

Chincoteague National Wildlife Refuge and Wallops Island National Wildlife Refuge Hunting Plan – Draft *May 2022*



N A T I O N A L
WILDLIFE
REFUGE SYSTEM

Appendix A - Chincoteague Compatibility Determination
Appendix B - Wallops Island Compatibility Determination
Appendix C - Environmental Assessment

**Chincoteague National Wildlife Refuge and
Wallops Island National Wildlife Refuge
Hunting Plan**

May 2022

U.S. Fish and Wildlife Service

**Chincoteague National Wildlife Refuge
8231 Beach Road
Chincoteague, VA 23336**

Submitted By:
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Signature

Date

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CHINCOTEAGUE NATIONAL WILDLIFE REFUGE AND WALLOPS ISLAND NATIONAL WILDLIFE REFUGE HUNTING PLAN

I. Introduction

National wildlife refuges are guided by the mission and goals of the National Wildlife Refuge System (Refuge System), 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 Refuge System Improvement Act of 1997, Refuge Recreation Act of 1962, and selected portions of the Code of Federal Regulations (CFR) and Fish and Wildlife Service Manual.

The Secretary of the Department of the Interior (DOI) established Chincoteague National Wildlife Refuge (NWR, refuge) in 1943 under authority of the Migratory Bird Conservation Act “...for use as an inviolate sanctuary or for any other management purpose, for migratory birds” (16 U.S.C. § 715d), especially migrating and wintering waterfowl. Since that time, refuge objectives have been expanded to include the protection and management of threatened and endangered species and other wildlife, and to provide for wildlife-oriented public use. Other refuge purposes, and their associated acquisition authorities, now include:

- “... suitable for— (1) incidental fish and wildlife-oriented recreational development, (2) the protection of natural resources, (3) the conservation of endangered species or threatened species ...” 16 U.S.C. § 460k- “... the Secretary ... may accept and use ... real ... property. Such acceptance may be accomplished under the terms and conditions of restrictive covenants imposed by donors ...” (Refuge Recreation Act (16 U.S.C. § 460k-460k-4), as amended);
- “... 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)“... 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); and,
- “... for conservation purposes ...” 7 U.S.C. § 2002 (Consolidated Farm and Rural Development Act).

Wallops Island NWR was created on March 11, 1971 when 373 acres of land were transferred to the Service from the National Aeronautics and Space Administration (NASA) Wallops Flight Center. Formally, Wallops Island NWR was established:

- “... for use as an inviolate sanctuary, or for any other management purpose, for migratory birds” 16 U.S.C. § 715d (Migratory Bird Conservation Act); and
- for “... particular value in carrying out the national migratory bird management program” 16 U.S.C. § 667b (Fish and Wildlife Coordination Act).

Chincoteague NWR encompasses approximately 14,032 acres. All but 418 of those acres are located in Accomack County, Virginia. In addition to the Virginia portion of Assateague Island, Chincoteague NWR also includes all 427 acres of Morris Island (located between Chincoteague and Assateague Islands), 546 acres of the northern end of Chincoteague Island (known as Wildcat Marsh), all 1,434 acres of Assawoman Island, 174 acres of the northern end of Metompkin Island, and 2,012 acres of Cedar Island in both fee title and easements. Chincoteague NWR has been designated as part of a Globally Important Bird Area (IBA) by the American Bird Conservancy and the Audubon Society; one of the top 10 birding Hotspots by the National Audubon Society; and a Site of International Importance within the Western Hemisphere Shorebird Reserve Network (WHSRN), a conservation partnership of stewards and landowners led by the Manomet Center for Conservation Sciences.

Chincoteague NWR is also an important recreational destination, particularly for people living in the Washington, D.C., Baltimore, Philadelphia, and New York City metropolitan areas. With approximately 1.2 to 1.4 million recreational visits annually, Chincoteague NWR is one of the most visited refuges in the United States. Chincoteague NWR is open to all six of the priority public uses of the Refuge System (hunting, fishing, wildlife observation and photography, environmental education and interpretation) as well as other public uses that have been deemed appropriate and compatible. The majority of visits to the refuge are for the recreational beach. The beach is managed by the National Park Service (NPS) under an agreement with the FWS resulting from a congressional mandate from when the Assateague Island National Seashore was designated in 1965. Visitation to Chincoteague NWR supports the Town of Chincoteague’s tourist economy.

Wallops Island NWR is located on the mainland, east of Wattsville, Virginia in Accomack County. The refuge is immediately adjacent to Highway 175, which provides access to the Town of Chincoteague and Chincoteague NWR. Wallops Island NWR is comprised mainly of salt marsh and woodlands and contains habitat for a variety of species, including upland- and wetland-dependent migratory birds. Wallops Island NWR is managed as a satellite refuge of Chincoteague NWR.

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

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

Hunting on the Delmarva Peninsula is a traditional outdoor pastime and remains a popular form of wildlife-dependent recreation on the refuges and a vital part of the cultural, social, and economic fabric of the communities near the refuges. All hunting is conducted within the regulatory framework established annually by the Commonwealth of Virginia. Chincoteague NWR is open to white-tailed deer, sika, and migratory bird hunting. Wallops Island NWR is closed to the public except for white-tailed deer hunting. It was opened to public hunting in 2002 to reduce effects of overbrowsing by white-tailed deer and to reduce the potential of deer collisions with vehicles on the adjacent Highway 175 and aircraft at the neighboring NASA flight facility.

New proposed changes for Chincoteague NWR include the following:

- In the Northern Hunt Zone, we would add raccoon, opossum, fox, and coyote hunting during the regular State deer season. Also in the Northern Hunt Zone, we would allow the use of muzzleloaders for big game hunting, remove the limit on the number of hunters in the sign-in/sign-out process, follow the State bag limit for white-tailed deer and open a quota hunt for turkey.

- The current Toms Cove Hook Hunt Zone would be merged into the Archery Only Hunt Zone, removing shotguns as a method of take.
- In the expanded Archery Only Hunt Zone, we would add raccoon, opossum, fox, and coyote hunting during the regular State deer season. Also in the Archery Only Hunt Zone, we would remove the limit on the number of hunters in the sign-in/sign-out process, we would follow the State bag limit for white-tailed deer, and we would open a quota hunt for wild turkey.
- The Waterfowl Hunt Areas would open to all migratory game birds during State seasons, from September 16 through March 14.

New proposed changes for Wallops Island NWR include the following:

- The refuge would open for the first time to hunting for upland game (raccoon, opossum, fox, coyote, rabbit, and squirrel), and all migratory game birds. Hunting for these species would occur during State seasons between September 16 and March 14.
- The refuge would eliminate the existing sign-in/out process for all hunts.

For both refuges, the use of non-lead ammunition for proposed new hunting opportunities (raccoon, opossum, fox and coyote, plus rabbit, squirrel and migratory game birds at Wallops Island NWR) will be required upon implementation of this plan in 2022. The use of non-lead ammunition for hunting deer will initially be voluntary and will transition to be required for use after a 4-year phase-in period is implemented then completed in 2026. This phase-in period will allow hunters time to adapt to the new regulations without diminishing deer hunting opportunities on the refuges. The refuge staff will provide information to assist in a valuable transition period that benefits fish, wildlife, and people.

II. Statement of Objectives

The objectives for the hunting programs at Chincoteague and Wallops Island NWRs are to provide the public with high quality wildlife-dependent recreational opportunities that align with refuge purposes and management objectives. The Service has long recognized that hunting is an integral part of a comprehensive wildlife management program and that positive benefits can be attributed to a well-managed hunt. As such, hunting is considered one of the six priority public uses of the refuge system. Hunting is recognized as an acceptable, traditional form of wildlife-dependent recreation that can be and is sometimes used as a tool to effectively manage wildlife population levels.

Hunting is consistent with Goal 6 of the refuges' 2015 Comprehensive Conservation Plan (CCP) to provide the opportunity for "people of all ages and abilities [to] develop a stewardship ethic while enjoying their refuge experience and increasing their knowledge of the Service, Refuge System, and the refuge." This goal includes a specific objective (Goal 6, Objective 6.1) to "increase level of opportunity (e.g., expansion of hunted species) in the hunt program, such as the fall/winter light goose hunt, through expansion of hunted species, trapping, and new hunting programs." This

objective will help provide safe and high quality big game, small game, and waterfowl hunting opportunities for the public.

III. Description of Hunting Program

A. Areas to be Opened to Hunting

We allow public hunting to occur in the following designated areas. Please see the attached map (Figure 1).

- Northern Hunt Zone (3,869 acres)
- Archery Only Zone (3,268 acres)
- Waterfowl Hunt Area (2,703 acres)
 - Morris Island (located between Chincoteague and Assateague Islands);
 - Wildcat Marsh (northern end of Chincoteague Island);
 - Assawoman Island; and
 - Metompkin Island (northern end)
- Wallops Island NWR (373 acres)

No-hunting zones would include beach areas, the over wash zone on the Assateague Island Unit, the southwest portion of Wildcat Marsh, and a 100-foot buffer area around any building, road or trail. Areas that would require a buffer area include the bunkhouse, visitor center, maintenance buildings, the Wildlife loop trail, headquarters office, lighthouse, Service Road, and the Marsh, Swan Cove, and the Woodland trails.

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

Hunting at Chincoteague and Wallops Island NWRs will be permitted from September 16 to March 14. Hunting hours and season dates within this time period will be in accordance with State regulations and may include additional refuge-specific limitations.

Chincoteague NWR

Migratory game bird hunting would be permitted for duck, goose, swan, rail, coot, snipe, gallinule, woodcock, dove, and crow in the designated Migratory Game Bird Hunt Zones (see map). Hunting and access for migratory game birds will be by boat only. Sunday hunting will be permitted for all migratory birds. The use of retriever dogs will be allowed. The use of non-lead ammunition will be required for all migratory game bird species in addition to the Federal requirements for waterfowl, swans, and coot.

Upland game hunting for raccoon, opossum, fox, and coyote would be allowed in the Northern and Archery Only Hunt Zones. Upland game hunting would be permitted during regular refuge hours only (i.e., no night hunting, access from 2 hours before sunrise to 2 hours after sunset) and would be concurrent with the State deer season. No dogs will be allowed. Upland game hunting would not be permitted on Sundays. The use of non-lead ammunition will be required where firearms are allowed.

Big game hunting will be permitted for white-tailed deer and sika in accordance with State seasons and methods of take in the Northern and Archery Only Hunt Zones. Spring and fall turkey hunting would also be allowed in the Northern and Archery Only Hunt Zones via a mentored quota hunt initially targeted to hunts for youth and apprentice hunters to assist the State with hunter recruitment and retention efforts (commonly referred to as R3). The Northern Hunt Zone is the firearms zone. In this area, methods of take will include all methods permitted by the State. Where firearms are allowed, the use of non-lead ammunition will be required for turkey hunts and will be encouraged for deer and sika until it's required for all species in 2026. The Archery Only Zone will be restricted to archery equipment only. Chase dogs will not be permitted for hunting deer on the refuge. Big game hunting will not be permitted on Sundays per State law. Daily sign-in and sign-out procedures will be required for big game hunters. This procedure notifies hunters of current management activities that may impact the hunt zones and allows for the collection of harvest and hunter participation data for planning of future hunt opportunities. The number of hunters will not be limited within each zone. Daily and seasonal bag limits will follow State regulations. The sika harvest will be regulated in accordance with the state Deer Population Reduction Program (DPOP).

Wallops Island NWR

Migratory game bird hunting would be permitted for waterfowl, rail, coot, snipe, gallinule, dove, woodcock, and crow. Hunting would adhere to State seasons except that it will start on September 16 and end on March 14 to minimize disturbance to shore birds arriving to nest in the spring. Use of trained retriever dogs would be permitted. Upland game hunting would include raccoon, opossum, fox, coyote, rabbit, and squirrel from September 16 to March 14. For big game, the refuge will remain open to white-tailed deer hunting in accordance with State seasons and methods of take. Chase dogs will not be permitted for hunting deer on the refuge. Spring and fall turkey hunting would be administered via a mentored quota hunt and initially targeted to hunts for youth and apprentice hunters to assist the State with hunter recruitment and retention efforts (commonly referred to as R3). Use of non-lead ammunition will be required for all migratory game bird, upland game, and turkey hunts. The use of non-lead ammunition will be encouraged for deer until it's required for in 2026.

C. Hunter Permit Requirements

Hunters will be required to obtain all relevant State and Federal licenses and permits and have in their possession a signed refuge-specific hunt brochure. See "Hunter Permit Application and/or Registration Procedures" below.

D. Consultation and Coordination with the State

The refuge reviewed the operations and regulations for neighboring State Wildlife Management Areas and refuges to find consistency where possible. Refuge staff worked with the local State biologist and conservation officers early in the development of the plan. The State of Virginia provided a letter of support for implementing requirements for non-lead ammunition on December 10, 2020. We reached out to VDWR on June 11, 2021, to discuss this Hunting Plan. Refuge staff requested review by the State regional office that covers our area to help adjust our plan to align, where possible, with State management goals. Refuge staff have continued to

consult and coordinate on specific aspects of the Hunting Plan. The State is in agreement with the refuges' hunting program, as it will help meet State objectives. Chincoteague NWR and Virginia Department of Wildlife Resources (VDWR) will continue to work together to ensure safe and enjoyable recreational hunting opportunities.

E. Law Enforcement

Enforcement of refuge violations normally associated with management of a national wildlife refuge is the responsibility of commissioned Federal Wildlife Officers (FWOs). Other officers, Special Agents, NPS Rangers, State game wardens, and the local Sheriff's Department may assist the Service's full-time FWOs.

F. Funding and Staffing Requirements

Annual hunt administration costs for Chincoteague and Wallops Island NWRs including salary, equipment, updating brochures, signs, collection of hunt data and analysis of biological information, etc. total approximately \$24,000. Chincoteague NWR funds are used to conduct hunts on the Chincoteague and Wallops Island NWRs. Funding specifically for hunts has not been allocated, although funds are available through recreation fees. We anticipate that funding would continue to be sufficient to continue the hunting program at Chincoteague and Wallops Island NWRs in the future.

Table 1. Funding and Staffing Requirements

Identifier	Cost
Staff (Maintenance, Biologist, Managers, Visitor Services, Contractors)	\$9,000
Maintain roads, parking lots, trails*	\$13,000
News releases, fact sheets, permitting reports	\$1,000
Maintain hunt/fish materials and supplies (signs, deer check station)	\$1,000
Total Annual Cost	\$24,000

**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. Volunteers account for some maintenance hours and help to reduce overall cost of the program.*

IV. Conduct of the Hunting Program

To ensure compatibility with refuge purposes and the mission of the Refuge System, hunting is conducted in accordance with State and Federal regulations and supplemented by refuge-specific regulations (50 CFR 32.65). However, the refuge managers may, upon annual review of the hunting program, impose further restrictions on hunting, recommend the refuges be closed to activities, or further liberalize hunting regulations up to the limit of State regulations. The refuges will restrict activity if it becomes inconsistent with other priority refuge programs or endangers refuge resources or public safety.

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

Hunters are required to sign the appropriate hunt brochure prior to hunting on Chincoteague and Wallops Island NWRs. Hunt brochures are available to be printed or downloaded from the

refuge website. Brochures are also available at the hunter check station and at the Herbert H. Bateman Visitor and Administrative Center. Hunters are required to sign in and out at the hunt check station each day in order to hunt in the Chincoteague NWR Northern or Archery Only Hunt Zones. Spring and fall turkey hunting will be administered via a mentored quota hunt and initially targeted to hunts for youth and apprentice hunters to assist the State with hunter recruitment and retention efforts (commonly referred to as R3). Hunter application and selection procedures for the proposed turkey quota hunts will be developed in coordination with the State and published online on the refuge website and in our hunting brochure.

B. Refuge-Specific Hunting Regulations

Listed below are proposed refuge-specific regulations and procedures that pertain to hunting on Chincoteague and Wallops Island NWRs upon implementation of this plan. These regulations and procedures may be modified as conditions change or if refuge expansion continues or occurs.

Chincoteague NWR Migratory Birds

- Hunting of waterfowl (duck, goose, swan), rail, coot, snipe, gallinule, dove, woodcock, and crow is allowed on designated areas of the refuge in accordance with State regulations between September 16 to March 14.
- Hunters must obtain and possess a signed refuge migratory game bird hunt brochure while hunting.
- Hunters may access the refuge from 2 hours before sunrise until 2 hours after sunset.
- Trained dogs may be used for the retrieval of migratory birds.
- Portable blinds and decoys must be removed at the end of each day's hunt.
- Permanent blinds and pit blinds are prohibited.
- Hunting areas are only accessible by boat.
- Non-lead ammunition is required.

Big Game

- Hunting of white-tailed deer and sika is allowed on designated areas of the refuge in accordance with State regulations.
- We allow hunting for turkey through a quota hunt process.

- Hunters must obtain and possess a signed big and upland game refuge hunt brochure while hunting.
- Firearms are prohibited in the designated archery only areas.
- Hunters may access the refuge from 2 hours before sunrise until 2 hours after sunset.
- All occupants of a vehicle or hunt party must possess a signed refuge hunt brochure and be actively engaged in hunting unless aiding a disabled person who possesses a valid State disabled hunting license.
- Portable tree stands are allowed but must be removed at the end of each day's hunt.
- Virginia DPOP tags will be provided by refuge staff and must be used on sika taken on the refuge.
- Hunting is prohibited within 100 feet of any building, road, or trail.
- Organized deer drives are prohibited.
- Deer chase dogs are prohibited.
- Hunters must sign in at the hunter check station prior to hunting and sign out upon exiting the refuge.
- Hunters must report all harvested animals on the sign-out sheet at the hunter check station. Self-serve jawbone extraction may be requested in accordance with State permit requirements.
- Non-lead ammunition is required for all turkey hunting and will be required for deer hunting beginning in 2026.

Upland Game

- Hunting of raccoon, opossum, fox, and coyote is allowed on designated areas of the refuge concurrent with the State deer season.
- Hunters must obtain and possess a signed refuge big and upland game hunt brochure while hunting.
- Hunters may access the refuge from 2 hours before sunrise until 2 hours after sunset.
- Firearms are prohibited in designated archery only areas.

- All occupants of a vehicle or hunt party must possess a signed refuge hunt brochure and be actively engaged in hunting unless aiding a disabled person who possesses a valid State disabled hunting license.
- Hunting is prohibited within 100 feet of any building, road, or trail.
- Hunters must sign in at the hunter check station prior to hunting and sign out upon exiting the refuge.
- Dogs are prohibited.
- Non-lead ammunition is required.

Wallops Island NWR

Migratory Birds

- Hunting of waterfowl (duck, goose, swan), rail, coot, snipe, gallinule, dove, woodcock, and crow is allowed on designated areas of the refuge in accordance with State regulations between September 16 to March 14.
- Hunters must obtain and possess a signed refuge hunt brochure while hunting.
- Hunters may access the refuge from 2 hours before sunrise to 2 hours after sunset.
- Trained dogs may be used for the retrieval of migratory birds.
- Portable blinds and decoys must be removed at the end of each day.
- Permanent blinds and pit blinds are prohibited.
- Non-lead ammunition is required.

Big Game

- Hunting of white-tailed deer is allowed on designated areas of the refuge in accordance with State regulations.
- We allow the hunting of turkey through a quota hunt process.
- Hunters must obtain and possess a signed refuge hunt brochure while hunting
- Hunters may access the refuge from 2 hours before sunrise to 2 hours after sunset.

- Portable tree stands are allowed but must be removed at the end of each day.
- Chase dogs for deer are prohibited.
- Organized deer drives are prohibited.
- Non-lead ammunition is required for all turkey hunts and will be required for deer hunting beginning in 2026.

Upland Game

- Hunting of raccoon, opossum, fox, coyote, rabbit, and squirrel is allowed on designated areas of the refuge from September 16 to March 14 in accordance with State regulations.
- Hunters must obtain and possess a signed refuge hunt brochure while hunting
- Hunters may access the refuge from 2 hours before sunrise to 2 hours after sunset.
- Non-lead ammunition is required.

For both refuges, the use of non-lead ammunition for proposed new hunting opportunities (raccoon, opossum, fox and coyote, plus rabbit, squirrel and migratory game birds at Wallops Island NWR) will be required upon implementation of this plan in 2022. The use of non-lead ammunition for hunting deer will initially be voluntary and will be required for use after a 4-year phase-in period is completed in 2026. This phase-in period will allow hunters time to adapt to the new regulations without diminishing deer hunting opportunities on the refuges. The refuge staff will provide information to assist in a valuable transition period that benefits fish, wildlife, and people.

C. Relevant State Regulations

We allow hunting on the refuges in accordance with State regulations subject to certain conditions including some season date restrictions. Additionally, the refuges coordinate with the State as needed to maintain regulations and programs that are consistent with the State's management programs. Relevant refuge-specific regulations are annually listed in 50 CFR 32.65, and summarized above in Section IV, subsections B and C. In addition to CFRs and refuge rules, hunters participating in refuge hunt should refer to the Virginia Hunting or Fishing Regulations Guide for general hours, requirements, definition of approved method, limits, license requirements, and other important information. Information can also be found on the VDWR website and through the annual Virginia Hunting and Trapping and/or Fishing Regulation Digests. Hunters are responsible for knowing and complying with all applicable State, Federal, and refuge-specific regulations.

D. Other Refuge Rules and Regulations for Hunting

- Visitors, including hunters, must pay the refuge entrance fee to access the Assateague Island unit of the Chincoteague NWR.
- Four-wheel drive vehicles are required to access Toms Cove Hook (does not require ORV zone permit for access).
- All over-sand vehicles must carry a shovel, jack, tow rope or chain, a board or similar support for the jack, and a low-pressure tire gauge.
- All vehicles must be parked in designated areas.
- Mopeds and other motorized vehicles are prohibited on trails meant for walking and biking.
- Pets are prohibited unless specifically allowed for a hunting purpose.

V. Public Engagement

A. Outreach for Announcing and Publicizing the Hunting Program

The refuge maintains a mailing list, for news release purposes, to local newspapers, radio, and websites. Special announcements and articles may be released in conjunction with hunting seasons. In addition, information about the hunt will be available at the Chincoteague NWR Visitor Center, on the Chincoteague NWR and Wallops Island NWR websites, and/or posted on the hunt check station.

B. Anticipated Public Reaction to the Hunting Program

Based on the comments received during the 2015 CCP process and because hunting has been allowed on Chincoteague NWR for almost 20 years, little negative public reaction to the proposed changes is expected. Some hunters may oppose requirements for non-lead ammunition, combining the old Toms Cove Hook Zone with the Archery Only Zone, and the removal of shotgun as a method of take on Toms Cove Hook. Hunting is an important economic and recreational use of natural resources in Virginia and along the Eastern shore.

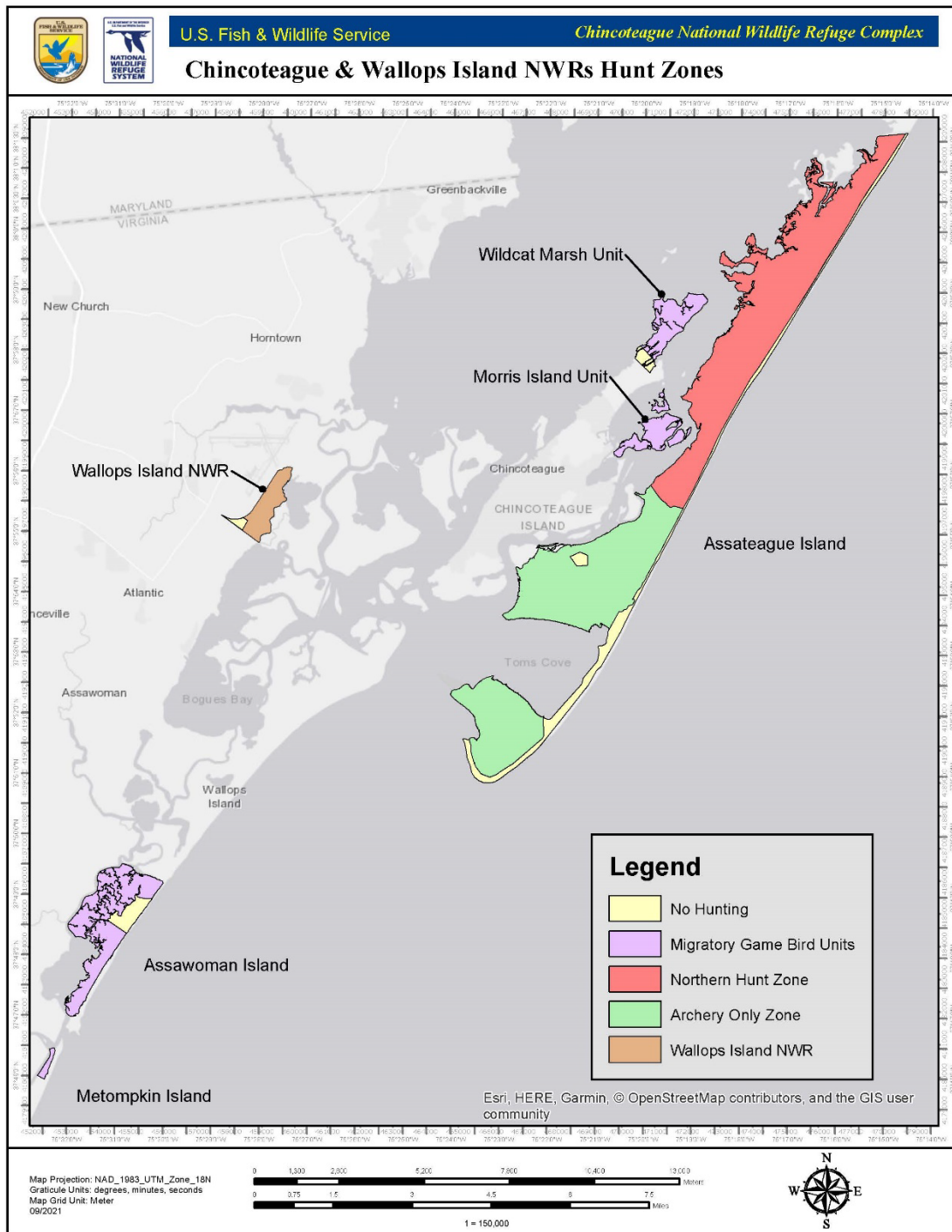
C. How Hunters Will Be Informed of Relevant Rules and Regulations

General information regarding hunting and other wildlife-dependent public uses can be obtained at Chincoteague NWR Visitor Center located at 8231 Beach Road, Chincoteague, VA 23336 or by calling (757) 336-6122. Dates, forms, hunting unit directions, maps, applications, and permit requirements about the hunt will be available at the Refuge Visitor Center and on the Chincoteague and Wallops Island NWR websites at: www.fws.gov/refuge/chincoteague/ and https://www.fws.gov/refuge/wallops_island/.

VI. Compatibility Determination

Hunting and all associated program activities proposed in this plan are compatible with the purposes of the refuge. See attached Compatibility Determinations.

Figure 1. Chincoteague and Wallops Island NWRs Hunt Zones



COMPATIBILITY DETERMINATION

USE: Hunting (Big game, upland game, and migratory game bird hunting)

REFUGE NAME: Chincoteague National Wildlife Refuge

DATE ESTABLISHED: May 13, 1943

ESTABLISHING and ACQUISITION AUTHORITIES:

- 1) Migratory Bird Conservation Act {16 U.S.C. 715d}
- 2) Refuge Recreation Act {16 U.S.C. 460 K-1, K-2}
- 3) Emergency Wetlands Resources Act of 1986 {16 U.S.C. 3901(b)}
- 4) Fish and Wildlife Act of 1956 {16 U.S.C. 742f (a)(4), (b)(1)}
- 5) Consolidated Farm and Rural Development Act {7 U.S.C. 2002}

REFUGE PURPOSE(S):

- “...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds.” 16 U.S.C. § 715d (Migratory Bird Conservation Act);
- “... suitable for - (1) incidental fish and wildlife-oriented recreational development, (2) the protection of natural resources, (3) the conservation of endangered species or threatened species ...” 16 U.S.C. § 460k-1 “... the Secretary ... may accept and use ... real ... property. Such acceptance may be accomplished under the terms and conditions of restrictive covenants imposed by donors ...” 16 U.S.C. § 460k-2 (Refuge Recreation Act (16 U.S.C. § 460k-460k-4), as amended);
- “... 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) “... 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); and
- “... for conservation purposes ...” 7 U.S.C. § 2002 (Consolidated Farm and Rural Development Act).

NATIONAL WILDLIFE REFUGE SYSTEM MISSION:

The mission of the National Wildlife Refuge System (Refuge System) is “... to administer a

national network of lands and waters for the conservation, management and, where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the 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 use is public hunting of big game (white-tailed deer, sika, and turkey), upland game (raccoon, opossum, fox, and coyote), and migratory game birds (rail, coot, snipe, gallinule, duck, goose, swan, woodcock, dove, and crow) at Chincoteague National Wildlife Refuge (NWR, refuge). Hunting was identified as one of six priority public uses of the Refuge System by the National Wildlife Refuge System Administration Act (NWRSA) 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?

The use would be conducted in designated management units of the refuge. Migratory game bird hunting is open on the Wildcat Marsh Unit, Morris Island Unit, Assawoman Island Unit, and Metompkin Island Unit. Wildcat Marsh Unit (546 acres) is located at the north end of Chincoteague Island, and Morris Island Unit (427 acres) is located between Chincoteague and Assateague Islands. Assawoman Island Unit contains 1,434 acres and encompasses the entire island, and the Metompkin Island Unit consists of 174 acres on the north end of the island. Thus, migratory game bird hunting would be conducted in designated areas of the refuge on a total of up to 2,581 acres over the 14,032-acre refuge, or approximately 18 percent of the refuge.

Big game and upland game hunting would be conducted in designated areas of the refuge on the Virginia portion of Assateague Island Unit. Assateague Island is a barrier beach island that extends over 30 miles along the Atlantic coast. The Assateague Island Unit includes the Northern Hunt Zone (3,869 acres) and the Archery Only Zone (3,268 acres).

No-hunting zones would include beach areas, the over wash zone on Assateague Island Unit, the southwest portion of Wildcat Marsh, and a 100-foot buffer area around any building, road or improved trail, including around refuge housing units, the bunkhouse, the headquarters office and Visitor Center, maintenance buildings, the lighthouse, the Service Road, the Wildlife Loop, the Marsh Trail, Swan Cove Trail, and the Woodland Trail. Please refer to Figure 1.

(c) When would the use be conducted?

Hunting would be permitted from September 16 to March 14. Season dates, within this time period, will be in accordance with State regulations. The only exception is for spring turkey hunting, which would occur during the State spring season from mid-April through early May. Big game and migratory game bird hunting hours would occur in accordance with State regulations, and hunters may access the refuge 2 hours before sunrise until 2 hours after sunset. Upland game hunting would only occur in accordance with State regulations and only during regular refuge access hours for hunting from 2 hours before sunrise to 2 hours after sunset. Night hunting would not be allowed. In accordance with State regulations, hunting on Sundays would be permitted for migratory bird hunting and prohibited for big game and upland game hunting.

(d) How would the use be conducted?

Hunting would be permitted in designated areas of the refuge in accordance with State and refuge-specific regulations. Hunters will read and sign a hunt brochure prior to hunting on the refuge. Hunt brochures are available online on the refuge website, at the hunt check station, or at the Visitor Center. Hunters on the Assateague Island Unit of the refuge are required to sign-in/sign-out at the hunt check station daily.

Big Game

Big game hunting is permitted for white-tailed deer, sika, and wild turkey in accordance with State seasons and methods of take within respective zones. The Northern Hunt Zone is the firearms zone and includes all methods permitted by the State, and the Archery Zone is restricted to archery equipment only. Spring and fall turkey hunting would be administered via a mentored quota hunt and initially targeted to hunts for youth and apprentice hunters to assist the State with hunter recruitment and retention efforts (commonly referred to as R3). The quota turkey hunt would require the use of non-lead ammunition. Big game hunting will not be permitted on Sundays per State law. Daily sign-in/sign-out procedures will be required for big game hunters to facilitate notification of hunters for current management activities which may impact the hunt zones, collection of harvest data, and to determine hunter participation data for planning of future hunt opportunities. The number of hunters will not be limited within each zone. Daily and seasonal bag limits will follow the State regulations. The sika harvest would be regulated in accordance with the State Deer Population Reduction Program (DPOP).

Upland Game

Upland game hunting for racoon, opossum, fox, and coyote would be allowed during regular refuge hours only (no night hunting, access from sunrise to sunset) and would be concurrent with the deer season (approximately October through early January). The use of non-lead ammunition would be required for all upland game species. Upland game hunting will not be permitted on Sundays.

Migratory Game Birds

Migratory game bird hunting would be permitted for rail, coot, snipe, gallinule, duck, goose, swan, woodcock, dove, and crow in the designated Migratory Bird Hunt Zones (see map). Hunting and access for migratory game bird hunting would be by boat only. Sunday hunting would be permitted for all migratory game birds. The use of retriever dogs would be allowed. Hunters must obtain, sign, and have in their possession a signed hunt brochure. The use of non-lead ammunition would be required for all migratory game bird species in addition to the Federal ammunition requirements for duck, goose, swan, and coot.

Hunter Access

The refuge will make reasonable efforts to allow hunters access to each of the hunt units. The intention is to provide safe, quality hunting opportunities that consider the welfare of the refuge wildlife resources. If hunting conditions are deemed unsafe to hunters or refuge staff or negative impacts on resources are discovered, hunt program procedures and timing are subject to change. All access points and hunter parking areas will be delineated on refuge hunt maps and will be included in the hunt brochures. Hunters may be permitted to enter refuge lands prior to normal refuge operating hours in order to reach hunt units at the start of State hunting hours for big game and migratory game bird hunting.

Waterfowl hunters may access hunt units by boat via several private and public boat launches within the refuge vicinity. No boat launches exist on the refuge and the waterfowl hunt units are not accessible via land. State and municipal boat launches are within a short distance of refuge hunting areas and can be used for the launch and retrieval of boats.

Non-Lead Ammunition

The use of non-lead ammunition for proposed new hunting opportunities (all migratory birds, raccoon, opossum, fox, coyote, and turkey) will be required upon implementation of this plan in 2022. The use of non-lead ammunition for hunting deer and sika will initially be voluntary and will transition to be required for use after a 4-year phase-in period is completed in 2026. This phase-in period will allow hunters time to adapt to the new regulations without diminishing deer hunting opportunities on the refuge. The refuge staff will provide information to assist in a valuable transition period that benefits fish, wildlife, and people.

(e) Why is the use being proposed?

Hunting is one of the priority public uses defined by the NWRSA of 1966, as amended by the Refuge System Improvement Act of 1997 (Public Law 105-57). Department of the Interior Secretarial Order 3356 (September 15, 2017) further emphasized identifying opportunities to increase outdoor recreation opportunities for all Americans, including opportunities to hunt and fish. This legitimate and appropriate use of a NWR is generally considered compatible as long as it does not materially interfere with or detract from the fulfillment of the Refuge System mission or the purposes of the refuge.

Objectives for the hunting program at Chincoteague NWR include providing the public with high quality wildlife-dependent recreational opportunities that align with refuge purposes and management objectives. The Service has long recognized that hunting is an integral part of a comprehensive wildlife management program and that positive benefits can be attributed to a well-managed hunt.

Hunting is consistent with the 2015 Comprehensive Conservation Plan's (CCP) larger goal that aims to have "people of all ages and abilities develop a stewardship ethic while enjoying their refuge experience and increasing their knowledge of the FWS, Refuge System, and the refuge." This goal includes a specific objective (Goal 6, Objective 6.1) to "increase level of opportunity (e.g., expansion of hunted species) in the hunt program, such as the fall/winter light goose hunt, through expansion of hunted species, trapping, and new hunting programs." This objective will help provide safe and high quality big game, small game, and waterfowl hunting opportunities for the public.

AVAILABILITY OF RESOURCES:

Cost analysis for administration and management of the hunt is estimated to be approximately \$24,000. Adequate Service resources currently exist and can be provided with existing personnel to properly develop, operate, and maintain the hunt and will not detract from refuge purposes or the Refuge System mission.

Resources involved in management and administration of the hunt include personnel to provide annual updates to the hunt brochure, website information, and hunt kiosk; personnel to maintain boundary markers in the field; staff and equipment to maintain roads and create designated parking and install signage in new units (see Table A-1).

Table A-1. Estimated Costs for Hunting at Chincoteague and Wallops Island NWRs Combined

Identifier	Cost
Staff (Maintenance, Biologist, Managers, Visitor Services, Contractors)	\$9,000
Maintain roads, parking lots, trails*	\$13,000
News releases, fact sheets, permitting reports	\$1,000
Maintain hunt/fish materials and supplies (signs, deer check station)	\$1,000
Total Annual Cost	\$24,000

**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. Volunteers account for some maintenance hours and help to reduce overall cost of the program.*

Monitoring of regional populations to determine harvest regulations will be conducted by the State. In addition, we will request State resources to manage the mentored turkey hunts.

ANTICIPATED IMPACTS OF THE USE:

The following are anticipated impacts for hunting on Chincoteague NWR. For more specific impacts related to all proposed changes detailed in the Hunting Plan, please refer to the Environmental Assessment (Appendix C).

Hunting has been permitted on the refuge since 1964 with no discernible adverse impacts to resources. Hunting provides wildlife-dependent recreational opportunities and can foster a better appreciation and more complete understanding of the wildlife and habitats associated with the southern Delmarva Peninsula landscape. This could result in more widespread and stronger support for wildlife conservation, the refuge, the Refuge System, and the Service.

This section predicts foreseeable impacts of implementing the hunting program on refuge resources. When detailed information may be deficient or unavailable, we base our evaluation on professional judgment and experience. We usually identify potential impacts within a long-range timeframe (i.e., 15 years) and beyond that timeframe, they become more speculative.

The refuge hunt program is designed to be sustainable through time, given relatively stable conditions, particularly because of close coordination with the Virginia Department of Wildlife Resources (VDWR). Overall, adverse impacts of hunting on big game (white-tailed deer, sika, and turkey), upland game (raccoon, opossum, fox, and coyote), and migratory game bird (rail, coot, snipe, gallinule, duck, goose, swan, woodcock, dove, and crow) populations at the refuge would be negligible. The proportion of the refuge's harvest of these species would be negligible when compared to local, regional, and statewide populations and harvest.

Because of the regulatory process for harvest management in place within the Service, 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, we anticipate no significant impacts on resident wildlife, migratory birds, and non-hunted wildlife as a result of hunting on Chincoteague NWR.

In comparison with the entire Atlantic Flyway, or the breeding ranges of the many birds and wildlife that use it, the hunting area of the refuge comprises a relatively small total land mass. The Service recognizes that the refuge is not isolated ecologically from the land around it; however, we may have overstated positive or negative impacts in that larger geographic context. Nevertheless, many of the actions we propose conform with the 2015 CCP and other regional landscape plans, and provide positive, incremental contributions to those larger landscape goals.

Big Game

Deer hunting (white-tailed and sika) on the refuge has been occurring since 1964 and annual harvest numbers on the refuge remain relatively high (in 2020/2021: 216 deer harvested; 2019/2020: 194 deer harvested). We anticipate a small increase in the number of deer harvested annually, but this would not meaningfully affect the current overpopulation of deer in the county. Deer may avoid hunting areas due to increased pressure, but this would not create negative impacts to the population. Sika populations are estimated using the Downing Population Reconstruction and are managed through the State harvest regulations for DPOP.

According to VDWR, the wild turkey population was estimated as 0.45 to 0.61 turkeys per square mile of suitable habitat for the northern Virginia region in the 2016-2017 season. The northern Virginia region population is considered stable to rising. Approximately 20,525 turkeys were harvested during the 2020 spring gobbler season, and 232 harvests were made in Accomack County.

Studies examining the direct effects of hunting on turkey behavior and movement are limited. One study conducted in Louisiana tracked the movements of wild turkey during the hunting season and found that distances traveled by wild turkeys were only 8 percent greater during hunting days than non-hunting days (Gross et al. 2015). Although hunting made it more likely for a turkey to change their movement patterns, a small-scale increase in range is not biologically significant.

The refuge would open a limited quota mentored turkey hunt during the spring and fall seasons. The remainder of the year would allow turkey to rest and recover. The refuge lacks current population estimates for turkeys on the refuge. However, based on staff observations of turkeys and anticipated hunter participation, the refuge estimates less than 10 turkeys will be harvested annually from Chincoteague NWR. Relative to State harvest numbers, refuge impacts on statewide populations are expected to be negligible.

Upland Game

We anticipate small harvest levels of these species and only minor impacts to their population levels. The majority of land use surrounding the refuge lands consists of agriculture and residential areas where populations of these species proliferate on the broader surrounding landscape. Any impacts will be short-term and minor and would mostly include changes in habitat use by individuals.

Migratory Game Birds

Opening less than 40 percent of the marshes to migratory game bird hunting would have some short-term disturbance to the waterbirds resting and feeding in the area. Marsh areas are prone to disturbance, and increased foot traffic to access hunting sites would result in trampling of sensitive marsh plants in frequently used areas (Lomnický et. al. 2019). There would be few long-term impacts to waterbird populations since most of the marsh area on the eastern shore is owned by the State and is already open to migratory bird hunting.

Non-target Species

Chincoteague NWR hosts a wide diversity of both resident and migratory wildlife. The refuges are important stopover sites in the Atlantic Flyway and provide important habitat for resident species in an area with rising development trends. Many common bird species will be in areas adjacent to hunting, in both upland and wetland areas, and they may relocate to other areas of the refuge during hunting.

Thirty-four mammal species have been recorded on the lower Delmarva Peninsula and 9 bat species may be found on or around the refuge. Frogs and toads that can be found at Chincoteague NWR include the Northern spring peeper, Southern green frog, Southern leopard frog, Fowler's toad, and Eastern narrow-mouthed toad. The freshwater and estuarine turtles that inhabit the refuge include the Eastern painted turtle, spotted turtle, Eastern mud turtle, Northern red-bellied cooter, Eastern box turtle, Eastern snapping turtle, and the estuarine Northern diamond-backed terrapin. The red-backed salamander is also commonly found.

Finfish of primary importance found near the refuges include the black drum, red drum, bluefish, winter flounder, summer flounder, menhaden, spot, Atlantic croaker, grey trout, mullet, spotted seatrout, and striped bass.

Some disturbance to non-target wildlife species and impacts on vegetation may occur. While not targeted for hunting or fishing, other wildlife may experience disturbance, avoidance of areas, habitat damage, or injury as a result of the use (Cole 1990). Hunting is not likely to adversely affect these species given the time of year the activities take place (September 16 through March 14) and where the uses occur on the refuge. In addition, hunting will not be permitted on Sunday for big and upland game and will not be permitted at night for any species.

Opening the Northern Hunt Zone and Archery Only Zone to fox, raccoon, opossum and coyote hunting may result in fewer predator species that have negative impacts on nesting migratory birds on the refuge. Populations of these species prey on eggs and disturb nesting birds resulting in reduced productivity. Allowing harvest of these species will likely result in desirable, positive outcomes of decreased predation on nesting migratory birds, and might reduce the need to conduct predator control.

Threatened and Endangered Species

Species that may be found on or nearby the refuge include seabeach amaranth, Northeastern beach tiger beetle, piping plover, red knot, roseate tern, black rail, Northern long-eared bat, Atlantic sturgeon, bald eagle, and five species of sea turtles. While not federally listed as a threatened or endangered species, bald eagles can be found nesting on or near the refuge and are protected by the

Bald and Golden Eagle Protection Act.

Seabeach amaranth was federally listed as threatened in 1993 by the Service. Seabeach amaranth is an annual plant species that occurs on the upper beach and sparsely vegetated over wash fans and inter-dune areas. This species appears to require extensive areas of barrier island beaches and inlets functioning in a relatively natural and dynamic manner. In the absence of over wash and storms, other plants less tolerant of disturbance colonize the sparsely vegetated areas and ultimately outcompete amaranth. Threats include beach stabilization efforts (particularly the use of beach armoring, such as sea walls and riprap), intensive recreational use, and herbivory (grass eating) by white-tailed deer, sika, and Chincoteague ponies.

Hunting is not likely to adversely affect these species given the time of year the activities take place (September 16 through March 14) and where the uses occur on the refuge. Present activities have not resulted in any adverse impacts on any threatened or endangered species. There is potential for disturbance from either walking, dogs, or noise to migrating red knot, roseate tern, piping plover, Northern long-eared bat, black rail and nesting sea turtles. However, these impacts are minimized, as the refuge would limit hunting seasons and provide archery and no-hunting areas that will assist to disperse impacts. In addition, dogs will not be allowed on the Assateague Island portion of the refuge to minimize the potential for disturbance in the most sensitive areas of the refuge. The refuge does not anticipate any impacts to Atlantic sturgeon as a result of the hunting program. Hunting would not be permitted on Sunday for big and upland game and would not be permitted at night for any species.

We will avoid potential adverse impacts to bald eagles by following management guidelines developed in consultation with the State, including sight and distance setbacks from nests and concentration areas that may develop, and time-of-year restrictions. Bald eagle nesting season starts around December 15 and continues throughout most winter and spring hunts. Hunting activities on the refuge end March 14.

Upon implementation of this plan, lead ammunition can be used on parts of the refuge during the deer hunting season as detailed in the Hunting Plan in accordance with State and refuge-specific regulations. The amount of lead introduced to the environment as a result of hunting, however, is negligible. Lead ammunition may only be used for hunting white-tailed deer and sika in the designated Northern Hunt Zone (3,869 acres) during the appropriate season (usually November to January). We require the use of non-lead ammunition for hunting all migratory game birds, upland game and turkey in the firearm zones. These species would likely not be exposed to lead ammunition, as they are either not present in the firearm units or are not present on the refuge during the hunting season. Furthermore, many participants in the hunt will choose non-lead methods of take such as archery. We will encourage voluntary use of non-lead ammunition and will educate hunters about impacts of lead on non-target species. By 2026, use of non-lead ammunition will be required for hunting all species including deer and sika. As a result, there are no anticipated adverse impacts to any of these species.

Habitat and Vegetation

Habitat types on Chincoteague NWR include forests, shrub/scrub, beach/dune, wet meadow/impoundment, and salt marsh. Waterfowl hunting may result in trampling of wetland

vegetation, alteration of drainage patterns, and creation of trails (Liddle and Scorgie 1980). Upland game hunters will likely traverse a larger area of the refuge than big game and migratory bird hunters. However, all these impacts will be minimal, as vegetation may be dormant or entering dormancy during the hunting seasons.

Heavily browsed forest understory and shrub vegetation leaves less food and cover for migratory birds, a resource that the refuge is focused on protecting. Reducing the deer population will decrease the browse effects on vegetation and enable the forest understory to grow and produce more food and cover for migrants (Horsley et. al 2003). This will also provide additional habitat for small mammals, reptiles, and invertebrates.

Visitor Use and Experiences

Chincoteague NWR is open to all six priority public uses of the Refuge System. In 2021, the refuge had 1,408,451 recreational visits. Of those visits, 2,074 were for hunting. With the expanded hunting program at Chincoteague NWR, the likelihood for conflicts between hunters and conflicts with non-consumptive users increases. Public outreach, zoning, and restrictions in some locations have been proposed to reduce conflicts among the different user groups. If conflicts arise among user groups, mitigation efforts can be implemented to ensure that the proposed use will not have significant impacts to other user groups. Impacts to other users will primarily be limited to the hunting season and are minimized by time and space zoning that lessens the interactions between hunters and other wildlife-dependent users.

PUBLIC REVIEW AND COMMENT:

This Compatibility Determination (CD) is part of the Chincoteague and Wallops Island NWR Hunting opening package. The hunting plan was coordinated with all interested and/or affected parties, including VDW staff. The public will be notified of the availability of the Hunting Plan, EA, and accompanying CD with no less than a 60-day review and comment period. We will inform the public through local venues, the refuge website, and social media.

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 purpose(s) and Refuge System mission, hunting can occur at Chincoteague NWR in accordance with State and Federal regulations and special refuge-specific restrictions to ensure that wildlife and habitat management goals are achieved, and that the program is providing a safe, high quality hunting experience for participants. This hunting program will be monitored and potentially modified or eliminated if any of the program's components are found not compatible.

The following stipulations are necessary to ensure compatibility:

- Hunting for any species will be in accordance with State seasons and limited between September 16 to March 14 (except for the spring turkey State-managed hunt).
- Hunters may only access the refuge from 2 hours before sunrise until 2 hours after sunset. No night hunting is allowed.
- Trained dogs may be used for the retrieval of migratory birds only. Dogs are prohibited on Assateague Island.
- Use of non-lead ammunition for migratory game birds, upland game and turkey will be required in all firearms units immediately.
- Non-lead ammunition will be required for hunting all species beginning in fall of 2026.

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.

Not only does hunting satisfy a recreational need, but hunting on NWRs is also an important, proactive management action that can prevent overpopulation and the deterioration of habitat (i.e., overbrowsing by deer). Disturbance to other species will occur, but this disturbance is generally short-term or minor. Suitable habitat exists on refuge lands to support hunting as proposed.

This activity will have minimal conflicts with other priority public uses and will not adversely affect biological resources. Therefore, through this compatibility determination process, we have determined that 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.

SIGNATURE:

Refuge Manager

(Signature)

(Date)

CONCURRENCE:

Regional Chief

(Signature)

(Date)

MANDATORY 15 YEAR RE-EVALUATION DATE:

(Date)

LITERATURE CITED:

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COMPATIBILITY DETERMINATION

USE: Hunting

REFUGE NAME: Wallops Island National Wildlife Refuge

DATE ESTABLISHED: March 11, 1971

ESTABLISHING and ACQUISITION AUTHORITY(IES):

- 1) Migratory Bird Conservation Act (16 U.S.C. § 715d)
- 2) Fish and Wildlife Coordination Act (16 U.S.C. § 667b)

REFUGE PURPOSE(S):

- “... for use as an inviolate sanctuary, or for any other management purpose, for migratory birds” 16 U.S.C. § 715d (Migratory Bird Conservation Act)
- “... particular value in carrying out the national migratory bird management program.” 16 U.S.C. § 667b (Fish and Wildlife Coordination Act)

NATIONAL WILDLIFE REFUGE SYSTEM MISSION:

The mission of the National Wildlife Refuge System (Refuge System) is “... to administer a national network of lands and waters for the conservation, management and, where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the 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 use is public hunting of big game (white-tailed deer and turkey), migratory game birds (duck, goose, swan, rail, coot, snipe, gallinule, dove, woodcock, and crow), and upland game (raccoon, opossum, fox, coyote, rabbit, and squirrel) on Wallops Island National Wildlife Refuge (NWR, refuge), which is managed as a satellite refuge of the Chincoteague National Wildlife Refuge Complex (NWRC). Hunting was identified as one of six priority public uses of the Refuge System by the National Wildlife Refuge System Administration Act (NWRSA) 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?

Wallops Island NWR is located on the mainland, east of Wattsville, VA in Accomack County. The refuge is immediately adjacent to Highway 175, which provides access to the Town of Chincoteague and to Chincoteague NWR. Wallops Island NWR (373 acres) is comprised mainly of salt marsh (195 acres) and forest/shrub (178 acres) and contains habitat for a variety of species, including upland and wetland dependent migratory birds. There is a safety zone (approximately 50

acres) located at the southern end of the unit where hunting will not be allowed.

(c) When would the use be conducted?

Hunting would be permitted from September 16 until March 14. Season dates within this time period will be in accordance with State regulations. The only exception is for spring turkey hunting, which will occur during the State spring season from mid-April through early May. Big game and migratory game bird hunting hours will be in accordance with State regulations and hunters may access the refuge 2 hours before sunrise until 2 hours after sunset. Upland game hunting will only occur during regular refuge access hours for all hunters (2 hours before sunrise to 2 hours after sunset). Night hunting will not be allowed. Sunday hunting will be permitted for migratory bird hunting, and prohibited for big game and upland game hunting (in accordance with State regulations).

(d) How would the use be conducted?

Hunting would be permitted in designated areas of the refuge in accordance with State and refuge-specific regulations. Hunters will read and sign a hunt brochure prior to hunting on the refuge. Hunt brochures are available online on the refuge website or at the Visitor Center.

Big Game

Big game hunting would be permitted for white-tailed deer and wild turkey in accordance with State seasons and methods of take. Spring and fall turkey hunting would be administered via a mentored quota hunt, initially through targeted hunts for youth and apprentice hunters. Providing special hunt opportunities would assist the State with hunter recruitment and retention efforts (commonly referred to as R3). The newly opened turkey hunt would require the use of non-lead shot. Big game hunting would not be permitted on Sundays per State law. Daily and seasonal bag limits would follow State regulations.

Upland Game

Upland game hunting for raccoon, opossum, fox, coyote, rabbit, and squirrel would be allowed in accordance with State regulations and during regular refuge hours for all hunters from 2 hours before sunrise to 2 hours after sunset (i.e., no night hunting). Season dates would be concurrent with State seasons from September 16 through March 14. Upland game hunting would not be permitted on Sundays. The use of non-lead ammunition would be required for all upland game species.

Migratory Game Birds

Migratory game bird hunting would be permitted for rail, coot, snipe, gallinule, duck, goose, swan, woodcock, dove, and crow. Sunday hunting would be permitted for all migratory game birds. The use of dogs for retrieval of migratory birds would be allowed. Hunters must obtain, sign, and have in their possession a signed hunt brochure. Migratory bird hunting would occur within State seasons from September 16 through March 14. The use of non-lead ammunition would be required for all migratory game bird species in addition to the Federal ammunition requirements for duck, goose, swan, and coot.

Hunter Access

The refuge will make reasonable efforts to provide hunter access. The intention is to provide safe, quality hunting opportunities that consider the welfare of refuge wildlife resources. If hunting

conditions are deemed unsafe to hunters or refuge staff or negative impacts on resources are discovered, the hunt program procedures and timing are subject to change. All access points and hunter parking lots will be delineated on refuge hunt maps and will be included in the hunt brochures. Hunters may be permitted to enter refuge lands prior to normal refuge operating hours in order to reach hunt units at the start of State hunting hours for big game, upland game and migratory game bird hunting.

Migratory bird hunters may access hunting by boat via several private and public boat launches within the vicinity of the refuge. No boat launches exist on the refuge. State and municipal boat launches are within a short distance of refuge hunting areas and can be used for the launch and retrieval of boats. Migratory bird hunters may also access areas by foot, but no established trails exist from the parking areas to the marsh.

Non-Lead Ammunition

The use of non-lead ammunition for proposed new hunting opportunities (raccoon, opossum, fox, coyote, rabbit, squirrel, turkey and migratory game birds) will be required upon implementation of this plan in 2022. The use of non-lead ammunition for hunting deer will initially be voluntary and will transition to be required for use after a 4-year phase-in period is implemented (2026). This phase-in period will allow hunters time to adapt to the new regulations without diminishing deer hunting opportunities on the refuge. The refuge staff will provide information to assist in a valuable transition period that benefits fish, wildlife, and people.

(e) Why is the use being proposed?

Hunting is one of the priority public uses defined by the NWRSA of 1966, as amended by the Refuge System Improvement Act of 1997 (Public Law 105-57). Department of the Interior Secretarial Order 3356 (September 15, 2017) further emphasized identifying opportunities to increase outdoor recreation opportunities for all Americans, including opportunities to hunt and fish. This legitimate and appropriate use of a national wildlife refuge is generally considered compatible as long as it does not materially interfere with or detract from the fulfillment of the Refuge System mission or the purposes of the refuge.

Objectives for the hunting program at the Wallops Island NWR include providing the public with high quality, wildlife-dependent recreational opportunities that align with refuge purposes and management objectives. The FWS has long recognized that hunting is an integral part of a comprehensive wildlife management program and that positive benefits can be attributed to a well-managed hunt.

Hunting is consistent with the refuge's 2015 Comprehensive Conservation Plan's (CCP) larger goal to have "people of all ages and abilities develop a stewardship ethic while enjoying their refuge experience and increasing their knowledge of the FWS, Refuge System, and the refuge." This goal includes a specific objective (Goal 6, Objective 6.1) to "increase level of opportunity (e.g., expansion of hunted species) in the hunt program, such as the fall/winter light goose hunt, through expansion of hunted species, trapping, and new hunting programs." This objective will help provide safe and high quality big game, small game, and waterfowl hunting opportunities for the public.

AVAILABILITY OF RESOURCES:

Cost analysis for administration and management of the hunt is estimated to be approximately \$24,000. Adequate FWS resources currently exist and can be provided with existing personnel to properly develop, operate, and maintain the hunt and will not detract from refuge purposes or the Refuge System mission.

Resources involved in management and administration of the hunt include personnel to provide annual updates to the hunt brochure, website information, and hunt kiosk; personnel to maintain boundary markers in the field; staff and equipment to maintain roads and create designated parking and install signage in new units (see Table B-1).

Table B-1. Estimated Costs for Hunting at Chincoteague and Wallops Island NWRs Combined*

Identifier	Cost
Hunt/Fish Program Staff (Maintenance, Biologist, Managers, Visitor Services, Contractors)	\$9,000
Maintain roads, parking lots, trails**	\$13,000
News releases, fact sheets, permitting, reports	\$1,000
Maintain hunt/fish materials and supplies (signs, deer check station)	\$1,000
Total Annual Cost	\$24,000

**Wallops Island NWR is unstaffed and unfunded, and as such, the hunting program would be funded through Chincoteague NWR.*

*** 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. Volunteers account for some maintenance hours and help to reduce overall cost of the program.*

ANTICIPATED IMPACTS OF THE USE:

The following are anticipated impacts for hunting on Wallops Island NWR. For more specific impacts related to all proposed changes detailed in the Hunting Plan, please refer to the Environmental Assessment (Appendix C).

Hunting has been permitted on the refuge since 2002 with no discernible adverse impacts to resources. Hunting provides wildlife-dependent recreational opportunities and can foster a better appreciation and more complete understanding of the wildlife and habitats associated with the southern Delmarva Peninsula landscape. This could result in more widespread and stronger support for wildlife conservation, the refuge, the Refuge System, and the FWS.

This section predicts foreseeable impacts of implementing the hunting program on refuge resources. When detailed information may be deficient or unavailable, we base our evaluation on professional judgment and experience. We usually identify potential impacts within a long-range timeframe (i.e., 15 years) and beyond that timeframe, they become more speculative.

The refuge hunt program is designed to be sustainable through time, given relatively stable conditions, particularly because of close coordination with the Virginia Department of Wildlife

Resources (VDWR). Adverse impacts of hunting on big game (white-tailed deer and turkey), upland game (raccoon, opossum, fox, coyote, rabbit, and squirrel), and migratory game birds (rail, coot, snipe, gallinule, duck, goose, swan, woodcock, dove, and crow) on the refuge are expected to be negligible. The proportion of the refuge's harvest of these species would be negligible when compared to local, regional, and statewide populations and harvest.

Because of the regulatory process for harvest management in place within the FWS, 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, we anticipate no significant impacts on resident wildlife, migratory birds, and non-hunted wildlife as a result of hunting on Wallops Island NWR.

In comparison with the entire Atlantic Flyway, or the breeding ranges of the many birds and wildlife that use it, the hunting area of the refuge comprises a relatively small total land mass. FWS recognizes that the refuge is not isolated ecologically from the land around it; however, we may have overstated positive or negative impacts in that larger geographic context. Nevertheless, many of the actions we propose conform with the 2015 CCP and other regional landscape plans, and provide positive, incremental contributions to those larger landscape goals.

Big Game

Deer hunting on the refuge has been occurring since 2002 and annual harvest numbers on the refuge remain low (e.g., 2020/21: 6 deer reported; 2019/20: 1 deer reported). We anticipate a small increase in the number of deer harvested annually, but this would not meaningfully affect the current overpopulation of deer in the county. Deer may avoid hunting areas due to increased pressure, but this will not create negative impacts to the population.

According to VDWR, the wild turkey population was estimated as 0.45 to 0.61 turkeys per square mile of suitable habitat for the northern Virginia region in the 2016-2017 season. In the refuge's region, the wild turkey density ranges from 0.26 to 0.44 turkeys per square mile. The northern Virginia region population is considered stable to rising. Approximately 20,525 turkeys were harvested during the 2020 spring gobbler season. During the 2020 spring season, 232 of those recorded harvests were made in Accomack County.

Studies examining the direct effects of hunting on turkey behavior and movement are limited. One study conducted in Louisiana tracked the movements of wild turkey during the hunting season and found that distances traveled by wild turkeys were only 8 percent greater during hunting days than non-hunting days (Gross et al. 2015). Although hunting made it more likely for a turkey to change their movement patterns, a small-scale increase in range is not biologically significant.

The refuge will open to a limited quota mentored turkey hunt during the spring and fall seasons. The remainder of the year would allow turkey to rest and recover. The refuge estimates less than two turkey will be harvested annually from Wallops Island NWR due to the small number of turkeys that have been observed on the island through observations by staff. Relative to State harvest numbers, refuge impacts on statewide populations are expected to be negligible.

Upland Game

We anticipate small harvest levels of these species and only minor impacts to their population levels. The majority of land use surrounding the refuge lands consists of Federal, agriculture and residential areas where populations of these species proliferate on the broader surrounding landscape. Any impacts will be short-term and minor and will mostly include changes in habitat use by individuals.

Migratory game birds

Opening to waterfowl hunting will have some short-term disturbance to the waterfowl resting and feeding in the area. Marsh areas are prone to disturbance and increased foot traffic to access hunting sites will result in trampling of sensitive marsh plants in frequently used areas (Lomnický et. al. 2019). There will be few long-term impacts to waterfowl populations since most of the marsh area on the eastern shore is owned by the State and is already open to migratory bird hunting.

Non-target Species

Wallops Island NWR hosts a wide diversity of both resident and migratory wildlife. The refuges are important stopover sites in the Atlantic Flyway and provide important habitat for resident species in an area with rising development trends. Many common bird species will be in areas adjacent to hunting, in both upland and wetland areas, and they may relocate to other areas of the refuge during hunting.

Thirty-four mammal species are recorded on the lower Delmarva Peninsula and 9 bat species may be found on or around the refuges. Frogs and toads that can be found at Wallops Island NWR include the Northern spring peeper, Southern green frog, Southern leopard frog, Fowler's toad, and Eastern narrow-mouthed toad. The freshwater and estuarine turtles that inhabit the refuge include the Eastern painted turtle, spotted turtle, Eastern mud turtle, Northern red-bellied cooter, Eastern box turtle, Eastern snapping turtle, and the estuarine Northern diamond-backed terrapin. The red-backed salamander is also commonly found.

Finfish of primary importance found near the refuges include the black drum, red drum, bluefish, winter flounder, summer flounder, menhaden, spot, Atlantic croaker, grey trout, mullet, spotted seatrout, and striped bass.

Some disturbance to non-target wildlife species and impacts on vegetation may occur. While not targeted for hunting or fishing, other wildlife may experience disturbance, avoidance of areas, habitat damage, or injury as a result of the use (Cole 1990). Hunting is not likely to adversely affect these species given the time of year the activities take place (September 16 through March 14) and where the uses occur on the refuge. In addition, hunting will not be permitted on Sunday for big and upland game, and will not be permitted at night for any species.

Opening the refuge to fox and coyote hunting may result in fewer predator species that have negative impacts on nesting migratory birds on the refuge. Populations of these species prey on eggs and disturb nesting birds resulting in reduced productivity. Allowing harvest of these species will likely result in desirable, positive outcomes of decreased predation on nesting migratory birds.

Threatened and Endangered Species

Species that may be found on or nearby the refuge include seabeach amaranth, Northeastern beach tiger beetle, piping plover, red knot, roseate tern, black rail, Northern long-eared bat, Atlantic sturgeon, monarch butterfly, bald eagle, and five species of sea turtles. While not federally listed as a threatened or endangered species, bald eagles (*Haliaeetus leucocephalus*) can be found nesting on or near the refuge and are protected by the Bald and Golden Eagle Protection Act.

Roseate tern and Eastern black rail would not be impacted by proposed hunting changes because they do not occur on the refuge. Northern long-eared bats may be disturbed by activity under or near their roost trees for stand placement, but this species is not known to winter in this region.

Seabeach amaranth was federally listed as threatened in 1993 by the USFWS. Seabeach amaranth is an annual plant species that could occur on the upper beach and sparsely vegetated over wash fans and inter-dune areas. Although seabeach amaranth generally grows in sparse to very sparse distribution, the existing population on the refuge is greatly dissipated. No known plants were observed in the 2021 census of the refuge. This species appears to require extensive areas of barrier island beaches and inlets functioning in a relatively natural and dynamic manner. In the absence of over wash and storms, other plants less tolerant of disturbance colonize the sparsely vegetated areas and ultimately outcompete amaranth. Threats include beach stabilization efforts (particularly the use of beach armoring, such as sea walls and riprap), intensive recreational use, and herbivory (grass eating) by white-tailed deer, sika, and Chincoteague ponies.

Hunting is not likely to adversely affect these species given the time of year the activities take place (September 16 through March 14) and where the uses occur on the refuge. Present activities do not have adverse impacts on any threatened or endangered species. There is potential for disturbance from either walking, dogs, or noise to Northern long-eared bat. However, these impacts are minimized, as the refuge would limit hunting seasons. Hunting would not be permitted on Sunday for big and upland game and would not be permitted at night for any species.

We will avoid potential adverse impacts to bald eagles by following management guidelines developed in consultation with the State, including sight and distance setbacks from nests and concentration areas that may develop, and time-of-year restrictions. Bald eagle nesting season starts around December 15 and continues throughout the times of most winter and spring hunts. Hunting activities on the refuge end March 15.

The negative impacts of lead on wildlife are documented and clear (Golden et al. 2016). To move towards reduction and future elimination of this threat on the refuge, we will be eliminating the use of lead ammunition over a 4-year period to educate and work with hunters on the use of non-lead alternatives. The phased transition to non-lead ammunition for all hunting will minimize the inadvertent exposure and subsequent lethal or sub-lethal impacts to bald and golden eagles, as well as other scavenging species. Eagles and other 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 shot and bullet fragments found in animal carcasses and gut piles are the most likely source of lead exposure. Many hunters do not realize that the carcass or gut pile they leave in the field usually

contains lead bullet fragments. Research will continue 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. The bioaccumulation of lead is a potential concern, but it does not likely present a significant issue on this refuge, as: 1) non-lead shot is currently required for hunting waterfowl; 2) we are proposing a 4-year phase out to the use of lead ammunition for all species by 2026; 3) the refuge strongly encourages use of non-lead alternatives for hunting deer and sika for the next 4 years; 4) we will educate hunters and the public to the potential adverse impacts of lead; and 5) the updated hunting activities are not likely to introduce substantially more lead into the environment over existing amounts with the current or proposed hunting program. Some hunters will also choose non-lead methods of take such as archery. As a result, there are no anticipated adverse impacts to any of the above listed species.

Habitat and Vegetation

Habitat types on Wallops Island NWR include forests, shrub/scrub, and salt marsh. Migratory bird hunting may result in trampling of wetland vegetation, alteration of drainage patterns, and creation of trails (Liddle and Scorgie 1980). Upland game hunters will likely traverse a larger area of the refuge than other hunters. However, all of these impacts will be reduced, as vegetation will likely be dormant or entering dormancy during the hunting seasons.

Heavily browsed forest understory and shrub vegetation leaves less food and cover for migratory birds, a resource that the refuge is focused on protecting. Reducing the deer population will decrease the browse effects on vegetation and enable the forest understory to grow and produce more food and cover for migrants (Horsley et. al 2003). This will also provide additional habitat for small mammals, reptiles, and invertebrates.

Visitor Use and Experiences

Wallops Island NWR is not open to any other public uses, therefore the expanded hunting program at Wallops Island NWR is unlikely to cause visitor use conflicts. If conflicts arise among hunters, mitigation efforts can be implemented to ensure that the proposed use will not have significant impacts to the hunting community. Impacts to individual hunters will be limited to the hunting season and are minimized by time and space zoning that lessens the interactions between hunters.

PUBLIC REVIEW AND COMMENT:

This Compatibility Determination (CD) is part of the Chincoteague and Wallops Island NWR hunting opening package. The hunting plan was coordinated with all interested and/or affected parties, including VDWR staff. The public will be notified of the availability of the Hunting Plan, EA, and accompanying CD with no less than a 60-day review and comment period. We will inform the public through local venues, the refuge website, and social media.

DETERMINATION (CHECK ONE BELOW):

_____ Use is not compatible

___X___ Use is compatible, with the following stipulations

STIPULATIONS NECESSARY TO ENSURE COMPATIBILITY:

To ensure compatibility with refuge purpose(s) and Refuge System mission, hunting can occur at Wallops Island NWR in accordance with State and Federal regulations and special refuge-specific restrictions to ensure that wildlife and habitat management goals are achieved, and that the program is providing a safe, high-quality hunting experience for participants. This hunting program will be monitored and potentially modified or eliminated if any the program's components are found not compatible.

The following stipulations are necessary to ensure compatibility:

- Hunting for any species will be limited between September 16 to March 14 (except for the spring turkey State-managed hunt).
- Hunters may access the refuge from 2 hours before sunrise to 2 hours after sunset (no night hunting).
- Trained dogs may be used for the retrieval of migratory game birds only.
- Use of non-lead ammunition for all migratory game birds, upland game and turkey will be required. Non-lead ammunition will be required for deer hunting after a 4-year phase in period (2026).

JUSTIFICATION:

Hunting is a priority wildlife-dependent use for the Refuge System through which the public can develop an appreciation for fish and wildlife. FWS 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.

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 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 purpose(s) of the refuge.

SIGNATURE:

Refuge Manager

(Signature)

(Date)

CONCURRENCE:

Regional Chief

(Signature)

(Date)

MANDATORY 15 YEAR RE-EVALUATION DATE:

(Date)

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Environmental Assessment

Chincoteague and Wallops Island National Wildlife Refuges

This Environmental Assessment (EA) evaluates the effects associated with the proposed action and complies with the National Environmental Policy Act (NEPA) in accordance with Council on Environmental Quality regulations (40 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. A list of laws and executive orders evaluated through this EA is included at the end of this document.

Proposed Action

The U.S. Fish and Wildlife Service (FWS) is proposing to expand hunting opportunities in accordance with the refuges' 2015 Comprehensive Conservation Plan (CCP). On Chincoteague National Wildlife Refuge (NWR, refuge), small game, big game and migratory bird hunting opportunities would be expanded on the Northern Hunt Zone and Archery-only Zone (which would be combined with the former Toms Cove Hook Hunt Zone). The sign-in/out process for hunting would also be modified. On Wallops Island NWR, migratory bird and small game hunting opportunities would be added to the hunt program and the sign-in/out process would be removed. Both refuges would add a quota turkey hunt. Upon implementation of the proposed hunt plan, both refuges would require the use of non-lead ammunition for hunting migratory birds, upland game, and turkey, and by 2026, use of non-lead would be required for hunting all species.

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

Chincoteague NWR was established pursuant to the Migratory Bird Conservation Act (16 U.S.C. § 715d), Refuge Recreation Act (16 U.S.C. § 460k-2, 16 U.S.C. § 460k-460k-4, as amended), Emergency Wetlands Resources Act of 1986 (16 U.S.C. § 3901(b)), Fish and Wildlife Act of 1956 (16 U.S.C. § 742f(b)(1)), and the Consolidated Farm and Rural Development Act (7 U.S.C. § 2002).

The primary purposes of Chincoteague NWR are:

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

- “... (1) incidental fish and wildlife-oriented recreational development, (2) the protection of natural resources, (3) the conservation of endangered species or threatened species ...” 16 U.S.C. § 460k- “... the Secretary ... may accept and use ... real ... property. Such acceptance may be accomplished under the terms and conditions of restrictive covenants imposed by donors ...” 16 U.S.C. § 460k-2 (Refuge Recreation Act (16 U.S.C. § 460k-460k-4), as amended);
- “... 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);
- “... the development, advancement, management, conservation, and protection of fish and wildlife resources ...” 16 U.S.C. § 742f(a)(4) “... 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), and;
- “... conservation purposes ...” 7 U.S.C. § 2002 (Consolidated Farm and Rural Development Act).

Wallops Island NWR was created on July 10, 1975, when 373 acres of land were physically transferred to the FWS from the National Aeronautics and Space Administration (NASA) Wallops Flight Center.

Formally, Wallops Island NWR was established for:

- “... for use as an inviolate sanctuary, or for any other management purpose, for migratory birds” 16 U.S.C. § 715d (Migratory Bird Conservation Act); and
- “... particular value in carrying out the national migratory bird management program” 16 U.S.C. § 667b (Fish and Wildlife Coordination Act).

The mission of the Refuge System, as outlined by the NWRSA, 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 NWRSA mandates the Secretary of the Interior in administering the Refuge System (16 U.S.C. 668dd(a)(4)) to:

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

Purpose and Need for the Action

The purpose of the proposed action is to provide compatible wildlife-dependent recreational opportunities on Chincoteague NWR and Wallops Island NWR. The need of the proposed action is to meet the FWS's priorities and mandates as outlined by the NWRSA to "recognize compatible wildlife-dependent recreational uses as the priority general uses of the Refuge System" and "ensure that opportunities are provided within the Refuge System for compatible wildlife-dependent recreational uses" (16 U.S.C. 668dd(a)(4)).

Hunting is consistent with Goal 6 of the refuges' 2015 CCP which aims to have "people of all ages and abilities develop a stewardship ethic while enjoying their refuge experience and increasing their knowledge of the FWS, Refuge System, and the refuge." This goal includes a specific objective (Objective 6.1) to "increase level of opportunity (e.g., expansion of hunted species) in the hunt program, such as the fall/winter light goose hunt, through expansion of hunted species, trapping, and new hunting programs." This objective will help provide safe and high-quality big game, small game, and waterfowl hunting opportunities for the public.

Department of the Interior Secretarial Order 3356 directs the FWS to enhance and expand public access to lands and waters on NWRs for hunting and other forms of outdoor recreation. The proposed action will also promote one of the priority public uses of the Refuge System and provide

opportunities for visitors to hunt in order to promote stewardship of our natural resources and increase public appreciation and support for the refuge.

Alternatives, including the Proposed Action

Alternative A – No Action Alternative

The No Action Alternative would continue the current hunt programs on the refuges. Chincoteague NWR is currently open to white-tailed deer, sika, and migratory bird hunting. Wallops Island NWR is currently open to white-tailed deer hunting only.

Alternative B –Proposed Action Alternative

The refuge hunt plan is presented in this document as the Proposed Action Alternative. On Chincoteague NWR, the hunting would be divided into three zones: the Northern Hunt Zone (firearms and archery), the Archery Only Zone, and the Waterfowl Hunt Areas. In the Northern Hunt Zone, big game and upland game (raccoon, opossum, fox, and coyote) hunting would be permitted during the regular State deer season. The use of firearms would be permitted. The refuge would remove the limit on the number of hunters in the zones, follow the State bag limit for white-tailed deer, and open a quota hunt for turkey. The use of non-lead ammunition will be required for hunting all migratory birds, upland game, and turkey. The use of non-lead ammunition to hunt deer would be phased in over a four-year period and would be required by 2026.

The current Toms Cove Hook Hunt Zone would be merged into the Archery Only Hunt Zone, removing shotguns as a method of take in this former zone. In the expanded Archery Only Hunt Zone, the refuge would add raccoon, opossum, fox, and coyote hunting during the regular State deer season. Also in the Archery Only Hunt Zone, the limit on the number of hunters in the sign-in/sign-out process would be removed. We would follow the State bag limit for white-tailed deer, and we would open a quota hunt for wild turkey.

The Waterfowl Hunt Areas would open to all migratory game birds during State seasons from September 16 through March 14 to minimize disturbance to migrating shore birds. The beaches on Assawoman Island, Cedar Island and Metompkin Island would remain closed to all public access.

On Wallops Island NWR, the refuge would open to upland game (raccoon, opossum, fox, coyote, rabbit, and squirrel), and all migratory game bird hunting. Hunting for these species would occur during State seasons between September 16 and March 14.

Measures to Avoid Conflicts:

- Hunting is prohibited within 100 feet of any building, road, or trail.
- The refuges would clearly post information on the hunting season at the refuge headquarters, on the website, and on signs throughout the refuges.
- The refuges would encourage all users to wear blaze orange per State regulations during the firearms hunting season to minimize potential safety issues.

- Maps will be provided for hunters to include hunt boundaries, buildings, trails, and parking areas to ensure hunters are aware of safety zone requirements.
- For both refuges, the use of non-lead ammunition will be required upon implementation of this plan in 2022 for migratory birds, upland game, and turkey. The use of non-lead ammunition for hunting deer will initially be voluntary and will transition to be required for use after a 4-year phase-in period is implemented (2026). This phase-in period will allow hunters time to adapt to the new regulations without diminishing deer hunting opportunities on the refuges. The refuge staff will provide information to assist in a valuable transition period that benefits fish, wildlife, and people.

This alternative offers increased opportunities for public hunting and fulfills the FWS's mandate under the NWRSA. The FWS has determined that the hunt plan is compatible with the purposes of Chincoteague and Wallops Island NWRs and the mission of the Refuge System.

Alternatives Considered, But Dismissed from Further Analysis

In developing hunting plans for national wildlife refuges, we regularly receive comments and requests from some members of the public to eliminate hunting. An alternative that would close the refuges to all hunting was therefore considered but dismissed from detailed analysis. A "No Hunting Alternative" would not accomplish the purposes we seek to accomplish by the adoption of this hunting plan, as described in the "purpose and need" section of this EA. Closing the refuge to hunting would conflict with the Refuge System Improvement Act, which provides that hunting is an appropriate and priority use of the Refuge System, shall receive priority consideration in refuge planning and management, mandates that hunting opportunities should be facilitated when feasible, and directs the FWS to administer the Refuge System so as to "provide increased opportunities for families to experience compatible wildlife-dependent recreation, particularly opportunities for parents and their children to safely engage in traditional outdoor activities, such as fishing and hunting." Furthermore, Department of the Interior Secretarial Order 3356, signed in 2017, directs the FWS 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. An alternative that failed to provide any opportunity to participate in hunting activities, where such activities are compatible with the purposes of the Refuge System, would also fail to meet the goals of the Refuge System.

Affected Environment and Environmental Consequences

This section is organized by affected resource 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 direct, indirect, and cumulative 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. Cumulative impacts are defined as the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions. This EA focuses on 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 would not be more than negligibly impacted by the action may be dismissed from further analyses.

Chincoteague NWR encompasses approximately 14,032 acres. All but 418 of those acres are in Accomack County, Virginia. In addition to the Virginia portion of Assateague Island, Chincoteague NWR also includes all 427 acres of Morris Island (located between Chincoteague and Assateague Islands), 546 acres of the northern end of Chincoteague Island (known as Wildcat Marsh), all 1,434 acres of Assawoman Island, 174 acres of the northern end of Metompkin Island, and 2,012 acres of Cedar Island in both fee title and easements.

Wallops Island NWR is located on the mainland, east of Wattsville, Virginia in Accomack County. The refuge is immediately adjacent to Highway 175, which provides access to the Town of Chincoteague and to Chincoteague NWR. Wallops Island NWR (373 acres) is comprised mainly of salt marsh (195 acres) and forest/shrub (178 acres) and contains habitat for a variety of species, including upland and wetland dependent migratory birds.

For more information regarding the general characteristics of the refuge's environment, please see Chapter 3.2 of the refuge's CCP, which can be found at:

https://www.fws.gov/refuge/Chincoteague/what_we_do/conservation.html.

TABLE C-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	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Habitat and Vegetation	<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 type="checkbox"/>	<input checked="" type="checkbox"/>
Refuge Management and Operations	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Socioeconomics and Environmental Justice	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

BIG GAME (white-tailed deer, sika, turkey)

Affected Resource Description

White-tailed deer are the largest native land mammals on the refuges. They are abundant in wooded areas and upland meadows, but they are also attracted to sites where dead trees have been cleared and tender regenerating forest vegetation is plentiful. The refuge partners with the NPS, Assateague Island National Seashore on monitoring population size on Chincoteague NWR. Some white-tailed deer also use Cedar and Assawoman islands, as evidenced by tracks and scat.

There are an estimated 850,000 to 1,000,000 white-tailed deer in the State of Virginia. Deer densities used to be significantly higher in Virginia, but through regulated hunting and planning, statewide deer densities have become low to moderate. Deer herds are in fair to good physical condition and are below biological carrying capacity (VDWR 2021a). In the entire State in 2020-2021 season, 208,131 total deer were harvested with 3,356 harvested in Accomack County (VDWR 2021b). Approximately 14 percent of the total kills were with archery equipment, 24 percent were with muzzleloader, and 63 percent were with firearms (VDWR 2021b). In the 2020-2021 season, a total of 216 deer (19 white-tailed deer, and 197 sika) were harvested from Chincoteague NWR and 6 white-tailed deer were harvested on Wallops Island NWR.

A small number of sika elk (*Cervus nippon*), a species native to east Asia and Japan, were released on the northern end of Assateague (MD) in the 1920s when the island was privately owned (Flyger 1960). They increased in number and expanded their range to occupy the entire island, and sika were well established on the Virginia end of the island when Chincoteague NWR was established in 1943. By 1963, the sika population was estimated at 1,300, and a browse line was becoming evident on refuge vegetation, indicating an over-population (Refuge Narratives). Public hunting, started in 1964, has continued to the present with objectives of reducing an exotic animal, preventing habitat degradation, and providing a public recreational opportunity.

The population of sika on the Chincoteague NWR portion of Assateague Island was estimated at 1,000 animals in the mid-1990s using a model combined with spotlight surveys (Bicksler et al. 1995). The minimum population estimate for sika in the fall of 2007 and 2008 was 600 animals based on Chincoteague NWR harvest data and the Downing population reconstruction model (Davis et al. 2007). Each year harvest data and staff observations of habitat conditions are evaluated to determine season lengths, hunt areas, and bag limits needed to control the herd and keep deer and elk from causing resource damage. Sika do not occur on Wallops Island NWR.

The first wild turkeys on Assateague Island were sighted in March 2005 by a refuge law enforcement officer. Coincidentally, the NPS staff reported turkeys on the north end of Assateague Island around the same time. The wild turkey population on both refuges is unknown. However, anecdotal observations suggest a viable population exists, since flocks greater than 30 birds (adults and juveniles) are frequently observed. Turkeys are also frequently sighted on Wallops Island NWR.

There are an estimated 180,000 wild turkeys in Virginia. During the 2020-2021 fall turkey season, 2,092 turkeys were harvested with 11 harvested in Accomack County. Muzzleloader hunters took about 2.7 percent of the total take and firearms hunters took 78.1 percent. Archery and crossbow

became a significantly more popular form of take during the last turkey season, making up 7.4 percent and 11.8 percent of the total take, respectively (VDWR 2021c).

Anticipated Impacts to Big Game (white-tailed deer, sika, turkey)

Alternative A

Under the No Action Alternative, the big game hunting program on the refuges would not change from the current white-tailed deer and sika hunts. Deer hunting (white-tailed and sika) on Chincoteague NWR has been occurring since 1964 and on Wallops Island (white-tailed only) since 2002. During the 2020-2021 hunting seasons, 216 deer were harvested on Chincoteague NWR. On Wallops Island NWR, 6 white-tailed deer were reported harvested during the season. Graph 1. Illustrates the deer harvest on Chincoteague NWR for the past 20 years. We anticipate a similar number of deer would continue to be harvested annually if hunt parameters do not change and this harvest would not meaningfully affect the current population of white-tailed deer.

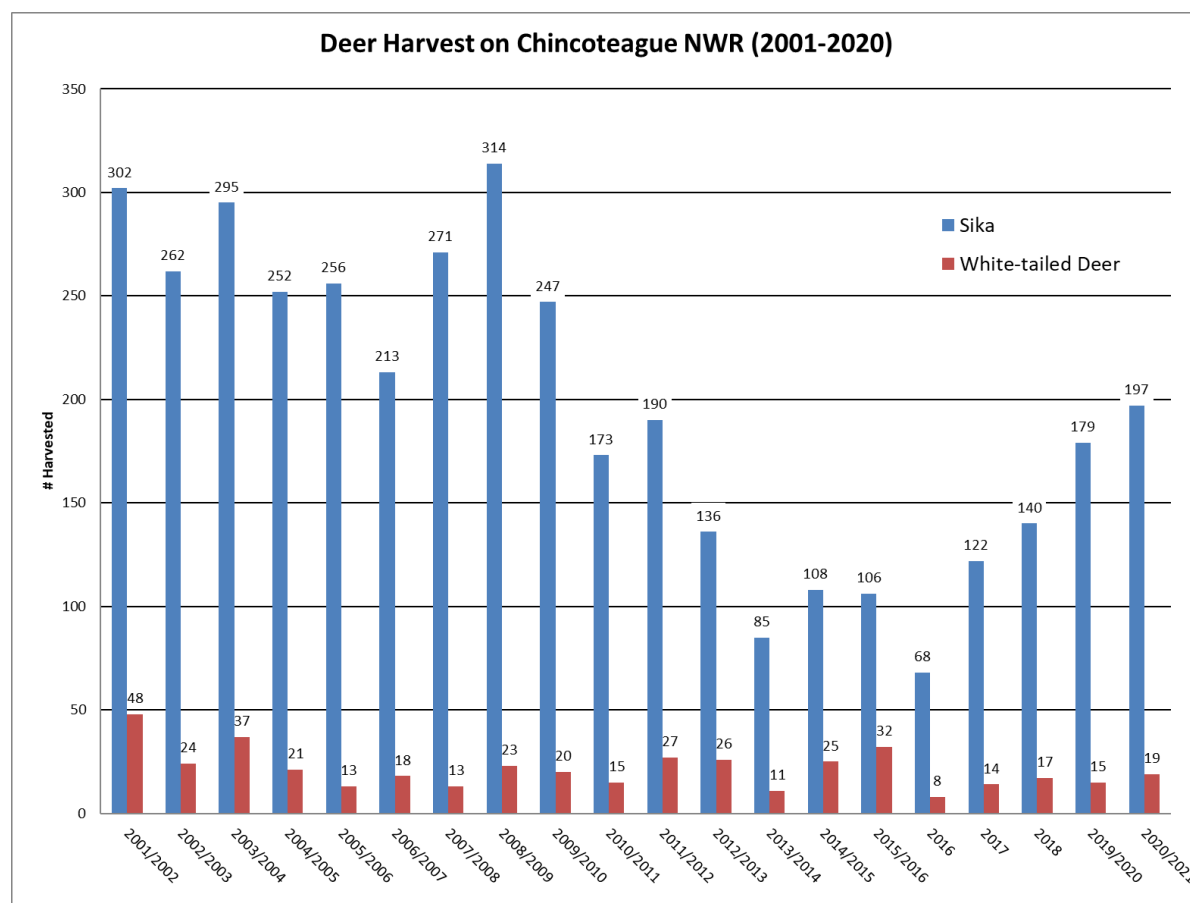


Figure C-1. Deer Harvest on Chincoteague NWR (2001-2020)

In the 2020-21 season, hunters visited Chincoteague NWR 1,907 times, while Wallops Island NWR received 107 hunter visits within the hunt seasons. Deer may avoid hunting areas due to hunting pressure, but current level of pressure would remain similar to past years and would not lead to negative impacts to the white-tailed deer population. Sika populations are estimated using the Downing Population Reconstruction and are managed through the State harvest regulations for the Deer Population Reduction Program (DPOP). Under this alternative, the sika population on the

refuge would continue to be suppressed to minimize competition with white-tailed deer.

Alternative B

Under the Proposed Action Alternative, we would allow the use of muzzleloaders for big game in the Northern Hunt Zone, remove shotgun as a method of take in the Toms Cove Hook Zone by combining this unit with the Archery Only Zone, remove limits on the number hunters, and follow State bag limits for white-tailed deer on Chincoteague. In recent years, annual hunter limits have never been reached and given the addition of muzzleloaders in the Northern Hunt Zone will be offset by the removal of shotguns on Toms Cove Hook, we do not anticipate a significant change in hunt visits or the number of deer harvested annually that would meaningfully affect the current population of white-tailed deer. Deer may avoid hunting areas due to increased pressure, but this would not lead to negative impacts to the population. On Wallops Island NWR, no changes are being proposed and we do not anticipate meaningful changes in annual harvest or impacts to the deer population. As under Alternative A, the sika population on the Chincoteague NWR would continue to be managed to reduce competition with white-tailed deer. Conversion to non-lead ammunition will be phased in for deer hunting over the next 4 years on both refuges. The transition to non-lead ammunition is not expected to impact harvest of big game species.

Under the Proposed Action Alternative, quota turkey hunts would be opened on Chincoteague and Wallops Island NWRs. According to VDWR, the wild turkey population was estimated as 0.45 to 0.61 turkey per square mile of suitable habitat for the northern Virginia region in the 2016-2017 season. The northern Virginia region population is considered stable to rising. Approximately 20,541 turkeys were harvested during the 2021 spring gobbler season, 211 harvests were made in Accomack County.

Studies examining the direct effects of hunting on turkey behavior and movement are limited. One study conducted in Louisiana tracked the movements of wild turkey during the hunting season and found that distances traveled by wild turkeys were only 8 percent greater during hunting days than non-hunting days (Gross et al. 2015). Although hunting made it more likely for a turkey to change their movement patterns, a small-scale increase in range is not biologically significant.

The refuge would open to a limited quota mentored turkey hunt during the spring and fall seasons. The remainder of the year would allow turkey to rest and recover. The refuge estimates less than 10 turkeys will be harvested annually from Chincoteague NWR and 2 from Wallops Island NWR. Annual harvest quotas would be set to ensure only minimal impacts to the refuges' populations. Relative to State harvest numbers, refuge hunting impacts on statewide or county populations are expected to be negligible.

Refuges, including Chincoteague and Wallops Island NWRs, conduct the refuge hunting program within the framework of State and Federal regulations. VDWR sets hunting frameworks based on species' populations and monitored harvests. The proposed refuge hunting regulations will be the same as, or more restrictive than, hunting regulations throughout the State. By maintaining hunting regulations that are the same as or more restrictive than the State, the refuge can ensure that they are maintaining seasons that are supportive of management on a more regional basis. Such an approach also provides consistency with large-scale population status and objectives.

MIGRATORY GAME BIRDS

Affected Resource Description

Waterfowl populations throughout the U.S. are managed through an administrative process known as flyways and the refuges are located in the Atlantic Flyway. In North America, the process for establishing waterfowl hunting regulations is conducted annually. In addition, public hearings are held, and the proposed regulations are published in the Federal Register to allow public comment.

Waterfowl populations have remained relatively stable along the Atlantic Flyway in Virginia (Roberts 2019). The total number of ducks and geese harvested in the Atlantic Flyway has also remained relatively stable in recent years (USFWS 2019). The proportion of the national waterfowl harvest that occurs on refuges is only 6 percent and there are no waterfowl populations that exist wholly and exclusively on refuges (USFWS 2013).

Liberal duck seasons (60 days, 6-bird bag limit) and resident goose seasons have resulted in high waterfowl harvests in Virginia during the past 10 years. Harvest has averaged approximately 133,300 ducks and 51,700 Canada geese from 2016 to 2019, compared to 114,770 ducks and 25,000 geese during the 1990's (VDWR 2020). Waterfowl hunter numbers in Virginia have been generally stable since the late 1990s. Since 1999, the Harvest Information Program (HIP) has been used to estimate hunter effort and harvest. The average number of duck and goose hunters over the past 3 years, as measured by HIP, was 16,700 and 13,900 respectively (VDWR 2020).

Anticipated Impacts to Migratory Game Birds

Alternative A

Under the No Action Alternative, on Chincoteague NWR, migratory game bird hunting would continue to be permitted for only rail, coot, duck, goose, and swan in the designated Migratory Bird Hunt Zones (see Figure 1). Hunting for snipe, gallinule, woodcock, dove, and crow would not be permitted. Wallops Island NWR would remain closed to migratory game bird hunting. Access for migratory game bird hunting on Chincoteague NWR would be by boat only and hunting from refuge beaches would remain prohibited after March 15. Sunday hunting would be permitted and the use of non-lead ammunition would be required for all migratory game bird species. Most of the marsh area on the eastern shore is owned by the State and is already open to migratory bird hunting. Continuing migratory game bird hunts on less than 40 percent of Chincoteague NWR would have some short-term disturbance to the migratory game birds resting and feeding in the area. There will be few long-term impacts to migratory game bird populations with harvest levels anticipated to remain similar to previous years.

Alternative B

Under the Proposed Action Alternative, on Chincoteague NWR, woodcock, dove, snipe, gallinule, and crow would be added to the species of migratory game birds that may be hunted. On Wallops Island NWR, migratory game bird hunting would be permitted for rail, coot, snipe, gallinule, duck, goose, swan, woodcock, dove, and crow. Sunday hunting would be permitted in accordance with State regulations. Migratory game bird hunting would occur within State seasons from September 16 through March 14. The use of non-lead ammunition would be required for all migratory game bird species.

The proposed expansion of migratory game bird hunting to include additional species on Chincoteague NWR and opening Wallops Island NWR to migratory bird hunting for the first time is anticipated to result in only minimal take of newly hunted species and negligible increases in take for those species already hunted. Impacts from hunters would continue to be restricted to occur on less than 40 percent of the total acreage at Chincoteague NWR, with only a minor increase in hunted acreage on Wallops Island NWR. As a result, we anticipate a similar but minimal short-term disturbance to the migratory game birds resting and feeding in the hunted area as under Alternative A. There would continue to be few long-term impacts to migratory game bird populations considering the small increase in huntable acreage on Wallops Island. The Assateague Island portion of Chincoteague NWR would remain closed to migratory game bird hunting and would continue to serve as relatively undisturbed habitat. The combined impact of the proposed migratory game bird hunts on both refuges would not result in significant impacts.

UPLAND GAME (raccoon, opossum, fox, coyote, rabbit, squirrel)

Affected Resource Description

Statewide trend data indicates coyote and red fox populations are rising while gray fox populations are falling (VDWR 2018). During the 2015-2016 season, an estimated 32,811 coyotes, 7,944 red fox, and 8,289 gray fox were harvested by hunters Statewide (Fies 2020, Pers. comm.).

Rabbit and squirrel are common and abundant species in Virginia. During the 2013-2014 season, an estimated 554,630 squirrels and 215,288 rabbits were harvested in the State (VDWR 2014). Raccoon and opossum are also common species. During the 2013-2014 season, an estimated 72,657 raccoons were harvested Statewide (VDWR 2014).

While population levels of upland game are not known, these species are also common and abundant in and around the refuges. Consequently, an active predator control program for raccoon, opossum, fox, and coyote is in place to minimize predation on priority management species, especially nesting migratory birds.

Anticipated Impacts to Upland Game (raccoon, opossum, fox, coyote, rabbit, squirrel)

Alternative A

Under the No Action Alternative, upland game hunting would remain closed on Chincoteague NWR and Wallops Island NWR. There would be no anticipated impacts under this alternative. Removal of predatory species would continue at current levels under the existing predator control program only and without the potential benefit of removals of raccoon, opossum, fox, and coyote by hunters.

Alternative B

Under the Proposed Action Alternative, upland game hunts would be opened on Chincoteague and Wallops Island NWRs. On the Chincoteague NWR Assateague Island Unit, Northern Hunt and Archery Only Zones, upland game hunting for raccoon, opossum, fox, and coyote would be allowed during regular refuge hours only (no night hunting, access from 2 hours before sunrise to 2 hours after sunset) and would be concurrent with the deer season (approximately October through early January). Upland game hunting will not be permitted on Sundays. On Wallops Island NWR, upland game hunting for raccoon, opossum, fox, coyote, rabbit, and squirrel would be allowed during

regular refuge hours only (no night hunting, access from 2 hours before sunrise to 2 hours after sunset) and would be concurrent with State seasons from September 16 through March 14. Upland game hunting would not be permitted on Sundays. The use of non-lead ammunition would be required on both refuges.

Refuge staff anticipate only small harvest levels of these species and only minor impacts to their population levels. Restricting upland game hunts to the deer season on Chincoteague NWR would likely further limit most take of these species to occur opportunistically by deer hunters. The majority of land use surrounding the refuges consists of agriculture and residential areas where populations of these species proliferate on the broader surrounding landscape. Any impacts would be short-term and minor and would mostly include changes in habitat use by individuals. A small reduction in active predator control may be realized as hunters harvest raccoon, opossum, fox, and coyote.

NON-TARGET WILDLIFE AND AQUATIC SPECIES

Affected Resource Description

Habitat conservation and management is the highest priority of the refuges, consistent with the original establishment purposes for the protection of migratory birds. More than 320 species of birds are known to use the refuges regularly for nesting and brood rearing, feeding, resting and staging during migration, or wintering.

Thirty-four mammal species are recorded on the lower Delmarva Peninsula and 9 species of bats may be found on or around the refuges. Frogs and toads that can be found at Chincoteague NWR include the Northern spring peeper, Southern green frog, Southern leopard frog, Fowler's toad, and Eastern narrow-mouthed toad. The freshwater and estuarine turtles that inhabit the refuge include the Eastern painted turtle, spotted turtle, Eastern mud turtle, Northern red-bellied cooter, Eastern box turtle, Eastern snapping turtle, and the estuarine Northern diamond-backed terrapin. The red-backed salamander is also commonly found.

Finfish of primary importance found near the refuges include the black drum, red drum, bluefish, winter flounder, summer flounder, menhaden, spot, Atlantic croaker, grey trout, mullet, spotted seatrout, and striped bass.

A more comprehensive discussion of the diversity of species found on the two refuges can be found in their respective CCPs at

https://www.fws.gov/refuge/Chincoteague/what_we_do/conservation.html.

Anticipated Impacts to Non-Target Wildlife and Aquatic Species

Alternative A

While this alternative likely results in some short-term but negligible negative impacts to small mammals, birds, and other wildlife due to disturbance in areas where human access for hunting activities occur, no significant impacts of the current hunting programs on non-target and aquatic wildlife species have been documented on either refuge. We do not anticipate the likelihood of significant impacts in the future with no changes to hunting.

Alternative B

While not targeted for hunting, impacts to non-target wildlife species including disturbance, avoidance of areas, habitat damage, or injury as a result of the use (Cole 1990) may occur, but such impacts are anticipated to be minimal and not significantly different from current levels. Hunting is not likely to adversely affect these species given the time of year the activities take place (September 16 through March 14) and where the uses occur on the refuge. For example, refuge beaches on Assateague, Assawoman and Metompkin Islands will remain closed to hunting during the migratory bird nesting season and much of the migration season. In addition, hunting would not be permitted on Sunday for big and upland game and night hunting would be prohibited, providing periods without any hunting disturbances. Prohibiting the use of hunting dogs on the Assateague Island Unit of Chincoteague NWR will ensure minimal impacts to the Delmarva fox squirrel, shorebirds and other non-target species. Rabbit and squirrel hunting on Chincoteague will also remain closed and will prevent the take of Delmarva fox squirrels.

Opening the Northern Hunt Zone and Archery Only Zone to fox, opossum, raccoon and coyote hunting will result in fewer predator species that have negative impacts on nesting migratory birds on the refuge. These species prey on eggs and disturb nesting birds, resulting in reduced productivity. Allowing harvest of these species would result in desirable, positive outcomes of decreased predation on nesting migratory birds and might reduce the need to conduct predator control.

The use of non-lead ammunition for deer hunting will initially be voluntary and will be required after a 4-year phase-in period. This phase-in period will allow hunters time to adapt to the new regulations without diminishing deer hunting opportunities on the refuges. The amount of lead introduced to the environment as a result of hunting activities will be negligible, given the restriction on lead ammunition for all upland, migratory game bird, and turkey hunting. The bioaccumulation of lead is a potential concern, but it does not present a significant issue for these activities as the refuge complex encourages use of non-lead alternatives for deer hunting and will educate hunters and the public to the potential adverse impacts of lead. Some hunters will choose non-lead methods of take such as archery.

THREATENED AND ENDANGERED SPECIES, AND OTHER SPECIAL STATUS SPECIES

Affected Resource Description

Species that may be found on or nearby the refuge include seabeach amaranth, Northeastern beach tiger beetle, piping plover, red knot, roseate tern, black rail, Northern long-eared bat, Atlantic sturgeon, monarch butterfly, bald eagle, and five species of sea turtles. Piping plover, loggerhead sea turtle, red knot, and seabeach amaranth are the current federally threatened or endangered species managed on the refuges. These species grow on, nest on or use refuge beaches during summer and during spring and fall migration seasons. We analyzed the alternatives for impacts to these four endemic focal species, which would exemplify the impacts for all other listed species that may be found on the refuge.

While not federally listed as a threatened or endangered species, bald eagles can be found nesting on or near the refuges and are protected by the Bald and Golden Eagle Protection Act.

Seabeach amaranth was federally listed as threatened in 1993 by the Service. Seabeach amaranth is an annual plant species that could occur on the upper beach and sparsely vegetated over wash fans and inter-dune areas. This species appears to require extensive areas of barrier island beaches and inlets functioning in a relatively natural and dynamic manner. In the absence of over wash and storms, other plants less tolerant of disturbance colonize the sparsely vegetated areas and ultimately outcompete amaranth. Threats include beach stabilization efforts (particularly the use of beach armoring, such as sea walls and riprap), intensive recreational use, and herbivory (grass eating) by white-tailed deer, sika, and Chincoteague ponies.

Anticipated Impacts to Threatened and Endangered Species

Alternative A

No impacts of the current hunting programs on threatened, endangered, and other special status species have been documented on either refuge. Most hunting occurs from September through the end of January, with the most participation from October through early December, when eagles are not nesting. Current management adheres to guidelines set forth in previous recovery plans and biological opinions. Under Alternative A, continuing the current hunting program will not result in any new or significant adverse impacts to threatened or endangered species.

Alternative B

Expansion of hunting under this alternative is not likely to adversely affect threatened, endangered, and other special status species given the time of year the activities take place (September 16 through March 14) and where the uses occur on the refuge. For example, refuge beaches on Assateague, Assawoman, and Metompkin Islands will remain closed to hunting during the piping plover and sea turtle nesting seasons and much of the migratory bird migration season. While there is a small potential for disturbance from either hunters walking or making noise to migrating red knot and piping plover, these impacts are minimized, as the refuge would limit hunting seasons and provide archery only and no-hunting areas that will assist to disperse impacts. In addition, dogs will not be allowed on the Assateague Island unit of the refuge to minimize the potential for disturbance in the most sensitive areas of the refuge.

We will avoid potential adverse impacts to bald eagles by following management guidelines developed in consultation with the State, including sight and distance setbacks from nests and concentration areas that may develop, and time-of-year restrictions. Bald eagle nesting season starts around December 15 and continues throughout the times of most winter and spring hunts.

Roseate tern and Eastern black rail would not be impacted by proposed hunting changes because they do not occur on the refuge. Atlantic sturgeon and Northeastern beach tiger beetle would not be impacted by proposed hunting changes because they do not occur in areas where hunting activities would take place. Northern long-eared bats may be disturbed by activity under or near their roost trees for stand placement, but this species is not known to winter in this region. Although seabeach amaranth generally grows in sparse to very sparse distribution, the existing population on the refuge is greatly dissipated. No known plants were observed in the 2021 census of the refuge.

Monarch butterflies are observed on nectar plants within beach strand habitat and impoundment management units during their peak migration (last two weeks of September through the first two

weeks of October). Monarch butterflies typically concentrate on seaside goldenrod located along the Beach Road corridor and the dunes from Swan Cove Trail south to Toms Cove. Assateague Island is a critical stopover point for southbound migrating monarchs that use the refuge's resources to rest, refuel, and roost for the night. While hunting is allowed between September 16 to March 14, hunting has not been shown to have negative impacts on monarch breeding or migration. Dogs will not be allowed on the Assateague Island unit of the refuge to minimize any potential for disturbance in the most sensitive areas of the refuge. Although this area is open to visitors during September and October, it is closed to all hunting seasons. Many visitors enjoy photographing monarch butterflies nectaring on the goldenrod.

The use of lead ammunition will initially be allowed in the designated Firearms Units on parts of the Chincoteague and Wallops Island refuges during the deer hunting seasons in accordance with State and refuge-specific regulations. By 2026, use of non-lead ammunition will be required for all species.

The negative impacts of lead on wildlife are documented and clear (Golden et al. 2016). To move towards reduction and future elimination of this threat on the refuge, we will be eliminating the use of lead ammunition over a 4-year period to educate and work with hunters on the use of non-lead alternatives. The phased transition to non-lead ammunition for all hunting will minimize the inadvertent exposure and subsequent lethal or sub-lethal impacts to bald and golden eagles, as well as other scavenging species. Eagles and other 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 shot and bullet fragments found in animal carcasses and gut piles are the most likely source of lead exposure. Many hunters do not realize that the carcass or gut pile they leave in the field usually contains lead bullet fragments. Research will continue 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. The bioaccumulation of lead is a potential concern, but it does not likely present a significant issue on this refuge, as: 1) non-lead shot is currently required for hunting waterfowl; 2) we are proposing a 4-year phase out to the use of lead ammunition for all species by 2026; 3) the refuge strongly encourages use of non-lead alternatives for hunting deer and sika for the next 4 years; 4) we will educate hunters and the public to the potential adverse impacts of lead; and 5) the updated hunting activities are not likely to introduce substantially more lead into the environment over existing amounts with the current or proposed hunting program. Some hunters will also choose non-lead methods of take such as archery.

We anticipate the amount of lead introduced on the refuge to decline with our proposed measures. Therefore, the scarce amount of lead introduced on this refuge from updated hunting activities is not likely to adversely affect any of the above listed species.

HABITAT AND VEGETATION

Affected Resource Description

Chincoteague NWR is a dynamic area with constant fluctuations in its shoreline boundaries and habitat acreage. Current vegetation cover is strongly associated with a certain habitat, and is so described in this section. There are five major habitat types found on the refuge (which include three smaller divisions: Assawoman Island, Metompkin Island, and Cedar Island). They are: Beach-Dune habitat (approximately 1,800 acres); Shrub-Early Successional habitat (approximately 2,900 acres); Forested Uplands habitat (approximately 1,800 acres); Impoundments and Freshwater Wetlands habitat (approximately 2,000 acres); and over 5,800 acres of salt marshes.

The most dominant vegetation on Assateague Island is the loblolly pine and loblolly pine/hardwoods maritime forest, encompassing much of the upland habitat, with salt marsh grasses encompassing much of the lowland habitats. Associated upland plant species include southern red oak, sweetgum, and sassafras. Understory associates include wild grape, Japanese honeysuckle, greenbriar, and American holly. The predominant vegetation in the open areas includes a variety of grasses, wax myrtle, and groundsel tree. Common fresh marsh vegetation consists of dwarf spike rush, smartweed, fleabane, swamp rose mallow, American three-square, umbrella-grass, saltgrass, beggartick, cattail, and eastern baccharis. Salt marsh vegetation consists mainly of salt marsh cord grass and salt meadow hay.

Salt marsh habitat covers approximately 95 percent (406 acres) of the Morris Island Unit and approximately 87 percent (485 acres) of the Wildcat Marsh Unit. Salt marsh cord grass, salt meadow cordgrass, and saltwort are the major vegetation species. Upland vegetation on Morris Island is limited to a few scattered sites (21 acres) of loblolly pine, wax myrtle, black cherry, and sassafras. Approximately 13 percent (73 acres) of the southern part of Wildcat Marsh is an upland forest consisting of loblolly pine, oak, and typical understory associates. Wax myrtle is scattered throughout the area.

Assawoman and Metompkin islands are barrier islands with habitat types consisting of beach, dunes, and extensive salt marshes to the west of the islands. The predominant species in the marsh include salt marsh cordgrass and salt meadow hay. On Metompkin, the marsh extends to the mainland, although it is intersected by numerous creeks and channels. The remainder of the island is predominantly sparse grasslands with little woody growth. Assawoman Island also contains extensive salt marshes, particularly in the northern half of the island. A cobble-laden wash over area, located at the northern tip and formed by the sealing of Assawoman Inlet, provides good habitat for nesting birds. Pockets of woody shrubs occur in depressions between the beachfront and the westward marshes. Plants found here include wax myrtle, bayberry and groundsel bush.

Cedar Island is dominated by beach and dune habitats on the ocean side and a brackish marsh dominated by salt meadow cordgrass on the bay side. A small thicket dominated by eastern red cedar and poison ivy occurs on the north end of the island. It is adjacent to the beach and is eroding rapidly. The north end also supports most of the islands' other plant diversity. Dead shrubs and some low-growing vegetation are present in over wash areas. Other habitat types found on Cedar Island include a salt flat to the south and mudflats that are exposed at low tide. Wallops Island

NWR is composed of 195 acres of salt marsh, 121 acres of forest, and 57 acres of old-field/early successional forests. Loblolly pine is the dominant species in the forest habitat and secondary components include: tulip poplar, red maple, southern red oak, wild cherry, dogwood, sassafras, and sweet gum. Understory includes: American holly, spicebush, Devil's walkingstick, and greenbrier. Transition zones between the marsh and woodland are dominated by groundsel tree and wax myrtle. The salt marsh is dominated by cordgrasses.

A Simoneaston Bay sea-level fen, named the Lucky Boy Fen, is found on Wallops Island NWR. Sea level fens are nutrient-poor, maritime seepage wetlands, confined to a few sites within the mid-Atlantic region that have an unusual combination of environmental conditions. The sea level fen is a globally significant (ranked as "G1" or critically imperiled) community type (Fleming and Patterson 2010); only four occur in Virginia, all of them in Accomack County (Fleming 2021). Lucky Boy Fen is located just above highest tide levels, at the base of a slope where abundant groundwater discharges. It is less than ½-acre in size but supports six rare plant species.

For more information regarding and the general characteristics of the refuge's environment, please see Chapter 3.3 of the refuge's CCP, which can be found at:

https://www.fws.gov/refuge/Chincoteague/what_we_do/conservation.html.

Anticipated Impacts to Habitat and Vegetation

Alternative A

Deer hunting would continue to occur in upland and, to a lesser extent, wetland habitats on the refuges. Reducing the exotic sika population on Chincoteague NWR would have a beneficial impact for vegetation, especially for the endangered seabeach amaranth, of which sika is a documented herbivore. The grazing habits of sika have led to overgrazing of certain habitat types on the refuge, mainly in the impoundments and forested areas. Continuation of sika harvest to reduce their numbers would help maintain positive increases in regeneration.

Heavily browsed forest understory and shrub vegetation leaves less food and cover for migratory birds, a resource that the refuge is focused on protecting. Maintaining current deer population levels will limit the browse effects on vegetation and enable the forest understory to grow and produce more food and cover for migrants (Horsley et. al 2003). This will also provide additional habitat for small mammals, reptiles, and invertebrates.

Direct impacts of hunters to wildlife habitat would continue to be minimal as most species impacted would have already undergone senescence (aging or dying process) or become dormant during the hunting seasons. Further impacts are minimized by not permitting hunters to cut vegetation for shooting lanes or camouflage, and by not permitting the use of permanent hunting structures attached by nails, wire, and other materials that could adversely affect vegetation. No significant impacts would result on the refuge from these visitor services, but current monitoring efforts would continue (USFWS 2007).

Waterfowl hunting would continue in tidal marshes on Chincoteague NWR. Marsh areas are prone to disturbance, and foot traffic to access hunting sites will result in trampling of sensitive marsh plants in frequently used areas (Lomnický et. al. 2019). However, limiting access to hunting areas to access by boat only minimizes trampling impacts. Furthermore, in upland areas, hunters tend to

park in improved lots and along refuge roads and disperse across fairly large areas in low density, resulting in minimal trampling of vegetation. As currently implemented, very little damage to habitat and vegetation by hunters occurs.

Alternative B

Proposed hunting program changes on the refuges would see a marginal increase in hunting opportunities through the addition of wild turkey and upland game hunting, and expansion of migratory game bird hunting. However, these opportunities are anticipated to result in only minimal increases in visitation, and thus, an insignificant increase in visitor trampling potential or vegetation habitat disturbance. As under Alternative A, reducing the sika population will continue to benefit wildlife habitats by reducing overgrazing.

Because migratory game bird hunters would still be restricted to accessing hunting areas from a boat on Chincoteague marshes, and only low numbers of hunters are expected to hunt on the marshes of Wallops Island NWR, disturbance and foot traffic in marsh areas that results in trampling of sensitive marsh plants is not anticipated to result in significant new marsh habitat and vegetation damage.

VISITOR USE AND EXPERIENCE

Affected Resource Description

Chincoteague NWR is open to all six priority public uses of the Refuge System, which are wildlife observation, wildlife photography, hunting, fishing, environmental education and environmental interpretation. Wallops Island NWR is open only to the current white-tailed deer hunt.

In 2021, there were 1,408,451 total visitors to Chincoteague NWR, most of them (98 percent) being for non-consumptive uses. Hunting is a traditional outdoor pastime and remains a popular form of wildlife-dependent recreation on the refuge and a vital part of the cultural, social, and economic fabric of communities near the refuge. Hunting visits made up less than 1 percent (2,074) of the total visits on Chincoteague NWR. On Wallops Island NWR, 107 hunter visits occurred.

Anticipated Impacts to Visitor Use and Experience

Alternative A

Refuge lands open to hunting would continue to take place within the regulatory framework established by the FWS and the VDWR, and would continue to allow the public to enjoy hunting at no or little cost in a region where private land is leased for hunting, often costing a person several hundred to several thousand dollars per year for membership. Hunting provides opportunities to experience a wildlife-dependent recreational activity and an increased awareness of the refuge and the Refuge System. Hunting instills an appreciation for and understanding of wildlife, the natural world and the environment, and promotes a land ethic and environmental awareness. Visitors interested in hunting would continue to find high quality opportunities to engage in their favored pastime.

The refuge would continue promoting a wildlife-oriented recreational opportunity that is compatible with the purpose for which the refuge was established. The hunting program would continue to provide an administratively simple program that balances other public use activities.

The program supports Presidential Executive Order 13443: Facilitation of Hunting Heritage and Wildlife Conservation, regional directives, and parallels State hunting regulations. In addition, it provides seasonal closures to avoid conflicts with other uses while continuing to offer disabled hunting opportunities.

On Chincoteague NWR, because the majority of hunting takes place outside of the major public use areas and occurs after the high visitation summer season, there is little conflict with other refuge visitors. However, limited hunting will occur within the major public use area, at times, requiring the closing of some trails to the general public. In order to minimize conflicts, select hunting zones will be limited to archery only. To accommodate hunters confined to wheelchairs, certain areas may be closed to general public access during the firearm season. All closures within the major public use area will be signed and patrolled to alert non-hunters of the ongoing big game hunt. In addition, the Northern Hunt Zone is closed to general public access during the firearm season and deer hunting is not allowed on Sundays, further reducing conflicts with other refuge visitors.

Maintaining current hunting policy on Wallops Island NWR would continue to minimize direct conflict between white-tailed deer populations and humans, particularly when human safety is an issue (e.g., reduce number of vehicle deer collision along Route 175).

Alternative B

With the proposed expanded hunting program at Chincoteague NWR, the likelihood for conflicts between hunters and non-consumptive users may increase but likely not significantly. Only a minimal increase in hunter numbers is anticipated with most impacts to other users being limited to the fall and winter; hunting will not be allowed during the spring and summer seasons when visitation on the refuge is the greatest. During the hunting season, public outreach, zoning (e.g., continuing closure of the Northern Hunt Zone to other uses during the firearm hunting season), and hunting restrictions in some locations including archery only areas, no-hunting zones and no-hunting setbacks from buildings, roads, and trails will minimize conflicts with other user groups. If conflicts arise, additional mitigation efforts will be implemented to ensure that hunting use will not have significant impacts. In addition, maintenance of hunter information stations will allow timely communication with hunters in order to provide updates throughout the hunting season regarding other refuge visitor service activities and management projects.

Non-hunting visitation to the Toms Cove Hook unit of Chincoteague has been increasing during the hunting season in recent years. Removing shotguns as a method of take on the Toms Cove Hook unit and adding this area to the Archery Only Hunt Zone will reduce conflicts with non-hunters and promote safety.

No impacts or conflicts with non-hunters on Wallops Island NWR are anticipated, as the refuge will remain closed to other public uses.

CULTURAL RESOURCES

Affected Resource Description

On Chincoteague NWR, a number of broad historical studies were produced around the time the Assateague Island National Seashore was established. Several studies of more limited scale have

also been performed for individual projects on the refuge. A 1989 overview study of the refuge (Fehr et al. 1989) and a subsequent maritime-focused overview of the Seashore (Langley 2002) provide the most comprehensive summaries of current knowledge regarding cultural resources on Assateague Island. Other units of Chincoteague NWR to include Morris, Assawoman, Metompkin, and Cedar Islands as well as Wildcat Marsh on Chincoteague Island have not been studied as intently, mainly because of the dynamic changes to the shoreline and the natural process of island movement. Pre-Contact Period evidence is rare, possibly due to the dynamic nature of the island's geomorphology and the fact that the lower third of current day Assateague Island did not exist during this period. Historic Period resources include: two marked cemeteries, the remnants of the Assateague Village, multiple fish and hunt camps, numerous shipwrecks, the site of a 1848 lifesaving station, a U.S. Coast Guard Station (owned by the NPS and included in the National Register of Historic Places (NRHP), and the Assateague Lighthouse (also listed in the NRHP). The refuge is also the grazing range for the internationally known herd of Chincoteague Ponies owned by the Chincoteague Volunteer Fire Company.

The historical context of Wallops Island is best captured in the Historic Resources Survey and Eligibility Report for Wallops Flight Facility – Accomack County, Virginia completed by URS Group, Inc. and EG&G Technical Services, Inc., in 2004 for NASA. This document provides important historical context over the time period between 1607 and 2004 and identifies several historical items of interest within the 373-acre Wallops Island NWR. A family cemetery with three marked graves is located near the maintenance facilities and two former Navy waste disposal sites are of interest to the Department of Defense.

Anticipated Impacts to Cultural Resources

Alternative A

No impacts of the current hunting programs on cultural resources have been documented on either refuge. We do not anticipate the likelihood of significant impacts in the future with no changes to hunting.

Alternative B

Hunting, regardless of method or target, is a consumptive activity that does not pose any threat to prehistoric or historic properties on or near the refuges. No impacts to cultural resources are anticipated above what may be caused by any refuge visitor. Although hunters would be able to access parts of the refuges that are closed to other visitors, this access alone is not expected to increase vandalism or disturbance to cultural resources by individuals while they are hunting, nor is it likely that hunters would be more likely to engage in vandalism or disturbance than any other refuge visitor. At Wallops Island NWR, hunting would be the only available public use; however, no adverse impacts to cultural resources are expected.

REFUGE MANAGEMENT AND OPERATIONS

Affected Resource Description

On Chincoteague NWR there are four unpaved trails (Lighthouse Trail, Marsh Trail, Bivalve Trail, and a Service Road trail), four accessible paved trails (Wildlife Loop, Woodland Trail, Black Duck Trail, and Swan Cove Trail), four different parking areas, a kayak launch and three wildlife observation platforms. The primary roads are Beach Road from the Town of Chincoteague to the

recreational beach, the Wildlife Loop, and the 9-mile long Service Road that extends north from the Wildlife Loop. Core infrastructure includes the Herbert H. Bateman Educational and Administration Center, a maintenance shop and compound, the Toms Cove Visitor Center next to the recreation beach, and the historic Assateague Lighthouse.

On Wallops Island NWR, three parking areas located on VA175 and an informational kiosk are available to hunters. No roads or trails are located on the refuge. Infrastructure is limited to a maintenance storage building and a fenced NPS maintenance compound authorized under an Memorandum of Understanding.

Currently, there are 16 permanent refuge employees that oversee the Chincoteague and Wallops Island NWRs. These personnel are stationed on Chincoteague NWR and include the refuge manager, deputy refuge manager, and administrative, biological, visitor services and maintenance staff, and Law Enforcement. Several other term and temporary employees are employed in any given year. The refuge also sometimes hires contractors and has numerous volunteers.

Anticipated Impacts to Refuge Management and Operations

Alternative A

Hunters currently use refuge infrastructure, such as public parking areas, hunter parking areas, and refuge roads and trails, to gain access to refuge lands. There are no adverse impacts to refuge facilities observed under this alternative. No changes to refuge facilities or infrastructure are anticipated under this alternative.

Annual hunt administration costs for Chincoteague and Wallops Island NWRs including salary, equipment, updating brochures, signs, collection of hunt data and analysis of biological information, etc. total approximately \$24,000. Chincoteague NWR funds are used to conduct hunts on the Chincoteague and Wallops Island NWRs. Funding specifically for hunts has not been allocated, although funds are available through recreation fees. Under this alternative, there would be no changes to the administration or budget for the hunt program.

Alternative B

Hunters would continue to use existing refuge infrastructure (parking areas, trails, roadways) to access hunting areas on both refuges. While slightly more hunters are expected to use the refuge under this alternative, no observable impacts to infrastructure or facilities are anticipated and no changes to facilities or infrastructure are planned or needed.

We anticipate hunt program administrative costs would not significantly change under Alternative B and that funding would continue to be sufficient to administer the hunting program at Chincoteague and Wallops Island NWRs in the future.

SOCIOECONOMICS AND ENVIRONMENTAL JUSTICE

Affected Resource Description

Chincoteague and Wallops Island NWRs are located in Accomack County, Virginia in close proximity to the town of Chincoteague. According to the U.S. Census Bureau, the population of Chincoteague grew 21 percent (from 3,572 to 4,317 individuals) between 1990 and 2000, but

declined 32 percent (to 2,941 residents) between 2000 and 2010 (U.S. Census Bureau 2010). In comparison, Accomack County's population declined by 13.4 percent over the same time period.

The town of Chincoteague has several sources of economic activity, including tourism (both refuge-related and other outdoor-based recreation opportunities), commercial fishing and seafood processing, and impacts from the nearby NASA Wallops Island Flight Facility. The three largest employment sectors are accommodation and food services, retail trade, and health care and social assistance. The median household income of Accomack County, Virginia is \$43,210.

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.

Anticipated Impacts to Socioeconomics and Environmental Justice

Alternative A

The current hunting program has a minor, long-term beneficial impact to the local economy. Combined, Chincoteague and Wallops Island NWRs average around 2,000 hunter visits a year, but each of those visits represents only a minor contribution to the local economy. Hunters spend money on gasoline, equipment, food, and lodging in the area surrounding the refuge. While positive, the contributions to the local economy are negligible.

Alternative B

While hunting visitation may slightly increase due to increased opportunities, hunting only accounts for a fraction of expenditures related to the refuge. Expanding hunting programs at Chincoteague and Wallops Island NWR would likely enrich the local economy by attracting additional refuge visitors to the area, but the additional economic impact is expected to be negligible under this action. We do not anticipate hunting opportunities proposed under this alternative will have negative impacts to other forms of refuge visitor related economic activities.

The FWS has identified no minority or low-income communities within the impact area. Minority or low-income communities would not be disproportionately affected by any impacts from this proposed action or any of the alternatives.

Monitoring

Game species populations are monitored by Chincoteague NWR staff in cooperation with VDWR. Game harvest reports provide additional means for monitoring overall species populations. Refuge hunters are required to indicate they were hunting on Federal land per State game-check procedures. The State has determined that populations of game species are at levels acceptable to support hunting and these assessments are reviewed and adjusted periodically. In addition, deer hunters on Chincoteague NWR will be required to report their harvest following each hunt. The refuge will be adaptive towards harvest management under the hunt program to ensure species and habitat health. Refuge-specific hunting regulations may be altered to achieve species-specific harvest objectives in the future.

Summary of Analysis

Alternative A – No Action Alternative

Under the No Action Alternative, there would be no additional costs to the refuge under this alternative. There would be no change to the current public use and wildlife management programs on the refuge. The refuge would not increase its impact on the economy and would not provide new hunting and access opportunities. This alternative has the least direct impacts of physical and biological resources. In addition, this alternative would not meet mandates under the NWRSA and Secretarial Order 3356.

Alternative B –Proposed Action Alternative

The Proposed Action Alternative is FWS's proposed action because it offers the best opportunity for public hunting that would result in a minimal impact on physical and biological resources, while meeting the FWS's mandates under the NWRSA and Secretarial Order 3356. We believe that hunting on the refuge would not have a significant impact on local or regional wildlife populations because the percentage likely to be harvested on the refuge, though possibly additive to existing hunting takes, would be a small fraction of the estimated populations. Additional hunting would not add more than slightly to the impacts to wildlife from hunting at the local or regional levels, and would only result in minor, negative impacts to wildlife populations.

List of Sources, Agencies and Persons Consulted

USFWS – Ecological Services – Virginia Field Office, Gloucester, VA (Section 7 process)
Virginia Department of Wildlife Resources – State Office – Henrico, VA (1/2020 Meeting)
Virginia Department of Wildlife Resources – District Office – Charles City, VA (6/2021 Meeting)
Virginia Department of Conservation and Recreation - Natural Heritage - Richmond, VA (Section 7 process)

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State Coordination

Refuges, including Chincoteague and Wallops Island NWRs, conduct hunting programs within the framework of State and Federal regulations. Virginia refuges met on January 14, 2020, with VDWR to discuss hunting on national wildlife refuges within the State of Virginia. A general overview of current opportunities and where other opportunities exist for the future. We worked with the local State biologist and conservation officers early in the development of the plan. The State of Virginia provided a letter of support for implementing requirements for non-lead ammunition on December 10, 2020. The refuge reached out to VDWR on June 11, 2021, to discuss this Hunting Plan. We asked for review by the State regional office that covers our area to help adjust our plan to align,

where possible, with State management goals. We have continued to consult and coordinate on specific aspects of the plan. The State is in agreement with the refuges' hunting program, as it will help meet State objectives. Chincoteague NWR and VDWR will continue to work together to ensure safe and enjoyable recreational hunting opportunities.

Tribal Consultation

Refuge staff will coordinate with federally recognized Tribal governments in areas of mutual interest, including hunting opportunities. Thirteen tribes will be contacted once the draft hunting plan is complete, and will include distribution of the draft for review and further coordination if needed.

Public Outreach

The refuge maintains a mailing list for news release purposes to local newspapers, radio, and websites. Special announcements and articles may be released in conjunction with hunting seasons. In addition, information about the hunt will be available at the Chincoteague NWR Visitor Center, on the Chincoteague NWR and Wallops Island NWR websites, and/or posted on hunt information stations. The public will be notified of the availability of the Hunting Plan, EA, and accompanying CDs with no less than a 60-day review and comment period. We will inform the public through local venues, the refuge website, and social media.

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OTHER APPLICABLE STATUTES, EXECUTIVE ORDERS AND REGULATIONS

Cultural Resources

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

Fish and Wildlife

- Bald and Golden Eagle Protection Act, as amended, 16 U.S.C. 668-668c, 50 CFR 22.
- Endangered Species Act of 1973, as amended, 16 U.S.C. 1531-1544; 36 CFR Part 13; 50 CFR Parts 10, 17, 23, 81, 217, 222, 225, 402, and 450.
- Fish and Wildlife Act of 1956, 16 U.S.C. 742 a-m.
- Lacey Act, as amended, 16 U.S.C. 3371 et seq.; 15 CFR Parts 10, 11, 12, 14, 300, and 904.
- Migratory Bird Treaty Act, as amended, 16 U.S.C. 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 U.S.C. 7401-7671q; 40 CFR Parts 23, 50, 51, 52, 58, 60, 61, 82, and 93; 48 CFR Part 23.
- Wilderness Act, 16 U.S.C. 1131 et seq.
- Wild and Scenic Rivers Act, 16 U.S.C. 1271 et seq.
- Executive Order 13112 – Invasive Species, 64 Fed. Reg. 6183 (1999).

Water Resources

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