock, rail, and crow).

The Service proposes to expand fishing opportunities (boating regulation changes) on an additional 1,360 acres of the refuge in accordance with the State of Kansas' rules and

regulations. These 1,360 acres are already open to fishing by foot and seasonal non-motorized boating activities.

Where will the use be conducted?

The described hunting will occur on refuge lands, specifically within the congressionally approved boundary as outlined in the 2020 Kirwin NWR Hunting and Fishing Plan and as shown on refuge hunt maps, brochures, and other forms of communication (see Figure 1). Adding any new lands, hunted species, or hunting opportunities require submission of an opening package, which includes an announcement in the Federal Register. This is completed on an annual basis.

When and how will the use be conducted?

All new hunting opportunities will occur within the existing hunt seasons established by the State of Kansas for hunting on the refuge. Hunting will not be allowed at night; refuge and shooting hours will remain the same as currently allowed. While specifics are described in the proposed hunting and fishing plan, closures will occur for the protection of species and the public at any time under the authority of the refuge manager (or other higher administrative authority). For example, closures will occur for the protection of whooping cranes using the refuge during migration (see Pearse et al. 2015).

The use is conducted according to state, federal, and refuge-specific regulations. Kansas Department of Wildlife, Parks, and Tourism publishes hunting regulations annually (<https://ksoutdoors.com/Hunting>). Regulations pertaining to hunting on all national wildlife refuges are available in 50 CFR 32.2 (<https://ecfr.io/>). Refuge-specific regulations are available on the refuge's website (www.fws.gov/refuge/kirwin/) and in brochures provided at refuge headquarters and kiosks.

The U.S. Fish and Wildlife Service (Service) limits hunt areas, seasons, hours, and other aspects of operations and procedures to ensure compatibility of multiple wildlife-dependent uses and with conservation priorities as described in the refuge comprehensive conservation plan (CCP) (USFWS 2006).

Why is this use being proposed?

The uses being proposed are to expand compatible wildlife-dependent opportunities on the refuge that collectively increase the potential for a heightened awareness and appreciation of natural resources. Hunting is one of six public use priorities named in the Improvement Act (www.fws.gov/willamettevalley/ccp/nwrsia.htm). Hunting was a traditional activity that occurred on refuge lands prior to and since refuge establishment. Expanding hunting opportunities and aligning regulations with state agencies implement Secretarial Order 3347, *Conservation Stewardship and Outdoor Recreation*, and Secretarial Order 3356, *Hunting, Fishing, Recreational Shooting, and Wildlife Conservation Opportunities and Coordination with States, Tribes, and Territories*. The hunt program is administered in accordance with sound wildlife management principles and public safety.

Availability of Resources:

While additional hunting and fishing opportunities will require more time and monetary resources, implementation can occur under current administrative conditions. Existing programs,

such as signs, brochures, and other communications, could be updated with available resources. Maintenance of infrastructure is closely tied to the Service Asset Maintenance Management System. The refuge's base budget and additional regional fiscal support will cover the cost of updates. Current law enforcement is sufficient for safety and management related to expanded hunting uses. Monitoring will heavily rely on state surveys and research information (<https://ksoutdoors.com/Services/Research-Publications/Wildlife-Research-Surveys>); however, some refuge-specific activities will occur (such as whooping crane verification, monitoring, and reporting).

Anticipated Impacts of the Use:

There would be an increased number of species allowed to be hunted, as well as expanded areas and methods of take to satisfy different hunting user groups. The refuge would increase opportunities by allowing hunting of state-defined furbearers (coyote, badger, bobcat, fox, mink, muskrat, opossum, raccoon, striped skunk, and weasel), migratory birds (crow, rail, and woodcock), and small game (grey squirrel and jackrabbit) and turkeys with no appreciably adverse impacts in context of regional and/or statewide populations. Hunt seasons and limits are established within frameworks set by the Service for migratory birds and by the State of Kansas for resident game species. Restrictions are adjusted with consideration of species population trends, supporting long-term conservation of natural resources.

Fishing visitations and success fluctuate according to water elevation and shoreline access in the Kirwin Reservoir, Bow Creek, and the North Fork Solomon River. The river and creek have marginal fisheries due to their seasonal flow and elevation changes. Kirwin NWR allows both motorized and non-motorized access to fishing on the reservoir with a few restrictions in place. Restrictions include a seasonal closure when the water elevations fall below 1,722 feet (measured annually on October 1st). If the water elevation is below the threshold, the lake is closed to all boats from October 1st–April 1st, with the exception of Bow Creek Unit which remains open to boat access to support hunting and fishing during appropriate seasons year-round. On years where the water elevation is at or above the threshold, the lake will remain open to all boating access. Beyond limited staffing issues and enforcement concerns, biologists have determined that migratory bird disturbance will not increase by the presence of motorized boats because the areas affected are already being disturbed by hunters on nearby land and fisherman year-round. High water levels (which are uncommon) will be the only time boats can physically make it to the proposed expansion area. The low water years or those below 1,722 feet elevation will not support adequate water depth to allow motorized boating access.

Based on biological impacts described in the CCP (2006), it was determined that boating in support of the six priority public uses within the refuge will not materially interfere with or detract from the purpose for which the refuge was established. Boating is not a priority public use; however, it does facilitate the six priority public uses. Although boats with motors were initially not permitted on 1,360 acres of the refuge. Yet, by specifying areas, the time of year, no wake zones, and by implementing a seasonal boat closure, boating was determined to be compatible.

The challenge of balancing multiple consumptive and nonconsumptive uses while supporting the conservation of natural resources continues to evolve. Hunting, fishing, and other public use activities have short-term disturbance impacts to be carefully considered prior to approval. For

example, monitoring wildlife response and public comments about area and temporal closures can provide periodic feedback that helps to make adjustments in any activities that create unsafe conditions for humans or result in unacceptable disturbance during endangered species use. In the years since CCP approval (2006), current conditions have offered hunting and fishing opportunities while whooping cranes continue to safely increase use of the refuge. This trend is expected to continue. There are no foreseen long-term impacts to sensitive non-target species, but periodic assessments may lead to necessary changes in public use activities.

Activities as part of the 2020 Kirwin NWR Hunting and Fishing Plan may negligibly affect other hunting and recreational uses and refuge administration. Adherence and enforcement of state, federal, and refuge-specific regulations are intended to facilitate public safety, multiple-use interests, and wildlife-habitat conservation. With respect to indirect or cumulative impacts, there are no anticipated adverse affects to area land use, Indian trust resources, cultural resouorces, environmental justice, listed threatened and endangered species, or other biological community resources.

For a more in-depth evaluation of impacts, refer to the EA associated with the 2020 Kirwin NWR Hunting and Fishing Plan.

Public Review and Comment:

On April 1, 2020, the Service released the draft CD for a 30 day public review and comment period. On April 1, 2020, the Service made the Draft Kirwin NWR Hunting and Fishing Plan and associated EA available to the public for a 30-day public review and comment period. The Draft Kirwin NWR Hunting and Fishing Plan, associated EA, and CD were amended and the 30-day public review and comment period was extended through May 27, 2020. The Service received comments from seventeen individuals and two organizations. One commenter expressed support for expanding the fishing opportunities by allowing motorized boating in an area currently closed to motorized boats on Kirwin NWR. Fifteen commenters expressed opposition to the proposed expansion of fishing opportunities by allowing motorized boating in an area currently closed to motorized boats on Kirwin NWR. One individual and two organizations were partially opposed to the proposed expanded opportunities for both hunting and fishing. Opposition from the two organizations pertained to hunting of coyote, bobcat, and locally rare or uncommon species, and largely considered conflicts with the refuge's frequent nonconsumptive users and any increased potential disturbance of whooping cranes. The majority of comments received were local opposition to the proposed expansion of fishing opportunities and the potential overutilization of the lake and associated impacts on fish populations within the reservoir.

Additionally, on April 9, 2020, the Service published the Draft 2020–2021 Station-Specific Hunting and Sport Fishing Regulation Regulations in the Federal Register. The Service has removed all refuge-specific regulations from 50 CFR Part 32 that were duplicative of other Service or State regulations, and thus unnecessary. The regulations removed from the refuge-specific regulations are all still enforceable on the refuge under Federal and State law. The regulations applicable to hunting on the refuge have been clarified concerning the use of temporary hunting blinds because of the rulemaking this year. The refuge will ensure that refuge's hunting brochure includes all applicable regulations for hunting on the refuge.

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

- Kansas Department of Wildlife, Parks, and Tourism; Pratt, Kansas
- Kansas State Historic Preservation Office; Topeka, Kansas
- Potentially impacted tribes

The Service Ecological Services program Kansas Field Supervisor was contacted (via phone and follow-up email) about the Kansas NWR Complex hunt plans on November 24, 2019. A request was made by the national wildlife refuges to review the list of species threatened, endangered, proposed, and under review as part of the environmental assessment Section 7 consultation requirement associated with the hunt plans.

Refuge staff met with Kansas Department of Wildlife, Parks, and Tourism on October 30, 2020, to discuss the current hunting program and recommendations for the future. During that meeting the state shared organization and public interests and responded to proposed hunting opportunities at the meeting and in follow-up verbal and written communications. These discussions helped adjust our plan to align, where possible, with state management goals. Overall, the state was supportive of the Service's proposals of expanded hunting opportunities and both agencies confirmed the continuance of a strong partnership. The refuge received a letter of concurrence from the state director on November 18, 2019.

The Service consulted with the Kansas State Historic Preservation Office, requesting review and comment concerning the Service's determination of no adverse effect to historic properties with regard to the opening of additional species to hunting on Kirwin NWR.

The Service mailed an invitation for comments to all tribes potentially impacted by initiating an EA to expand hunting opportunities at Kirwin NWR. The Service extended an invitation to engage in government-to-government consultation in accordance with Executive Order 13175.

Determination (check one below):

- Use is not compatible.
- Use is compatible with the below stipulations:

Stipulations Necessary to Ensure Compatibility:

To ensure compatibility with the Refuge System and refuge goals and objectives, hunting and fishing can only occur under the follow conditions:

- Implementation of uses as described in the refuge's 2020 hunting and fishing plan, in accordance with applicable state, federal, and refuge-specific regulations.
- Only nontoxic shot is permitted on the refuge when hunting with a shotgun (waterfowl, upland game, turkey).
- Vehicle travel is limited to designated roads, trails, and parking areas.
- Promote sound hunting practices for safe recreational use and provide quality experiences.

Justification:

Hunting is identified as a priority public use in the Improvement Act, and will help meet Refuge System goals with minimal conflicts. Wildlife-based recreation can instill a greater appreciation of natural resources. Hunting seasons and bag limits are established by the states within a framework set nationally by the Service for migratory game birds, and at the state level for big game, upland game, and furbearers. These restrictions ensure the continued well-being of migratory birds and resident wildlife populations. Hunting does result in the take of individuals within the overall population, but the annually established restrictions are designed to safeguard adequate breeding population from year to year. The area closed to waterfowl hunting (Kirwin Reservoir) on the refuge provides safe stopover habitat for migratory birds during migration that coincides with the hunting season. Yet, specific refuge regulations address equity and quality opportunities for hunters.

Hunting is consistent with the refuge's larger goals to restore and re-establish native plant communities throughout the refuge for wildlife and for education and recreational opportunities; to maintain the refuge through active management programs, including hunting; and to provide opportunities for visitors to understand, observe, and enjoy wildlife and native habitats of the Solomon River Basin. Additional information about these goals can be found in the CCP (2006). The refuge will continue to provide sanctuary habitat for birds and other wildlife throughout the year while hunting has been determined compatible, provided the above stipulations be implemented. Therefore, hunting use will be permitted, as it is a priority public use and will not diminish the primary purposes of the refuge.

Fishing is also identified as a priority public use in the Improvement Act and will help meet Refuge System goals with only minimal conflicts. This is considered a wildlife-based recreational activity that can instill a greater appreciation of natural resources. Yet, the refuge will continue to provide sanctuary habitat for birds and other wildlife throughout the year. The administration of the boating program is conducted using available resources. Implementing new programs, activities, and facilities outlined in the CCP is tied to funding requests. Hunting, fishing, and other human activities can cause disturbance to wildlife. Disturbance to migrating and wintering waterfowl will continue to be limited by maintaining the current seasonal boat closure on most of the reservoir during low water conditions. Boating in support of the six public uses (hunting, fishing, wildlife observation, wildlife photography, environmental education, and interpretation) is compatible.

Signatures:

Submitted By:

Brad Krohn, Refuge Manager
Kirwin NWR
U.S. Fish and Wildlife Service
Kirwin, Kansas

Date

Concurrence:

Refuge Supervisor
Interior Regions 5 and 7
U.S. Fish and Wildlife Service
Lakewood, Colorado

Date

Approved:

Refuge System Chief
Interior Regions 5 and 7
U.S. Fish and Wildlife Service
Lakewood, Colorado

Date

Mandatory 10- or 15-Year Reevaluation Date: 2035

References

Pearse, A.T.; Brandt, D.A.; Harrell, W.C.; Metzger, K.L.; Baasch, D.M.; Hefley, T.J. 2015. Whooping crane stopover site use intensity within the Great Plains: U.S. Geological Survey Open-File Report 2015–2016, 12 p. <www.dx.doi.org/10.3133/ofr20151166>

[USFWS] U.S. Fish and Wildlife Service. 2006. Comprehensive Conservation Plan – Kirwin National Wildlife Refuge, Kansas. Lakewood, CO: U.S. Department of Interior, Fish and Wildlife Service. 221 p.

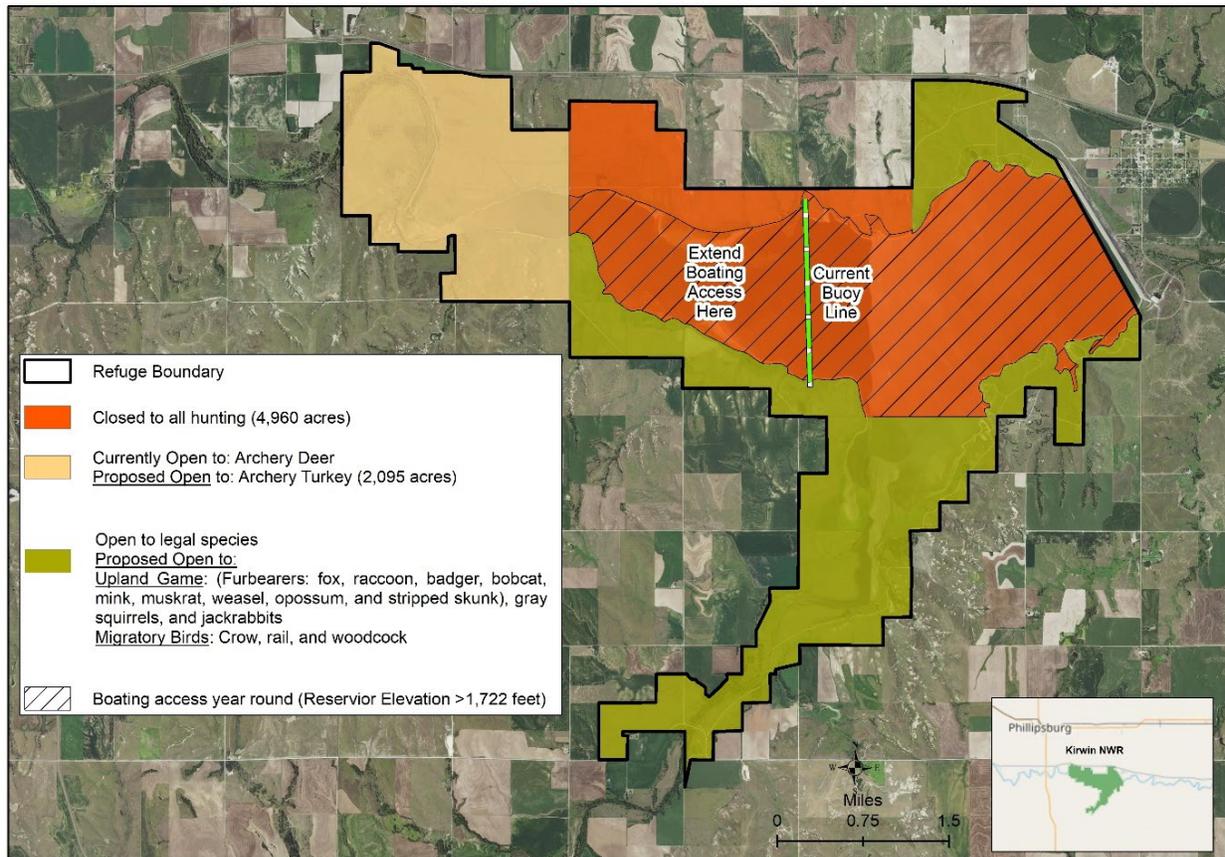


Figure 1. Proposed Hunting and Boating Changes at Kirwin National Wildlife Refuge.

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

Intra-Service Section 7 Biological Evaluation Form – Region 6

Originating Person: Brad Krohn

Date Submitted: 7/10/2020

Telephone Number: 308-263-3000

- I. **Service Program and Geographic Area or Station Name:** Kirwin National Wildlife Refuge
- II. **Flexible Funding Program** (e.g. Joint Venture, etc) if applicable: N/A
- III. **Location:** Location of the project including County, State and TSR (township, section & range):

Phillips County, Kansas, Section, township, and range: Kirwin NWR includes parts or all of sections 26, 27, 28, 33, 34, 35, 36 in Township 4 South, Range 17 West; sections 1, 2, 13, 23, 24, 25 in Township 5 South, Range 17 West; sections 28, 29, 31, 32, 33 in Township 4 South, Range 16 West; sections 4, 5, 6, 7, 8, 9, 18 in Township 5 South, Range 16 West.

The Refuge visitor center is located 6 miles east of Glade, Kansas, on State Highway 9, one mile south on 700 Road.

- IV. **Species/Critical Habitat:** List federally endangered, threatened, proposed, and candidate species or designated or proposed critical habitat that may occur within the action area. To obtain species lists: <http://ecos.fws.gov/ipac/>
- Whooping crane, *Grus americana* (federally listed: endangered)
 - Least tern, *Sterna antillarum* (federally listed: endangered)
 - Piping plovers, *Charadrius melodus* (federally listed: threatened)
 - Northern Long-Eared Bat, *Myotis septentrionalis* (federally listed: threatened)

There is no federally designated critical habitat at Kirwin NWR.

- V. **Project Description:** Describe proposed project or action or, if referencing other documents, prepare an executive summary (attach additional pages as needed):

The Service proposes to expand hunting opportunities for turkey (Big Game) on an additional 2095 acres of the Refuge in accordance with the State of Kansas' rules and regulations. These 2095 acres are already open to hunting of other species. Hunting expansion includes archery hunting for turkey. Additional species to be hunted on the already open to hunting upland areas of the refuge include small game (grey squirrel,

jackrabbit), state-defined furbearers (coyote, fox, raccoon, badger, bobcat, mink, muskrat, weasel, opossum, raccoon and striped skunk), and migratory birds (woodcock, rail, and crow). The project is development of an approved step-down Hunting and Fishing Plan for Kirwin NWR in Kansas. Most of the general actions were approved as part of development of a Comprehensive Conservation Plan (2006). A Section 7 consultation is needed because this step-down plan contains more detail on hunting activities and has required minor adjustments partly due to recent Secretarial Orders (3347 and 3356). The general action is outlined and expanded hunting opportunities mentioned here are further explained in the Environmental Assessment.

VI. Determination of Effects:

(A) Description of Effects: Describe the action(s) that may affect the species and critical habitat list in item IV. Your rationale for the Section 7 determination made below (B) should be described here.

Whooping crane: Whooping cranes migrate through the area in the spring and fall. Critical U.S. whooping crane migration habitat includes Cheyenne Bottoms State Waterfowl Management Area and Quivira NWR, Kansas; the Platte River bottoms between Lexington and Denman, Nebraska; and Salt Plains NWR, Oklahoma, have been designated as critical to the conservation of the species. The Refuge is a major stopover area actually in both the spring and fall, and the species has been observed as recently as 2018. The species can occasionally be found on the Refuge in short duration during the spring and fall migration, however it is expected that the amendments to the hunting plan would have no negative impacts.

In the event of sightings, the refuge will continue to work with the State to monitor conflicts between sport hunting and whooping cranes. In addition, the refuge will work with the State to follow and update contingency plans for protection of whooping cranes that appear in hunt areas or other hazardous situations.

In that hunting is already allowed on these 902 acres, additional species will not impact the following species, whose Refuge occurrence is noted as follows:

Interior least tern: Occasional visitors to the Refuge. Nesting has been confirmed in the past with young produced in 1974, 1976, and 1980. The majority of nesting habitat is found on the east end of the reservoir.

Piping plovers: Occasional visitor during migration. Prefers sandy areas bordering vegetation and open shoreline areas.

Northern Long-Eared Bat: There have been no documented cases on the Refuge, although they might be found elsewhere in Phillips County.

(B) Determination: Determine the anticipated effects of the proposed project on species and critical habitat lists in item IV. Check all applicable boxes and list the species (or attach a list) associated with each determination.

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.**

_____X_____

whooping crane (*Grus americana*) federally listed: endangered
piping plover (*Charadrius melodus*) federally listed: threatened
least tern (*Sterna antillarum*) federally listed: 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 BRAD KROHN
[Supervisor at originating station]

Digitally signed by
BRAD KROHN
Date: 2020.07.14
11:12:58 -05'00'

Date _____

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

A. Concurrence

Nonconcurrence

Explanation of nonconcurrency

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: _____

APPENDIX D FINDING OF NO SIGNIFICANT IMPACT

FINDING OF NO SIGNIFICANT IMPACT AND DECISION TO IMPLEMENT THE KIRWIN NATIONAL WILDLIFE REFUGE HUNTING AND FISHING PLAN

KIRWIN NATIONAL WILDLIFE REFUGE

Kirwin, Kansas

The United States (U.S.) Fish and Wildlife Service (Service) is proposing to open or expand hunting opportunities for upland game including state-defined furbearers (fox, raccoon, badger, bobcat, mink, muskrat, weasel, opossum, and striped skunk), coyotes, gray squirrels, jackrabbits, migratory birds (crow, rail, woodcock) and turkeys on the Kirwin National Wildlife Refuge (NWR) in accordance with the Kirwin NWR Hunting and Fishing Plan (2020).

Selected Action

Alternative A – Proposed Action Alternative: The Service would expand hunting opportunities on Kirwin NWR by opening the refuge to hunting for upland game including state-defined furbearers (fox, raccoon, badger, bobcat, mink, muskrat, weasel, opossum, and striped skunk), coyote, gray squirrel, jackrabbit, and migratory birds (crow, rail, and woodcock). No new hunting acres are proposed. In addition, the refuge would expand archery-only turkey hunting on 2,095 acres.

This alternative was selected over the other alternatives because it offers the best opportunities for public hunting while meeting the Service's mandates under the National Wildlife Refuge System Administration Act of 1966 (NWRSA) and Secretarial Order 3356. The preferred alternative would allow 15 new species to be hunted on Kirwin NWR resulting in an estimated increase of 245 hunter-use days, minor increased economic inputs to local communities, and minimized potential direct and indirect impacts to biological resources, habitat, and other recreational uses. This alternative balances the needs of the multiple user groups on the refuge and utilizes existing roads and infrastructure to the extent possible, thereby minimizing impacts on physical resources.

The Service has determined that the hunting and fishing plan is compatible with the purposes of the Kirwin NWR and the mission of the National Wildlife Refuge System (Refuge System).

Other Alternatives Considered and Analyzed

Alternative B – No Action Alternative: Current hunting and fishing opportunities would continue on the refuge. Hunting and fishing opportunities exist on Kirwin NWR consistent with the refuge's comprehensive conservation plan (CCP) (2006). Hunting is permitted on 5,734 acres of refuge lands. The area open to hunting varies annually based on the pool elevations in the reservoir. Seasonal sport fishing is allowed in accordance with state fishing regulations with some exceptions where areas are closed to promote migratory waterfowl use and limit

disturbance from motorized boats. Hunting of waterfowl (teal, ducks, coot, mergansers, and geese), pheasant, quail, dove, fox squirrel, deer, turkey, and cottontail rabbit is currently allowed during regular state seasons that occur within the period of September 1 through April 30, in accordance with applicable federal and state regulations. Light Goose Spring Conservation Order season is open on Kirwin NWR from February 17 through April 30 each year. Prohibited hunting activities include the use of rifles, pistols, and falconry.

This alternative was not selected because although it would have the least direct impacts on physical and biological resources, it does not meet the main purpose of the proposed action, which is to expand hunting opportunities on the refuge.

Summary of Effects of the Selected Action

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

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

- The selected alternative would result in minor, short-term direct and indirect impacts on resident game species, other wildlife, fish, and their habitats. The Service believes that hunting of these species would not have a significant impact on regional or statewide wildlife and fish populations as the number harvested on Kirwin NWR would be a small fraction of regional and statewide populations. In addition, overall populations would continue to be monitored by the Kansas Department of Wildlife, Parks, and Tourism (KDWPT) and future harvests would be adjusted as needed under existing state regulatory processes.
- Administration costs would be negligible. The furbearer, coyote, and crow hunting seasons occur during months of the year when officers would be making other hunter contacts, therefore additional law enforcement would not be required.
- Local economies would receive minor benefits from hunters and anglers purchasing items related to hunting and fishing.
- The Service is committed to ensuring that all members of the public have equal access to the Nation's fish and wildlife resources, as well as equal access to information that would enable them to take part meaningfully in activities and policy shaping, therefore minority and low income populations would not be adversely effected.
- The KDWPT is responsible for monitoring populations of resident game and fish and implementing any adjustments to future harvests as needed under the existing state regulations to ensure sustainable populations (<https://ksoutdoors.com/>). Their action would prevent potential cumulative impacts from occurring due to hunting take, development, and population increase.

- All non-hunted wildlife species occurring on the refuge may be impacted by disturbances from hunting activities. Short-term disturbances may take place at the time of the action when hunting occurs on the refuge. In a single season, non-hunted wildlife may be disturbed multiple times. However, there are enough available habitat resources for wildlife to relocate, both on refuge and on adjacent lands, minimizing negative impacts. Long-term impacts of short-term disturbance are not likely to occur and cumulative impacts are negligible on non-hunted wildlife.
- The refuge would continue to support substantial populations of non-hunted wildlife under all alternatives. Therefore, at the local level, hunting on the refuge adds minimally to cumulative impacts on non-hunted wildlife, and negligibly relative to statewide and regional populations.
- Only nontoxic shot is permitted on the refuge when hunting; lead ammunition is prohibited on the refuge. The minimal-use lead fishing tackle on the refuge would be negligible and should not result in any cumulative impacts relative to lead poisoning of wildlife. Hunting opportunities on Kirwin NWR only allow use of nontoxic ammunition. Adverse environmental impacts of lead are acknowledged in the EA. The Service continues to educate hunters and anglers on the impacts of lead on the environment, and particularly on human health and safety concerns of ingesting animals harvested with lead ammunition. Kirwin NWR supports lead alternatives, recommends the use of nontoxic tackle on the refuge, and encourages visitors to voluntarily use nontoxic tackle for all harvest activities. Lead alternatives to both ammunition and tackle are becoming more widely available and used by hunters and anglers.
- Climate change may result in both positive and negative cumulative effects on resident game species. The Service would work with KDWPT to adjust the hunting program on the refuge to ensure it does not contribute further to cumulative impacts of climate change on resident game species and fish.
- The proposed action may lead to adverse impacts on nonconsumptive user groups on the refuge during hunting season. The increased hunting opportunities would create additional noise and visual impacts to visitors of the refuge when hunters are present. However, these impacts to nonconsumptive users would be balanced out by setting aside other areas for nonconsumptive public use.

Measures to mitigate and/or minimize adverse effects have been incorporated into the selected action. These measures include:

- Closing areas to hunting and public use following recurrence of prohibited activities.
- Limiting hunting access to areas to allow the recovery or improvement of refuge or local species populations or habitat conditions.
- Adjusting hunting opportunities to address concerns related to disease or contaminants.
- Adjusting hunting opportunities to address safety concerns or conflicts associated with multiple hunting uses, nonconsumptive uses, and Service staff activities.
- Rectifying impacts by repairing, rehabilitating, or restoring the affected environment.

- The refuge federal wildlife officer and KDWPT game wardens would monitor the hunts and conduct license, bag limit, and access compliance checks.
- Notification of hunting activities on the refuge would be posted in key areas and at the refuge headquarters to inform visitors that may want to participate in other activities such as fishing, wildlife observation, or wildlife photography that hunting is occurring within designated areas on the refuge.

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

- In the context of local, state, and refuge hunting and fishing programs, the proposed action would result in 15 new species harvested with a very low expected harvest rate, allowing hunting with shotgun or archery equipment only (rifles, pistols, muzzleloaders, and trapping on the refuge are prohibited). The Service works closely with the state to ensure that additional species harvested on a refuge are within the limits set by the state to ensure healthy populations of the species for present and future generations of Americans.
- The action would result in beneficial impacts to the human environment, including the biodiversity and ecological integrity of the refuge, as well as the wildlife-dependent recreational opportunities and socioeconomics of the local economy, with only negligible adverse impacts to the human environment as discussed above.
- The adverse direct and indirect effects of the proposed action on air, water, soil, habitat, wildlife, aesthetic/visual resources, and wilderness values are expected to be minor and short-term. The benefits to long-term ecosystem health that these efforts would accomplish far outweigh any of the short-term adverse impacts discussed in this document.
- The Refuge System uses an adaptive management approach to all wildlife management on refuges. Monitoring and re-evaluating the hunting and fishing opportunities on the refuge on an annual basis ensures that the hunting and fishing programs continue to contribute to the biodiversity and ecosystem health of the refuge and ensure that these opportunities do not contribute to any cumulative impacts to habitat or wildlife from climate change, human population growth and development, or local, state, or regional wildlife management.
- The proposed action, along with proposed mitigation measures, would ensure that there is low danger to the health and safety of refuge staff, visitors, and hunting and fishing participants.
- The proposed action is not in an ecologically sensitive area.
- The proposed action would not impact any threatened or endangered species or any federally designated critical habitat.
- The proposed action would not impact any cultural or historical resources.
- The proposed action would not impact any Wilderness areas.

- There is no scientific controversy over the impacts of this action, and the impacts of the proposed action are relatively certain.
- The proposal is not expected to have any significant adverse effects on wetlands and floodplains, pursuant to Executive Orders 11990 and 11988.

Public Review

On April 1, 2020, the Service made the draft hunting and fishing plan and associated EA available to the public for a 30-day public review and comment period. The draft hunting and fishing plan and associated EA were amended, and the 30-day public review and comment period was extended through May 27, 2020. The draft hunting and fishing plan and associated EA were available at www.fws.gov/mountain-prairie/huntfish.php#. Hard copies were also available upon request.

The Service received comments from seventeen individuals and two organizations. One commenter expressed support for expanding the fishing opportunities by allowing motorized boating in an area currently closed to motorized boats on Kirwin NWR. Fifteen commenters expressed opposition to the proposed expansion of fishing opportunities by allowing motorized boating in an area currently closed to motorized boats on Kirwin NWR. One individual and two organizations were partially opposed to the proposed expanded opportunities for both hunting and fishing. Opposition from the two organizations pertained to hunting of coyote, bobcat, and locally rare or uncommon species, and largely considered conflicts with the refuge's frequent nonconsumptive users and any increased potential disturbance of whooping cranes. The majority of comments received were local opposition to the proposed expansion of fishing opportunities and the potential overutilization of the lake and associated impacts on fish populations within the reservoir. The Service has made revisions to the EA to address and clarify some of the concerns raised about effects of the proposed action.

Additionally, on April 9, 2020, the Service published the Draft 2020–2021 Station-Specific Hunting and Sport Fishing Regulation Regulations in the Federal Register. The Service has removed all refuge-specific regulations from 50 Code of Federal Regulations Part 32 that were duplicative of other Service or state regulations, and thus unnecessary. The regulations removed from the refuge-specific regulations are all still enforceable on the refuge under federal and state law. The regulations applicable to hunting on the refuge have been clarified. The refuge will ensure that refuge's hunting brochure includes all applicable regulations for hunting on the refuge.

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

- KDWPT; Pratt, Kansas
- Kansas State Historic Preservation Office; Topeka, Kansas
- Potentially impacted tribes

The Service Ecological Services program Kansas Field Supervisor was contacted (via phone and follow-up email) about the Kansas NWR Complex hunting plans on November 24, 2019. A request was made by the national wildlife refuges to review the list of species threatened,

endangered, proposed, and under review as part of the environmental assessment Section 7 consultation requirement associated with the hunting plans.

Refuge staff met with KDWPT on October 30, 2020, to discuss the current hunting program and recommendations for the future. During that meeting the state shared organization and public interests and responded to proposed hunting opportunities at the meeting and in follow-up verbal and written communications. These discussions helped adjust our plan to align, where possible, with state management goals. Overall, the state was supportive of the Service's proposals of expanded hunting opportunities and both agencies confirmed the continuance of a strong partnership. The refuge received a letter of concurrence from the state director on November 18, 2019.

The Service consulted with the Kansas State Historic Preservation Office, requesting review and comment concerning the Service's determination of no adverse effect to historic properties with regard to the opening of additional species to hunting on the Kirwin NWR.

The Service mailed an invitation for comments to all tribes potentially impacted by initiating an EA to expand hunting opportunities at Kirwin NWR. The Service extended an invitation to engage in government-to-government consultation in accordance with Executive Order 13175.

Finding of No Significant Impact

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

Decision

The Service has decided to open and expand hunting opportunities for upland game including state-defined furbearers (fox, raccoon, badger, bobcat, mink, muskrat, weasel, opossum, and striped skunk), coyotes, gray squirrels, jackrabbits, migratory birds (crow, rail, and woodcock) and turkeys on the Kirwin NWR in accordance with the Kirwin NWR Hunting and Fishing Plan. These actions will be effective at the end of the final national process period for hunting and fishing on Refuge System lands.

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

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

Noreen Walsh
Regional Director, Interior Regions 5 and 7
U.S. Fish and Wildlife Service
Lakewood, Colorado

Date