



U.S. Fish and Wildlife Service

Ernest F. Hollings ACE Basin National Wildlife Refuge *Hunting Plan Amendment and Environmental Assessment August 2021*



**Ernest F. Hollings ACE Basin National Wildlife Refuge
Hunt Plan Amendment and Environmental Assessment
Adding Eastern Wild Turkey, Meleagris gallopavo, to big game
hunting (Youth Harvest Only) on Grove Tract, Barrelville Tract,
Bonny Hall Tract, and Upper Combahee Unit.**

U.S. Fish and Wildlife Service

**Ernest F. Hollings ACE Basin National Wildlife Refuge
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Section A. Hunting Plan

ERNEST F. HOLLINGS ACE BASIN NATIONAL WILDLIFE REFUGE HUNTING PLAN AMENEDMENT- BIG GAME HUNTING (YOUTH ONLY): Add Eastern Wild Turkey (*Meleagris gallopavo*)

I. Introduction

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

The ACE Basin National Wildlife Refuge was officially established on September 20, 1990, and was renamed the Ernest F. Hollings ACE Basin National Wildlife Refuge (EFH ACE Basin NWR, refuge) on May 16, 2005, in honor of South Carolina's retired U.S. Senator Ernest F. Hollings.

Recognizing the importance of the area for wetland and habitat protection, migratory bird benefits and conservation opportunities served by the lands and waters of the refuge, the Service administratively designated ACE Basin NWR in 1990 under the Emergency Wetlands Resources Act of 1986, the Fish and Wildlife Act of 1956, and the Migratory Bird Conservation Act of 1929, thus outlining the primary purposes of these lands and waters:

"...the conservation of the wetlands of the Nation in order to maintain the public benefits they provide and to help fulfill international obligations contained in various migratory bird treaties and conventions..." 16 U.S.C. 3901(b) (Emergency Wetlands Resources Act of 1986)

"... for the development, advancement, management, conservation, and protection of fish and wildlife resources ..." 16 U.S.C. 742f(a)(4) (Fish and Wildlife Act of 1956)

"... for the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition of servitude ..." 16 U.S.C. 742f(b)(1) (Fish and Wildlife Act of 1956)

"... for use as an inviolate sanctuary, or for any other management purpose, for migratory birds." 16 U.S.C. § 715d (Migratory Bird Conservation Act of 1929)

"...to conserve and protect migratory birds...and other species of wildlife that are listed...as endangered species or threatened species and to restore or develop adequate wildlife habitat." 16 U.S.C. § 715i (Migratory Bird Conservation Act of 1929)

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

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

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

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

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

The refuge is composed of two major units, together comprising approximately 12,077 acres. The Edisto Unit consists of 7,396 acres and is located approximately 20 miles southwest of the city of Charleston, SC, in Charleston County. The Combahee Units consists of 4,681 acres in Beaufort, Colleton and Hampton Counties and is located approximately 20-25 miles northwest of the city of Beaufort, SC.

The refuge’s two units are drained by two significant river systems: the Combahee-Salkahatchie, which flows through the Combahee Unit, and the South Edisto, which flows adjacent to the Edisto Unit. Many broad, low-gradient interior drains are present as either extension of tidal streams and rivers or flooded bays and swales. Within this diverse drainage system, the refuge

contains exceptionally diverse wildlife habitat, including high quality forested wetlands, forested uplands, brackish natural marsh, freshwater natural marsh, managed marshes or wetland management units, marsh islands and pristine estuarine rivers.

The refuge's two major units (Edisto Unit and Combahee Unit) are further broken down into sub-units with the Edisto Unit containing the Barrelville, Grove and Jehossee sub-units and the Combahee Unit containing the Bonny Hall, Combahee Fields and Upper Combahee sub-units. The refuge has been separated into nine management units or compartments which range in size from 350 to 3,355 acres. Compartment boundaries are established along geographic features that can be easily identified on the ground (e.g., rivers, roads, trails).

Hunting for white-tailed deer (primitive weapon: archery and muzzleloader) and waterfowl (duck, teal, geese and coot) within natural, un-impounded marsh areas has been permitted in designated areas of the refuge since 1994. Since 2006, after the refuge was re-named, feral hog hunting has been allowed, incidental to white-tailed deer hunting, in designated areas of the refuge. A special mobility-impaired hunt for white-tailed deer (incidental feral hog take allowed) is conducted on the Edisto Unit with a quota for the number of hunters and harvest. Fishing is permitted on the refuge. Designated areas are closed seasonally to fishing activities in order to serve as sanctuary areas to protect migratory waterfowl. Fishing areas include the open waters (non-impounded) of the refuge and bank fishing, seasonally, within most refuge impoundments.

All hunting requires State of South Carolina and signed refuge hunting brochure, the latter of which is available at no cost to the participant.

II. Statement of Objectives

The objectives of a "Youth-Only" wild turkey hunting program on EFH ACE Basin NWR are to:

- provide spring hunting (YOUTH ONLY) of wild turkey under big game hunting on the Barrelville Tract, Grove Tract, Bonny Hall Tract, and Upper Combahee Unit where fall white-tailed deer and feral hog hunting currently is permitted; and
- provide the public with a recreational opportunity to experience wildlife on more refuge lands and increase opportunities for hunters/anglers, especially for youth and families.

Hunting is consistent with the refuge's Comprehensive Conservation Plan's (USFWS 2009) larger goals, specifically:

Goal 10: HUNTING AND FISHING

Objective 10A: Waterfowl, Small Game, Wild Turkey, White-tailed Deer and Feral Hog Hunting

Continue to provide safe, high-quality recreational waterfowl, white-tailed deer and feral hog hunting opportunities. Waterfowl hunting in the refuge's open marshes is consistent with the founding principle of the refuge to maintain traditional uses of the area. White-tailed deer and feral hog hunting help refuge management maintain a healthy refuge deer herd by preventing overpopulation and associated habitat and/or agricultural crop degradation as well as helping to

control invasive feral hogs and associated damage done by them. Large populations of small game animals, especially gray squirrels and raccoons, could provide the public a recreational opportunity on the refuge and reduce competition for nesting sites and mast with fox squirrels (for which no hunting season is allowed). Various units within the refuge harbor strong populations of wild turkey that could provide recreational hunting opportunities to user groups, such as youth and physically impaired persons, that have minimal access to hunt units.

The objectives of this hunting plan amendment are designed to contribute to, or be compatible with, the overall refuge goals and any subsequent specific regulations. This plan will provide high quality, wildlife-oriented recreation to the general public and the opportunity to utilize a renewable resource.

III. Description of Hunting Program

A. Areas to be Opened to Hunting

Since the purchase of most of the refuge tracts in the early 1990's, the wild turkey population has increased to what is likely its maximum potential for the habitat. By providing sanctuary and not allowing hunting, the small remnant numbers of refuge birds present at the time of acquisition have now reached levels sufficient to allow limited hunting (i.e., youth only). Additionally, large private tracts of land which immediately surround the refuge allow very limited turkey hunting, which also contributes to harvestable numbers of surplus birds in the general area.

Accordingly, spring youth turkey hunting will occur on 5,300 acres in four hunt units – the Barrelville Tract, Grove Tract, Bonny Hall Tract and Upper Combahee Unit. The Grove Tract comprises approximately 1,773 acres of forested riparian habitat, mixed pine/hardwood forests, bottomland hardwood swamps, pine forests, grasslands and managed and intertidal marsh. The Barrelville Tract is composed of approximately 722 acres of pine forest interspersed with bottomland hardwood forested drainages. The Bonny Hall Tract comprises approximately 1,461 acres of forested riparian habitat, mixed pine/hardwood forests, bottomland hardwood swamps, pine forests, grasslands and managed and intertidal marsh. The Upper Combahee Unit comprises approximately 1,344 acres of forested riparian habitat, mixed pine/hardwood forests, bottomland hardwood swamps and pine forests. (Figure 1-3).

Figure 1. ACE Basin Hunt Units (1 of 3)

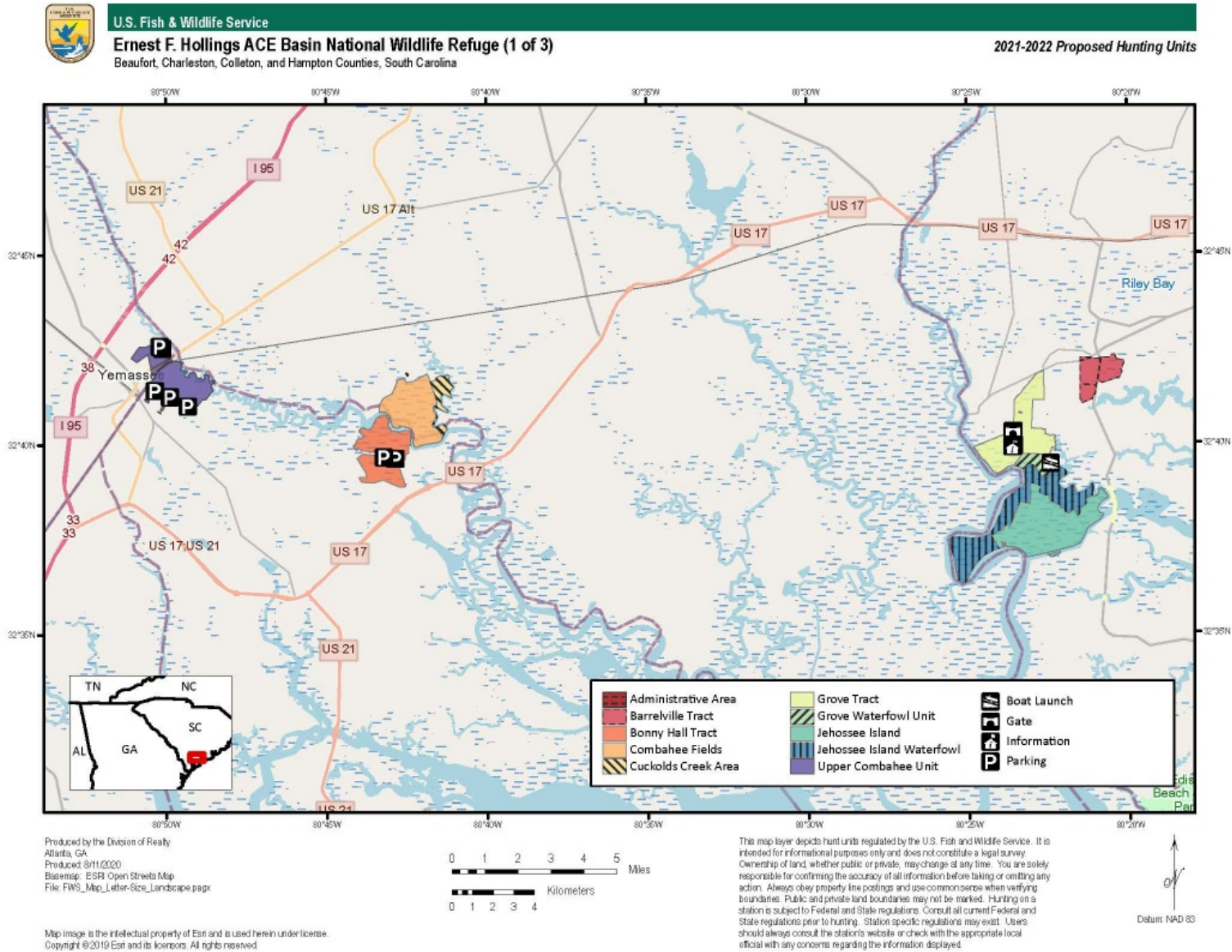


Figure 2. ACE Basin Hunt Units (2 of 3)

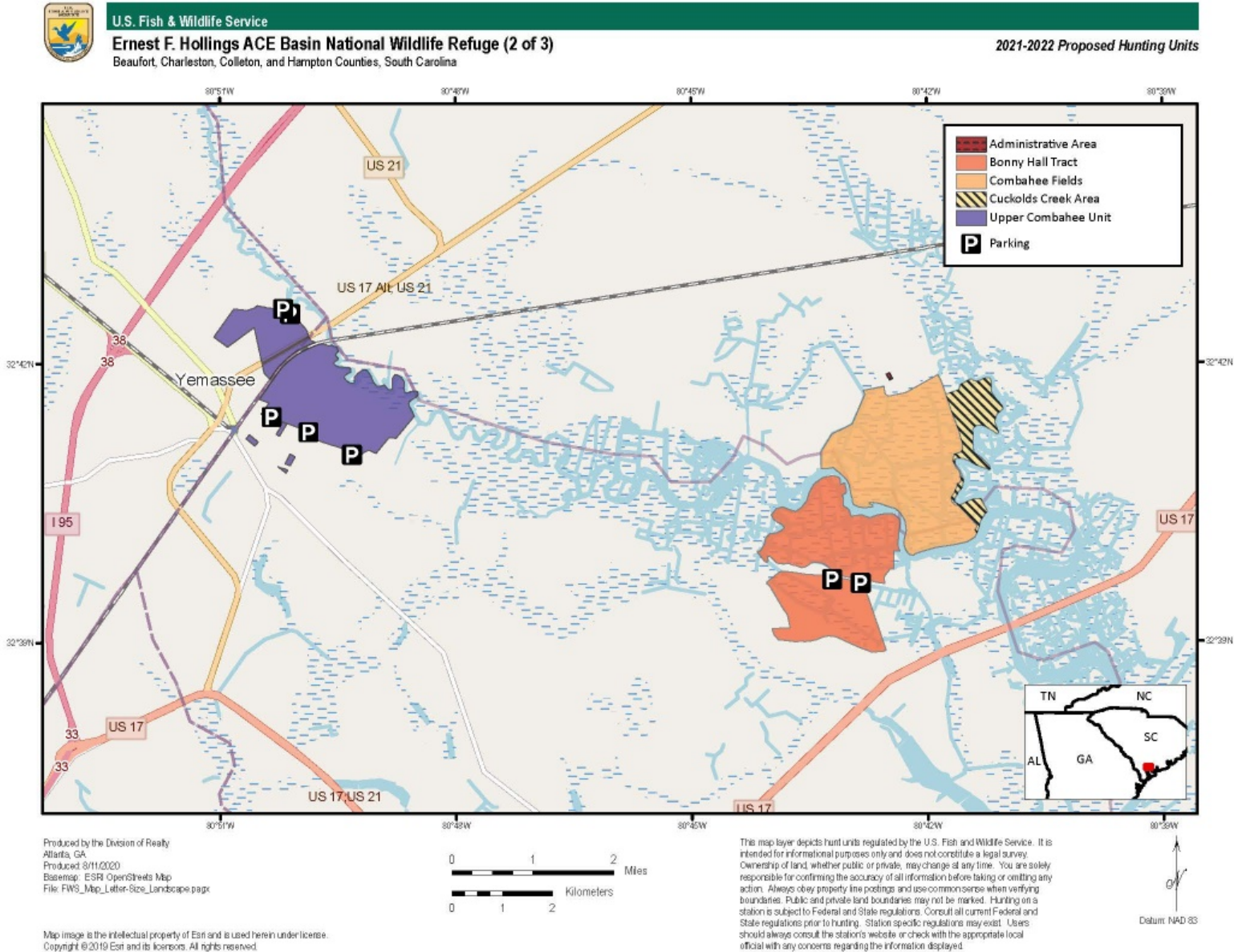
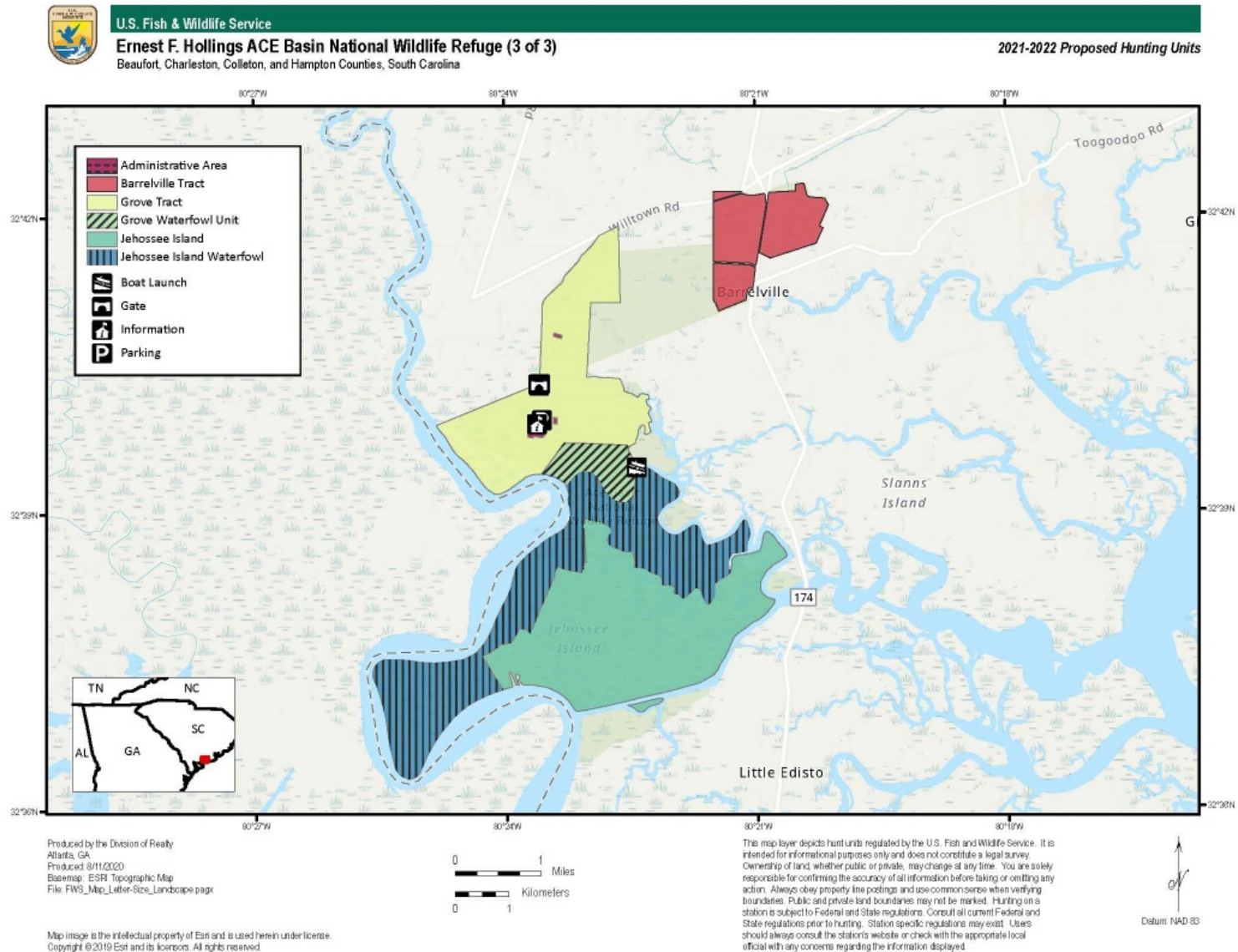


Figure 3. ACE Basin Hunt Units (3 of 3)



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

Limited youth wild turkey hunting for public recreational purposes will be allowed on designated areas of the refuge. Turkey hunting will be in accordance with state regulations. More restrictive refuge-specific conditions will apply for consistency with nearby State of South Carolina Wildlife Management Areas and their Youth Hunter programs. Due to limited acreage of huntable upland and forested wetlands, refuge-specific conditions that may apply include season length, bag limit and quotas on number of permitted youth hunters. High public demand and the large acreage of land required for turkey hunting will limit the number of hunters allowed in order to ensure a safe hunt. Initially, as recommended by the South Carolina Department of Natural Resources (SCDNR; S. Chappellear, personal communication, August 04, 2020) the youth hunt for wild turkey will occur on the Saturdays (to not conflict with school attendance by the youth hunters) in the month of April and be limited to 5 hunters per each Saturday hunt, for a total of 20-25 eligible youth hunters (depending each year on the number of Saturdays in April). Turkey hunting will be allowed for a maximum of five Saturdays in April by not more than five youth hunters and accompanying assistants, parents or guardians.

Hunting Access: Hunters and assistants, parents or guardians may access the hunt units on or after 5:00 am and must exit the hunt units not later than one hour after official sunset. Legal shooting hours are from one-half hour before official sunrise until one-half hour after official sunset.

Hunters may find legal parking in the visitor parking lots and at gated entrance roads, or along the refuge's boundary, to access the hunt units by foot or bicycle. Hunters are reminded not to block entrance road gates when parking so as to not impede access for law enforcement and for safety considerations. Access by watercraft is not permitted during the Youth Turkey Hunts.

C. Hunter Permit Requirements

Hunters age 16 and age 17 will be required to have a valid SCDNR hunting license. All youth hunters, regardless of age, must have and properly utilize SCDNR-issued turkey tags in accordance with South Carolina turkey hunting regulations. Hunters will also be required to have in their possession a refuge specific permit indicating their status as being drawn for the hunt. See "Hunter Permit Application and/or Registration Procedures" below.

D. Consultation and Coordination with the State

A provision of the National Wildlife Refuge System Improvement Act of 1997, and subsequent agency policy, is that the Service shall ensure timely and effective cooperation and collaboration with other state fish and game agencies and tribal governments during the course of acquiring and managing refuges. State wildlife management areas and national wildlife refuges cumulatively provide the foundation for the protection of species and contribute to the overall health and sustainment of fish and wildlife species in the State of South Carolina.

The hunt plan amendment to add a youth turkey hunt has been developed with the ongoing consultation and coordination with the State of South Carolina on formulating the plan and agreement for continued coordination afterwards.

The refuge reviewed the operations and regulations for neighboring state wildlife management areas to find consistency where possible. The refuge first reached out to the state on June 26, 2020, to discuss this Hunt Plan. Additionally, a scoping letter seeking input was sent October 1, 2020. We worked with the local state biologists and conservation officers early in the development of the plan. We have continued to consult and coordinate on specific aspects of the Hunt Plan. The state is in agreement with the refuge's Hunt Plan, as it will help meet state objectives. The SCDNR's "Comprehensive Wildlife Strategy" was developed to determine the wildlife conservation priorities of the agency and its partners after inviting representatives from partner groups, including the Service, to share their ideas with the planning team (Kohlsaet, et al., SCDNR 2005). This endeavor was updated with the publication of the SCDNR *State Wildlife Action Plan-2015* (SWAP; A. Smith, et al., SCDNR 2015). The SWAP addresses management strategies for 496 animals and 332 plants for a grand total of 828 species of conservation concern according to the SCDNR-State Wildlife Grants/State Wildlife Action Plan Coordinator (A. Smith, personal communication, September 03, 2020), with eastern wild turkey among those species. Accordingly, coordination on this hunt plan amendment with the SCDNR Wildlife Regional Coordinator, Regional Biologist and State Wildlife Action Plan Coordinator, beginning on June 26, 2020, resulted in multiple conversations and the continued sharing of recommendations and research data. The SCDNR Wildlife Regional Coordinator (S. Chappelle, personal communication, August 04, 2020) offered numerous recommendations and strategies relative to the timing of the youth turkey hunt, participant age and harvest considerations, as well as hunt unit strategies consistent with neighboring SCDNR Wildlife Management Area. SCDNR Wildlife Biologist and Assistant Big Game Program Coordinator (J. Cantrell, personal communication, August 06, 2020) provided current wild turkey research data from South Carolina lowcountry study sites relative to wild turkey management, turkey population studies, hunting activity and male turkey movements, hunting and nesting phenology influence, and wild turkey peak breeding chronology. Recommendations received from the State Wildlife Action Plan Coordinator (A. Smith, personal communication, September 03, 2020) included youth turkey hunt management considerations to minimize the likelihood of impacts to non-game SWAP species of concern. The refuge-specific regulations were outlined with the direct assistance of SCDNR staff. Disease management activities, including chronic wasting disease, will continue to be coordinated through the state. Established hunter training helps ensure hunters continue to use good judgment related to humaneness and animal welfare.

E. Law Enforcement

Enforcement of refuge violations normally associated with management of a national wildlife refuge is the responsibility of commissioned federal wildlife officers. Other officers, special agents, state game wardens, and the local Sheriff's Department often assist the South Carolina Lowcountry Refuges Complex full-time federal wildlife officers' law enforcement efforts on the EFH ACE Basin NWR.

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

- Refuge and hunt area boundaries are clearly posted;
- The refuge provides a brochure that shows hunt areas; and
- South Carolina Lowcountry Refuges Complex law enforcement staff randomly check hunters for compliance with Federal and state laws.

F. Funding and Staffing Requirements

Annual youth-only turkey hunt administration costs, including salary, equipment, law enforcement, brochures, collection of hunt data and analysis of biological information, etc., for EFH ACE Basin NWR totals approximately \$7,500. EFH ACE Basin NWR funds will be used to conduct youth turkey hunts on the Barrelville, Grove, Bonny Hall and Upper Combahee Units. Funding specifically for the youth-only turkey hunts has not been allocated, although funds are available through annual refuge management capability funding allocations. No offsetting revenues are collected for the youth turkey hunt.

Table 1. Funding and Staffing Requirements

Identifier	Cost
Staff: maintenance workers, wildlife refuge specialist and refuge manager	\$3,000
Maintain roads, parking lots, trails*	\$1,000
News releases, fact sheets, reports for Hunt Program	\$500
Maintain hunting signs	\$500
Law Enforcement	\$2,500
Total Annual Cost	\$7,500
<p><i>*Refuge trails and roads are maintained for a variety of activities. Costs shown are a percentage of total costs for trail/road maintenance on the refuge and are reflective of the percentage of trail/road use for hunting and fishing. Volunteers account for some maintenance hours and help to reduce overall cost of the program.</i></p>	

IV. Conduct of the Hunting Program

A. Hunter Permit Application, Selection, and/or Registration Procedures

Hunters will apply for the youth spring turkey hunt on a specific Office of Management and Budget (OMB) hunt application form available online at the EFH ACE Basin NWR website (<http://acebasin.fws.gov>) or by contacting the refuge office at: Ernest F. Hollings ACE Basin NWR, P.O. Box 848, Hollywood, South Carolina 29449, phone (843) 889-3084. No application fee is required of the applicant. Only one hunter may apply per form. Applicants who apply more than once for the Youth Turkey Hunt will be eligible for the drawing.

The choice of all Saturday hunts in April may be submitted per application; however, only one choice (single Saturday) will be awarded. Applications postmarked by a February 15 deadline to the above refuge address will be accepted through February 20. A maximum of 25 hunters (5 hunters per Saturday and up to 5 Saturdays, depending on the calendar year) will be selected at random. Successful applicants will be notified by March 1. Youth Turkey Hunt permits are non-transferable and are valid only for the individual whose name appears on the permit.

Selected hunters will be notified through the mail with a refuge specific permit indicating their status as being drawn for the hunt. Hunters will be required to have this letter in their possession in order to participate in the youth turkey hunt. Upon entering the refuge to hunt wild turkey, drawn youth hunters must possess their refuge letter and the current year Ernest F. Hollings ACE Basin NWR Hunting and Fishing Regulations brochure, which must have been signed by them indicating they understand and agree to abide by the hunting regulations.

B. Refuge-Specific Hunting Regulations

To ensure compatibility with refuge purposes and the mission of the NWRS, hunting must be conducted in accordance with state and Federal regulations, as supplemented by refuge-specific regulations and information sheets/brochures. Stipulations are detailed in the Hunting Compatibility Determination (Appendix A). Each hunt date will be limited to 5 youth hunters (age 17 or younger on the date of the hunt for which they apply) who will be selected by drawing.

The following youth turkey hunting procedures and regulations apply at EFH ACE Basin NWR:

1. Only shotguns will be allowed for use. The use of buckshot, slugs and all other weapons or methods are prohibited.
2. Hunting will be permitted within designated areas of the refuge, including the Grove Tract, Barrelville Tract, Bonny Hall Tract and Upper Combahee Unit . Hunt unit access for youth turkey hunts by watercraft is prohibited.
3. Hunters may be accompanied by one assistant, parent or guardian age 21 or older who may participate in the hunt (calling, etc.), but may not personally carry a firearm (except as authorized by a concealed carry permit), harvest nor attempt to harvest a turkey.
4. All youth hunters age 16 or 17 must have a valid South Carolina Department of Natural Resources Hunting License. Youth hunters age 16 or age 17 that have successfully completed a State of South Carolina-approved hunter education course may hunt without an assistant, parent or guardian. All other youth hunters (age 15 and younger) **must** be accompanied by an assistant, parent or guardian age 21 or older.
5. Hunters and assistants, parents or guardians may enter the hunt units on or after 5:00 am and must exit the hunt units not later than one hour after official sunset. Legal shooting hours are from one-half hour before official sunrise until one-half hour

after official sunset.

6. Youth Hunter Bag Limit: One male turkey.
7. Turkeys must be tagged with youth hunter's state-issued tags in accordance with state law.

C. Relevant State Regulations

The refuge conducts its hunting program within the framework of state and Federal regulations. Hunting at the refuge is at least as restrictive as the State of South Carolina and, in some cases, more restrictive. Additionally, the refuge coordinates with the state as needed to maintain regulations and programs that are consistent with the state's management programs. All relevant refuge-specific regulations are listed above in Section IV, subsection B.

D. Other Refuge Rules and Regulations for Hunting

50 CFR Part 32 outlines refuge-specific regulations; 50 CFR Part 26 outlines Public Entry and Use, including specific regulations for EFH ACE Basin NWR; and 50 CFR Part 27 outlines prohibited acts. The refuge hunt brochure will provide important information and requirements for hunting on the refuge. Seasons will be set annually and will be published in the refuge's hunt brochure for the specified year. Key requirements and prohibitions are listed.

- Fires on the refuge – open fires are not permitted on the refuge.
- Reporting Harvest – Hunters will be required to report their harvest to refuge staff.
- All-terrain vehicles (ATVs), utility terrain vehicles (UTVs), golf carts and any other off-road vehicles are prohibited.
- Use or possession of electronic game calls is prohibited.
- Destroying or cutting vegetation is prohibited.

V. Public Engagement

A. Outreach for Announcing and Publicizing the Hunting Program

The refuge maintains a mailing list of local newspapers for information bulletin purposes. Information bulletins to inform the public will be developed and submitted to appropriate local newspapers for the youth turkey hunt announcing the initial opening and other pertinent information. The refuge website contains similar information, as well as a printable general hunt brochure. In addition, information about the hunt will be available at EFH ACE Basin NWR headquarters.

B. Anticipated Public Reaction to the Hunting Program

Public reaction to the youth turkey hunts is anticipated to be highly favorable. Limited hunting was determined desirable at public meetings during the establishment of the refuge. Hunting of turkey is a common and acceptable form of local recreation and already exists in the surrounding area outside the refuge. Many of the current hunters that visit the refuge inquire as to when this species will be allowed to be hunted on the refuge. Hunting is an important economic and

recreational use of South Carolina's natural resources.

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

General information regarding hunting and other wildlife-dependent public uses can be obtained at the EFH ACE Basin NWR headquarters or by contacting the refuge office at: Ernest F. Hollings ACE Basin NWR, P.O. Box 848, Hollywood, South Carolina 29449, phone (843) 889-3084. Dates, forms, hunting unit directions, maps, applications and permit requirements about the hunt will be available on the station website at: <http://acebasin.fws.gov>.

VI. Compatibility Determination

Hunting and all associated program activities proposed in this plan are compatible with the purposes of the refuge. See attached Compatibility Determination: Ernest F. Hollings ACE Basin NWR Youth Turkey Hunt Compatibility Determination.

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School of Forestry and Natural Resources, University of Georgia.

Section B. Environmental Assessment

Ernest F. Hollings ACE National Wildlife Refuge
Environmental Assessment for 2021 Youth Turkey
Hunt Plan

August 2021

Environmental Assessment for Youth Turkey Hunting Plan Amendment

This Environmental Assessment (EA) is being prepared to evaluate the effects associated with this proposed action and to comply with the National Environmental Policy Act (NEPA) in accordance with Council on Environmental Quality regulations (40 CFR 1500-1509) and Department of the Interior (43 CFR 46; 516 DM 8) and U.S. Fish and Wildlife Service (550 FW 3) regulations and policies. NEPA requires examination of the effects of proposed actions on the natural and human environment.

Proposed Action

The U.S. Fish and Wildlife Service (Service) is proposing to expand hunting opportunities on the Ernest F. Hollings ACE Basin National Wildlife Refuge (NWR, refuge) to include “Youth-Only” turkey hunting in accordance with the refuge’s Comprehensive Conservation Plan. Spring season (April) hunting (YOUTH ONLY) of wild turkey will be permitted under big game hunting on the Barrelville Tract, Grove Tract, Bonny Hall Tract, and Upper Combahee Unit where big game hunting of white-tailed deer and feral hog currently is permitted in the fall season of the year. A total of 5,300 acres will be opened to “Youth-Only” turkey hunts through a free lottery application process. This expanded hunting opportunity will occur on approximately 44% of the refuge acreage.

A proposed action may evolve during the NEPA process as the agency refines its proposal and gathers feedback from the public, tribes, and other agencies. Therefore, the final proposed action may be different from the original. The proposed action will be finalized at the conclusion of the public comment period for the EA.

Background

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

Recognizing the importance of the area for wetland and habitat protection, migratory bird benefits and conservation opportunities served by the lands and waters of the refuge, the Service administratively designated ACE Basin NWR in 1990 under the Emergency Wetlands Resources Act of 1986, the Fish and Wildlife Act of 1956, and the Migratory Bird Conservation Act of 1929, thus outlining the primary

purposes of these lands and waters:

"...the conservation of the wetlands of the Nation in order to maintain the public benefits they provide and to help fulfill international obligations contained in various migratory bird treaties and conventions..." 16 U.S.C. 3901(b) (Emergency Wetlands Resources Act of 1986)

"... for the development, advancement, management, conservation, and protection of fish and wildlife resources ..." 16 U.S.C. 742f(a)(4) (Fish and Wildlife Act of 1956)

"... for the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition of servitude ..." 16 U.S.C. 742f(b)(1) (Fish and Wildlife Act of 1956)

"... for use as an inviolate sanctuary, or for any other management purpose, for migratory birds." 16 U.S.C. § 715d (Migratory Bird Conservation Act of 1929)

"...to conserve and protect migratory birds...and other species of wildlife that are listed...as endangered species or threatened species and to restore or develop adequate wildlife habitat." 16 U.S.C. § 715i (Migratory Bird Conservation Act of 1929)

The refuge was renamed the Ernest F. Hollings ACE Basin NWR (EFH ACE Basin NWR) on May 16, 2005, in honor of South Carolina's retired U.S. Senator Ernest F. Hollings.

The mission of the NWRS, as outlined by the National Wildlife Refuge System Administration Act, as amended by the National Wildlife Refuge System Improvement Act (16 U.S.C. 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."

Additionally, the NWRSAA mandates the Secretary of the Interior in administering the NWRS (16 U.S.C. 668dd(a)(4)) to:

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

The ACE Basin NWR provides resources for migratory birds, endangered species and compatible public uses. Through a motivated, experienced, and well-trained staff and volunteers, and with active participation of partners, the refuge will work to maintain its unique ecological landscape features and be an active partner to achieve the goals and objectives of the ACE Basin Project, originally a 350,000-acre

estuary/ecosystem conservation partnership, now expanded to a 1.2 million acre focus area between state, Federal, corporate, private landowners and non-governmental organizations. Through team development, the refuge will strive to be a model of excellence in natural resource management and celebrate our achievements with the public and our partners. The management of wildlife and habitat on the refuge will be an adaptive, science-based, comprehensive endeavor that links biological needs with resource management. The refuge will actively seek to expand partnerships to further conservation stewardship and protection of natural resources. We will actively seek research to support the informational needs of the refuge and be willing to adapt and respond to change, including shifts in climate. We will seek and develop appropriate and compatible public use opportunities and enhance awareness and appreciation of the refuge and the NWRS. Through outreach and public participation, the refuge will share with our neighboring communities within the ACE Basin Project area the values of the NWRS and a fish and wildlife heritage for all Americans.

The refuge strives to preserve a nationally significant wildlife ecosystem that will provide a complex of habitats for wintering waterfowl, endangered species, other migratory and resident birds, mammals, reptiles, amphibians, and plants. The refuge acquisition boundary currently includes approximately 18,000 acres.

The refuge is composed of two major units, together comprising approximately 12,077 acres. The Edisto Unit consists of 7,396 acres and is located approximately 20 miles southwest of the city of Charleston, SC, in Charleston County. The Combahee Units consists of 4,681 acres in Beaufort, Colleton and Hampton Counties and is located approximately 20-25 miles northwest of the city of Beaufort, SC.

The refuge's two units are drained by two significant river systems: the Combahee-Salkahatchie, which flows through the Combahee Unit, and the South Edisto, which flows adjacent to the Edisto Unit. Many broad, low-gradient interior drains are present as either extension of tidal streams and rivers or flooded bays and swales. Within this diverse drainage system, the refuge contains exceptionally diverse wildlife habitat, including high-quality forested wetlands, forested uplands, brackish natural marsh, freshwater natural marsh, managed marshes or wetland management units, marsh islands, and pristine estuarine rivers.

Purpose and Need for the Proposed Action

In February 1993, a sport hunting decision document package was approved for opening the ACE Basin NWR to big game hunting (white-tailed deer only), upland/small game hunting (in general), and migratory bird hunting (goose and duck only). Pertinent, subsequent hunt plan amendments have included the refuge name change to the EFH ACE Basin NWR, the addition of hunting areas resulting from refuge land acquisition, and the adding of feral hog to big game hunting. The purpose of the current proposed action is to amend the existing hunting plan for the EFH ACE Basin NWR to add wild turkey to big game hunting (Youth-Only Hunting).

The need is to meet the requirements of the NWRSIA; evaluate compatibility of proposed uses; protect biological integrity, diversity, and environmental health; and implement the Comprehensive Conservation Plan and step-down management plans of the refuge. The need is also to align, as much as possible and where compatible with refuge purposes and management, with state hunting regulations through effective

coordination with state fish and wildlife agencies, Native American Tribes, adjacent landowners, and the general public, while ensuring the biological integrity, diversity, and environmental health of the NWRS are maintained [16 U.S. Code §668dd(a)(4)]. Further, the need is also to meet the Service’s priorities and mandates; implement the Service’s Secretarial Order (SO) 3347 *Conservation Stewardship and Outdoor Recreation* and SO 3356 *Hunting, Fishing, Recreational Shooting, and Wildlife Conservation Opportunities and Coordination with States, Tribes, and Territories* by expanding hunting opportunities and better aligning Service regulations with state regulations.

Alternatives

Alternative A – No Action Alternative

Under this alternative, only white-tailed deer, feral hog, goose, coot, teal and duck hunting will continue to be allowed on most of the refuge. Compatible wildlife-dependent public recreational opportunities will be limited to existing levels.

Alternative B – Limited Youth Spring Turkey Hunting – Preferred Action Alternative

The refuge has prepared a draft hunt plan, which is presented in this document as the Preferred Action Alternative. Under the Preferred Action Alternative, spring turkey hunting (Youth-Only Hunting) will occur in two hunting units on the refuge: The Grove Tract, Barrelville Tract, the Bonny Hall Tract, and Upper Combahee Unit. Limited wild turkey hunting for public recreational purposes, limited to Youth Hunters, will be allowed on designated areas of the refuge. Turkey hunting will be in accordance with state regulations. More restrictive refuge-specific regulations will apply for consistency with nearby State of South Carolina Wildlife Management Areas and their Youth Hunter programs and also due to limited acreage of huntable upland and forested wetlands. Refuge-specific regulations that may apply include season length, bag limit, and quotas on number of permitted youth hunters. High public demand and the large acreage of land required for turkey hunting will limit the number of hunters allowed in order to ensure a safe hunt. Initially, as recommended by the South Carolina Department of Natural Resources (SCDNR; S. Chappelle, personal communication, August 04, 2020) the Youth Hunt for wild turkey will occur on the Saturdays (to not conflict with school attendance by the youth hunters) in the month of April and be limited to 5 hunters per each Saturday hunt, for a total of 20-25 eligible youth hunters (depending each year on the number of Saturdays in April). The youth hunters will be drawn by the Office of Management and Budget (OMB)-approved lottery application at no charge to the applicants. The youth applicants must be age 17 or younger on the date of the hunt for which they are successfully drawn. Hunters may be accompanied by one assistant, parent or guardian age 21 or older who may participate in the hunt (calling, etc.), but may not personally carry a firearm (except as authorized by a concealed carry permit), harvest nor attempt to harvest a turkey. All youth hunters age 16 or 17 must have a valid SCDNR Hunting License. Youth hunters age 16 or age 17 that have successfully completed a State of South Carolina-approved hunter education course may hunt without an assistant, parent or guardian. All other youth hunters (age 15 and younger) must be accompanied by an assistant, parent or guardian age 21 or older.

To ensure compatibility with refuge purposes and the mission of the NWRS, hunting must be conducted in accordance with state and Federal regulations, as supplemented by refuge-specific regulations and information sheets/brochures.

The following refuge-specific youth turkey hunting procedures and regulations apply at EFH ACE Basin NWR and will be published in the Federal Register as part of the 2021-2022 Refuge-Specific Hunting and Sport Fishing Regulations:

1. Only shotguns will be allowed for use. The use of buckshot, slugs and all other weapons or methods are prohibited.
2. Hunting will be permitted within designated areas of the refuge including the Grove Tract, Barrelville Tract, Bonny Hall Tract, and Upper Combahee Unit. Watercraft access to and within the hunt units where turkey hunting occurs will be prohibited.
3. Hunters may be accompanied by one assistant, parent or guardian age 21 or older who may participate in the hunt (calling, etc.), but may not personally carry a firearm (except as authorized by a concealed carry permit), harvest nor attempt to harvest a turkey.
4. All youth hunters age 16 or 17 must have a valid South Carolina Department of Natural Resources Hunting License. Youth hunters age 16 or age 17 that have successfully completed a State of South Carolina-approved hunter education course may hunt without an assistant, parent or guardian. All other youth hunters (age 15 and younger) must be accompanied by an assistant, parent or guardian age 21 or older.
5. Hunters and assistants, parents or guardians may enter the hunt units on or after 5:00 am and must exit the hunt units not later than one hour after official sunset. Legal shooting hours are from one-half hour before official sunrise until one-half hour after official sunset.
6. Youth Hunter Bag Limit: One male turkey.
7. Turkeys must be tagged with youth hunter's state-issued tags in accordance with state law.

Measures to Avoid Conflicts:

The Youth-Only turkey hunts will be conducted after the departure of the majority of wintering migratory waterfowl; therefore, minimal disturbance to migratory waterfowl is anticipated. Use of lead shot is allowed for turkey hunting but, considering the separation between the predominately upland hunt and wetland habitat, the ingestion of lead shot by migratory birds should be minimal. The Youth-Only turkey hunt will occur well after the existing white-tailed deer and feral hog primitive weapons hunt in the fall of the year and therefore should pose no conflict. Fishing opportunities on the refuge coincide with the Youth Turkey Hunt but occur in different habitats so should pose little to no impact on one another. The walk/bicycle-in youth turkey hunters will use existing fire breaks and roads for access. No soil compaction or vegetation disturbance is expected. No impacts to endangered species or archaeological or cultural resources is anticipated as a result of the Youth-Only turkey hunt. Parking will occur in established parking areas and temporary sites already designated along existing fire lines and roads.

Public (Youth Only) turkey hunting will be very limited in scope and will, therefore, have minimal impact on resident turkeys, which are abundant on the refuge hunt units. Only five hunters will be allowed to hunt at any given time due to the limited space and the goal to minimize impact to turkeys during peak breeding periods (Wakefield et al. 2019, Speake 1991), and those hunts will be restricted to only occur on Saturdays in the month of April.

Under the Preferred Action Alternative, limited turkey hunting will be implemented in the spring, under

refuge and state regulations: restricting spring turkey hunting to a maximum of five Saturdays in April during the state-approved spring turkey season; limiting hunter participation to youth hunters ages 17 and below; limiting the areas opened to spring turkey hunting; and limiting hunter numbers through lottery draws. This alternative provides a recreational experience to the general public while maintaining a sustainable eastern wild turkey population. The estimated cost to operate a limited spring turkey hunt program is \$7,500 annually. Under this alternative, the refuge law enforcement officer and/or SCDNR wardens will monitor the hunt and will conduct license, bag limit, and access compliance checks. Refuge staff and trained volunteers will administer the hunt and collect data on all harvested game.

This alternative offers increased compatible wildlife-dependent public recreation opportunities (public hunting) and fulfills the Service's mandate under the NWRSA.

Affected Environment and Environmental Consequences

This section is organized by Affected Environment categories and for each affected resource discusses both (1) the existing environmental and socioeconomic baseline in the action area for each resource and (2) the effects and impacts of the proposed action and any alternatives on each resource. The effects and impacts of the proposed action considered here are changes to the human environment, whether adverse or beneficial, that are reasonably foreseeable and have a reasonably close causal relationship to the proposed action or alternatives. This EA includes the written analyses of the environmental consequences on a resource only when the impacts on that resource could be more than negligible and therefore considered an "affected resource." Any resources that will not be more than negligibly impacted by the action have been dismissed from further analyses.

The EFH ACE Basin NWR is located within the 1.2 million-acre Ashepoo–Combahee–Edisto (ACE) Basin Project. The ACE Basin Project is widely recognized as a unique and critical environment marked by a wide diversity of wildlife and plants and representing the largest estuarine resource in South Carolina. The refuge is a partner in the ACE Basin Task Force, a coalition consisting of the Service, SCDNR, Ducks Unlimited, The Nature Conservancy, Nemours Wildlife Foundation, The Open Land Trust, The Edisto Island Open Land Trust, The National Audubon Society, The Beaufort County Open Land Trust and private landowners of the ACE Basin Project.

The refuge is composed of two major units, together comprising approximately 12,077 acres. The Edisto Unit consists of 7,396 acres and is located approximately 20 miles southwest of the city of Charleston, SC, in Charleston County. The Combahee Units consists of 4,681 acres in Beaufort, Colleton and Hampton Counties and is located approximately 20-25 miles northwest of the city of Beaufort, SC. The lands adjacent to the refuge are primarily large, natural landscapes in private ownership and most often under conservation easement.

The refuge's two major units (Edisto Unit and Combahee Unit) are further broken down into sub-units with the Edisto Unit containing the Barrelville and Grove turkey hunt sub-units, and the Combahee Unit containing the Bonny Hall and Upper Combahee turkey hunt sub-units. The refuge has been separated into 9 management units or compartments which range in size from 350 to 3,355 acres. Compartment

boundaries are established along geographic features that can be easily identified on the ground (e.g., rivers, roads, trails).

The refuge is drained by two significant river systems: the Combahee-Salkahatchie, which flows through the Combahee unit, and the South Edisto, which flows adjacent to the Edisto unit. Many broad, low-gradient interior drains are present as either extensions of tidal streams and rivers or flooded bays and swales. The refuge's mean tidal amplitude ranges from around 2 feet on the upper reaches of the Combahee River to 5 feet on the lower refuge area along the South Edisto River. Salinities range from fresh water in the upper reaches to 6-7 ppt on the lower reaches, with season deviations occurring depending on precipitation amounts. The major vegetative communities on the refuge include natural marshes, managed marshes (wetland management units), forested wetlands, and upland forest. General characteristics of each community and associated wildlife are as follows:

Natural Marshes

Dominant plants in freshwater marshes include giant cutgrass, common cattail, northern wild rice, pickerel weed, arrowheads, smartweeds, various rushes, spikerushes, and sedges. Brackish marshes are dominated by big cordgrass, narrow-leaved cattail, tropical cattail, black needlerush, and saltmarsh bulrush, together with soft-stem, American and Olney bulrushes.

Managed Marshes (Wetland Management Units)

Management of naturally occurring plant communities within these wetland management units provides cover and food resources required to meet the behavioral and nutritional needs of waterfowl, as well as a broad spectrum of other wildlife species. In freshwater units managed by spring and summer drawdown, waterfowl food plants include wild millets, panic grasses, smartweeds, and flat sedges. In freshwater units managed as semi-permanently flooded marshes, waterfowl food or cover plants include watershield, white waterlily, and pondweeds. Important waterfowl food plants encouraged in brackish units include widgeongrass, saltmarsh bulrush, and dwarf spikerush.

Grasslands

Grasslands occur primarily in the Grove and Bonny Hall sub-units, with the Grove containing the majority in the form of previously farmed pastureland that has been managed to support naturally occurring warm-season grasses. Species composition in these grasslands typically include broomsedge, big bluestem, switchgrass, foxtail grass, giant plume grass, vasey grass, and eastern gamma grass.

Forested Wetlands

Forested wetlands occur primarily in the upper portion of the floodplains of the Combahee unit. The cypress-tupelo swamp forest occupies deep sloughs, margins of oxbows, and wet flats, and is flooded for at least some portion of the year. Dominant vegetation includes bald cypress, water tupelo, swamp tupelo, green ash, red maple, wax myrtle, and titi. The bottomland hardwood forest type is drier than the cypress-tupelo forest and is inundated for a considerably shorter period. This forest type supports water oak, laurel oak, overcup oak, water hickory, sweet gum, and green ash, along with a scattering of pond pine, spruce pine, loblolly pine, and cypress.

Upland Forest

The primary vegetative types are pine and pine-hardwood. Past logging and agricultural practices, combined with present day forestry management, has resulted in monotypic loblolly pine plantations in many areas. Pine-hardwood forests are relatively common and occur on both wet and dry sites. Wet areas

are typically vegetated with loblolly pine and can include white oak, sweet gum, yellow poplar, and tupelo. Drier sites can support primarily longleaf pine in association with blackjack, turkey, and shrubby post oak. The upland hardwood type is much less common than the pine and pine-hardwood. These mixed hardwoods generally include oaks, (white, live, turkey, blackjack), hickories (mockernut, pignut), and an assortment of broadleaf evergreen (hollies, bays).

The resources in Table 1 below either (1) do not exist within the project area or (2) will either not be affected or only negligibly affected by the proposed action.

TABLE 1. POTENTIAL FOR ADVERSE IMPACTS FROM PROPOSED ACTION AND ALTERNATIVES

Resources	Not Applicable: Resource does not exist in project area	No/Negligible Impacts: Exists but no or negligible impacts	Greater than Negligible Impacts: Impacts analyzed in this EA
Species to Be Hunted/Fished	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Non-Target Wildlife and Aquatic Species	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Threatened and Endangered Species and Other Special Status Species	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Habitat and Vegetation (including vegetation of special management concern)	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Geology and Soils	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Air Quality	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Water Quality	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Floodplains	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Wilderness	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Visitor Use and Experience	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Cultural Resources	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Refuge Management and Operations	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Socioeconomics	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Tables 2-6 provide, for each resource of the refuge:

1. A brief description of the relevant general features of the affected environment;
2. A description of relevant environmental trends and planned actions;
3. A brief description of the affected resources in the proposed action area;
4. Impacts of the proposed action and any alternatives on those resources.

TABLE 2. AFFECTED NATURAL RESOURCES AND ANTICIPATED IMPACTS OF THE PROPOSED ACTION AND ANY ALTERNATIVES

Eastern Wild Turkey (*Meleagris gallopavo*)

Affected Environment Description

The eastern wild turkey population in the low country of South Carolina is down from recent high levels, but stable (South Carolina Department of Natural Resources. 2020). The SCDNR has reduced the general harvest limit throughout the state from five gobblers to three gobblers during the spring hunting season and adjusted the season dates to lessen harvest impacts during the period of peak breeding (South Carolina Department of Natural Resources. 2020). Refuge wild turkey populations mirror, or likely exceed, surrounding area wild turkey populations in light of the absence of turkey hunting on the refuge.

Environmental Trends and Planned Actions Description

According to the SCDNR 2019 Turkey Hunter Survey, an estimated 15,783 adult gobblers and 1,591 jakes were harvested for a statewide total of 17,374 turkeys during the 2019 spring season. This figure represents a 3.1% decrease in harvest from 2018 (17,939). Legislative changes that went into effect in 2016 provided an earlier starting date and increased number of days in the turkey season in 34 of 46 South Carolina counties. The effect of this season change was a 50% increase in opportunity (days) for the majority of the state. Although the harvest was up a combined 24% the first two years of the new framework, it has been down 10% the last two years.

This apparent up and down cycle related to harvest under the new season framework may be explained in two ways. First, perhaps turkey numbers initially increased when the new season went into place leading to an increase in harvest because more birds were available for harvest on the landscape. Alternatively, more hunter effort associated with the new framework may have increased the harvest regardless of the number of turkeys on the landscape.

We find that turkey production, as measured during the Summer Turkey Survey which has been conducted annually since 1982, has been poor since the new season began. In fact, recruitment during the last 5 years has been the lowest of any 5-year period since the survey began. Typically, low recruitment is followed by decreasing harvest and good recruitment is followed by increasing harvest. Based on this analysis, the initial trend of higher harvest under the new season does not fit with the notion of a recent increase in the turkey population.

On the other hand, hunter effort (days/hunted) has increased an average of 23% under the new season framework compared to the years leading up to the new framework. Again, the new season increased opportunity (days) for hunters in 34 of 46 counties by 50%, and this data clearly indicates that hunters took advantage of the additional opportunity. With turkey production being low recently, it appears that increased effort rather than increased turkey numbers was more influential in the initial increase in harvest that accompanied the new season. This is supported by the fact that most recently, in spite of increased hunting effort, the harvest has declined. In any event, legislation passed in 2019 establishes a completely new season framework which will likely bring about new harvest trends as well.

Number of Turkey Hunters

Even though all individuals receiving a set of Turkey Transportation Tags were licensed to hunt turkeys, only 60% indicated that they actually hunted turkeys. Based on this figure, approximately 50,772 hunters

participated in the 2018 state spring turkey season, a 3.2% decrease from 2017 (52,429). Counties with the highest estimates for individual hunters include, Fairfield, Union, Newberry, Orangeburg, and Berkeley.

Hunter Effort

Hunter effort was measured in days, with one day being defined as any portion of the day spent afield. Turkey hunters averaged approximately 5.9 days afield during the 2019 season. Successful hunters averaged significantly more days afield (7.3 days) than unsuccessful hunters (4.8 days). Extrapolating to the entire population of turkey hunters yields a figure of 258,445 total days of spring gobbler hunting, down less than 1% from 2018 (258,786 days).

Hunting Success

For determination of hunting success, only those individuals that actually hunted turkeys were included in the analysis and, similarly, success was defined as harvesting at least one turkey. Overall hunting success in 2018 was 23%. Unlike deer hunting, which typically has high success, turkey hunting can be an inherently unsuccessful endeavor, relatively speaking. Curiously though, the proportion of hunters who take two gobblers was slightly greater than those who take one, indicating that successful hunters had essentially the same chance of taking two birds as they did one bird.

The statewide bag limit in South Carolina is three gobblers, but most successful hunters harvest only one or two birds. However, it is interesting to note the relative contribution to the total harvest of turkeys by the few hunters that harvest three birds; while the percentage of hunters taking 3 birds was only 2.3, this small percentage of hunters harvested an estimated 28% of the total birds taken in the state.

Anticipated Impacts

Alternative A: No Action Alternative

Estimated Hunter Numbers: 0

Estimated Take: 0

Existing big game hunting for white-tailed deer and feral hogs during the fall season of the year and year-round fishing area activities result in negligible impact to eastern wild turkey populations on the refuge. Minimal, short-term impacts to habitat and vegetation, threatened and endangered species, non-game wildlife and visitor use and experience remains the same.

Alternative B: Limited Youth Spring Turkey Hunting – Preferred Action Alternative

Estimated Hunter Numbers: 20-25

Estimated Take: 10-15

Youth turkey hunting activity and harvest will have minimal negative effects on the refuge turkey population and surrounding area. Existing big game hunting for white-tailed deer and feral hogs during the fall season of the year and year-round fishing area activities result in negligible impact to eastern wild turkey populations on the refuge. In combination, all hunting and fishing activity on the refuge

causes short-term disturbance to targeted game and non-game wildlife species, habitat and vegetation, endangered and threatened species, and visitor use and experience. Public (Youth) recreation experience from the limited opportunity to hunt wild turkey on the refuge enhances existing visitor use and experience.

Non-Target Wildlife and Aquatic Species

Affected Environment Description

A total of 291 avian species have been observed with varying degrees of regularity on the refuge. Fifty-five of these are accidentals, having been reported only once or twice. A total of 96 of these bird species are known to nest on the refuge. Migratory bird management is a refuge priority, with emphasis on waterfowl within wetland units. Approximately 20 species of waterfowl winter at the refuge, with peaks averaging 13,650 birds in January and February. The major species include pintails, wood ducks, green-winged teal, ring-necked ducks, mallards, blue-winged teal, shovelers, widgeon, and gadwall. Wood ducks and a few mottled ducks are the only resident nesting ducks. Other priority species within wetland management units include herons, egrets, ibis, rails, bitterns, other marsh and wading birds, and shorebirds.

The refuge is home to most mammalian species common to South Carolina. At least 36 species of mammals occur on the refuge. Some of the most obvious of these are white-tailed deer, raccoon, feral hog, river otter, opossum, bobcat, gray fox, beaver, cottontail and marsh rabbit, gray and fox squirrel, and an assortment of small rodents. Many of these species utilize both upland and wetland habitats.

The multiple range of habitats, from forested upland and wetland to freshwater and tidal marsh, provide ample habitat for a diverse group of amphibians and reptiles. Approximately 109 species of amphibians and reptiles, indigenous to this part of South Carolina, occur on or are suspected to occur on the refuge.

Environmental Trends and Planned Actions Description

Climate change refers to the increasing changes in the measures (e.g., precipitation, temperature, wind patterns) of climate over a long period of time. [U.S. Geological Service 2019]. There is no definitive information on how exactly changes in climate will impact species populations. Addressing uncertainty in the environment is critical to being able to anticipate and adapt to changes that may occur in the environment. For the Department of the Interior (DOI), this will be reflected in how we manage access and exploitation of natural resources, protect and conserve our natural heritage, and provide for the conservation of the environment for future generations while avoiding undue restrictions on the current generation. The U.S. Geological Survey, as the science advisory body for the DOI, will characterize the ranges of possible future change trajectories and will provide guidance on how to estimate potential ecosystem impacts, support resource management, assist in hazards characterization and mitigation, and assist land use planning (Reilly 2019).

There is a concern about the bioavailability of spent lead ammunition (bullets) and sinkers on the environment, endangered and threatened species, birds (especially raptors), humans and other mammals, or other fish and wildlife susceptible to biomagnification. Lead shot and bullet fragments found in animal carcasses and gut piles are the most likely source of lead exposure. (Kelly et al. 2011). Many

hunters do not realize that the carcass or gut pile they leave in the field usually contains lead bullet fragments. Research continues on the effects of lead ammunition and the fragments it can deposit in killed game. Avian predators and scavengers can be susceptible to lead poisoning when they ingest lead fragments or pellets in the tissues of animals killed or wounded by lead ammunition. Lead poison may weaken raptors and increase mortality rate by leaving them unable to hunt or more susceptible to vehicles or power line accidents (Kramer and Redig 1997). In a study of bald eagles and golden eagles admitted to the Raptor Rehabilitation Program, College of Veterinary Medicine, at Washington State University from 1991 to 2008 it was found that 48% of bald eagles and 62% of golden eagles tested had blood lead levels considered toxic by current standards. Of the bald and golden eagles with toxic lead levels, 91% (bald) and 58% (golden), were admitted to the rehabilitation facility after the end of the general deer and elk hunting seasons in December (Stauber 2010).

Additionally, recent studies have found that wildlife hunted with lead ammunition can increase risks to human health due to the ingestion of lead (Hunt et. al 2009). While no lead poisoning of humans has been documented from ingestion of wild game, some experts, including the Center for Disease Control, have recommended the use of non-toxic bullets when hunting to avoid lead exposure and that pregnant women and children under 6 should not consume wild-game shot with lead ammunition. (Streater 2009). This recommendation comes after a study done in North Dakota found that those who ate wild game had significantly higher levels of lead in their blood than those who did not (Iqbal et. al 2009).

Anticipated Impacts

Alternative A: No Action Alternative

No additional impacts.

Alternative B: Limited Youth Spring Turkey Hunting – Preferred Action Alternative

The refuge has become increasingly more important as a resting place for migratory birds. Under this alternative, the refuge will open portions of the refuge to limited hunting of wild turkey, however 56% of the refuge will remain closed to any additional turkey hunting. Negligible impacts on resident wildlife, migratory birds and non-hunted wildlife are expected by allowing hunting on the refuge because of the regulatory process for harvest management in place within the Service, the setting of hunting seasons largely outside of the breeding seasons of resident and migratory wildlife, the ability of individual refuge hunt programs to adapt refuge-specific hunting regulations to changing local conditions, and the wide geographic separation of individual refuges. Minimal and short-term disturbance to non-target wildlife species may occur during spring nesting activities. This alternative mitigates this impact by limiting the number of hunters, hours of access, hunt days and available hunt units.

Threatened and Endangered Species and Other Special Status Species

Affected Environment Description

Wood stork (*Mycteria americana*) in the area primarily forage in shallow water sites throughout the summer, but year-round observations have been recorded. No known nesting of wood stork occurs on the refuge.

The bald eagle is a regular visitor and sometimes nester on the refuge from October through April. They can be observed frequently hunting and foraging in small numbers of one to four in and around refuge shallow open-water wetland management units. In recent years, there has been an average of at least a half dozen active eagle nests located on or adjacent to refuge property.

Currently black rail are known to exist within the southeastern quadrant of the J2 managed tidal impoundment on Jehossee Island. Active cooperative research efforts between the refuge, Charleston FWS-ES staff, and the SCDNR are seeking to understand the habitat preferences of black rail and enhance management prescriptions accordingly.

See Appendix C for a full list of species and impact statements.

Environmental Trends and Planned Actions Description

Refer to trends and planned actions for non-targeted wildlife and aquatic species.

Anticipated Impacts

Alternative A: No Action Alternative

No impacts as the youth turkey hunt will not be conducted.

Alternative B: Limited Youth Spring Turkey Hunting – Preferred Action Alternative

A consultation pursuant to Section 7 of the Endangered Species Act will be conducted as part of this EA and the Hunt Plan. Impacts to wood stork, bald eagle, and black rail is expected to be negligible as the youth hunt will not be allowed within or immediately adjacent to areas during times of nesting and foraging. The Youth turkey hunt will be limited to Saturdays in April with a limited draw-quota. The increase in hunters using toxic shot while turkey hunting will be very small (<1%). Because we require hunters to remove gut piles from the refuge when they have a successful take of a hunted species, the additional amount of lead in the environment from the expanded hunting opportunity should only have a negligible cumulative impact on the accumulation of lead in the environment. See Appendix C for detailed impact statements.

Habitat and Vegetation (including vegetation of special management concern)

Affected Environment Description

See habitat description in Affected Resources.

Environmental Trends and Planned Actions Description

Other than for invasive species where control and elimination are the target, hunting programs are designed to be sustainable. The Service will continue conservation management activities to continue to protect and manage habitats and vegetation on the refuge. While habitats and vegetation on the refuge will be expected to continue to be impacted by outside factors, including human population increases and associated development patterns, climate change, and invasive species, the Service is unaware of

any other adverse environmental trends or planned actions that will adversely impact habitat and vegetation.

Anticipated Impacts

Alternative A: No Action Alternative

No additional impacts to current use.

Alternative B: Limited Youth Spring Turkey Hunting – Preferred Action Alternative

Negligible impacts associated with youth hunting activity are expected. Research has shown that primarily travel within hunt units occurs on roads, trails and firebreaks, thus causing negligible disturbance to vegetation and habitat. Hunts will be limited by hunting days, hours, numbers of hunters and access (foot or bicycle).

TABLE 3. AFFECTED VISITOR USE AND EXPERIENCE AND ANTICIPATED IMPACTS OF THE PROPOSED ACTION AND ANY ALTERNATIVES

Visitor Use and Experiences
<p><i>Affected Environment Description</i></p> <p>All units of the refuge are open year-round from sunrise to sunset. Extra hours of access are permitted for certain hunting activities. A limited amount of refuge roadways are available for vehicular travel. The refuge receives visitation for a multitude of reasons, with bird watching among the most common uses.</p>
<p><i>Environmental Trends and Planned Actions Description</i></p> <p>According to the July 01, 2019, population estimate by the U.S. Census Bureau, South Carolina currently has approximately 5.2 million residents. This represents an 11% rate of growth since 2010. Current population growth levels meet or exceed this rate. Fortunately, the ACE Basin Project Area now has in excess of 300,000 acres of environmentally protected lands and waters around the refuge. Management can do nothing to stem this population increase trend, but refuges and other tracts of habitats will become even more important as repositories of biodiversity. Development and population growth are the events which are most likely to affect resident and migratory wildlife, threatened and endangered species and habitat, and wetlands and vegetation.</p>
<p><i>Anticipated Impacts</i></p> <p>Alternative A: No Action Alternative</p> <p>A youth turkey hunt will not be implemented. Opportunities to create additional outdoor recreation experiences by adding new access will be lost. In addition, the refuge’s ability to connect with certain segments of the public will potentially be diminished since hunting for a popular game species will not be permitted. Hunters will pursue hunting opportunities off-refuge and thus the refuge’s ability to reach those members of the public and promote natural resources conservation, environmental education and natural resources stewardship may be more limited.</p> <p>Alternative B: Limited Youth Spring Turkey Hunting – Preferred Action Alternative</p> <p>An increased public recreation opportunity for youth turkey hunting will be provided. Negligible adverse effects on other public uses are expected due to limited hunt days, hours, hunters, and access.</p>
Environmental Justice
<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>

Affected Environment Description

Minority or low-income populations are located within the four home counties of the refuge: Charleston, Colleton, Beaufort, and Hampton. Colleton and Hampton counties have a higher percentage of families below the poverty line (17% and 15%, respectively) compared to the U.S. (10.1%) and South Carolina (11.7%) averages (US Department of Commerce 2020). Charleston and Beaufort counties have lower percentage of families below the poverty line at 9.5% and 7%, respectively. Compared to the 39% of the U.S. population and 36.3% of the South Carolina population represented by minorities, Charleston County (36%) and Beaufort County (32%) is more similar to the U.S. overall, while Colleton County (43%) and Hampton County (59%) have a higher percentage than the U.S. population and state population. (US Department of Commerce 2020).

The 6 counties within 25 miles of the refuge vary widely, ranging between 9% and 17% of families below the poverty line and with minority populations ranging between 32% and 59% (US Department of Commerce 2020).

Environmental Trends and Planned Actions Description

The Service is unaware of any other adverse environmental trends or planned actions that will adversely impact environmental justice on the refuge.

Anticipated Impacts

Alternative A and B:

No anticipated impacts have been identified by this environmental assessment.

Monitoring

Harvest records, including numbers of animals harvested, and biological data are annually recorded by refuge staff. Additionally, refuge staff routinely perform formal and informal species and habitat inventory and monitoring to maintain an understanding of the status of refuge fauna and flora and to contribute to adaptive management strategies. Disease management activities, including chronic wasting disease, will continue to be coordinated through the state. Established hunter training education helps ensure hunters continue to use good judgment related to humaneness and animal welfare.

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 – No Action Alternative:

As described above, the no action alternative will fail to provide additional wildlife-dependent recreation

opportunities (youth turkey hunting) and will minimally increase or have no effect on the refuge and adjoining area wild turkey populations.

Alternative B – Limited Youth Spring Turkey Hunting – Preferred Action

As described above, the proposed action alternative helps meet the purpose and needs of the Service by providing additional wildlife-dependent recreation opportunities (youth turkey hunt). The proposed action alternative's impacts to wild turkey populations, other wildlife, threatened and endangered species, habitat and vegetation, and visitor use and experience is negligible.

List of Sources, Agencies and Persons Consulted

SCDNR, Service

List of Preparers

Mark A. Purcell, Wildlife Refuge Manager, Ernest F. Hollings ACE Basin NWR
Laura Housh, Natural Resource Planner, USFWS

State Coordination

Beginning in June of 2020, numerous email and telephonic conversations and data-sharing efforts were made between Refuge Manager Purcell and SCDNR staff, including Sam Chappelle-Wildlife Regional Coordinator, Jay Cantrell-Wildlife Biologist and Assistant Big Game Program Coordinator and Anna Smith-State Wildlife Action Plan Coordinator. Additionally, a state scoping letter was mailed for early input on the planning process on October 1, 2020.

Tribal Consultation

The Service sent scoping letters making notification and seeking input on October 1, 2020 to:

- Catawba Nation
- Eastern Shawnee Tribe of Oklahoma
- Shawnee Tribe
- Absentee-Shawnee

Public Outreach

The Service provided public notice of the proposal through local and national public notice of the availability of the draft Hunt Plan, Environmental Assessment, and draft Hunting Compatibility Determination for Ernest F. Hollings ACE Basin National Wildlife Refuge (NWR, refuge) for public review and comment. Local public notice included a Public Information Bulletin and information and documents posted on the refuge's website. National public notice was provided through the Federal Register (Volume 86, Number 84; 86 FR 23794; Docket No. FWS-HQ-NWRS-2021-0027, FXRS12610900000-212-FF09R20000; pages 23794-23842) which was published on May 4, 2021. Public comments on the proposal were received by the Service during the public review and comment period (April 15, 2021 through July 6, 2021) from three members of the public (one with several signature), and the Choctaw Nation of Oklahoma. The Service's responses to comments received through the Federal Register rulemaking process were published in the final rule in the Federal Register. The Service's responses to comments received locally and refuge-specific comments received through the Federal Register can be found in Appendix D of this document.

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Appendix A. Other Applicable Statutes, Executive Orders, and Regulations

Multiple other statutes, Executive Orders, and regulations apply; the most notable are included here.

Cultural Resources

- American Indian Religious Freedom Act, as amended, 42 USC §§1996 – 1996a; 43 CFR Part 7
- Antiquities Act of 1906, 16 USC §§431-433; 43 CFR Part 3
- Archaeological Resources Protection Act of 1979, 16 USC §§470aa – 470mm; 18 CFR Part 1312; 32 CFR Part 229; 36 CFR Part 296; 43 CFR Part 7
- National Historic Preservation Act of 1966, as amended, 16 USC §§470-470x-6; 36 CFR Parts 60, 63, 78, 79, 800, 801, and 810
- Paleontological Resources Protection Act, 16 USC §§470aaa – 470aaa-11
- Native American Graves Protection and Repatriation Act, 25 USC §§3001-3013; 43 CFR Part 10
- Executive Order 11593 – Protection and Enhancement of the Cultural Environment, 36 Fed. Reg. 8921 (1971)
- Executive Order 13007 – Indian Sacred Sites, 61 Fed. Reg. 26771 (1996)

Fish and Wildlife

- Bald and Golden Eagle Protection Act, as amended, 16 USC §§668-668c, 50 CFR 22
- Endangered Species Act of 1973, as amended, 16 USC §§1531-1544; 36 CFR Part 13; 50 CFR Parts 10, 17, 23, 81, 217, 222, 225, 402, and 450
- Fish and Wildlife Act of 1956, 16 USC §§742 a-m
- Lacey Act, as amended, 16 USC §3371 et seq.; 15 CFR Parts 10, 11, 12, 14, 300, and 904
- Migratory Bird Treaty Act, as amended, 16 USC §§703-712; 50 CFR Parts 10, 12, 20, and 21
- Executive Order 13186 – Responsibilities of Federal Agencies to Protect Migratory Birds, 66 Fed. Reg. 3853 (2001)

Natural Resources

- Clean Air Act, as amended, 42 USC §§7401-7671q; 40 CFR Parts 23, 50, 51, 52, 58, 60, 61, 82, and 93; 48 CFR Part 23
- Wilderness Act, 16 USC §1131 et seq.
- Wild and Scenic Rivers Act, 16 USC §1271 et seq.
- Executive Order 13112 – Invasive Species, 64 Fed. Reg. 6183 (1999)

Water Resources

- Coastal Zone Management Act of 1972, 16 USC §1451 et seq.; 15 CFR Parts 923, 930, 933
- Federal Water Pollution Control Act of 1972 (commonly referred to as Clean Water Act), 33 USC §1251 et seq.; 33 CFR Parts 320-330; 40 CFR Parts 110, 112, 116, 117, 230-232, 323, and 328
- Rivers and Harbors Act of 1899, as amended, 33 USC §401 et seq.; 33 CFR Parts 114, 115, 116, 321, 322, and 333
- Safe Drinking Water Act of 1974, 42 USC §300f et seq.; 40 CFR Parts 141-148
- Executive Order 11988 – Floodplain Management, 42 Fed. Reg. 26951 (1977)
- Executive Order 11990 – Protection of Wetlands, 42 Fed. Reg. 26961 (1977)

Appendix B. Compatibility Determination

COMPATIBILITY DETERMINATION

USE: Hunting -Big Game (Youth Turkey Hunt)

REFUGE NAME: Ernest F. Hollings ACE Basin National Wildlife Refuge

DATE ESTABLISHED: September 20, 1990

ESTABLISHING and ACQUISITION AUTHORITYIES:

The refuge establishment and acquisition authorities for Ernest F. Hollings ACE Basin National Wildlife Refuge (EFH ACE Basin NWR, refuge) are:

Emergency Wetlands Resources Act of 1986 (16 U.S.C. 3901b; 100 STAT. 3582-91); Migratory Bird Conservation Act of 1919, as amended (16 U.S.C. 4601-4-4601-11; 90 STAT. 1313); Migratory Bird Hunting and Conservation Stamp Act of March 16, 1934, as amended (16 U.S.C. 718-718h).

REFUGE PURPOSES:

The purposes for which the EFH ACE Basin NWR was established are:

“.....the conservation of the wetlands of the Nation in order to maintain the public benefit they provide and to help fulfill international obligations contained in various migratory bird treaties and conventions..... (Emergency Wetlands Resources Act of 1986)

"... for the development, advancement, management, conservation, and protection of fish and wildlife resources ..." 16 U.S.C. 742f(a)(4) (Fish and Wildlife Act of 1956)

"... for the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition of servitude ..." 16 U.S.C. 742f(b)(1) (Fish and Wildlife Act of 1956)

"... for use as an inviolate sanctuary, or for any other management purpose, for migratory birds." 16 U.S.C. § 715d (Migratory Bird Conservation Act of 1929)

"...to conserve and protect migratory birds...and other species of wildlife that are listed...as endangered species or threatened species and to restore or develop adequate wildlife habitat." 16 U.S.C. § 715i (Migratory Bird Conservation Act of 1929)

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 United States for the benefit of present and future generations of Americans" (Refuge System Improvement Act of

1997, Public Law 105-57).

DESCRIPTION OF USE:

(a) What is the use? Is the use a priority public use?

The new use is public hunting (Youth Only) of eastern wild turkey (*Meleagris gallopavo*) on EFH ACE Basin NWR. Hunting was identified as one of six priority public uses of the Refuge System by the Refuge System Administration Act of 1966, as amended by the Refuge System Improvement Act of 1997 (Public Law 105-57), when found to be compatible.

(b) Where would the use be conducted?

Spring youth turkey hunting will occur on 5,300 acres in four hunt units: The Grove Tract, Barrelville Tract, Bonny Hall Tract, and Upper Combahee Unit. The Grove Tract comprises approximately 1,773 acres of forested riparian habitat, mixed pine/hardwood forests, bottomland hardwood swamps, pine forests, grasslands and managed and intertidal marsh. The Barrelville Tract is composed of approximately 722 acres of pine forest interspersed with bottomland hardwood forested drainages. The Bonny Hall Tract comprises approximately 1,461 acres of forested riparian habitat, mixed pine/hardwood forests, bottomland hardwood swamps, pine forests, grasslands and managed and intertidal marsh. The Upper Combahee Unit comprises approximately 1,344 acres of forested riparian habitat, mixed pine/hardwood forests, bottomland hardwood swamps and pine forests.

The youth turkey hunt will occur on four hunt units that also currently permit big game hunting (primitive weapons: archery and muzzleloader) in the fall of the year for white-tailed deer and incidental take of feral hogs and represent approximately 44% of the refuge acreage.

Approximately 17 acres of the Grove Tract and 6 acres of the Bonny Hall Tract are classified as “Administrative Area” and are posted and closed to all hunting activities.

(c) When would the use be conducted?

Initially, as recommended by the South Carolina Department of Natural Resources (SCDNR; S. Chappelle, personal communication, August 04, 2020), the youth hunt for wild turkey will occur on the Saturdays (to not conflict with school attendance by the youth hunters) in the month of April. Limited Youth Turkey hunting will be permitted with access to the four hunt units annually from 5:00 am until one hour after official sunset on each Saturday in the month of April. Legal shooting hours are from one-half hour before official sunrise until one-half hour after official sunset.

(d) How would the use be conducted?

Limited youth turkey hunting for public recreational purposes will be allowed on designated areas of the refuge. Turkey hunting will be in accordance with state regulations. More restrictive, refuge-specific regulations will apply for consistency with nearby State of South Carolina Wildlife Management Areas and their Youth Hunter programs and also due to limited acreage of huntable upland and forested wetlands. Refuge-specific regulations that may apply include season length, bag limit, and quotas on number of permitted youth hunters. High public demand and the large acreage of land required for turkey hunting will limit the number of hunters allowed in order to ensure a safe hunt. The hunt will be limited to 5 hunters per each Saturday

hunt in April. The youth hunters will be drawn by the Office of Management and Budget (OMB)-approved lottery application at no charge to the applicants. The youth applicants must be age 17 or younger on the date of the hunt for which they are successfully drawn. Hunters may be accompanied by one assistant, parent or guardian age 21 or older who may participate in the hunt (calling, etc.), but the parent or guardian may not personally carry a firearm (except as authorized by a concealed carry permit), harvest, nor attempt to harvest a turkey. All youth hunters age 16 or 17 must have a valid SCDNR License. Youth hunters age 16 or 17 that have successfully completed a State of South Carolina-approved hunter education course may hunt without an assistant, parent or guardian. All other youth hunters (age 15 and younger) must have completed a state approved hunter education course and be accompanied by an assistant, parent or guardian age 21 or older.

Each Youth Hunter is limited to the harvest of one male wild turkey and is otherwise subject to SCDNR turkey hunting regulations, including tagging requirements. Hunters may find legal parking in the visitor parking lots and at gated entrance roads, or along the refuge's boundary, to access the hunt units by foot or bicycle. Hunters are reminded not to block entrance road gates when parking so as to not impede access for law enforcement and safety considerations. Access by watercraft is not permitted during the Youth Turkey Hunts. All youth hunters, regardless of age, must have and properly utilize SCDNR-issued turkey tags in accordance with South Carolina turkey hunting regulations. Hunters will also be required to have in their possession a refuge specific permit indicating their status as being drawn for the hunt and a signed refuge annual hunting brochure. The brochure will cover all refuge regulations, hunting units, and species. The brochure can be obtained by visiting the refuge headquarters or by going online to the refuge's website. Hunters will need to attain all other applicable local, state and/or Federal licenses, permits, or stamps in accordance with local, state, and Federal laws.

(e) Why is the use being proposed?

Hunting is one of the priority public uses outlined in the Refuge System Improvement Act. The U.S. Fish and Wildlife Service (Service) supports and encourages priority uses when they are appropriate and compatible on national wildlife refuge lands. Hunting is a healthy, traditional, recreational use of renewable natural resources that is deeply rooted in America's heritage. Hunting is also an important wildlife management tool.

The proposed action will further align the refuge with the Department of the Interior's Secretarial Order 3356, which directs the Service to enhance and expand public access to lands and waters on national wildlife refuges for hunting, fishing, recreational shooting, and other forms of outdoor recreation. The proposed action will promote one of the priority public uses of the Refuge System. Hunting will also promote the stewardship of our natural resources and increase the public's appreciation and support for the refuge.

The Ashepoo, Combahee and Edisto (ACE) Basin has a long tradition of hunting, beginning with Native Americans and continuing to present-day hunters.

The primary wildlife hunted in the ACE Basin project area are white-tailed deer; wild turkey;

bobwhite quail; mourning dove; eastern gray squirrel; rabbit; terrestrial furbearers, such as raccoon, gray fox, and opossum; waterfowl; and American alligator. White-tailed deer is the most popular game species sought by hunters in South Carolina. The trends in deer harvest for Colleton County have remained relatively stable since 1988. Harvest reports obtained from private and public lands in the state represent the minimum number harvested, largely because reporting harvested animals is not required and many harvested deer are unreported. The other big game species sought by hunters in the ACE Basin is the wild turkey. In the coastal plain of South Carolina, hunting for turkey occurs during the spring months. The hunting is restricted to gobblers only.

One of the most striking changes that have occurred with hunting in the ACE Basin study area and other parts of South Carolina has been the transition from small game, such as squirrels and rabbits, to big game hunting for white-tailed deer and wild turkey. Squirrel hunting was once the most popular hunting activity in South Carolina, but today squirrels are among the most underutilized game animals. Rabbit hunting has also declined in popularity. The switch from small game to deer and turkey has increased the demand for available hunting land. A score of hunting clubs that are tightly managed have been formed in the ACE Basin area and are a popular means of gaining access to private land.

Controlled, limited hunting is compatible with specific refuge objectives, sound wildlife management, and in the public’s interest on the EFH ACE Basin NWR (Purcell, M.A. 2009). As a management objective, hunting provides the public with an opportunity to utilize a renewable resource. It also provides an area for traditional public use in the ACE Basin, helping meet the objectives of the refuge and the ACE Basin Joint Venture, a flagship project of the North American Waterfowl Management Plan.

AVAILABILITY OF RESOURCES:

Annual youth-only turkey hunt administration costs, including salary, equipment, law enforcement, brochures, collection of hunt data and analysis of biological information, etc., for EFH ACE Basin NWR totals approximately \$7,500. EFH ACE Basin NWR funds will be used to conduct youth turkey hunts on the Barrelville, Grove, Bonny Hall and Upper Combahee Units. Funding specifically for the youth-only turkey hunts has not been allocated, although funds are available through annual refuge management capability funding allocations.

Funding and Staffing Requirements

Identifier	Cost
Staff: maintenance workers, wildlife refuge specialist, and refuge manager	\$3,000
Maintain roads, parking lots, trails*	\$1,000
News releases, fact sheets, reports for Hunt Program	\$500
Maintain hunting signs	\$500
Law Enforcement	\$2,500
Total Annual Cost	\$7,500

**Refuge trails and roads are maintained for a variety of activities. Costs shown are a percentage of total costs for trail/road maintenance on the refuge and are reflective of the percentage of trail/road use for hunting and fishing. Volunteers account for some maintenance hours and help to reduce overall cost of the program.*

Off-setting Revenue: There are no offsetting revenues for youth turkey hunts.

ANTICIPATED IMPACTS OF THE USE:

The refuge prepared a draft hunt plan and associated environmental assessment (USFWS 2021). Anticipated impacts were identified and evaluated based on best professional judgment and published scientific papers. Many of the impacts associated with turkey hunting are similar to those considered for other public use activities, such as wildlife viewing and photography, with the exception of direct mortality to wild turkeys, short-term changes in the distribution and abundance of wild turkey, and travel through the hunt area.

The Youth-Only turkey hunts will be conducted after the departure of the majority of wintering migratory waterfowl; therefore, minimal disturbance to migratory waterfowl is anticipated. Use of lead shot is allowed for turkey hunting but, considering the separation between the predominately upland hunt and wetland habitat, the ingestion of lead shot by migratory birds should be minimal. The Youth-Only turkey hunt will occur well after the existing white-tailed deer and feral hog primitive weapons hunt in the fall of the year and therefore should pose no conflict. Fishing opportunities on the refuge coincide with the Youth Turkey Hunt but occur in different habitats so should pose little to no impact on one another. The walk/bicycle-in youth turkey hunters will use existing fire breaks and roads for access. No soil compaction or vegetation disturbance is expected. No impacts to endangered species or archaeological or cultural resources is anticipated as a result of the Youth-Only turkey hunt. Parking will occur in established parking areas and temporary sites already designated along existing fire lines and roads.

Public (Youth-Only) turkey hunting will be very limited in scope and will, therefore, have minimal impact on resident turkeys which are abundant on the refuge hunt units. Only five hunters will be allowed to hunt at any given time due to the limited space and the goal to minimize impact to turkeys during peak breeding periods (Wakefield et al. 2019, Speake 1991), and those hunts will be restricted to only occur on Saturdays in the month of April. Hunting turkeys on the refuge will make the birds more skittish and prone to disturbance, reduce the amount of time they spend in courtship, foraging and resting, and alter their habitat usage patterns (Wakefield et al. 2019, Gerrits et al. 2017). Disturbance to non-target birds and resident wildlife will likely occur from turkey hunting and associated hunter activity but will be short-term and temporary. Overall, the effects on migratory birds are expected to be minimal.

Cumulative Impacts

Cumulative impacts on the environment result from incremental impacts of a proposed action when these are added to other past, present, and reasonably foreseeable future actions. While cumulative impacts may result from individually minor actions, they may, viewed as a whole, become substantial over time. The refuge hunt program, including the “Youth-Only” spring turkey hunt, is designed to be sustainable through time, given relatively stable conditions,

particularly because of close coordination with the SCDNR.

The cumulative impacts of “Youth-Only” hunting on eastern wild turkey populations at the refuge will be negligible. The proportion of the refuge’s potential harvest of these species will be negligible when compared to local, regional, and statewide populations and harvest.

No direct or indirect cumulative impacts on resident wildlife, migratory birds and non-hunted wildlife are expected by allowing hunting on the refuge because of the regulatory process for harvest management in place within the Service, the setting of hunting seasons largely outside of the breeding seasons of resident and migratory wildlife, the ability of individual refuge hunt programs to adapt refuge-specific hunting regulations to changing local conditions, and the wide geographic separation of individual refuges.

PUBLIC REVIEW AND COMMENT:

The Service provided public notice of the proposal through local and national public notice of the availability of the draft Hunt Plan, Environmental Assessment, and draft Hunting Compatibility Determination for Ernest F. Hollings ACE Basin National Wildlife Refuge (NWR, refuge) for public review and comment. Local public notice included a Public Information Bulletin and information and documents posted on the refuge’s website. National public notice was provided through the Federal Register (Volume 86, Number 84; 86 FR 23794; Docket No. FWS-HQ-NWRS-2021-0027, FXRS12610900000-212-FF09R20000; pages 23794-23842) which was published on May 4, 2021. Public comments on the proposal were received by the Service during the public review and comment period (April 15, 2021 through July 6, 2021) from three members of the public (one with several signatures), and the Choctaw Nation of Oklahoma. The Service’s responses to comments received through the Federal Register rulemaking process were published in the final rule in the Federal Register. The Service’s responses to comments received locally and refuge-specific comments received through the Federal Register can be found in Appendix D of this document.

DETERMINATION (CHECK ONE BELOW):

Use is not compatible

Use is compatible, with the following stipulations

STIPULATIONS NECESSARY TO ENSURE COMPATIBILITY:

To ensure compatibility with refuge purposes and the Refuge System mission, “Youth-Only” turkey hunting can occur at EFH ACE Basin NWR in accordance with state and Federal regulations and special refuge-specific regulations. These regulations and restrictions will ensure that wildlife and habitat management goals are achieved and that the program is providing a safe experience for participants.

The following stipulations are necessary to ensure compatibility:

- A. Only shotguns will be allowed for use. The use of buckshot, slugs and all other weapons or methods are prohibited.
- B. Hunting will be permitted within designated areas of the refuge, including the Grove Tract, Barrelville Tract, Bonny Hall Tract and Upper Combahee Unit .
- C. Hunters may be accompanied by one assistant, parent or guardian age 21 or older who may participate in the hunt (calling, etc.), but may not personally carry a firearm (except as authorized by a concealed carry permit), harvest nor attempt to harvest a turkey.
- D. All youth hunters age 16 or 17 must have a valid South Carolina Department of Natural Resources Hunting License. Youth hunters age 16 or age 17 that have successfully completed a State of South Carolina-approved hunter education course may hunt without an assistant, parent or guardian. All other youth hunters (age 15 and younger) must complete a state approved hunter education course and **must** be accompanied by an assistant, parent or guardian age 21 or older.
- E. Hunters and assistants, parents or guardians may enter the hunt units on or after 5:00 am and must exit the hunt units not later than one hour after official sunset. Legal shooting hours are from one-half hour before official sunrise until one-half hour after official sunset.
- F. Youth Hunter Bag Limit: One male turkey.
- G. Turkeys must be tagged with youth hunter's state-issued tags in accordance with state law.

50 CFR Part 32 outlines refuge-specific regulations; 50 CFR Part 26 outlines Public Entry and Use, including specific regulations for EFH ACE Basin NWR; and 50 CFR Part 27 outlines prohibited acts. The refuge hunt brochure will provide important information and requirements for hunting on the refuge. Seasons will be set annually and will be published in the refuge's hunt brochure for the specified year. Key requirements and prohibitions are listed.

- Fires on the refuge – open fires are not permitted on the refuge.
- Reporting Harvest – Hunters will be required to report their harvest to refuge staff.
- All-terrain vehicles (ATVs), utility terrain vehicles (UTVs), golf carts and any other off-road vehicles are prohibited.
- Use or possession of electronic game calls is prohibited.
- Destroying or cutting vegetation is prohibited.
- Access within the hunting areas will be restricted to foot and/or bicycle only.
- To eliminate the disturbance resulting from boat traffic, watercraft access to and within the hunt units where turkey hunting occurs is prohibited.
- Any area in which substantial use or nesting by endangered species occurs in April will be closed to hunting.

JUSTIFICATION:

Hunting is a priority wildlife-dependent use for the Refuge System through which the public can develop an appreciation for fish and wildlife. Service policy is to provide expanded opportunities for wildlife-dependent uses when compatible and consistent with sound fish and wildlife management and ensure that they receive enhanced attention during planning and management.

Hunting satisfies a recreational need, but hunting on national wildlife refuges is also an important, proactive management action that can prevent overpopulation and the deterioration of habitat. Disturbance to other species will occur, but this disturbance is generally short-term. Suitable habitat exists on refuge lands to support hunting as proposed.

Development of hunting opportunities fulfills both the Refuge System mission as well as the refuge's goals. Controlled, limited hunting, as described in the refuge's Comprehensive Conservation Plan (USFWS 2009), is compatible with specific refuge objectives (Goal 3-Objective 3.A, Goal 10-Objective 10.A), sound wildlife management, and in the public's interest on the EFH ACE Basin NWR. As a management objective, hunting provides the public with an opportunity to utilize a renewable resource. It will also provide an area for traditional public use in the ACE Basin, helping meet not only the objectives of the refuge, but also of the ACE Basin Joint Venture, a flagship project of the North American Waterfowl Management Plan.

This activity will not conflict with any of the other priority public uses or adversely impact biological resources. Therefore, through this compatibility determination process, we have determined that "Youth-Only" turkey hunting on the refuge, in accordance with the stipulations provided above, is a compatible use that will not materially interfere with, or detract from, the fulfillment of the Refuge System mission or the purposes of the refuge.

NEPA COMPLIANCE FOR REFUGE USE (Check one below):

- Categorical Exclusion Without Environmental Action Statement
- Categorical Exclusion and Environmental Action Statement
- Environmental Assessment and Finding of No Significant Impact
- Environmental Impact Statement and Record of Decision

REFERENCES AND LITERATURE CITED:

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- U.S. Fish and Wildlife Service. 2021. Ernest F. Hollings Ace Basin National Wildlife Refuge Draft Hunt Plan and Environmental Assessment. Atlanta, GA. U.S. Department of the Interior. Fish and Wildlife Service. Southeast Region.

SIGNATURE: *Mark A. Purcell* August 5, 2021
Refuge Manager _____
Signature Date

CONCURRENCE:

Area Supervisor: _____
NWRS, Interior Regions 2 and 4 Signature Date

Compatibility Coordinator _____
NWRS, Interior Regions 2 and 4 Signature Date

Regional Refuge Chief _____
NWRS, Interior Regions 2 and 4 Signature Date

MANDATORY 15-YEAR RE-EVALUATION DATE: 2036

Appendix C. Intra-Service Section 7 Biological Evaluation

SOUTHEAST REGION

INTRA-SERVICE SECTION 7 BIOLOGICAL EVALUATION FORM

Originating Person: Mark A. Purcell

Telephone Number: (843)-889-3084 **E-Mail:** Mark_Purcell@fws.gov

Date:

PROJECT NAME (Grant Title/Number): Hunting Plan Amendment for Ernest F. Hollings ACE Basin NWR-Youth Turkey Hunt

I. Service Program:

Ecological Services

Federal Aid

Clean Vessel Act

Coastal Wetlands

Endangered Species Section 6

Partners for Fish and Wildlife

Sport Fish Restoration

Wildlife Restoration

Fisheries

Refuges/Wildlife

II. State/Agency: SC / USFWS

III. Station Name: Ernest F. Hollings ACE Basin NWR (EFH ACE Basin NWR)

IV. Description of Proposed Action (attach additional pages as needed):

In February 1993, a sport hunting decision document package was approved for opening the ACE Basin NWR to big game hunting (white-tailed deer only), upland/small game hunting (in general), and migratory bird hunting (goose and duck only). In April 2006, the approved hunting plan was amended to add feral hog and wild turkey to big game hunting, add eastern gray squirrel and raccoon to upland hunting, add coot to migratory game bird hunting, address the Refuge name change and add the Barrelville tract acquisition acres to the hunt area.

As referenced in the EFH ACE Basin NWR Comprehensive Conservation Plan approved in September 2009, “additional special hunts will be considered for small game, turkey, and deer/hogs within designated areas of the refuge”. Accordingly, in consideration of the negligible impact and disturbance to targeted game animals (eastern wild turkey) and

other non-targeted species, the Refuge seeks to establish a limited-quota Youth Turkey Hunt annually in the month of April. Therefore, the purpose of the current proposed action is to amend the existing hunt plan for the EFH ACE Basin NWR to add eastern wild turkey to big game hunting (YOUTH ONLY) on the Barrelville Tract, Grove Tract, Bonny Hall Tract and Upper Combahee Unit.

As provided in the original hunt plan, disturbance to non-targeted species would be minimized and refuge overall biological values of the refuge would be protected; these concepts are still valid and have not changed. Additionally, the Section 7 evaluation, approved in 1993 for the original plan, addressed and approved the opening of the refuge generally to big game, upland/small game, and migratory bird hunting. The section 7 evaluation, approved in 2006 for the 2006 Hunting Plan Amendment, addressed adding feral hog and wild turkey to big game hunting, eastern gray squirrel and raccoon to upland hunting, and coot to migratory game bird hunting. The current proposal seeks to implement an opportunity for youth only hunting for eastern wild turkey on refuge hunt units.

V. Pertinent Species and Habitat:

**A. Include species/habitat occurrence map:
Complete the following table:**

SPECIES/CRITICAL HABITAT	STATUS ¹
Wood stork, <i>Mycertia americana</i>	T
Eastern Black Rail, <i>Laterallus jamaicensis</i>	T
West Indian Manatee, <i>Trichechus manatus</i>	T
Northern Long-eared Bat, <i>Myotis septentrionalis</i>	T
Bachmans Warbler, <i>Vermivoria bachmanii</i>	E
Piping Plover, <i>Charadrius melodus</i>	T
Red Knot, <i>Calldris cantus rufa</i>	T
Red-cockaded Woodpecker, <i>Picoides borealis</i>	E
Frosted Flatwoods Salamander, <i>Ambystoma cingulatum</i>	T
American Chaffseed, <i>Schwalbea americana</i>	E

SPECIES/CRITICAL HABITAT	STATUS ¹
Camby's Dropwort, <i>Oxypolis canbyl</i>	E
Pondberry, <i>Lindera melissifolia</i>	E
Green Sea Turtle, <i>Chelonia mydas</i>	T
Leatherback Sea Turtle, <i>Dermochelys corlacea</i>	E
Loggerhead Sea Turtle, <i>Caretta caretta</i>	T
Kemp's Ridley Sea Turtle, <i>Lepidochelys kempii</i>	E
Monarch Butterfly, <i>Danaus plexippu</i>	C

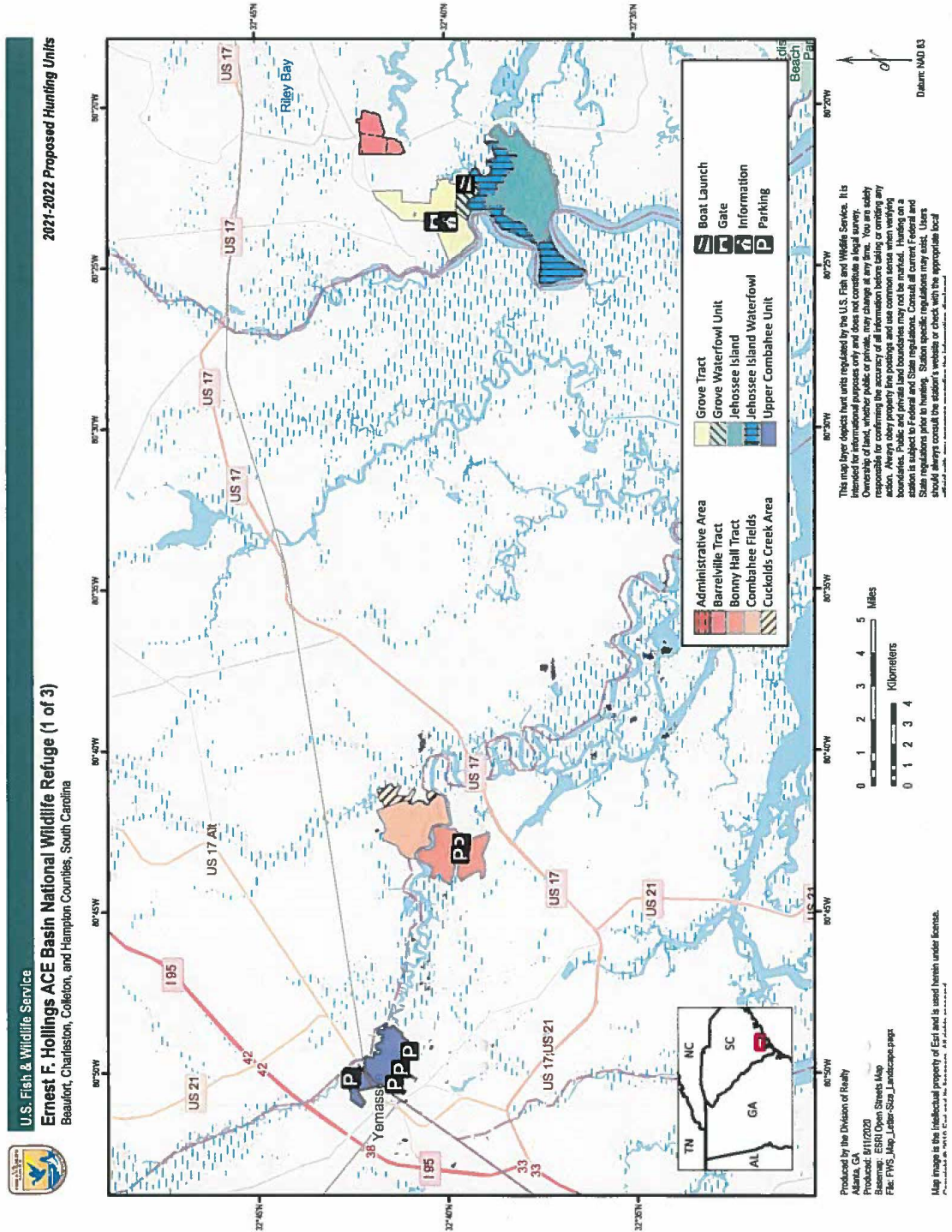
¹STATUS: E=endangered, T=threatened, PE=proposed endangered, PT=proposed threatened, CH=critical habitat, PCH=proposed critical habitat, C=candidate species

Identify listed, proposed and candidate species as well as designated and proposed critical habitat within the action area and their status. The action area includes the immediate area where the proposed action will occur, as well as any other areas where direct or indirect impacts of the action may be expected. For example, effects of an action in the headwaters of a stream may affect endangered fish that occur 20 miles downstream. A compilation of species or critical habitats that possibly occur in the action area may be generated by the Project Leader, or it may be requested from the appropriate Ecological Services Office.

Note: All experimental populations of listed species are treated as threatened species. However, for the purposes of intra-Service section 7 consultation, they are treated as species *proposed* for listing if they occur off National Wildlife Refuge or National Park System lands and they are classed as "non-essential" experimental populations.

List all listed, proposed or candidate species and designated or proposed critical habitat that may occur within the action area. This informs the reviewer what species have been considered.

VI. Location (attach map): See attached map.



- A. **Ecoregion Number and Name:** Ecoregion #33, Savannah-Santee-Pee Dee
- B. **County and State:** Charleston, Colleton, Beaufort, Hampton Co., SC
- B. **Section, township, and range (or latitude and longitude):** Lat. 32°40'00"
Long. 80°23'00"
- D. **Distance (miles) and direction to nearest town:** 35 miles south of Charleston, SC
- C. **Species/habitat occurrence:**

Listed species and habitat occurrence on the refuge are based on the expert opinion of Service biologists, supplemented with information from the Environmental Conservation Online System (ECOS, <https://ecos.fws.gov/ecp/>) and Information for Planning and Consultation (IPaC, <https://ecos.fws.gov/ipac/>) databases.

Since research activities are ongoing in this area and since the ECOS and IPaC databases are regularly updated, approximately every 90 days, it is possible that the specific threatened and endangered species identified as present on or near the refuge may change between the finalization of this Biological Evaluation and its publication. The IPaC database also identifies multiple species that are not actually present within the hunt units; for these species our determination is that any hunting actions on these units will have no effect to species not occurring on these units.

VII. Determination of Effects:

- A. **Explanation of effects of the action on species and critical habitats in item V. B (attach additional pages as needed):**

SPECIES/ CRITICAL HABITAT	IMPACTS TO SPECIES/CRITICAL HABITAT
Wood stork, <i>Mycertia americana</i>	Not likely to have adverse effects. The limited quota youth turkey hunt addition to the hunting program is expected to have negligible impacts to nesting or feeding wood stork. Due to the extreme difficulty associated with harvesting wild turkeys, shooting on the refuge is anticipated to be so minimal that noise impacts to listed species from gun shots are also expected to be unmeasurable and discountable. These birds temporarily relocate and consistently move to other areas to forage when disturbance occurs. Lead shot can be used during the hunting season. The amount of lead introduced to the environment because of turkey

SPECIES/ CRITICAL HABITAT	IMPACTS TO SPECIES/CRITICAL HABITAT
	<p>hunting, however, is negligible given the limited scope and timing of the hunt. The bioaccumulation of lead is a potential concern, but it does not present a significant issue for this activity on this refuge because turkey carcasses will be removed from the refuge, which removes the lead shot contained in the carcasses before it can enter the environment or food chain. There are no anticipated biologically significant adverse impacts to this species through direct consumption or bioaccumulation uptake of lead because of this proposal. The proposed action is not likely to adversely impact this species.</p>
<p>Black rail, <i>Laterallus jamaicensis</i></p>	<p>This transient species would only be found in emergent freshwater habitats in the spring or fall. The limited quota youth turkey hunt addition to the hunting program would occur on uplands and have minimal, if any, impacts to black rail because the species is not present in the hunting area. The activities associated with a limited youth turkey hunt will not alter black rail habitat. The limited exposure to gunfire would not be likely to alarm this species. Lead shot can be used during the hunting season. The amount of lead introduced to the environment because of turkey hunting, however, is negligible given the limited scope and timing of the hunt. Turkey carcasses will be removed from the refuge. Additionally, the only lead ammunition allowed on the refuge would likely be too large to be ingested by a small bird like a black rail. This species is not likely to be affected by use of lead ammunition due to the low occurrence of lead that could possibly bioaccumulate in insects or other food they eat. The refuge's hunting program is not likely to adversely affect this species.</p>
<p>West Indian Manatee, <i>Trichechus manatus</i></p>	<p>There will be no effect from hunting because this species is only present outside of the action area and is an aquatic species. Due to the extreme difficulty associated with harvesting wild turkeys, shooting on the refuge is anticipated to be so minimal that noise impacts to listed species from gun shots are also expected to be unmeasurable and discountable. Lead shot can be used during the hunting season. This mammal is only present in waterways that are not hunted. Increased hunting could potentially introduce an additional minimal amount of lead into the environment, but the amount of lead is negligible given low participation. This species is not a scavenge animal on prey that bio accumulation or direct consumption could occur. Therefore, there are no anticipated biologically significant adverse impacts to this species through</p>

SPECIES/ CRITICAL HABITAT	IMPACTS TO SPECIES/CRITICAL HABITAT
	direct consumption or bioaccumulation uptake of lead because of this proposal.
Northern Long-eared Bat, <i>Myotis septentrionalis</i>	There is no anticipated effect from hunting because this species is only present outside of the action area. Due to the extreme difficulty associated with harvesting wild turkeys, shooting on the refuge is anticipated to be so minimal that noise impacts to listed species from gun shots are also expected to be unmeasurable and discountable. Human presence and related noise during hunting activities have not been included among the activities interfering or affecting this species, especially during the dusk and evening hours when the bat feeds and hunters may be allowed on the refuge. Lead shot can be used during the hunting season. The amount of lead introduced to the environment because of turkey hunting, however, is negligible given low participation. Turkey carcasses will be removed from the refuge. The bioaccumulation of lead is a potential concern, but it does not present a significant issue for this activity on this refuge because this species would not have the opportunity to ingest lead associated with this action. This species is not a scavenger animal on prey that lead bioaccumulation or direct consumption could occur. Therefore, there are no anticipated biologically significant adverse impacts to this species through direct consumption or bioaccumulation uptake of lead because of this proposal. The proposed action is unlikely to adversely impact this species.
Bachman's Warbler, <i>Vermivora bachmanii</i>	There will be no effect on this species from hunting because it is not been documented on the refuge nor contains critical habitat for this species. Due to the extreme difficulty associated with harvesting wild turkeys, shooting on the refuge is anticipated to be so minimal that noise impacts to listed species from gun shots are also expected to be unmeasurable and discountable. Lead shot can be used during the hunting season. The amount of lead introduced to the environment because of turkey hunting, however, is negligible given low participation. Turkey carcasses will be removed from the refuge. The bioaccumulation of lead is a potential concern, but it does not present a significant issue for this activity on this refuge because this species is not present on the refuge. Additionally, the only lead ammunition allowed on the refuge would likely be too large to be ingested by a small bird like a Bachman's warbler. This species is not likely to be affected by use of lead ammunition due to the low occurrence of lead that could possibly bioaccumulate in insects or other food they eat. The refuge's hunting program is not likely to adversely affect this

SPECIES/ CRITICAL HABITAT	IMPACTS TO SPECIES/CRITICAL HABITAT
	species.
Piping Plover, <i>Charadrius melodus</i>	Hunting will have no effect because the species is outside of the action area. Lead shot can be used during the hunting season. The amount of lead introduced to the environment because of turkey hunting, however, is negligible given low participation. Turkey carcasses will be removed from the refuge. The bioaccumulation of lead is a potential concern, but it does not present a significant issue for this activity on this refuge because this species is not present on the refuge. Additionally, the only lead ammunition allowed on the refuge would likely be too large to be ingested by a small bird like a piping plover. This species is not likely to be affected by use of lead ammunition due to the low occurrence of lead that could possibly bioaccumulate in insects or other food they eat. Therefore, there are no anticipated biologically significant adverse impacts to this species through direct consumption or bioaccumulation uptake of lead because of this proposal.
Red Knot, <i>Calidris cantus rufa</i>	Hunting will have no effect because the species is outside of the action area. Lead shot can be used during the hunting season. The amount of lead introduced to the environment because of turkey hunting, however, is negligible given low participation. Turkey carcasses will be removed from the refuge. The bioaccumulation of lead is a potential concern, but it does not present a significant issue for this activity on this refuge because this species is not present on the refuge. Additionally, the only lead ammunition allowed on the refuge would likely be too large to be ingested by a small bird like a red knot. This species is not likely to be affected by use of lead ammunition due to the low occurrence of lead that could possibly bioaccumulate in insects or other food they eat. The refuge's hunting program is not likely to adversely affect this species. Therefore, there are no anticipated biologically significant adverse impacts to this species through direct consumption or bioaccumulation uptake of lead because of this proposal.
Red-cockaded	There would be no effect on this species from hunting. Though

SPECIES/ CRITICAL HABITAT	IMPACTS TO SPECIES/CRITICAL HABITAT
Woodpecker, <i>Picoides borealis</i>	occurring on adjacent lands, red-cockaded woodpeckers are not documented nesting on the refuge. Due to the extreme difficulty associated with harvesting wild turkeys, shooting on the refuge is anticipated to be so minimal that noise impacts to listed species from gun shots are also expected to be unmeasurable and discountable. Lead shot can be used during the hunting season. Increased hunting could potentially introduce an additional minimal amount of lead into the environment, but the amount of lead is negligible given low participation. Although bioaccumulation could occur over time, the size of lead shot allowed, where allowed, is of a significant size to not be ingested by this species. This species is not a scavenge animal, but exclusively forages on insects. Therefore, there are no anticipated biologically significant adverse impacts to this species through direct consumption or bioaccumulation uptake of lead because of this proposal.
Frosted Flatwoods Salamander, <i>Ambystoma cingulatum</i>	Hunting will have no effect on this species because it has never been documented on the refuge. Due to the extreme difficulty associated with harvesting wild turkeys, shooting on the refuge is anticipated to be so minimal that noise impacts to listed species from gun shots are also expected to be unmeasurable and discountable. If this species is ever documented on the refuge, efforts will be made to educate the public of its location in order to reduce the risk of injuring the species while hunting. Lead shot can be used during the hunting season The amount of lead introduced to the environment because of turkey hunting, however, is negligible given the limited scope and timing of the hunt and the use of shot expended during the hunt. Turkey carcasses will be removed from the refuge. The bioaccumulation of lead is a potential concern, but it does not present a significant issue for this activity on this refuge because this species is not present on the refuge. Moreover, the lead introduced on this refuge will have no effect on the frosted flatwoods salamander because the species is not present on the refuge.
American Chaffseed, <i>Schwalbea americana</i>	Hunting will have no effect on this species because it has never been documented on the refuge. Existing refuge regulations prohibit the cutting or manipulation of vegetation for the purpose of hunting. However, there is the potential that a hunter could step on this plant while in the act of hunting or pursuing game. If this plant is ever documented on the refuge, efforts will be made to educate the public of its location and what the plant looks like in order to reduce the risk of injuring the plant while hunting. Lead shot can be used during the hunting season The amount of

SPECIES/ CRITICAL HABITAT	IMPACTS TO SPECIES/CRITICAL HABITAT
	<p>lead introduced to the environment because of turkey hunting, however, is negligible given the limited scope and timing of the hunt and the use of shot expended during the hunt. Turkey carcasses will be removed from the refuge. The bioaccumulation of lead is a potential concern, but it does not present a significant issue for this activity on this refuge because this species is not present on the refuge. Moreover, the lead introduced on this refuge will have no effect on the American chaffseed because the species is not present on the refuge.</p>
<p>Camby's Dropwort, <i>Oxypolis canbyl</i></p>	<p>Hunting will have no effect on this species because it has never been documented on the refuge. Existing refuge regulations prohibit the cutting or manipulation of vegetation for the purpose of hunting. However, there is the potential that a hunter could step on this plant while in the act of hunting or pursuing game. If this plant is ever documented on the refuge, efforts will be made to educate the public of its location and what the plant looks like in order to reduce the risk of injuring the plant while hunting. Lead shot can be used during the hunting season. The amount of lead introduced to the environment because of turkey hunting, however, is negligible given the limited scope and timing of the hunt and the use of shot expended during the hunt. Turkey carcasses will be removed from the refuge. The bioaccumulation of lead is a potential concern, but it does not present a significant issue for this activity on this refuge because this species is not present on the refuge. Moreover, the lead introduced on this refuge will have no effect on the Camby's dropwort because the species is not present on the refuge.</p>
<p>Pondberry, <i>Lindera melissifolia</i></p>	<p>Hunting will have no effect on this species because it has never been documented on the refuge. Existing refuge regulations prohibit the cutting or manipulation of vegetation for the purpose of hunting. However, there is the potential that a hunter could step on this plant while in the act of hunting or pursuing game. If this plant is ever documented on the refuge, efforts will be made to educate the public of its location and what the plant looks like in order to reduce the risk of injuring the plant while hunting. Lead shot can be used during the hunting season. The amount of lead introduced to the environment because of turkey hunting, however, is negligible given the limited scope and timing of the hunt and the use of shot expended during the hunt. Turkey carcasses will be removed from the refuge. The bioaccumulation of lead is a potential concern, but it does not present a significant issue for this activity on this refuge because this species is not present on the refuge. Moreover, the lead introduced on this</p>

SPECIES/ CRITICAL HABITAT	IMPACTS TO SPECIES/CRITICAL HABITAT
	refuge will have no effect on the pondberry because the species is not present on the refuge.
Green Sea Turtle, <i>Chelonia mydas</i>	Hunting will have no effect because the species is outside of the action area and aquatic. Turkey hunters will not enter the waters in which sea turtles are present. Lead shot can be used during the hunting season. The amount of lead introduced to the environment because of turkey hunting, however, is negligible given low participation. Turkey carcasses will be removed from the refuge. The bioaccumulation of lead is a potential concern, but it does not present a significant issue for this activity on this refuge because this species would not have the opportunity to ingest lead associated with this action. This species is not a scavenge animal on prey that bio accumulation or direct consumption could occur. Therefore, there are no anticipated biologically significant adverse impacts to this species through direct consumption or bioaccumulation uptake of lead because of this proposal.
Leatherback Sea Turtle, <i>Dermochelys corlacea</i>	Hunting will have no effect because the species is outside of the action area and aquatic. Turkey hunters will not enter the waters in which sea turtles are present. Lead shot can be used during the hunting season. The amount of lead introduced to the environment because of turkey hunting, however, is negligible given low participation. Turkey carcasses will be removed from the refuge. The bioaccumulation of lead is a potential concern, but it does not present a significant issue for this activity on this refuge because this species would not have the opportunity to ingest lead associated with this action. This species is not a scavenge animal on prey that bio accumulation or direct consumption could occur. Therefore, there are no anticipated biologically significant adverse impacts to this species through direct consumption or bioaccumulation uptake of lead because of this proposal.
Loggerhead Sea Turtle, <i>Caretta caretta</i>	Hunting will have no effect because the species is outside of the action area and aquatic. Turkey hunters will not enter the waters in which sea turtles are present. Lead shot can be used during the hunting season. The amount of lead introduced to the environment because of turkey hunting, however, is negligible given low participation. Turkey carcasses will be removed from the refuge. The bioaccumulation of lead is a potential concern, but it does not present a significant issue for this activity on this refuge because this species would not have the opportunity to ingest lead associated with this action. This species is not a scavenge animal on prey that bio accumulation or direct consumption could occur. Therefore, there are no anticipated biologically significant adverse

SPECIES/ CRITICAL HABITAT	IMPACTS TO SPECIES/CRITICAL HABITAT
	impacts to this species through direct consumption or bioaccumulation uptake of lead because of this proposal.
Kemp's Ridley Sea Turtle, <i>Lepidochelys kempii</i>	Hunting will have no effect because the species is outside of the action area and aquatic. Turkey hunters will not enter the waters in which sea turtles are present. Lead shot can be used during the hunting season. The amount of lead introduced to the environment because of turkey hunting, however, is negligible given low participation. Turkey carcasses will be removed from the refuge. The bioaccumulation of lead is a potential concern, but it does not present a significant issue for this activity on this refuge because this species would not have the opportunity to ingest lead associated with this action. This species is not a scavenge animal on prey that bio accumulation or direct consumption could occur. Therefore, there are no anticipated biologically significant adverse impacts to this species through direct consumption or bioaccumulation uptake of lead because of this proposal.
Monarch Butterfly, <i>Danaus plexippus</i>	Hunting is not likely to have adverse effects on this species because of its transitory presence on the refuge. Milkweed host plants would also be expected to have minimal impacts due to limited foot travel access for hunting activities. Although additional foot traffic may cause foot strikes to milkweed or cause the butterflies to move temporarily, the additional possible strikes would be minimal. Increased hunting could potentially introduce an additional minimal amount of lead into the environment, but the amount of lead is negligible given low participation. This species is not a scavenge animal on prey that bio accumulation or direct consumption could occur. Monarch butterfly forages exclusively on nectar from milkweed, bioaccumulation of lead would not affect this species due to their position in the food chain. Therefore, there are no anticipated biologically significant adverse impacts to this species through direct consumption or bioaccumulation uptake of lead because of this proposal. The proposed action is not likely to adversely impact this species.

B. Explanation of actions to be implemented to reduce adverse effects:

SPECIES/ CRITICAL HABITAT	ACTIONS TO MINIMIZE IMPACTS
Wood stork, <i>Mycertia americana</i>	Youth turkey hunt addition to the hunting program will not be allowed within or immediately adjacent to areas during the time when wood storks are involved in foraging or nesting in those

SPECIES/ CRITICAL HABITAT	ACTIONS TO MINIMIZE IMPACTS
	areas, if nesting should occur on the refuge in the future. Youth Turkey Hunts will be limited to Saturdays in April with a limited draw-quota hunt process. Honor recovery plan guidelines.
Black rail, <i>Laterallus jamaicensis</i>	Youth turkey hunt addition to the hunting program will not be allowed within or immediately adjacent to areas known or suspected to harbor black rail. No Youth Turkey Hunts are to be held on Jehossee Island. Honor recovery plan guidelines.
West Indian Manatee, <i>Trichechus manatus</i>	No actions necessary.
Northern Long-eared Bat, <i>Myotis septentrionalis</i>	No actions necessary.
Bachman's Warbler, <i>Vermivoria bachmanii</i>	No actions necessary.
Piping Plover, <i>Charadrius melodus</i>	No actions necessary.
Red Knot, <i>Callidris cantus rufa</i>	No actions necessary.
Red-cockaded Woodpecker, <i>Picoides borealis</i>	No actions necessary.
Frosted Flatwoods Salamander, <i>Ambystoma cingulatum</i>	No actions necessary.
American Chaffseed, <i>Schwalbea americana</i>	No actions necessary.
Camby's Dropwort, <i>Oxypolis canbyl</i>	No actions necessary.
Pondberry, <i>Lindera melissifolia</i>	No actions necessary.
Green Sea Turtle, <i>Chelonia mydas</i>	No actions necessary.
Leatherback Sea Turtle, <i>Dermochelys corlacea</i>	No actions necessary.
Loggerhead Sea Turtle, <i>Caretta caretta</i>	No actions necessary.
Kemp's Ridley Sea Turtle, <i>Lepidochelys kempii</i>	No actions necessary.
Monarch Butterfly, <i>Danaus plexippus</i>	No actions necessary.

Lead ammunition can be used during the youth turkey hunt. The amount of lead introduced to the environment as a result of this activity, however, is negligible and, the above listed species are only transiently present on the refuge as they move between areas of better habitats. We also encourage the use of non-toxic ammunition and fishing tackle and educate hunters and anglers about lead. As a result, there are no anticipated adverse impacts to any of the above listed species.

VIII. Effect Determination and Response Requested:

SPECIES/ CRITICAL HABITAT	DETERMINATION ¹			RESPONSE ¹ REQUESTED
	NE	NA	AA	
Wood stork		X		Concurrence
Black rail		X		Concurrence
West Indian Manatee, <i>Trichechus manatus</i>	X			Concurrence
Northern Long-eared Bat, <i>Myotis septentrionalis</i>	X			Concurrence
Bachman's Warbler, <i>Vermivoria bachmanii</i>	X			Concurrence
Piping Plover, <i>Charadrius melodus</i>	X			Concurrence
Red Knot, <i>Calidris cantus rufa</i>	X			Concurrence
Red-cockaded Woodpecker, <i>Picoides borealis</i>	X			Concurrence
Frosted Flatwoods Salamander, <i>Ambystoma cingulatum</i>	X			Concurrence
American Chaffseed, <i>Schwalbea americana</i>	X			Concurrence
Camby's Dropwort, <i>Oxypolis canbyl</i>	X			Concurrence
Pondberry, <i>Lindera melissifolia</i>	X			Concurrence

SPECIES/ CRITICAL HABITAT	DETERMINATION ¹			RESPONSE ¹ REQUESTED
	NE	NA	AA	
Green Sea Turtle, <i>Chelonia mydas</i>	X			Concurrence
Leatherback Sea Turtle, <i>Dermochelys corlacea</i>	X			Concurrence
Loggerhead Sea Turtle, <i>Caretta caretta</i>	X			Concurrence
Kemp's Ridley Sea Turtle, <i>Lepidochelys kempii</i>	X			Concurrence
Monarch Butterfly, <i>Danaus plexippus</i>		X		Concurrence

¹DETERMINATION/ RESPONSE REQUESTED:

NE = no effect. This determination is appropriate when the proposed action will not directly, indirectly, or cumulatively impact, either positively or negatively, any listed, proposed, candidate species or designated/proposed critical habitat. Response Requested is optional but a "Concurrence" is recommended for a complete Administrative Record.

NA = not likely to adversely affect. This determination is appropriate when the proposed action is not likely to adversely impact any listed, proposed, candidate species or designated/proposed critical habitat or there may be beneficial effects to these resources. Response Requested is a "Concurrence".

AA = likely to adversely affect. This determination is appropriate when the proposed action is likely to adversely impact any listed, proposed, candidate species or designated/proposed critical habitat. Response Requested for listed species is a "Formal Consultation". Response requested for proposed and candidate species is a "Conference".



Signature (originating station)

July 23, 2021

Date

IX. Reviewing Ecological Services Office Evaluation:

A. Concurrence X Nonconcurrence _____


B. Formal consultation required _____

C. Conference required _____

D. Informal conference required _____

E. Remarks (attach additional pages as needed):

MARK
CALDWELL

 Digitally signed by MARK
CALDWELL
Date: 2021.07.27 09:16:24 -04'00'

July 27, 2021

Signature

Date

Deputy Field Supervisor

Ecological Services, Charleston, SC

Title

Office

Appendix D. Summary of Public Comments and Response from the U.S. Fish and Wildlife Service

The U.S. Fish and Wildlife Service (USFWS, Service) appreciates interest in future management and hunting opportunities on national wildlife refuges (NWRs, refuges). The Service provided public notice of the proposal through local and national public notice of the availability of the draft Hunt Plan, Environmental Assessment, and draft Hunting Compatibility Determination for Ernest F. Hollings ACE Basin National Wildlife Refuge (NWR, refuge) for public review and comment. Local public notice included a Public Information Bulletin and information and documents posted on the refuge's website. National public notice was provided through the Federal Register (Volume 86, Number 84; 86 FR 23794; Docket No. FWS-HQ-NWRS-2021-0027, FXRS1261090000-212-FF09R20000; pages 23794-23842) which was published on May 4, 2021. Public comments on the proposal were received by the Service during the public review and comment period (April 15, 2021 through July 6, 2021) from three members of the public (one with several signature), and the Choctaw Nation of Oklahoma. The Service's responses to comments received through the Federal Register rulemaking process were published in the final rule in the Federal Register. The Service's responses to comments received locally and refuge-specific comments received through the Federal Register are published here.

Under the National Environmental Policy Act (NEPA), the Service must respond to substantive comments. For purposes of this planning process, a substantive comment is one that was submitted during the public review and comment period, which was within the scope of the proposed action, was specific to the proposed action, had a direct relationship to the proposed action, and included reasons for the Service to consider it. (For example, a substantive comment could be that the document referenced 500 individuals of a particular species, but that current research found 600. In such a case, the Service would likely update the document to reflect the 600, citing the current research. While a comment that would not be considered substantive would be, "We love the proposal.") Comments outside the scope of the proposal were not addressed.

Comment: "As a resident of Charleston County and native of the ACE Basin region in South Carolina, I wholeheartedly support the USFWS proposal to allow turkey hunting on the Ernest F. Hollings NWR. Public hunting opportunities for turkey are somewhat limited south of Charleston on state operated wildlife management areas, and the addition of this tract would be greatly welcomed."

Service's Response to Comment: The Service appreciates your interest in future management and hunting opportunities at ACE Basin NWR. Working in coordination with the State, the Service believes adding opportunities for turkey hunting will have minor to negligible impacts and is an important aspect of the Service's roles and responsibilities as outlined in the legislation establishing the National Wildlife Refuge System. We did not make any changes to the proposed action as a result of these comments.

Comment: Several commenters wanted the use of crossbows during the all hunts.

Service's Response to Comment: Though the refuge did not address this method of take for the youth turkey hunt plan amendment, the use of crossbows will be analyzed in a separate NEPA process. We did not make any changes to the proposed action as a result of these comments.

Appendix E. Finding of No Significant Impact and Decision to Implement The 2021 Big Game Hunting Plan at Ernest F. Hollings Ace Basin National Wildlife Refuge

The US Fish and Wildlife Service (Service) will open new Eastern Wild Turkey “youth-only” hunting opportunities for the Ernest F. Hollings (EFH) ACE Basin National Wildlife Refuge (EFH ACE Basin NWR or refuge) in addition to current hunting seasons all in accordance with the refuge’s 2021-22 Hunt Plan which is stepped-down from the 2009 EFH ACE Basin NWR Comprehensive Conservation Plan (CCP) (USFWS 2009) and amends the 1993 Sport Hunting Plan and Environmental Assessment (USFWS 1993). In an effort to become more aligned with the State of South Carolina’s regulations and seasons, ACE Basin NWR is proposing to open these new hunting opportunities in addition to current seasons.

This additional hunt offers the best opportunity for public hunting that would result in a minimal impact on physical and biological resources, while meeting the Service’s mandates under the National Wildlife Refuge System Administration Act (NWRSA) and Secretarial Order 3356, and aligning with the State of South Carolina’s regulations and seasons.

Selected Action

Alternative B—Proposed Action Alternative:

Under the Proposed Action Alternative, in addition to the current white-tailed deer, feral hog, goose, coot, teal and duck hunting, spring turkey hunting (Youth-Only Hunting) will occur in the Edisto Unit and Combahee Unit on the refuge that includes the following tracts: The Grove Tract, Barrelville Tract, the Bonny Hall Tract, and Upper Combahee Tract. Turkey hunting would be in accordance with state regulations. More restrictive refuge-specific regulations would apply for consistency with nearby State of South Carolina Wildlife Management Areas and their Youth Hunter programs and also due to limited acreage of huntable upland and forested wetlands. Refuge-specific regulations that may apply include season length, bag limit, and quotas on number of permitted youth hunters. High public demand and the large acreage of land required for turkey hunting would limit the number of hunters allowed in order to ensure a safe hunt. Initially, as recommended by the South Carolina Department of Natural Resources (SCDNR; S. Chappellear, personal communication, August 04, 2020) the proposed Youth Hunt for wild turkey would occur on the Saturdays (to not conflict with school attendance by the youth hunters) in the month of April and be limited to 5 hunters per each Saturday hunt, for a total of 20- 25 eligible youth hunters (depending each year on the number of Saturdays in April). The youth hunters would be drawn by the Office of Management and Budget (OMB)-approved lottery application at no charge to the applicants. The youth applicants must be age 17 or younger on the date of the hunt for which they are successfully drawn. Hunters may be accompanied by one assistant, parent or guardian age 21 or older who may participate in the hunt (calling, etc.), but may not personally carry a firearm (except as authorized by a concealed carry permit), harvest nor attempt to harvest a turkey. All youth hunters age 16 or 17 must have a valid SCDNR Hunting License. Youth hunters age 16 or age 17 that have successfully completed a State of South Carolina-approved hunter education course

may hunt without an assistant, parent or guardian. All other youth hunters (age 15 and younger) must be accompanied by an assistant, parent or guardian age 21 or older.

This alternative was selected over the other alternatives because it offers the best opportunity for public hunting that would result in a minimal impact on physical and biological resources, while meeting the Service's mandates under the NWRSA and Secretarial Order 3356, and aligns more fully with the State of South Carolina's hunting regulations.

Other Alternatives Considered and Analyzed

Alternative A—[No Action Alternative]

Under Alternative A, only white-tailed deer, feral hog, goose, coot, teal and duck hunting would continue to be allowed on most of the refuge. Compatible wildlife-dependent public recreational opportunities would be limited to existing levels. There would be no change in current refuge implementation of this priority, compatible wildlife-dependent public use that is allowed. Opportunities to create additional outdoor recreation experiences by adding additional species would be lost. In addition, the Refuge's ability to connect with certain segments of the public would potentially be diminished since hunting for some popular game species would not be permitted. Hunters would pursue these species off-refuge and thus the Refuge's ability to reach those members of the public and promote natural resources conservation, environmental education and natural resources stewardship may be more limited.

This alternative was not selected, because the existing hunting program at refuge did not align with the State of South Carolina's hunting season structure. Additionally, this alternative does not fully fulfill the Service's mandates under the NWRSA and Secretarial Order 3356.

Summary of Effects of the Selected Action

An Environmental Assessment (EA) was prepared in compliance with the National Environmental Policy Act (NEPA) to provide decision-making framework that 1) explored a reasonable range of alternatives to meet project objectives, 2) evaluated potential issues and impacts to the refuge, resources and values, and 3) identified mitigation measures to lessen the degree or extent of these impacts. The EA provided more detailed analysis of the potentially affected natural resources and visitor use and experience with no or negligible impacts anticipated for geology and soils, air quality, water quality, floodplains, Wilderness, cultural resources, refuge management and operations, and socioeconomics. The EA is incorporated as part of this finding.

Implementation of the agency's decision would be expected to result in the environmental, social, and economic effects summarized in the EA, particularly tables 2 through 6. Minor beneficial impacts would be expected for visitor use and experience under Alternative B. The refuge would expect to experience neutral to minor decreases in the depredation rates of songbirds, plants, invertebrates, small mammals, deer fawn, turtles, and other reptiles and amphibians through potential decreases in invasive species and predators. The proposed hunting

activities would be expected to support healthy wildlife populations. Further, an Endangered Species Act Section 7 consultation (Appendix C in the 2021-22 Hunting Package) was developed with the determination that the Proposed Action would not adversely affect the recovery and/or protection of these species or critical habitat. The refuge limit or exclude hunting activities where there are biological concerns. To meet the requirements of compatibility, the Service could limit or exclude hunting activities on additional portions of the refuges to avoid conflicts related to biological resources, such as threatened or endangered species, if necessary. Special hunts could also be used to manage hunting pressure, provide increased opportunities, and manage overall take at appropriate levels.

This alternative would allow new opportunities as described in the hunting plan within the Refuge by expanding open areas, seasons and species hunted. These new hunting opportunities will attract hunters currently not using the Refuge, thus affording an opportunity for the Refuge to engage new segments of the public to promote natural resources conservation, environmental education and natural resources stewardship. Opportunities to create additional outdoor recreation experiences would be consistent with goals and priority uses identified by the National Wildlife Refuge System Improvement Act of 1997 and Secretarial Orders 3347 and 3356. The Service has determined that these changes in the Hunting Plan are compatible with the purposes of the EFH ACE Basin National Wildlife Refuge and the mission of the NWRS.

The Refuge Manager may establish specific regulations for individual species or portions of the Refuge depending on conflicts with other wildlife dependent recreation priorities. Permanent or periodic hunting closures for specific species or closures of portions of the Refuge may be necessary if the Refuge Manager determines that there is specific habitat, wildlife protection and/or public safety requirements. The need to implement mitigation measures will be evaluated annually. All hunting and fishing would be conducted in accordance with all applicable State, Refuge and federal regulations. Coordination with the public and Refuge stakeholders including the State will promote continuity and understanding of Refuges and Service resource goals and objectives, and will help assure that the decision-making process takes into account all interests.

Measures to Mitigate and Minimize Adverse Effects

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

BIOLOGICAL CONFLICTS

The Refuge minimizes conflict related to biological resources by adopting a “wildlife first” principle explicitly stated in the Refuge Improvement Act. Staff monitors species population trends to ensure that target species can be hunted on the Refuge without adversely affecting the species. These monitoring activities include direct observation of populations, consultation with State and Service species specialists, and review of current species survey information and research.

PUBLIC USE CONFLICTS

In an effort to minimize conflicts with priority non-hunting recreational uses outlined in the Refuge Improvement Act, and for public safety, the Refuge designates areas open to hunting and enforces Refuge-specific regulations. Areas administratively closed to hunting are clearly marked with “No Hunting Zone” or “Area beyond This Sign Closed” signs and/or illustrated in the Refuge hunting brochure map. Overall, hunting impacts to visitor services/recreation opportunities are considered short-term, minor and local. Past conflicts have been minimal and we anticipate future conflicts to be about the same.

Specific measures taken to avoid conflict with non-hunting Refuge visitors include the following. As public use levels on the refuge expand across time, unanticipated conflicts between user groups may occur. The Refuge Visitor Service program will be adjusted as needed to eliminate or minimize each problem and provide quality wildlife dependent recreational opportunities that include promoting public safety. Overall, the cumulative impact of hunting on other wildlife-dependent recreation or public safety at the Refuge is expected to be minor.

ADMINISTRATIVE CONFLICTS

There is potential for conflict to occur between the hunting public and management activities on the Refuge. During heavy hunter presence periods, Refuge staff (other than law enforcement personnel) typically avoid working in locations where hunters are present. Another potential conflict associated with hunting on the Refuge is between adjacent landowners and the hunting public. Portions of the Refuge are closed to all hunting. These no hunting zones are clearly illustrated on the Refuges hunting brochure map and marked with “No Hunting Zone” signs. In locations where hunting is allowed the boundaries are posted with refuge boundary signs. Law enforcement personnel work closely with Refuge neighbors on illegal trespass issues and violations of hunting within 100 yards of public dwellings to mitigate these conflicts.

Public Review

The proposal has been thoroughly coordinated with all interested and/or affected parties. The Service sent letters regarding the Draft Hunting and Fishing Plans, draft hunting and fishing compatibility determinations, regulations, and EA to the state of South Carolina on in October 2020 and April 2021. Refuge staff will continue to coordinate with SCDNR to address annual implementation of hunting activities. The Service also sent letters requesting comments and consultation in October 2020 and follow up emails in April 2021 to:

- Catawba Nation
- Eastern Shawnee Tribe of Oklahoma
- Shawnee Tribe
- Absentee-Shawnee

The Service provided public notice of the proposal through local and national public notice of the availability of the draft Hunt Plan, Environmental Assessment, and draft Hunting Compatibility Determination for EFH ACE Basin NWR for public review and comment. Local public notice included a Public Information Bulletin and information and documents posted on the refuge’s website. National public notice was provided through the Federal Register ([Volume](#)

[86, Number 84; 86 FR 23794; Docket No. FWS-HQ-NWRS-2021-0027, FXRS12610900000-212-FF09R20000; pages 23794-23842](#)) which was published on May 4, 2021. Public comments on the proposal were received by the Service during the public review and comment period (April 15, 2021 through July 6, 2021) from three members of the public (one with several signatures), and the Choctaw Nation of Oklahoma. The Service's responses to comments received through the Federal Register rulemaking process were published in the final rule in the Federal Register. The Service's responses to comments received locally and refuge-specific comments received through the Federal Register can be found in Appendix D of this document.

Finding of No Significant Impact

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

- In the context of local/State/refuge hunting/fishing programs, the proposed action will only result in a harvest of less than 1% of additional species. The Service works closely with the State to ensure that additional species harvested on a refuge are within the limits set by the State to ensure healthy populations of the species for present and future generations of Americans.
- The action will result in beneficial impacts to the human environment, including the biodiversity and ecological integrity of the refuge, as well as the wildlife-dependent recreational opportunities and socioeconomics of the local economy, with only negligible adverse impacts to the human environment as discussed above.
- The adverse direct and indirect effects of the proposed action on air, water, soil, habitat, wildlife, aesthetic/visual resources, and wilderness values are expected to be minor and short-term. The benefits to long-term ecosystem health that these efforts will accomplish far outweigh any of the short-term adverse impacts discussed in this document.
- The NWRS uses an adaptive management approach to all wildlife management on refuges, monitoring and re-evaluating the hunting and fishing opportunities on the refuge on an annual basis. This ensures the hunting and fishing programs continue to contribute to the biodiversity and ecosystem health of the refuge and these opportunities do not contribute to any cumulative impacts to habitat or wildlife from climate change, population growth and development, or local, State, or regional wildlife management.
- The action, along with proposed mitigation measures, will ensure that there is low danger to the health and safety of refuge staff, visitors, and the hunters/fishers themselves.
- The action is not in an ecologically sensitive area;
- The action will not impact any candidate, threatened, or endangered species; or any Federally-designated critical habitat;
- The action will not impact any cultural or historical resources;
- The action will not impact any wilderness areas;
- There is no scientific controversy over the impacts of this action and the impacts of the proposed action are relatively certain.
- The proposal is not expected to have any significant adverse effects on wetlands and floodplains, pursuant to Executive Orders 11990 and 11988 because: The areas proposed for expanding hunting already are open to some form of hunting. This proposed package only expands the list of species available to be taken.

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 proposals to implement the 2021-22 Hunting Plan on the EFH ACE Basin NWR do not constitute major Federal actions significantly affecting the quality of the human environment under the meaning of section 102 (2) (c) of the National Environmental Policy Act of 1969 (as amended). As such, an environmental impact statement is not required.

Decision

The Service has decided to implement the 2021-22 Hunting Package for the EFH ACE Basin NWR.

This action is compatible with the purposes of the refuges and the mission of the National Wildlife Refuge System. See the attached compatibility determination for EFH ACE Basin NWR (Appendix B in the 2021-22 Hunt Package).

The action is consistent with applicable laws and policies.

Refuge Chief

Signature/Date