

Final Environmental Assessment

For Hunting and Fishing on Flint Hills National Wildlife Refuge

July 2020

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The hunting and fishing plan proposes to continue existing hunting opportunities and provide new hunting opportunities on the refuge. The hunting program generally would follow State of Kansas regulations with respect to the target species, seasons, bag limits, and method of take. In certain instances, we, the Service, may deviate from those regulations to meet refuge wildlife population, public use, and public safety goals.

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 proposed action. The final decision on the proposed action will be made at the conclusion of the public comment period for the EA and the Draft 2020–2021 Refuge-Specific Hunting and Sport Fishing Regulations. The Service cannot open a refuge to hunting and fishing until a final rule has been published in the Federal Register formally opening the refuge to hunting and fishing.

1.2 Background

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

Specifically, Flint Hills NWR was established pursuant to the Fish and Wildlife Coordination Act of 1958: “Flint Hills NWR was established in 1966 and ‘. . . shall be administered by the Secretary of the Interior directly or in accordance with cooperative agreements . . . and in accordance with such rules and regulations for the conservation, maintenance, and management of wildlife, resources thereof, and its habitat thereon, . . .’” 16 U.S. Code Section 644. (Comprehensive Conservation Plan [CCP], p. 6).

In addition, the Refuge Recreation Act (16 U.S. Code Section 460-1) states that each refuge is “. . . suitable for incidental fish and wildlife oriented recreational development, the protection of natural resources, and the conservation of endangered or threatened species . . .” (CCP, p. 6).

Refuge Purpose

The primary purpose of the refuge is to “restore and maintain the hydrological system for the Neosho River drainage by managing for wetlands, control of exotic species, and management of trust responsibilities for the maintenance of plant and animal communities” (CCP, p. 1).

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

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

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

The refuge maintains a 60 percent closure to migratory waterfowl hunting, in compliance with Migratory Bird Treaty Act recommendations for national wildlife refuges. The Neosho River divides the refuge, with the area south of the Neosho River (comprising approximately 40 percent of total refuge acreage) being open to waterfowl hunting.

1.3 Purpose and Need for the Proposed Action

The purpose of this proposed action is to provide compatible wildlife-dependent recreational opportunities on the 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 NWRs" and "ensure that opportunities are provided within the NWRs for compatible wildlife-dependent recreational uses" (16 U.S. Code 668dd[a][4]). The need of the proposed action also meets the Service's implementation of Secretarial Order 3347, "Conservation Stewardship and Outdoor Recreation," and Secretarial Order 3356, "Hunting, Fishing, Recreational Shooting, and Wildlife Conservation Opportunities and Coordination with States, Tribes, and Territories," by expanding hunting opportunities and aligning Service regulations with state regulations.

A purpose of this hunting and fishing plan is to bring the refuge into alignment with KDWPT regulations and other national wildlife refuges in Kansas. Furthermore, the coyote hunting proposal would provide consistency of regulations with the adjacent Otter Creek State Wildlife

Area and the U.S. Army Corps of Engineers John Redmond Reservoir. Simplifying regulations could assist with reducing the downward trend in hunters and anglers by providing for the recruitment, retention, and reactivation of sportsmen and sportswomen. Other applicable statutes, Executive Orders, and regulations can be found in Appendix A.

2.0 Alternatives

2.1 Alternatives Considered

Alternative A – Expand Hunting to Include Furbearer and Coyote and Extend Whitetail Antlerless-Only Season – Proposed Action Alternative

The refuge has prepared a hunting and fishing plan, which is presented in this document as the Proposed Action Alternative. The proposed alternative would not open additional acres for hunting, but rather new species (furbearers and coyote), and additional days for deer hunting (see Figure 2). The trail areas and South 19th unit (9,108 acres combined), historically closed to hunting, would remain as such.

Furbearer and Coyote

Under the Proposed Action Alternative, the Service would open hunting for badger, bobcat, fox, mink, muskrat, opossum, raccoon, striped skunk, weasel, and coyote on the 8,295-acre South Neosho Unit on the refuge in accordance with the refuge's hunting and fishing plan. No trapping or use of dogs to run furbearer and coyote is being proposed. Hunting for beaver and otter is not permitted by state regulations and is not proposed in this alternative. Method of take for furbearers would include shotgun, muzzleloader, archery, and rimfire rifle. Dogs, vehicles, or bait may not be used to hunt furbearers or coyotes. Coyotes may not be hunted from a vehicle or a road. Electronic calls would be permitted for coyote and furbearer. Hunting would be permitted during daylight hours (one-half hour before legal sunrise until legal sunset). Hunting seasons would be consistent with state regulations.

Deer

In addition, the Service proposes allowing the extended WAO season, on the 8,295-acre South Neosho Unit on the refuge. Methods of take would include archery, muzzleloader, and shotgun (slugs only). Centerfire rifles and pistols would be prohibited.

Mitigating measures would include prohibiting the use of centerfire rifles to provide for public safety. In addition, the Townsite Trail Area, north of Hartford, would be closed to hunting activities year-round. This would reduce conflict with hikers, birdwatchers, and photographers. Under this alternative, the refuge law enforcement officers and KDWP wardens would monitor the hunts. They also would conduct license, bag limit, and access compliance checks.

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.

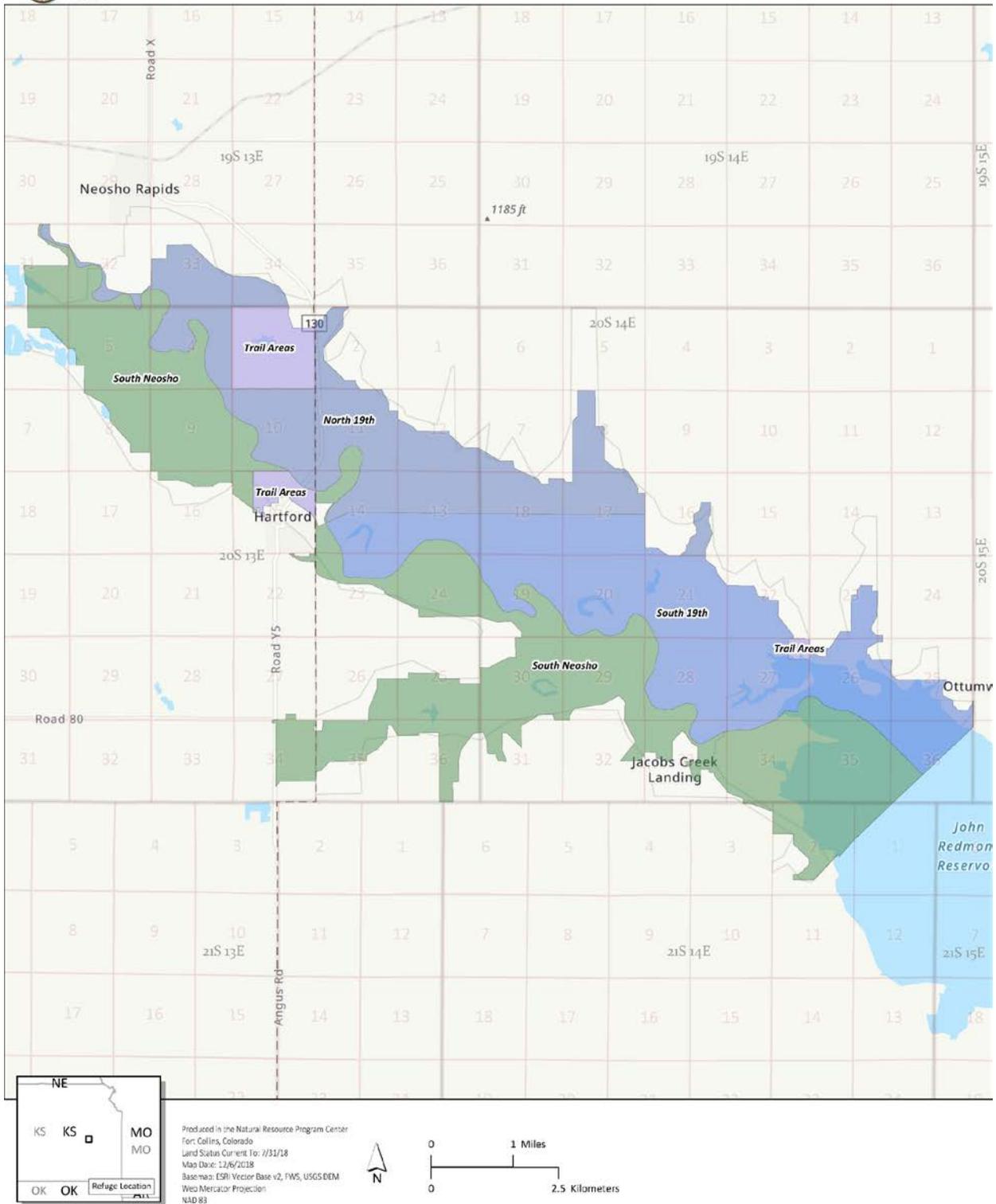


Figure 2. Vicinity Map, Showing Open (Green) Areas and Closed (Blue) Areas of the Refuge.

Alternative B – Continue Current Hunting Program – No Action Alternative

Under the No Action Alternative, the refuge would continue to prohibit furbearer and coyote hunting, as well as deer hunting under the extended WAO. Other hunting seasons would remain in place, as outlined in the refuge hunting regulations.

3.0 Affected Environment and Environmental Consequences

3.1 Affected Environment

The refuge consists of 18,463 acres of wetlands, riparian forests, restored grasslands, and agricultural lands. Prior to refuge establishment, significant alterations occurred to vegetation and hydrology. Although much of the native tallgrass prairie was cleared for agriculture, native habitats still occur within wetlands, riparian forests, and remnant grasslands. Former agricultural fields provide sites for wetland management.

The hydrology of the Neosho River remained intact until the construction of the John Redmond Reservoir in 1965. Many federal reservoirs were constructed for flood control, following the record floods of 1951 in eastern Kansas. Despite the name “Flint Hills,” the refuge is within a floodplain of the Neosho River. Flood frequency and duration increased after construction of the reservoir, limiting the success of tallgrass restoration efforts. Although the refuge is managed primarily for migratory waterfowl, significant habitat occurs for furbearer, deer, and other wildlife.

The refuge provides significant wetland habitat in an area dominated by pasture and cultivated crops. Land cover data show a dearth of emergent herbaceous wetlands within the 3,015-square-mile watershed. Most of the watershed is dominated by grassland or pasture (68 percent of acreage) and cultivated crops (21 percent of acres). Therefore, moist soil impoundments and shrub and scrub wetlands provide important migratory waterfowl habitat along the Neosho River. Mensik and Paveglio (2004) present management concepts that apply well to refuge habitats.

“Because many refuges are located in areas that have fragmented habitats as well as dramatically altered hydrology and vegetation, they are often islands of habitat surrounded by large urban areas or intensive agricultural development. Many of the refuges located along the Continent’s four major flyways were established to conserve and intensively manage nesting, migration, and wintering areas for migratory waterfowl and waterbirds. A large number of the System’s Migratory Bird Conservation Act-authorized waterfowl refuges were established in conjunction with other federal projects, such as reservoirs and irrigation drainage projects. Because these NWRs are often the only remaining habitat in a highly altered landscape, they are intensively and consistently managed to provide habitat for migratory birds that utilize migration flyways spanning the Northern and Southern hemispheres.”

For more information regarding the affected environment, please see the refuge’s CCP (<https://www.fws.gov/mountain-prairie/refuges/flh.php>).

Tables 1 through 6 provide additional, 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 not be more than negligibly affected by the action have been dismissed from further analyses.

Tables 1 through 5 provide:

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

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.

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>Flint Hills NWR would allow hunting for additional species (furbearers and coyote) and additional days for deer hunting. No additional acres would be opened for hunting and areas historically closed to hunting would remain as such.</i></p>	<p><u>Alternative B (No Action)</u> <i>Hunting seasons and species would remain as outlined in the current refuge hunting regulations. .</i></p>
<p>Furbearers and Coyote</p>		
<p>In the roadside index conducted by KDWPT employees since 1980, raccoon observations have nearly tripled. Similarly, coyote observations have nearly quadrupled.</p> <p>Refuge staff members report abundant coyotes and raccoons as well. The coyote population is dense enough that an unattended harvested deer is quickly shredded and devoured by coyotes. Raccoons are commonly seen during nighttime spotlight deer surveys.</p> <p>Other furbearers (opossum, striped skunk, badger, and fox) do not seem to be increasing as rapidly, either on the refuge, or throughout the state. Frequent flooding of the refuge likely reduces the populations of some species.</p> <p>Neotropical migrant birds have declined continentally over several decades and mid-sized predators are suspected as part of this problem. Raccoons are known nest predators (Staller et al. 2005). The refuge represents some of the western extent of prothonotary warblers. Within the refuge’s floodplain forests, raccoons are a likely nest predator of this species.</p>	<p>At the statewide level in Kansas, these furbearer species have increasing population trends, according to summer roadside surveys by the KDWPT (KDWPT 2018). A cooperative mark-resight trail camera study with KDWPT in 2016–2017 estimated a density of 56.184 (+/- 2.0132) raccoons per square kilometer, indicating a raccoon population of approximately 2,675 likely inhabits the refuge. The definition of relatively high densities of raccoons is considered more than 30 per square kilometer (Gehrt 2003; Riley et al. 1998). Coyotes appeared ubiquitous across the refuge and observed individuals looked relatively healthy.</p> <p>The survey trend from 1967–2011 for these species is shown in Figure 3 and Figure 4.</p> <p>Hunters report seeing furbearers, particularly coyotes, when they are turkey hunting. These public users regularly inquire if coyote and raccoon hunting is a possibility on the refuge.</p> <p>Furbearer hunting on the refuge would add to the opportunity and quality of outdoor recreation experience offered on the refuge. The refuge would likely see some “dedicated” raccoon hunters willing to hunt or call furbearers during the day. However, harvest would likely be dominated by incidental take. Deer hunters and squirrel hunters may encounter and harvest furbearers. Refuge law enforcement officers estimate that 20 dedicated raccoon hunters might take approximately 25–30 animals throughout the year. Estimated take of the other furbearer species would be even fewer than that of raccoon.</p>	<p>Furbearer and coyote hunting would continue to be prohibited on the refuge. Populations would likely continue increasing, because they exist throughout the state. Nest predation from these species would continue unabated.</p>

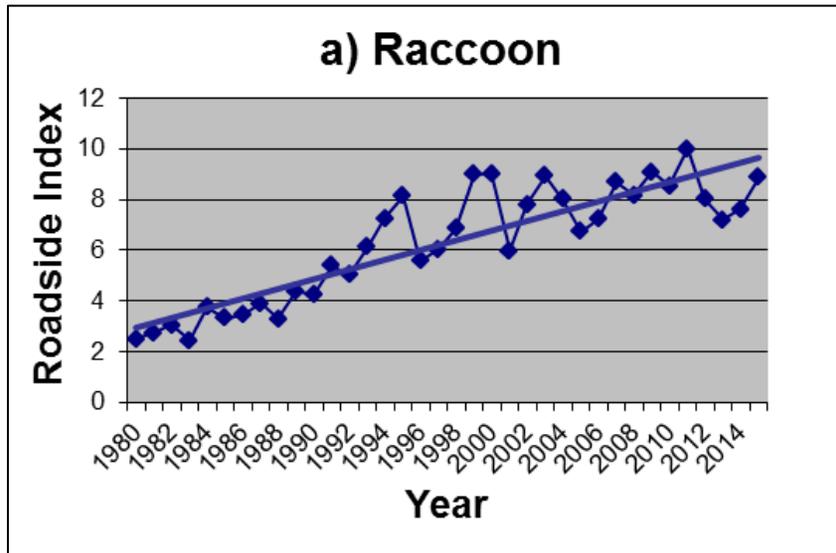
Affected Resources	<u>Alternative A (Proposed Action)</u> <i>Flint Hills NWR would allow hunting for additional species (furbearers and coyote) and additional days for deer hunting. No additional acres would be opened for hunting and areas historically closed to hunting would remain as such.</i>	<u>Alternative B (No Action)</u> <i>Hunting seasons and species would remain as outlined in the current refuge hunting regulations. .</i>
White-Tailed Deer		
<p>White-tailed deer are the only cervids on the refuge. Since 2010, refuge staff has conducted distance sampling with the assistance of Dr. Lloyd Fox, big game program coordinator for KDWPT. Refuge staff would need several years of surveys to identify population trends, yet the initial data yield interesting information. The distance sampling indicates a refuge-wide deer density of 23 per square mile. A lower density of 16 per square mile occurs in areas south of the river which are open to deer hunting for the full season. The portion of the refuge north of the river, closed for most of the deer season, shows more than double the density, 34 per square mile. Other public lands within deer management unit (DMU) 14 show densities of approximately 15 per square mile. However, the surrounding private land in DMU 14 has densities ranging from 5–10 per square mile. Therefore, the refuge supports a markedly higher deer density than the surrounding private land, and even a higher density than the public land within DMU 14. The closed areas of the refuge should provide a greater density and quality of hunting for the public.</p>	<p>Although the refuge has deer densities that are more than double that of the surrounding private land, refuge staff does not observe excessive damage to vegetation or a “browse line.” However, the deer density estimates indicate that the refuge herd could support additional hunting opportunities. The WAO season typically is less than one week long (five days in 2019). Service law enforcement officers estimate that 25–30 hunters would take advantage of this expanded hunting opportunity. The success rate would be somewhere around 50 percent. These impacts are considered to be negligible due to the small number of hunters and the limited number of days per year on which these impacts occur.</p>	<p>The WAO season would continue to be closed on the refuge. Although deer numbers on the refuge are higher than those on the surrounding private land, the refuge is not showing habitat degradation.</p>

Affected Resources	<u>Alternative A (Proposed Action)</u> <i>Flint Hills NWR would allow hunting for additional species (furbearers and coyote) and additional days for deer hunting. No additional acres would be opened for hunting and areas historically closed to hunting would remain as such.</i>	<u>Alternative B (No Action)</u> <i>Hunting seasons and species would remain as outlined in the current refuge hunting regulations. .</i>
Other Wildlife and Aquatic Species		
<p>The refuge supports a diversity of wildlife species of eastern Kansas, including game and nongame species, reptiles, amphibians, and invertebrates, which are important contributors to the overall biodiversity on the refuge. Songbirds breed at the refuge, whereas waterfowl, rails, and raptors primarily use the refuge as wintering and migratory habitat. Wintering waterfowl concentrations on the refuge are highest from late November through February. The refuge maintains a 9,445-acre waterfowl sanctuary that excludes access to the public, including small-game and migratory bird hunters. This area provides sanctuary and roosting areas for migratory birds and helps to offset potential disturbance effects.</p>	<p>Increased hunting may result in little disturbance to wildlife, because no additional units would be open to hunting. The South Neosho is already open to general hunting during the proposed furbearer and coyote hunting season. Similarly, during the WAO season, small game and waterfowl seasons are open in the South Neosho hunting unit.</p> <p>Hunting would not occur during the active breeding season for most birds; therefore, no disturbance would be expected. However, coyotes are known to depredate white-tailed deer fawns and ground nesting birds such as northern bobwhite quail and turkeys (Cooper et al. 2015, Rollins and Carroll 2001, Staller et al. 2005). Raccoons are documented egg predators and opportunistically take other smaller species (Rollins and Carroll 2001, Staller et al. 2005). Furthermore, high densities of coyotes and raccoons can be reservoirs for distemper, rabies, West Nile Virus, round worm, mange, and likely other understudied diseases (Chronert et al. 2006, Fischer 1995). Some of these diseases are zoonotic (transmittable to humans). Visitors at the refuge enjoy seeing wildlife but do not want to contract diseases from those species. In 2017, a hunter reported being attacked by a seemingly rabid raccoon. Incidents like that are a risk to public health and well-being. This situation demonstrates the need for active furbearer management at the refuge.</p>	<p>Furbearer and coyote hunting would continue to be prohibited on the refuge. Populations would likely continue increasing, because they exist throughout the state. Nest predation from these species would continue unabated.</p>
Threatened and Endangered Species and Other Special Status Species		
<p>There are no threatened and endangered species or species of special management concern in the area of the proposed hunting expansion.</p>	<p>The proposed action and alternatives would not affect any species of special management concern.</p>	<p>No impact on threatened and endangered species would be anticipated.</p>

Affected Resources	<u>Alternative A (Proposed Action)</u> <i>Flint Hills NWR would allow hunting for additional species (furbearers and coyote) and additional days for deer hunting. No additional acres would be opened for hunting and areas historically closed to hunting would remain as such.</i>	<u>Alternative B (No Action)</u> <i>Hunting seasons and species would remain as outlined in the current refuge hunting regulations. .</i>
Vegetation		
Forest vegetation may include silver maple, American sycamore, elm, pecan, green ash, hackberry, eastern cottonwood, willow, and oak species. Wetland species are mixed, but include shrubs such as coralberry, sedge, millet, and smartweed.	The proposed action would not affect any vegetation of special management concern. Although the refuge has deer densities more than double that of the surrounding private land, refuge staff does not observe excessive damage to vegetation or a “browse line.”	If no changes are made to the hunting regulations, there would be no changes to vegetation species or structure.

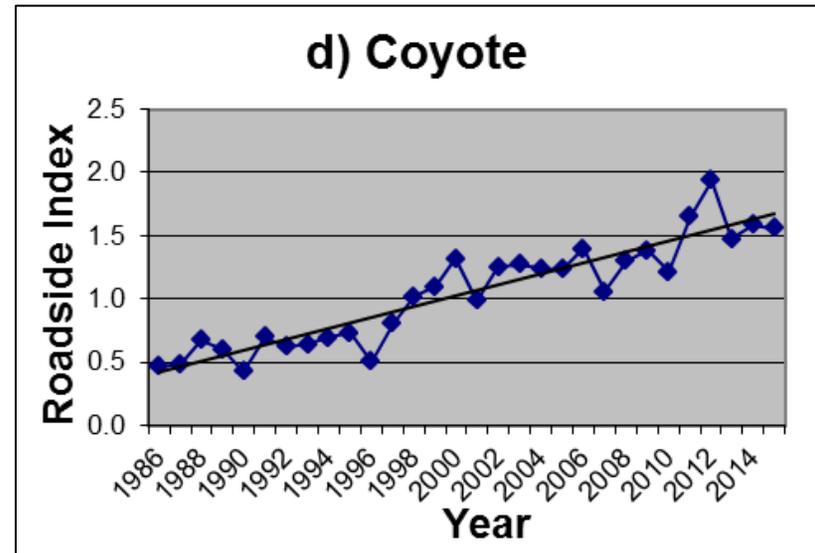
Key: DMU = deer management unit; KDWPT = Kansas Department of Wildlife, Parks, and Tourism; NWR = National Wildlife Refuge; WAO = whitetail antlerless only

Note: The impacts on refuge soils, geology, air quality, water resources, and floodplains are all considered to be nonexistent to negligible and have not been analyzed further.



Source: KDWPT, Summer Roadside Survey (2015)

Figure 3. Kansas Survey Trend for Raccoon (1967–2011).



Source: KDWPT, Summer Roadside Survey (2015)

Figure 4. Kansas Survey Trend for Coyote (1967–2011).

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

<p>Affected Resources</p>	<p><u>Alternative A (Proposed Action)</u> <i>Flint Hills NWR would allow hunting for additional species (furbearers and coyote) and additional days for deer hunting. No additional acres would be opened for hunting and areas historically closed to hunting would remain as such.</i></p>	<p><u>Alternative B (No Action)</u> <i>Hunting seasons and species would remain as outlined in the current refuge hunting regulations. .</i></p>
<p>Hunters are the primary constituency on the refuge, accounting for more than half of the total visits. The refuge averages about 27,033 visitors per year.</p>	<p>Hunters are the primary constituency on the refuge, accounting for more than half of the total visits. Hunting furbearers, coyotes, and deer during the WAO season would be unlikely to disturb refuge visitors engaged in other priority public uses. In addition, the WAO season usually lasts less than one week. Furbearer hunting season typically opens from mid-November through mid-February. This is a segment of the year with fewer birders and hikers. The proposed hunt would not conflict with other refuge wildlife-dependent recreational programs such as wildlife observation, wildlife photography, wildlife interpretation, environmental education, or fishing.</p> <p>Hunter numbers, particularly deer hunters, have been declining for the past six years. An additional hunt, such as the extended WAO season, would not only provide an additional opportunity for hunting but also a chance to fill unused tags from earlier seasons. Furthermore, expanded hunting opportunity could slow the downward trend in hunting at the refuge by providing for the recruitment, retention, and reactivation of sportsmen and women.</p>	<p>The visiting public would continue to be frustrated by a lack of furbearer and coyote hunting options at the refuge. Deer hunters likely would continue to express concern over the abundance of coyotes and predators they see while hunting from a deer stand.</p>

Key: NWR = National Wildlife Refuge; WAO = whitetail antlerless only

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

<p>Affected Resources</p>	<p><u>Alternative A (Proposed Action)</u> <i>Flint Hills NWR would allow hunting for additional species (furbearers and coyote) and additional days for deer hunting. No additional acres would be opened for hunting and areas historically closed to hunting would remain as such.</i></p>	<p><u>Alternative B (No Action)</u> <i>Hunting seasons and species would remain as outlined in the current refuge hunting regulations. .</i></p>
<p>Archaeological survey investigations conducted on the refuge have identified numerous archaeological sites. Most of these sites represent Middle Ceramic occupation presumed to date from 1,000 to 1,500 A.D. According to Thies (1981), the archaeological sites thus far discovered represent occupations ranging from the Paleo-Indians era up to and including the Historic era, or from approximately 12,000 B.C. to the earliest days of Euro-American settlement. Thies goes on to say it is probably that more sites exist in the areas that could not be adequately investigated during the 1979 and earlier surveys. One archaeological site of note, the Williamson Site, is listed in the National Register of Historic Places. Human remains have been discovered at the site. A number of the identified sites have been recommended for further study.</p>	<p>Because of the temporary and superficial use of refuge habitats during hunting and fishing activities, there should be no direct or indirect impacts on cultural resources under this alternative from visitors engaged in hunting and fishing 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, hunting would not be expanded to include new species or to areas that are currently closed. There would be no change to existing environmental conditions; subsequently, no direct or indirect impacts on cultural resources would be anticipated under this alternative.</p>

Key: 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.

Affected Resources	<u>Alternative A (Proposed Action)</u> <i>Flint Hills NWR would allow hunting for additional species (furbearers and coyote) and additional days for deer hunting. No additional acres would be opened for hunting and areas historically closed to hunting would remain as such.</i>	<u>Alternative B (No Action)</u> <i>Hunting seasons and species would remain as outlined in the current refuge hunting regulations. .</i>
Land Use		
<p>The refuge has ongoing projects of habitat management and restoration of wetlands, forests, shrublands, and grasslands. Some of these activities (prescribed fire, tree plantings, water management, and wetland management) coincide with hunting seasons. The staff continues with this habitat work during hunting season, using the opportunity to engage and educate the public in land management.</p>	<p>There would be no conflicts with the cooperative farming program. The expanded hunting opportunities would not adversely affect land use. The refuge would continue to engage in habitat management and cooperative agriculture use during the hunting season to ensure that the refuge meets its other refuge management objectives.</p>	<p>Under the current hunting plan, there would be no change in the refuge management and operations.</p>
Administration		
<p>Current hunting program expenses include staff resources, signage, and law enforcement staffing. The refuge currently has law enforcement coverage from a federal officer and a federal zone officer, with additional coverage from KDWPT officers.</p>	<p>The proposed alternative (expanded hunting opportunities) would not require any additional cost for law enforcement. The proposed hunting seasons occur during months of the year when officers would be making other hunter contacts anyway. The hunts would occur in existing hunting units, and thus would require no new signage. The only local administrative change would be reprinting the refuge hunting brochure with the updated regulations. This occurs on an annual basis and would not require additional expense.</p>	<p>Under the current hunting plan, there would be no change in the refuge management and operations.</p>

Key: KDWPT = Kansas Department of Wildlife, Parks and Tourism; 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>Flint Hills NWR would allow hunting for additional species (furbearers and coyote) and additional days for deer hunting. No additional acres would be opened for hunting and areas historically closed to hunting would remain as such.</i></p>	<p><u>Alternative B (No Action)</u> <i>Hunting seasons and species would remain as outlined in the current refuge hunting regulations. .</i></p>
<p>Local and Regional Economics</p>		
<p>The refuge is approximately 20 miles from the city of Emporia, Kansas, with a population of 33,400. The city of Harford, Kansas, where the refuge is located, has a stable population of more than 400 people. The predominant land uses in the vicinity of the refuge are grazing and non-irrigated farming. The refuge averages about 27,033 visitors per year.</p>	<p>Expenditures by hunters in Kansas averaged \$1,240 per year in 2011 (USDOI 2011). Expenditures in Kansas by wildlife watchers in 2011 averaged \$371 (USDOI, 2011).</p> <p>The proposed alternative would likely increase hunting on the refuge not only by providing additional hunts, but also by simplifying regulations, bringing them more into alignment with state hunting regulations.</p>	<p>Under the No Action Alternative, there would be no change to the existing refuge hunting program. There would be no additional effects on local and regional economies.</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 identifying and addressing disproportionately high or adverse human health or environmental effects of their programs and policies on minorities and low-income populations and communities.</p> <p>According to the Kansas Health Institute (Hunt and Panas 2018), population growth in Kansas from 2000 to 2016 was 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>Within the spirit and intent of Executive Order 12898 – Federal Action to Address Environmental Justice in Minority Populations, and Low Income Populations, no actions being considered in the 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>The Service is committed to ensuring that all members of the public have equal access to the nation’s fish and wildlife resources, and equal access to information that would enable them to take part meaningfully in activities and policy shaping.</p>	<p>Under the No Action Alternative, there would be no change to the existing refuge hunting program. Continuing the existing program would have no effects on minority or low-income communities.</p>

Key: EA = Environmental Assessment; NWR = National Wildlife Refuge

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 and Fishing	
<p>Both deer hunting and furbearer harvest have changed in the past decades. Although deer scarcely existed in the area surrounding the refuge during the 1950s, Kansas deer hunting now enjoys national acclaim.</p> <p>Though deer hunting has increased, the opposite is true of furbearer harvest. One factor may be the significant decline in fur prices over the past 40 plus years. Furbearer populations have risen dramatically, in part because of decreased harvest.</p> <p>Between 1955 and 2015, hunter participation among Kansas residents declined by half, from 10 percent down to 5 percent. During that same timeframe, Kansas experienced an increase in hunters from other states.</p> <p>The survey trend from 2017–2018 for the harvest, participation, and activity levels for hunters in Kansas during the 2017–2018 is shown in Table 7.</p> <p>From the 2017 Furbearer Harvest Survey (KDWPT 2018c):</p> <p>Chronic wasting disease (CWD) does occur in Kansas, but has not been confirmed in the counties surrounding the refuge. Deer density estimates remain stable, even in the northwestern portion of the state, where CWD seems most prevalent. However, long-term deer populations could decline as they have in other states where CWD has existed for decades. Over the past 10 years, deer densities on the refuge have been consistent.</p>	<p>The refuge conducts its hunting program in coordination with state regulations and in consultation with state wildlife professionals. In many cases, refuge regulations are more restrictive than the state regulations.</p> <p>Under the proposed action, the Service would allow an additional few days of deer hunting, and furbearer and coyote hunting during daylight hours. In the case of each hunt, the proposed action is more restrictive than state regulations. For this reason, and the 8,295-acre prohibited hunting zone (South 19th Unit), the proposed hunts would have a negligible cumulative effect on local or statewide wildlife populations.</p> <p>Deer</p> <p>State estimates are provided below (KDWPT 2018b, 2019c).</p> <p>Total permits issued = 182,632</p> <p>Success rate = 49.6 percent</p> <p>Total state harvest = 79,567</p> <p>Initially, the estimated take would likely be fewer than 20 deer annually. Over the long-term (decades), there likely would be no more than 100 annually, considering potential population increases and uncertain needs of herd health management. Relative to state and regional harvest numbers, refuge impacts on harvest numbers would be negligible.</p> <p>Furbearers</p> <p>Considering low numbers of occurrence of many furbearer species and refuge hunt limitations (for example, area and hours), the potential take would likely be negligible in proportion to regional or state numbers.</p>

Other Past, Present, and Reasonably Foreseeable Activity Impacting Affected Environment	Descriptions of Anticipated Cumulative Impacts
	<p>Coyote</p> <p>Based on an estimated average of 0.47 per bag/day over a 181-day refuge season, potential harvest would be about 85 coyotes. In reality, it is not expected that coyote hunting would or could occur every day of the season. Also, considering the refuge hunt limitations (for example, no use of vehicles or lights, no dogs, and the hours), it is expected that the actual take would be much less.</p>
Other Wildlife-Dependent Recreation	
<p>There are roads and trails on and around the refuge that contribute to cumulative impacts. 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>Hunters comprise a majority of the public use on the refuge. The refuge does maintain trails for hiking, nature observation, photography, or nature interpretation. Hunting is prohibited in the trail areas and the 8,295-acre South 19th Unit. Therefore, significant acreage exists for other wildlife-dependent recreation.</p>	<p>Roads and trails on the refuge contribute to cumulative impacts on the environment. Roads and trails fragment habitat and increase the potential for the spread of invasive species and human-wildlife interaction (thereby disturbance). No newly developed roads or trails would be planned under the proposed alternative.</p> <p>The proposed alternative would not interfere with other wildlife-dependent recreation. Similarly, other wildlife-dependent recreation would not preclude the proposed action. For example, hunting and birding currently coexist in the same areas of the refuge. Yet, if non-hunters want to recreate in areas without hunting, there are many acres for those activities.</p>
Development and Population Increase	
<p>Land use has remained relatively stable since the refuge was established. The human population has not increased enough to promote development and habitat conversion.</p> <p>Since 1980, the population of Lyon County, Kansas, has decreased by approximately 1,700 people (from 35,100 to 33,400). The City of Harford, Kansas, where the refuge is located, has a stable population of more than 400 people. Over the past 20 years, development has been minimal. In the last 10 years, a 90-turbine wind energy project was completed 20 miles east of the refuge. Refuge staff has not observed changes to wildlife populations as a result.</p>	<p>It is uncertain how projected population and development trends in Kansas would influence species and hunting and fishing 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 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 likely would be experienced with increasing populations. Impacts would in part be influenced by changing societal interests and other developments (for example, transportation and equipment).</p> <p>The use of an adaptive management approach would allow the refuge to periodically review and adjust the hunting and fishing program to ensure that it does not contribute to the cumulative impacts of population growth and development on species.</p>

Other Past, Present, and Reasonably Foreseeable Activity Impacting Affected Environment	Descriptions of Anticipated Cumulative Impacts
Agricultural Land Uses	
<p>Tillable agriculture and pastures for cattle dominate the land use in the area surrounding the refuge. Over the past two decades, there has been a slight increase in tillable acres as Conservation Reserve Program acres decrease, and some private land pasture are converted to row crops.</p>	<p>Over the same time period, on refuge land, the Service has restored habitats, thus reducing cropland acreage from 3,900 acres to approximately 2,300 acres. The refuge staff has not noticed a decrease in deer densities over these past two decades. Furbearers and coyotes have increased, but reasons for that extend beyond land conversion. Refuge staff anticipates relative stability in agricultural land use. Therefore, cumulative impacts would be minor.</p>
Agricultural Land Uses	
<p>The Service prohibits the use of lead shot on the refuge. Lead would be allowed in rimfire rifles, muzzleloaders (single projectile), and shotguns (as slugs only) under the proposed alternative.</p>	<p>Research has indicated that lead can be present in gut piles left by deer hunters after field dressing. Bald eagles and other raptors feed on the gut piles and may ingest the lead, leading to poisoning.</p> <p>Under the proposed alternative, the refuge represents only a fraction of hunting for white-tailed deer in the local area. We also expect that extending the WAO hunting season would not substantially increase harvest or hunter numbers but would be more likely to provide additional opportunities for current hunters and anglers. Therefore, the proposed action likely would introduce only small amounts of lead statewide, which would have a minor negative impact.</p>
Climate Change	
<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>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/), the prediction is that Kansas may experience warmer winter and spring temperatures. The number of cold (minimum temperature below 0 degrees F) nights may decrease. Annual precipitation, although uncertain, is predicted to be less in summer and more in winter. The intensity of droughts is expected to increase; however, deluge events may also become more frequent.</p>	<p>It has been reported that temporal shifts are occurring in species migration patterns in response to climate change and available food resources at higher latitudes. Over the last 20 years, there have been changes to farming practices and crop rotations, some of those attributable to weather patterns. Although Kansas still leads the nation in hard red winter wheat production, local farmers have significantly reduced their acreage of this crop. Some cite the increased rain and disease problems with winter wheat. This leaves corn and soybeans as the primary crops. Deer often graze in wheat during the winter, and thus large-scale agricultural changes could affect their populations over time. Data from local deer surveys do not show changes yet.</p> <p>Using available and emerging science, the Service would continue to assess predictions of these complex effects and use an adaptive management approach to implement this action to ensure that it does not add to the effects of climate change on the environment.</p>

Other Past, Present, and Reasonably Foreseeable Activity Impacting Affected Environment	Descriptions of Anticipated Cumulative Impacts
	Hunting programs and mitigation measures would adapt with changing conditions to continue to conserve natural resources and balance compatible recreational uses.

Key: CWD = chronic wasting disease; EA = Environmental Assessment; WAO = whitetail antlerless only

Table 7. Harvest, Participation, and Activity Levels for Hunters in Kansas during the 2017–2018 Furbearer Harvest Survey.

Species	Survey Respondents Who Pursued (n)	Estimated Harvest	% of Hunters Who Pursued	Harvest/100 Days	Maximum Harvest	Ave Harvest/Hunter
Badger	35	91	5	13.8	2	0.66
Bobcat	310	728	42	10.1	7	0.6
Coyote	637	17,537	86	48.7	100	6.99
Red Fox	44	122	6	10.3	20	0.7
Gray Fox	19	4	3	0.2	1	0.05
Swift Fox	11	4	1	1.5	1	0.09
Opossum	55	980	7	32.4	40	4.49
Raccoon	218	10,378	29	109.8	100	12.09
Skunk	22	153	3	60.6	6	1.77

Source: KDWPT 2018c

3.4 Mitigation Measures to Prevent Conflicts

Mitigating measures include prohibiting the use of centerfire rifles and pistols to provide for public safety of the surrounding private landowners. In addition, the Townsite Trail Area, north of Hartford, is closed to hunting activities year-round. This reduces conflict with hikers, birdwatchers, and photographers. Refuge law enforcement officer and KDWPT wardens monitor the hunts. They would conduct license, bag limit, and access compliance checks.

To mitigate potential conflicts between raccoon hunters’ dogs and the surrounding private landowners, the Service would prohibit the use of dogs and night hunting for furbearers. On national wildlife refuges, no unconfined domestic animals (dogs, hogs, cats, horses, sheep, or cattle) shall be permitted to enter or roam at large (CFR S26.21[b]). Therefore, furbearer hunting would be limited to daylight hours, without dogs.

3.5 Monitoring

The State of Kansas conducts and uses surveys that are used to facilitate decision-making related to hunting and fishing activities (<https://ksoutdoors.com/Services/Research-Publications/Wildlife-Research-Surveys>). The refuge would heavily rely 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. Service law enforcement officers would offer the best source of monitoring for both the wildlife populations and also the hunting impact.

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

This alternative helps meet the purpose and needs of the Service as described above, because it provides additional wildlife-dependent recreation opportunities on the refuge. This hunting and fishing plan brings the refuge into alignment with KDWPT regulations, and with other national wildlife refuges in Kansas. Furthermore, the coyote hunting proposal would provide some consistency of regulations with the adjacent Otter Creek State Wildlife Area and the U.S. Army Corps of Engineers John Redmond Reservoir. Simplifying regulations could assist with reducing the downward trend in hunters and anglers by providing for the recruitment, retention, and re-activation of sportsmen and sportswomen.

The proposed alternative would create hunting opportunity, yet not likely enough take to adversely affect populations of the hunted species. Vegetation change would be minimal. There would be no impact on threatened and endangered species. Cultural resources would not be affected. The proposed hunts would require minimal additional administration and law enforcement. Visitor use would increase, thus positively affecting the local economy.

The Service has determined that the proposed action is compatible with the purposes of the refuge and the mission of the Refuge System.

Alternative B – No Action Alternative

The visiting public would continue to be frustrated by a lack of furbearer and coyote hunting options at the refuge. Deer hunters would likely continue to express concern over the abundance of coyotes and predators they see while hunting from a deer stand.

3.7 List of Sources, Agencies and Persons Consulted

The following agencies and organizations were consulted during the development of this EA:

- KDWPT; Pratt, Kansas
- Barbara Boyle, Refuge Supervisor, USFWS DOI Region 5
- Aaron Mize, Hunt and Fish Coordinator, USFWS DOI Regions 5 and 7
- Bernardo Garza, Hunt and Fish Coordinator, USFWS DOI Regions 5 and 7
- Craig Mowry, Project Leader, USFWS Kansas NWR Complex

3.8 List of Preparers

Name	Position	Work Unit
Tim Menard	Wildlife Biologist	Flint Hills NWR

3.9 State Coordination

Representatives of the Kansas NWR Complex (Flint Hills, Marais des Cygnes, and Quivira 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 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. KDWP 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.

Flint Hills NWR and KDWP will continue to work together to ensure safe and enjoyable recreational hunting opportunities. Law enforcement officers from both the Service and the KDWP work together to patrol Flint Hills NWR, safeguarding hunters, visitors, and both game and nongame species.

3.10 Tribal Consultation

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

3.11 Public Outreach

On April 1, 2020, the Service made the hunting and fishing plan and EA available to the public for a 30-day public review and comment period. The Service received comments from six individuals and two organizations. Two commenters expressed support for expanding hunting opportunities to include furbearers and coyote, as well as additional days for deer hunting on Flint Hills NWR. Two commenters expressed opposition to expanding hunting on Flint Hills NWR, and one commenter requested clarification regarding deer hunting. We discuss the comments we received below by topic.

Comment (1): Many commenters expressed general opposition to any hunting or fishing in the Refuge System. In many cases, commenters stated that hunting was antithetical to the purposes of a "refuge," which, in their opinion, should serve as an inviolate sanctuary for all wildlife. Some of these commenters generically opposed expanded or new hunting or fishing opportunities at specific stations.

Response: The Service prioritizes facilitating wildlife-dependent recreational opportunities, including hunting and fishing, on Service land in compliance with applicable Service law and policy. For refuges, the NWRSA, as amended, stipulates that hunting (along with fishing, wildlife observation and photography, and environmental education and interpretation), if found to be compatible, are a legitimate and priority general public use of a refuge and should be facilitated (16 U.S. Code 668dd[a][3][D]). So, we only allow hunting of resident wildlife on national wildlife refuges 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. For hatcheries, we allow hunting and fishing when such activity is determined not to be detrimental to the propagation and distribution of fish or other aquatic wildlife (50 CFR 71.1). For all 106

stations opening or expanding hunting or fishing, or both, in this rule, we determined that the proposed actions were compatible or would not have these detrimental impacts.

Each refuge manager makes a decision regarding hunting and fishing opportunities only after rigorous examination of the available information, consultation and coordination with states and tribes, and compliance with NEPA (42 U.S. Code 4321 et seq.), Section 7 of the Endangered Species Act of 1973, as amended (16 U.S. Code 1531 et seq.), and other applicable laws and regulations. The many steps taken before a refuge opens or expands a hunting or fishing opportunity on the refuge ensure that the Service does not allow any opportunity that would compromise the purpose of the station or the mission of the agency.

Hunting of resident wildlife on 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 include resident wildlife population and habitat objectives, minimizing disturbance impacts to wildlife, maintaining high-quality opportunities for hunting and other wildlife-dependent recreation, eliminating or minimizing conflicts with other public uses or refuge management activities, and protecting public safety.

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, again, 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 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.

We did not make any changes to the rule as a result of these comments.

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

Response: 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.

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

Comment (3): We received several comments that other forms of recreation are important to the economy in addition to hunting and to expand hunting opportunities above other public uses is unfair to other refuge users.

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. There are several other compatible public uses enjoyed by the public on Flint Hills NWR and providing an expanded hunting opportunity is not expected to impact other public users or create conflicts.

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

Comment (4): 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 hunting individual species on a case-by-case basis. As with all species, a refuge manager makes a decision about managing bobcat/coyote/fox populations, including allowing predator 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.” Predator species play a critical role in the integrity, diversity, and overall health of ecosystems, so management actions concerning all species must be considered on a refuge-by-refuge basis. We considered the impacts of hunting on predator populations through individual environmental assessments for each of the proposed hunting openings and expansions at each refuge.

Each individual EA looks at the cumulative impact of the openings of predator hunting on a refuge at the local level to ensure that these opportunities do not add significantly to the cumulative impacts of other past, present or foreseeable future actions, including other hunting in the local or regional area, on these species. None of the individual environmental assessments found more than minor impacts to these species. We also consider the cumulative impacts of all proposed hunts in the 2020–2021 cumulative impacts report accompanying the proposed rule.

To clarify, our determination of the rule’s impact on furbearers, like many other resident wildlife species in the rule, is not based on bag limits, but rather on the limited number of hunters that we expect to pursue these opportunities as a result of the rule. Hunting for furbearers is only open on refuges during the day, while most successful hunting for some species of furbearers is conducted at night. Trapping, not hunting, is the method of take that most hunters of furbearers prefer. Neither hounding nor trapping are valid methods of take as part of hunting programs in the Refuge System. In other cases, the terrain and habitat of the refuge or hatchery are not conducive to these types of hunting opportunities. Therefore, it was our determination that the

proposed rule, while bringing greater alignment with state hunting regulations, will not result in significant impacts to predator or furbearer species.

The Service does not attempt to define or authorize “trophy hunting” in any of our laws, regulations, or policies concerning hunting. We follow state hunting and fishing regulations, except for where we are more restrictive on individual refuges, including state regulations concerning responsible hunting, or prohibitions on wanton waste (defined as “to intentionally waste something negligently or inappropriately”). As stated in our response to *Comment (1)*, we only allow hunting on refuges and hatcheries when we have determined that the opportunity is sustainable and compatible.

Many coyotes and furbearers are only taken incidentally during other refuge hunts. Baiting is prohibited on all refuges outside Alaska under 50 CFR 32.2(h), unless specifically authorized under station-specific regulations, and it is uncommon for baiting to be authorized. The use of dogs for hounding is prohibited on refuges by 50 CFR 26.21(b) unless authorized by refuge-specific regulations, and many refuges only authorize the use of dogs for retrieval of migratory birds, upland game birds, and small game. Most refuges that allow dogs require the dogs to be under the immediate control of the hunter at all times, or leashed unless actively retrieving an animal.

Under the Refuge Improvement Act of 1997 (PL 105-57), trapping is not considered a priority wildlife dependent recreational use of the Refuge System. Trapping programs on refuges are generally implemented to accomplish wildlife management objectives. These objectives vary between refuges, and are often an essential tool in meeting refuge management objectives (for example, trapping of predators may be necessary to accomplish waterfowl production objectives or to protect an endangered species).

The NWRSAA, as amended, also mandates that “[r]egulations permitting hunting or fishing of fish and resident wildlife within the Refuge System shall be, to the extent practicable, consistent with State fish and wildlife laws, regulations, and management plans” (16 U.S.C. 668dd[m]). Therefore, all the opportunities for hunting predators in this rule that are intended to bring greater consistency with state fish and wildlife laws, regulations, and management plans, are part of realizing the Service’s mission. Moreover, these, as with all predator hunting determinations and all hunting and fishing determinations, were 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 the 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 the public comment period and determined that they did not affect our initial determinations that these small and minor opportunities for hunting predators had no more than minor impacts on the population health of these species or other wildlife at the local, regional, or national level.

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

Comment (5): 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 Section 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 environment 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: We considered the impacts of hunting on predator populations through the individual environmental assessment for the proposed hunting opening. As mentioned in the Flint Hills NWR EA, other furbearers (opossum, striped skunk, badger, and fox) all show increasing populations across the state (data from the KDWPT Roadside Survey, 2015). Those populations should support the level of hunting in the proposed changes to the hunting and fishing plan. We also considered the cumulative impacts of all proposed hunts in the 2020–2021 cumulative impacts report accompanying the proposed rule.

A majority of furbearer harvest statewide occurs not through hunting, but rather trapping, which is not being proposed within this plan. Furthermore, impacts to furbearers and coyote on the refuge would be minimized by method of take (no centerfire rifles or pistols) and timing of the hunts (limited to daylight hours). Finally, nearly half of the refuge (9,108 acres) would remain closed to hunting.

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

Comment (6): One commenter was of the opinion that skunks and opossums are not desirable game species and are largely nocturnal, making hunting of these species an unlikely means of control. The commenter also felt muskrat, mink, fox, badger, and bobcats either are not common on the refuge or are nocturnal and not likely to be desirable quarry for hunters, or if hunted for, not found. The commenter stated it appears 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: This hunting and fishing plan proposes to maintain existing hunting opportunities and provide new hunting opportunities on the Flint Hills NWR. The hunting program generally will follow State of Kansas regulations with respect to the target species, seasons, bag limits, and method of take. In certain instances, we may deviate from those regulations to meet Refuge wildlife population, public use, and public safety goals. The intent of this proposal is to provide increased hunter opportunity, not necessarily to "control" wildlife populations.

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

Comment (7): One commenter objected on procedural grounds, and requests all comments be posted online.

Response: Comments submitted through the Federal Register regulatory process are available at [regulations.gov](https://www.regulations.gov). While not required by NEPA, it is our policy to summarize all comments received through the individual refuge NEPA process in the final environmental assessment.

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

Comment (8): One commenter asserted that we should prepare an environmental impact statement (EIS) before proposing to expand hunting and fishing opportunities on the refuge. According to the commenter, the proposed hunting openings and expansions are significant enough to warrant an EIS, and that the Service did not adequately analyze the cumulative impacts across the country on all huntable populations with the cumulative impacts report.

Response: The Service disagrees with the assertion that we should prepare an EIS before proposing expanded hunting and fishing opportunities on the refuge. The Service's NEPA-related analysis of the impacts of the proposed openings and expansions demonstrated that the proposal would not have significant impacts at the local, regional, or national level, and the commenter has provided no additional information that would change our analysis. We annually conduct management activities on the refuge that minimize or offset impacts of hunting on physical and cultural resources, including establishing designated areas for hunting; restricting levels of use; confining access and travel to designated locations; providing education programs and materials for hunters, and other users; and conducting law enforcement activities.

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

Comment (9): We received one comment with concern that the proposed hunting opportunities on the refuge would create an increased need for law enforcement capacity and have a detrimental impact to public safety, wildlife and other Service resources.

Response: In order to open or expand hunting or sport fishing on a refuge, we must find the activity compatible. To find an activity compatible, the activity must not "materially interfere or detract from" public safety, wildlife resources, or the purposes of the refuge. We have determined that the proposed action would not have detrimental impacts and found the actions to be compatible.

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

We did not make any change to the hunting and fishing plan or EA based on this comment.

Comment (10): One commenter expressed concern that the draft plan would allow use of lead in rimfire rifles, muzzleloaders (single projectile), and shotguns (as slugs only). Because of

ecological risks of lead ammunition, the commenter requested that any expansion of hunting require the use of nontoxic ammunition only. The commenter stated science demonstrates harm that lead poisoning causes eagles and other wildlife that live on this refuge, and provided a link (<https://diversity.box.com/s/63lkfzz46uprpu67sfk31on118ixnj4f>) to supporting documentation, requesting that these studies be included in the official record for this project. The commenter also felt the draft environmental assessment acknowledges potential impacts from lead poisoning but fails to take the “hard look” required under NEPA. Furthermore, the environmental assessment should consider an alternative that would require use of nontoxic ammunition for all hunting on the refuge.

Response: The Service shares the commenter’s concerns regarding the bioavailability of lead in the environment. See Nancy Golden, et al., “A Review and Assessment of Spent Lead Ammunition and Its Exposure and Effects to Scavenging Birds in the United States,” which is available online at <https://www.fws.gov/midwest/refuges/Review%20and%20Assessment%20paper.pdf>.

Historically, the principal cause of lead poisoning in waterfowl was the collection of high densities of lead shot in wetland sediments associated with migratory bird hunting activities (Kendall et al. 1996). In 1991, as a result of high bird mortality, the Service instituted a nationwide ban on the use of lead shot for hunting waterfowl and coots (50 CFR 32.2[k]). The Service requires any new shot types for waterfowl and coot hunting to undergo rigorous testing in a three-tier approval process that involves an ecological risk assessment and an evaluation of the candidate shot’s physical and chemical characteristics, short- and long-term impacts on reproduction in waterbirds, and potential toxic impacts on invertebrates (50 CFR 20.134). Because of this rigorous testing, the shot toxicity issue of the past is now substantially less of an ecological concern.

However, there remains a concern about the bioavailability of spent lead ammunition (bullets) and sinkers on the environment, endangered and threatened species, birds, mammals, and humans or other fish and wildlife susceptible to biomagnification. The impacts of lead on human health and safety have been a focus of several scientific studies. We share the commenter’s concerns about the adverse impacts of lead. We have reviewed the literature provided during the public comment period and have updated our station-specific analyses, as well as the national cumulative impact report as appropriate.

Although there is not a Service-wide ban on lead ammunition for non-migratory bird hunting activities or lead sport fishing tackle, the Service has taken specific steps to limit the use of lead in hunting and fishing activities on refuges and hatcheries. 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. We always encourage hunters and fishers to voluntarily use nontoxic ammunition and 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.

The Service believes it is important to encourage refuge-state partnerships to reach decisions on lead usage. We continue to research this issue and engage with states and other partners to promote the use of non-lead ammunition and tackle. We share a strong partnership with the states in managing wildlife, and, therefore, we are proceeding with the phase-out of toxic ammunition in a coordinated manner with each respective state wildlife agency. For example, in

California the use of lead ammunition is prohibited statewide including on all Service lands, largely in response to the adverse impacts of lead on the California condor.

At those stations, where the Service is continuing to allow lead ammunition and tackle in order to be consistent with the states, the number of new hunters or anglers expected to be using lead bullets or lead tackle as a result of the new or expanded opportunities are expected to be very low, so the resulting addition of lead into the environment was negligible or minor. Where lead ammunition or tackle is still allowed (although discouraged) on Service lands, when compared to the lead in the environment as a result from other fishing, hunting or other activities in the local, regional and national area, the addition of lead and the associated impacts to the environment are negligible.

We disagree with the assertion that any use of lead shot in connection with opening and expanding hunting and fishing on the refuge in this rulemaking will harm endangered or threatened species. The refuge carefully evaluated possible impacts on endangered and threatened species as part of the NEPA process (see the Section 7 Biological Evaluation in Appendix B. As discussed above, on refuges, where lead ammunition or tackle is allowed, we found that the low number of hunters and anglers using lead ammunition or tackle would result in no more than a negligible increase of lead in the environment when compared to the lead ammunition and tackle being used in the surrounding areas.

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

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

Preparer Signature: _____ Date: _____

Name/Title: Craig Mowry, Project Leader, Kansas National Wildlife Refuge Complex, Flint Hills, NWR

Reviewer Signature: _____ Date: _____

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

3.13 References

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[USFWS] U.S. Fish and Wildlife Service. 2000. Flint Hills National Wildlife Refuge Comprehensive Conservation Plan. Department of the Interior, U.S. Fish and Wildlife Service, Region 6. Hartford, KS.

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

APPENDIX B SECTION 7 BIOLOGICAL EVALUATION FORM

Section 7 Biological Evaluation Form

Originating Person: Jack R. Bohannon Date Submitted: 6/12/2020
Telephone Number: 620-392-5553

- I. **Service Program and Geographic Area or Station Name:** Flint Hills 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):
Lyon and Coffey Counties, Kansas: Township 20South, Range 13 East
- 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/>

Northern long-eared bat, *Myotis septentrionalis*
Neosho madtom, *Nocturus placidus*
Topeka shiner, *Notropis topeka*
Neosho mucket, *Lampsilis rafinesqueana*

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

Under the Proposed Action Alternative, the Service would open hunting for badger, bobcat, fox, mink, muskrat, opossum, raccoon, striped skunk, weasel, and coyote on the 8,295-acre South Neosho Unit on the Flint Hills National Wildlife Refuge in accordance with the refuge's Hunt/Fish Plan, 2020. No trapping or running is being proposed. Hunting for beaver and otter is not permitted by state regulations and is not proposed in this alternative. Method of take for furbearers and coyote will include shotgun, muzzleloader, archery, and rimfire rifle. Dogs, vehicles, or bait may not be used to hunt furbearers or coyotes. Coyotes may not be hunted from a vehicle or a road. Electronic calls would be permitted for coyote and furbearer. Hunting would be permitted during daylight hours (one-half hour before legal

VI. **Determination of Effects:**

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

The proposed changes to hunting regulations do not include any changes to habitat, vegetation structure, or river/stream locations. Furthermore, the additional public use as a result of these new hunts will be negligible and of limited impact to habitats.

(B) Determination: Determine the anticipated effects of the proposed project on species and critical habitats listed 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.**

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

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

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

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

JACK
Signature BOHANNAN
[Supervisor at originating station]

Digitally signed by JACK
BOHANNAN
Date: 2020.06.12 23:34:25 -05'00'

Date _____

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

A. **Concurrence** _____ **Nonconcurrence** _____
Explanation for nonconcurrence:

B. **Formal consultation required** _____
List species or critical habitat unit

C. **Effects are addressed in the Programmatic Consultation on R6's
Recovery Program – no further consultation needed** _____

D. **Conference required** _____
List species or critical habitat unit

Name of Reviewing ES Office _____

Signature

Date

APPENDIX C FINDING OF NO SIGNIFICANT IMPACT

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

FLINT HILLS NATIONAL WILDLIFE REFUGE

Hartford, Kansas

The United States (U.S.) Fish and Wildlife Service (Service) is implementing the Flint Hills National Wildlife Refuge (NWR) Hunting and Fishing Plan in Kansas. The refuge will expand hunting opportunities to include hunting of badger, bobcat, mink, muskrat, fox, opossum, raccoon, striped skunk, weasel, and coyote on the 8,295-acre South Neosho Unit on the Flint Hills NWR. In addition, the Service will extend the firearm whitetail antlerless-only season (WAO).

Selected Action

Alternative A – Proposed Action Alternative: The Service proposes to open hunting of badger, bobcat, mink, muskrat, fox, opossum, raccoon, striped skunk, weasel, and coyote on the 8,295-acre South Neosho Unit on the Flint Hills NWR in accordance with the refuge's hunting and fishing plan (2020). Methods of take include shotgun, muzzleloader, archery, and rimfire firearms. In addition, the Service proposes allowing the extended firearm WAO. The refuge is located in southeast Kansas, in parts of Coffey and Lyon Counties.

The hunting and fishing plan proposes to continue existing hunting opportunities and provide new hunting opportunities on the refuge. The hunting program generally would follow State of Kansas regulations with respect to the target species, seasons, bag limits, and method of take. In certain instances, we, the Service, may deviate from those regulations to meet refuge wildlife population, public use, and public safety goals.

Mitigating measures include prohibiting the use of centerfire rifles and pistols to provide for public safety. In addition, the Townsite Trail Area and Burgess Trail Area will remain closed to hunting activities year-round. This will reduce conflict with hikers, birdwatchers, and photographers. The refuge law enforcement officers and Kansas Department of Wildlife, Parks and Tourism (KDWPT) wardens will monitor the hunts and conduct license, bag limit, and compliance checks.

This alternative was selected over the other alternatives because this alternative offers the best opportunities for public hunting while meeting the Service's mandates under the National Wildlife Refuge System Administration Act, as amended by the National Wildlife Refuge System Improvement Act of 1997, and Secretarial Order 3356. The proposed alternative would result in an estimated increase of 50 hunter use days, minor increased economic inputs to local communities, and would minimize potential direct and indirect impacts to biological resources. 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 refuge and the mission of the Refuge System.

Other Alternatives Considered and Analyzed

Alternative B – No Action Alternative: Under the No Action Alternative, the refuge would continue to prohibit furbearer and coyote hunting, as well as deer hunting under the extended WAO. Other hunting seasons would remain in place, as outlined in the refuge hunting regulations.

This alternative was not selected, because even though 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 Flint Hills NWR would be a small fraction of regional and statewide populations. In addition, overall populations would continue to be monitored by the KDWPT and future harvests would be adjusted as needed under existing state regulatory processes.
- Administration costs would be negligible. The furbearer and coyote 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 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 will not be adversely affected.
- 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 (www.ksoutdoors.com/). Their action will

prevent potential cumulative impacts from occurring due to hunting take, development, and population increase.

- Non-hunted wildlife species occurring on the refuge may be impacted by disturbances due to 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 them to relocate, both on refuge and on adjacent lands, so there are minimal 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 will 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.
- Climate change may result in both positive and negative cumulative effects on resident game species. The Service will work with KDWPT to adjust the hunting program on the refuge to ensure that it does not contribute further to the cumulative impacts of climate change on resident game species and fish.
- The proposed action may lead to some adverse impacts on nonconsumptive user groups on the refuge during hunting season. The increased hunting opportunities would create additional noise and visual impacts to those users visiting 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:

- Prohibiting the use of centerfire rifles and pistols to provide for public safety.
- The Townsite Trail Area and Burgess Trail Area would remain closed to hunting activities year-round. This would reduce conflict with hikers, birdwatchers, and photographers.
- The refuge law enforcement officers and KDWPT wardens would monitor the hunts and conduct license, bag limit, and compliance checks.
- Notification of hunting activities on the refuge will 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:

- The proposed action would result in an anticipated 50 furbearers harvested, 30–50 coyote harvested, and 20 additional deer annually harvested. The potential take would likely be negligible in proportion to regional or state numbers. 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 adverse direct and indirect effects of the proposed action on air, water, soil, habitat, wildlife, and aesthetic/visual resources are expected to be minor and short-term.
- Managed and limited harvest of furbearers and coyote has been shown to be consistent with long-term population maintenance and enhancement, and the action is not irreversible.
- The Refuge System uses an adaptive management approach to all wildlife management on refuges, monitoring and re-evaluating the hunting opportunities on the refuge on an annual basis to ensure that the hunting program continues to contribute to the biodiversity and ecosystem health of the refuge and that these opportunities do not contribute to any cumulative impacts to habitat for wildlife from climate change; population growth and development; or local, state, or regional wildlife management.
- The monitoring and mitigation measures related to this proposed action will ensure that the Service can act swiftly under any worst-case scenario to ensure this action does not contribute to any significant adverse impacts on furbearers, coyote, or other habitat and wildlife on the refuge.
- The action would result in beneficial effects on the human environment, including increased wildlife-dependent recreational opportunities and socioeconomics of the local economy, with only minimal adverse impacts on the human environment as discussed in the environmental assessment.
- The action, along with proposed mitigation measures, will ensure that there is low danger to the health and safety of refuge staff, visitors, and the hunters and fishers themselves.
- The effects on the quality of the human environment of the proposed activities are not highly controversial. The Service acknowledges some opposition to aspects of the proposed activities but concludes that this opposition does not rise to the level of significant scientific controversy regarding the impacts of the proposed action.
- The Service notes that those voicing opposition to the Service's proposed alternative do not provide data or evidence to refute the numeric estimates of loss and the related potential for distributional impacts, which the Service has concluded are not of a magnitude to threaten the wildlife or habitat of the refuge.
- The possible effects of the proposed activities on the quality of the human environment are relatively certain and do not involve unique or unknown risks. Hunting is already occurring on the refuge and wildlife and habitat on the refuge continue to thrive despite the loss of habitat outside the refuge boundaries.
- The proposed activities do not establish a precedent for actions with future significant effects or represent a decision in principle about a future consideration, because regulations with regard to take in sport hunting seasons are determined annually and all harvest regulations are reviewed, based on new biological information.

- There are no significant cumulative effects identified by the EA. Additional hunting would not add more than slightly to the cumulative impacts to furbearer and coyote populations stemming from hunting at the local and regional levels, and would result in minor impacts on furbearers and coyote on the refuge.
- There are no irreversible or irretrievable resource commitments identified by this assessment, except for a minor consumption of fossil fuels for routine operations.
- The proposed activities would not threaten a violation of federal, state, or local law or requirements imposed for the protection of the environment.
- The proposed activities would not have an adverse effect on historical or cultural resources due to the temporary and superficial use of refuge habitats during hunting activities.
- The action would not affect any threatened or endangered species; or any federally designated critical habitat.
- The action would not affect any federally designated wilderness areas.
- The proposal is not expected to have any significant adverse effects on wetlands and floodplains, pursuant to Executive Orders 11990 and 11988.

Public Review

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

Refuge staff met with KDWPT on October 30, 2019, 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. 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 Secretary of the KDWPT 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 Flint Hills NWR.

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

On April 1, 2020, the Service released the EA for a 30-day public comment period. The Service received eight responses to our request for public comments on the EA. Most of the comments expressed opposition to the proposed action from those concerned about impacts to hunted species and other wildlife on the refuge, and to other wildlife-dependent recreation on the refuge. The Service addressed and clarified some of the concerns raised during the review process (see Public Outreach Section in the EA).

In addition, 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 the hunting on the refuge have been clarified concerning the use of temporary hunting blinds as a result of the rulemaking this year. The refuge will ensure that refuge’s hunting brochure includes all applicable regulations for hunting on the refuge.

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 Flint Hills 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 hunting of badger, bobcat, mink, muskrat, fox, opossum, raccoon, striped skunk, weasel, and coyote on the 8,295-acre South Neosho Unit on the Flint Hills NWR. In addition, the Service will extend the firearm WAO season. 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 D of the EA).

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

APPENDIX D FINAL COMPATIBILITY DETERMINATION FOR HUNTING ON FLINT HILLS NATIONAL WILDLIFE REFUGE

Use: Hunting of furbearer (badger, bobcat, mink, muskrat, fox, opossum, raccoon, striped skunk, weasel) and coyote, and allowing the extended firearm whitetail antlerless only (WAO) season

Refuge Name: Flint Hills National Wildlife Refuge

Establishing and Acquisition Authorities:

- Fish and Wildlife Coordination Act (1958), 16 United States (U.S.) Code Section 644, and the Refuge Recreation Act (16 U.S. Code Section 460-1)

Refuge Purpose(s):

The primary purpose of Flint Hills National Wildlife Refuge (NWR) is to restore and maintain the hydrological system for the Neosho River drainage by managing for wetlands, control of exotic species, and management of trust responsibilities for the maintenance of plant and animal communities.

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?

The use includes hunting opportunities in addition to the existing approved hunting and fishing uses. Additional species to be hunted include coyote and state-defined hunted furbearers (raccoon, opossum, striped skunk, bobcat, fox, mink, badger, muskrat, and weasel). Another hunting opportunity will involve an expansion of deer hunting to include the extended WAO season as defined by Kansas Department of Wildlife, Parks, and Tourism.

Where will the use be conducted?

The additional hunting uses will occur within the existing South Neosho Hunt Unit on Flint Hills NWR. The proposed hunts will not occur in the North 19th and South 19th Hunt Units because they provide sanctuary for migratory birds and help to offset potential disturbance effects. This 9,445-acre waterfowl sanctuary prohibits access by the public, including hunters.

When and how will the use be conducted?

All new hunting opportunities will occur within the existing state hunting seasons. Hunting will not be allowed at night. Refuge shooting hours for coyote and furbearers will be one-half hour before legal sunrise until legal sunset. WAO deer hunting hours will be in accordance with state regulations.

The use will be conducted according to state, federal, and refuge-specific regulations. The U.S. Fish and Wildlife Service (Service) limits the hunting area, season, hours, and other aspects of operations and procedures to ensure compatibility of multiple wildlife-dependent uses and with conservation priorities.

Why is this use being proposed?

Hunting is a priority general public use of the Refuge System that is also an important wildlife management tool. The Service recognizes hunting as a healthy, traditional outdoor pastime, deeply rooted in the American heritage. Hunting can instill a unique understanding and appreciation of wildlife, their behavior, and their habitat needs. Hunting programs can promote understanding and appreciation of natural resources and their management on lands and waters in the Refuge System. This interest is congruent with the Department of the Interior Secretarial Order 3356, "Hunting, Fishing, Recreational Shooting, and Wildlife Conservation Opportunities and Coordination with States, Tribes, and Territories."

Availability of Resources:

Although additional hunting opportunities will require more time and monetary resources, implementation can occur under current administrative conditions. Existing programs, such as signs, brochures, and other communications, can be updated with available resources. Maintenance of infrastructure is closely tied to the Service Asset Maintenance Management System. The refuge's base budget will cover the cost of updates. Current law enforcement is sufficient for safety and management related to expanded hunting uses.

Anticipated Impacts of the Use:

Short-Term Impacts:

Overall, accommodating this wildlife-dependent use likely will result in minimal effects on wildlife. Although hunting causes mortality to wildlife, season dates and bag limits are set with the long-term health of populations in mind. Wildlife will be disturbed temporarily near the activity. This covers temporary displacement of birds and other resident wildlife from foot traffic moving through the area and gunshots. Data collected from the refuge indicate that there are sustainable wildlife populations to support the proposed hunts. Hunting will only occur in the South Neosho Hunt Unit, with 9,445 refuge acres remaining as a sanctuary for wildlife. In addition, the proposed hunts will not occur in the trail areas, and thus will minimally affect nonconsumptive public use. There will be negligible effects on vegetation or threatened and endangered species. Refuge staff anticipates a positive response from the hunting public, and will periodically assess impacts to allow adjustments in hunting activities.

Long-Term and Cumulative Impacts:

There will be no long-term impacts on wildlife resources at a population scale. Overall, the proposed action is expected to benefit hunters in the area by providing additional public land for hunting.

Public Review and Comment:

This compatibility determination was prepared concurrently with the draft environmental assessment and companion hunting and fishing plan for the refuge. Public review and comment was achieved concurrently with the public review and comment period for the draft hunting and fishing plan and environmental assessment. Public review and comment was solicited through public posting of notices at the refuge and notices on local newspapers.

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 of furbearer (badger, bobcat, mink, muskrat, fox, opossum, raccoon, striped skunk, weasel) and coyote will only occur under the follow conditions:

- Implementation of uses as described in the refuge hunting and fishing plan, and according to applicable state, federal, and refuge-specific regulations.

Justification:

In view of the above and with the stipulations previously described, hunting will not materially interfere with or detract from the Refuge System mission or purposes of the refuge. Hunting is a priority public use of the Refuge System, and providing a hunting program contributes to achieving one of the refuge goals. Disturbance of wildlife will occur, but the effects are expected to be temporary and minimal. Hunting is not expected to adversely affect the biological integrity, diversity, and environmental health of the refuge or the Refuge System.

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

Current staffing levels and funding are adequate to administer the hunting program. Kansas state law further controls hunter activities. Hunting is a legitimate wildlife-management tool that can be used to control wildlife populations. Hunting harvests a small percentage of the renewable resources, which is in accordance with wildlife-management objectives and principles.

Signatures:

Craig Mowry, Project Leader

Date

Review:

Barbara Boyle, Refuge Supervisor

Date

Approval:

Maureen Gallagher, Refuge Chief
Region 6

Date

Mandatory 10- or 15-year Re-Evaluation Date: 2035