U.S. Fish & Wildlife Service

Chincoteague and Wallops Island National Wildlife Refuges

Final Comprehensive Conservation Plan and Environmental Impact Statement

August 2015

Volume 3 - Appendix P through S

Front cover:

Sunrise at Chincoteague National Wildlife Refuge
Steve Hillebrand/USFWS

This blue goose, designed by J.N. "Ding" Darling, has become the symbol of the National Wildlife Refuge System.

The U.S. Fish and Wildlife Service (Service) is the principal Federal agency responsible for conserving, protecting, and enhancing fish, wildlife, plants, and their habitats for the continuing benefit of the American people. The Service manages the National Wildlife Refuge System comprised of over 150 million acres including over 555 national wildlife refuges and thousands of waterfowl production areas. The Service also operates 70 national fish hatcheries and 81 ecological services field stations. The agency enforces Federal wildlife laws, manages migratory bird populations, restores nationally significant fisheries, conserves and restores wildlife habitat such as wetlands, administers the Endangered Species Act, and helps foreign governments with their conservation efforts. It also oversees the Wildlife and Sportfish Restoration Program which distributes hundreds of millions of dollars in excise taxes on fishing and hunting equipment to state wildlife agencies.

Comprehensive Conservation Plans (CCPs) provide long-term guidance for management decisions on a refuge and set forth goals, objectives, and strategies needed to accomplish refuge purposes. CCPs also identify the Service's best estimate of future needs. These plans detail program levels that are sometimes substantially above current budget allocations and, as such, are primarily for Service strategic planning and program prioritization purposes. CCPs do not constitute a commitment for staffing increases, operational and maintenance increases, or funding for future land acquisition.

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Refuge Vision Statement

Our vision statement for the refuges is a synthesis of the refuges' purposes, the National Wildlife Refuge System mission and goals, and other biological, legal, and social concerns in which the refuge has a role. It is intended to be an expression of what the refuge will be like in the future in terms of natural resources and visitor experience. Our vision for the refuge, developed to help provide the core component of management strategies hereafter, is as follows:

> *Chincoteague and Wallops Island National Wildlife Refuges encompass extraordinary and ever-changing lands at the edge of the sea, a place where unique habitats and wildlife flourish. In partnership with others, the refuges are a vital part of a larger system of protected lands and waters on the Delmarva Peninsula critical to migratory birds. People from around the world can visit the refuges to learn, recreate, refresh themselves, be inspired by wildlife and wild lands, and renew their connection with nature.*

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Appendix P

USFWS

Boardwalk on Refuge

Compatibility Determinations

Chincoteague NWR and Wallops Island NWR
Compatibility Determinations

1. Wildlife Observation, Wildlife Photography, and Interpretation
2. Environmental Education
3. Fishing (Recreational)
4. Migratory Game Bird Hunting
5. Big Game Hunting
6. Commercial Filming, Still Photography, and Photography Workshops
7. Grazing of Chincoteague Ponies
8. Horseback Riding
9. Research and Studies Conducted by non-USFWS Staff
10. Shell Collection
11. Big Game Hunting (Wallops Island NWR)
12. Research and Studies Conducted by non-USFWS Staff (Wallops Island NWR)

COMPATIBILITY DETERMINATION

USE: Wildlife Observation, Wildlife Photography, and Interpretation

REFUGE NAME: Chincoteague National Wildlife Refuge

DATE ESTABLISHED: May 13, 1943

ESTABLISHING AND ACQUISITION AUTHORITY(IES):

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).

- "... 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.

DESCRIPTION OF USE:

(a) What is the use? Is the use a priority public use?
The use is wildlife observation, wildlife photography, and interpretation. These are priority public uses identified by Executive Order 12996 (March 25, 1996) and by the Refuge System Administration Act of 1966, as amended by the Refuge System Improvement Act of 1997 (Public Law 105-57).

(b) Where would the use be conducted?
The use would be conducted within the refuge's boundary. The uses would be conducted in current buildings and on current and future trails and roadsides of the refuge. Visitors can access information about the refuge using advanced technology (computers, radio, cell phone, downloadable programming, etc.). Designated areas open to visitors for wildlife observation, photography, and interpretation are as follows (see Map 2-3 in the Comprehensive Conservation Plan and Environmental Impact Statement (CCP/EIS) for an illustration of where these uses would be conducted on the refuge):

- Herbert H. Bateman Educational and Administrative Center
- Assateague Lighthouse
- Beach Road and Beach Road Bike Trail
- Marsh Trail
- Wildlife Loop
- Lighthouse Trail
- Black Duck Trail
- Swan Cove Trail
- Woodland Trail
- Bivalve Trail
- Beachfront
- New Beach Access Road
- Service Road

Access to the beachfront is permitted in two ways:

1) Foot access is currently allowed year round from the Maryland/Virginia state line to the southern terminus of the National Park Service (NPS) recreational beach parking area.

2) Foot access and over sand vehicle (OSV) use/access is currently allowed at certain times of the year from the NPS southernmost recreational beach parking area at Toms Cove to "Fishing Point" on Toms Cove Hook.

Access for wildlife observation and photography in the OSV zone is further restricted by the following stipulations:

1) Overwash portion of the OSV zone closed March 15 through August 31 based on shorebird nesting behavior; close 200 meters north of nesting sites from 2 days prior to any nests hatching and through fledging.
2) Hook portion of OSV zone closed March 15 to August 31 or thereafter, until last shorebird fledges.
3) Upon complete establishment of the new recreational beach, from March 15 to September 15, the area south of the new assigned area is closed.
4) From September 16 to March 14, the zone will again start at the beach terminus of Beach Road at Toms Cove, then south along the Atlantic Ocean beachfront to "Fishing Point" on Toms Cove Hook, then returning by the same route. Walking and OSV use will generally be within the intertidal zone, unless OSVs are re-directed by signage to avoid sea turtle nest sites; vehicles are prohibited from the dunes or vegetated areas. Wildlife observation and photography could also occur along the beachfront of Assawoman, Metompkin, and Cedar Islands outside the shorebird nesting season.

(c) When would the use be conducted?

Opportunities for wildlife/wildlands observation, wildlife photography, and interpretation are available at existing buildings and via existing trails and newly established ones during normal refuge hours. Normal refuge hours are 5 a.m. to 10 p.m. from May through September; 6 a.m. to 6 p.m. from November through March; and 6 a.m. to 8 p.m. during the months of March, April, and October. A new access road will be established connecting current visitor use areas to the new recreational beach. Some conflicts are expected between refuge user groups, as well as wildlife use which will be managed by seasonal closures. These seasonal closures are explained below and apply mostly to non-consumptive users during the hunting season or beachfront walking during the shorebird nesting season.

- All beach areas on Assateague Island south of the newly established assigned area (i.e., the Swan Cove Trail beach terminus) will be closed to all visitor use from March 15 until September 15 or until the last shorebird fledges, due to nesting of federally threatened piping plovers, as well as other shorebird species.
- All trails south and east of the Administrative Office and the new Beach Access Road may be closed for big game hunting during the fall and winter months.
- Staffing of the Assateague Island Lighthouse and operation of the Wildlife Tour Bus is provided by the Chincoteague Natural History Association (CNHA). Operations vary throughout the year. Daily access is provided during the busier visitor use periods with

weekend access during the shoulder seasons and very limited or no access during the winter months.

- The Herbert H. Bateman Educational and Administrative Center is open daily throughout the year.
- Beachfront access on Assateague Island north of the recreation beach would be year round within the Intertidal zone.
- Staff and/or volunteer guided interpretative programs may occur year round but are concentrated in the busier visitor use periods.
- Beachfront access on the southern islands would be permitted for these uses outside of the shorebird nesting season (March 15 to September 15) and the safety and security zone established by National Aeronautics and Space Administration (NASA) on Assawoman Island. As Metompkin and Cedar Islands have other ownership as well, visitors should consult with those entities prior to visiting.

(d) How would the use be conducted?

These three priority visitor uses would be allowed on established and newly developed roads, trails, parking areas, beachfront areas and in buildings that have been designed to accommodate such uses and in areas that are least sensitive to human intrusion. Uses would be conducted for the general public, as well as for organized groups, including school and youth groups. Brochures and maps depicting the roads and trails open for these uses are available at the Herbert H. Bateman Educational and Administrative Center, at trailheads and on the refuge's website.

Interpretation may be conducted by way of personal presentations by staff, volunteers, CNHA personnel, contracted and guest presenters, teachers and other youth leaders, and at special events and displays both on and off the refuge. Educational and interpretive information will also be provided via signage, kiosks, printed information, exhibits, audiovisual presentations, web based information, podcasts, radio messages and lecture programs. Wildlife observation and photography are usually self-conducted activities and are facilitated through the availability of trails, viewing areas, tours, and informational materials. Wildlife observation programs such as birding field trips, CNHA Wildlife Tours, and other nature walks are frequently given. Viewing scopes are provided in designated areas.

Refuge staff are responsible for on-site evaluations to resolve visitor use issues; monitor and evaluate impacts; maintain boundaries and signs; meet with interested public; recruit volunteers; prepare and present interpretive and educational programs; maintain existing trails and viewing areas; revise brochures and develop new information materials, install and/or update kiosks; develop needed signage; organize and conduct refuge events; conduct regularly scheduled programs for the public; display off-site exhibits at local events; develop relationships with media; provide law enforcement and security; and respond to public inquiries.

Foot access is permitted in all listed areas. Bicycle access is permitted on all paved roads, hard-surfaced trails and on the Bike Trail that parallels Beach Road. Access for non-motorized, hand carried watercraft (including but not limited to kayaks, canoes, kite boards, sail boats and sailboards) into Toms Cove and Assateague Channel will be available from a launch site to be developed near the South Pony Corral area. Access north of the recreational beach via the Service Road will be available by foot or via the CNHA Wildlife Tour Bus and by other organized groups authorized with a permit or agreement.

In addition to published 50 Code of Federal Regulation (CFR) regulations and State regulations, refuge-specific regulations also apply for "Wildlife Observation and Photography and Interpretation" and are as follows:

- All boats must be off the water by sunset. Only non-motorized, hand carried, non-commercial watercraft access will be permitted.
- Areas may be closed on the refuge with little or no warning for safety or other reasons.
- Visitors must stay on the designated trail routes and areas.
- Opportunities for wildlife observation, wildlife photography, and interpretation are available via the established road and trail network, the OSV zone, and along the proposed beach access road and bike trail as well as along the beachfront during normal refuge hours. All new construction will be done in such a way as to minimize impacts to refuge resources. Some conflict between refuge users is expected to result in short-term moderate adverse impacts, which will be managed through seasonal closures. These seasonal closures apply mostly to non-consumptive users during the hunting season. Other seasonal closures are in place to minimize wildlife disturbance.
- Bicycling is allowed on roads, paved trails or others designated for bicycle use.
- The Herbert H. Bateman Educational and Administrative Center is open daily.
- The following activities are prohibited, including, but not limited to: ice skating, camping, rollerblading, geocaching/metal detecting, off-road and mountain biking, all-terrain vehicles (ATVs), picnicking, pets, operation of model boats and airplanes, soliciting of funds (per 50 CFR 27.97 for Private Operations and per 50 CFR 27.86 for Begging), and other activities identified in 50 CFR Part 27.
- All boaters would be required to operate their craft and possess all safety equipment in accordance with Commonwealth of Virginia and U.S. Coast Guard (USCG) Regulations.

(e) Why is this use being proposed?

Wildlife observation, wildlife photography, and interpretation are Priority Public Uses as defined by the Refuge System Administration Act of 1966, as amended by the Refuge System Improvement Act of 1997 (Public Law 105-57), and if compatible, are to receive enhanced consideration over other general public uses.

These uses are conducted to provide compatible educational and recreational opportunities for visitors to enjoy the resource and to gain understanding and appreciation for fish, wildlife, wildlands ecology, the relationships of plant and animal populations within the ecosystem, and

wildlife management. These uses will provide opportunities for visitors to observe and learn about wildlife and wildlands at their own pace in an unstructured environment and to observe wildlife habitats firsthand. These uses will enhance the public's understanding of natural resource management programs and ecological concepts to enable the public to better understand the problems facing our wildlife/wildlands resources, to realize what effect the public has on wildlife resources, to learn about the U.S. Fish and Wildlife Service (USFWS) role in conservation, to better understand the biological facts upon which USFWS management programs are based, and to foster an appreciation for the importance of wildlife and wildlands. It is anticipated that participation in these uses will result in a more informed public, with an enhanced stewardship ethic and enhanced support and advocacy for wildlife conservation.

These uses will also provide an intrinsic, safe, outdoor recreational opportunity in a scenic setting, with the realization that those who come strictly for recreational enjoyment will be enticed to participate in the more educational facets of the visitor use program, and can then become informed advocates for wildlife conservation.

AVAILABILITY OF RESOURCES:

Allowing the use of wildlife observation, photography, and interpretation is within the resources available to administer our Visitor Services program with the current level of participation. Additional funding for visitor services' improvements can also come from entrance fee revenues, grant funds, and contributions. Compliance with refuge regulations is handled within the regular duties of the station Law Enforcement Officers. As funding is available, the refuge will complete and maintain projects and facilities. Volunteers and partners will be utilized to help with construction and maintenance.

Facilities or materials needed to support this use include maintaining access roads, parking areas, roadside pull-offs, kiosks, signs, the visitor center exhibits, wayside exhibits, observation platforms, photography blinds and trails; creating new beach access road and bike trail, observation tower, accessible crabbing area and boat launch area; and providing information in refuge publications, social media sites, the refuge's website as well as other information sharing venues.

Sufficient staff and maintenance funding within our base budget as well as revenues generated from the refuge entrance fee program are available to make annual progress toward completion of all the projects described above and to maintain those already completed; however, additional funding will be needed to construct the road and trail system to the new recreational beach.

ANTICIPATED IMPACTS OF THE USE:

Anticipated impacts of the use can be divided into those associated without OSV, which encompass nearly all of the use, and those impacts associated with OSV which make up very little of the overall wildlife observation and photography use.

Non-OSV Use Impacts

Wildlife observation, photography, and interpretation can result in varying impacts to wildlife resources. An effect of allowing visitor's access to the refuge will be the provision of additional wildlife-dependent recreational opportunities and a better appreciation and more complete understanding of the wildlife and habitats associated with the refuge, the Delmarva ecosystems, and the world at large.

Visitors engaging in these activities are expected to use and stay on trails or roads to access the interior of the refuge. This disturbance may displace individual animals to adjacent areas of the refuge.

The refuge expects that wildlife observation, wildlife photography, and interpretation will have short-term, long-term, and cumulative positive impacts on the economies of the town and county in which the refuge lies. While not as significant as the summer beach tourism, visitors participating in these wildlife oriented recreational pursuits come in noteworthy numbers - staying and spending in the local community. Please refer Appendix M of the CCP (*Chincoteague National Wildlife Refuge Economic Analysis In Support of Comprehensive Conservation Plan*) for more detailed information. The relocation of the recreational beach and associated trails may elevate interest in the wildlife oriented recreational activities on the refuge resulting in an increased spending in the local community and region.

Wildlife observation, wildlife photography, and interpretation are expected to have negligible adverse short-term, long-term or cumulative impacts on soils, local or regional air quality, and hydrology or water quality. However, negative impacts to water quality can result from human activities. We will continue to address these through educational information and programming.

Wildlife observation, wildlife photography, and interpretation are expected to have negligible adverse short-term, long-term or cumulative impacts on vegetation. Disturbance to vegetation (both wetland and upland) will occur during the construction of new beach access road and bike trails as well as associated parking lots.

Disturbance factors resulting from visitor use are always considered for all State and Federal listed species. Of these, impacts on the shorebirds including the piping plover, red knot, upland sandpiper and Wilson's plover will be minimized through the seasonal closure of beachfront south of the Swan Cove Trail beach terminus area from March 15 through September 15 (upon establishment of new recreational beach). Other than during the construction period or relocated beach infrastructure and facilities, the proposed activities would not likely affect the Delmarva fox squirrel. The bald eagle, while no longer listed as a State or Federal listed species, is still

protected under the Bald and Golden Eagle Protection Act. Bald eagles may nest in areas visible to the public making for excellent wildlife observation, interpretative and photography opportunities. At this time these activities are not expected to have any negative impacts on bald eagles.

Wildlife observation, wildlife photography, and interpretation are expected to have negligible adverse short-term, long-term or cumulative impacts on waterfowl. Reducing access north of the new recreational beach area will provide waterfowl sanctuaries which will minimize some of these impacts and allow waterfowl to have undisturbed areas during biologically critical periods of the day.

This use is expected to have negligible adverse short-term, long-term or cumulative impacts on shorebirds and landbirds. We expect indirect impacts to landbirds to increase due to the proposed beach access road and trail construction and use. Visitor use activities including wildlife observation, wildlife photography, and interpretation are expected to increase in these areas as well; however, after construction, disturbance to landbirds in proposed areas for interpretation, wildlife observation and photography is expected to be negligible since all visitors will be required to be on designated walking trails and access roads.

Wildlife observation, wildlife photography, and interpretation are expected to have negligible adverse short-term, long-term or cumulative impacts on secretive marsh and waterbirds. We expect negligible increased impacts to secretive marsh and waterbirds due to proposed expansions in visitor use activities as they will be offset by fewer disturbances in current visitor use areas. The construction of a wider Service Road, new Beach Access Road and new parking lots and infrastructure to the new beach area has the potential to increase disturbance to secretive marsh and waterbirds; however, this is primarily a short-term impact.

Wildlife observation, wildlife photography, and interpretation are expected to have negligible adverse short-term, long-term or cumulative impacts on mammals. In general, the presence of humans would disturb most mammals, which would typically result in indirect short-term adverse impacts, which would be negligible because they would not cause long-term effects on individuals and populations.

Refuge strategies for conserving and maintaining biological integrity, diversity, and environmental health, restoring native plant communities, improving habitat conditions, and controlling invasive or nuisance species would be management actions incorporated in all alternatives and would provide beneficial impacts on mammals. Each of these actions would directly or indirectly benefit mammalian populations over the long term by ensuring the continuation of quality natural habitats on the refuge for resident mammalian wildlife.

Vehicles would be restricted to roads and harassment or taking of any wildlife other than legal game species would not be permitted.

The beneficial impacts of providing the existing level of wildlife-dependent activities, with some modest increases, include helping meet existing and future demands for outdoor recreation as indicated in the 2012 U.S. Geological Survey (USGS) National Visitor Survey. Visitor use appears to be remaining fairly steady in recent years, but we want to continue to improve our opportunities to expand the knowledge base of our visitors on environmental concerns. The economic benefits of increased tourism would also benefit local communities.

Some conflict between wildlife observers, photographers and other refuge users is expected to result in short-term moderate adverse impacts, which will be managed through seasonal closures. In addition, while new visitors become familiar with those changes, violations could increase.

Guided tour activities should not conflict with other refuge users as the CNHA tour bus will be operating north of the new recreational beach. Operation/tours of the Assateague Island Lighthouse and future renovation/operation/Interpretation of the lightkeeper's house by CNHA are occurring in areas not currently open for self-guided use.

New or expanded visitor services programs, such as installation of an eBird kiosk, and/or facilities, such as a new visitor contact station, are expected to increase public awareness of, and visitation to, the refuge, and would enable staff to provide better customer service. We would expect a certain level of inconvenience during the construction of refuge facilities. The adverse effects generally are short-term, and more than offset by the long-term gains in public education and appreciation. Impacts to refuge resources are expected to be negligible.

OSV Impacts

The activity of wildlife observation and photography, by itself, has no significant impact to migratory birds due to disturbance. However, the use of OSVs to gain access to remote southernmost areas of Assateague Island must be reviewed.

Migratory birds - Since the use of OSVs will occur along the Atlantic ocean beachfront, impacts to migratory birds will generally be restricted to shorebirds. The refuge consulted with the USFWS Ecological Services Virginia Field Office who issued a Biological Opinion on the impacts of OSV use, among other uses, on piping plovers. The impacts described therein can be extrapolated to other shorebirds.

The refuge has been designated as internationally important for shorebirds by the Western Hemisphere Shorebird Reserve network. It is an important staging area and provides habitat for shorebirds during both spring and fall migrations. Nesting species include piping plover, American oystercatcher, willet, common and least tern, and black skimmer. Spring migration generally runs from early April to early June, when thousands of shorebirds use refuge habitats. Dunlin and sanderling are predominant during early spring migration, while semipalmated sandpiper makes up nearly half of those birds counted during late spring migration. The peak of

fall migration occurs from July through September with semipalmated and least sandpipers accounting for the majority of individuals. The red knot, designated as threatened under the Endangered Species Act, also uses the refuge during spring and fall migration.

Motorized vehicle use on beaches is an extreme threat to piping plovers, as well as other shorebirds that nest on beaches and dunes. Vehicles can crush eggs, adults, and chicks (Wilcox 1959, Tull 1984, Burger 1987, Patterson et al. 1991). In Massachusetts and New York, 18 piping plover chicks and 2 adults were killed by off-road vehicles in 14 documented incidents (Melvin et al. 1994). Goldin (1993) compiled records of 34 chick mortalities (30 on the Atlantic Coast and 4 on the Northern Great Plains) due to vehicles. Biologists who monitor and manage piping plovers believe that vehicles kill many more chicks than are found and reported (Melvin et al. 1994). Beaches used by recreational vehicles during nesting and brood-rearing periods generally have fewer breeding plovers than available nesting and feeding habitat can support. In contrast, plover abundance and productivity has increased on beaches where recreational vehicle restrictions during chick-rearing periods have been combined with protection of nests from predators (Goldin 1993) (USFWS 2008a). It has been documented that piping plover chicks will tend to run along ruts caused by vehicles and remain motionless as vehicles approach (USFWS 1996). Piping plover chicks may also have difficulty crossing deep ruts and moving quickly enough out of a vehicle's path. Additionally, piping plovers tend not to reach their full habitat carrying capacity on beaches where vehicles are allowed during the nesting and brood rearing periods (USFWS 1996).

To mitigate for these potential negative impacts, the refuge has instituted seasonal closures for surf fishermen, horseback riders, and OSV users. The beach habitats of Toms Cove Hook are the most productive on the refuge for nesting and staging shorebirds. As noted above, with establishment of the new recreational beach, the Toms Cove Hook portion of the surf fishing, horseback riding and OSV zone would be closed from March 15 through September 15 annually, and later if unfledged birds remain in the area. The closure period also encompasses the peak times of spring and fall migration, thus providing undisturbed habitat for shorebirds during the most critical times of year.

The closures extend from the nest site a distance of 200 meters (656 feet) north. It is possible that some nests may not be discovered, and the presence of nest searchers may also cause direct loss if eggs are inadvertently crushed. In either of these situations, there could be negative impacts to nesting shorebirds. When the recreational beach area is moved to a more northern location, as is proposed in the CCP/EIS (alternative B), the Overwash area would be managed identically with the Toms Cove Hook portion, which will provide added protection to birds using the Overwash area.

OSV users may encounter shorebirds at times outside of the closure period. During this time, all birds should be capable of flight, and therefore can travel short distances to other high quality, undisturbed portions of the refuge, such as the bay side of Toms Cove. There could be some

negative impacts due to birds expending energy to travel away from preferred feeding or resting areas.

Based on a review of the literature, with seasonal closures in place, and if nest searches in the Overwash zone are conducted thoroughly and professionally, the direct, indirect, and cumulative impacts of OSV use to shorebirds should not be significant.

Threatened and endangered species - This section assesses impacts to federally listed threatened and endangered species: piping plover, red knot, sea turtles, and seabeach amaranth.

Piping plover and *red knot* impacts are covered above under migratory shorebird impacts.

Sea turtles - Five species of federally listed sea turtles use Assateague Island's ocean and bay waters. The leatherback sea turtle, which is also a state listed species, Kemp's Ridley sea turtle, and the Atlantic hawksbill are Federal endangered species. The loggerhead sea turtle and green sea turtle are Federal threatened, with the loggerhead also being state threatened. The loggerhead sea turtle nests on Assateague Island, which is the northern extent of its breeding range. To date, there has been no confirmed nesting by green or leatherback sea turtles within the refuge although both these species have been seen in waters off Virginia's barrier islands during the nesting season. Dead stranded turtles of these species are occasionally found on refuge beaches. However, with the average global air and water temperatures rising, refuge beaches may become more favorable for these species (USFWS 2008c).

Nesting activity on Assateague and NASA Wallops Islands has risen noticeably in recent years, perhaps the result of a loggerhead translocation project. From 1969 to 1979 sea turtle eggs from nests laid on Cape Island of Cape Romain National Wildlife Refuge (NWR), Charleston County, South Carolina were relocated to Chincoteague NWR. During, and the first two decades following, the relocation program (1970 to 1999) staff recorded 16 crawls on Assateague and NASA Wallops; 10 resulted in nests and 6 were false crawls, meaning no nest was made. Loggerhead sea turtles take 30 years to reach maturity, so females that were part of the transplant project may now be returning to their hatch and release sites. Loggerhead nesting activity from 2000 to 2012 on Chincoteague Island had a total of 66 crawls; 23 resulted in nests and 43 were false crawls (CNWR unpublished database). Eleven of the nests were located on Wild Beach, north of the recreational beach in an area closed to all OSV use. Eight nests were located on the recreational beach area and OSV zone (5 at the Overwash and 3 on public beach). These nests were monitored and managed in accordance with the Chincoteague NWR Intra-Service Section 7 and Biological Opinion (USFWS 2008). The other 4 nests were located south of the recreational beach on the Toms Cove Hook area.

OSV use poses a risk of injury to females and live stranded turtles, can leave ruts that trap hatchlings attempting to reach the ocean (Hosier et al. 1981, Cox et al. 1994), can disturb adult females and cause them to abort nesting attempts, and can interfere with sea-finding behavior if

headlights are used at night (NMFS and USFWS 1991). Driving directly above incubating egg clutches can cause sand compaction, which may decrease hatching and emergence success and directly kill pre-emergent hatchlings (NMFS and USFWS 2007). Artificial lighting on human structures may affect turtle behavior in a similar manner (Witherington and Martin 1996). When artificial lighting impairs sea-finding behavior of nesting females and emerging hatchlings, the affected animals face increased exposure to the elements and predation.

To mitigate for potential impacts to sea turtles, the following protocols will be implemented: Sea turtle crawl searches will be conducted in the morning hours during piping plover monitoring and avian predator management to ensure nest protection procedures begin as soon as possible. All sea turtle nests will be marked, thus establishing a buffer zone, to protect the nest from recreation-related human activity. Staff or volunteers will place a minimum of four informative "Area Closed" signs forming a 5-foot radius around the nest. Rope will be strung between the signs to discourage vehicles and pedestrians from trespassing into the nest site. OSV access will occur outside this buffer zone.

OSVs are prohibited from the recreational beach. However, headlights from the parking lot or adjacent OSV zone will have the potential to affect hatchling emergence to the ocean. Staff will erect a light and hatchling emergence barrier around the 5-foot radius buffer zone into the intertidal zone in both the OSV zone and recreational beach area.

The beach is wide enough to allow OSVs to travel landside of the nest without adversely affecting dune or vegetated habitats; therefore, staff will continue to allow OSV traffic west of the nest. Pedestrians may access areas west of the nest or within the intertidal zone. Because a light and hatchling emergence barrier will be in place during the entire hatch window, a nest sitter will not be present at night.

Staff will erect a light and hatchling barrier around the 5-foot radius buffer zone and toward the intertidal zone. A corridor will be created near the intertidal zone for OSV and pedestrian access. A nest sitter will open the access corridor to the public one hour after sunrise. A nest sitter will close the corridor at sunset.

Management activities on the refuge should have a net positive effect on sea turtle nesting due primarily to in situ protection of nests. Active and passive predator control, conducted primarily for plover nest protection, will also help nesting sea turtles by reducing the number of potential sea turtle nest predators on the refuge. All sea turtle nests will be left in place and protected from threats as outlined in the attached Intra-Service Section 7 Biological Evaluation Form (USFWS 2008). Following the protocols established in Enclosure 1, CNWR staff will make a determination of how to provide protection to each nest based on the nest timing, location, and any possible site-specific issues. All turtle nests on Assateague will be excavated to confirm the presence of eggs. While this excavation process has a slight possibility of damage to the eggs, it is a standard procedure recommended and used by all sea turtle experts in the United States. The nests will

then be protected by predator exclosures and symbolic fencing to prevent public trespass. Any turtle nests that occur in the Overwash zone when that area is re-opened to vehicles after the end of the plover nesting season (generally about September 15), will also be protected with a light barrier.

Seabeach amaranth - Seabeach amaranth is an annual plant and a member of the Amaranth family (Amaranthaceae). Upon germination, the plant initially forms a small, unbranched sprig, but soon begins to branch profusely, forming a low-growing mat. It was added to the List of Endangered and Threatened Wildlife and Plants (50 CFR 17.12) as a threatened species.

Population numbers at the refuge have been low, and limited primarily to beach areas north of the recreational beach. The number of plants within the refuge has experienced major fluctuations in numbers since its rediscovery in 2001. In 2005, a record 69 plants were documented outside of the OSV zone. The numbers dropped to 13 plants in 2006, 2 plants in 2011, and no plants were found in 2012.

OSV use on the beach during the growing season can potentially have detrimental effects on the species, as the fleshy stems of this plant are brittle and easily broken. Plants generally do not survive even a single pass by a truck tire (Weakley and Bucher 1992). Sites where vehicles are allowed to run over seabeach amaranth plants often show severe population declines. Dormant season OSV use has shown little evidence of significant detrimental effects, unless it results in massive physical erosion or degradation of the site, such as compacting or rutting of the upper beach. In some cases, winter OSV traffic may actually provide some benefits for the species by setting back succession of perennial grasses and shrubs with which seabeach amaranth cannot compete successfully. However, extremely heavy OSV use, even in winter, may have some negative impacts, including pulverization of seeds (Weakley and Bucher 1992).

As noted above, no seabeach amaranth plants have been found within the OSV zone. Activities by refuge staff for management and protection of nesting plovers and sea turtles have a net positive effect on seabeach amaranth, in that the plants are often found during these other management activities, resulting in better protection of the plants. The refuge staff annually surveys for the plant, and records or monitors any locations. Plants that have grown during the spring/summer period are usually enclosed with fencing when found. If plants are found in public OSV use areas, signs and symbolic fencing will provide protection and reduce the risk of inadvertent disturbance to plants. As a result of closure of nesting areas for protection of the plover and sea turtles, seabeach amaranth that possibly occur in these areas can complete most of its life cycle removed from the threat of crushing from public OSV use. Crushing of a plant or plants by the public, staff, or OSVs could potentially occur in some circumstances, but is highly unlikely due to the actions taken by the refuge to protect the dune and beach areas, and the fact that most of the populations of the plant occur north of the recreational beach and do not receive pedestrian or OSV use. Refuge prohibitions on OSV use in the dunes, and efforts to educate the public should decrease trampling in almost all cases. This form of take is considered insignificant (USFWS 2008a).

Wetlands - The OSV zone is located within the intertidal zone and beachfront area, therefore, there will be no wetland impacts.

Recreation - The purpose of continuing to permit OSV use on the refuge is to facilitate wildlife observation and photography, which are both priority recreational uses of the Refuge System. Allowing this use will provide additional opportunities in areas that would be difficult to access without the use of vehicles. Therefore the impact on these recreational users will be positive. While seasonal closures will limit the times and locations that these activities may occur, they are necessary to protect numerous wildlife species that use these same locations.

There is the potential of user conflicts in the OSV zone, especially when vehicles are in use in the presence of pedestrians engaging in wildlife observation or photography, or surf fishermen and/or horseback riders. Times when vehicles are actually in use will be limited. The majority of refuge beach is open for pedestrian use and restricted from OSV use, so there is sufficient opportunity for users to engage in their respective activities without causing disturbance to other users.

PUBLIC REVIEW AND COMMENT:

This compatibility determination is part of the Chincoteague NWR CCP/EIS. Public notification and review included a notice of availability published in the Federal Register, a 90-day comment period for the draft CCP/EIS during which public meetings were held, a 30-day review period for the final CCP/EIS, and the record of decision published in the Federal Register. We also inform the public through local media releases and our website.

DETERMINATION (CHECK ONE BELOW):

_____Use is not compatible

__X___Use is compatible, with the following stipulations

STIPULATIONS NECESSARY TO ENSURE COMPATIBILITY:

The refuge will manage these three priority visitor uses (wildlife observation, photography, and interpretation) in accordance with Federal and State regulations and will review it annually to ensure high quality wildlife dependent recreational opportunities are achieved and that these programs are providing safe experiences for participants. The refuge based these stipulations on current practices, the CCP/EIS, and refuge-specific regulations.

To ensure compatibility with refuge purposes and the mission of the Refuge System, wildlife observation, photography, and interpretation can occur on the refuge if the refuge-specific regulations are followed and following stipulations are met:

- This use must be conducted in accordance with Commonwealth of Virginia and Federal regulations (50 CFR), and special refuge-specific regulations published in refuge brochures.
- The visitor use program will be reviewed annually to ensure that it contributes to refuge objectives in managing quality recreational opportunities and protecting habitats, and is subject to modification if on-site monitoring by refuge personnel or other authorized personnel results in unanticipated negative impacts to natural communities, wildlife species, or their habitats or other refuge uses. Refuge Law Enforcement Officer(s) will promote compliance with refuge regulations, monitor visitor use patterns and public safety, and document visitor interactions. Refuge Law Enforcement personnel will monitor all areas and enforce all applicable State and Federal Regulations.
- All boats must be off the water by sunset.
- Visitors must stay on the designated trail routes and areas.
- Opportunities for wildlife observation, wildlife photography, and environmental interpretation are available via existing roads and trails and along the newly constructed beach access road and bike trail during normal operational hours. Best construction practices will be used when developing the new beach access road as well as any other visitor use facility to minimize impacts to refuge resources. Moderate beneficial impacts are expected. Some conflict between refuge users is expected to result in short-term moderate adverse impacts, which will be managed through seasonal closures. These seasonal closures are highlighted below and apply mostly to non-consumptive users during the hunting season. Other seasonal closures are in place to minimize wildlife disturbance.
- After establishment of the new recreational beach, all beach areas on Assateague Island south of the new assigned area (i.e. Swan Cove Trail beach terminus) will be closed to all visitor use from March 15 until September 15 or until the last shorebird fledges due to nesting of federally threatened piping plovers as well as other shorebirds.
- All trails south and east of the Administrative Office and the New Beach Access Road may be closed for Big Game Hunting during the fall and winter months.
- Staffing of the Assateague Island Lighthouse and operation of the Wildlife Tour Bus is provided by the CNHA. Operations vary throughout the year but daily access is provided during the busier visitor use periods with weekend access during the shoulder season and very limited or no access during the winter months.
- The Herbert H. Bateman Educational and Administrative Center is open daily throughout the year.
- Staff and/or volunteer guided interpretative programs may occur year round but are concentrated in the busier visitor use periods.
- Beachfront access on the southern islands outside of the nesting season (March 15 to September 15) would be permitted for these activities and outside of the safety and security zone established by NASA on Assawoman Island. As Metompkin and Cedar Islands have other ownership as well, visitors should consult with those entities prior to visiting.
- Pets are not permitted on the refuge.

- Bicycling is allowed only on roads, hard surfaced trails, and the Beach Road Bike trail.
- The following activities are prohibited, including, but not limited to: ice skating, camping, rollerblading, geocaching/metal detecting, off-road and mountain biking, ATVs, picnicking, pets, operation of model boats and airplanes, soliciting of funds (per 50 CFR 27.97 for Private Operations and per 50 CFR 27.86 for Begging), and other activities identified in 50 CFR Part 27.
- All boaters would be required to operate their craft and possess all safety equipment in accordance with Commonwealth of Virginia and USCG Regulations.
- Beach access will occur only on refuge-owned lands on the sandy part of the beach from the toe of the dunes to the Atlantic Ocean (mean high water demarcation to mean low water demarcation). Parking lots with a dune crossover provides access to the beach. Access on the dune and adjacent marshes is prohibited. No refuge-specific permits are required.
- Access to closed areas or use during the refuge's closed hours requires a special use permit, which is subject to the refuge manager's approval, unless the activity is in conjunction with a refuge staff- or volunteer-led program.
- Changes outlined in the CCP dealing with closed and seasonally closed areas and visitor use regulations, when approved, will be incorporated into their respective visitor use program.

The refuge will implement seasonal closures and other mitigating measures as described above, and in the Biological Opinion on monitoring and management practices for piping plover, loggerhead sea turtle, green sea turtle, leatherback sea turtle, and seabeach amaranth on Chincoteague NWR within the OSV zone.

When and if the recreational beach is moved to a more stable location, and a new surf fishing and OSV zone is created adjacent to the new beach area, the Overwash area will be merged with the Toms Cove Hook area in terms of management of surf fishing, horseback riding and OSV use and seasonal restrictions.

JUSTIFICATION:

Wildlife observation, photography, and interpretation are priority wildlife-dependent uses for the Refuge System through which the public can develop an appreciation for fish and wildlife (Executive Order 12996, March 25, 1996 and the Refuge System Administration Act of 1966, as amended by the Refuge System Improvement Act of 1997 (Public Law 105-57)). USFWS's 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.

Specific refuge regulations address equity and quality of opportunities for visitors and help safeguard refuge habitats. Impacts from this proposal, short-term and long-term, direct, indirect,

and cumulative, are expected to be minor and are not expected to diminish the value of the refuge for its stated objectives. Available parking and size of the facilities will typically limit use at any given time, except during special events.

Conflicts between visitors are localized and are addressed through law enforcement, visitor education, and continuous review and updating to visitor use regulations. Conflicts are further reduced by the establishment of seasonal area closures.

Stipulations above will ensure proper control of the means of use and provide management flexibility should detrimental impacts develop. Allowing this use also furthers the mission of the Refuge System by providing renewable resources for the benefit of the American public while conserving fish, wildlife, and plant resources on the refuge.

This activity will not materially interfere with or detract from the mission of the Refuge System or the purpose for which the refuge was established.

Signature: Refuge Manager: _____

(Signature and Date)

Concurrence: Regional Chief: _____

(Signature and Date)

Mandatory 15-year re-evaluation date: _____

(Date)

COMPATIBILITY DETERMINATION

USE: Environmental Education

REFUGE NAME: Chincoteague National Wildlife Refuge

DATE ESTABLISHED: May 13, 1943

ESTABLISHING AND ACQUISITION AUTHORITY(IES):

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).

- "... 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.

DESCRIPTION OF USE:

(a) What is the use? Is the use a priority public use?
The use is environmental education. This is a priority public use identified by Executive Order 12996 (March 25, 1996) and by the Refuge System Administration Act of 1966, as amended by the Refuge System Improvement Act of 1997 (Public Law 105-57).

(b) Where would the use be conducted?
The use would occur on Chincoteague National Wildlife Refuge (NWR) at the following locations:

Environmental Education Trail: In 2001, the refuge completed construction of an environmental education (EE) trail and study area (approximately 1 mile in length) that is designated specifically for curriculum-based educational programming and group activities. The trail, located just west of the historic Assateague Lighthouse provides students with access to several refuge habitats including freshwater and saltwater wetlands and maritime forest. (Note: The Environmental Education Trail is closed to general public access and is not depicted on general refuge map graphics found in publications and on wayside exhibits).

Herbert H. Bateman Educational and Administrative Center (HHBEAC): This education center was completed in 2003 and provides students and teachers with access to 5,000 square feet of exhibits, a 125-seat auditorium, a classroom/wet lab, and a teacher resource room. In total, approximately 9,000 square feet of visitor services space is available to host environmental education programming.

Self-Guided Trails: The following trail systems may also be used for environmental education programming: Wildlife Loop (3.2 miles), Woodland Trail (1.6 miles), Lighthouse Trail (.25 miles), Marsh Trail (.5 miles), Black Duck Trail (1 mile), Swan Cove Trail (.5 miles), and Bivalve Trail.

National Park Service (NPS) Assigned Area: This assigned area currently includes the recreational beach, adjacent parking lots, and the visitor contact station. Upon establishment of the new recreational beach area proposed in the Comprehensive Conservation Plan (CCP) (approximately 1.5 miles north of the existing recreational beach), the new assigned area would include the new recreational beach, adjacent parking lots, new visitor contact station, and extend south 1 mile to the beach terminus of the Swan Cove Trail.

Toms Cove: Several formal and informal trails provide access to Toms Cove and the associated marshes for multiple uses, including environmental education.

Service Road: Several educational study areas have been identified along the Service Road and are used predominantly by the Chincoteague Bay Field Station (CBFS, formerly Marine Science Consortium), which provides students with invaluable field experiences in Ecology, Biology, Marine Science, and Environmental Science.

Websites: A variety of pre- and post-visit activities are available on the refuge's and NPS websites.

- http://www.fws.gov/northeast/chinco/
- http://www.nps.gov/asis

(c) When would the use be conducted?

Opportunities for EE exist year-round, during authorized refuge hours of operation, which vary on a seasonal basis.

- The highest demand for ranger led EE programs occurs in spring (March through mid-June) and fall (September through October).
- Self guided EE may occur in buildings and on trails during normal operational hours.

(d) How would the use be conducted?

A refuge staff member will serve as the primary point of contact, facilitating the coordination and scheduling of all EE requests being conducted on the refuge. For programs conducted by refuge staff, at least three people must be available for EE from September through mid-June on Wednesday through Friday. From March through mid-June, staff can be expected to be needed every Wednesday through Friday.

The EE Coordinator will manage classroom reservations and it may only be reserved by refuge staff and by partners (Chincoteague Natural History Association (CNHA), NPS and CBFS) for periods of more than three weekdays in a row during the months of September to February and mid-June to August to ensure it is available for educational use. From March to mid-June, the classroom cannot be scheduled for more than one weekday or for a Friday by an outside organization. Weekend days are exempt from this limitation.

The EE Coordinator will manage auditorium reservations. Auditorium videos will be shown upon request or upon need determined by the staff person working in the HHBEAC from September through mid-June on weekdays. However, the auditorium will be reserved if an EE program is scheduled as notified by the EE coordinator. Even if the EE program is scheduled for outside, the EE program leader will notify the HHBEAC personnel if they would like to keep the

auditorium reserved as a backup for inclement weather. Weekend days are exempt from this limitation.

Group tours of exhibits may be self-guided or teacher-guided. If groups request a guided tour, it will be at the discretion of the person scheduling and/or conducting the program, and may depend upon availability of staff, group size, previous visit experience and specific interest.

Minimum scheduling time requirements (including introduction in auditorium, travel time to program location, bathroom time, and program implementation):

- Habitat Hunting: 1.5 hours (actual program time-1 hour)
- The Human Connection: 1.5 hours (actual program time-1 hour)
- Wildlife and Technology: 2 hours (actual program time-1.5 hours)
- Group consisting of 2 classes for outside or outside/inside field trip: 3 hours
- Group consisting of 3 classes for an outside or outside/inside field trip: 4 hours
- Group consisting of 4 classes for an outside or outside/inside field trip: 5 hours
- Group consisting of 2 classes for an inside program: 1.75 hours
- Group consisting of 3 classes for an inside program: 2.75 hours
- Group consisting of 4 classes for an inside program: 3.5 hours

Groups arriving less than 30 minutes late will have one of their programs (their first program) shortened by the corresponding amount of time. All of their other scheduled programs will remain on schedule. Groups arriving over 30 minutes late will have one (or more if warranted) of their programs cancelled. Teachers and students can utilize any leftover time in the exhibits, watching a video in the auditorium, or on the refuge.

Access for non-motorized, hand carried watercraft (including but not limited to kayaks, canoes, kite boards, sail boats and sailboards) into Toms Cove and Assateague Channel will be available from a launch site to be developed near the South Pony Corral area.

(e) Why is this use being proposed?

Environmental education is a priority public use of the Refuge System under the Refuge System Administration Act of 1966 (16 U.S.C. 668dd-668ee), as amended by the Refuge System Improvement Act of 1997. EE programs instill learning and awareness, knowledge, attitudes, skills, and commitment to conserve natural resources and to continuously revisit and explore scientific, biological, historical, and societal issues related to conservation (U.S. Fish and Wildlife Service (USFWS) policy 605 FW 6).

It must be clearly noted that the goal of EE is not environmental advocacy. It is to teach learners how to become aware, ask questions, seek evidence and formulate their own, unique, creative thoughts about the environment and conservation.

The CBFS (formerly Marine Science Consortium), located near the Wallops Flight Facility, has been conducting EE on the refuge since 1971. During an average year, their students make about 4,000 visits to the refuge. A special use permit allows the groups to use seine nets, dip nets, shovels, sediment sieves, and environmental monitoring equipment at the future terminus of Beach Road near Toms Cove and within the recreational beach area, Black Duck Pool and Swan Cove Pool impoundments, the Woodland Trail, and other approved educational areas along the Service Road.

AVAILABILITY OF RESOURCES:

Allowing the use of environmental education is within the resources available to administer our current level of participation and to ensure that the use remains compatible with the refuge purposes. Additional funding for visitor services improvements and EE can also come from entrance fee revenues, grant funds, and contributions. Compliance with refuge regulations is handled within the regular duties of the station Law Enforcement Officers. As funding is available, the refuge will complete and maintain projects and facilities. Volunteers and partners will be utilized to help with construction, maintenance, and with conducting EE activities.

Facilities or materials needed to support this use include maintaining access roads, parking areas, roadside pull-offs, kiosks, signs, the Visitor Center, wayside exhibits, observation platforms, photography blinds, accessible crabbing areas, and trails; creating new beach access road and bike trail, observation tower, accessible crabbing area and boat launch area; and providing information in refuge publications, social media sites, the refuge's website as well as other information sharing venues.

Sufficient staff and maintenance funding within our base budget is available to make annual progress toward completion of all the projects described above and to maintain those already completed; however, additional funding and staff will be needed to grow the program to its full potential as identified in USFWS's "Conserving the Future" document to inventory existing environmental education efforts on refuge, identify priorities for growth, and outlines basic standards of learning in accordance with Commonwealth of Virginia and State of Maryland educational guidelines.

ANTICIPATED IMPACTS OF THE USE:

Visitor use activities currently occurring on the refuge have been analyzed for impacts to wildlife and habitat and are expected to have a short term negative impacts on vegetation. EE could alter habitats by trampling vegetation, compacting soils, and increasing the potential of erosion. Repeated visitation to any particular locale at the refuge could cause damage to vegetation and therefore, wildlife habitat. Substantial, widespread habitat degradation is not expected due to the limited and regulated occurrence of this activity. For EE, impacts would be minimal since groups

use designated areas created to traverse through habitat which prevents additional vegetation impacts.

EE can result in positive impacts to the wildlife resource. Allowing visitors to participate in EE leads to a better appreciation and more complete understanding of the wildlife and habitats associated with the refuge, the Delmarva ecosystems, and the world at large.

Disturbance factors resulting from public use are always considered for all listed threatened or endangered species, at either the State or Federal level. Of these, impacts on the shorebirds including the piping plover, red knot, upland sandpiper and Wilson's plover will be minimized through the seasonal closure of beachfront south of the Swan Cove Trail beach terminus area from March 15 through September 15 (upon establishment of new recreational beach). Other than during the construction period, the proposed activities would not likely affect the Delmarva fox squirrel. Areas near active bald eagle nests will be restricted to all activities and access, in accordance with Federal, State, and refuge specific guidelines.

EE activities are expected to have negligible adverse short-term, long-term, or cumulative impacts on waterfowl, shorebirds, or landbirds. Protecting areas north of the recreational beach area will provide waterfowl sanctuaries which will minimize some of these impacts and allow waterfowl to have undisturbed access to these areas during biologically critical periods. We expect indirect impacts to landbirds to increase due to the proposed beach access road and trail construction and use. EE activities are expected to increase in these areas as well. However, after construction, disturbance to landbirds in proposed areas is expected to be negligible since all visitors will be required to be on designated walking trails and access roads.

Impacts to fisheries from visitors engaged in environmental education are expected to be temporary and minor. While students use sampling techniques such as seine and dip nets to collect organisms, all are returned to the collection area immediately following study. Specimens are collected, stored and observed in containers designed to minimize harm or long term impact. Any non-threatened and/or endangered organisms temporarily removed from the aquatic environment are insignificant to the overall population.

The beneficial impacts of providing the existing level of wildlife-dependent activities, with some modest increases, include helping meet existing and future demands for outdoor recreation as indicated in the 2012 U.S. Geological Survey (USGS) National Visitor Survey. Visitor use appears to be remaining fairly steady in recent years, but we want to continue to improve our opportunities to expand the knowledge base of our visitors on environmental concerns. The economic benefits of increased tourism would also benefit local communities.

Some conflict between EE activities and other refuge users is expected to result in short-term moderate adverse impacts, which will be managed through seasonal closures.

New or expanded visitor services programs and/or facilities are expected to increase public awareness of, and visitation to, the refuge, and would enable staff to provide better customer service. We would expect a certain level of inconvenience during the construction of refuge facilities. The adverse effects generally are short-term, and more than offset by the long-term gains in public education and appreciation. Impacts to refuge resources are expected to be negligible.

PUBLIC REVIEW AND COMMENT:

This compatibility determination is part of the Chincoteague National Wildlife Refuge (NWR) Comprehensive Conservation Plan and Environmental Impact Statement (CCP/EIS). Public notification and review included a notice of availability published in the Federal Register, a 90-day comment period for the draft CCP/EIS during which public meetings were held, a 30-day review period for the final CCP/EIS, and the record of decision published in the Federal Register. We also inform the public through local media releases and our website.

DETERMINATION (CHECK ONE BELOW):

_____Use is not compatible

__X___Use is compatible, with the following stipulations

STIPULATIONS NECESSARY TO ENSURE COMPATIBILITY:

The refuge will manage EE in accordance with Federal and State regulations and review it annually to ensure wildlife and habitat goals are achieved and that these programs are providing safe, high quality experiences for participants. The refuge based these stipulations on current practices, the CCP/EIS, and refuge-specific regulations (See Description of Use section).

To ensure compatibility with refuge purposes and the mission of the Refuge System, EE can occur on the refuge if the refuge-specific regulations are followed and following stipulations are met:

- This use must be conducted in accordance with State and Federal regulations (50 CFR), and special refuge-specific regulations published in refuge brochures.
- The visitor use program will be reviewed annually to ensure that it contributes to refuge objectives in managing quality recreational opportunities and protecting habitats, and is subject to modification if on-site monitoring by refuge personnel or other authorized personnel results in unanticipated negative impacts to natural communities, wildlife species, or their habitats. Refuge Law Enforcement Officer(s) will promote compliance

with refuge regulations, monitor public use patterns and public safety, and document visitor interactions. Refuge Law Enforcement personnel will monitor all areas and enforce all applicable State and Federal Regulations.

- A special use permit may be required to conduct EE in designated areas to reduce the possibility of disturbance.
- All boats must be off the water at sunset.
- Visitors must stay on the designated trail routes and areas.
- Opportunities for EE are available via existing roads and trails and along the newly constructed beach access road and bike trail during normal operational hours. Best construction practices will be used when developing the new beach access road and trail as well as any other visitor use facility to minimize impacts to refuge resources. Moderate beneficial impacts are expected. Some conflict between refuge users is expected to result in short-term moderate adverse impacts, which will be managed through seasonal closures. These seasonal closures are highlighted below and apply mostly to non-consumptive users during the hunting season. Other seasonal closures are in place to minimize wildlife disturbance.
- After establishment of the new recreational beach, all beach areas on Assateague Island south of the new assigned area (i.e. Swan Cove Trail beach terminus) will be closed to all visitor use from March 15 until September 15 or until the last shorebird fledges due to nesting of federally threatened piping plovers as well as other shorebirds. The existing Toms Cove VCS would be open year-round for environmental education programs only, and maintained by NPS until it becomes unserviceable.
- All trails south and east of the Administrative Office and the new Beach Access Road may be closed for big game hunting during the fall and winter months.
- Staffing of the Assateague Island Lighthouse and operation of the Wildlife Tour Bus is provided by the CNHA. Operations vary throughout the year but daily access is provided during the busier public use periods with weekend access during the shoulder season and very limited or no access during the winter months.
- The Herbert H. Bateman Educational and Administrative Center is open daily throughout the year.
- Staff and/or volunteer guided EE programs may occur year around but are concentrated in spring and fall months.
- All boaters would be required to operate their craft and possess all safety equipment in accordance with Commonwealth of Virginia and U.S. Coast Guard regulations.
- Beach access will occur only on refuge owned lands on the sandy part of the beach from the toe of the dunes to the Atlantic Ocean (mean high water demarcation to mean low water demarcation). Parking lots with a dune crossover provides access to the beach. Access on the dune and adjacent marshes is prohibited. No refuge-specific permits are required.
- Changes outlined in the finalized CCP dealing with closed and seasonally closed areas and public use regulations, when approved, will be incorporated into their respective public use program.

JUSTIFICATION:

Environmental education is a priority wildlife-dependent use for the Refuge System through which the public can develop an appreciation for fish and wildlife (Executive Order 12996, March 25, 1996 and the Refuge System Administration Act of 1966, as amended by the Refuge System Improvement Act of 1997 (Public Law 105-57)). USFWS 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.

These programs and activities are directed toward organized groups and individuals associated with academic institutions. Cooperative outdoor education programs significantly expand general and specialized educational opportunities for the public beyond what the refuge alone can provide.

Specific refuge regulations address equity and quality of opportunities for visitors and help safeguard refuge habitats. Impacts from this proposal, short-term and long-term, direct, indirect, and cumulative, are expected to be minor, and are not expected to diminish the value of the refuge for its stated objectives. Available parking and size of the facilities will typically limit use at any given time, except during special events. Conflicts between visitors are localized and are addressed through law enforcement, public education, and continuous review and updating to public use regulations. Conflicts are further reduced by the establishment of seasonal area closures.

Stipulations above will ensure proper control of the means of use and provide management flexibility should detrimental impacts develop. Allowing this use also furthers the mission of the Refuge System by providing renewable resources for the benefit of the American public while conserving fish, wildlife, and plant resources on the refuge.

This activity will not materially interfere with or detract from the mission of the Refuge System or purposes for which the refuge was established.

Signature: Refuge Manager: _____

(Signature and Date)

Concurrence: Regional Chief: _____

(Signature and Date)

Mandatory 15-year re-evaluation date: _____

(Date)

COMPATIBILITY DETERMINATION

USE: Fishing (Recreational)

REFUGE NAME: Chincoteague National Wildlife Refuge

DATE ESTABLISHED: May 13, 1943

ESTABLISHING AND ACQUISITION AUTHORITY(IES):

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).

- "... 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.

DESCRIPTION OF USE:

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

The use is recreational fishing (finfish, oysters, clams, and crabs). Surf fishing, crabbing, and shell fishing are among the most popular wildlife-dependent recreational activities conducted on the refuge. Some of the finfish common to the waters around the refuge are bluefish, striped bass, summer flounder, Atlantic croaker, spot, and red drum. Clearnose skate, bullfish, and southern stingrays may be caught, as well as smooth or spiny dogfish sharks. Fishing is a priority public use of the Refuge System under the Refuge System Administration Act of 1966 (16 U.S.C. 668dd-668ee), as amended by the Refuge System Improvement Act of 1997 (Improvement Act).

(b) Where would the use be conducted?

Assateague Island

Surf fishing occurs along the Assateague Island beachfront from the Maryland/Virginia state line to "Fishing Point" on Toms Cove Hook. Access to the beachfront is permitted in two ways:

1) Foot access is currently allowed year-round from the Maryland/Virginia state line to the southern terminus of the National Park Service (NPS) recreational beach parking area.
2) Foot access and over sand vehicle (OSV) use/access is allowed from the NPS southernmost recreational beach parking area at Toms Cove to "Fishing Point" on Toms Cove Hook.

Access for surf fishing in the OSV zone is further restricted by the following stipulations:

1) Overwash portion of the OSV zone closed March 15 through August 31 based on shorebird nesting behavior; close 200 meters north of nesting sites from 2 days prior to any nests hatching and through fledging.
2) Hook portion of OSV zone closed March 15 to August 31 or thereafter, until last shorebird fledges.
3) Upon complete establishment of the new recreational beach, from March 15 to September 15, the area south of the new assigned area is closed. The new assigned area would include the new recreational beach, adjacent parking lots, new visitor contact station, and extend south 1 mile to the beach terminus of the Swan Cove Trail.
4) From September 16 to March 14, the zone will again start at the beach terminus of Beach Road at Toms Cove, then south along the Atlantic Ocean beachfront to "Fishing Point" on Toms Cove Hook, then returning by the same route. Walking and OSV use will

generally be within the intertidal zone, unless OSVs are re-directed by signage to avoid sea turtle nest sites; vehicles are prohibited from the dunes or vegetated areas.

Shell fishing activities (clams, oysters, and crabs) are confined primarily to saltmarsh and mudflats within Toms Cove via Bivalve Trail. Additionally, crabbing is allowed within the borrow ditch running along Beach Road within Swan's Cove Pool. To promote better access, a new fishing/crabbing dock is proposed to be built near the South Pony Corral area.

Southern Island Units (Assawoman, North Metompkin, and Cedar Islands)
Fishing activities also occur on the Southern Island Units (Assawoman, North Metompkin, and Cedar Islands). Access is limited to boat use, and there are time of year restrictions to portions of these islands due to threatened species nesting during the summer months. Assawoman Island would be completely closed to all forms of public use, including fishing, from March 15 through September 15 or thereafter, until the last shorebird fledges.

No data are available for use of these islands; however, information gathered during law enforcement patrols indicates that little of this use occurs on these islands.

(c) When would the use be conducted?
Surf fishing, clamming, crabbing and oyster harvest will be permitted during normal refuge hours of operation which are:

- May through September: 5 a.m. to 10 p.m.
- October: 6 a.m. to 8 p.m.
- November through February: 6 a.m. to 6 p.m.
- March and April: 6 a.m. to 8 p.m.

In addition, on Assateague Island overnight fishing permits are available, at no cost, for nighttime surf fishing only. These "life time" permits may be obtained from the NPS at the Toms Cove Visitor Center or during the winter months at the Herbert H. Bateman Educational and Administrative Center. Permittees must be actively engaged in surf fishing at all times while on the refuge after the normal refuge hours listed above.

Additionally on Assateague Island,

- Overwash and Toms Cove Hook Area - Open from September 16 through March 14. If unfledged shorebirds remain in the surf fishing and OSV zone after September 15, the refuge manager will designate a closed area to protect these birds.
- The refuge manager may close the surf fishing and OSV zone at any time for safety or security reasons.

(d) How would the use be conducted?

Visitors are allowed to fish, crab, oyster and/or clam in designated areas of the refuge as these activities are deemed wildlife oriented and are promoted within the U.S. Fish and Wildlife Service (USFWS), nationwide. Fishing, crabbing, clamming and oyster harvest would take place within the regulatory framework established by the Virginia Marine Resources Commission (VMRC) and the USFWS. Visitors are required to follow all Commonwealth of Virginia regulations, including possession of applicable licenses. Anglers age 16 and older must possess a valid Virginia Saltwater Fishing or Potomac River Fisheries Sport Fishing license. Anglers who are exempt from licensing and holders of out of state reciprocal licenses must register with the Virginia Fisherman Identification Program (FIP). In addition, the refuge may impose stricter regulations as deemed necessary to maintain healthy populations of oysters and clams on Refuge tidal lands.

Overnight fishing permits are available, at no cost, for nighttime surf fishing. These "life time" permits may be obtained from the NPS at the Toms Cove Visitor Center or during the winter months at the Herbert H. Bateman Educational and Administrative Center. Permittees must be actively engaged in surf fishing at all times while on the refuge after the normal refuge hours.

(e) Why is this use being proposed?

Fishing, crabbing, clamming and oyster harvest are current recreational uses on the refuge and are appropriate activities. Refuge expenses are very minimal aside from already existing standard law enforcement patrols to verify that regulations are being followed. This use supports wildlife dependent recreation as outlined in the Improvement Act.

Surf fishing was one of the first documented public recreational uses of the Chincoteague NWR (Assateague Island) soon after it was established. The first record of surf fishing appeared in the May to August 1944 refuge report. In most instances, fishermen boated to the "bow-of-the-beach" and walked over the over wash to fish on the ocean beach. In later years (1948), prior to the construction of the bridge to the island, anglers would drive down the beach from the Maryland end of Assateague Island to fish on the refuge. The construction of the bridge to Assateague Island in 1962 contributed to a significant increase in the general use of Assateague Island and subsequently to surf fishing on the refuge. Surf fishing, clamming, crabbing and oyster harvest continue to be popular family oriented recreational activities.

AVAILABILITY OF RESOURCES:

Permitting and oversight of recreational surf fishing, crabbing, clamming and oyster harvest is within the resources available to the Visitor Services and Law Enforcement programs to administer this use.

As indicated in the 2012 Memorandum of Understanding between the NPS and U.S. Fish and Wildlife Service (USFWS) for Interagency Cooperation at Assateague Island National Seashore and Chincoteague National Wildlife Refuge or subsequent agreements, the NPS will assist in the day-to-day management of OSVs used for surf fishing within the refuge by issuing permits,

educating permit holders on OSV use regulations, and assisting the USFWS with enforcing OSV use regulations, creel limits, and closures (USFWS 2012). Responsibility of monitoring vehicles, maintenance of facilities, and law enforcement is delegated to qualified and available full time employees of either the NPS or USFWS. Refuge staff will ensure that closed areas are delineated and maintained to achieve maximum protection for beach nesting birds and carry out appropriate monitoring and management actions as required by the USFWS's Biological Opinion on monitoring and management practices for piping plover, loggerhead sea turtle, green sea turtle, leatherback sea turtle, and seabeach amaranth on Chincoteague National Wildlife Refuge, Virginia. These activities include searching for and monitoring piping plover and sea turtle nests, erecting exclosures, signage and barriers to protect nests, and "nest sitting" just prior to anticipated emergence of sea turtle hatchlings.

The USFWS and NPS both administer the day-to-day operation of the OSV permit program. Refuge costs are primarily staff time, with some expenditures for materials such as signs, posts, and fencing. Use of volunteer interns lessens the cost to the refuge, and fee receipts augment the refuge's annual operations and maintenance budget.

Within the annual refuge operations and maintenance budget, in combination with fee receipts, there is sufficient staffing and funding available to accomplish the tasks necessary to facilitate this use. The funding received by the refuge is adequate to ensure that the use remains compatible with refuge purposes.

ANTICIPATED IMPACTS OF USE:

The day-to-day activity of crabbing, clamming and oyster harvest is considered a consumptive use of renewable resources found on the refuge. However, there are few adverse impacts from that harvest and there is no significant impact on migratory birds due to the small number of those resources that are harvested.

The activity of surf fishing, by itself, has no significant impact to migratory birds due to disturbance or the fish resources that are harvested. However, the use of OSVs to gain access to remote southernmost surf fishing areas of Assateague Island must be reviewed.

Migratory birds - Since the use of OSVs for surf fishing will occur along the Atlantic ocean beachfront, impacts to migratory birds will generally be restricted to shorebirds. The refuge consulted with the USFWS Ecological Services Virginia Field Office who issued a Biological Opinion on the impacts of OSV use, among other uses, on piping plovers. The impacts described therein can be extrapolated to other shorebirds.

The refuge has been designated as internationally important for shorebirds by the Western Hemisphere Shorebird Reserve network. It is an important staging area and provides habitat for shorebirds during both spring and fall migrations. Nesting species include piping plover,

American oystercatcher, willet, common and least tern, and black skimmer. Spring migration generally runs from early April to early June, when thousands of shorebirds use refuge habitats. Dunlin and sanderling are predominant during early spring migration, while semipalmated sandpiper makes up nearly half of those birds counted during late spring migration. The peak of fall migration occurs from July through September with semipalmated and least sandpipers accounting for the majority of individuals. The red knot, designated as threatened under the Endangered Species Act, also uses the refuge during spring and fall migration.

Motorized vehicle use on beaches is an extreme threat to piping plovers, as well as other shorebirds that nest on beaches and dunes. Vehicles can crush eggs, adults, and chicks (Wilcox 1959, Tull 1984, Burger 1987, Patterson et al. 1991). In Massachusetts and New York, 18 piping plover chicks and 2 adults were killed by off-road vehicles in 14 documented incidents (Melvin et al. 1994). Goldin (1993) compiled records of 34 chick mortalities (30 on the Atlantic Coast and 4 on the Northern Great Plains) due to vehicles. Biologists who monitor and manage piping plovers believe that vehicles kill many more chicks than are found and reported (Melvin et al. 1994). Beaches used by recreational vehicles during nesting and brood-rearing periods generally have fewer breeding plovers than available nesting and feeding habitat can support. In contrast, plover abundance and productivity has increased on beaches where recreational vehicle restrictions during chick-rearing periods have been combined with protection of nests from predators (Goldin 1993) (USFWS 2008a). It has been documented that piping plover chicks will tend to run along ruts caused by vehicles and remain motionless as vehicles approach (USFWS 1996). Piping plover chicks may also have difficulty crossing deep ruts and moving quickly enough out of a vehicle's path. Additionally, piping plovers tend not to reach their full habitat carrying capacity on beaches where vehicles are allowed during the nesting and brood rearing periods (USFWS 1996).

To mitigate for these potential negative impacts, the refuge has instituted seasonal closures for surf fishermen, horseback riders, and OSV users. The beach habitats of Toms Cove Hook are the most productive on the refuge for nesting and staging shorebirds. As noted above, with establishment of the new recreational beach, the Toms Cove Hook portion of the surf fishing, horseback riding and OSV zone would be closed from March 15 through September 15 annually, and later if unfledged birds remain in the area. The closure period also encompasses the peak times of spring and fall migration, thus providing undisturbed habitat for shorebirds during the most critical times of year.

The closures extend from the nest site a distance of 200 meters (656 feet) north. It is possible that some nests may not be discovered, and the presence of nest searchers may also cause direct loss if eggs are inadvertently crushed. In either of these situations, there could be negative impacts to nesting shorebirds. When the recreational beach area is moved to a more northern location, as is proposed in the CCP/EIS (alternative B), the Overwash area would be managed identically with the Toms Cove Hook portion, which will provide added protection to birds using the Overwash area.

Surf fishermen and OSV users may encounter shorebirds at times outside of the closure period. During this time, all birds should be capable of flight, and therefore can travel short distances to other high quality, undisturbed portions of the refuge, such as the bay side of Toms Cove. There could be some negative impacts due to birds expending energy to travel away from preferred feeding or resting areas.

Based on a review of the literature, with seasonal closures in place, and if nest searches in the Overwash zone are conducted thoroughly and professionally, the direct, indirect, and cumulative impacts of OSV use for surf fishing to shorebirds should not be significant.

Threatened and endangered species - This section assesses impacts to federally-listed threatened and endangered species: piping plover, red knot, sea turtles, and seabeach amaranth.

Piping plover and *red knot* impacts are covered above under migratory shorebird impacts.

Sea turtles - Five species of federally-listed sea turtles use Assateague Island's ocean and bay waters. The leatherback sea turtle, which is also a State listed species, Kemp's Ridley sea turtle, and the Atlantic hawksbill are Federal endangered species. The loggerhead sea turtle and green sea turtle are Federal threatened, with the loggerhead also being State threatened. The loggerhead sea turtle nests on Assateague Island, which is the northern extent of its breeding range. To date, there has been no confirmed nesting by green or leatherback sea turtles within the refuge although both these species have been seen in waters off Virginia's barrier islands during the nesting season. Dead stranded turtles of these species are occasionally found on refuge beaches. However, with the average global air and water temperatures rising, refuge beaches may become more favorable for these species (USFWS 2008c).

Nesting activity on Assateague and NASA Wallops Islands has risen noticeably in recent years, perhaps the result of a loggerhead translocation project. From 1969 to 1979 sea turtle eggs from nests laid on Cape Island of Cape Romain National Wildlife Refuge (NWR), Charleston County, South Carolina were relocated to Chincoteague NWR. During, and the first two decades following, the relocation program (1970 to 1999) staff recorded 16 crawls on Assateague and NASA Wallops; 10 resulted in nests and 6 were false crawls, meaning no nest was made. Loggerhead sea turtles take 30 years to reach maturity, so females that were part of the transplant project may now be returning to their hatch and release sites. Loggerhead nesting activity from 2000 to 2012 on Chincoteague Island had a total of 66 crawls; 23 resulted in nests and 43 were false crawls (CNWR unpubl. database). Eleven of the nests were located on Wild Beach, north of the recreational beach in an area closed to all OSV use. Eight nests were located on the recreational beach area and OSV zone (5 at the Overwash and 3 on public beach). These nests were monitored and managed in accordance with the Chincoteague NWR Intra-Service Section 7 and Biological Opinion (USFWS 2008). The other 4 nests were located south of the recreational beach on the Toms Cove Hook area.

OSV use poses a risk of injury to females and live stranded turtles, can leave ruts that trap hatchlings attempting to reach the ocean (Hosier et al. 1981, Cox et al. 1994), can disturb adult females and cause them to abort nesting attempts, and can interfere with sea-finding behavior if headlights are used at night (NMFS and USFWS 1991). Driving directly above incubating egg clutches can cause sand compaction, which may decrease hatching and emergence success and directly kill pre-emergent hatchlings (NMFS and USFWS 2007). Artificial lighting on human structures may affect turtle behavior in a similar manner (Witherington and Martin 1996). When artificial lighting impairs sea-finding behavior of nesting females and emerging hatchlings, the affected animals face increased exposure to the elements and predation.

To mitigate for potential impacts to sea turtles, the following protocols will be implemented: Sea turtle crawl searches will be conducted in the morning hours during piping plover monitoring and avian predator management to ensure nest protection procedures begin as soon as possible. All sea turtle nests will be marked, thus establishing a buffer zone, to protect the nest from recreation-related human activity. Staff or volunteers will place a minimum of four informative "Area Closed" signs forming a 5-foot radius around the nest. Rope will be strung between the signs to discourage vehicles and pedestrians from trespassing into the nest site. OSV access will occur outside this buffer zone.

OSVs are prohibited from the recreational beach. However, headlights from the parking lot or adjacent OSV zone will have the potential to affect hatchling emergence to the ocean. Staff will erect a light and hatchling emergence barrier around the 5-foot radius buffer zone into the intertidal zone in both the OSV zone and recreational beach area.

The beach is wide enough to allow OSVs to travel landside of the nest without adversely affecting dune or vegetated habitats; therefore, staff will continue to allow OSV traffic west of the nest. Pedestrians may access areas west of the nest or within the intertidal zone. Because a light and hatchling emergence barrier will be in place during the entire hatch window, a nest sitter will not be present at night.

*OSV Zone-DAY: Beach is too narrow for ORVs to pass landward during **Hatch Window**:*

Staff will erect a light and hatchling barrier around the 5-foot radius buffer zone and toward the intertidal zone. A corridor will be created near the intertidal zone for OSV and pedestrian access. A nest sitter will open the access corridor to the public one hour after sunrise. A nest sitter will close the corridor at sunset. If hatchling activity occurs during the day, nest sitters will follow the OSV Zone-Night protocol.

*OSV Zone-NIGHT: Beach is too narrow for OSVs to pass landward during **Hatch Window***:

The OSV and pedestrian access corridor gate will close at sunset. Throughout the night a turtle sitter will open the gate to OSVs and pedestrians allowing passage north and south through the

corridor of the turtle hatchling emergence zone when hatchlings are not crawling to the ocean. After an OSV or pedestrian passes through the area, the turtle sitter will immediately re-close the gates and sweep away all OSV and foot tracks. The access corridor and gates will be used as needed from sunset until one hour after sunrise or when turtle hatchling activity ceases. A turtle sitter will be posted at nests which fall into this scenario each night for the duration of the entire hatch window.

Management activities on the refuge should have a net positive effect on sea turtle nesting due primarily to in situ protection of nests. Active and passive predator control, conducted primarily for plover nest protection, will also help nesting sea turtles by reducing the number of potential sea turtle nest predators on the refuge. All sea turtle nests will be left in place and protected from threats as outlined in the attached Intra-Service Section 7 Biological Evaluation Form (USFWS 2008). Following the protocols established in Enclosure 1, CNWR staff will make a determination of how to provide protection to each nest based on the nest timing, location, and any possible site-specific issues. All turtle nests on Assateague will be excavated to confirm the presence of eggs. While this excavation process has a slight possibility of damage to the eggs, it is a standard procedure recommended and used by all sea turtle experts in the United States. The nests will then be protected by predator exclosures and symbolic fencing to prevent public trespass. Any turtle nests that occur in the Overwash zone when that area is re-opened to vehicles after the end of the plover nesting season (generally about September 15), will also be protected with a light barrier. In addition to the barriers, human nest sitters (staff or volunteers) will be used at night during the hatch window to protect nests in areas where the location of the nest and the width of the beach is such that an OSV cannot pass landward of the nest. Nest sitters will prevent vehicles from passing seaward of turtle nests while hatchling turtles are on the beach to prevent injury to hatchling turtles.

Seabeach amaranth - Seabeach amaranth is an annual plant and a member of the Amaranth family (Amaranthaceae). Upon germination, the plant initially forms a small, unbranched sprig, but soon begins to branch profusely, forming a low-growing mat. It was added to the List of Endangered and Threatened Wildlife and Plants (50 CFR 17.12) as a threatened species.

Population numbers at the refuge have been low, and limited primarily to beach areas north of the recreational beach. The number of plants within the refuge has experienced major fluctuations in numbers since its rediscovery in 2001. In 2005, a record 69 plants were documented outside of the OSV zone. The numbers dropped to 13 plants in 2006, 2 plants in 2011, and no plants were found in 2012.

OSV use on the beach during the growing season can potentially have detrimental effects on the species, as the fleshy stems of this plant are brittle and easily broken. Plants generally do not survive even a single pass by a truck tire (Weakley and Bucher 1992). Sites where vehicles are allowed to run over seabeach amaranth plants often show severe population declines. Dormant season OSV use has shown little evidence of significant detrimental effects, unless it results in

massive physical erosion or degradation of the site, such as compacting or rutting of the upper beach. In some cases, winter OSV traffic may actually provide some benefits for the species by setting back succession of perennial grasses and shrubs with which seabeach amaranth cannot compete successfully. However, extremely heavy OSV use, even in winter, may have some negative impacts, including pulverization of seeds (Weakley and Bucher 1992).

As noted above, no seabeach amaranth plants have been found within the OSV zone. Activities by refuge staff for management and protection of nesting plovers and sea turtles have a net positive effect on seabeach amaranth, in that the plants are often found during these other management activities, resulting in better protection of the plants. The refuge staff annually surveys for the plant, and records or monitors any locations. Plants that have grown during the spring/summer period are usually enclosed with fencing when found. If plants are found in public OSV use areas, signs and symbolic fencing will provide protection and reduce the risk of inadvertent disturbance to plants. As a result of closure of nesting areas for protection of the plover and sea turtles, seabeach amaranth that possibly occur in these areas can complete most of its life cycle removed from the threat of crushing from public OSV use. Crushing of a plant or plants by the public, staff, or OSVs could potentially occur in some circumstances, but is highly unlikely due to the actions taken by the refuge to protect the dune and beach areas, and the fact that most of the populations of the plant occur north of the recreational beach and do not receive pedestrian or OSV use. Refuge prohibitions on OSV use in the dunes, and efforts to educate the public should decrease trampling in almost all cases. This form of take is considered insignificant (USFWS 2008a).

Wetlands - The surf fishing and OSV zone is located within the intertidal zone and beachfront area, therefore there will be no wetland impacts.

Recreation - The purpose of continuing to permit OSV use on the refuge is to facilitate surf fishing, a priority recreational use of the Refuge System. Allowing this use will provide additional opportunities in areas that would be difficult to access without the use of vehicles. Therefore the impact on these recreational users will be positive. While seasonal closures will limit the times and locations that these activities may occur, they are necessary to protect numerous wildlife species that use these same locations.

There is the potential of user conflicts in the OSV zone, especially when vehicles are in use in the presence of pedestrians engaging in wildlife observation or photography and/or horseback riders. Since OSVs are permitted only to access fishing and hunting areas, times when vehicles are actually in use will be limited. The majority of refuge beach is open for pedestrian use and restricted from OSV use, so there is sufficient opportunity for users to engage in their respective activities without causing disturbance to other users.

Allowing overnight surf fishing could potentially impact migratory shore birds and nesting sea turtles. These impacts have been reduced for shorebirds and eliminated for sea turtles by restricting this use to periods outside the peak migration and nesting seasons, respectively. There

is the possibility of increased disturbance to dune habitats; however, regular patrols and enforcement of this closed area will be implemented. No other adverse impacts are anticipated.

In addition, surf fishing takes place at the south end of Assawoman Island, and the north end of Metompkin Island except during closures or in restricted areas. Surf fishing in these areas has the potential of impacting the feeding and resting by a variety of shorebirds, gulls, and terns. Surveys conducted from 1990 to 1993 indicated an average peak of 2,000 shorebirds, 370 gulls, and 60 terns along the affected beach activity zone. The highest peak for all three species group occurred during the early fall migration (August) with 4,900, 600, and 180, respectively. Shorebird use of the beach fishing area was approximately 85 percent sanderling, with whimbrel, ruddy turnstone, red knot accounting for the remaining total. Gull species including laughing gulls in the summer months and great black-backed, herring and ring-billed during the remainder of the year. Terns present within the affected area were mostly royal, common, and least.

To mitigate for the potential negative impact of surf fishing activities to migratory birds, the refuge has instituted a seasonal closure to all access. All of Assawoman Island will be closed from March 15 through September 15 annually, and later if unfledged birds remain in the area. On Metompkin Island shore bird nesting areas are posted closed to public access during the shorebird nesting season. These closure periods also encompasses the peak times of spring and fall migration, thus providing undisturbed habitat for shorebirds during the most critical times of year.

Shell fishing activities (clams, oysters, and crabs) are confined primarily to saltmarsh and mudflats within Toms Cove. Anticipated impacts include minor disturbance to feeding wading birds, migrant shorebirds, and nesting saltmarsh species (rails and songbirds). Disturbance from crabbing in the borrow ditch along Beach Road near Swans Cove Pool will primarily affect wading birds during the summer months. Because of the small area in which crabbing is allowed disturbance is very minimal.

PUBLIC REVIEW AND COMMENT:

This compatibility determination is part of the Chincoteague NWR CCP/EIS. Public notification and review included a notice of availability published in the Federal Register, a 90-day comment period for the draft CCP/EIS during which public meetings were held, a 30-day review period for the final CCP/EIS, and the record of decision published in the Federal Register. We also inform the public through local media releases and our website.

DETERMINATION (CHECK ONE BELOW):

_____Use is not compatible

__X___Use is compatible, with the following stipulations

STIPULATIONS NECESSARY TO ENSURE COMPATIBILITY:

Surf fishing, crabbing, clamming and oyster harvest would take place within the regulatory framework established by the VMRC and USFWS. Visitors are required to follow all Commonwealth of Virginia regulations, including license to fish. Anglers age 16 and older must possess a valid Virginia Saltwater Fishing or Potomac River Fisheries Sport Fishing license. Anglers who are exempt from licensing and holders of out of state reciprocal licenses must register with the Virginia FIP. In addition, the refuge may impose stricter regulations as deemed necessary to maintain healthy populations of oysters and clam on refuge tidal lands. The refuge does not host any fishing tournaments.

The refuge will implement seasonal closures and other mitigating measures as described above, and in the Biological Opinion on monitoring and management practices for piping plover, loggerhead sea turtle, green sea turtle, leatherback sea turtle, and seabeach amaranth on Chincoteague NWR within the OSV zone.

When and if the recreational beach is moved to a more stable location, and a new surf fishing and OSV zone is created adjacent to the new beach area, the Overwash area will be merged with the Toms Cove Hook area in terms of management of surf fishing, horseback riding and OSV use and seasonal restrictions.

Shell fishing will continue to be restricted to segments of the Toms Cove's saltmarsh and mudflats. These restrictions are dictated by the accessibility of these areas to the visiting public. No artificial methods for extracting shellfish from the substrate. Use of mechanized harvest equipment and artificial extraction methods such as salt or chlorine are not allowed. All other saltmarsh and mudflats will remain closed to public entry the entire year, in order to minimize disturbance.

To ensure compatibility within the lower island refuge units, seasonal restrictions will continue to be imposed on users, and periodic law enforcement patrols will be conducted on weekends and holidays during the summer months for all fishing (finfish and shellfish) activities. To reduce shorebird nesting disturbance on Assawoman Island during the breeding season, we will implement a complete closure, including fishing, from March 15 through September 15 or thereafter, until the last shorebird fledges.

JUSTIFICATION:

Recreational fishing (surf fishing, clamming, crabbing and oyster harvest) is a priority wildlife-dependent use for the Refuge System through which the public can develop an appreciation for fish and wildlife (Executive Order 12996, March 25, 1996 and the Refuge System Administration Act of 1966, as amended by the Refuge System Improvement Act of 1997 (Public Law 105-57)). USFWS 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.

The refuge's recreational fishing program is focused on providing a wholesome, fun outdoor experience for the individual or family. Specific refuge regulations address equity and quality of fishing opportunities for visitors and help safeguard refuge habitats. Impacts from this proposal, short-term and long-term, direct, indirect, and cumulative, are expected to be minor and are not expected to diminish the value of the refuge for its stated objectives.

Conflicts between users are localized and are addressed through law enforcement, public education, and continuous review and updating to public use regulations. Conflicts are further reduced by the establishment of seasonal area closures.

This activity will not materially interfere with or detract from the mission of the Refuge System or purposes for which the refuge was established.

Signature: Refuge Manager: _____

(Signature and Date)

Concurrence: Regional Chief: _____

(Signature and Date)

Mandatory 15-year re-evaluation date: _____

(Date)

LITERATURE CITED

Blodget, B.G. 1978. The Effect of Off-Road Vehicles on Least Terns and other Shorebirds. M.S. Thesis. Univ. Mass., Amherst. 79 pp.

Burger, J. 1987. New Jersey Endangered Beach-Nesting Bird Project: 1986 Research. Unpublished report. New Jersey Dept. Env. Protection. NJ. 37 pp.

Collazo, J.A., J.R. Walters, and J.F. Parnell. 1994. Factors Affecting Reproduction and Migration of Waterbirds on North Carolina Barrier Islands. 1993 Annual Prog. Report. N.C. State Univ., Raleigh, NC. 57 pp.

Cullen, R. 1985. Rationing Recreational Use of Public Land. *J. Environ. Manage*. 21: 213 - 224.

Edington, J.M., and A.M. Edington. 1986. Ecology, Recreation and Tourism. Cambridge Univ. Press. Cambridge, UK. 200 pp.

Erwin, R.M. 1989. Responses to Human Intruders by Birds in Colonies: Eperimental Results and Management guidelines. *Col. Watebirds.* 12(1): 104-108.

Goldin, M.R. 1993. Effects of Human Disturbance and Off-Road Vehicles on Piping Plover Reproduction Success and Behavior at Breezy Point, Gateway Nat. Rec. Area, M.S. Thesis. Univ. Mass., Amherst, MA. 128 pp.

Hill, J.O. 1988. Aspects of breeding biology of Piping Plovers Charadrius melodus in Bristol County, Mass., in 1988. Unpublished report. University of Mass., Amherst, MA. 44 pp.

Hoopes, E.M., C.R. Griffin, and S.M. Melvin. 1992. Relationship Between Human Recreation and Piping Plover Foraging Ecology and Chick Survival. Unpublished report. Univ. Mass., Amherst, MA. 77 pp.

Klein, M.L. 1989. Effects of High Levels of Human Visitation on Foraging Waterbirds at J.N. "Ding" Darling NWR, Sanibel, FL. Final Report to USFWS. 103 pp.

Loegering, J.P. 1992. Piping Plover Breeding Biology, Foraging Ecology and Behavior on Assateague Island National Seashore, Maryland. M.S. Thesis. VPI&SU, Blacksburg, VA 247 pp.

MacIvor, L.H. 1990. Population Dynamics, Breeding Ecology, and Management of Piping Plovers on Outer Cape Cod, Massachusetts. M.S. Thesis, Univ. Mass., Amherst, VA. 100 pp.

Purdy, K.G., G.R. Goff, D.J. Decker, G.A. Pomerantz, and N.A. Connelly. 1987. A Guide to Managing Human Activity on National Wildlife Refuges. Human Dimensions Research Unit, Cornell Univ., Ithaca, NY. 34 pp.

Shaffer, F. and P. Laporte. 1992. Rapport synthese des recherches relatives au pluvier siffleur (Charadrius melodus) effectuees aux Iles-de-la-Madeleine de 1987 a 1991. Association quebecoise des groupes d'ornithologues et Service canadien de la faune. 78 pp.

U.S. Fish and Wildlife Service. 1944. Chincoteague NWR Narrative Report May - August 1944. Unpublished Report. USFWS, Chincoteague, VA.

U.S. Fish and Wildlife Service. 1947. Chincoteague NWR Narrative Report May - August 1947. Unpublished Report. USFWS, Chincoteague, VA.

U.S. Fish and Wildlife Service. 1948. Chincoteague NWR Narrative Report May - August and September - December. 1948. USFWS, Chincoteague, VA.

U.S. Fish and Wildlife Service. 1956. Chincoteague NWR Narrative Report September - December 1956. USFWS. Chincoteague, VA.

U.S. Fish and Wildlife Service. 1993. Annual Narrative. USFWS, Chincoteague, VA.

U.S. Department of the Interior, Fish and Wildlife Service. 1988. Management of Piping Plover on Toms Cove Hook. Environmental Assessment. Chincoteague National Wildlife Refuge. Chincoteague, VA. 67 pp.

U.S. Department of the Interior, Fish and Wildlife Service. 1992. Final Environmental Impact Statement for the Chincoteague National Wildlife Refuge Master Plan. Chincoteague National Wildlife Refuge. Chincoteague, VA. 259 pp.

U.S. Department of the Interior, Fish and Wildlife Service. 1993. Master Plan. Chincoteague National Wildlife Refuge. Chincoteague, VA. 125 pp.

Welty, J.C. 1982. The life of birds. Sauders College Publishing, Philadelphia, PA. 754 pp.

COMPATIBILITY DETERMINATION

USE: Migratory Game Bird Hunting

REFUGE NAME: Chincoteague National Wildlife Refuge

DATE ESTABLISHED: May 13, 1943

ESTABLISHING AND ACQUISITION AUTHORITY(IES):

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).

- "... 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.

DESCRIPTION OF USE:

(a) What is the use? Is the use a priority public use?
The use is the public hunting of migratory game birds. Hunting was identified as one of six priority public uses by Executive Order 12996 (March 25, 1996) and by the Refuge System Administration Act of 1966, as amended by the Refuge System Improvement Act of 1997 (Public Law 105-57).

(b) Where the use would be conducted?
The use would be conducted in designated areas of the refuge. Migratory game bird hunting is open on Wildcat Marsh, Morris Island, Assawoman Island, and North Metompkin Island. Wildcat Marsh (546 acres) is located at the north end of Chincoteague Island and Morris Island (427 acres) is located between Chincoteague and Assateague Islands. Assawoman Island Division contains 1,434 acres and encompasses the entire island; Metompkin Island Division consists of 174 acres on the north end of the island. Thus, the use 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.

(c) When would the use be conducted?
Hunting would take place within the season dates established by the Virginia Department of Game and Inland Fisheries (VDGIF) and the U.S. Fish and Wildlife Service (USFWS). Specific regulations for each hunt will be published by the refuge in advance of the hunt seasons.

(d) How would the use be conducted?
Hunting would take place within the regulatory framework established by VDGIF and USFWS. The refuge manager may, upon annual review of the hunting program and in coordination with VDGIF, impose further restrictions on hunting. Hunting at the refuge is at least as restrictive as the Commonwealth of Virginia, and in some cases, more restrictive. The refuge coordinates with the VDGIF annually to maintain regulations and programs that are consistent with the State's management programs. Hunting restrictions may be imposed if hunting conflicts with other higher priority refuge programs, endangers refuge resources, or public safety. Specific hunt details will be outlined in the annual hunt program.

Migratory Game Bird Hunt - Specific Regulations:
Hunters must obtain an Annual Refuge Hunt Permit and maintain the permit on their person while hunting on the refuge.

U.S. Fish and Wildlife Service
Hunting Opportunities
Chincoteague and Wallops Island National Wildlife Refuges
Accomack County, Virginia and Worcester County, Maryland
Worcester County
Greenbackville
Maryland
Virginia
679
13
Chincoteague Bay
Wildcat Marsh
Assateague Island
Morris Island
Oak Hall
Wattsville
175
Chincoteague
Assateague Island National Seashore
Watts Bay
Atlantic
Accomack County
Toms Cove
Bogues Bay
679
Atlantic Ocean
Wallops Island NWR
Assawoman Island
Metompkin Island
Location Map
MARYLAND
VIRGINIA
Atlantic Ocean
Hunting Areas
Firearms Seasonal
Archery and Firearms
Migratory Game Bird Hunting Only
Migratory Game Bird and Firearms Seasonal
Refuge Features
Refuge Lands
Assateague Island National Seashore
National Park Service Land
Other Features
Major Road/Highway
State Boundary
N
W
E
S
0 0.5 1 2 3
Miles

(e) Why is this use being proposed?
Hunting is one of the priority public uses of the Refuge System. 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 national wildlife refuge. USFWS will continue the tradition of wildlife-related recreation on the refuge by allowing hunting in compliance with State regulations.

The primary objective of the refuge waterfowl hunts is to provide the general public with quality waterfowl hunting opportunities. This objective was reviewed in the Chincoteague National Wildlife Refuge (NWR) Environment Assessment Big Game and Migratory Game Bird Hunt Proposal of 2007 to ensure the hunt program was in conformance with the laws and policy of USFWS.

AVAILABILITY OF RESOURCES:

The Refuge Recreation Act requires that funds are available for the development, operation, and maintenance of the permitted forms of recreation. The permit fee ($20 for deer), and a processing application fee ($5/hunter) are the minimal amounts needed to offset the cost of facilitating the preseason drawings and managing the lottery hunts.

Administrative changes in the hunting program were implemented to ease the administrative burden on staff resources. Kinsail Corporation, a private firm working through a Memorandum of Understanding with the refuge, conducts the hunting applications, lottery selection, and permits. Cost savings resulted from phasing out the use of permanent hunting structures and eliminating the need to have staff conduct daily lottery drawings for permits. Regulations for the fee program allow the refuge to retain 80 percent of the total fees collected, Kinsail retains the $5 application fee charge to each hunter. The resources necessary to provide and administer this use, at current use levels, are available within current and anticipated refuge budgets and no increase in use is proposed above historic levels.

There would be some costs associated with these programs in the form of road maintenance, and law enforcement. These costs should be minimal relative to total refuge operations and maintenance costs and would not diminish resources dedicated to other refuge management programs.

ANTICIPATED IMPACTS OF THE USE:

General Impacts of Public Use

Direct impacts are those impacts immediately attributable to an action. Indirect impacts are those impacts that are farther in time and in space. Effects that are minor when considered alone, but collectively may be important are known as cumulative effects. Incremental increases in activities by people engaged in the variety of allowed uses on the refuge could cumulatively result in

detrimental consequences to wildlife and/or habitats. Refuge staff will monitor these activities to ensure wildlife resources are not impacted in a detrimental manner. Since the hunting areas comprise portions of the refuge with the least amount of waterfowl use and hunting times are restricted, disturbance and other impacts are not expected to be significant.

In this compatibility determination, some of the anticipated impacts are not considered major or significant, and are described as either negligible or minor. The magnitude of such changes is defined as follows:

- Negligible -- Management actions would result in impacts that would not be detectable or if detected, would have effects that would be considered slight, localized, and short-term.
- Minor -- Management actions would result in a detectable change, but the change would be slight and have only a local effect on the community, the resource, or ecological processes. The change would be discountable, insignificant, and of little consequence and short-term in nature.

The use would be conducted in designated areas of the refuge, on a total of up to 2,581 acres over the 14,032-acre refuge. In 2014, only 213 visits occurred on the refuge for migratory bird hunting, possibly because the hunt areas are only accessible by boat. Thus, our determination considers these factors in our overall analysis.

Hunting provides additional wildlife-dependent recreational opportunities and can foster a better appreciation and more complete understanding of the wildlife and habitats associated with Delmarva ecosystems. This can translate into more widespread and stronger support for wildlife conservation, the refuge, the Refuge System, and the USFWS. The following is a discussion of refuge-specific impacts.

Impacts on Socioeconomic Environment

Accomack County is one of the poorest counties in Virginia. The 2010 population estimate for Accomack County is 33,164 persons (U.S. Census Bureau.) Chincoteague NWR is one of the most heavily visited refuges in the Refuge System. Visitors come to Chincoteague for a variety of reasons. Many come in the summer months to access the beach. The beaches of Assateague Island offer a unique experience in the mid-Atlantic area as they exist primarily in an undeveloped setting unlike other beaches like Virginia Beach or Ocean City that are heavily developed. This natural setting draws many families seeking out a more traditional beach going experience.

Spending associated with recreational use of the refuge can generate a substantial amount of economic activity in both local and regional economies. Refuge visitors spend money on a wide variety of goods and services. Trip-related expenditures may include expenses for food, lodging, and transportation. Anglers, hunters, boaters, and wildlife watchers also buy equipment and supplies for their particular activity. Because this spending directly affects towns and communities where these purchases are made, recreational visitation can have an impact on local

economies, especially in small towns and rural areas. These direct expenditures are only part of the total picture, however. Businesses and industries that supply the local retailers where the purchases are made also benefit from recreation spending. For example, a family may decide to purchase a set of fishing rods for an upcoming vacation. Part of the total purchase price will go to the local retailer, say a sporting goods store. The sporting goods store in turn pays a wholesaler who in turn pays the manufacturer of the rods. The manufacturer then spends a portion of this income to cover manufacturing expenses. In this fashion, each dollar of local retail expenditures can affect a variety of businesses at the local, regional and national level. Consequently, consumer spending associated with refuge recreation can have an impact on economic activity, employment, household earnings and local, State, and Federal tax revenue.

Total visits to the refuge exceeded 1.36 million in 2010. Refuge recreation-related expenditures, and associated economic output, jobs, job income and total (county, State and Federal) tax revenue are as follows: total retail related expenditures are estimated at $113.8 million; economic output at $150.3 million; jobs at 1,794, job income at $48.6 million and total tax revenue of $10.6 million. (2012, Chincoteague National Wildlife Refuge -Economic Analysis - In Support of Comprehensive Conservation Plan,)

The refuge's contribution to the economy of the area through offering hunting opportunities for migratory game birds and big game is negligible in context of overall visitation and expenditures. Offering these hunting opportunities may enable hunters to contribute to the local community through local purchases of gas, food, lodging, and supplies.

Impacts on Cultural Resources

The body of federal historic preservation laws has grown dramatically since the enactment of the Antiquities Act of 1906. Several themes recur in these laws, their promulgating regulations, and more recent Executive Orders. They include:

- Each agency is to systematically inventory the historic properties on their holdings and to scientifically assess each property's eligibility for the National Register of Historic Places.
- Federal agencies are to consider the impacts to cultural resources during the agencies management activities and seek to avoid or mitigate adverse impacts.
- Protection of cultural resources from looting and vandalism are to be accomplished through a mix of informed management, law enforcement efforts, and public education.
- The increasing role of consultation with groups, such as Native American tribes, in addressing how a project or management activity may impact specific archaeological sites and landscapes deemed important to those groups.

The USFWS is legally mandated to inventory, assess, and protect cultural resources located on those lands that the agency owns, manages, or controls. USFWS cultural resource policy is delineated in 614 FW 1-5 and 126 FW 1-3.

In the USFWS Northeast Region, the cultural resource review and compliance process is initiated by contacting the Regional Historic Preservation Officer/Regional Archaeologist. The officer or archeologist will determine whether the proposed undertaking has the potential to impact cultural resources, identify the "area of potential effect," determine the appropriate level of scientific investigation necessary to ensure legal compliance, and initiates consultation with the pertinent State Historic Preservation Office and federally recognized Tribes.

With a relatively small number of hunters dispersed across the refuge during the hunting season, impacts would be negligible on the refuge's cultural resources based on our observations of past hunting impacts.

Impacts on Air Quality

Hunting is expected to have negligible adverse short-term, long-term or cumulative impacts on local or regional air quality. Localized increases in emissions from hunter's vehicles or boat motors would be negligible compared to current off-refuge contributions to pollutant levels and likely increases in air emissions in the Accomack County air shed from land development over the next 15 years. Any adverse air quality effects from refuge activities would be more than offset by the benefits of maintaining the refuge in natural vegetation. The hunting program would not violate Environmental Protection Agency (EPA) standards and would comply with the Clean Air Act.

Impacts on Soils

The soils of Chincoteague NWR consist primarily of sand and silt loams. The soils are a mixture of Chincoteague silt loam (0-1 percent slope), Assateague fine sand (2-35 percent slope), Camocca fine sand (0-2 percent slope), beach sand (0-5 percent slope), Fisherman-Camocca complex (0-6 percent slope), and Udorthents and Udipsamments soils (0-30 percent slope). The soils are predominantly made of loam, silt, and sand. Assateague fine sand areas are rarely flooded. However, the rest of the areas are frequently to moderately prone to flooding. Hiking or walking can alter habitats by trampling vegetation, compacting soils, and increasing the potential of erosion. Using these baseline impacts, the refuge's hunt program has the potential to cause some soil compaction since off-trail foot travel occurs; however, hunting is expected to have negligible adverse short-term, long-term or cumulative impacts on soils. With a limited number of hunters dispersed across the refuge during the hunting season, impacts would be negligible based on our observations of past hunting impacts. Vehicles would continue to be confined to existing refuge roads and parking lots to minimize impacts outside of that developed footprint.

Impacts on Hydrology and Water Quality

No natural freshwater streams or lakes exist on Chincoteague NWR. Rainfall and tidal over wash are the only sources of surface water on Assateague Island. The moist soil units or impoundments are slightly brackish to highly saline because of tidal over wash, salt spray, and the accumulation of salt residue as water evaporates. The same environmental influences make the groundwater lenses beneath the islands brackish. Evaporation and transpiration account for major surface

water depletion during the summer months. The drinking water supply for Chincoteague Island and the refuge comes via pipeline from three deep wells and a shallow well field near the National Aeronautics and Space Administration (NASA) base on the mainland. Large bodies of water bordering the Refuge are the Atlantic Ocean, Chincoteague Bay, and Assateague Channel. Hunting is expected to have negligible adverse short-term, long-term or cumulative impacts on hydrology or water quality based upon staff observations of past hunting impacts. The hunting program would not violate federal or state standards for contributing pollutants to water sources and would comply with the Clean Water Act.

The use of boats by hunters has the potential to affect water quality negatively by increasing erosion, stirring up bottom sediments, or introducing pollutants into waterways. USFWS does not expect emissions from vehicles or boat motors to substantially affect the water quality of the region. Non-toxic shot is required for all waterfowl hunting. Public outreach and education on littering and proper waste disposal will lessen potential negative water quality impacts.

Impacts on Vegetation

Repeated visitation to any particular locale at the refuge could continue to cause minor site-specific damage to vegetation. Accidental introduction of invasive plants, pathogens, or exotic invertebrates attached to boats, or on shoes or clothing, is another source of direct impact on vegetation. In places where unmarked paths are created by hunters and anglers, little used pathways will retain their dominant vegetation species, but on medium-use pathways some plant species will be replaced and heavily used paths will often contain invasive species (Liddle and Scorgie 1980).

Using the information previously presented as a baseline and considering staff observations of past impacts, hunting is expected to have negligible adverse short-term, long-term, or cumulative impacts on vegetation. Disturbance to vegetation is expected to increase due to an expected increase in migratory game bird hunters in new free roam hunting areas during all hunting seasons. The possibility for new trails to be developed from repeated hunter entry may occur. However, anticipated dispersal of hunters across hunting areas, the inherent nature of hunters to only travel as far as needed to find a hunting location, and knowing that most vegetative species will have already undergone senescence or become dormant, the impacts to vegetation are expected to be negligible. On-going education about the peril of non-native invasive plant species introduction will continue through refuge outreach.

Impacts on Federal and State Endangered Species

The endangered Delmarva Peninsula fox squirrel (*Scurius cinerus cinerus*) and the threatened seabeach amaranth (*Amaranthus pumilus*) are the only federally listed species that could potentially utilize refuge hunt areas during the Virginia hunting seasons. Although the Delmarva Peninsula fox squirrel has been proposed for delisting from the endangered species list since the draft Comprehensive Conservation Plan and Environmental Impact Statement (CCP/EIS) was published, it has not been finalized yet. Piping plover, red knot, and loggerhead sea turtles are not

found on the refuge during the hunting seasons. While the bald eagle is no longer a federally listed species, the refuge uses the national bald eagle management guidelines for bald eagle management to implement time-of-year restrictions for nesting eagles. The guidelines do not permit any activity within 330 feet of an active nest during the breeding season (USFWS 2011).

A Section 7 Evaluation has been conducted as part of this review and it was determined that proposed activities will not likely affect the Delmarva fox squirrel or seabeach amaranth. No Delmarva fox squirrels have been found on the southern island units where much of the waterfowl hunting occurs. Furthermore, the hunting of any squirrel species is prohibited on the refuge to further minimize impacts to this endangered species. Seabeach amaranth is an annual plant (i.e., not persistent in winter) and would not likely be seen on the refuge during the hunting season. Plants that have grown during the spring/summer period are usually enclosed with fencing when found.

Impacts on Waterfowl

The migratory game bird hunting areas consists of approximately 1,750 acres or 13 percent of the refuge land, with a rail hunting area of 864 acres or 6 percent of the refuge land. Only the saltmarsh portion of Wildcat Marsh, Morris Island, Assawoman, and Metompkin Islands are used for waterfowl hunting. Rail hunting is only permitted on marshes of Assawoman Island and the north end of Metompkin Island.

Hunting occurs only on the northern end of Chincoteague Island, and on Morris, Assawoman, and the north end of Metompkin Islands. Morton (1986) found that the increased presence of humans associated with the refuge big game hunting program can contribute to movements of ducks, particularly black ducks, off the refuge. These disturbances are at a time when these birds need the isolation of the refuge to feed and rest. Paulus (1984) and Belanger (1989) found that hunting activity (gun shots or hunter movements) caused waterfowl to move to less disturbed areas and avoided some areas until after the hunting season. Laskowski et al (1993) documented human disturbance to a representative species of waterfowl by the visiting public (on managed impoundments) on Back Bay NWR, Virginia. Disturbance elicited behavioral changes ranging from increase alertness to flying to other parts of the refuge. McNeil et al. (1992) found that many waterfowl species avoid human disturbance by feeding at night instead of the day.

Waterfowl and other migratory bird hunting will continue to be limited to specific areas on the refuge in order to reduce potential disturbance. Migratory game birds are those bird species so designated in conventions between the United States and several foreign nations for the protection and management of these birds. Under the Migratory Bird Treaty Act (16 USC 703-712), the Secretary of the Interior is authorized to determine when "hunting, taking, capture, killing, possession, sale, purchase, shipment, transportation, carriage, or export of any bird, or any part, nest, or egg" of migratory game birds can take place, and to adopt regulations for this purpose.

Light goose, resident Canada goose, and mourning dove hunting would result in a potential increase in visitors related to hunting. These hunt programs would be regulated as the current hunt programs are, with a limited amount of permits awarded. This number of new permits would not cause significant impacts to birds because the total number of hunters that would be on the refuge at any time would not be enough to result in any significant disturbance.

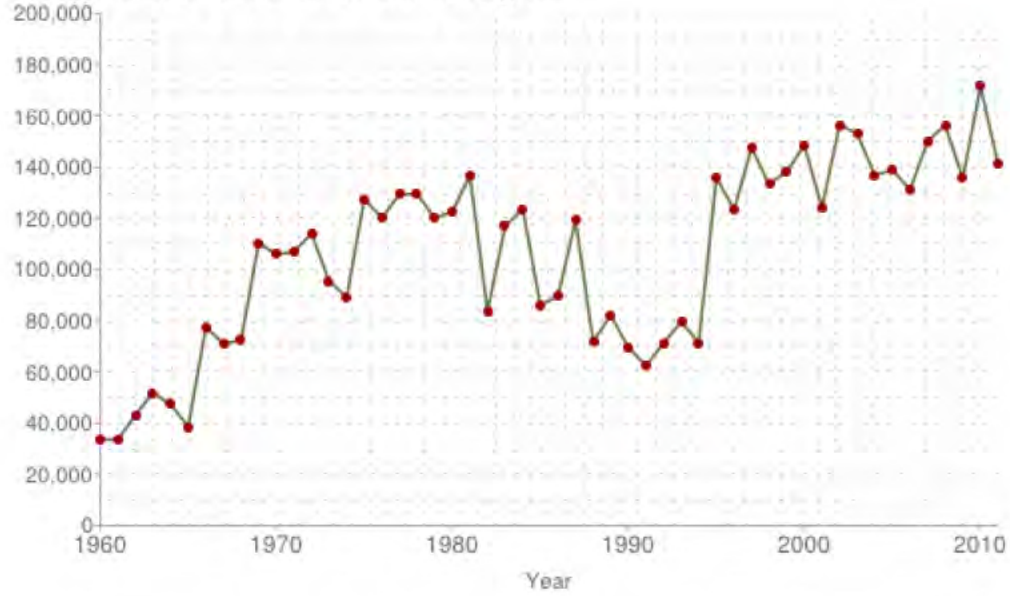
Net positive impacts from the refuge hunt program are expected. We expect that the harvest of local resident Canada geese would have the following beneficial effects:

- Increase natural seed regeneration within refuge impoundments thereby increasing fall/winter food availability for migrating ducks, geese and swans.
- Reduce fecal contamination in the refuge impoundments. Excessive fecal matter also changes the nitrogen and oxygen levels in the refuge waters resulting in algal blooms and death of aquatic organisms. (Source: U.S. Department of Agriculture, Animal and Plant Health Inspection Service (USDA-APHIS). 1999. Environmental Assessment for the management of conflicts associated with non-migratory Canada geese, migratory Canada geese, and urban/suburban ducks in the Commonwealth of Virginia. 77 pp.)
- Reduce the possibility of transmitting disease to susceptible populations of migrating birds as they over-winter at the refuge or pass through.
- Reduce negative interactions (aggressive behavior) with refuge visitors on roads and trails during spring breeding season.

Harvest and disturbance of light geese under the authority of the light goose conservation order would have the following beneficial effects:

- Reduce damage caused by light geese to sensitive arctic breeding habitats. This would have the additional benefit of reducing negative impacts to other bird species nesting within that same arctic habitat.
- Reduce damage to wintering habitats within the Atlantic Flyway.

Total number of ducks harvested in Virginia



Total number of geese harvested in Virginia

http://www.flyways.us/regulations-and-harvest/harvest-trends

The resident Canada goose population increased significantly during the 1980s and early 1990s. The population peaked at over 260,000 geese in the mid- to late-1990s in Virginia and has been steadily reduced by specific management programs since that time. The current population estimate is 158,267 (+/- 28%) in Virginia and over 1 million in the Atlantic Flyway. For migrant Canada geese, the breeding population estimate for 2012 (190,340) is similar to the past 3 year average (189,317).

http://www.dgif.virginia.gov/hunting/va_game_wildlife/waterfowlfactsheets.pdf

Liberal duck seasons (60 days, 6 bird bag limit) and resident goose seasons have resulted in higher waterfowl harvests in Virginia during the past 10 years. Harvest has averaged approximately 150,000 ducks and 60,000 geese from 2000 to 2011, compared to 114,770 ducks and 25,000 geese during the 1990s. The long season length and liberal bags offer greater opportunity and a greater cumulative harvest over the course of the season.

Waterfowl hunter numbers in Virginia have been generally stable since the late 1990s, and Federal Duck Stamp sales have averaged 23,390 in Virginia (for 5-year period, 2006-10). 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 13,618 and 12,360 respectively. In 2011, only 99 visits occurred on the refuge for migratory bird hunting, possibly because the hunt areas are only accessible by boat.

Chincoteague Waterfowl Harvest (self-reported, 2008-2013)
2008/2009 - 212
2009/2010 - 65
2010/2011 - 53
2011/2012 - 67
2012/2013 - 69

Given the exceptionally low numbers of waterfowl harvested from the refuge in respect to the total Statewide harvest and waterfowl population, no cumulative impacts to local, regional, or statewide populations of ducks or geese are anticipated from hunting on the refuge.

Based on past observations of impacts on shorebirds by refuge staff, disturbance by refuge hunters to shorebirds is expected to be negligible since most shorebird species have completely passed through Virginia by peak hunting season in November through January. Some hunting occurs when these species may be migrating before and after this peak hunting time. In addition, hunters are restricted from prime shorebird use areas.

Impacts to Landbirds

Disturbance to landbirds has been well documented. Pedestrian travel can influence normal behavioral activities, including feeding, reproductive, and social behavior and the location of recreational activities impacts species in different ways. Miller et al. (1998) found that nesting success was lower near recreational trails, where human activity was common, than at greater distances from the trails. A number of species have shown greater reactions when pedestrian use occurred off trail (Miller et al. 1998). For songbirds, Gutzwiller et al. (1997) found that singing behavior of some species was altered by low levels of human intrusion.

Disturbance to these non-hunted migratory birds could have regional, local, and flyway effects. Free-roaming big game hunters may cause local, temporary, minor alterations to feeding and

resting behavior in landbirds. However, the limited number of hunters, and the availability of nearby undisturbed habitats, renders the direct, indirect, and cumulative impacts on these species negligible. Hunting will have little to no effect on nesting landbirds due to seasonal differences in these activities. The early part of nesting season of some raptors coincides with the end of the majority of hunting seasons, but hunting would have little impact on the critical periods of incubation and fledging.

Impacts on Secretive Marsh and Waterbirds

Resident waterbirds tend to be less sensitive to human disturbance than are migrants, and thus will be less impacted by disturbance from public use on the refuge. However, wading birds have been found to be extremely sensitive to disturbance in the northeastern U.S. and may be adversely impacted by disturbance from public use on the refuge (Burger and Gochfeld 1998). The impacts of intrusion through public use are generally negligible for this group of birds, but can vary by species and between years (Gutzwiller and Anderson 1999).

Disturbance to secretive marsh birds and waders from hunting would start in September and usually end in January, unless hunting is allowed during the snow goose conservation order into mid-April. This disturbance may have direct effects on migrating and wintering secretive marsh birds and waders. Due to the limited number of hunting days and the restricted hours, we expect the short-term, long-term and cumulative impacts to be negligible.

Impacts on Fisheries

Impacts to fisheries from visitors engaged in hunting are expected to be temporary and negligible. Anticipated increases in hunting will cause increased suspension of bottom sediments from boat motors. However, since hunting occurs during the fall and winter months, this sediment suspension should not adversely affect biological oxygen demand (BOD) for fisheries resources. Effects on inter-jurisdictional fishes are expected to be unlikely from hunting because the majority of the refuge will experience minimal, transitory use by hunters.

Impacts on Mammals

In general, the presence of humans will disturb most mammals, which typically results in indirect negligible short-term adverse impacts without long-term effects on individuals and populations. Adverse impacts on resident game populations from hunting would be negligible.

Negative impacts from hunting on non-hunted mammals, such as voles, moles, mice, shrews, and bats, are expected to be negligible. Except for some species of migratory bats, these species have very limited home ranges and hunting would not affect their populations regionally. Impacts of hunting to migratory bat species would be negligible. These species are in torpor or have completely passed through Virginia by peak hunting season in November through January. Vehicles are restricted to roads and harassment or taking of any wildlife other than legal game species is not permitted.

Impacts to Amphibians and Reptiles

The direct, indirect, and cumulative effects of hunting to amphibians and reptiles such as snakes, skinks, turtles, lizards, salamanders, frogs, and toads are expected to be negligible. Hibernation or torpor by cold-blooded reptiles and amphibians limits their activity during the hunting seasons for migratory game birds, when temperatures are low and hunters would rarely encounter them during most of the hunting season.

Impacts to Invertebrates

Impacts to invertebrates such as butterflies, moths, other insects, and spiders are expected to be negligible. Invertebrates are not active during the majority of the hunting seasons and would have few interactions with hunters during the hunting season.

Impacts on Public Use and Access

Refuge lands 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. Refuge hunting programs also make special accommodations for mobility-impaired hunters. Hunting provides opportunities to experience a wildlife-dependent recreational activity, 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 find high quality opportunities to engage in their favored pastime.

The refuge would also be promoting a wildlife-oriented recreational opportunity that is compatible with the purpose for which the refuge was established. The public would have an increased awareness of the refuge and the Refuge System and public demand for more areas to hunt and learn about wildlife would be met. The hunting program provides 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 minimize wildlife disturbance and/or avoid conflicts with other uses, enhances disabled hunting opportunities, further develops an appreciation for fish and wildlife, and expands public hunting opportunities.

Migratory game bird hunting on Wildcat Marsh, Morris, Assawoman, and Metompkin Islands is expected to cause no conflicts with other refuge public use programs. It is anticipated that hunting will be the only major use on these areas and will take place at a time when other public uses are declining. All hunting areas are remote, accessible only by boat, and located a considerable distance from the main public use areas. These factors alone should eliminate conflicts with other public use activities.

Other Past, Present, Proposed, and Reasonably Foreseeable Actions and Anticipated Impacts

Cumulative effects on the environment result from incremental effects of a proposed action when these are added to other past, present, and reasonably foreseeable future actions. While cumulative effects may result from individually minor actions, they may, viewed as a whole, become substantial over time. The hunt plan has been designed to be sustainable through time given relatively stable conditions.

Natural marsh habitats on some migration and wintering areas have been impacted by the destructive feeding strategies of overabundant greater snow geese (Giroux and Bedard 1987, Giroux et al. 1998, Young 1985). In addition, goose damage to agricultural crops has become a problem (Bedard and Lapointe 1991, Filion et al. 1998, Giroux et al. 1998, Delaware Division of Fish and Wildlife 2000). Snow geese use the refuge wetland habitats extensively, and are not subjected to any hunting disturbance or mortality on the refuge. Impacts to refuge wetlands and impacts to wetland-dependent wildlife increase over time if the population is not adequately controlled at the flyway level, through the coordinated efforts of individual agencies.

Similarly, resident Canada geese have been shown to cause changes in wetland community structure (Laskoswki et al. 2002). Resident geese can reduce the amount of plant biomass that would be available to migrant birds at the end of the growing season. Heavy grazing by geese can result in reduced yields and in some instances a total loss of the grain crop (Allen et al. 1985, Flegler et al. 1987). Thus, uncontrolled Canada goose populations on the refuge can affect migratory bird populations utilizing the refuge as well as contribute to agricultural losses on lands surrounding the refuge.

The geographic boundary for considering cumulative effects in the Chincoteague CCP/EIS includes the Southern Delmarva Peninsula (in particular Accomack County) and all coastal NWRs in the area of the Chesapeake Bay and Delmarva Peninsula. Although our analysis is done resource by resource, we have chosen a large geographic boundary to include all possible cumulative effects, including possible additive effects of strategies within this CCP on others' actions. The other NWRs are included because past and future management actions and resources at these refuges could be similar to the actions proposed in this CCP. These include the Eastern Shore of Virginia/Fisherman Island NWRs, Eastern Neck NWR, Back Bay NWR, Prime Hook NWR, Bombay Hook NWR, and the Chesapeake Marshlands NWR Complex (NWRC), which includes Blackwater, Martin, and Susquehanna NWRs. The total land area of these refuges, including Chincoteague and Wallops Island NWRs, is approximately 87,500 acres. For these other refuges, this cumulative effects analysis includes only the adverse effects of each refuge CCP's selected alternative. Bombay Hook is in the process of developing its CCP/EA and therefore, no information impact information is available to include in this analysis.

Other refuges in the mid-Atlantic area often experience different and fewer impacts to vegetation, habitat, and wildlife, than Chincoteague NWR does, probably because Chincoteague NWR is one of the most intensely visited refuges in the nation. The other refuge EAs (developed as part of their CCP process) are concerned primarily with the impacts to wildlife from hunting and human

interaction and with specific actions that require vegetation clearing. Minor adverse effects to vegetation and wildlife as a result of human contact and trampling from various public activities are reported at the refuge under all alternatives, as well as at Eastern Shore of Virginia/Fisherman Island NWRs and the Chesapeake Marshlands NWRC. Although this is a cumulative effect, in all cases it is temporary and partially mitigated for by education and management activities. Both Chincoteague NWR and Prime Hook NWR experience impacts from overgrazing of certain overpopulated wildlife species (e.g. light geese); this will be mitigated through hunting. As shown in Table 4-7 in the Final CCP/EIS, actions on all of the refuges, at the Seashore, and on the Wallops Flight Facility (WFF) have identified vegetation clearing projects. At WFF most of the effect of a very large vegetation clearing project will be mitigated by replanting with lower-growing vegetation. The estimated total effect of these actions (excluding the mitigated areas at WFF), and the clearing associated with the beach parking and access for the preferred alternative at Chincoteague NWR, is approximately 27 acres. This is less than 0.01 percent of the total area of these sites and most of the impacts would be mitigated. Selective cutting of forest vegetation through silviculture practices at both Chincoteague NWR and Prime Hook NWR would have temporary adverse impacts, but beneficial long term impacts to vegetation and wildlife habitat. The spraying of herbicides and pest control chemicals could result in cumulative effects to invertebrates at Chincoteague NWR and Prime Hook NWR.

Minor adverse effects to shorebirds as a result of human contact from hunting, fishing, hiking, and walking are reported at the refuge under all alternatives, as well as at Eastern Shore of Virginia/Fisherman Island NWRs and the Chesapeake Marshlands NWRC. At Eastern Shore of Virginia NWR, additional human contact would increase over the existing condition by adding canoeing and kayaking opportunities and from the loss of beneficial foods when an impoundment complex is allowed to revert to scrub-shrub and natural emergent marshes. At Chesapeake Marshlands NWRC, an adverse effect would result from permitting hunting on an additional 200 acres. At Chincoteague NWR, these would be offset in the preferred alternative by relocation of the beach and beach parking area and allowing natural processes to occur, which is beneficial to shorebirds, and also by allowing for natural succession of vegetation to occur in the 300-acre NWF. While a cumulative adverse effect would result from actions at these three refuges, the net effect, when considering the beneficial impact of management actions at the three refuges, is negligible.

None of the protected wildlife or plant species that would be adversely affected at the refuge would be adversely affected by actions that have been taken or are proposed at other NWRs in the cumulative effects analysis study area. Some past actions at the WFF have had an adverse effect on piping plover habitat; however, all of these actions have been subject to Section 7 consultation and the impacts have been mitigated. Therefore, there are no adverse cumulative impacts to threatened and endangered species.

Anticipated Impacts if Individual Actions are Allowed to Accumulate

The cumulative impact of hunting on migratory and resident wildlife populations at Chincoteague NWR is negligible. The proportion of the refuge's harvest of migratory game birds is negligible when compared to local, regional, and flyway populations and harvest.

Because of the regulatory process for harvest management of migratory birds in place within the USFWS, the setting of hunting seasons largely outside the breeding seasons of resident and migratory wildlife, the ability of individual refuge hunt programs to adapt refuge-specific hunting regulations to changing local conditions, and the wide geographic separation of individual refuges, we anticipate no direct or indirect cumulative effects on resident wildlife, migratory birds, and non-hunted wildlife of hunting on Chincoteague NWR.

PUBLIC REVIEW AND COMMENT:

This compatibility determination is part of the Chincoteague National Wildlife Refuge CCP/EIS. Public notification and review included a notice of availability published in the Federal Register, a 90-day comment period for the draft CCP/EIS during which public meetings were held, a 30-day review period for the final CCP/EIS, and the record of decision published in the Federal Register. We also inform the public through local media releases and our website.

DETERMINATION (CHECK ONE BELOW):

_____Use is not compatible

__X___Use is compatible, with the following stipulations

STIPULATIONS NECESSARY TO ENSURE COMPATIBILITY:

The refuge will manage the hunt program in accordance with Federal and State regulations and review it annually to ensure wildlife and habitat goals are achieved and that the program is providing a safe, high quality hunting experience for participants.

To ensure compatibility with refuge purposes and the mission of the Refuge System, hunting can occur on the refuge if the refuge-specific regulations highlighted in this document and following stipulations are met:

- This use must be conducted in accordance with State and Federal regulations, and special refuge regulations published in the refuge Hunting Regulations brochures.
- This use is subject to modification if on-site monitoring by refuge personnel or other authorized personnel results in unanticipated negative impacts to natural communities, wildlife species, or their habitats.
- Law Enforcement Officer(s) will promote compliance with refuge regulations, monitor public use patterns and public safety, and document visitor interactions. Law

Enforcement personnel will monitor all areas and enforce all applicable State and Federal Regulations.

- Several management strategies identified by Klein (1989) are used to control the negative effects of recreation on wildlife; these included: permits, user fees, zoning (Cullen 1985), travel ease, public education (Purdy et al. 1987), limiting number of visitors present, and periodic closing. Chincoteague NWR employs these measures to lessen the disturbance and impact to wildlife.
- The refuge manager may, upon annual review of the hunting program and in coordination with VDGIF, impose further restrictions on hunting. Further restrictions may include but are not limited to recommending that the refuge be closed to hunting or further liberalize hunting regulations. Hunting restrictions may be imposed if hunting conflicts with other, higher priority refuge programs, endangers refuge resources, or public safety. Specific hunt details will be outlined in the annual hunt program.

JUSTIFICATION:

Hunting is a priority wildlife-dependent use for the Refuge System through which the public can develop an appreciation for fish and wildlife (Executive Order 12996, March 25, 1996 and the Refuge System Administration Act of 1966, as amended by the Refuge System Improvement Act of 1997 (Public Law 105-57)). USFWS 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 seasons and bag limits are established by the Commonwealth of Virginia and generally adopted by the refuge. These restrictions ensure the continued well-being of overall populations of game animals. Hunting does result in the taking of many individuals within the overall population, but restrictions are designed to safeguard an adequate breeding population from year to year. Specific refuge regulations address equity and quality of opportunity for hunters, and help safeguard refuge habitat. Disturbance to other fish and wildlife does occur, but this disturbance is generally short-term and adequate habitat occurs in adjacent areas. Loss of plants from foot traffic is minor, or temporary, since hunting occurs mainly after the growing season.

Conflicts between hunters are localized and are addressed through law enforcement, public education, and continuous review and updating to State and refuge hunting regulations. Conflicts between other various user groups are minor given the season of the year for hunting, the location of most hunting away from public use facilities, and seasonal area closures.

Stipulations above will ensure proper control of the means of use and provide management flexibility should detrimental impacts develop. Allowing this use also furthers the mission of the Refuge System by providing renewable resources for the benefit of the American public while conserving fish, wildlife, and plant resources on the refuge.

This activity will not materially interfere with or detract from the mission of the Refuge System or purposes for which the refuge was established.

Signature: Refuge Manager: _____

(Signature and Date)

Concurrence: Regional Chief: _____

(Signature and Date)

Mandatory 15-year re-evaluation date: _____

(Date)

LITERATURE CITED:

Behrend, D.F., Mattfeld, G.F., Tierson, W.C., Wiley JE III. 1970. Deer density control for comprehensive forest management. J For 68:695–700

Belanger, L. and J. Bedard. 1989. Responses of staging greater snow geese to human disturbance. J. Wildl. Manage. 53(3):713-719.

Burger, J., L. Niles, and K.E. Clark. 1996. Importance of beach, mudflat and marsh habitats to migrant shorebirds on Delaware Bay. Biol. Conserv. 79:283-292.

Burger, J., and M. Gochfeld. 1998. Effects of ecotourists on bird behaviour at Loxahatchee National Wildlife Refuge, Florida. Environ. Conserv. 25: 13-21.

Cullen, R. 1985. Rationing recreational Use of public land. J. Environ. Manage. 21: 213 - 224.

Davis, M., J. Berkson, D. Steffen, and M. Tilton. 2007. Evaluation of Accuracy and Precision of Downing Population Reconstruction. Journal of Wildlife Management 71(7): 2297–2303.

Gutzwiller, K.J., E.A. Kroese, S.H. Anderson, and C.A. Wilkins. 1997. Does human intrusion alter the seasonal timing of avian song during breeding periods? Auk 114: 55-65

Gutzwiller, K.J., and S.H. Anderson. 1999. Spatial extent of human-intrusion effects on subalpine bird distributions. Condor 101:378-389.

Hunter, M.L., Jr. 1990. Wildlife, forests, and forestry: principles of managing forests for biological diversity. Prentice-Hall, Inc. Englewood Cliffs, NJ. 370pp.

Keller, V.E. 1991. The effects of disturbance from roads on the distribution of feeding sites of geese (*Anser brachyrhynchus, A. anser*), wintering in north-east Scotland. Ardea 79:229-232.

Klein, M.L. 1989. Effects of high levels of human visitation on foraging waterbirds at J.N. "Ding" Darling NWR, Sanibel, FL. Final report to USFWS. 103 pp.

Korschgen, C.E. and Dahlgren, R.B. 1992. Human Disturbance of Waterfowl: Causes, Effects and Managements: In Management Hand Book, Fish and Wildlife Leaflet 1-7.

Laskowski, H., T. Leger, J. Gallegos, and J. James. 1993. Behavior response of greater yellowlegs, snowy egrets, and mallards to human disturbance at Back Bay National Wildlife Refuge, Virginia. USFWS, Final report RMS 51510-01-92. Cambridge, MD. 31 pp.

Liddle, M.J. and H.R.A. Scorgie. 1980. The effect of recreation on freshwater plants and animals: a review. Biol. Conserv. 17:183-206.

McNeil, R., P. Drapeau, and J.D. Goss-Custard. 1992. The occurrence and adaptive significance of nocturnal habits in waterfowl. Biol. Rev. 67:381-419.

Miller, S.G., R.L. Knight, and C.K. Miller. 1998. Influence of recreational trails on breeding bird communities. Ecological Applications 8:162-169.

Morton, J.M. 1987. Habitat use and energetics of American black ducks wintering at Chincoteague, Virginia. M.S. Thesis. VPI&SU, Blacksburg, VA. 147 pp.

Morton, J.M., R.L Kirkpatrick, and M.R. Vaughn. Wetland use of black ducks wintering at Chincoteague, VA. 1986. Paper presented at the Symposium on Waterfowl and Wetland Management in the Coastal Zone of the Atlantic Flyway, Wilmington, DE, Sept 16-19, 1986. 27 pp.

Nudds, T.D., 1980. Forage `preference': theoretical considerations of diet selection by deer. Journal of Wildlife Management 44, 735-740.

Paulus, S.L. 1984. Activity budgets of nonbreeding gadwalls in Louisiana. J. Wildl.Manage. 48(2):371-380.

Pfister, C., Harrington, B.A., and M. Lavine. 1992. The impact of human disturbance on shorebirds at a migration staging area. Biol. Cons. 60:1-12.

Purdy, K.G., G.R. Goff, D.J. Decker, G.A. Pomerantz, and N.A. Connelly. 1987.A guide to managing human activity on National Wildlife Refuges. Human Dimensions Research Unit, Cornell Univ., Ithaca, NY. 34 pp.

Sexton, N.R., Gillette, S.C., Koontz, L., Stewart, S.C., Loomis, J., and Wundrock, K.D., 2005 Visitor and community survey results for Kilauea Point National Wildlife Refuge and Lighthouse: Completion report: U.S. Geological Survey, Biological Resources Discipline, Open-File Report 2005-1420, 221p.

Strole, T.A., and R.C. Anderson. 1992. White-Tailed deer browsing: Species preferences and implications for central Illinois Forests. Natural Areas Journal 12: 139-44.

Tilghman, N.G. 1989. Impacts of white-tailed deer on forest regeneration in northwestern Pennsylvania. Journal of Wildlife Management 53:524-532.

U.S. Department of the Interior, Fish Wildlife Service. 1992. Hunt Management Plan.Chincoteague National Wildlife Refuge, Chincoteague, VA. 19 pp.

U.S. Department of the Interior, Fish and Wildlife Service. 1992. Final Environmental Impact Statement for the Chincoteague National Wildlife Refuge Master Plan. Chincoteague National Wildlife Refuge. Chincoteague, VA. 259 pp.

U.S. Department of the Interior, Fish and Wildlife Service. 1993. Master Plan. Chincoteague National Wildlife Refuge. Chincoteague, VA. 125 pp

USFWS. 1992. Final Environmental Impact Statement for the Chincoteague National Wildlife Refuge Master Plan. U.S. Fish and Wildlife Service. Chincoteague, VA. 259 pp.

_____ 2011. Habitat Management Plan for Chincoteague & Wallops Island National Wildlife Refuges. Chincoteague National Wildlife Refuge, Chincoteague, VA. Unpubl. DRAFT

Waller D.M., Alverson, W.S. 1997. - e white-tailed deer: a keystone herbivore. Wildl Soc Bull 25:217-226.

Warren, R.J. 1991. Ecological justification for controlling deer populations in eastern national parks. Trans. North Am. Wildl. and Nat. Resour. Conf. 56:56-66.

COMPATIBILITY DETERMINATION

USE: Big Game Hunting

REFUGE NAME: Chincoteague National Wildlife Refuge

DATE ESTABLISHED: May 13, 1943

ESTABLISHING AND ACQUISITION AUTHORITY(IES):

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).

- "... 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.

DESCRIPTION OF USE:

(a) What is the use? Is the use a priority public use?
The use is the public hunting of big game (white-tailed deer and sika elk). Hunting was identified as one of six priority public uses by Executive Order 12996 (March 25, 1996) and by the Refuge System Administration Act of 1966, as amended by the Refuge System Improvement Act of 1997 (Public Law 105-57).

(b) Where the use would be conducted?
The use would be conducted in designated areas of the refuge on the Virginia portion of Assateague Island. Assateague Island is a barrier beach island that extends over 30 miles along the Atlantic coast. Additionally, big game hunting is allowed on the northern portion of Chincoteague Island on a unit of the refuge known as Wildcat Marsh.

(c) When would the use be conducted?
Hunting would take place within the season dates established by the Virginia Department of Game and Inland Fisheries (VDGIF) and the U. S. Fish and Wildlife Service (USFWS); however, the hunting of sika elk may occur outside of the Commonwealth's deer season as a depopulation hunt. Deer hunting is normally between mid-November through the first week of January. Specific regulations for each hunt will be published by the refuge in advance of the hunt seasons.

(d) How would the use be conducted?
Hunting would take place within the regulatory framework established by VDGIF and USFWS; however, the hunting of sika elk may occur outside of the Commonwealth's deer season as a depopulation hunt.

The refuge manager may, upon annual review of the hunting program and in coordination with VDGIF, impose further restrictions on hunting. Hunting at the refuge is at least as restrictive as the Commonwealth of Virginia, and in some cases, more restrictive. The refuge coordinates with the VDGIF annually to maintain regulations and programs that are consistent with the State's management programs. Hunting restrictions may be imposed if hunting conflicts with other higher priority refuge programs, endangers refuge resources, or public safety. Specific hunt details will be outlined in the annual hunt program.

U.S. Fish and Wildlife Service
Hunting Opportunities
Chincoteague and Wallops Island National Wildlife Refuges
Accomack County, Virginia and Worcester County, Maryland
Worcester County
Greenbackville
Maryland
Virginia
679
13
Chincoteague Bay
Wildcat Marsh
Assateague Island
Morris Island
Oak Hall
Wattsville
175
Chincoteague
Assateague Island National Seashore
Watts Bay
Atlantic
Accomack County
Toms Cove
Bogues Bay
579
Atlantic Ocean
Wallops Island NWR
Assawoman Island
Metompkin Island
Location Map
MARYLAND
VIRGINIA
Atlantic Ocean
Hunting Areas
Firearms Seasonal
Archery and Firearms
Migratory Game Bird Hunting Only
Migratory Game Bird and Firearms Seasonal
Refuge Features
Refuge Lands
Assateague Island National Seashore
National Park Service Land
Other Features
Major Road/Highway
State Boundary
N
W
E
S
0 0.5 1 2 3
Miles

Big Game Hunt - Specific Regulations:

Permits - Applications for the big game hunt are processed by Kinsail Corporation. Hunters can apply and pay on-line.

Orientations - All hunters must attend a firearms orientation session prior to their assigned hunt period to obtain their permit. Sessions will be held prior to each scheduled hunt period. Hunters must be on time. Once the orientation begins, individuals will not be allowed in or allowed to hunt, under any circumstances. Scouting will be permitted following the orientation session. Hunters may only scout their area on the day prior to their scheduled 2-day hunt period.

General Regulations

- Hunters must adhere to regulations published in the refuge hunt brochure, all Accomack County and VDGIF hunting regulations, and those specific regulations that apply to big game hunting.
- VDGIF requirements on the use of firearms, muzzleloaders and bows apply.
- A sign-in/out box is located at the kiosk in parking area one. Each hunter must sign in immediately before entering and sign out after exiting the hunt zone.
- Reporting all harvested animals must comply with VDGIF requirements via tele-check and also be indicated on refuge check in/out sheet located at the kiosk.
- Hunters must park in designated parking areas.
- Non-hunters or persons not in possession of a valid refuge permit are not permitted to hunt on the refuge.
- All hunters must make a reasonable effort to recover wounded animals.
- Discharging any weapon within 50 feet of the centerline of any road or on/from/into a safety zone is prohibited.
- The boundaries of the hunt zone are recognized in the field by prominent signs. Each hunter is responsible for knowing the boundaries of the hunt zone.
- Federal government worksites may be staffed during the hunt. The zone around these sites is posted closed to hunting. Hunters may enter this zone strictly for the purpose of accessing the hunting area and must have their weapons unloaded.
- Hunters may pursue downed or crippled deer into the safety area (closed to hunting around the worksites). Contact the refuge headquarters for assistance if needed to dispatch wounded animal.
- Those hunters scouting must be in possession of their hunt permit.
- Any hunters who require assistance with retrieving or dressing harvested animals may apply for up to two non-hunting permits. This permit will allow an assistant to be present only during the retrieval and dressing of harvested animals. Non-hunting assistant permits must be requested.

(e) Why is this use being proposed?

Hunting is one of the priority public uses of the Refuge System. 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 national wildlife refuge. USFWS will continue the tradition of wildlife-related recreation on the refuge by allowing hunting in compliance with State regulations.

Primary objectives of the refuge hunts are to (1) maintain big game populations at a level compatible with refuge habitats, (2) reduce the exotic big game population, (3) reduce competition between exotic sika elk (*Cervus nippon*), and native wildlife, including white-tailed deer (*Odocoileus virginianus*), waterfowl and other wetland species, (4) provide the general public with quality big game hunts, and, (5) minimize direct conflicts between big game populations and humans, particularly when human safety is an issue. These objectives were reviewed in the Chincoteague National Wildlife Refuge (NWR) Environment Assessment Big Game and Migratory Game Bird Hunt Proposal of 2007 to ensure the hunt program was in conformance with the laws and policy of USFWS.

AVAILABILITY OF RESOURCES:

The Refuge Recreation Act requires that funds are available for the development, operation, and maintenance of the permitted forms of recreation. The permit fee ($20 for deer), and a processing application fee ($5/hunter) are the minimal amounts needed to offset the cost of facilitating the preseason drawings and managing the lottery hunts.

Administrative changes in the hunting program were implemented to ease the administrative burden on staff resources. Kinsail Corporation, a private firm working through a Memorandum of Understanding with the refuge, conducts the hunting applications, lottery selection, and permits. Cost savings resulted from phasing out the use of permanent hunting structures and eliminating the need to have staff conduct daily lottery drawings for permits. Regulations for the fee program allow the refuge to retain 80 percent of the total fees collected, Kinsail retains the $5 application fee charge to each hunter. The resources necessary to provide and administer this use, at current use levels, are available within current and anticipated refuge budgets and no increase in use is proposed above historic levels.

There would be some costs associated with these programs in the form of road maintenance, and law enforcement. These costs should be minimal relative to total refuge operations and maintenance costs and would not diminish resources dedicated to other refuge management programs.

ANTICIPATED IMPACTS OF THE USE:

General Impacts of Public Use

Direct impacts are those impacts immediately attributable to an action. Indirect impacts are those impacts that are farther in time and in space. Effects that are minor when considered alone, but collectively may be important are known as cumulative effects. Incremental increases in activities by people engaged in the variety of allowed uses on the refuge could cumulatively result in detrimental consequences to wildlife and/or habitats. Refuge staff will monitor these activities to ensure wildlife resources are not impacted in a detrimental manner. Since the hunting areas comprise portions of the refuge with the least amount of waterfowl use and hunting times are restricted, disturbance and other impacts are not expected to be significant.

In this compatibility determination, some of the anticipated impacts are not considered major or significant, and are often described as either negligible or minor. The magnitude of such changes is defined as follows:

- Negligible -- Management actions would result in impacts that would not be detectable or if detected, would have effects that would be considered slight, localized, and short-term.
- Minor -- Management actions would result in a detectable change, but the change would be slight and have only a local effect on the community, the resource, or ecological processes. The change would be discountable, insignificant, and of little consequence and short-term in nature.

In 2014, big game hunting saw 1,437 visits, and the refuges harvested a total of 173 white-tailed deer over the past 5 years, with 37 in 2012. Thus, our determination considers these factors in our overall analysis.

Hunting provides additional wildlife-dependent recreational opportunities and can foster a better appreciation and more complete understanding of the wildlife and habitats associated with Delmarva ecosystems. This can translate into more widespread and stronger support for wildlife conservation, the refuge, the Refuge System, and the USFWS. The following is a discussion of refuge-specific impacts.

Impacts on Socioeconomic Environment

Accomack County is one of the poorest counties in Virginia. The 2010 population estimate for Accomack County is 33,164 persons (U.S. Census Bureau.) Chincoteague NWR is one of the most heavily visited refuges in the Refuge System. Visitors come to Chincoteague for a variety of reasons. Many come in the summer months to access the beach. The beaches of Assateague Island offer a unique experience in the mid-Atlantic area as they exist primarily in an undeveloped setting unlike other beaches like Virginia Beach or Ocean City that are heavily developed. This natural setting draws many families seeking out a more traditional beach going experience.

Spending associated with recreational use of the refuge can generate a substantial amount of economic activity in both local and regional economies. Refuge visitors spend money on a wide variety of goods and services. Trip-related expenditures may include expenses for food, lodging, and transportation. Anglers, hunters, boaters, and wildlife watchers also buy equipment and

supplies for their particular activity. Because this spending directly affects towns and communities where these purchases are made, recreational visitation can have an impact on local economies, especially in small towns and rural areas. These direct expenditures are only part of the total picture, however. Businesses and industries that supply the local retailers where the purchases are made also benefit from recreation spending. For example, a family may decide to purchase a set of fishing rods for an upcoming vacation. Part of the total purchase price will go to the local retailer, say a sporting goods store. The sporting goods store in turn pays a wholesaler who in turn pays the manufacturer of the rods. The manufacturer then spends a portion of this income to cover manufacturing expenses. In this fashion, each dollar of local retail expenditures can affect a variety of businesses at the local, regional and national level. Consequently, consumer spending associated with refuge recreation can have an impact on economic activity, employment, household earnings and local, State, and Federal tax revenue.

Total visits to the refuge exceeded 1.36 million in 2010. Refuge recreation-related expenditures, and associated economic output, jobs, job income, and total (county, State and Federal) tax revenue are as follows: total retail related expenditures are estimated at $113.8 million; economic output at $150.3 million; jobs at 1,794, job income at $48.6 million and total tax revenue of $10.6 million. (2012, Chincoteague National Wildlife Refuge -Economic Analysis - In Support of Comprehensive Conservation Plan,)

The refuge's contribution to the economy of the area through offering hunting opportunities for migratory game birds and big game is negligible in context of overall visitation and expenditures. Offering these hunting opportunities may enable hunters to contribute to the local community through local purchases of gas, food, lodging, and supplies.

Impacts on Cultural Resources

The body of Federal historic preservation laws has grown dramatically since the enactment of the Antiquities Act of 1906. Several themes recur in these laws, their promulgating regulations, and more recent Executive Orders. They include:

- Each agency is to systematically inventory the historic properties on their holdings and to scientifically assess each property's eligibility for the National Register of Historic Places.
- Federal agencies are to consider the impacts to cultural resources during the agencies management activities and seek to avoid or mitigate adverse impacts.
- Protection of cultural resources from looting and vandalism are to be accomplished through a mix of informed management, law enforcement efforts, and public education.
- The increasing role of consultation with groups, such as Native American tribes, in addressing how a project or management activity may impact specific archaeological sites and landscapes deemed important to those groups.

The USFWS is legally mandated to inventory, assess, and protect cultural resources located on those lands that the agency owns, manages, or controls. USFWS cultural resource policy is delineated in 614 FW 1-5 and 126 FW 1-3.

In the USFWS Northeast Region, the cultural resource review and compliance process is initiated by contacting the Regional Historic Preservation Officer/Regional Archaeologist. The officer or archeologist will determine whether the proposed undertaking has the potential to impact cultural resources, identify the "area of potential effect," determine the appropriate level of scientific investigation necessary to ensure legal compliance, and initiates consultation with the pertinent State Historic Preservation Office and federally recognized Tribes.

With a relatively small number of hunters dispersed across the refuge during the hunting season, impacts would be negligible on the refuge's cultural resources based on our observations of past hunting impacts.

Impacts on Air Quality

Hunting is expected to have negligible adverse short-term, long-term or cumulative impacts on local or regional air quality. Localized increases in emissions from hunter's vehicles or boat motors would be negligible compared to current off-refuge contributions to pollutant levels and likely increases in air emissions in the Accomack County air shed from land development over the next 15 years. Any adverse air quality effects from refuge activities would be more than offset by the benefits of maintaining the refuge in natural vegetation. The hunting program would not violate Environmental Protection Agency (EPA) standards and would comply with the Clean Air Act.

Impacts on Soils

The soils of Chincoteague NWR consist primarily of sand and silt loams. The soils are a mixture of Chincoteague silt loam (0-1 percent slope), Assateague fine sand (2-35 percent slope), Camocca fine sand (0-2 percent slope), beach sand (0-5 percent slope), Fisherman-Camocca complex (0-6 percent slope), and Udorthents and Udipsamments soils (0-30 percent slope). The soils are predominantly made of loam, silt, and sand. Assateague fine sand areas are rarely flooded. However, the rest of the areas are frequently to moderately prone to flooding. Hiking or walking can alter habitats by trampling vegetation, compacting soils, and increasing the potential of erosion. Using these baseline impacts, the refuge's hunt program has the potential to cause some soil compaction since off-trail foot travel occurs; however, hunting is expected to have negligible adverse short-term, long-term or cumulative impacts on soils. With a limited number of hunters dispersed across the refuge during the hunting season, impacts would be negligible based on our observations of past hunting impacts. Vehicles would continue to be confined to existing refuge roads and parking lots to minimize impacts outside of that developed footprint, with the exception of hunters assigned to Toms Cove Hook.

Impacts on Hydrology and Water Quality

No natural freshwater streams or lakes exist on Chincoteague NWR. Rainfall and tidal over wash are the only sources of surface water on Assateague Island. The moist soil units or impoundments are slightly brackish to highly saline because of tidal over wash, salt spray, and the accumulation

of salt residue as water evaporates. The same environmental influences make the groundwater lenses beneath the islands brackish. Evaporation and transpiration account for major surface water depletion during the summer months. The drinking water supply for Chincoteague Island and the refuge comes via pipeline from three deep wells and a shallow well field near the National Aeronautics and Space Administration (NASA) base on the mainland. Large bodies of water bordering the Refuge are the Atlantic Ocean, Chincoteague Bay, and Assateague Channel. Hunting is expected to have negligible adverse short-term, long-term or cumulative impacts on hydrology or water quality based upon staff observations of past hunting impacts. The hunting program would not violate standards for contributing pollutants to water sources and would comply with the Clean Water Act.

USFWS does not expect emissions from vehicles to substantially affect the water quality of the region. Lead slugs and buckshot are permitted for deer hunting. Public outreach and education on littering and proper waste disposal will lessen potential negative water quality impacts.

Impacts on Vegetation

Repeated visitation to any particular locale at the refuge would continue to cause minor site-specific damage to vegetation. Accidental introduction of invasive plants, pathogens, or exotic invertebrates attached to boats, or on shoes or clothing, is another source of direct impact on vegetation. In places where unmarked paths are created by hunters and anglers, little used pathways will retain their dominant vegetation species, but on medium-use pathways some plant species will be replaced and heavily used paths will often contain invasive species (Liddle and Scorgie 1980).

Using the information previously presented as a baseline and considering staff observations of past impacts, hunting is expected to have negligible adverse short-term, long-term, or cumulative impacts on vegetation. Disturbance to vegetation is expected to increase due to an expected increase in deer hunters in new free roam hunting areas during all hunting seasons. The possibility for new trails to be developed from repeated hunter entry may occur. However, anticipated dispersal of hunters across hunting areas, the inherent nature of hunters to only travel as far as needed to find a hunting location, and knowing that most vegetative species will have already undergone senescence or become dormant, the impacts to vegetation are expected to be negligible. The refuge has 10,241 huntable acres, and issued 298 big game permits during the 2013/2014 season, for a density of one hunter per 34.3 acres. On-going education about the peril of non-native invasive plant species introduction will continue through refuge outreach.

Deer overabundance can affect native vegetation and natural ecosystems and has been well-studied (Tilghman 1989, Nudds 1980, Hunter 1990). White-tailed deer selectively forage on vegetation (Strole and Anderson 1992), and thus can have substantial impacts on certain herbaceous and woody species and on overall plant community structure (Waller and Alverson 1997). Overbrowsing by deer can decrease tree reproduction, understory vegetation cover, plant density, and plant diversity (Warren 1991). High densities of deer have also been recognized as

vectors for spreading invasive species like Japanese stiltgrass. Thus, control of the white-tailed deer population on the refuge will have a moderate beneficial impact on the vegetation communities.

Impacts on Federal and State Endangered Species

The endangered Delmarva Peninsula fox squirrel (*Scurius cinerus cinerus*) and the threatened seabeach amaranth (*Amaranthus pumilus*) are the only federally listed species potentially utilizing refuge hunt areas during the Virginia hunting seasons. Although the Delmarva Peninsula fox squirrel has been proposed for delisting from the endangered species list since the draft CCP/EIS was published, it has not been finalized yet. Piping plover, red knot, and loggerhead sea turtles are not found on the refuge during hunting seasons. While the bald eagle is no longer a federally listed species, the refuge uses the national bald eagle management guidelines for bald eagle management to implement time-of-year restrictions for nesting eagles. The guidelines do not permit any activity within 330 feet of an active nest during the breeding season (USFWS 2011).

A Section 7 Evaluation has been conducted as part of this review and it was determined that proposed activities will not likely affect the Delmarva fox squirrel or seabeach amaranth. The hunting of any squirrel species is prohibited on the refuge to further minimize impacts to this endangered species. As stated earlier, the refuge has 10,241 huntable acres, and issued 298 big game permits during the 2013/2014 season, for a density of one hunter per 34.3 acres. Seabeach amaranth is an annual plant (i.e., not persistent in winter) and would not likely be seen on the refuge during hunting season. Plants that have grown during the spring/summer period are usually enclosed with fencing when found.

Impacts on Waterfowl

Morton (1986) found that the increased presence of humans associated with the refuge big game hunting program can contribute to movements of ducks, particularly black ducks, off the refuge. These disturbances are at a time when these birds need the isolation of the refuge to feed and rest. Paulus (1984) and Belanger (1989) found that hunting activity (gun shots or hunter movements) caused waterfowl to move to less disturbed areas and avoided some areas until after the hunting season. Laskowski et al (1993) documented human disturbance to a representative species of waterfowl by the visiting public (on managed impoundments) on Back Bay NWR, Virginia. Disturbance elicited behavioral changes ranging from increase alertness to flying to other parts of the refuge. McNeil et al. (1992) found that many waterfowl species avoid human disturbance by feeding at night instead of the day.

Impacts to Landbirds

Disturbance to landbirds has been well documented. Pedestrian travel can influence normal behavioral activities, including feeding, reproductive, and social behavior and the location of recreational activities impacts species in different ways. Miller et al. (1998) found that nesting success was lower near recreational trails, where human activity was common, than at greater

distances from the trails. A number of species have shown greater reactions when pedestrian use occurred off trail (Miller et al. 1998). For songbirds, Gutzwiller et al. (1997) found that singing behavior of some species was altered by low levels of human intrusion.

Disturbance to these non-hunted migratory birds could have regional, local, and flyway effects. Free-roaming big game hunters may cause local, temporary, minor alterations to feeding and resting behavior in landbirds. However, the limited number of hunters, and the availability of nearby undisturbed habitats, renders the direct, indirect, and cumulative impacts on these species negligible. Hunting will have little to no effect on nesting landbirds due to seasonal differences in these activities. The early part of nesting season of some raptors coincides with the end of the majority of hunting seasons, but hunting would have little impact on the critical periods of incubation and fledging.

Impacts on Secretive Marsh and Waterbirds

Resident waterbirds tend to be less sensitive to human disturbance than are migrants, and thus will be less impacted by disturbance from public use on the refuge. However, wading birds have been found to be extremely sensitive to disturbance in the northeastern U.S. and may be adversely impacted by disturbance from public use on the refuge (Burger and Gochfeld 1998). The impacts of intrusion through public use are generally negligible for this group of birds, but can vary by species and between years (Gutzwiller and Anderson 1999).

Disturbance to secretive marsh birds and waders from hunting would start in September and usually end in January, unless hunting is allowed during the snow goose conservation order into mid-April. This disturbance may have direct effects on migrating and wintering secretive marsh birds and waders. Due to the limited number of hunting days and the restricted hours, we expect the short-term, long-term and cumulative impacts to be negligible.

Impacts on Fisheries

Impacts to fisheries from visitors engaged in hunting are expected to be temporary and negligible. Since hunting occurs during the fall and winter months, any sediment suspension should not adversely affect biological oxygen demand (BOD) for fisheries resources. Effects on inter-jurisdictional fishes are expected to be unlikely from hunting because the majority of the refuge will experience minimal, transitory use by hunters.

Impacts on Mammals

In general, the presence of humans will disturb most mammals, which typically results in indirect negligible short-term adverse impacts without long-term effects on individuals and populations. Adverse impacts on resident game populations from hunting would be negligible.

VDGIF, under the direction of a Governor-appointed Board of Directors, is specifically charged by the General Assembly with the management of the State's wildlife resources. The Virginia Deer Management Plan, first completed in 1999 and revised in 2006, guides management of deer

habitat, deer populations, damage caused by deer, and deer-related recreation in the Commonwealth. In 2012, 213,597 deer were reported killed by hunters in Virginia. This total included 96,712 antlered bucks, 18,061 button bucks, 98,781 does (46.3 percent), and 43 "unknown" deer. It is also 8 percent below the last 10-year average of 232,573. In Accomack County, an average of 3,056 deer per year are killed (see Table, 2008-2012 data).

Accomack County Deer Kills, 2008-2012

Year	Antlered Males	Male Fawns	Females	% Female	Unknown	Total
2008	1412	371	1924	51.9%	0	3707
2009	1225	249	1614	52.3%	0	3088
2010	1246	307	1740	52.8%	0	3293
2011	1007	263	1535	54.7%	2	2807
2012	923	212	1249	52.4%	0	2384

http://www.dgif.virginia.gov/wildlife/deer/harvest/index.asp

Population reconstruction computer models indicate that Virginia's Statewide deer population has been relatively stable over the past decade, fluctuating between 850,000 and 1,050,000 animals (mean = 945,000). http://www.dgif.virginia.gov/wildlife/deer/management-plan/virginia-deer-management-plan.pdf

Hunting resident game species, such as deer, on Chincoteague NWR and Wallops Island NWR will result in negligible impacts on their populations because of their restricted home ranges. The refuges also contribute negligibly to the state's total harvest for resident game species.

Chincoteague NWR white-tailed deer harvest
2008/2009 - 23
2009/2010 - 20
2010/2011 - 15
2011/2012 - 27
2012/2013 - 26

Wallops Island NWR white-tailed deer harvest
2008 - 13
2009 - 15
2010 - 15
2011 - 8
2012 - 11

The refuges harvested a total of 173 white-tailed deer over the past 5 years, with 37 in 2012. Given the exceptionally low numbers of animals harvested from the refuges in respect to the total

Statewide harvest and deer population, no cumulative impacts to local, regional, or Statewide populations of white-tailed deer are anticipated from hunting of the species on the refuges.

The refuge recognizes the need for an overall Assateague Island deer and elk population estimate. Staff continues to collaborate with Assateague Island National Seashore to develop a protocol for data collection resulting in a deer and elk population estimation. Using past harvest data, VDGIF Wildlife Biologist, Todd Engelmeyer, estimated the Assateague Island, Virginia, sika herd population size. Engelmeyer applied the Downing Population Reconstruction Model to 2007 and 2008 CNWR sika harvest data to produce a minimum population estimate. Downing population reconstruction "uses harvest-by-age data and backward addition of cohorts to estimate minimum population size over time" (Davis et al 2007). Results indicated a minimum population estimate of 644 sika (218 bucks, 426 does) in fall 2007 and 567 sika (181 bucks, 386 does) in fall 2008 (Todd Engelmeyer, VDGIF, pers. comm.). Note the Downing Population Estimate is based on harvest data, not survey data and the estimate only takes into account the Virginia portion of Assateague. The estimate does not consider the Maryland portion of Assateague Island nor hunter effort, skill, etc. Also, no prevention or control of epizootic hemorrhagic disease exists to date except by keeping populations below the carrying capacity of their habitats. Based on these considerations, it is anticipated that hunting would have short-term and long-term minor-to-moderate beneficial impacts on deer health and quality and habitat condition.

The continued aggressive management of the non-native sika population would have a beneficial impact on native white-tailed deer. As white-tailed deer compete with sika for habitat and food sources, the decreased sika population would reduce this competition. Deer impacts to ecosystems (e.g., forest regeneration, ground-dwelling birds) are a concern in certain areas with poor habitat and high deer populations. The VDGIF has implemented innovative programs such as the Deer Population Reduction Program (DPOP). The refuge manages sika population with DPOP. The 5-year (2008-2012) average of sika harvested from CNWR is 212, while white tailed deer averaged 22 annually.

Negative impacts from hunting on non-hunted mammals, such as voles, moles, mice, shrews, and bats, are expected to be negligible. Except for some species of migratory bats, these species have very limited home ranges and hunting would not affect their populations regionally. Impacts of hunting to migratory bat species would be negligible. These species are in torpor or have completely passed through Virginia by peak hunting season in November through January. Vehicles are restricted to roads and harassment or taking of any wildlife other than legal game species is not permitted.

Impacts to Amphibians and Reptiles

The direct, indirect, and cumulative effects of hunting to amphibians and reptiles such as snakes, skinks, turtles, lizards, salamanders, frogs, and toads are expected to be negligible. Hibernation or torpor by cold-blooded reptiles and amphibians limits their activity during the hunting seasons for

deer, and migratory game birds, when temperatures are low and hunters would rarely encounter them during most of the hunting season.

Impacts to Invertebrates

Impacts to invertebrates such as butterflies, moths, other insects, and spiders are expected to be negligible. Invertebrates are not active during the majority of the hunting seasons and would have few interactions with hunters during the hunting season.

Impacts on Public Use and Access

Refuge lands 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. Refuge hunting programs also make special accommodations for mobility-impaired hunters. Hunting provides opportunities to experience a wildlife-dependent recreational activity, 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 find high quality opportunities to engage in their favored pastime.

The refuge would also be promoting a wildlife-oriented recreational opportunity that is compatible with the purpose for which the refuge was established. The public would have an increased awareness of the refuge and the Refuge System and public demand for more areas to hunt and learn about wildlife would be met. The hunting program provides 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 minimize wildlife disturbance and/or avoid conflicts with other uses, enhances disabled hunting opportunities, further develops an appreciation for fish and wildlife, and expands public hunting opportunities.

As the majority of big game hunting will take place north of the major public use area and will occur after the high visitation summer season, little conflict with other refuge visitation is expected.

However, limited hunting will occur within the major public use area, requiring the closing of some trails to the general public. In order to minimize conflicts, selected hunting zones will be limited to half-day hunts. To accommodate hunters confined to wheelchairs, hunt zone(s) will be closed to the general public daily, throughout the hunt. Closures within the major public use area will be heavily signed and patrolled to alert non-hunters of the ongoing big game hunt. In addition, allowing firearms hunting only from Monday through Friday and not on the weekends will further reduce conflicts with other refuge visitors.

Other Past, Present, Proposed, and Reasonably Foreseeable Actions and Anticipated Impacts

Cumulative effects on the environment result from incremental effects of a proposed action when these are added to other past, present, and reasonably foreseeable future actions. While cumulative effects may result from individually minor actions, they may, viewed as a whole, become substantial over time. The hunt plan has been designed to be sustainable through time given relatively stable conditions.

The geographic boundary for considering cumulative effects in the Chincoteague CCP/EIS includes the Southern Delmarva Peninsula (in particular Accomack County) and all coastal NWRs in the area of the Chesapeake Bay and Delmarva Peninsula. Although our analysis is done resource by resource, we have chosen a large geographic boundary to include all possible cumulative effects, including possible additive effects of strategies within this CCP on others' actions. The other NWRs are included because past and future management actions and resources at these refuges could be similar to the actions proposed in this CCP. These include the Eastern Shore of Virginia/Fisherman Island NWRs, Eastern Neck NWR, Back Bay NWR, Prime Hook NWR, Bombay Hook NWR, and the Chesapeake Marshlands NWR Complex (NWRC), which includes Blackwater, Martin, and Susquehanna NWRs. The total land area of these refuges, including Chincoteague and Wallops Island NWRs, is approximately 87,500 acres. For these other refuges, this cumulative effects analysis includes only the adverse effects of each refuge CCP's selected alternative. Bombay Hook is in the process of developing its CCP/EA and therefore, no information impact information is available to include in this analysis.

Other refuges in the mid-Atlantic area often experience different and fewer impacts to vegetation, habitat, and wildlife, than Chincoteague NWR does, probably because Chincoteague NWR is one of the most intensely visited refuges in the nation. The other refuge EAs (developed as part of their CCP process) are concerned primarily with the impacts to wildlife from hunting and human interaction and with specific actions that require vegetation clearing. Minor adverse effects to vegetation and wildlife as a result of human contact and trampling from various public activities are reported at the refuge under all alternatives, as well as at Eastern Shore of Virginia/Fisherman Island NWRs and the Chesapeake Marshlands NWRC. Although this is a cumulative effect, in all cases it is temporary and partially mitigated for by education and management activities. Both Chincoteague NWR and Prime Hook NWR experience impacts from overgrazing of certain overpopulated wildlife species (e.g. light geese); this will be mitigated through hunting. As shown in Table 4-7 in the Final CCP/EIS, actions on all of the refuges, at the Seashore, and on the Wallops Flight Facility (WFF) have identified vegetation clearing projects. At WFF most of the effect of a very large vegetation clearing project will be mitigated by replanting with lower-growing vegetation. The estimated total effect of these actions (excluding the mitigated areas at WFF), and the clearing associated with the beach parking and access for the preferred alternative at Chincoteague NWR, is approximately 27 acres. This is less than 0.01 percent of the total area of these sites and most of the impacts would be mitigated. Selective cutting of forest vegetation through silviculture practices at both Chincoteague NWR and Prime Hook NWR would have temporary adverse impacts, but beneficial long term impacts to

vegetation and wildlife habitat. The spraying of herbicides and pest control chemicals could result in cumulative effects to invertebrates at Chincoteague NWR and Prime Hook NWR.

Minor adverse effects to shorebirds as a result of human contact from hunting, fishing, hiking, and walking are reported at the refuge under all alternatives, as well as at Eastern Shore of Virginia/Fisherman Island NWRs and the Chesapeake Marshlands NWRC. At Eastern Shore of Virginia NWR, additional human contact would increase over the existing condition by adding canoeing and kayaking opportunities and from the loss of beneficial foods when an impoundment complex is allowed to revert to scrub-shrub and natural emergent marshes. At Chesapeake Marshlands NWRC, an adverse effect would result from permitting hunting on an additional 200 acres. At Chincoteague NWR, these would be offset in the preferred alternative by relocation of the beach and beach parking area and allowing natural processes to occur, which is beneficial to shorebirds, and also by allowing for natural succession of vegetation to occur in the 300-acre NWF. While a cumulative adverse effect would result from actions at these three refuges, the net effect, when considering the beneficial impact of management actions at the three refuges, is negligible.

None of the protected wildlife or plant species that would be adversely affected at the refuge would be adversely affected by actions that have been taken or are proposed at other NWRs in the cumulative effects analysis study area. Some past actions at the WFF have had an adverse effect on piping plover habitat; however, all of these actions have been subject to Section 7 consultation and the impacts have been mitigated. Therefore, there are no adverse cumulative impacts to threatened and endangered species.

Anticipated Impacts if Individual Actions are Allowed to Accumulate

The cumulative impact of hunting on migratory and resident wildlife populations (white-tailed deer and sika) at Chincoteague NWR is negligible. The proportion of the refuge's harvest of deer is negligible when compared to local, regional, and state populations and harvest.

Because of the setting of hunting seasons largely outside the breeding seasons of resident and migratory wildlife, the ability of individual refuge hunt programs to adapt refuge-specific hunting regulations to changing local conditions, and the wide geographic separation of individual refuges, we anticipate no direct or indirect cumulative effects on resident wildlife, migratory birds, and non-hunted wildlife of hunting on Chincoteague NWR.

PUBLIC REVIEW AND COMMENT:

This compatibility determination is part of the Chincoteague NWR CCP/EIS. Public notification and review included a notice of availability published in the Federal Register, a 90-day comment period for the draft CCP/EIS during which public meetings were held, a 30-day review period for the final CCP/EIS, and the record of decision published in the Federal Register. We also inform the public through local media releases and our website.

DETERMINATION (CHECK ONE BELOW):

_____Use is not compatible

__X___Use is compatible, with the following stipulations

STIPULATIONS NECESSARY TO ENSURE COMPATIBILITY:

The refuge will manage the hunt program in accordance with Federal and State regulations and review it annually to ensure wildlife and habitat goals are achieved and that the program is providing a safe, high quality hunting experience for participants.

To ensure compatibility with refuge purposes and the mission of the Refuge System, hunting can occur on the refuge if the refuge-specific regulations highlighted in this document and following stipulations are met:

- This use must be conducted in accordance with State and Federal regulations, and special refuge regulations published in the refuge Hunting Regulations brochures.
- This use is subject to modification if on-site monitoring by refuge personnel or other authorized personnel results in unanticipated negative impacts to natural communities, wildlife species, or their habitats.
- Law Enforcement Officer(s) will promote compliance with refuge regulations, monitor public use patterns and public safety, and document visitor interactions. Law Enforcement personnel will monitor all areas and enforce all applicable State and Federal Regulations.
- Several management strategies identified by Klein (1989) can be used to control the negative effects of recreation on wildlife; these included: permits, user fees, zoning (Cullen 1985), travel ease, public education (Purdy et al. 1987), limiting number of visitors present, and periodic closing. Chincoteague NWR employs these measures to lessen the disturbance and impact to wildlife.
- Big game hunting, using firearms, will continue to be permitted on about 5,200 acres of the 13,682-acre refuge, or 38 percent of the total area; other areas will remain closed to this activity.
- Big game hunting will continue to be by permit only, with all successful hunters being required to register at the refuge game check station.
- The archery hunt will begin in early October in order to avoid the major migration period.
- The refuge manager may, upon annual review of the hunting program and in coordination with VDGIF, impose further restrictions on hunting. Further restrictions may include but are not limited to recommending that the refuge be closed to hunting or further liberalize hunting regulations. Hunting restrictions may be imposed if hunting conflicts with other refuge programs, endangers refuge resources, or public safety. Specific hunt details will be outlined in the annual hunt program.

JUSTIFICATION:

Hunting is a priority wildlife-dependent use for the Refuge System through which the public can develop an appreciation for fish and wildlife (Executive Order 12996, March 25, 1996 and the Refuge System Administration Act of 1966, as amended by the Refuge System Improvement Act of 1997 (Public Law 105-57)). USFWS 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 seasons and limits are established by the Commonwealth of Virginia and generally adopted by the refuge. These restrictions ensure the continued well-being of overall populations of game animals. Hunting does result in the taking of many individuals within the overall population, but restrictions are designed to safeguard an adequate population from year to year. Specific refuge regulations address equity and quality of opportunity for hunters, and help safeguard refuge habitat. Disturbance to other fish and wildlife does occur, but this disturbance is generally short-term and adequate habitat occurs in adjacent areas. Loss of plants from foot traffic is minor, or temporary, since hunting occurs mainly after the growing season.

Conflicts between hunters are localized and are addressed through law enforcement, public education, and continuous review and updating to State and refuge hunting regulations. Conflicts between other various user groups are minor given the season of the year for hunting, the location of most hunting away from public use facilities, and seasonal area closures.

Big game hunting is conducted to maintain populations at a level compatible with refuge habitat, reduce the exotic sika population to lessen competition with native white-tailed deer, and to provide the general public with quality hunting. Without a method to reduce the big game populations on Assateague Island, overpopulation would occur, followed by a reduction in the quality of the habitat, and a reduced herd size due to disease and starvation. A public hunt is the most feasible alternative at this time to accomplishing a reduction in the herd size.

Stipulations above will ensure proper control of the means of use and provide management flexibility should detrimental impacts develop. Allowing this use also furthers the mission of the Refuge System by providing renewable resources for the benefit of the American public while conserving fish, wildlife, and plant resources on the refuge.

This activity will not materially interfere with or detract from the mission of the Refuge System or purposes for which the refuge was established.

Signature: Refuge Manager: _____

(Signature and Date)

Concurrence: Regional Chief: _____

(Signature and Date)

Mandatory 15-year re-evaluation date: _____

(Date)

LITERATURE CITED:

Behrend, D.F., Mattfeld, G.F., Tierson, W.C., Wiley, J.E. III. 1970. Deer density control for comprehensive forest management. J For 68:695-700

Belanger, L. and J. Bedard. 1989. Responses of staging greater snow geese to human disturbance. J. Wildl. Manage. 53(3):713-719.

Burger, J., L. Niles, and K.E. Clark. 1996. Importance of beach, mudflat and marsh habitats to migrant shorebirds on Delaware Bay. Biol. Conserv. 79:283-292.

Burger, J., and M. Gochfeld. 1998. Effects of ecotourists on bird behaviour at Loxahatchee National Wildlife Refuge, Florida. Environ. Conserv. 25: 13-21.

Cullen, R. 1985. Rationing Recreational Use of Public Land. J. Environ. Manage. 21: 213-224.

Davis, M., J. Berkson, D. Steffen, and M. Tilton. 2007. Evaluation of Accuracy and Precision of Downing Population Reconstruction. Journal of Wildlife Management 71(7): 2297-2303.

Gutzwiller, K.J., E.A. Kroese, S.H. Anderson, and C.A. Wilkins. 1997. Does human intrusion alter the seasonal timing of avian song during breeding periods? Auk 114: 55-65

Gutzwiller, K.J., and S.H. Anderson. 1999. Spatial extent of human-intrusion effects on subalpine bird distributions. Condor 101:378-389.

Hunter, M.L., Jr. 1990. Wildlife, forests, and forestry: principles of managing forests for biological diversity. Prentice-Hall, Inc. Englewood Cliffs, NJ. 370pp.

Keller, V.E. 1991. The effects of disturbance from roads on the distribution of feeding sites of geese (*Anser brachyrhynchus, A. anser*), wintering in north-east Scotland. Ardea 79:229-232.

Klein, M.L. 1989. Effects of high levels of human visitation on foraging waterbirds at J.N. "Ding" Darling NWR, Sanibel, FL. Final report to USFWS. 103 pp.

Korschgen, C.E. and Dahlgren, R.B. 1992. Human Disturbance of Waterfowl: Causes, Effects and Managements: In Management Hand Book, Fish and Wildlife Leaflet 1-7.

Laskowski, H., T. Leger, J. Gallegos, and J. James. 1993. Behavior response of greater yellowlegs, snowy egrets, and mallards to human disturbance at Back Bay National Wildlife Refuge, VA. USFWS, Final report RMS 51510-01-92. Cambridge, MD. 31 pp.

Liddle, M.J. and H.R.A. Scorgie. 1980. The effect of recreation on freshwater plants and animals: a review. Biol. Conserv. 17:183-206.

McNeil, R., P. Drapeau, and J.D. Goss-Custard. 1992. The occurrence and adaptive significance of nocturnal habits in waterfowl. Biol. Rev. 67:381-419.

Miller, S.G., R.L. Knight, and C.K. Miller. 1998. Influence of recreational trails on breeding bird communities. Ecological Applications 8:162-169.

Morton, J.M. 1987. Habitat use and energetics of American black ducks wintering atChincoteague, VA. M.S. Thesis. VPI&SU, Blacksburg, VA. 147 pp.

Morton, J.M., R.L. Kirkpatrick, and M.R. Vaughn. Wetland use of black ducks wintering at Chincoteague, VA. 1986. Paper presented at the Symposium on Waterfowl and Wetland Management in the Coastal Zone of the Atlantic Flyway, Wilmington, DE, Sept 16-19, 1986. 27 pp.

Nudds, T.D., 1980. Forage `preference': theoretical considerations of diet selection by deer. Journal of Wildlife Management 44, 735-740.

Paulus, S.L. 1984. Activity budgets of nonbreeding gadwalls in Louisiana. J. Wildl. Manage. 48(2):371-380.

Pfister, C., Harrington, B.A., and M. Lavine. 1992. The impact of human disturbance on shorebirds at a migration staging area. Biol. Cons. 60:1-12.

Purdy, K.G., G.R. Goff, D.J. Decker, G.A. Pomerantz, and N.A. Connelly. 1987. A guide to managing human activity on National Wildlife Refuges. Human Dimensions Research Unit, Cornell Univ., Ithaca, NY. 34 pp.

Sexton, N.R., Gillette, S.C., Koontz, L., Stewart, S.C., Loomis, J., and Wundrock, K.D., 2005 Visitor and community survey results for Kilauea Point National Wildlife Refuge and Lighthouse: Completion report: U.S. Geological Survey, Biological Resources Discipline, Open-File Report 2005-1420, 221p.

Strole, T.A., and R.C. Anderson. 1992. White-tailed deer browsing: Species preferences and implications for central Illinois forests. Natural Areas Journal 12: 139-44.

Tilghman, N.G. 1989. Impacts of white-tailed deer on forest regeneration in northwestern PA. Journal of Wildlife Management 53 :524-532.

U.S. Department of the Interior, Fish and Wildlife Service. 1992. Hunt Management Plan. Chincoteague National Wildlife Refuge, Chincoteague, VA. 19 pp.

U.S. Department of the Interior, Fish and Wildlife Service. 1992. Final Environmental Impact Statement for the Chincoteague National Wildlife Refuge Master Plan. Chincoteague National Wildlife Refuge. Chincoteague, VA. 259 pp.

U.S. Department of the Interior, Fish and Wildlife Service. 1993. Master Plan. Chincoteague National Wildlife Refuge. Chincoteague, VA. 125 pp

USFWS. 1992. Final Environmental Impact Statement for the Chincoteague National Wildlife Refuge Master Plan. U.S. Fish and Wildlife Service. Chincoteague, VA. 259 pp.

Waller D.M., Alverson, W.S. 1997. White-tailed deer: a keystone herbivore. Wildl Soc Bull 25:217-226.

Warren, R.J. 1991. Ecological justification for controlling deer populations in eastern national parks. Trans. North Am. Wildl. and Nat. Resour. Conf. 56:56-66.

COMPATIBILITY DETERMINATION

USE: Commercial Filming, Still Photography, and Photography Workshops

REFUGE NAME: Chincoteague National Wildlife Refuge

DATE ESTABLISHED: May 13, 1943

ESTABLISHING AND ACQUISITION AUTHORITY(IES):

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).

- "... 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.

DESCRIPTION OF USE:

(a) What is the use? Is the use a priority public use?
The use is commercial filming, still photography, and photography workshops. "Commercial filming " means the film, electronic, magnetic, digital or other recording of a moving image by a person, business, or other entity for a market audience that involves the advertisement of a product or service, the creation of a product for sale, or the use of actors, models, sets, or props. For the purposes of this definition, creation of a product for sale includes a film, video, television broadcast, or documentary of historic events, wildlife, natural events, features, subjects, or participants in a sporting or recreation event created for the purpose of generating income, such as for a documentary, television or feature film, advertisement, or similar project.

"Still photography" conducted on lands managed by Department of the Interior (DOI) agencies requires a permit when it involves models or props that are not a part of the site's natural or cultural resources or administrative facilities, or when it takes place at a location where members of the public generally are not allowed, or where additional administrative costs are likely. The land use fee for still photography would apply only to still photography that requires a permit.

Conducting "photography workshops" for commercial purposes typically involves approximately 10 to 20 participants and an instructor. The emphasis is placed on wildlife and scenic photography.

"Commercial" filming, still photography, and photography workshops are not priority public uses. Hereafter, commercial filming, still photography, and photography workshops will be collectively referred to as commercial photography.

(b) Where would the use be conducted?
The use would be conducted within the refuge's boundary.

(c) When would the use be conducted?
The use may take place at anytime during the year. Seasonal closures may be in effect during different times of the year which would prevent the activity from taking place.

(d) How would the use be conducted?

The use would be conducted in specified areas of the refuge depending on season, number of requests, and possible impacts to the resource. Specific areas of the refuge would be identified for the activity on a case-by-case basis and participants would remain in the area designated. U.S. Fish and Wildlife Service (USFWS) wilderness policy generally prohibits commercial photography in wilderness areas unless we determine it is necessary to provide educational information about wilderness uses and values and does not degrade the wilderness character of the area. In cases where we allow such photography as a commercial service, we first evaluate it for appropriateness and compatibility, and we manage the use through an audiovisual productions permit. Although there exists no "congressionally designated wilderness lands" within the refuge, there are 1,300 acres of land that have been proposed as wilderness. Proposed wilderness areas are managed by the USFWS to maintain their wilderness qualities in the event Congress designates them as wilderness. Hiking, photography, hunting, fishing, and wildlife observation may be among the permitted uses. At Chincoteague National Wildlife Refuge (NWR) due to its vastness and difficulty for the general public to access the more remote sections of the refuge, limited commercial filming and photography access can directly support the interpretation and education of the resources managed on the refuge as well as promoting wilderness character. We do not expect limited commercial photography access to materially interfere with or detract from the mission of the Refuge System, nor diminish the purpose for which the refuge was established. It will not pose significant adverse effects on refuge resources, interfere with public use of the refuge, or cause an undue administrative burden.

Each request for this use will be considered, and if appropriate, will be issued a Special Use Permit (SUP) by the refuge manager. Each request must be presented in writing with details of who, what, where, when, why, and how the commercial operation will be conducted. Each request will be evaluated on its own merit. The refuge manager will use professional judgment and ensure that the request will have no considerable negative impacts to natural or cultural resources, or visitor services, and does not violate refuge regulations. Special needs will be considered on a case-by-case basis and are subject to the refuge manager's approval. Any approved SUP will outline the framework in which the use can be conducted and refuge staff will ensure compliance with the permit. The criteria that the refuge manager will use in approving or disapproving a commercial filming request are listed below under "Stipulations Necessary to Ensure Compatibility."

(e) Why is this use being proposed?

The production of commercial films, still photography, and conducting photography workshops are all popular enterprises on the refuge, due to the scenic natural habitats, abundant wildlife and prominent cultural features found in the area. Providing a mechanism to allow this use augments the refuge's ability to reach potentially new audiences. Involvement in these uses will allow the permittee and any participants an opportunity to learn more about the refuge and the USFWS, while encouraging them to share their experiences with the general public through a variety of media formats. Each proposed use has the potential to support and enhance the priority public uses of wildlife photography, environmental education, and interpretation.

AVAILABILITY OF RESOURCES:

Permitting this use is within the resources available to administer our Visitor Services Program. When additional staff costs are incurred to review each request, analyze affected habitats and wildlife, coordinate with the outside entity and process a SUP, the costs will be paid by permittee. Ensuring compliance with the terms of the Permit is within the regular duties of the refuge Law Enforcement Officer(s).

ANTICIPATED IMPACTS OF THE USE:

Visitor use activities currently occurring on the refuge have been analyzed for impacts to wildlife and habitat and are expected to have a short term negative impact on vegetation. Commercial photography could alter habitats by trampling vegetation, compacting soils, and increasing the potential of erosion. Repeated visitation to any particular locale at the refuge could cause damage to vegetation and therefore, wildlife habitat. Substantial, widespread habitat degradation is not expected due to the limited and regulated occurrence of this activity. For commercial photography, impacts would be minimal since permittees use refuge trails and roadsides created to traverse through habitat, and avoid additional vegetation impacts.

Commercial filming, still photography, and the conduct of photography workshops can result in positive impacts to the wildlife resource. While some level of disturbance is expected to impact wildlife resources, a positive effect of limited commercial photography activities will allow the permittee and any participants an opportunity to learn more about the refuge and the USFWS, while encouraging them to share their experiences with the general public through a variety of media formats. Each proposed use has the potential to support and enhance the priority public uses of wildlife photography, environmental education, and interpretation.

Those engaged in commercial photography are expected to use and stay on designated hiking trails or roads to access the interior of the refuge. To minimize disturbance to natural resources and ensure public safety, the refuge has implemented restrictions on public entry such as closed areas, seasonally restricted areas, and daily hour restrictions. Facilities most utilized by those engaged in commercial photography are roads, parking lots, trails, and observation platforms. Areas near active bald eagle nests will be restricted to all activities and access, in accordance with Federal, State, and refuge specific guidelines.

Commercial photography is expected to have negligible short-term, long-term or cumulative impacts on the economy of the town of Chincoteague, Accomack County, or of the region. We would not expect this activity to considerably alter the demographic of economic characteristics of the local community. All refuge actions will neither disproportionately affect any communities nor damage or undermine any businesses or community organizations. No adverse impacts are foreseen to be associated with changes in the community character or demographic composition.

Commercial photography, as with other uses, has the potential to impact cultural resources that are located within the refuge boundary. Without adequate oversight, participants may inadvertently damage or disturb known or undiscovered cultural artifacts or historic properties. All participants will be required to strictly adhere to special permit conditions developed to protect natural and cultural resources during commercial photography.

PUBLIC REVIEW AND COMMENT:

This compatibility determination is part of the Chincoteague National Wildlife Refuge (NWR) Comprehensive Conservation Plan and Environmental Impact Statement (CCP/EIS). Public notification and review include a notice of availability published in the Federal Register, a 30-day review period for the final CCP/EIS, and the record of decision published in the Federal Register. We also inform the public through local media releases and our website.

DETERMINATION (CHECK ONE BELOW):

_____Use is not compatible

__X__Use is compatible, with the following stipulations

STIPULATIONS NECESSARY TO ENSURE COMPATIBILITY:

Each request must comply with 43 CFR Part 5, Public Law 106-206 of May 2000, 8 RM 16 (Refuge Manual), and any revisions to these or other related federal policies.

To ensure compatibility with the Refuge System mission and refuge purposes, and to minimize or exclude adverse impacts as described above, the activity will be subject to the following stipulations:

- Commercial photography in support of conservation, refuge purposes, the Refuge System Mission, and/or for education and interpretive purposes will be considered.
- Permittee(s), designated representatives, and associates will comply with all refuge regulations and conditions of the SUP as provided by the refuge manager. The SUP will detail who, what, where, when, why, and how the commercial operation will be conducted.
- The refuge manager will consider requests that include special access only if they demonstrate a means to enhance education, appreciation, and/or understanding of the natural resources conservation and the Refuge System.
- Alterations to any vegetation are prohibited unless pre-approved by refuge manager.
- Permittee will be required to minimize potential impacts to refuge visitors and natural and/or cultural resources within the refuge.

- Permittee is responsible for acquiring and/or renewing any necessary Commonwealth of Virginia and Federal permits prior to beginning or continuing their project.
- The refuge manager or designee can suspend the project, modify conditions, and/or terminate the project that is already permitted and in progress should unacceptable, unforeseen, or unexpected impacts or issues arise or be noted.
- Proper credit should be given to the refuge and the USFWS for all commercial photography, including commercial recordings of images and sounds collected on the refuge.
- Permittee will clean up all sites of trash and litter and to restore the site(s) to pre-filming conditions to the satisfaction of the refuge manager.
- Permittee will provide the USFWS with at least one free copy of all commercial product(s) generated on the refuge. This product(s) will be available for use by the USFWS.

The refuge shall also collect any costs incurred as a result of commercial photography activities, including but not limited to administrative, personnel costs, damage to facilities and resources, etc. All costs recovered shall be in addition to any use fee. Public Law 106-206 states that fees for commercial photography must be based on several criteria, including:

- The number of days the commercial photography or still photography takes place on Federal land.
- The size of the film crew present on Federal land.
- The amount and type of equipment present on Federal land.

JUSTIFICATION:

Commercial photography has the potential to inspire and educate the public about the Refuge System, natural habitats, and wildlife. Wildlife photography is a priority wildlife-dependent use for the Refuge System through which the public can develop an appreciation for fish and wildlife (Executive Order 12996, March 25, 1996 and the Refuge System Administration Act of 1966, as amended by the Refuge System Improvement Act of 1997 (Public Law 105-57)). USFWS policy is to provide expanded opportunities for wildlife-dependent uses when compatible and consistent with sound fish and wildlife management, ensuring that they receive enhanced attention during planning and management.

Specific refuge regulations address equity and quality of opportunities for visitors and help safeguard refuge habitats. Impacts from this proposal, short-term and long-term, direct, indirect, and cumulative, are expected to be minor and are not expected to diminish the value of the refuge for its stated objectives.

Stipulations above will ensure proper control of the means of use and provide management flexibility should detrimental impacts develop. Allowing this use also furthers the mission of the Refuge System by providing renewable resources for the benefit of the American public while conserving fish, wildlife, and plant resources on the refuge.

Commercial photography is considered an economic use of a national wildlife refuge and is guided by the following policies:

16 U.S.C. 668dd, 50 CFR 27.71, Motion or Sound Pictures
The taking or filming of any motion or sound pictures on a national wildlife refuge for subsequent commercial use is prohibited except as may be authorized under the provisions of 43 CFR part 5.

16 U.S.C. 668dd, 50 CFR 27.97, Private Operations
Soliciting business or conducting a commercial enterprise on any national wildlife refuge is prohibited except as may be authorized by special permit.

16 U.S.C. 668dd, 50 CFR 27.86, Begging
Begging on any national wildlife refuge is prohibited. Soliciting of funds for the support or assistance of any cause or organization is also prohibited unless properly authorized.

16 U.S.C. 668dd, 50 CFR, Subpart A, 29.1 Allowing Economic Uses on National Wildlife Refuges
We may only authorize public or private economic use of the natural resources of any national wildlife refuge, in accordance with 16 U.S.C. 715s, where we determine that the use contributes to the achievement of the national wildlife refuge purposes or the Refuge System mission.

8 RM 16, Audio Visual Productions

5 RM 17, Commercial & Economic Uses on National Wildlife Refuges

43 CFR Part 5, Making Pictures, Television Productions or Sound Tracks on Certain Areas Under the Jurisdiction of the Department of the Interior

Public Law 106-206, Commercial Filming

This activity will not materially interfere with or detract from the mission of the Refuge System or purposes for which the refuge was established. In addition, this activity will contribute to one or more purposes of the refuge or Refuge System.

Signature: Refuge Manager: _____

(Signature and Date)

Concurrence: Regional Chief: _____

(Signature and Date)

Mandatory 10-year re-evaluation date: _____

(Date)

COMPATIBILITY DETERMINATION

USE: Grazing of Chincoteague Ponies

REFUGE NAME: Chincoteague National Wildlife Refuge

DATE ESTABLISHED: May 13, 1943

ESTABLISHING AND ACQUISITION AUTHORITY(IES):

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).

- "... 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.

DESCRIPTION OF USE:

(a) What is the use? Is the use a priority public use?
The use is grazing of Chincoteague ponies. The grazing program on the refuge allows up to 150 adult Chincoteague ponies, a registered breed and owned by the Chincoteague Volunteer Fire Company (CVFC), a 501c3 nonprofit organization, to graze within two separate compartments on the refuge. In 2013, an Interim Pony Management Plan was developed as part of the draft Comprehensive Conservation Plan and Environmental Impact Statement (CCP/EIS) to provide guidance and set short term management objectives for this use. This is not a priority public use.

(b) Where would the use be conducted?
The horses are allowed to graze on approximately 3,946 acres. The current grazing program includes two compartments: the southern compartment which contains 547 acres and the northern compartment which has 3,399 acres. The southern compartment consists primarily of salt marsh with a limited amount of shrub/scrub and upland pine forest. U.S. Fish and Wildlife Service (USFWS) allows the grazing of up to 50 adult Chincoteague ponies in this unit. This compartment is the primary public viewing area for the Chincoteague ponies. The northern compartment is a mix of salt marsh, brackish water areas, scrub/shrub, pine forest and maritime forest. USFWS allows the grazing of up to 100 adult Chincoteague ponies in this unit. However, if necessary during the winter months, ponies from the southern compartment may be moved to the north compartment for animal safety and welfare.

The compartments were established to keep the ponies off the beach and dune areas and some of the major moist soil management units, as well as separating them from the visiting public for safety reasons. The maximum number of ponies allowed has remained constant at 150 adult animals since the initial permit was issued in the 1940s. Any recruitment above that number is removed each summer.

(c) When would the use be conducted?
The grazing program is conducted year round.

(d) How would the use be conducted?

A Special Use Permit (SUP) for grazing is annually issued to the CVFC at the start of the new fiscal year. Prior to the signing of the new SUP, the refuge manager will meet with the Pony Committee Chair for the CVFC and discuss changes or updates to the proposed SUP. Once agreement has been reached as to the content of the SUP, the Pony Committee Chair will submit the proposed SUP to the CVFC Pony Committee and then the full CVFC membership. Once approved, the SUP will be signed by the refuge manager and the Pony Committee Chair and/or the President of the CVFC. Additional meetings with the CVFC Pony Committee are held to organize volunteer work details and/or round-up events.

As stated, the ponies are contained by either fencing or natural barriers, such as the Assateague Channel. The fire company is required to keep the ponies within the grazing units and to repair the fence as needed with the assistance of refuge personnel. The roundups are conducted by the CVFC members on horseback. Both the spring and fall roundups take 2 days to complete. The summer event(s) (round-up, penning, sunrise walk down the beach, swim, auction, and return) is a 1-week event. This week long event takes place in the last week of July in which the Wednesday and Thursday fall within the month of July. This provides consistency in long range planning efforts for the CVFC, the refuge, Town of Chincoteague, Chamber of Commerce, and tourism related agencies.

(e) Why is this use being proposed?

The grazing of the Chincoteague ponies, by the CVFC, has been an ongoing use since the 1920s, nearly 20 years prior to the refuge's establishment. The proposal being reviewed is a continuation of that use. However, a brief history is instrumental in understanding this use.

Domestic livestock grazing has long been a part of Assateague Island's history from the time the Eastern Shore was settled during the early 1600s. Early accounts of grazing horses and other livestock (sheep, goats, cattle, etc.) on barrier islands indicate this was a common and widespread practice all along the Atlantic Coast. Periodic roundups and so called "pennings" were often held to determine ownership and to count and sell excess or unwanted stock. In the mid 1920s the CVFC purchased horses/ponies from the estate of Joseph S. Pruitt, an oysterman from Greenbackville, Virginia. The first annual pony roundup and swim conducted by the CVFC was in 1925. Fire company members, later dubbed "Saltwater Cowboys," herded the ponies to the Assateague Channel and swam them to nearby Chincoteague Island for auction.

With the creation of the refuge in 1943, USFWS granted a permit to livestock owner, Wyle Maddox, to graze cattle and horses on designated portions of the island (Narrative Report (NR) 1943). In 1946, USFWS issued the CVFC a SUP for grazing no more than 150 head of horses (NR 1946). These animals (domestic animals and horses) were allowed free range of the entire refuge. Between 1946 and 1952, both permits were in effect; however, in 1953 the only grazing permit issued was to the CVFC. This permit was renewed annually and is currently in place, although the

conditions of the permit have changed considerably over the years. Since the late 1950s, a number of attempts have been made to fence the ponies out of the most sensitive wildlife areas. The latest attempt, which continues to the present, was begun in 1989, when the fences around the two compartments were redone in order to more adequately contain the ponies.

Foals of the year are sold at auction and are not included in count of adult horses. This activity includes three roundups each year with the annual pony penning and swim in July. The historical details of the grazing program are covered in the 1990 Pony Management Plan (as amended in 1995). Additionally, this program was evaluated in the 1992 Final EIS and the 1993 Chincoteague National Wildlife Refuge (NWR) Master Plan. This use was subsequently considered compatible in two compatibility determinations approved in 1994 and 2004.

In 1947, the Chincoteague ponies reaped national and international attention with Marguerite Henry's children's classic, *Misty of Chincoteague*. The later movie version in 1961 further heightened the popularity of the authentic island pony and its lineage. To children and adults, "Misty of Chincoteague" is an iconic symbol of the spirited ponies freely roaming on Assateague Island.

The Assateague Island recreational beach, the ponies, and the refuge are the town of Chincoteague's and Accomack County's major tourist attractions. Every year the refuge experiences between 1.2 and 1.5 million visits. This makes the refuge one of the top five most visited national wildlife refuges in America. Due to refuge related tourism, over $100 million dollars is spent in the regional economy for lodging, meals, gasoline, souvenirs, recreation, and other items.

In 2010, the town completed a visitor survey. Eighty percent of Chincoteague visitors selected Assateague Beach as their top destination. Viewing the wild ponies consistently ranked among the top three activities most important to visitors.

By allowing the uses described in this determination, the visiting public, who might come just to see these world famous ponies, will also be exposed to natural resource related subjects and therefore, will have a better understanding and appreciation for wildlife, the cultural history of the refuge, and the importance of the Refuge System. Therefore, the draw of the Chincoteague ponies will positively contribute to the achievement of Refuge System and refuge purposes.

AVAILABILITY OF RESOURCES:

The CVFC owns and manages the Chincoteague ponies and is responsible for the health and well-being of the ponies including, but not limited to: veterinarian services, supplemental watering and feeding, rounding-up horses that escape their pastures, opening gates/fences when large coastal

storm threaten, and oversight of the three round-ups and the pony swim. Additionally, CVFC jointly coordinates efforts with refuge staff to identify and conduct maintenance and replacement projects for gates and fence lines, clearing of down trees and limbs from fence lines, repair of corrals, and other pony related management and/or maintenance projects.

The refuge will provide the posts, barbed wire, and gates needed to maintain the approximate 13 miles of fence line that contains the Chincoteague ponies in the two pasture areas. This expenditure is undertaken by USFWS to limit its exposure for possible litigation. Federal Courts have held that the government should compensate private individuals "…for the value of the improvements that they had constructed on lands covered by their grazing permits…." (Rusk 2008). The word "their" in this sentence refers to government agencies. The estimated cost for materials to replace 1 mile of three strand barbed wire fence is $3,500. Annual costs to USFWS are estimated at $65,000.

Additionally, staff time is devoted to issuing the permit, assisting with fence repair and maintenance, crowd control during pony round-ups, and ensuring compliance with the special conditions. The refuge is very fortunate to attract individuals and groups from around the country that wish to conduct volunteer service at the refuge, and these volunteers are often employed to help with fence and gate maintenance projects. Within the annual refuge operations and maintenance budget, there is sufficient staffing and funding available to accomplish these tasks encompassed by this use.

ANTICIPATED IMPACTS OF THE USE:

Numerous studies have been conducted and articles written on the effect of grazing on marshes. Some of these studies have been specific to Assateague Island and even to the refuge. Depending on the study, one can find both positive and negative effects of grazing on marshes. Several studies have shown that grazing could have a stimulating effect on grass production (McNaughton, 1979; Hubbard, 1970; Chabreck, 1968; and Ranwell, 1961). McNaughton (1979) found that production of grasses increased up to an optimal level of grazing then declined when subjected to overgrazing. Bakker (1985) determined that grazing of a salt marsh lead to enhanced species diversity, due to the removal of litter. However, Wood (1980) found that the net primary productivity of the marsh on a barrier island in North Carolina was reduced by heavy grazing, but that exploitation of the salt marsh was not exceeding productivity. Rubenstein et al (1976), working in the same location as Wood, indicated that grazing had no significant effect on above ground biomass but did on the below ground biomass in marsh areas. Turner (1987), in studying grazing on a barrier island in Georgia, indicated that the abundance of the periwinkle snail was reduced due to grazing, and that grazing had a substantial impact on standing stocks of Spartina. Turner (1988), in another study on the same island, determined that the horse population should be maintained at a level to prevent excessive damage to the salt marsh. Zervanos (1978), working

on Assateague Island, found little evidence to demonstrate adverse effects from pony grazing on the Maryland end of the island. Keiper (1981) determined that grazing on the refuge may stimulate additional plant growth, although the vegetation may be shorter but denser; he discovered that more growth was exhibited in the grazed versus un-grazed sites.

Since the ponies are allowed to graze within migratory bird habitat, impacts are likely to occur. Pony grazing on the natural marshes and within moist soil management units can lessen the amount of food and cover available to migratory birds. The value, of areas of the marsh which may be heavily grazed, is less for migratory birds, such as rails and black ducks which utilize this habitat. Nests of ground-nesting birds, such as willets, quail, shorebirds, etc. are in danger of being trampled if nesting occurs within the grazing compartments. Based on the research cited in this determination, some habitat may actually be improved, while others are negatively impacted.

The National Park Service (NPS) (2009) published a *Finding of No Significant Impact - Environmental Assessment of Alternatives for Managing the Feral Horses of Assateague Island National Seashore*. In this document the NPS determined that "…Scientific studies have found that the horses can disrupt important native plant communities, such as salt marsh wetlands, by reducing plant vigor, changing species composition, and altering marsh structure and morphology. This, in turn, can reduce the ecological functionality of those communities and their value as habitat for native fauna, thereby limiting biodiversity. Horse grazing has been shown to also harm rare species, including the beach-dwelling threatened species *Amaranthus pumilus*, by dramatically reducing seed production and limiting the plant's reproductive potential. Natural processes essential to maintaining a healthy barrier island ecosystem have also been affected by a too-large horse population. Favored by horses, the intensive grazing of American beach grass (*Ammophlia brevigulata*) has been demonstrated to alter the processes of dune formation and stabilization. Collectively, the results of a broad array of research indicate that the recommended limit of 150 horses has failed to protect the other natural resources and values of Assateague Island. …" Additionally, as part of its research efforts, the NPS determined that a feral horse population maintained in the range of 80 to 100 would best sustain herd health.

Research now indicates that the mid-Atlantic coastline is experiencing a rate of sea level rise that is second only to that of the Louisiana and Texas wetlands/coastline along the Gulf of Mexico. Delissa Padilla Nieves, (2009), conducted a Sea Level Affecting Marsh Model (SLAMM) analysis for the lower Delmarva Peninsula. The results of that modeling revealed an overall loss of approximately 57 percent of the salt marsh by the year 2100 under a 1-meter sea level rise scenario. Most of the grazing area within the southern compartment (547 acres) consists primarily of salt marsh. In the northern compartment (3,399 acres) much of this unit is also salt marsh, but it does have a more upland shrub/scrub and pine forest component. Over the term of this Compatibility Determination (10 years) conversion of salt marsh habitat to mud flats or open water is expected to be less than significant.

Since the establishment of the refuge, the actual amount of grazing on the refuge has been reduced from two grazing permits to only one, with the number of animals being reduced by half in the early 1950s when the second permit was discontinued. Additionally, restrictions have also been added to reduce any possible impacts to the migratory bird habitat. Since the early 1950s, the number of ponies has been fairly constant at around 150 adult animals; therefore, their impacts can be considered to be fairly constant. However, continued grazing by Chincoteague ponies in the salt marshes of the two grazing compartments is expected to reduce and/or eliminate the accumulation of detritus (decaying vegetation). This buildup of decaying vegetation is thought to be vital if salt marsh root systems are to keep pace with rising sea levels. Reducing grazing pressure on the salt marsh is consistent with CVFC's goal of maintaining a viable healthy population of Chincoteague ponies on the refuge. Although not mandated, we believe maintaining the Chincoteague pony population at or below its current number of 135 animals, in lieu of 150, over the next 10 years is important in maintaining a balanced approach to pony grazing in the light of a changing climate.

PUBLIC REVIEW AND COMMENT:

This compatibility determination is part of the Chincoteague NWR CCP/EIS. Public notification and review included a notice of availability published in the Federal Register, a 90-day comment period for the draft CCP/EIS during which public meetings were held, a 30-day review period for the final CCP/EIS, and the record of decision published in the Federal Register. We also inform the public through local media releases and our website.

DETERMINATION (CHECK ONE BELOW):

_____Use is not compatible

__X___Use is compatible, with the following stipulations

STIPULATIONS NECESSARY TO ENSURE COMPATIBILITY:

The CVFC will be required to adhere to the special conditions contained in the SUP which allows the grazing and must be consistent with provisions of the Pony Management Plan in order for this activity to remain compatible. The special conditions include:

1. This permit authorizes the use of the Chincoteague NWR for the grazing of Chincoteague Ponies (ponies) only. Ponies are authorized only within the permitted pasture/habitat units (i.e. North and South Pony Management Areas, see attached map.) The herd numbers will not exceed

that allotted (150) for such grazing, unless permission is granted by the refuge manager for extenuating circumstances (i.e. weather, tidal flooding, etc.). Permittee is solely responsible for ensuring the ponies are in compliance with these conditions. Failure to comply may result in cancellation of grazing privileges, the imposition of administrative fees and/or legal charges.

a. Permittee has 1 week to return ponies to permitted compartments once notified by the refuge manager; an additional week may be granted based on adequate justification. Ponies that habitually get out of permitted compartments will be removed from the refuge until the fence is repaired or escape is blocked.
b. Ponies will be promptly returned to their assigned grazing units after the annual July round-up and auction.

2. The permittee is responsible for the maintenance of all assigned fences, including repair of damage caused by tidal flooding and other acts of nature. The USFWS will purchase all post and fencing materials necessary for scheduled maintenance and repairs of fence lines. The permittee, in concert with the refuge manager, will develop a fence replacement and repair schedule/plan that stipulates the replacement of fence lines for a period of 10 years. The permittee will work in concert with the refuge manager for the scheduling of joint fence maintenance activities.

3. The permittee will designate individuals authorized to assist in management activities for the Chincoteague pony herd and will supply a list to the refuge manager within 30 days after issuance of the SUP. The top four names will be authorized to take action in the event of an emergency, if the Pony Committee Chairman is not available. Additionally, the permittee will provide the refuge manager a list of volunteers and helpers assigned to Pony Committee activities (round-ups, feeding and watering, etc.).

4. The permittee will provide the name and phone number of a contact veterinarian in case of emergency. Chincoteague NWR will contact the permittee in case of an emergency, but should the permittee fail to respond within 12 hours, the refuge will initiate veterinarian services and the permittee will be responsible for all charges. Permittee will comply with all Commonwealth of Virginia and U.S. Department of Agriculture livestock health laws.

5. Pony penning activities are allowed for herd size management. Additional stipulations apply and are identified in the 2013 Interim Pony Management Plan and SUP.

6. The permittee is responsible for conduct of members of work parties while on the refuge. Consumption of alcoholic beverages is not allowed on the refuge.

7. The permittee after each round-up (spring, summer and fall) will provide the refuge manager a written report stating the number of ponies present on the refuge. The report at a minimum will

provide the number or adult females and males found in individual grazing units (north and south). Stock present in excess of the maximum allowable as of November 1 will be removed from the refuge within 30 days. Animals in excess of the maximum allowable after 30 days will subject the permittee to appropriate administrative and legal action.

8. The refuge manager reserves the right to amend or modify this permit if conditions and management considerations dictate. The Chairman of the Pony Committee will be notified prior to any anticipated changes in this permit.

JUSTIFICATION:

The Chincoteague ponies are important assets to the local communities, evoking a meaningful sense of place and generating both economic and environmental benefits. The Chincoteague ponies have long been a part of Assateague Island's history. In 1947, the Chincoteague ponies reaped national and international attention with Marguerite Henry's children's classic, *Misty of Chincoteague*. The later movie version in 1961 further heightened the popularity of the authentic island pony and its lineage. To children and adults, "Misty of Chincoteague" is an iconic symbol of the spirited ponies freely roaming on Assateague Island.

The Assateague Island recreational beach, the ponies, and the refuge are the town of Chincoteague's and Accomack County's major tourist attractions. Every year the refuge experiences between 1.2 and 1.5 million visits. This makes the refuge one of the top five most visited National Wildlife Refuges in America. Due to refuge related tourism, over $100 million dollars is spent in the regional economy for lodging, meals, gasoline, souvenirs, recreation, and other items.

In 2010, the town completed a visitor survey. Eighty percent of Chincoteague visitors selected Assateague Beach as their top destination. Viewing the wild ponies consistently ranked among the top three activities most important to visitors.

By allowing the uses described in this determination, the visiting public, who might come just to see these world famous ponies, will also be exposed to natural resource related subjects and therefore, will have a better understanding and appreciation for wildlife, the cultural history of the refuge, and the importance of the Refuge System. Therefore, the draw of the Chincoteague ponies will positively contribute to the achievement of Refuge System and refuge purposes.

Past studies by USFWS confirm that controlled livestock grazing can be beneficial to some vegetative communities by increasing vigor of perennial grasses, speeding recycling of nutrients, increasing production of vegetation, preventing the decline and death of plants due to lodging and

build-up of old plant material, and accomplishing the effect of burning without leaving soil severely exposed (Service 1987).

On a rotational basis, the refuge undertakes mowing, disking and at times prescribed burning of impoundments to set back succession and maintain a healthy vigorous plant community. Refuge staff propose introducing a specified number of ponies (to be determined) into the impoundments (Pools A, B North , C, D, and E) for a specified period of time. This will provide rotational disturbance to the plant communities without the use of fossil fuels.

This activity will not materially interfere with or detract from the mission of the Refuge System or purposes for which the refuge was established. In addition, this activity will contribute to one or more purposes of the refuge or Refuge System.

Signature: Refuge Manager: _____
(Signature and Date)

Concurrence: Regional Chief: _____
(Signature and Date)

Mandatory 10-year re-evaluation date: _____
(Date)

BIBLIOGRAPHY

Arcese, P. 1987. Age, intrusion pressure and defense against floaters by territorial male Song Sparrows. Anim. Behav. 35:773-784.

Cairns, D. 1980. Nesting density, habitat structure and human disturbance as factors in Black Guillemot reproduction. Wilson Bull. 92:352-361.

Carlson, A. and J. Morena. 1992. Cost of short flights in the Willow Tit measured with doubly-labeled water. Auk 109:389-393.

Cullen, R. 1985. Rationing recreational use of public land. J. Environ. Manage. 21:213-224.

Delissa Padilla Nieves, August 26, 2009, Application of the Sea Level Affecting Marshes Model (SLAMM 5.0.2) in the Lower Delmarva Peninsula for the Northampton and Accomack counties, VA Somerset and Worcester counties, MD. Conservation Biology Program, National Wildlife Refuge System

Ewald, P.W. and F.L. Carpenter. 1978. Territorial responses to energy manipulations in the Anna Hummingbird. Oecologia 31:277-292.

Gill, F.B. and L.L. Wolf. 1975. Eonomics of feeding territoriality in the Golden-winged Sunbird. Ecology 56:333-345.

Gutzwiller, K.J. and Anderson S.H. 1999. Spatial Extent of Human-Intrusion Effects on Subalpine Bird Distributions. The Condor. 101-378-389.

Gutzwiller, K.J. 1998. Vertical Distributions of Breeding Season Birds: Is Human Intrusion Influential? Wilson Bulletin. 110(4) 497-503.

Gutzwiller, K.J., Wiedenmann, R.T., Clements, K.L., and Anderson, S.H. 1994. Effects of human intrusion on son occurrence and singing consistence in subalpine birds. Auk. Vol. 111: 28-37.

National Park Service, Finding of No Significant Impact and Environmental Assessment of Alternatives for Managing the Feral Horses of Assateague Island National Seashore. February 2009.

Radesater, T., S. Jakobsson, N. Andbjer, A. Bylin, and K. Nystrom. 1987. Song rate and pair formation in the Willow Warbler, *Phylloscopus trochilus*. Anim. Behav. 35:1645-1651.

Riffell, S.K., Gutzwiller, K.J., and Anderson S.H. 1996. Ecological Applications 6(2) 492-505.

Rusk, James, Federal Claims Court Awards $4.2M to Ranchers' Estate for Taking of Water Rights. Real Estate, Land Use & Environmental Law Blog, June 20, 2008, posted by Sheppard Mullin.

COMPATIBILITY DETERMINATION

USE: Horseback Riding

REFUGE NAME: Chincoteague National Wildlife Refuge

DATE ESTABLISHED: May 13, 1943

ESTABLISHING AND ACQUISITION AUTHORITY(IES):

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).

- "... 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.

DESCRIPTION OF USE:

(a) What is the use? Is the use a priority public use?
The use is recreational horseback riding on Chincoteague NWR, on Assateague Island, Virginia. Horseback riding is not a priority public use; however, it does facilitate wildlife observation and photography.

(b) Where would the use be conducted?
Horseback riding will be conducted along the southernmost Atlantic ocean beachfront of Assateague Island. Access for horseback riding (in the oversand vehicle, or OSV, zone) is restricted by the following stipulations:
1) Overwash portion of the OSV zone closed March 15 through August 31 based on shorebird nesting behavior; close 200 meters north of nesting sites from 2 days prior to any nests hatching and through fledging.
2) Hook portion of OSV zone closed March 15 to August 31 or thereafter, until last shorebird fledges.
3) Upon complete establishment of the new recreational beach, from March 15 to September 15, the area south of the new assigned area is closed.
4) From September 16 to March 14, the zone will again start at the beach terminus of Beach Road at Toms Cove, then south along the Atlantic Ocean beachfront to "Fishing Point" on Toms Cove Hook, then returning by the same route.

The approximate linear distance of beachfront open to horseback or OSV use at this time of year is 4.5 miles one way, 9 miles round trip. Travel will generally be within the intertidal zone, unless horseback riders and vehicle drivers are re-directed by signage to avoid sea turtle nest sites; horseback riding and vehicles are prohibited from the dunes or vegetated areas.

(c) When would the use be conducted?

- If unfledged shorebirds remain in the OSV zone after September 15, the refuge manager will designate a closed area to protect these birds;
- The refuge manager may close the OSV zone at anytime for safety or security reasons.

Horseback riding will be permitted during normal refuge hours of operation which are:

- May through September: 5 a.m. to 10 p.m.;

- October: 6 a.m. to 8 p.m.;
- November through March: 6 a.m. to 6 p.m.;
- April: 6 a.m. to 8 p.m.

(d) How would the use be conducted?
In cooperation with the National Park Service (NPS) the refuge will develop maps and brochures that detail the specific routes of travel and any regulations that those engaged in horseback riding must adhere to. A check-in and check-out box will be located conveniently at the start of the trail so that horseback riders can sign-in and obtain current brochures, maps and any updates on closed areas or beachfront conditions.

The refuge, in conjunction with NPS, will be responsible for all routine maintenance activities and law enforcement within the area established for this use. Refuge staff will post nesting areas for the protection of endangered species (i.e. sea turtles) as well as informing riders of any special restricted areas.

(e) Why is this use being proposed?
Horseback riding has a long history on Assateague Island. Even before the establishment of the refuge in 1943, horseback riding was the preferred way of rounding-up livestock that was allowed to free range on the island. During World War II, the United States Coast Guard patrolled the Assateague Island shoreline by horseback looking for German U-boats or evidence of human activity on the beach. However, recreational horseback riding has always been a favorite pastime of local/county residents and has been permitted with varying degrees of restrictions since the establishment of the refuge.

Historically, horseback riding was allowed on the Beach Road, Spur Road to the OSV zone and, depending on the time of year, the area of Toms Cove Hook that was open to off road vehicle use and along a small section of Toms Cove beyond the Coast Guard Station. Since the writing of the last Compatibility Determination for horseback riding (2004), horseback riders have parked their trailers at or near the southern terminus of the current NPS assigned area and have accessed the horseback riding area/OSV zone from that location. In 2012, approximately 140 riders participated in this activity. This use has remained very low over the years, with the vast majority of this use taking place in the beachfront area of the OSV zone.

AVAILABILITY OF RESOURCES:

The resources necessary to provide and administer this use, at current levels, is available within current and anticipated refuge budgets. Staff time associated with administration of this use is minimal. Since all of this activity takes place in an area that is currently administered as the OSV zone, which has a much larger volume of traffic/use, administering this use will be a minor duty in the oversight of the OSV use.

ANTICIPATED IMPACTS OF THE USE:

Wildlife Impacts

Studies that have been conducted elsewhere show that horseback travel can cause disturbances to wildlife. Disturbances vary with the wildlife species involved and the type, level, frequency, duration and the time of year such activities occur. Whittaker and Knight (1998) note that wildlife response can include attraction, habituation and avoidance. The proposed use has the potential of intermittently interrupting the feeding habits of a variety of shorebirds, gulls, terns and wading birds on the refuge. Numerous studies have documented that migratory birds are disturbed by human activity on beaches. Erwin (1989) documented disturbance of common terns and skimmers and recommended that human activity be restricted a distance of 100 meters around nesting sites. Disturbance can cause shifts in habitat use, abandonment of habitat and increase energy demands on affected wildlife (Knight and Cole 1991). Flight in response to disturbance can lower nesting productivity and cause disease and death. Knight and Cole (1991) suggest recreational activities occurring simultaneously may have a combined negative impact on wildlife. Hammitt and Cole (1998) conclude that the frequent presence of humans in a wildland area can dramatically change the normal behavior of wildlife mostly through unintentional harassment. Horseback riders would tend to present some of the same potential impacts as pedestrians. However, since this use will not be allowed during the nesting season no impact to nesting shorebirds is expected.

Besides possible direct disturbance, horseback riding can lead to soil compaction, which could have detrimental effects on invertebrates using the area and therefore limit the amount of forage for shorebirds. However, since this activity occurs mostly in the intertidal zone, the addition of horses is not expected to cause any additional serious consequences to migratory birds, as the result of soil compaction. Due to the limited amount of this activity and the closures in place to restrict this use, overall disturbance is expected to be minimal. Anticipated impacts of horse use on wildlife include temporal disturbances to species using refuge habitats open to horseback riding. These disturbances are likely to be short term and infrequent based on current levels of use. Routes found compatible for horseback riding are located in the OSV zone on the refuge. Smaller more sensitive wildlife habitat such as riparian, wetland and grassland areas are closed for this use. Based on current observations by Refuge Law Enforcement Officers and other refuge staff existing levels of use are not anticipated to significantly increase wildlife habitat fragmentation or cause significant impacts through disturbance.

Impacts to plants

Under all development scenarios, approximately 96 percent of the horseback riding will take place along the Atlantic Ocean beachfront below the high tide zone. This area is devoid of vegetation. It is anticipated however, that allowing this use will have minimal impact to vegetation near parking area assigned for horse trailer parking. Current plant communities that occur in these areas are not rare or highly sensitive to disturbance based on available information. Through the development of brochures, maps, and established travel corridors we will minimize the impacts to vegetation along the entire horseback riding/OSV zone.

Invasive Species

Exposed soil and an abundance of sunlight along roads and trails provide ideal conditions for the establishment of invasive plant species. The known incidence of invasive plant species is relatively low on the refuge. Based on current levels of use it is anticipated that no significant increases in invasive plant species will occur as a result of this use. In addition, the saline environment of the area helps prevent the establishment of invasive plants from seeds found in the fecal excrement of horses.

Threatened and Endangered Species

Two Federal threatened species found on the refuge could be affected by this activity. Piping plovers (*Charadrius melodus*) which use the refuge can be impacted negatively by human activity. Pedestrians on beaches may crush eggs (Burger 1987, Hill 1988, Shaffer and Laporte 1992, Cape Cod National Seashore 1993, Collazo et al. 1994). Other studies have shown that if pedestrians cause incubating plovers to leave their nests, the eggs can overheat (Burgstrom 1991) or the eggs can cool to the point of embryo death (Welty 1982). Pedestrians have been found to displace unfledged chicks (Strauss 1990, Burger 1991, Hoopes et al. 1992, Loegering 1992, Goldin 1993). Horses have the potential to cause some of the same impacts but the seasonal closure of the horseback riding and OSV zone will prevent any disturbances to nesting piping plovers. It is anticipated that recreational horseback riding will not cause any direct or indirect impacts to nesting or migrating piping plovers or red knots due to the minimal nature of this use and the seasonal closures of nesting areas.

Seabeach amaranth (*Amaranthus pumilus*) is a small annual dune plant native to barrier island beaches of the Atlantic coast. It is currently listed as a Federal threatened species. Germination takes place over a relatively long period of time, generally from April to July. Flowering begins as soon as plants have reached sufficient size, sometimes as early as June, but more typically commencing in July and continuing until the death of the plant in late fall. Seed production begins in July or August and reaches a peak in most years in September but continues until the death of the plant. It is a "pioneer species," growing on newly created dunes, over wash fans and other areas of bare sand. Intensive recreational use of beaches threatens amaranth populations in some instances. Pedestrian traffic, even during the growing season, generally occurs in areas where it has little effect on populations of seabeach amaranth. Any impacts by recreational horseback riders will be similar to those of OSV use since they will occur in the same area under the same rules and regulation of OSV use.

Unregulated, OSV use and by extension horseback riding on the beach during the growing season could have detrimental effects on the species if those uses are not routed around the plants (Weakley and Bucher 1991). The fleshy stems of this plant are brittle and easily broken. Therefore, even minor beach traffic (OSV and horseback riding) over the plants during the growing season is detrimental, causing mortality and reduced seed production (Weakley and Bucher 1991). Dormant season OSV use has shown little evidence of significant detrimental

effects, unless it results in massive physical erosion or degradation of the site. In some cases, winter OSV traffic may actually provide some benefits for the species by setting back succession of perennial grasses and shrubs with which seabeach amaranth cannot compete successfully (USFWS 1996). Extremely heavy use of an Amaranthus site, even in the winter, may have some negative impacts including pulverization of seeds. No negative impacts are anticipated to seabeach amaranth by horseback riding.

User Conflicts

Conflicts between trail users are commonly reported in the literature (Knight and Gutzwiller 1995, Ramthun 1995, Watson et. al 1994, Chavez et al. 1993). Conflicts range from concerns over personal safety to certain user groups feeling that they should be given priority over other groups based on a past history or other reasons. In the best professional opinion of the refuge law enforcement officers obtained from observation and direct contact, no significant user conflicts have been reported on the refuge.

PUBLIC REVIEW AND COMMENT:

This compatibility determination is part of the Chincoteague NWR Comprehensive Conservation Plan and Environmental Impact Statement (CCP/EIS). Public notification and review included a notice of availability published in the Federal Register, a 90-day comment period for the draft CCP/EIS during which public meetings were held, a 30-day review period for the final CCP/EIS, and the record of decision published in the Federal Register. We also inform the public through local media releases and our website.

DETERMINATION (CHECK ONE BELOW):

_____Use is not compatible

__X___Use is compatible, with the following stipulations

STIPULATIONS NECESSARY TO ENSURE COMPATIBILITY:

Klein (1989) identified several management strategies used to control the negative effects of recreation on wildlife; these included: user fees, travel ease, permits, zoning (Cullen, 1985), public education (Purdy 1987), limiting number of visitors present, and periodic closing. Chincoteague NWR employs measures such as:

a. Charging an entrance fee
b. Develop informational brochures and maps
c. Developing rules and regulations that govern horseback riding
d. Specify areas open or closed to horseback riding
e. Protecting and marking sea turtle nest and sea beach amaranth plants

f. Conducting routine law enforcement patrols

Horseback riding will be permitted from established parking area(s) and corridors and then along the beachfront/intertidal zone. This area will be subject to the same conditions and closures as the OSV zone as they apply:

g. Sand dunes and vegetated areas are considered closed, even within OSV zone.
h. Horseback riders must stay to the east of the black and white post
i. Horseback riding is permitted
   - May through September: 5 a.m. to 10 p.m.;
   - October: 6 a.m. to 8 p.m.;
   - November through March: 6 a.m. to 6 p.m.;
   - April: 6 a.m. to 8 p.m.
j. Litter or waste may not be burned, buried or discarded but must be removed and disposed of in designated receptacles located outside of OSV zone.
k. The OSV and horseback riding zone will be subject to partial or total closure to all OSV, horseback riding, boat, and pedestrian use during the piping plover nesting season.
l. Horseback riding is allowed east and south of the designated black and white OSV posts along the intertidal area and terminates at Fishing Point, the western tip of Toms Cove Hook.
m. This activity will be limited to times when this area is open to OSVs.
n. Horseback riding will mimic the opening and closing of the OSV zone.
   - September 16 to March 14, it will be permitted along the beachfront ending at the south tip of Assateague Island known as "Fishing Point."
   - After September 15, if unfledged shorebird chicks remain in the OSV zone the refuge manager will designate a closed area to protect those chicks.
o. Prior to opening of the OSV and horseback riding zone, locations of seabeach amaranth plants and sea turtle nests will be identified by refuge staff. All seabeach amaranth plants and sea turtle nests found by refuge staff will be protected with wire mesh fencing similar to predator exclosures used for piping plover nests. Fences provide additional protection from being crushed by either OSVs or horses.

JUSTIFICATION:

Although horseback riding is considered a nonwildlife-oriented form of recreation, it does facilitate wildlife observation and photography. Use is low and occurs in an area used by OSVs which results in very little additional disturbance.

This activity will not materially interfere with or detract from the mission of the Refuge System or purposes for which the refuge was established.

Signature: Refuge Manager: _____
(Signature and Date)

Concurrence: Regional Chief: _____
(Signature and Date)

Mandatory 10-year re-evaluation date: _____
(Date)

LITERATURE CITED

Berstrom, P.W. 1991. Incubation temperatures of Wilson's plovers and killdeer. Condor. 91: 634-641

Burger, J. 1987. New Jersey Endangered Beach-Nesting Bird Project: 1986 Research. Unpublished report. New Jersey Department of Environmental Protection, NJ. 37 pp.

Cape Cod National Seashore. 1993. Piping plover nest found trampled by pedestrian. News Release. Cape Cod National Seashore, South Wellfleet, MA. 2 pp.

Collazo, J.A., J.R. Walters, and J.F. Parnell. 1994. Factors Affecting Reproduction and Migration of Waterbirds on North Carolina Barrier Islands. 1993 Annual Progress Report. North Carolina State University, Raleigh, NC. 57 pp.

Erwin, M.R. 1989. Responses to Human Intruders by Birds Nesting in Colonies: Experimental Results and Management Guidelines. Colonial Waterbirds 12 (1) :104-108.

Goldin, M.R. 1993. Effects of human disturbance and off-road vehicles on piping plover reproductive success and behavior at Breezy Point, Gateway National Recreation Area, NY, M.S. Thesis. University of Mass., Amherst, MA. 128 pp.

Hammitt, William E. and Cole, David N. 1998. Wildland Recreation. John Wiley & Sons, NY. 361pp.

Hoopes, E.M., C.R. Griffin, and S.M. Melvin. 1992. Relationship between human recreation and Piping Plover foraging ecology and chick survival. Unpublished report. University of Mass., Amherst, MA. 77 pp.

Klein, M.L. 1993. Waterbird Behavioral Responses to Human Disturbances. Wildl. Soc. Bull. 21:31-39.

Klein, M.L. 1989. Effects of high levels of Human Visitation on Foraging Waterbirds at J.N. "Ding" Darling NWR, Sanibel, FL. Final Report to USFWS. 103pp.

Knight, R.L. and D.N. Cole. 1991. Effects of recreational activity on wildlife in wildlands. Transactions of the 56th North American Wildlife and Natural Resources Conference pp.238-247.

Kuss, Fred R. 1986. A review of major factors influencing plant responses to recreation impacts. Environmental Management. 10:638-650.

Leogering, J.P. 1992. Piping Plover breeding biology, foraging ecology and behavior on Assateague Island National Seashore, MD. M.S. Thesis. Virginia Polytechnic Institute and State University, Blacksburg, VA. 247 pp.

Purdy, K.G., G.R. Goff, D.J. Decker, G.A. Pomerantz, and N.A. Connelly. 1987. A Guide to Managing Human Activity on National Wildlife Refuges. Human Dimensions research unit, Cornell Univ., Ithaca, NY, 34pp.

U.S. Department of the Interior, Fish and Wildlife Service. 1992. Final Environmental Impact Statement for the Chincoteague National Wildlife Refuge Master Plan. Chincoteague National Wildlife Refuge. Chincoteague, VA. 259 pp.

U.S. Department of the Interior, Fish and Wildlife Service. 1993. Public Use Plan. Chincoteague National Wildlife Refuge. Chincoteague, VA. 98 pp.

U.S. Fish and Wildlife Service, 1996. Recovery Plan for Seabeach Amaranth (*Amaranthus pumilius Rafinesque*). Atlanta, GA. 59pp.

Weakley, A. and M. Bucher. 1991. Status survey of seabeach amaranth (*Amaranthus pumilus Rafinesque*) in North and South Carolina, second edition (after Hurricane Hugo). Report to North Carolina Plant Conservation Program, North Carolina Department of Agriculture, Raleigh, NC, and Endangered Species Field Office, U.S. Fish and Wildlife Service, Asheville, NC. 149 pp.

Whittaker, D. and Knight, R. 1998. Understanding wildlife responses to humans. Wildlife Society Bulletin, 26(3): 312-317.

COMPATIBILITY DETERMINATION

USE: Research and Studies Conducted by non-USFWS Staff

REFUGE NAME: Chincoteague National Wildlife Refuge

DATE ESTABLISHED: May 13, 1943

ESTABLISHING AND ACQUISITION AUTHORITY(IES):

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).

- "... 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.

DESCRIPTION OF USE:

(a) What is the use? Is the use a priority public use?
The use is research conducted by agencies, organizations, and other research entities other than U.S. Fish and Wildlife Service (USFWS) staff on the refuge. Research is the planned, organized, and systematic gathering of data to discover or verify facts.

This determination covers low or no-impact research projects; namely, those projects with methods that only have a minimal potential to adversely impact cultural resources, water, soils, or native wildlife and plants. This is not an all-inclusive list, but examples of the types of research that may be allowed include: mist-netting for banding or tagging birds, point count surveys, fish and amphibian tagging, electrofishing, radio-telemetry tracking, use of cameras and recorders, use of live or other passive traps, or non-destructive searches of nests, dens, or burrows.

Research activities allowed under this determination must not result in long-term, negative alterations to wildlife behavior (e.g. result in wildlife leaving previously occupied areas for long periods; modifying their habitat use; or, causing nest or young abandonment). No project may degrade wildlife habitat, including vegetation, soils, and water. Research associated activities that would generally not be allowed include, but are not limited to, those that would result in soil compaction or erosion, degrade water quality, remove or destroy vegetation, involve off-road vehicle use, collect and remove animals or whole native plants, cause public health or safety concerns, or result in conflicts with other compatible refuge uses.

Refuge support of research directly related to refuge goals and objectives may take the form of funding, in-kind services such as housing or use of other facilities, vehicles, boats, or equipment, direct staff assistance with the project in the form of data collection, provision of historical records, conducting of management treatments, or other assistance as appropriate.

While we will actively promote research projects that directly relate to knowledge and management of refuge resources, we also recognize that Chincoteague National Wildlife Refuge (NWR) lies in a unique geographic location and its secure nature offers significant opportunities to other federal agencies to fulfill their missions. Although these agencies' interests are not always closely aligned with the refuge's purposes or the Refuge System mission, the National Aeronautics and Space Administration (NASA), U.S. Geological Survey (USGS), United States Coast Guard (USCG), National Oceanic and Atmospheric Administration (NOAA), and the

Department of the Navy each have an interest in conducting nationally important research on the refuge. This research typically involves space exploration, geologic or atmospheric studies, or is important for national defense or homeland security operations. For these reasons, research proposals from these federal agencies will be considered by the refuge manager even if they do not contribute directly to refuge needs. Research proposals from these agencies are subject to all the same considerations and stipulations found in this determination, such as the condition that all research have low or no-impact to refuge resources and that there be no conflicts with other compatible refuge uses. Non-wildlife or habitat research proposals from agencies other than those mentioned above will be evaluated separately.

Research conducted by non-USFWS staff is not a priority public use of the National Wildlife Refuge System (Refuge System) under the National Wildlife Refuge System Administration Act of 1966 (16 U.S.C. 668dd-668ee) and the Refuge System Improvement Act of 1997 (Public Law 105-57).

(b) Where would the use be conducted?

Chincoteague NWR is located primarily in Accomack County, Virginia with approximately 418 acres in Worcester County, Maryland. Most of the 14,032-acre refuge is located on the southern end of Assateague Island (9,021 acres), a 37-mile long, mid-Atlantic, coastal, barrier island on the east side of the Delmarva Peninsula. In addition, the refuge operates three divisions that are located on islands which, including Assateague Island, extend over 30 miles along the Atlantic Coast. Assawoman Island Division contains 1,434 acres and encompasses the entire island; Metompkin Island Division consists of 174 acres on the north end of the island; and Cedar Island Division contains 1,412 acres in fee title and 600 acres in easements. Additional lands can be found on the north end of Chincoteague Island: Wildcat Marsh (546 acres) and Morris Island (427 acres), which is located between Chincoteague and Assateague Islands.

Research locations will vary depending on the individual research project that is proposed. A specific research project is usually limited to a particular location, habitat type, plant, or wildlife species. On occasion, research projects will encompass an assemblage of habitat types, plants, or wildlife. The research location will be limited to those areas of the refuge that are absolutely necessary to conduct the research project. The refuge may limit areas available to research as necessary to ensure the protection of Federal trust resources, or to reduce conflict with other compatible refuge uses. The methods and routes of access to study locations will be identified by refuge staff.

(c) When would the use be conducted?

The timing of the research may depend entirely on the individual research project that is being conducted. Scientific research will be allowed to occur on the refuge throughout the year. An individual research project could be short-term in design, requiring only one or two visits over the course of a few days, or be a multiple year study that may require regular visits to the study site. The timing of each individual research project will be limited to the minimum required to complete

the project. If a research project occurs during the refuge hunting season, special precautions will be required and enforced to ensure safety. The refuge manager would approve the timing (e.g., project length, seasonality, time of day) of the research prior to the start of the project to minimize impacts to wildlife and habitats, ensure safety, and reduce conflicts with other compatible refuge uses.

(d) How would the use be conducted?

The objectives, methods, and approach of each research project will be carefully scrutinized by the refuge manager before it will be allowed on the refuge. Only low or no-impact research activities, such as those listed under section (a) above, are covered under this determination.

Research projects must have a USFWS-approved study plan and protocol. A detailed research proposal that follows the refuge's study proposal guidelines (see attachment 1) is required from parties interested in conducting research on the refuge. Each research proposal request will be considered, and if determined appropriate and compatible, will be issued a special use permit (SUP) by the refuge manager that includes the stipulations in this determination. The refuge manager will use sound professional judgment and ensure that the request will not materially interfere with or detract from the fulfillment of the Refuge System mission or the purpose(s) of the refuge. Before initiating a research project that involves federally listed endangered or threatened species, an interagency Section 7 consultation should be completed.

If approved, multi-year research projects will be reviewed annually to ensure that they are meeting their intended design purposes, that reporting and communicating with refuge staff is occurring, and that projects continue to be consistent with the mission of the Refuge System and purposes for which the refuge was established.

If the refuge manager decides to deny, modify, or halt a specific research project, the refuge manager will explain the rationale and conclusions supporting their decision in writing. The denial or modification to an existing study will generally be based on evidence that the details of a particular research project may:

- Negatively impact water, soils, native fish, wildlife, and habitats or cultural, archaeological, or historical resources beyond the low or no-impact standard.
- Detract from fulfilling the refuge's purposes or conflict with refuge goals and objectives.
- Raise public health or safety concerns.
- Conflict with other compatible refuge uses.
- Not be manageable within the refuge's available staff or budget time.
- Deviate from the approved study proposal such that impacts to refuge resources are more severe or extensive than originally anticipated.

This determination makes clear that research should not materially interfere with or detract from the refuge's purposes or the Refuge System mission.

(e) Why is this use being proposed?

Scientific research, including inventory and monitoring projects, are an integral part of refuge management. Quality research provides critical information for establishing baseline information on refuge resources and evaluating management effects on wildlife and habitat. Research findings can inform, strengthen, and improve future refuge management decisions, as well as inform management decisions on other ownerships with Federal trust resources in the Delmarva Peninsula and possibly elsewhere in the Northeast Region. For example, past projects on the refuge have studied federally listed species, such as piping plover, red knot, Delmarva Peninsula fox squirrel, loggerhead sea turtle, and other species of conservation concern, such as American oystercatcher and saltmarsh sparrow. Research projects may also include evaluating habitat management treatments and the associated wildlife community response, as well as, measures of impacts from public uses on refuge lands.

The refuge manager would particularly encourage research supporting approved refuge goals and objectives that clearly improves land management decisions related to Federal trust resources, helps evaluate or demonstrate state-of-the art techniques, and/or helps address or adapt to changing climate and land use impacts. Research conducted by other federal agencies that is not refuge resource based may be allowed for instances of national significance to space exploration, geologic or atmospheric studies, or because it is important for national defense or homeland security operations.

AVAILABILITY OF RESOURCES:

The resources necessary to provide and administer this use are available within current and anticipated refuge budgets. The bulk of the cost for research is incurred in staff time to review research proposals, coordinate with researchers, and write SUPs. In some cases, a research project may only require 1 day of staff time to write a SUP. In other cases, a research project may take many weeks, as the refuge staff must coordinate with students and advisors and accompany researchers' onsite visits. These responsibilities are accounted for in budget and staffing plans. We estimate the annual costs associated with the administration of this use.

Review proposals, coordinate with researchers (Refuge Biologist):	$6,000
Review proposals, issue SUPs General coordination (Refuge Manager):	$4,000
Vehicle, equipment, housing maintenance (Maintenance Worker):	$3,000
Total Annual Cost of Program:	$13,000

We do not anticipate charging fees.

ANTICIPATED IMPACTS OF THE USE:

Disturbance to wildlife, vegetation, water, soils, or cultural resources could occur while researchers are accessing study sites on vehicles or by foot, or while they are engaged in their project. The presence of researchers could also indirectly disturb wildlife. Potential impacts include:

- Trampling, damage, and killing of vegetation from walking off-trail (Kuss 1986, Roovers et al. 2004, Hammitt and Cole 1998).
- Soil compaction, soil erosion, and changes in hydrology from hiking on and off trail (Kuss 1986, Roovers et al. 2004).
- Disturbance to wildlife that causes shifts in habitat use, abandonment of habitat, increased energy demands on affected wildlife, changes in nesting and reproductive success, and singing behavior (Knight and Cole 1991, Miller et al. 1998, Shulz and Stock 1993, Gill et al. 1996, Arrese 1987, Gill et al. 2001).

Overall, we expect that these impacts would be negligible because of the low number of researchers and because, under this determination, only low or no-impact projects would be allowed. As indicated under (a) above, low impact projects are those that would only minimally impact cultural resources, water, soils, or native wildlife and plants, and would not result in long-term, negative alterations to species' behavior, or their habitat, including vegetation, soils, and water. Research would only be conducted in approved locations and at approved times of day and season to minimize impacts to sensitive habitats and wildlife.

Animals may be temporarily disturbed during direct or remote observation, telemetry, capture (e.g., mist-netting), or banding. In rare cases, direct injury or mortality could result as an unintended result of research activities. Mist-netting and banding, which are common research methods, can cause stress, especially when birds are captured, banded, and weighed. In very rare cases, birds have been injured or killed during mist netting, or killed when predators reach the netted birds before researchers (Spotswood et al. 2012). To minimize the potential for injuries, researchers should be properly trained (Fair et al. 2010, Spotswood et al. 2012).

The U.S. Department of Agriculture's Animal Welfare Information Center maintains a website with resources to help minimize stress, injury, and mortality of wildlife in field studies at: *https://awic.nal.usda.gov/research-animals/wildlife-field-studies*.

Researchers may also inadvertently damage plants (e.g. via trampling or equipment use) during the research project. To minimize impacts, the SUP will outline how researchers are allowed to access their study sites and use equipment to minimize the potential for impacts to refuge

vegetation, soils, and water. We would not allow the collection and removal, or permanent damage, of any native plants under this determination.

Overall, allowing well-designed, properly reviewed, low or no-impact research to be conducted by non-USFWS personnel is likely to have very little negative impact on cultural resources, water, soils, or wildlife populations and habitats. We anticipate research will only have negligible to minor impacts to refuge wildlife and habitats because it will only be carried out after the refuge approves a detailed project proposal and issues a SUP including the stipulations in this determination to ensure compatibility. These stipulations are designed to help ensure each project minimizes impacts to refuge cultural resources, wildlife, vegetation, soils, and water.

We also anticipate only minimal impacts because USFWS staff will supervise this activity, and it will be conducted in accordance with refuge regulations. In the event of persistent disturbance to refuge resources, the activity will be further restricted or discontinued. If the research project is conducted with professionalism and integrity, potential temporary or minor adverse impacts are likely to be outweighed by the knowledge contributed to our understanding of refuge resources and our management effects on those resources, as well as the opportunity to inform, strengthen, and improve future refuge management decisions.

PUBLIC REVIEW AND COMMENT:

This compatibility determination will have a 30-day review period with the final Chincoteague NWR CCP/EIS, and the record of decision published in the Federal Register. We will also inform the public through local media releases and our website.

DETERMINATION (CHECK ONE BELOW):

_____Use is not compatible

__X___Use is compatible, with the following stipulations

STIPULATIONS NECESSARY TO ENSURE COMPATIBILITY:

- Only low or no-impact projects are covered under this determination. Low impact projects, as indicated under (a) above, are those that would only have a minimal potential to impact cultural resources, water, soils, or native wildlife and plants. No project should result in long-term negative alterations to wildlife behavior (e.g. result in wildlife leaving previously occupied areas for a long term; modifying their habitat use within their range; or, causing nest or young abandonment). No project should degrade wildlife habitat, including vegetation, soils, and water. Nest, dens, and burrows must not be harmed. No research activities should result in soil compaction or erosion, degrade water quality,

remove or destroy vegetation, involve off-road vehicle use, or result in collection and removal of animals or whole native plants.

- Research would only be conducted in USFWS-approved locations, using approved modes of access, and conducted only after the timing, season, duration, numbers of researchers, and areas open and closed is approved. Sensitive wildlife habitat areas will be avoided unless sufficient protection, approved by the USFWS, is implemented to limit the area and/or resources potentially impacted by the proposed research.

- If a research project occurs during the refuge hunting season, special precautions will be required and enforced to ensure public health and safety, and otherwise reduce conflicts with other compatible refuge uses.

- The USFWS will require modifications to research activities, including temporarily closing areas, or changing methods, when warranted, to avoid harm to sensitive wildlife and habitat when unforeseen impacts arise.

- All researchers will be required to submit a detailed research proposal following the refuge's study proposal guidelines (attachment 1) and USFWS Policy (FWS Refuge Manual Chapter 4 Section 6). The refuge must be given at least 45 days to review proposals before initiation of research. Proposals will include obligations for regular progress reports and a final summary document including all findings.

- The criteria for evaluating a research proposal, outlined in the "Description of Use" section (a) above, will be used when determining whether a proposed study will be approved on the refuge. Projects could be denied if they:

    - Will adversely affect native fish, wildlife, and habitats or cultural, archaeological, or historical resources beyond the low or no-impact standard.
    - Materially interfere with or detract from fulfilling the refuge's purposes or conflicts with refuge goals and objectives.
    - Cause public health or safety concerns.
    - Conflict with other compatible refuge uses.
    - Are not manageable within the refuge's available staff or budget time.

- Proposals will be prioritized and approved based on need, benefit to refuge resources, and the level of refuge funding required. USFWS experts, State agencies, or academic experts may be asked to review and comment on proposals.

- If proposal is approved, a SUP will be issued. The SUP will contain this determination's stipulations as well as project-specific terms and conditions that the researcher(s) must follow relative to the activities planned (e.g., location, duration, seasonality, etc.).

- Researchers must comply with all state and Federal laws and follow all refuge rules and regulations. All necessary State and Federal permits must be obtained before starting research on the refuge (e.g., permits for capturing and banding birds). Any research involving federally listed species may require Section 7 consultation under the Endangered Species Act. Any research involving ground disturbance may require historic preservation consultation with the Regional Historic Preservation Officer and/or State Historic Preservation Officer.

- Researchers will mark any survey routes, plots, and points in as visually unobtrusive a manner as practical. No permanent markers or infrastructure can be left on the refuge.

- Researchers will use every precaution and not conduct activities that would cause damage to refuge property or present hazards or significant annoyances to other refuge visitors. Any damage should be reported immediately to the refuge manager.

- Researchers must not litter, or start or use open fires on refuge lands.

- Prior to initiating the project, all researchers handling wildlife must be properly trained to minimize the potential for harm to individual animals. In addition, a review of the U.S. Department of Agriculture's Animal Welfare Information Center website must be documented by the researcher with identification of practices that will be followed to help further minimize stress, injury, and mortality of wildlife. The website is reached at: *https://awic.nal.usda.gov/research-animals/wildlife-field-studies*.

- Researchers may not use any chemicals (e.g., herbicides to treat invasive plants) or hazardous materials without prior written consent of refuge manager (e.g., the type of chemical, timing of use, and rate of application). All activities will be consistent with USFWS policy and an approved refuge Pesticide Use Plan.

- Researchers will be required to take steps to ensure that invasive species and pathogens are not inadvertently introduced or transferred to the refuge and surrounding lands (e.g., cleaning equipment).

- Refuge staff will monitor research activities for potential impacts to refuge resources. The refuge manager may determine that previously approved research and SUPs be modified or terminated due to observed impacts that are more severe or extensive than originally anticipated. The refuge manager will also have the ability to cancel a SUP if the researcher is not in compliance with the stated conditions.

- Researchers must have the SUP in their possession when engaged in research activities and will present it to refuge officials and State and Federal law enforcement agents upon their request.

- Researchers will submit a final report to the refuge upon completion of their work. For long-term studies, interim progress reports may also be required. The refuge also expects that research findings will be published in peer-reviewed publications. The contribution of the refuge and the USFWS should be acknowledged in any publications. The SUP will identify a schedule for annual progress reports and the submission of a final report or scientific paper.

JUSTIFICATION:

The USFWS encourages quality, scientific research because it provides critical baseline information on Federal trust and other refuge resources and helps evaluate the management effects on those resources. Research results will also help inform, strengthen, and improve future refuge management decisions, as well as inform management decisions on other ownerships in the Delmarva Peninsula and possibly elsewhere in the Northeast Region. Due to its proximity to other federal research facilities and its secure location, Chincoteague NWR provides a unique setting to conduct other nationally significant scientific research in support of other federal agencies' missions.

Given the stipulations above, and given that only low or no-impact research projects would be conducted under this determination, we do not anticipate this activity will have greater than minor impact on refuge resources. Impacts, if they occur, would be confined in area, duration, and magnitude, with no long-term consequences predicted. Therefore, research conducted by non-USFWS personnel on Chincoteague NWR will not materially interfere with or detract from the mission of the Refuge System or the purposes for which the refuge was established.

Signature: Refuge Manager: _____
(Signature and Date)

Concurrence: Regional Chief: _____
(Signature and Date)

Mandatory 10-year re-evaluation date: _____
(Date)

LITERATURE CITED

Arrese, P. 1987. Age, intrusion pressure and defense against floaters by territorial male Song Sparrows. Animal Behavior 35:773-784.

Buckley, P. and F. Buckley. 1976. Guidelines for the protection and management of colonially nesting waterbirds. North Atlantic Regional Office. NPS. Boston, MA 54 pp.

Burger, J. and M. Gochfield. 1991. Human activity influence and diurnal and nocturnal foraging of Sanderlings. *Condor*. 93:259-265.

Ellison L.N. and L. Cleary. 1978. Effects of human disturbance on breeding of double-crested cormorants. *Auk* 95:510-517.

Erwin, R.M. 1989. Responses to human intruders by birds nesting in colonies: Experimental results and management guidelines. *Col. Waterbirds* 12(1):104-108.

Fair, J., E. Paul, and J. Jones, Eds. 2010. Guidelines to the Use of Wild Birds in Research. Washington, D.C. Ornithological Council.

Frederick, R.B. and M. W. Collopy. 1989. Researcher disturbance in colonies of wading birds: Effects of frequency of visit and egg-marking on reproductive parameters. *Col. Waterbirds*. 12(2):152-157.

Gill, J.A.,W.J. Sutherland, and A.R. Watkinson. 1996. A method to quantify the effects of human disturbance on animal populations. Journal of Applied Ecology 33:786-792.

Gutzwiller, K.J., R.T. Wiedenmann, K.L. Clements, and S.H. Anderson. 1994. Effects of human intrusion on song occurrence and singing consistence in subalpine birds. The Auk 111:28-37.

Gutzwillwer, K.J. and H. A. Stanley. 1999. Spatial extent of human-intrusion effects on subalpine bird distributions. *Condor*. 101: 378-389.

Gutzwiller, K.J., H.A. Marcum, H.B. Harvey, J.D. Roth, and S.H. Anderson. 1998. Bird tolerance to human intrusion in Wyoming montane forests. *Condor*. 100:519-527.

Hammitt, W.E., and D.N. Cole. 1998. Wildlife Recreation: Ecology and Management (2nd edition). New York: John Wiley & Sons. 361p.

Henson, P. and T.A. Grant. 1991. The effects on human disturbance of trumpeter swan breeding behavior. *Wildl. Soc. Bull.* 19:248-257.

Knight, R.L., and D.N. Cole. 1991. Effects of recreational activity on wildlife in wildlands. Transactions of the 56th North American Wildlife and Natural Resources Conference pp. 238-247.

Knight, R.L., and D.N. Cole. 1995. Wildlife responses to recreationists. Pages 51-69 in R.L. Knight and D.N. Cole, editors. Wildlife and recreationists: coexistence through management and research. Washington, DC. Island Press, 372 pp.

Miller, S.G., R.L. Knight, and C.K. Miller. 1998. Influence of recreational trails on breeding bird communities. Ecological Applications 8:162-169.

North American Banding Council. 2001. North American bander's manual. April 2001. Accessed May 2015 online at: *http://www.nabanding.net/other-publications/*.

Parsons, K.C. and J. Burger. 1982. Human disturbance and nestling behavior in black-crowned night herons. *Condor* 84: 184-187.

Safina, C. and J. Burger. 1983. Effects of human disturbance on reproductive success in the black skimmer. *Condor*. 85:164-171.

Schultz, R.D., and M. Stock. 1993. Kentish plovers and tourist-competitors on sandy coasts? Wader Study Group Bulletin 68 (special issue): 83-92.

Spotswood, E.N., K.R. Goodman, J. Carlisle, R.L. Cormier, D.L. Humple, J. Rousseau, S.L. Guers, and G.G. Barton. 2012. How safe is mist netting? Evaluating the risk of injury and mortality to birds. Methods in Ecology and Evolution 3:29-38.

Tremblay, J. and L.N. Ellison. 1979. Effects of human disturbance on breeding of black-crowned night-herons. *Auk* 96:364-369.

U. S. Fish and Wildlife Service. 1982. National Wildlife Refuge System - Refuge Manual Department of Interior, USFWS, Washington, DC.

Attachment 1. Chincoteague National Wildlife Refuge Complex Study Proposal Guidelines

A study proposal is a justification and description of the work to be done, and includes cost and time requirements. Proposals must be specific enough to serve as "blueprints" for the investigative efforts. Step-by-step plans for the actual investigations must be spelled out in advance, with the level of detail commensurate with the cost and scope of the project and the needs of management. Please submit proposals electronically as a Microsoft Word document or hardcopy to the refuge manager.

The following list provides a general outline of first order headings/sections for study proposals.

- Cover Page.
- Table of Contents (for longer proposals).
- Abstract.
- Statement of Issue.
- Literature Summary.
- Objectives/Hypotheses.
- Study Area.
- Methods and Procedures.
- Quality Assurance/Quality Control.
- Specimen Collections.
- Deliverables.
- Special Requirements, Concerns, Necessary Permits.
- Literature Cited.
- Peer Review.
- Budget.
- Personnel and Qualifications.

Cover Page

The cover page must contain the following information:

- Title of Proposal.
- Current Date.
- Investigator(s): name, title, organizational affiliation, address, telephone and fax numbers, and e-mail address of all investigators or cooperators.
- Proposed starting date.
- Estimated completion date.
- Total Funding Support Requested from the U.S. Fish and Wildlife Service (USFWS).
- Signatures of Principal Investigator(s) and other appropriate institutional officials.

Abstract

The abstract should contain a short summary description of the proposed study, including reference to major points in the Statement of Issue, Objectives, and Methods and Procedures sections.

Statement of Issue

Provide a clear, precise summary of the problem to be addressed and the need for its solution. This section should include statements of the importance, justification, relevance, timeliness, generality, and contribution of the study. Describe how any products will be used, including any anticipated commercial use. What is the estimated probability of success of accomplishing the objective(s) within the proposed timeframe?

Literature Summary

This section should include a thorough but concise literature review of current and past research that pertains to the proposed research, especially any pertinent research conducted within the Delmarva Peninsula, and specifically, on refuge units. A discussion of relevant legislation, policies, and refuge planning and management history, goals, and objectives should also be included.

Objectives/Hypotheses

A very specific indication of the proposed outcomes of the project should be stated as objectives or hypotheses to be tested. Project objectives should be measurable. Provide a brief summary of what information will be provided at the end of the study and how it will be used in relation to the problem. These statements should flow logically from the statement of issue and directly address the management problem.

Establish data quality objectives in terms of precision, accuracy, representativeness, completeness, and comparability as a means of describing how good the data need to be to meet the project's objectives.

Study Area

Provide a detailed description of the geographic area(s) to be studied and include a clear map delineating the proposed study area(s) and showing specific locations where work will occur.

Methods and Procedures

This section should describe as precisely as possible how the objectives will be met or how the hypotheses will be tested. Include detailed descriptions and justifications of the field and laboratory methodology, protocols, and instrumentation. Explain how each variable to be measured directly addresses the research objective/ hypothesis. Describe the experimental design, population, sample size, and sampling approach (including procedures for sub-sampling). Summarize the statistical and other data analysis procedures to be used. List the response

variables and tentative independent variables or covariates. Describe the experimental unit(s) for statistical analysis. Also include a detailed project time schedule that includes initiation, fieldwork, analysis, reporting, and completion dates.

Quality Assurance/Quality Control

Adequate quality assurance/quality control (QA/QC) procedures help insure that data and results are: credible and not an artifact of sampling or recording errors; of known quality; able to stand up to external scientific scrutiny; and accompanied by detailed method documentation. Describe the procedures to be used to insure that data meet defined standards of quality and program requirements, errors are controlled in the field, laboratory, and office, and data are properly handled, documented, and archived. Describe the various steps (e.g., personnel training, calibration of equipment, data verification and validation) that will be used to identify and eliminate errors introduced during data collection (including observer bias), handling, and computer entry. Identify the percentage of data that will be checked at each step.

Specimen Collections

Clearly describe the kind (species), numbers, sizes, and locations of animals, plants, rocks, minerals, or other natural objects to be sampled, captured, or collected. Identify the reasons for collecting, the intended use of all the specimens to be collected, and the proposed disposition of collected specimens. For those specimens to be permanently retained as voucher specimens, identify the parties responsible for cataloging, preservation, and storage and the proposed repository.

Deliverables

The proposal must indicate the number and specific format of hard and/or electronic media copies to be submitted for each deliverable. The number and format will reflect the needs of the refuge and the refuge manager. Indicate how many months after the project is initiated (or the actual anticipated date) that each deliverable will be submitted. Deliverables are to be submitted or presented to the refuge manager.

Deliverables that are required are as follows:

Reports and Publications

Describe what reports will be prepared and the timing of reports. Types of reports required in fulfillment of natural and social science study contracts or agreements include:

(1) Progress report(s) (usually quarterly, semiannually, or annually): may be required
(2) Draft final and final report(s): always required

A final report must be submitted in addition to a thesis or dissertation (if applicable) and all other identified deliverables. Final and draft final reports should follow refuge guidelines (see attachment).

In addition, investigators are encouraged to publish the findings of their investigations in refereed professional, scientific publications and present findings at conferences and symposia. The refuge manager appreciates opportunities to review manuscripts in advance of publication.

Data Files
Provide descriptions of any spatial (Geographic Information Systems; GIS) and non-spatial data files that will be generated and submitted as part of the research. Non-spatial data must be entered onto Windows CD-ROMs in Access or Excel. Spatial data, which includes GPS (Global Position System)-generated files, must be in a format compatible with the refuge's GIS system (ArcGIS 10.1 or later, or e00 format).

Metadata
For all non-spatial and spatial data sets or information products, documentation of information (metadata) describing the extent of data coverage and scale, the history of where, when, and why the data were collected, who collected the data, the methods used to collect, process, or modify/ transform the data, and a complete data dictionary must also be provided as final deliverables. Spatial metadata must conform to USFWS (Federal Geographic Data Committee; FDGC) metadata standards.

Oral Presentations
Three types of oral briefings should be included: pre-study, annual, and closeout.
These briefings will be presented to refuge staff and other appropriate individuals and cooperators. In addition, investigators should conduct periodic informal briefings with refuge staff throughout the study whenever an opportunity arises. During each refuge visit, researchers should provide verbal updates on project progress. Frequent dialogue between researchers and refuge staff is an essential element of a successful research project.

Specimens and Associated Project Documentation
A report on collection activities, specimen disposition, and the data derived from collections, must be submitted to the refuge following refuge guidelines.

Other:
Researchers must provide the refuge manager with all of the following:

1. Copies of field notes/ notebooks/ datasheets.
2. Copies of raw data (in digital format), including GIS data, as well as analyzed data.

3. Copies of all photos, slides (digital photos preferred), videos, and films.
4. Copies of any reports, theses, dissertations, publications or other material (such as news articles) resulting from studies conducted on refuge.
5. Detailed protocols used in study.
6. Aerial photographs.
7. Maps.
8. Interpretive brochures and exhibits.
9. Training sessions (where appropriate).
10. Survey forms.
11. Value-added software, software developed, and models.

Additional deliverables may be required of specific studies.

Special Requirements, Permits, and Concerns

Provide information on the following topics where applicable. Attach copies of any supporting documentation that will facilitate processing of your application.

Refuge Assistance

Describe any refuge assistance needed to complete the proposed study, such as use of equipment or facilities or assistance from refuge staff. It is important that all equipment, facilities, services, and logistical assistance expected to be provided by the USFWS be specifically identified in this section so all parties are in clear agreement before the study begins.

Ground Disturbance

Describe the type, location, area, depth, number, and distribution of expected ground- disturbing activities, such as soil pits, cores, or stakes. Describe plans for site restoration of significantly affected areas.

Proposals that entail ground disturbance may require an archeological survey and special clearance prior to approval of the study. You can help reduce the extra time that may be required to process such a proposal by including identification of each ground disturbance area on a U.S. Geological Survey (USGS) 7.5-minute topographic map.

Site Marking and/or Animal Marking

Identify the type, amount, color, size, and placement of any flagging, tags, or other markers needed for site or individual resource (e.g., trees) identification and location. Identify the length of time it is needed and who will be responsible for removing it. Identify the type, color, placement of any tags placed on animals (see SUP for requirements on marking and handling of animals).

Access to Study Sites

Describe the proposed method and frequency of travel to and within the study site(s). Explain any need to enter restricted areas. Describe duration, location, and number of participants, and approximate dates of site visits.

Use of Mechanized and Other Equipment
Describe any vehicles, boats, field equipment, markers, or supply caches by type, number, and location. You should explain the need to use these materials and if or how long they are to be left in the field.

Safety
Describe any known potentially hazardous activities, such as electro-fishing, scuba diving, whitewater boating, aircraft use, wilderness travel, wildlife capture or handling, wildlife or immobilization.

Chemical Use
Identify chemicals and hazardous materials that you propose using within the refuge. Indicate the purpose, method of application, and amount to be used. Describe plans for storage, transfer, and disposal of these materials and describe steps to remediate accidental releases into the environment. Attach copies of Material Safety Data Sheets.

Animal Welfare
If the study involves vertebrate animals, describe your protocol for any capture, holding, marking, tagging, tissue sampling, or other handling of these animals (including the training and qualifications of personnel relevant to animal handling and care). If your institutional animal welfare committee has reviewed your proposal, please include a photocopy of their recommendations. Describe alternatives considered, and outline procedures to be used to alleviate pain or distress. Include contingency plans to be implemented in the event of accidental injury to or death of the animal. Include state and Federal permits. Where appropriate, coordinate with and inform state natural resource agencies.

Literature Cited
List all reports and publications cited in the proposal.

Peer Review
Provide the names, titles, addresses, and telephone numbers of individuals with subject-area expertise who have reviewed the research proposal. If the reviewers are associated with the investigator's research institution or if the proposal was not reviewed, please provide the names, titles, addresses, and telephone numbers of three to five potential subject-area reviewers who are not associated with the investigator's institution. These individuals will be asked to provide reviews of the proposal, progress reports, and the draft final report.

Budget

The budget must reflect both funding and assistance that will be requested from the USFWS and the cooperator's contributions on an identified periodic (usually annual) basis.

Personnel Costs

Identify salary charges for principal investigator(s), research assistant(s), technician(s), clerical support, and others. Indicate period of involvement (hours or months) and pay rate charged for services. Be sure to include adequate time for data analysis and report writing and editing.

Fringe Benefits

Itemize fringe benefit rates and costs.

Travel

Provide separate estimates for fieldwork and meetings. Indicate number of trips, destinations, estimated miles of travel, mileage rate, air fares, days on travel, and daily lodging and meals charges. Vehicle mileage rate cannot exceed standard government mileage rates. Charges for lodging and meals are not to exceed the maximum daily rates set for the locality by the Federal Government.

Equipment

Itemize all equipment to be purchased or rented and provide a brief justification for each item costing more than $1,000. Be sure to include any computer-related costs. For proposals funded under USFWS agreement or contract, the refuge reserves the right to transfer the title of purchased equipment with unit cost of $1,000 or more to the Federal Government following completion of the study. These items should be included as deliverables.

Supplies and Materials

Purchases and rentals under $1,000 should be itemized as much as is reasonable.

Subcontract or Consultant Charges

All such work must be supported by a subcontractor's proposal also in accordance with these guidelines.

Specimen Collections

Identify funding requirements for the cataloging, preservation, storage, and analyses of any collected specimens that will be permanently retained.

Printing and Copying

Include costs for preparing and printing the required number of copies of progress reports, the draft final report, and the final report. In general, a minimum of two (2) copies of progress reports (usually due quarterly, semiannually, or as specified in agreement), the draft final report, and the final report are required.

Indirect Charges
Identify the indirect cost (overhead) rate and charges and the budget items to which the rate is applicable.

Cooperator's Contributions
Show any contributing share of direct or indirect costs, facilities, and equipment by the cooperating research institution.

Outside Funding
List any outside funding sources and amounts.

Personnel and Qualifications
List the personnel who will work on the project and indicate their qualifications, experience, and pertinent publications. Identify the responsibilities of each individual and the amount of time each will devote. A full vita or resume for each principal investigator and any consultants should be included here.

DRAFT AND FINAL REPORT GUIDELINES

Draft final and final reports should follow Journal of Wildlife Management format and should include the following sections:

Title Page
Abstract
Introduction/ Problem statement
Study Area
Methods (including statistical analyses)
Results
Discussion
Management Implications
Management Recommendations
Literature Cited

COMPATIBILITY DETERMINATION

USE: Shell Collection

REFUGE NAME: Chincoteague National Wildlife Refuge

DATE ESTABLISHED: May 13, 1943

ESTABLISHING AND ACQUISITION AUTHORITY(IES):

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).

- "... 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.

DESCRIPTION OF USE:

(a) What is the use? Is the use a priority public use?
This use allows the collection of non-inhabited shells and beach debris for personal enjoyment. This use would be authorized only in areas open to public use, where it would not interfere with other public use activities. This is not a priority public use; however people participating in this activity are likely to experience other priority public uses like observing wildlife.

(b) Where would the use be conducted?
The majority of shell collecting will take place along the beachfront of Assateague Island. Collection will be focused in the area directly in front of the parking lots but will extend the entire length of the island. Limited collection may occur on the Southern Islands as well in conjunction with other wildlife dependent recreation. Shell availability is totally dependent upon the ocean currents, tides, and storm events.

(c) When would the use be conducted?
The activity occurs throughout the calendar year during normal operational hours.

(d) How would the use be conducted?
Shell collection will be limited to 1 gallon of shells/person/day for non-commercial use and only in areas open to the general public.

(e) Why is this use being proposed?
Allowing visitors to pick up shells and beach debris and take home a small amount of shells from the refuge will encourage an appreciation for the beach and marine environment. Shell collection has a long history on Assateague Island. It has historically taken place on the refuge since Native Americans used the area. Mollusks were used for food, their shells for tools and/or as currency. Since refuge establishment, visitors have wandered the beachfront in search of these treasures from the sea.

AVAILABILITY OF RESOURCES:

Permitting shell collecting is within the resources available to administer our visitor services program. The funding received by the refuge is adequate to continue to administer this program and to ensure that the use remains compatible with the refuge purposes.

ANTICIPATED IMPACTS OF THE USE:

Impacts to refuge resources from the activity of shell collecting will likely be minimal if conducted in accordance with refuge regulations. Shell collecting may intermittently interrupt the feeding habits of a variety of shorebirds, gulls and terns. Numerous studies have documented that migratory birds are disturbed by human activity on beaches. Erwin (1989) documented disturbance of common terns and skimmers and recommended that human activity be restricted a distance of 100 meters around nesting sites. Klein (1993) in a studying waterbird response to human disturbance found that as intensity of disturbance increased, avoidance response by the birds increased and found that out of vehicle activity to be more disruptive than vehicular traffic. Pfister et al. (1992) found that the impact of disturbance was greater on species using the heavily disturbed front side of the beach, with the abundance of the impacted species being reduced by as much as 50 percent. Roberson et al. (1980) discovered, in studying the effects of recreational use of shorelines on nesting birds, that disturbance negatively impacted species composition. Piping plovers which use the refuge heavily are also impacted negatively by human activity. Pedestrians on beaches may crush eggs (Burger 1987, Hill 1988, Shaffer and Laporte 1992, Cape Cod National Seashore 1993, Collazo et al. 1994). Other studies have shown that if pedestrians cause incubating plovers to leave their nests, the eggs can overheat (Berstrom 1991) or the eggs can cool to the point of embryo death (Welty 1982). Pedestrians have been found to displace unfledged chicks (Strauss 1990, Burger 1981, Hoopes et al. 1992, Loegering 1992, Goldin 1993).

Although some disturbance to migratory birds will occur, it will be minimal due to the activity taking place on or near the recreational beach. Additionally, there are existing seasonal closures in place to protect piping plovers and other coastal nesting birds.

PUBLIC REVIEW AND COMMENT:

This compatibility determination is part of the Chincoteague National Wildlife Refuge (NWR) Comprehensive Conservation Plan (CCP/EIS). Public notification and review included a notice of availability published in the Federal Register, a 90-day comment period for the draft CCP/EIS during which public meetings were held, a 30-day review period for the final CCP/EIS, and the record of decision published in the Federal Register. We also inform the public through local media releases and our website.

DETERMINATION (CHECK ONE BELOW):

_____Use is not compatible

__X___Use is compatible, with the following stipulations

STIPULATIONS NECESSARY TO ENSURE COMPATIBILITY:

- Visitors are limited to one gallon/person/day.
- No commercial collection will be permitted.
- Only non-occupied shells may be collected.
- Visitors are not permitted to collect any item prohibited by Federal law, such as historic artifacts.
- Access south of OSV parking area will be closed from March 15 to September 15 or until the last shorebird fledges.

JUSTIFICATION:

This activity will not materially interfere with or detract from the mission of the Refuge System or purposes for which the refuge was established.

Signature: Refuge Manager: _____
(Signature and Date)

Concurrence: Regional Chief: _____
(Signature and Date)

Mandatory 10-year re-evaluation date: _____
(Date)

LITERATURE CITED:

Berstrom, P.W. 1991. Incubation temperatures of Wilson's plovers and killdeer. Condor. 91: 634-641

Burger, J. 1981. Effect of human activity on birds at a coastal bay. Biol. Conserv. 21:231-241.

Burger, J. 1987. New Jersey Endangered Beach-Nesting Bird Project: 1986 Research. Unpublished report. New Jersey Department of Environmental Protection, NJ. 37 pp.

Cape Cod National Seashore. 1993. Piping plover nest found trampled by pedestrian. News Release. Cape Cod National Seashore, South Wellfleet, MA. 2 pp.

Collazo, J.A., J.R. Walters, and J.F. Parnell. 1994. Factors Affecting Reproduction and Migration of Waterbirds on North Carolina Barrier Islands. 1993 Annual Progress Report. North Carolina State University, Raleigh, NC. 57 pp.

Erwin, M.R. 1989. Responses to Human Intruders by Birds Nesting in Colonies: Experimental Results and Management Guidelines. Colonial Waterbirds 12 (1) :104-108.

Goldin, M.R. 1993. Effects of human disturbance and off-road vehicles on piping plover reproductive success and behavior at Breezy Point, Gateway National Recreation Area, New York, M.S. Thesis. University of Mass., Amherst, MA. 128 pp.

Hill, J.O. 1988. Aspects of breeding biology of Piping Plovers Charadrius melodus in Bristol County, Mass., in 1988. Unpublished report. University of Mass., Amherst, MA. 44 pp.

Hoopes, E.M., C.R. Griffin, and S.M. Melvin. 1992. Relationship between human recreation and Piping Plover foraging ecology and chick survival. Unpublished report. University of Mass., Amherst, MA. 77 pp.

Klein, M.L. 1993. Waterbird behavioral responses to human disturbance. Wildl. Soc.Bull. 21:31-39.

Leogering, J.P. 1992. Piping Plover breeding biology, foraging ecology and behavior on Assateague Island National Seashore, MD. M.S. Thesis. Virginia Polytechnic Institute and State University, Blacksburg, VA. 247 pp.

Pfister, C., B. A. Harrington, and M. Lavine. 1992. The Impact of Human Disturbance on Shorebirds at a Migration Staging Area. Biological Conservation 60 (2) :115-126.

Pruner, R.A, M.J. Friel, and J.A. Zimmerman. 2011. Interpreting the influence of habitat management actions on shorebird nesting activity at coastal state parks in the Florida panhandle. 2010-11 study final report. Department of Environmental Protection, Florida Park Service, Panama City, FL.

Roberton, R. J. and N. J. Flood. 1980. Effects of Recreational Use of Shorelines on Breeding Bird Populations. Canadian Field-Naturalist 94 (2) :131-138.

Strauss, E. 1990. Reproductive success, life history patterns, and behavioral variation in a population of Piping Plovers subjected to human disturbance (1982-1989). Ph.D. dissertation. Tufts University, Medford, MA.

Welty, J.C. 1982. The life of birds. Sauders College Publishing, Philadelphia, PA. 754 pp.

COMPATIBILITY DETERMINATION

USE: Big Game 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) An Act Authorizing the Transfer of Certain Real Property for Wildlife {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 (An Act Authorizing the Transfer of Certain Real Property for Wildlife).

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.

DESCRIPTION OF USE:

(a) What is the use? Is the use a priority public use?
The use is the public hunting of white-tailed deer. Hunting was identified as one of six priority public uses by Executive Order 12996 (March 25, 1996) and by the Refuge System Administration Act of 1966, as amended by the Refuge System Improvement Act of 1997 (Public Law 105-57).

(b) Where would the use be conducted?
Public hunting for white-tailed deer will be allowed on the entire 373-acre refuge except for designated safety zones and closed areas.

(c) When would the use be conducted?
The use would be conducted in designated areas of the refuge in accordance with Federal and Commonwealth regulations. Hunting would take place within the open hunting seasons

established by Virginia Department of Game and Inland Fisheries (VDGIF). This is normally between mid-November through the first week of January.

(d) How would the use be conducted?

Hunting will be conducted within the framework of the Commonwealth of Virginia regulations (including hunt days and hunting hours), and Federal regulations published in Title 50 of the Code of Federal Regulations (50 CFR 32), pertaining to the Refuge System Administration Act, as well as existing, refuge-specific regulations. The refuge manager may, upon annual review of the hunting program and in coordination with VDGIF, impose further restrictions on hunting. Hunting at the refuge is at least as restrictive as the Commonwealth of Virginia, and in some cases, more restrictive. The refuge coordinates with VDGIF annually to maintain regulations and programs that are consistent with the State's management programs. Hunting restrictions may be imposed if hunting conflicts with other higher priority refuge programs, endangers refuge resources, or public safety. Specific hunt details will be outlined in the annual hunt program.

Hunters will be selected for the opening week(s) of the Commonwealth's firearms deer season through a lottery selection system similar to the one currently used at the Chincoteague National Wildlife Refuge (NWR). For the remainder of the deer season, each hunter will pay and obtain a refuge hunting permit online.

Further refuge-specific regulations applicable to deer hunting at Wallops Island NWR are detailed in this Compatibility Determination under the section "Stipulations Necessary to Ensure Compatibility."

(e) Why is this use being proposed?

Hunting is one of six priority public uses encouraged on national wildlife refuges as long as they are deemed compatible. Hunting will be used primarily as a management tool for reducing the impacts of white-tailed deer on forested habitats important to migratory birds and other wildlife. The public hunt will also reduce the threat of deer-aircraft strikes at the adjacent NASA/Goddard Space Flight Center/Wallops Flight Facility (WFF), and deer-automobile strikes on the adjacent Virginia State Route 175. Finally, the proposed hunt will provide limited public hunting opportunities on Wallops Island NWR.

The objectives for the Wallops Island NWR hunt program are to (1) reduce deer and vehicle collisions that occur along State Route 175 and the refuge boundary, (2) reduce the potential for increased deer/aircraft collisions at NASA WFF, (3) manage the deer population at levels that minimize negative effects upon the natural ecosystems at Wallops Island NWR, including native vegetation and wildlife communities, (4) provide a wildlife-dependent recreational activity.

AVAILABILITY OF RESOURCES:

An estimated 30 staff days will be required to plan and manage the hunt, including: handling public inquiries and law enforcement. This use is routine in nature and may be accomplished with approved staffing and funding.

ANTICIPATED IMPACTS OF THE USE:

Deer hunting will occur on the refuge within the designated firearms deer season established by VDGIF. This is normally between mid-November through the first week of January and occurs during the fall migration and wintering period for many migratory bird species, including waterfowl that use the tidal creeks on and adjacent to the refuge. Morton (1987) found that the increased presence of humans and vehicles associated with the refuge hunting program on Chincoteague NWR was contributing to movements of black ducks off the refuge at a time when these birds need the isolation of the refuge. Laskowski et al. (1993) documented human disturbance to representative species of waterfowl, wading birds, and shorebirds by the visiting public on Back Bay NWR, Virginia. Disturbance elicited behavioral changes ranging from increase alertness to flying to other parts of the refuge. Klein (1993) found that approaching birds on foot was the most disruptive of usual visitor activities at J.N. "Ding" Darling NWR, Florida. Morton (1993) summarizes research on the impacts of human disturbance and its effects on waterfowl and proposes management actions that could reduce the frequency or effects of disturbance. Some of the disturbances listed will occur on the refuge with waterfowl being the major category of birds impacted, due to the time of year that hunting occurs.

We anticipate there will be limited disturbance to waterfowl, raptors, or wading birds in the area on the days hunters will be on the refuge. Disturbance will be minimized because: hunting activities will take place outside nesting and brood-rearing periods for most wildlife species; hunter numbers will be limited; the number of hunting days will be limited; hunters will not be permitted to enter the hunting area with motor vehicles, all-terrain vehicles or hunting dogs. Harassment of waterfowl will be limited because the hunting zones will restrict hunter activities to the upland/woodland habitats. The large acreage of saltmarsh and woodland in the vicinity of the refuge will provide adequate space and habitat for temporarily displaced birds. Escape cover for smaller mammals is available and disturbance by hunters should not adversely affect them. A 330-foot closed area around any active eagle nest will be maintained.

Positive effects on the vegetation are anticipated from a reduction in the white-tailed deer population at Wallops Island NWR. The impacts of dense deer populations on forest regeneration and the composition and diversity of the herbaceous understory have been well documented (Tilghman, 1989). Reducing the size of the deer population will prevent further degradation due to over browsing. Well-managed hunting can effectively control deer and produce striking changes in the forest vegetation (Behrend, et al., 1970). The impact of deer hunting on the vegetation would likely result in better recruitment of forest canopy species and an increase in the diversity of

shrubs and the herbaceous understory. This will increase the quality of forage areas, escape cover, and nesting habitat for neotropical songbirds and other forest-floor or mid-canopy wildlife species at Wallops Island NWR.

The sea level fen on the refuge will not be open to deer hunting activities. Therefore, there are no anticipated adverse impacts to this rare ecosystem.

The refuge delineates small, limited-use parking areas for hunters; however, such parking is adjacent to State Route 175, and does not result in clearing any forested areas. We anticipate slight benefits to human health and safety adjacent to the refuge. By reducing the number of deer on the refuge, we will reduce the potential for deer-vehicle collisions on State Route 175 and deer-aircraft collisions at the WFF.

VDGIF, under the direction of a Governor-appointed Board of Directors, is specifically charged by the General Assembly with the management of the State's wildlife resources. The Virginia Deer Management Plan, first completed in 1999 and revised in 2006, guides management of deer habitat, deer populations, damage caused by deer, and deer-related recreation in the Commonwealth. In 2012, 213,597 deer were reported killed by hunters in Virginia. This total included 96,712 antlered bucks, 18,061 button bucks, 98,781 does (46.3 percent), and 43 "unknown" deer. It is also 8 percent below the last 10-year average of 232,573. In Accomack County, an average of 3,056 deer per year are killed (see Table, 2008-2012 data).

Accomack County Deer Kills, 2008-2012

Year	Antlered Males	Male Fawns	Females	% Female	Unknown	Total
2008	1412	371	1924	51.9%	0	3707
2009	1225	249	1614	52.3%	0	3088
2010	1246	307	1740	52.8%	0	3293
2011	1007	263	1535	54.7%	2	2807
2012	923	212	1249	52.4%	0	2384

http://www.dgif.virginia.gov/wildlife/deer/harvest/index.asp

Population reconstruction computer models indicate that Virginia's Statewide deer population has been relatively stable over the past decade, fluctuating between 850,000 and 1,050,000 animals (mean = 945,000).
http://www.dgif.virginia.gov/wildlife/deer/management-plan/virginia-deer-management-plan.pdf

Hunting resident game species, such as deer, on Chincoteague NWR and Wallops Island NWR will result in negligible impacts on their populations because of their restricted home ranges. The refuges also contribute negligibly to the State's total harvest for resident game species.

Chincoteague NWR white-tailed deer harvest
2008/2009 – 23
2009/2010 - 20
2010/2011 - 15
2011/2012 - 27
2012/2013 - 26

Wallops Island NWR white-tailed deer harvest
2008 - 13
2009 - 15
2010 - 15
2011- 8
2012 – 11

The refuges harvested a total of 173 white-tailed deer over the past 5 years, with 37 in 2012. Given the exceptionally low numbers of animals harvested from the refuges in respect to the total Statewide harvest and deer population, no cumulative impacts to local, regional, or Statewide populations of white-tailed deer are anticipated from hunting of the species on the refuges.

Several management strategies identified by Klein (1989) can be used to control the negative effects of recreation (including hunting) on wildlife; these include: permits, user fees, zoning (Cullen 1985), travel ease, public education (Purdy et al. 1987), limiting number of visitors present, and periodic closing. Chincoteague NWR currently employs many of these measures to lessen the disturbance and impact to wildlife of existing deer hunt programs.

Cumulative effects on the environment result from incremental effects of a proposed action when these are added to other past, present, and reasonably foreseeable future actions. While cumulative effects may result from individually minor actions, they may, viewed as a whole, become substantial over time. The hunt plan has been designed to be sustainable through time given relatively stable conditions.

The cumulative impact of hunting white-tailed deer at the refuge is negligible. The proportion of the refuge's harvest of deer is negligible when compared to local, regional, and State populations and harvest. Because of the ability of individual refuge hunt programs to adapt refuge-specific hunting regulations to changing local conditions, we anticipate no direct or indirect cumulative effects on resident wildlife, migratory birds, or non-hunted wildlife on Wallops Island NWR.

PUBLIC REVIEW AND COMMENT:

This compatibility determination is part of the Chincoteague and Wallops Island NWRs Comprehensive Conservation Plan and Environmental Impact Statement (CCP/EIS). Public notification and review included a notice of availability published in the Federal Register, a 90-day

comment period for the draft CCP/EIS during which public meetings were held, a 30-day review period for the final CCP/EIS, and the record of decision published in the Federal Register. We also inform the public through local media releases and our website.

DETERMINATION: (CHECK ONE BELOW)

_____Use is not compatible

__X___Use is compatible, with the following stipulations

STIPULATIONS NECESSARY TO ENSURE COMPATIBILITY:

Deer hunting will be permitted in the refuge except within small safety zones and designated closed areas. The deer hunt program will be evaluated annually to ensure it meets hunt plan objectives.

Persons possessing, transporting, or carrying firearms on national wildlife refuges must comply with all provisions of State and local law. Persons may only use (discharge) firearms in accordance with refuge regulations (50 CFR 27.42 and specific refuge regulations in 50 CFR Part 32).

Wallops Island NWR Refuge Specific Regulations:

- All Federal and State hunting regulations apply.
- State requirements for hunting licenses and stamps apply.
- State requirements on the use of firearms, muzzleloaders and bows apply.
- Hunters must have permits in possession prior to entering the refuge to scout or hunt.
- Reporting all harvested animals must comply with State requirements for check-in and also be indicated on check-in/out sheet (see below for additional information).
- A sign-in/out box is located at the kiosk in parking area one (see map). Each hunter must sign in immediately before entering and sign out after exiting the hunt zone.
- All harvests must be reported on the sign-in/out sheet.
- 330-feet closed area around eagle's nests.
- Hunters must park in designated parking areas.
- All hunters must make a reasonable effort to recover wounded animals.
- Discharging any weapon within 50 feet of the center line of any road or on/from/into a safety zone is prohibited.
- The boundaries of the hunt zone are recognized in the field by prominent signs. Each hunter is responsible for knowing the boundaries of the hunt zone.
- Federal government worksites may be staffed during the hunt. The zone around these sites is posted closed to hunting (see map). Hunters may enter this zone strictly for the purpose of accessing the hunting area and must have their weapons unloaded. There shall be no loitering in areas closed to hunting.

- Hunters may pursue downed or crippled deer into the safety zone (area closed to hunting around worksites). Contact refuge headquarters for assistance if needed to dispatch wounded animal.
- Tree stands permanently attached by nails, wire, screws, or in any other way is prohibited. Portable stands are permitted and may remain installed for the duration of the season. All stands must be removed at the close of the season. U.S. Fish and Wildlife Service (USFWS) is not responsible for any personal property left unattended.
- The use of a boat, ATV, bicycle or saddled animal is prohibited.
- The minimum age allowed to hunt on the refuge is 12.
- Hunters must reach the age minimum by the date of their assigned hunt and the child must meet Virginia State licensing requirements.
- Hunters between the ages of 12 and 17 must be accompanied and directly supervised by a mentor over 18 who has on their person a valid Virginia hunting license and refuge permit from Chincoteague NWR headquarters.
- Scouters must be in possession of their hunt permit while scouting.
- Scouters and hunters must sign-in and out at the refuge kiosk.
- Any hunters who require assistance with retrieving or dressing harvested animals may apply for 1 or 2 non-hunting permits. This permit will allow an assistant to be present only during retrieval and dressing of harvested animals. Non-hunting assistant permits must be requested prior to November 16th.
- Camping and fires are prohibited.

JUSTIFICATION:

Hunting is a priority wildlife-dependent use for the Refuge System through which the public can develop an appreciation for fish and wildlife (Executive Order 12996, March 25, 1996 and the Refuge System Administration Act of 1966, as amended by the Refuge System Improvement Act of 1997 (Public Law 105-57)). USFWS 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 seasons and bag limits are established by the Commonwealth of Virginia and generally adopted by the refuge. These restrictions ensure the continued well-being of overall populations of game animals. Hunting does result in the taking of many individuals within the overall population, but restrictions are designed to safeguard an adequate breeding population from year to year. Specific refuge regulations address equity and quality of opportunity for hunters, and help safeguard refuge habitat. Disturbance to other fish and wildlife does occur, but this disturbance is generally short-term and adequate habitat occurs in adjacent areas. Loss of plants from foot traffic is minor, or temporary, since hunting occurs mainly after the growing season.

Conflicts between hunters are localized and are addressed through law enforcement, public education, and continuous review and updating to State and refuge hunting regulations. Conflicts

between other various user groups are minor given the season of the year for hunting, the location of most hunting away from public use facilities, and seasonal area closures.

Recreational hunting of white-tailed deer will be subject to the stipulations listed, and will not interfere with the primary purposes for which the refuge was established. A public deer hunt on Wallops Island NWR is considered a feasible and cost effective means of improving habitat quality, especially for forest understory, migratory songbirds, and for maintaining structural and species diversity on the refuge. In addition, it is believed that by instituting a deer hunt, incidences of vehicle-deer and aircraft-deer strikes on the neighboring State Route 175 and WFF will be reduced over time.

This activity will not materially interfere with or detract from the mission of the Refuge System or purposes for which the refuge was established.

Signature: Refuge Manager: _____
(Signature and Date)

Concurrence: Regional Chief: _____
(Signature and Date)

Mandatory 15-year re-evaluation date: _____
(Date)

LITERATURE CITED:

Behrend, D.F., G.F. Mattfield, W.C. Tierson and J.E. Wiley. 1970. Deer density control for comprehensive forest management. J. Forestry. 68:695-700.

Cullen, R. 1985. Rationing recreational use of public land. *J. Environ. Manage*. 21:213-224.

Klein, M.L. 1989. Effects of high levels of human visitation on foraging waterbirds at J.N. "Ding" Darling NWR, Sanibel, FL. Final report to USFWS. 103 pp.

Laskowski, H., T. Leger, J. Gallegos, and J. James. 1993. Behavior response of greater yellowlegs, snowy egrets, and mallards to human disturbance at Back Bay National Wildlife Refuge, VA. USFWS, Final report RMS 51510-01-92. Cambridge, MD. 31 pp.

Morton, J. M. 1987. Habitat use and energetics of American black ducks wintering at Chincoteague, VA. M.S. Thesis. VPI&SU, Blacksburg, VA. 147 pp.

Purdy, K.G., G.R. Goff, D.J. Decker, G.A. Pomerantz, and N.A. Connelly. 1987. A guide to managing human activity on National Wildlife Refuges. Human Dimensions Research Unit, Cornell Univ., Ithaca, NY. 34 pp.

Tilghman, N.G. 1989. Impacts of white-tailed deer on forest regeneration in northwestern PA. J. Wildl. Manage. 53:524-532

COMPATIBILITY DETERMINATION

USE: Research and Studies Conducted by non-USFWS Staff

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) An Act Authorizing the Transfer of Certain Real Property for Wildlife {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 (An Act Authorizing the Transfer of Certain Real Property for Wildlife).

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.

DESCRIPTION OF USE:

(a) What is the use? Is the use a priority public use?
The use is research conducted by agencies, organizations, and other research entities other than U.S. Fish and Wildlife Service (USFWS) staff on the refuge. Research is the planned, organized, and systematic gathering of data to discover or verify facts.

This determination covers low or no-impact research projects; namely, those projects with methods that only have a minimal potential to adversely impact cultural resources, water, soils, or native wildlife and plants. This is not an all-inclusive list, but examples of the types of research that may be allowed include: mist-netting for banding or tagging birds, point count surveys, fish and amphibian tagging, electrofishing, radio-telemetry tracking, use of cameras and recorders, use of live or other passive traps, or non-destructive searches of nests, dens, or burrows.

Research activities allowed under this determination must not result in long-term, negative alterations to wildlife behavior (e.g. result in wildlife leaving previously occupied areas for long periods; modifying their habitat use; or, causing nest or young abandonment). No project may degrade wildlife habitat, including vegetation, soils, and water. Research associated activities that would generally not be allowed include, but are not limited to, those that would result in soil compaction or erosion, degrade water quality, remove or destroy vegetation, involve off-road vehicle use, collect and remove animals or whole native plants, cause public health or safety concerns, or result in conflicts with other compatible refuge uses.

Refuge support of research directly related to refuge goals and objectives may take the form of funding, in-kind services such as housing or use of other facilities, vehicles, boats, or equipment, direct staff assistance with the project in the form of data collection, provision of historical records, conducting of management treatments, or other assistance as appropriate.

While we will actively promote research projects that directly relate to knowledge and management of refuge resources, we also recognize that Chincoteague National Wildlife Refuge (NWR) and Wallops Island NWR lie in a unique geographic location and its secure nature offers significant opportunities to other federal agencies to fulfill their missions. Although these agencies' interests are not always closely aligned with the refuge's purposes or the Refuge System mission, the National Aeronautics and Space Administration (NASA), U.S. Geological Survey (USGS), United States Coast Guard (USCG), National Oceanic and Atmospheric Administration (NOAA), and the Department of the Navy each have an interest in conducting nationally important research on the refuge. This research typically involves space exploration, geologic or atmospheric studies, or is important for national defense or homeland security operations. For these reasons, research proposals from these federal agencies will be considered by the refuge manager even if they do not contribute directly to refuge needs. Research proposals from these agencies are subject to all the same considerations and stipulations found in this determination, such as the condition that all research have low or no-impact to refuge resources and that there be no conflicts with other compatible refuge uses. Non-wildlife or habitat research proposals from agencies other than those mentioned above will be evaluated separately.

Research conducted by non-USFWS staff is not a priority public use of the National Wildlife Refuge System (Refuge System) under the National Wildlife Refuge System Administration Act of 1966 (16 U.S.C. 668dd-668ee) and the Refuge System Improvement Act of 1997 (Public Law 105-57).

(b) Where would the use be conducted?

Wallops Island National Wildlife Refuge (NWR) encompasses 373 acres of which 195 acres are salt marsh, 121 acres are forest, and 57 acres are old-field/early successional forests. Loblolly pine is the dominant species in the forest habitat, secondary components include: tulip poplar, red maple, southern red oak, wild cherry, dogwood sassafras, and sweet gum. Understory includes: American holly, spicebush, Devil's walking stick 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 with an unusual combination of environmental conditions for the mid-Atlantic (Virginia Department of Conservation and Recreation (VDCR) 2001). The sea level fen is a globally significant (G1) community type (Fleming and Patterson 2010); only four occur in Virginia, all of them in Accomack County (VDCR 2001). Lucky Boy Fen is located just above highest tide levels, at the base of a slope where abundant groundwater discharges. It is less than one-half acre in size, but supports six rare plant species.

Research locations will vary depending on the individual research project that is proposed. A specific research project is usually limited to a particular location, habitat type, plant, or wildlife species. On occasion, research projects will encompass an assemblage of habitat types, plants, or wildlife. The research location will be limited to those areas of the refuge that are absolutely necessary to conduct the research project. The refuge may limit areas available to research as necessary to ensure the protection of Federal trust resources, or to reduce conflict with other compatible refuge uses. The methods and routes of access to study locations will be identified by refuge staff.

(c) When would the use be conducted?

The timing of the research may depend entirely on the individual research project that is being conducted. Scientific research will be allowed to occur on the refuge throughout the year. An individual research project could be short-term in design, requiring only one or two visits over the course of a few days, or be a multiple year study that may require regular visits to the study site. The timing of each individual research project will be limited to the minimum required to complete the project. If a research project occurs during the refuge hunting season, special precautions will be required and enforced to ensure safety. The refuge manager would approve the timing (e.g., project length, seasonality, time of day) of the research prior to the start of the project to minimize impacts to wildlife and habitats, ensure safety, and reduce conflicts with other compatible refuge uses.

(d) How would the use be conducted?

The objectives, methods, and approach of each research project will be carefully scrutinized by the refuge manager before it will be allowed on the refuge. Only low or no-impact research activities, such as those listed under section (a) above, are covered under this determination.

Research projects must have a USFWS-approved study plan and protocol. A detailed research proposal that follows the refuge's study proposal guidelines (see attachment 1) is required from parties interested in conducting research on the refuge. Each research proposal request will be considered, and if determined appropriate and compatible, will be issued a special use permit

(SUP) by the refuge manager that includes the stipulations in this determination. The refuge manager will use sound professional judgment and ensure that the request will not materially interfere with or detract from the fulfillment of the Refuge System mission or the purpose(s) of the refuge. Before initiating a research project that involves federally listed endangered or threatened species, an interagency Section 7 consultation should be completed.

If approved, multi-year research projects will be reviewed annually to ensure that they are meeting their intended design purposes, that reporting and communicating with refuge staff is occurring, and that projects continue to be consistent with the mission of the Refuge System and purposes for which the refuge was established.

If the refuge manager decides to deny, modify, or halt a specific research project, the refuge manager will explain the rationale and conclusions supporting their decision in writing. The denial or modification to an existing study will generally be based on evidence that the details of a particular research project may:

- Negatively impact water, soils, native fish, wildlife, and habitats or cultural, archaeological, or historical resources beyond the low or no-impact standard.
- Detract from fulfilling the refuge's purposes or conflict with refuge goals and objectives.
- Raise public health or safety concerns.
- Conflict with other compatible refuge uses.
- Not be manageable within the refuge's available staff or budget time.
- Deviate from the approved study proposal such that impacts to refuge resources are more severe or extensive than originally anticipated.

This determination makes clear that research should not materially interfere with or detract from the refuge's purposes or the Refuge System mission.

(e) Why is this use being proposed?

Scientific research, including inventory and monitoring projects, are an integral part of refuge management. Quality research provides critical information for establishing baseline information on refuge resources and evaluating management effects on wildlife and habitat. Research findings can inform, strengthen, and improve future refuge management decisions, as well as inform management decisions on other ownerships with Federal trust resources in the Delmarva Peninsula and possibly elsewhere in the Northeast Region. For example, past projects on the refuge have studied federally listed species, such as piping plover, red knot, Delmarva Peninsula fox squirrel, loggerhead sea turtle, and other species of conservation concern, such as American oystercatcher and saltmarsh sparrow. Research projects may also include evaluating habitat management treatments and the associated wildlife community response, as well as, measures of impacts from public uses on refuge lands.

The refuge manager would particularly encourage research supporting approved refuge goals and objectives that clearly improves land management decisions related to Federal trust resources, helps evaluate or demonstrate state-of-the art techniques, and/or helps address or adapt to changing climate and land use impacts. Research conducted by other federal agencies that is not refuge resource based may be allowed for instances of national significance to space exploration, geologic or atmospheric studies, or because it is important for national defense or homeland security operations.

AVAILABILITY OF RESOURCES:

The resources necessary to provide and administer this use are available within current and anticipated refuge budgets. The bulk of the cost for research is incurred in staff time to review research proposals, coordinate with researchers, and write SUPs. In some cases, a research project may only require 1 day of staff time to write a SUP. In other cases, a research project may take many weeks, as the refuge staff must coordinate with students and advisors and accompany researchers' onsite visits. This refuge is managed as a satellite of Chincoteague NWR. Therefore, all funding and staff time spent reviewing research proposals and issuing permits is administered by Chincoteague NWR. These responsibilities are accounted for in budget and staffing plans. We estimate the annual costs associated with the administration of this use.

Review proposals, coordinate with researchers
(Refuge Biologist): $6,000

Review proposals, issue SUPs
General coordination (Refuge Manager): $4,000

Vehicle, equipment, housing maintenance
(Maintenance Worker): $3,000

Total Annual Cost of Program: $13,000
We do not anticipate charging fees.

ANTICIPATED IMPACTS OF THE USE:

Disturbance to wildlife, vegetation, water, soils, or cultural resources could occur while researchers are accessing study sites on vehicles or by foot, or while they are engaged in their project. The presence of researchers could also indirectly disturb wildlife. Potential impacts include:

- Trampling, damage, and killing of vegetation from walking off-trail (Kuss 1986, Roovers et al. 2004, Hammitt and Cole 1998).

- Soil compaction, soil erosion, and changes in hydrology from hiking on and off trail (Kuss 1986, Roovers et al. 2004).
- Disturbance to wildlife that causes shifts in habitat use, abandonment of habitat, increased energy demands on affected wildlife, changes in nesting and reproductive success, and singing behavior (Knight and Cole 1991, Miller et al. 1998, Shulz and Stock 1993, Gill et al. 1996, Arrese 1987, Gill et al. 2001).

Overall, we expect that these impacts would be negligible because of the low number of researchers and because, under this determination, only low or no-impact projects would be allowed. As indicated under (a) above, low impact projects are those that would only minimally impact cultural resources, water, soils, or native wildlife and plants, and would not result in long-term, negative alterations to species' behavior, or their habitat, including vegetation, soils, and water. Research would only be conducted in approved locations and at approved times of day and season to minimize impacts to sensitive habitats and wildlife.

Animals may be temporarily disturbed during direct or remote observation, telemetry, capture (e.g., mist-netting), or banding. In rare cases, direct injury or mortality could result as an unintended result of research activities. Mist-netting and banding, which are common research methods, can cause stress, especially when birds are captured, banded, and weighed. In very rare cases, birds have been injured or killed during mist netting, or killed when predators reach the netted birds before researchers (Spotswood et al. 2012). To minimize the potential for injuries, researchers should be properly trained (Fair et al. 2010, Spotswood et al. 2012).

The U.S. Department of Agriculture's Animal Welfare Information Center maintains a website with resources to help minimize stress, injury, and mortality of wildlife in field studies at: *https://awic.nal.usda.gov/research-animals/wildlife-field-studies*.

Researchers may also inadvertently damage plants (e.g. via trampling or equipment use) during the research project. To minimize impacts, the SUP will outline how researchers are allowed to access their study sites and use equipment to minimize the potential for impacts to refuge vegetation, soils, and water. We would not allow the collection and removal, or permanent damage, of any native plants under this determination.

Overall, allowing well-designed, properly reviewed, low or no-impact research to be conducted by non-USFWS personnel is likely to have very little negative impact on cultural resources, water, soils, or wildlife populations and habitats. We anticipate research will only have negligible to minor impacts to refuge wildlife and habitats because it will only be carried out after the refuge approves a detailed project proposal and issues a SUP including the stipulations in this determination to ensure compatibility. These stipulations are designed to help ensure each project minimizes impacts to refuge cultural resources, wildlife, vegetation, soils, and water.

We also anticipate only minimal impacts because USFWS staff will supervise this activity, and it will be conducted in accordance with refuge regulations. In the event of persistent disturbance to refuge resources, the activity will be further restricted or discontinued. If the research project is conducted with professionalism and integrity, potential temporary or minor adverse impacts are likely to be outweighed by the knowledge contributed to our understanding of refuge resources and our management effects on those resources, as well as the opportunity to inform, strengthen, and improve future refuge management decisions.

PUBLIC REVIEW AND COMMENT:

This compatibility determination will have a 30-day review period with the final Chincoteague and Wallops Island NWRs CCP/EIS, and the record of decision published in the Federal Register. We will also inform the public through local media releases and our website.

DETERMINATION (CHECK ONE BELOW):

_____Use is not compatible

__X___Use is compatible, with the following stipulations

STIPULATIONS NECESSARY TO ENSURE COMPATIBILITY:

- Only low or no-impact projects are covered under this determination. Low impact projects, as indicated under (a) above, are those that would only have a minimal potential to impact cultural resources, water, soils, or native wildlife and plants. No project should result in long-term negative alterations to wildlife behavior (e.g. result in wildlife leaving previously occupied areas for a long term; modifying their habitat use within their range; or, causing nest or young abandonment). No project should degrade wildlife habitat, including vegetation, soils, and water. Nest, dens, and burrows must not be harmed. No research activities should result in soil compaction or erosion, degrade water quality, remove or destroy vegetation, involve off-road vehicle use, or result in collection and removal of animals or whole native plants.

- Research would only be conducted in USFWS-approved locations, using approved modes of access, and conducted only after the timing, season, duration, numbers of researchers, and areas open and closed is approved. Sensitive wildlife habitat areas will be avoided unless sufficient protection, approved by the USFWS, is implemented to limit the area and/or resources potentially impacted by the proposed research.

- If a research project occurs during the refuge hunting season, special precautions will be required and enforced to ensure public health and safety, and otherwise reduce conflicts with other compatible refuge uses.

- The USFWS will require modifications to research activities, including temporarily closing areas, or changing methods, when warranted, to avoid harm to sensitive wildlife and habitat when unforeseen impacts arise.

- All researchers will be required to submit a detailed research proposal following the refuge's study proposal guidelines (attachment 1) and USFWS Policy (FWS Refuge Manual Chapter 4 Section 6). The refuge must be given at least 45 days to review proposals before initiation of research. Proposals will include obligations for regular progress reports and a final summary document including all findings.

- The criteria for evaluating a research proposal, outlined in the "Description of Use" section (a) above, will be used when determining whether a proposed study will be approved on the refuge. Projects could be denied if they:

    - Will adversely affect native fish, wildlife, and habitats or cultural, archaeological, or historical resources beyond the low or no-impact standard.
    - Materially interfere with or detract from fulfilling the refuge's purposes or conflicts with refuge goals and objectives.
    - Cause public health or safety concerns.
    - Conflict with other compatible refuge uses.
    - Are not manageable within the refuge's available staff or budget time.

- Proposals will be prioritized and approved based on need, benefit to refuge resources, and the level of refuge funding required. USFWS experts, State agencies, or academic experts may be asked to review and comment on proposals.

- If proposal is approved, a SUP will be issued. The SUP will contain this determination's stipulations as well as project-specific terms and conditions that the researcher(s) must follow relative to the activities planned (e.g., location, duration, seasonality, etc.).

- Researchers must comply with all state and Federal laws and follow all refuge rules and regulations. All necessary State and Federal permits must be obtained before starting research on the refuge (e.g., permits for capturing and banding birds). Any research involving federally listed species may require Section 7 consultation under the Endangered Species Act. Any research involving ground disturbance may require historic preservation consultation with the Regional Historic Preservation Officer and/or State Historic Preservation Officer.

- Researchers will mark any survey routes, plots, and points in as visually unobtrusive a manner as practical. No permanent markers or infrastructure can be left on the refuge.

- Researchers will use every precaution and not conduct activities that would cause damage to refuge property or present hazards or significant annoyances to other refuge visitors. Any damage should be reported immediately to the refuge manager.

- Researchers must not litter, or start or use open fires on refuge lands.

- Prior to initiating the project, all researchers handling wildlife must be properly trained to minimize the potential for harm to individual animals. In addition, a review of the U.S. Department of Agriculture's Animal Welfare Information Center website must be documented by the researcher with identification of practices that will be followed to help further minimize stress, injury, and mortality of wildlife. The website is reached at: *https://awic.nal.usda.gov/research-animals/wildlife-field-studies*.

- Researchers may not use any chemicals (e.g., herbicides to treat invasive plants) or hazardous materials without prior written consent of refuge manager (e.g., the type of chemical, timing of use, and rate of application). All activities will be consistent with USFWS policy and an approved refuge Pesticide Use Plan.

- Researchers will be required to take steps to ensure that invasive species and pathogens are not inadvertently introduced or transferred to the refuge and surrounding lands (e.g., cleaning equipment).

- Refuge staff will monitor research activities for potential impacts to refuge resources. The refuge manager may determine that previously approved research and SUPs be modified or terminated due to observed impacts that are more severe or extensive than originally anticipated. The refuge manager will also have the ability to cancel a SUP if the researcher is not in compliance with the stated conditions.

- Researchers must have the SUP in their possession when engaged in research activities and will present it to refuge officials and State and Federal law enforcement agents upon their request.

- Researchers will submit a final report to the refuge upon completion of their work. For long-term studies, interim progress reports may also be required. The refuge also expects that research findings will be published in peer-reviewed publications. The contribution of the refuge and the USFWS should be acknowledged in any publications. The SUP will identify a schedule for annual progress reports and the submission of a final report or scientific paper.

JUSTIFICATION:

The USFWS encourages quality, scientific research because it provides critical baseline information on Federal trust and other refuge resources and helps evaluate the management effects on those resources. Research results will also help inform, strengthen, and improve future refuge management decisions, as well as inform management decisions on other ownerships in the Delmarva Peninsula and possibly elsewhere in the Northeast Region. Due to its proximity to other federal research facilities and its secure location, Chincoteague and Wallops Island NWRs provide a unique setting to conduct other nationally significant scientific research in support of other federal agencies' missions.

Given the stipulations above, and given that only low or no-impact research projects would be conducted under this determination, we do not anticipate this activity will have greater than minor impact on refuge resources. Impacts, if they occur, would be confined in area, duration, and magnitude, with no long-term consequences predicted. Therefore, research conducted by non-USFWS personnel on Wallops Island NWR will not materially interfere with or detract from the mission of the Refuge System or the purposes for which the refuge was established.

This activity will not materially interfere with or detract from the mission of the Refuge System or purposes for which the refuge was established.

Signature: Refuge Manager: _____
(Signature and Date)

Concurrence: Regional Chief: _____
(Signature and Date)

Mandatory 10-year re-evaluation date: _____
(Date)

LITERATURE CITED:

Arrese, P. 1987. Age, intrusion pressure and defense against floaters by territorial male Song Sparrows. Animal Behavior 35:773-784.

Buckley, P. and F. Buckley. 1976. Guidelines for the protection and management of colonially nesting waterbirds. North Atlantic Regional Office. NPS. Boston, MA 54 pp.

Burger, J. and M. Gochfield. 1991. Human activity influence and diurnal and nocturnal foraging of Sanderlings. *Condor*. 93:259-265.

Ellison L.N. and L. Cleary. 1978. Effects of human disturbance on breeding of double-crested cormorants. *Auk* 95:510-517.

Erwin, R.M. 1989. Responses to human intruders by birds nesting in colonies: Experimental results and management guidelines. *Col. Waterbirds* 12(1):104-108.

Fair, J., E. Paul, and J. Jones, Eds. 2010. Guidelines to the Use of Wild Birds in Research. Washington, D.C. Ornithological Council.

Frederick, R.B. and M. W. Collopy. 1989. Researcher disturbance in colonies of wading birds: Effects of frequency of visit and egg-marking on reproductive parameters. *Col. Waterbirds*. 12(2):152-157.

Gill, J.A.,W.J. Sutherland, and A.R. Watkinson. 1996. A method to quantify the effects of human disturbance on animal populations. Journal of Applied Ecology 33:786-792.

Gutzwiller, K.J., R.T. Wiedenmann, K.L. Clements, and S.H. Anderson. 1994. Effects of human intrusion on song occurrence and singing consistence in subalpine birds. The Auk 111:28-37.

Gutzwillwer, K.J. and H. A. Stanley. 1999. Spatial extent of human-intrusion effects on subalpine bird distributions. *Condor*. 101: 378-389.

Gutzwiller, K.J., H.A. Marcum, H.B. Harvey, J.D. Roth, and S.H. Anderson. 1998. Bird tolerance to human intrusion in Wyoming montane forests. *Condor*. 100:519-527.

Hammitt, W.E., and D.N. Cole. 1998. Wildlife Recreation: Ecology and Management (2nd edition). New York: John Wiley & Sons. 361p.

Henson, P. and T.A. Grant. 1991. The effects on human disturbance of trumpeter swan breeding behavior. *Wildl. Soc. Bull.* 19:248-257.

Knight, R.L., and D.N. Cole. 1991. Effects of recreational activity on wildlife in wildlands. Transactions of the 56th North American Wildlife and Natural Resources Conference pp. 238-247.

Knight, R.L., and D.N. Cole. 1995. Wildlife responses to recreationists. Pages 51-69 in R.L. Knight and D.N. Cole, editors. Wildlife and recreationists: coexistence through management and research. Washington, DC. Island Press, 372 pp.

Miller, S.G., R.L. Knight, and C.K. Miller. 1998. Influence of recreational trails on breeding bird communities. Ecological Applications 8:162-169.

North American Banding Council. 2001. North American bander's manual. April 2001. Accessed May 2015 online at: http://www.nabanding.net/other-publications/.

Parsons, K.C. and J. Burger. 1982. Human disturbance and nestling behavior in black-crowned night herons. *Condor* 84: 184-187.

Safina, C. and J. Burger. 1983. Effects of human disturbance on reproductive success in the black skimmer. *Condor*. 85:164-171.

Schultz, R.D., and M. Stock. 1993. Kentish plovers and tourist-competitors on sandy coasts? Wader Study Group Bulletin 68 (special issue): 83-92.

Spotswood, E.N., K.R. Goodman, J. Carlisle, R.L. Cormier, D.L. Humple, J. Rousseau, S.L. Guers, and G.G. Barton. 2012. How safe is mist netting? Evaluating the risk of injury and mortality to birds. Methods in Ecology and Evolution 3:29-38.

Tremblay, J. and L.N. Ellison. 1979. Effects of human disturbance on breeding of black-crowned night-herons. *Auk* 96:364-369.

U. S. Fish and Wildlife Service. 1982. National Wildlife Refuge System - Refuge Manual Department of Interior, USFWS, Washington, DC.

Attachment 1. Chincoteague National Wildlife Refuge Complex Study Proposal Guidelines

A study proposal is a justification and description of the work to be done, and includes cost and time requirements. Proposals must be specific enough to serve as "blueprints" for the investigative efforts. Step-by-step plans for the actual investigations must be spelled out in advance, with the level of detail commensurate with the cost and scope of the project and the needs of management. Please submit proposals electronically as a Microsoft Word document or hardcopy to the refuge manager.

The following list provides a general outline of first order headings/sections for study proposals.

- Cover Page.
- Table of Contents (for longer proposals).
- Abstract.
- Statement of Issue.
- Literature Summary.
- Objectives/Hypotheses.
- Study Area.
- Methods and Procedures.
- Quality Assurance/Quality Control.
- Specimen Collections.
- Deliverables.
- Special Requirements, Concerns, Necessary Permits.
- Literature Cited.
- Peer Review.
- Budget.
- Personnel and Qualifications.

Cover Page

The cover page must contain the following information:

- Title of Proposal.
- Current Date.
- Investigator(s): name, title, organizational affiliation, address, telephone and fax numbers, and e-mail address of all investigators or cooperators.
- Proposed starting date.
- Estimated completion date.
- Total Funding Support Requested from the U.S. Fish and Wildlife Service (USFWS).
- Signatures of Principal Investigator(s) and other appropriate institutional officials.

Abstract

The abstract should contain a short summary description of the proposed study, including reference to major points in the Statement of Issue, Objectives, and Methods and Procedures sections.

Statement of Issue

Provide a clear, precise summary of the problem to be addressed and the need for its solution. This section should include statements of the importance, justification, relevance, timeliness, generality, and contribution of the study. Describe how any products will be used, including any anticipated commercial use. What is the estimated probability of success of accomplishing the objective(s) within the proposed timeframe?

Literature Summary

This section should include a thorough but concise literature review of current and past research that pertains to the proposed research, especially any pertinent research conducted within the Delmarva Peninsula, and specifically, on refuge units. A discussion of relevant legislation, policies, and refuge planning and management history, goals, and objectives should also be included.

Objectives/Hypotheses

A very specific indication of the proposed outcomes of the project should be stated as objectives or hypotheses to be tested. Project objectives should be measurable. Provide a brief summary of what information will be provided at the end of the study and how it will be used in relation to the problem. These statements should flow logically from the statement of issue and directly address the management problem.

Establish data quality objectives in terms of precision, accuracy, representativeness, completeness, and comparability as a means of describing how good the data need to be to meet the project's objectives.

Study Area

Provide a detailed description of the geographic area(s) to be studied and include a clear map delineating the proposed study area(s) and showing specific locations where work will occur.

Methods and Procedures

This section should describe as precisely as possible how the objectives will be met or how the hypotheses will be tested. Include detailed descriptions and justifications of the field and laboratory methodology, protocols, and instrumentation. Explain how each variable to be measured directly addresses the research objective/ hypothesis. Describe the experimental design, population, sample size, and sampling approach (including procedures for sub-sampling). Summarize the statistical and other data analysis procedures to be used. List the response

variables and tentative independent variables or covariates. Describe the experimental unit(s) for statistical analysis. Also include a detailed project time schedule that includes initiation, fieldwork, analysis, reporting, and completion dates.

Quality Assurance/Quality Control

Adequate quality assurance/quality control (QA/QC) procedures help insure that data and results are: credible and not an artifact of sampling or recording errors; of known quality; able to stand up to external scientific scrutiny; and accompanied by detailed method documentation. Describe the procedures to be used to insure that data meet defined standards of quality and program requirements, errors are controlled in the field, laboratory, and office, and data are properly handled, documented, and archived. Describe the various steps (e.g., personnel training, calibration of equipment, data verification and validation) that will be used to identify and eliminate errors introduced during data collection (including observer bias), handling, and computer entry. Identify the percentage of data that will be checked at each step.

Specimen Collections

Clearly describe the kind (species), numbers, sizes, and locations of animals, plants, rocks, minerals, or other natural objects to be sampled, captured, or collected. Identify the reasons for collecting, the intended use of all the specimens to be collected, and the proposed disposition of collected specimens. For those specimens to be permanently retained as voucher specimens, identify the parties responsible for cataloging, preservation, and storage and the proposed repository.

Deliverables

The proposal must indicate the number and specific format of hard and/or electronic media copies to be submitted for each deliverable. The number and format will reflect the needs of the refuge and the refuge manager. Indicate how many months after the project is initiated (or the actual anticipated date) that each deliverable will be submitted. Deliverables are to be submitted or presented to the refuge manager.

Deliverables that are required are as follows:

Reports and Publications

Describe what reports will be prepared and the timing of reports. Types of reports required in fulfillment of natural and social science study contracts or agreements include:

(1) Progress report(s) (usually quarterly, semiannually, or annually): may be required
(2) Draft final and final report(s): always required

A final report must be submitted in addition to a thesis or dissertation (if applicable) and all other identified deliverables. Final and draft final reports should follow refuge guidelines (see attchment).

In addition, investigators are encouraged to publish the findings of their investigations in refereed professional, scientific publications and present findings at conferences and symposia. The refuge manager appreciates opportunities to review manuscripts in advance of publication.

Data Files
Provide descriptions of any spatial (Geographic Information Systems; GIS) and non-spatial data files that will be generated and submitted as part of the research. Non-spatial data must be entered onto Windows CD-ROMs in Access or Excel. Spatial data, which includes GPS (Global Position System)-generated files, must be in a format compatible with the refuge's GIS system (ArcGIS 10.1 or later, or e00 format).

Metadata
For all non-spatial and spatial data sets or information products, documentation of information (metadata) describing the extent of data coverage and scale, the history of where, when, and why the data were collected, who collected the data, the methods used to collect, process, or modify/ transform the data, and a complete data dictionary must also be provided as final deliverables. Spatial metadata must conform to USFWS (Federal Geographic Data Committee; FDGC) metadata standards.

Oral Presentations
Three types of oral briefings should be included: pre-study, annual, and closeout.
These briefings will be presented to refuge staff and other appropriate individuals and cooperators. In addition, investigators should conduct periodic informal briefings with refuge staff throughout the study whenever an opportunity arises. During each refuge visit, researchers should provide verbal updates on project progress. Frequent dialogue between researchers and refuge staff is an essential element of a successful research project.

Specimens and Associated Project Documentation
A report on collection activities, specimen disposition, and the data derived from collections, must be submitted to the refuge following refuge guidelines.

Other:
Researchers must provide the refuge manager with all of the following:

1. Copies of field notes/ notebooks/ datasheets.
2. Copies of raw data (in digital format), including GIS data, as well as analyzed data.

3. Copies of all photos, slides (digital photos preferred), videos, and films.
4. Copies of any reports, theses, dissertations, publications or other material (such as news articles) resulting from studies conducted on refuge.
5. Detailed protocols used in study.
6. Aerial photographs.
7. Maps.
8. Interpretive brochures and exhibits.
9. Training sessions (where appropriate).
10. Survey forms.
11. Value-added software, software developed, and models.

Additional deliverables may be required of specific studies.

Special Requirements, Permits, and Concerns

Provide information on the following topics where applicable. Attach copies of any supporting documentation that will facilitate processing of your application.

Refuge Assistance

Describe any refuge assistance needed to complete the proposed study, such as use of equipment or facilities or assistance from refuge staff. It is important that all equipment, facilities, services, and logistical assistance expected to be provided by the USFWS be specifically identified in this section so all parties are in clear agreement before the study begins.

Ground Disturbance

Describe the type, location, area, depth, number, and distribution of expected ground- disturbing activities, such as soil pits, cores, or stakes. Describe plans for site restoration of significantly affected areas.

Proposals that entail ground disturbance may require an archeological survey and special clearance prior to approval of the study. You can help reduce the extra time that may be required to process such a proposal by including identification of each ground disturbance area on a U.S. Geological Survey (USGS) 7.5-minute topographic map.

Site Marking and/or Animal Marking

Identify the type, amount, color, size, and placement of any flagging, tags, or other markers needed for site or individual resource (e.g., trees) identification and location. Identify the length of time it is needed and who will be responsible for removing it. Identify the type, color, placement of any tags placed on animals (see SUP for requirements on marking and handling of animals).

Access to Study Sites

Describe the proposed method and frequency of travel to and within the study site(s). Explain any need to enter restricted areas. Describe duration, location, and number of participants, and approximate dates of site visits.

Use of Mechanized and Other Equipment
Describe any vehicles, boats, field equipment, markers, or supply caches by type, number, and location. You should explain the need to use these materials and if or how long they are to be left in the field.

Safety
Describe any known potentially hazardous activities, such as electro-fishing, scuba diving, whitewater boating, aircraft use, wilderness travel, wildlife capture or handling, wildlife or immobilization.

Chemical Use
Identify chemicals and hazardous materials that you propose using within the refuge. Indicate the purpose, method of application, and amount to be used. Describe plans for storage, transfer, and disposal of these materials and describe steps to remediate accidental releases into the environment. Attach copies of Material Safety Data Sheets.

Animal Welfare
If the study involves vertebrate animals, describe your protocol for any capture, holding, marking, tagging, tissue sampling, or other handling of these animals (including the training and qualifications of personnel relevant to animal handling and care). If your institutional animal welfare committee has reviewed your proposal, please include a photocopy of their recommendations. Describe alternatives considered, and outline procedures to be used to alleviate pain or distress. Include contingency plans to be implemented in the event of accidental injury to or death of the animal. Include state and Federal permits. Where appropriate, coordinate with and inform state natural resource agencies.

Literature Cited
List all reports and publications cited in the proposal.

Peer Review
Provide the names, titles, addresses, and telephone numbers of individuals with subject-area expertise who have reviewed the research proposal. If the reviewers are associated with the investigator's research institution or if the proposal was not reviewed, please provide the names, titles, addresses, and telephone numbers of three to five potential subject-area reviewers who are not associated with the investigator's institution. These individuals will be asked to provide reviews of the proposal, progress reports, and the draft final report.

Budget

The budget must reflect both funding and assistance that will be requested from the USFWS and the cooperator's contributions on an identified periodic (usually annual) basis.

Personnel Costs

Identify salary charges for principal investigator(s), research assistant(s), technician(s), clerical support, and others. Indicate period of involvement (hours or months) and pay rate charged for services. Be sure to include adequate time for data analysis and report writing and editing.

Fringe Benefits

Itemize fringe benefit rates and costs.

Travel

Provide separate estimates for fieldwork and meetings. Indicate number of trips, destinations, estimated miles of travel, mileage rate, air fares, days on travel, and daily lodging and meals charges. Vehicle mileage rate cannot exceed standard government mileage rates. Charges for lodging and meals are not to exceed the maximum daily rates set for the locality by the Federal Government.

Equipment

Itemize all equipment to be purchased or rented and provide a brief justification for each item costing more than $1,000. Be sure to include any computer-related costs. For proposals funded under USFWS agreement or contract, the refuge reserves the right to transfer the title of purchased equipment with unit cost of $1,000 or more to the Federal Government following completion of the study. These items should be included as deliverables.

Supplies and Materials

Purchases and rentals under $1,000 should be itemized as much as is reasonable.

Subcontract or Consultant Charges

All such work must be supported by a subcontractor's proposal also in accordance with these guidelines.

Specimen Collections

Identify funding requirements for the cataloging, preservation, storage, and analyses of any collected specimens that will be permanently retained.

Printing and Copying

Include costs for preparing and printing the required number of copies of progress reports, the draft final report, and the final report. In general, a minimum of two (2) copies of progress reports (usually due quarterly, semiannually, or as specified in agreement), the draft final report, and the final report are required.

Indirect Charges
Identify the indirect cost (overhead) rate and charges and the budget items to which the rate is applicable.

Cooperator's Contributions
Show any contributing share of direct or indirect costs, facilities, and equipment by the cooperating research institution.

Outside Funding
List any outside funding sources and amounts.

Personnel and Qualifications
List the personnel who will work on the project and indicate their qualifications, experience, and pertinent publications. Identify the responsibilities of each individual and the amount of time each will devote. A full vita or resume for each principal investigator and any consultants should be included here.

DRAFT AND FINAL REPORT GUIDELINES

Draft final and final reports should follow Journal of Wildlife Management format and should include the following sections:

Title Page
Abstract
Introduction/ Problem statement
Study Area
Methods (including statistical analyses)
Results
Discussion
Management Implications
Management Recommendations
Literature Cited

Appendix Q

George Gentry/ USFWS

American Pintail

Findings of Appropriateness

FINDING OF APPROPRIATENESS OF A REFUGE USE

Refuge Name: Chincoteague National Wildlife Refuge

Use: Commercial Filming, Still Photography, and Photography Workshops

This form is not required for wildlife-dependent recreational uses, take regulated by the State, or uses already described in a refuge CCP or step-down management plan approved after October 9, 1997.

Decision Criteria:	**YES**	**NO**
(a) Do we have jurisdiction over the use?	✓	
(b) Does the use comply with applicable laws and regulations (Federal, State, tribal, and local)?	✓	
(c) Is the use consistent with applicable Executive orders and Department and Service policies?	✓	
(d) Is the use consistent with public safety?	✓	
(e) Is the use consistent with goals and objectives in an approved management plan or other document?	✓	
(f) Has an earlier documented analysis not denied the use or is this the first time the use has been proposed?	✓	
(g) Is the use manageable within available budget and staff?	✓	
(h) Will this be manageable in the future within existing resources?	✓	
(i) Does the use contribute to the public's understanding and appreciation of the refuge's natural or cultural resources, or is the use beneficial to the refuge's natural or cultural resources?	✓	
(j) Can the use be accommodated without impairing existing wildlife-dependent recreational uses or reducing the potential to provide quality (see section 1.6D, 603 FW 1, for description), compatible, wildlife-dependent recreation into the future?	✓	

Where we do not have jurisdiction over the use ("no" to (a)), there is no need to evaluate it further as we cannot control the use. Uses that are illegal, inconsistent with existing policy, or unsafe ("no" to (b), (c), or (d)) may not be found appropriate. If the answer is "no" to any of the other questions above, we will **generally** not allow the use.

If indicated, the refuge manager has consulted with State fish and wildlife agencies. Yes ✓ No ___

When the refuge manager finds the use appropriate based on sound professional judgment, the refuge manager must justify the use in writing on an attached sheet and obtain the refuge supervisor's concurrence.

Based on an overall assessment of these factors, my summary conclusion is that the proposed use is:

Not Appropriate_____ **Appropriate** ✓

Refuge Manager:_____ Date:_____

If found to be **Not Appropriate**, the refuge supervisor does not need to sign concurrence if the use is a new use.

If an existing use is found **Not Appropriate** outside the CCP process, the refuge supervisor must sign concurrence.

If found to be **Appropriate**, the refuge supervisor must sign concurrence.

Refuge Supervisor:_____ Date:_____

A compatibility determination is required before the use may be allowed.

FWS Form 3-2319
02/06

Justification for a Finding of Appropriateness of a Refuge Use

Refuge Name: Chincoteague National Wildlife Refuge

Use: Commercial Filming, Still Photography, and Photography Workshops

Narrative:
Commercial photography has the potential to inspire and educate the public about the Refuge System, natural habitats, and wildlife. Wildlife photography is a priority wildlife-dependent use for the Refuge System through which the public can develop an appreciation for fish and wildlife (Executive Order 12996, March 25, 1996 and the National Wildlife Refuge System Administration Act of 1966, as amended by the National Wildlife Refuge System Improvement Act of 1997 (Public Law 105-57)). The Service's policy is to provide expanded opportunities for wildlife-dependent uses when compatible and consistent with sound fish and wildlife management, ensuring that they receive enhanced attention during planning and management.

Specific refuge regulations address equity and quality of opportunities for visitors and help safeguard refuge habitats. Impacts from this proposal, short-term and long-term, direct, indirect, and cumulative, are expected to be minor and are not expected to diminish the value of the refuge for its stated objectives.

Stipulations as described in the Compatibility Determination for this use will ensure proper control of the means of use and provide management flexibility should detrimental impacts develop. Allowing this use also furthers the mission of the National Wildlife Refuge System by providing renewable resources for the benefit of the American public while conserving fish, wildlife, and plant resources on the refuge.

This activity will not materially interfere with or detract from the mission of the Refuge System or purposes for which the refuge was established. In addition, this activity will contribute to one or more purposes of the refuge or Refuge System.

FINDING OF APPROPRIATENESS OF A REFUGE USE

Refuge Name: Chincoteague National Wildlife Refuge

Use: Grazing of Chincoteague Ponies

This form is not required for wildlife-dependent recreational uses, take regulated by the State, or uses already described in a refuge CCP or step-down management plan approved after October 9, 1997.

Decision Criteria:	YES	NO
(a) Do we have jurisdiction over the use?	✓	
(b) Does the use comply with applicable laws and regulations (Federal, State, tribal, and local)?	✓	
(c) Is the use consistent with applicable Executive orders and Department and Service policies?	✓	
(d) Is the use consistent with public safety?	✓	
(e) Is the use consistent with goals and objectives in an approved management plan or other document?	✓	
(f) Has an earlier documented analysis not denied the use or is this the first time the use has been proposed?	✓	
(g) Is the use manageable within available budget and staff?	✓	
(h) Will this be manageable in the future within existing resources?	✓	
(i) Does the use contribute to the public's understanding and appreciation of the refuge's natural or cultural resources, or is the use beneficial to the refuge's natural or cultural resources?		✓
(j) Can the use be accommodated without impairing existing wildlife-dependent recreational uses or reducing the potential to provide quality (see section 1.6D, 603 FW 1, for description), compatible, wildlife-dependent recreation into the future?	✓	

Where we do not have jurisdiction over the use ("no" to (a)), there is no need to evaluate it further as we cannot control the use. Uses that are illegal, inconsistent with existing policy, or unsafe ("no" to (b), (c), or (d)) may not be found appropriate. If the answer is "no" to any of the other questions above, we will **generally** not allow the use.

If indicated, the refuge manager has consulted with State fish and wildlife agencies. Yes ✓ No ___

When the refuge manager finds the use appropriate based on sound professional judgment, the refuge manager must justify the use in writing on an attached sheet and obtain the refuge supervisor's concurrence.

Based on an overall assessment of these factors, my summary conclusion is that the proposed use is:

Not Appropriate_____ **Appropriate** ✓

Refuge Manager:_____ Date:_____

If found to be **Not Appropriate**, the refuge supervisor does not need to sign concurrence if the use is a new use.

If an existing use is found **Not Appropriate** outside the CCP process, the refuge supervisor must sign concurrence.

If found to be **Appropriate**, the refuge supervisor must sign concurrence.

Refuge Supervisor:_____ Date:_____

A compatibility determination is required before the use may be allowed.

FWS Form 3-2319
02/06

Justification for a Finding of Appropriateness of a Refuge Use

Refuge Name: Chincoteague National Wildlife Refuge

Use: Grazing of Chincoteague Ponies

Narrative:
The Chincoteague ponies are important assets to the local communities, evoking a deeply meaningful sense of place and generating both economic and environmental benefits.

The Chincoteague ponies have long been a part of Assateague Island's history from the time the Eastern Shore was settled during the early 1600's through today. In 1947, the Chincoteague ponies reaped national and international attention with Marguerite Henry's children's classic, *Misty of Chincoteague*. The later movie version in 1961 further heightened the popularity of the authentic island pony and its lineage. To children and adults, "Misty of Chincoteague" is an iconic symbol of the spirited ponies freely roaming on Assateague Island.

The Assateague Island recreational beach, the ponies, and the Refuge are the Town of Chincoteague and Accomack County's major tourist attractions. Every year the Refuge experiences between 1.2 and 1.5 million visits. This makes the Refuge one of the top five most visited National Wildlife Refuges in America. Due to Refuge related tourism, over $100 million dollars is spent in the regional economy for lodging, meals, gasoline, souvenirs, recreation, and other items.

In 2010, the town completed a visitor survey. Eighty percent (80%) of Chincoteague visitors selected Assateague Beach as their top destination. Viewing the wild ponies consistently ranked among the top three activities most important to visitors.

By allowing the use described in this determination, the visiting public, who might come just to see these world famous ponies, will also be exposed to natural resource related subjects and therefore, will have a better understanding and appreciation for wildlife, the cultural history of the Refuge, and the importance of the National Wildlife Refuge System. One of the secondary goals of the National Wildlife Refuge System is to provide opportunities for the public to develop an understanding and appreciation for wildlife wherever those opportunities are compatible. The draw of the Chincoteague ponies will contribute to the achievement of the public use goals of the Chincoteague National Wildlife Refuge.

This activity will not materially interfere with or detract from the mission of the Refuge System or purposes for which the refuge was established. In addition, this activity will contribute to one or more purposes of the refuge or Refuge System.

FINDING OF APPROPRIATENESS OF A REFUGE USE

Refuge Name: Chincoteague National Wildlife Refuge

Use: Horseback Riding

This form is not required for wildlife-dependent recreational uses, take regulated by the State, or uses already described in a refuge CCP or step-down management plan approved after October 9, 1997.

Decision Criteria:	**YES**	**NO**
(a) Do we have jurisdiction over the use?	✓	
(b) Does the use comply with applicable laws and regulations (Federal, State, tribal, and local)?	✓	
(c) Is the use consistent with applicable Executive orders and Department and Service policies?	✓	
(d) Is the use consistent with public safety?	✓	
(e) Is the use consistent with goals and objectives in an approved management plan or other document?	✓	
(f) Has an earlier documented analysis not denied the use or is this the first time the use has been proposed?	✓	
(g) Is the use manageable within available budget and staff?	✓	
(h) Will this be manageable in the future within existing resources?	✓	
(i) Does the use contribute to the public's understanding and appreciation of the refuge's natural or cultural resources, or is the use beneficial to the refuge's natural or cultural resources?		✓
(j) Can the use be accommodated without impairing existing wildlife-dependent recreational uses or reducing the potential to provide quality (see section 1.6D, 603 FW 1, for description), compatible, wildlife-dependent recreation into the future?	✓	

Where we do not have jurisdiction over the use ("no" to (a)), there is no need to evaluate it further as we cannot control the use. Uses that are illegal, inconsistent with existing policy, or unsafe ("no" to (b), (c), or (d)) may not be found appropriate. If the answer is "no" to any of the other questions above, we will **generally** not allow the use.

If indicated, the refuge manager has consulted with State fish and wildlife agencies. Yes ✓ No ___

When the refuge manager finds the use appropriate based on sound professional judgment, the refuge manager must justify the use in writing on an attached sheet and obtain the refuge supervisor's concurrence.

Based on an overall assessment of these factors, my summary conclusion is that the proposed use is:

Not Appropriate_____ **Appropriate** ✓

Refuge Manager:_____ Date:_____

If found to be **Not Appropriate**, the refuge supervisor does not need to sign concurrence if the use is a new use.

If an existing use is found **Not Appropriate** outside the CCP process, the refuge supervisor must sign concurrence.

If found to be **Appropriate**, the refuge supervisor must sign concurrence.

Refuge Supervisor:_____ Date:_____

A compatibility determination is required before the use may be allowed.

FWS Form 3-2319
02/06

Justification for a Finding of Appropriateness of a Refuge Use

Refuge Name: Chincoteague National Wildlife Refuge

Use: Horseback Riding

Narrative:
Horseback riding has a long history on Assateague Island. Even before the establishment of the refuge in 1943, horseback riding was the preferred way of rounding-up livestock that was allowed to free range on the island. During World War II, the United States Coast Guard patrolled the Assateague Island shoreline by horseback looking for German U-boats or evidence of human activity on the beach. However, recreational horseback riding has always been a favorite pastime of local/county residents and has been permitted with varying degrees of restrictions since the establishment of the Refuge.

Historically, horseback riding was allowed on the Beach Road, Spur Road to the OSV zone and, depending on the time of year, the area of Toms Cove Hook that was open to off road vehicle use and along a small section of Tom's Cove beyond the Coast Guard Station. Currently, horseback riders park their trailers at or near the southern terminus of the National Park Service assigned area and access the horseback riding area at that location. Horseback riding occurs along the southernmost Atlantic Ocean beachfront of Assateague Island and in the same area known as the Over Sand Vehicle (OSV) zone. In order to protect beach nesting migratory birds, seasonal closures of the horseback riding/OSV zone will be implemented.

In the best professional opinion of the refuge law enforcement officers obtained from observation and direct contact, in 2012, approximately 140 riders participated in this activity. Although horseback riding is considered a non-wildlife oriented form of recreation, it does facilitate wildlife observation and photography. Use is low and occurs in an area used by OSVs which results in little additional disturbance.

FINDING OF APPROPRIATENESS OF A REFUGE USE

Refuge Name: Chincoteague National Wildlife Refuge

Use: Research and Studies Conducted by non-USFWS staff

This form is not required for wildlife-dependent recreational uses, take regulated by the State, or uses already described in a refuge CCP or step-down management plan approved after October 9, 1997.

Decision Criteria:	**YES**	**NO**
(a) Do we have jurisdiction over the use?	✔	
(b) Does the use comply with applicable laws and regulations (Federal, State, tribal, and local)?	✔	
(c) Is the use consistent with applicable Executive orders and Department and Service policies?	✔	
(d) Is the use consistent with public safety?	✔	
(e) Is the use consistent with goals and objectives in an approved management plan or other document?	✔	
(f) Has an earlier documented analysis not denied the use or is this the first time the use has been proposed?	✔	
(g) Is the use manageable within available budget and staff?	✔	
(h) Will this be manageable in the future within existing resources?	✔	
(i) Does the use contribute to the public's understanding and appreciation of the refuge's natural or cultural resources, or is the use beneficial to the refuge's natural or cultural resources?	✔	
(j) Can the use be accommodated without impairing existing wildlife-dependent recreational uses or reducing the potential to provide quality (see section 1.6D, 603 FW 1, for description), compatible, wildlife-dependent recreation into the future?	✔	

Where we do not have jurisdiction over the use ("no" to (a)), there is no need to evaluate it further as we cannot control the use. Uses that are illegal, inconsistent with existing policy, or unsafe ("no" to (b), (c), or (d)) may not be found appropriate. If the answer is "no" to any of the other questions above, we will **generally** not allow the use.

If indicated, the refuge manager has consulted with State fish and wildlife agencies. Yes ✔ No ___

When the refuge manager finds the use appropriate based on sound professional judgment, the refuge manager must justify the use in writing on an attached sheet and obtain the refuge supervisor's concurrence.

Based on an overall assessment of these factors, my summary conclusion is that the proposed use is:

Not Appropriate_____ **Appropriate** ✔

Refuge Manager:_____ Date:_____

If found to be **Not Appropriate**, the refuge supervisor does not need to sign concurrence if the use is a new use.

If an existing use is found **Not Appropriate** outside the CCP process, the refuge supervisor must sign concurrence.

If found to be **Appropriate**, the refuge supervisor must sign concurrence.

Refuge Supervisor:_____ Date:_____

A compatibility determination is required before the use may be allowed.

FWS Form 3-2319
02/06

Justification for a Finding of Appropriateness of a Refuge Use

Refuge Name: Chincoteague National Wildlife Refuge

Use: Research and Studies Conducted by non-USFWS staff

Narrative:
The USFWS encourages quality, scientific research because it provides critical baseline information on Federal trust and other refuge resources and helps evaluate the management effects on those resources. Research results will also help inform, strengthen, and improve future refuge management decisions, as well as inform management decisions on other ownerships in the Delmarva Peninsula and possibly elsewhere in the Northeast Region. Due to its proximity to other federal research facilities and its secure location, Chincoteague NWR provides a unique setting to conduct other nationally significant scientific research in support of other federal agencies' missions.

Generally, research projects utilize methods that only have a minimal potential to adversely impact cultural resources, water, soils, or native wildlife and plants. This is not an all-inclusive list, but examples of the types of research that may be allowed include: mist-netting for banding or tagging birds, point count surveys, fish and amphibian tagging, electrofishing, radio-telemetry tracking, use of cameras and recorders, use of live or other passive traps, or non-destructive searches of nests, dens, or burrows.

The objectives, methods, and approach of each research project will be carefully scrutinized by the refuge manager before it will be allowed on the refuge. The refuge manager would approve the timing (e.g., project length, seasonality, time of day) of the research prior to the start of the project to minimize impacts to wildlife and habitats, ensure safety, and reduce conflicts with other compatible refuge uses. If the research project is conducted with professionalism and integrity, potential temporary or minor adverse impacts are likely to be outweighed by the knowledge contributed to our understanding of refuge resources and our management effects on those resources, as well as the opportunity to inform, strengthen, and improve future refuge management decisions.

Approved research/study proposals will be issued a Special Use Permit (SUP) with appropriate restrictions to lessen disturbance to wildlife, identify restricted areas, and other limits as needed. Refuge staff will monitor research activities for potential impacts to the refuge and for compliance with conditions listed on the SUP. The refuge manager may determine that previously approved research and SUP be terminated due to observed impacts. The refuge manager will also will have the ability to cancel a SUP if the researcher is not in compliance with the stated conditions.

FINDING OF APPROPRIATENESS OF A REFUGE USE

Refuge Name: Chincoteague National Wildlife Refuge

Use: Shell Collecting

This form is not required for wildlife-dependent recreational uses, take regulated by the State, or uses already described in a refuge CCP or step-down management plan approved after October 9, 1997.

Decision Criteria:	YES	NO
(a) Do we have jurisdiction over the use?	✓	
(b) Does the use comply with applicable laws and regulations (Federal, State, tribal, and local)?	✓	
(c) Is the use consistent with applicable Executive orders and Department and Service policies?	✓	
(d) Is the use consistent with public safety?	✓	
(e) Is the use consistent with goals and objectives in an approved management plan or other document?	✓	
(f) Has an earlier documented analysis not denied the use or is this the first time the use has been proposed?	✓	
(g) Is the use manageable within available budget and staff?	✓	
(h) Will this be manageable in the future within existing resources?	✓	
(i) Does the use contribute to the public's understanding and appreciation of the refuge's natural or cultural resources, or is the use beneficial to the refuge's natural or cultural resources?		✓
(j) Can the use be accommodated without impairing existing wildlife-dependent recreational uses or reducing the potential to provide quality (see section 1.6D, 603 FW 1, for description), compatible, wildlife-dependent recreation into the future?	✓	

Where we do not have jurisdiction over the use ("no" to (a)), there is no need to evaluate it further as we cannot control the use. Uses that are illegal, inconsistent with existing policy, or unsafe ("no" to (b), (c), or (d)) may not be found appropriate. If the answer is "no" to any of the other questions above, we will **generally** not allow the use.

If indicated, the refuge manager has consulted with State fish and wildlife agencies. Yes ✓ No ___

When the refuge manager finds the use appropriate based on sound professional judgment, the refuge manager must justify the use in writing on an attached sheet and obtain the refuge supervisor's concurrence.

Based on an overall assessment of these factors, my summary conclusion is that the proposed use is:

Not Appropriate_____ **Appropriate** ✓

Refuge Manager:_____ Date:_____

If found to be **Not Appropriate**, the refuge supervisor does not need to sign concurrence if the use is a new use.

If an existing use is found **Not Appropriate** outside the CCP process, the refuge supervisor must sign concurrence.

If found to be **Appropriate**, the refuge supervisor must sign concurrence.

Refuge Supervisor:_____ Date:_____

A compatibility determination is required before the use may be allowed.

FWS Form 3-2319
02/06

Justification for a Finding of Appropriateness of a Refuge Use

Refuge Name: Chincoteague National Wildlife Refuge

Use: Shell Collection

Narrative:
Mollusks have probably been used by primates as a food source long before humans evolved. Shell collecting probably goes back as far as there have been humans living near beaches. Stone Age seashell necklaces have been found, sometimes in areas far from the ocean, indicating that they were traded. Shell jewelry is found at almost all archaeological sites, including at ancient Aztec ruins, digs in ancient China, and the Indus Valley. Shell collection has a long history on Assateague Island. It has historically taken place on the refuge since Native Americans used the area. Mollusks were used for food, their shells for tools and/or as currency. Since refuge establishment, visitors have wandered the beachfront in search of these treasures from the sea. Impacts are minimal as the beach is open to other recreational activity.

This use allows the collection of non inhabited-shells for personal enjoyment. Shell collecting would be authorized in areas open to public use, where it would not interfere with other public use activities. This is not a priority public use; however people participating in this activity are likely to experience other priority public uses like observing wildlife.

The current regulation allows the collection of 1 gallon/person/day of dead and/or unoccupied shells. This regulation is consistent with Assateague Island National Seashore (NPS) regulation concerning shell collection.

FINDING OF APPROPRIATENESS OF A REFUGE USE

Refuge Name: Chincoteague National Wildlife Refuge

Use: Horseshoe Crab Harvesting

This form is not required for wildlife-dependent recreational uses, take regulated by the State, or uses already described in a refuge CCP or step-down management plan approved after October 9, 1997.

Decision Criteria:	YES	NO
(a) Do we have jurisdiction over the use?	✓	
(b) Does the use comply with applicable laws and regulations (Federal, State, tribal, and local)?		✓
(c) Is the use consistent with applicable Executive orders and Department and Service policies?		✓
(d) Is the use consistent with public safety?	✓	
(e) Is the use consistent with goals and objectives in an approved management plan or other document?		✓
(f) Has an earlier documented analysis not denied the use or is this the first time the use has been proposed?		✓
(g) Is the use manageable within available budget and staff?		✓
(h) Will this be manageable in the future within existing resources?		✓
(i) Does the use contribute to the public's understanding and appreciation of the refuge's natural or cultural resources, or is the use beneficial to the refuge's natural or cultural resources?		✓
(j) Can the use be accommodated without impairing existing wildlife-dependent recreational uses or reducing the potential to provide quality (see section 1.6D, 603 FW 1, for description), compatible, wildlife-dependent recreation into the future?	✓	

Where we do not have jurisdiction over the use ("no" to (a)), there is no need to evaluate it further as we cannot control the use. Uses that are illegal, inconsistent with existing policy, or unsafe ("no" to (b), (c), or (d)) may not be found appropriate. If the answer is "no" to any of the other questions above, we will **generally** not allow the use.

If indicated, the refuge manager has consulted with State fish and wildlife agencies. Yes ✓ No ___

When the refuge manager finds the use appropriate based on sound professional judgment, the refuge manager must justify the use in writing on an attached sheet and obtain the refuge supervisor's concurrence.

Based on an overall assessment of these factors, my summary conclusion is that the proposed use is:

Not Appropriate ✓ **Appropriate**_____

Refuge Manager:_____ Date:_____

If found to be **Not Appropriate**, the refuge supervisor does not need to sign concurrence if the use is a new use.

If an existing use is found **Not Appropriate** outside the CCP process, the refuge supervisor must sign concurrence.

If found to be **Appropriate**, the refuge supervisor must sign concurrence.

Refuge Supervisor:_____ Date:_____

A compatibility determination is required before the use may be allowed.

FWS Form 3-2319
02/06

Justification for a Finding of Appropriateness of a Refuge Use

Refuge Name: Chincoteague National Wildlife Refuge

Use: Horseshoe Crab Harvesting

Narrative:

- The commercial harvest of horseshoe crabs is an economic use that takes place on tidal lands administered by the U.S. Fish and Wildlife Service (USFWS). In accordance with 16 U.S.C. 668 dd, 50 CFR, Subpart A, 29.1, entitled: *May we allow economic uses on national wildlife refuges?*, we may only authorize public or private economic use of the natural resources of any national wildlife refuge, in accordance with 16 U.S.C. 715s, where we determine that the use contributes to the achievement of the national wildlife refuge purposes or the National Wildlife Refuge System (Refuge System) mission. The commercial harvesting of horseshoe crabs does not contribute to the refuge's migratory bird purpose, does not contribute to the public's understanding and appreciation of the refuge's natural or cultural resources, and is not beneficial to refuge resources.
- In accordance with USFWS policy on appropriate refuge uses (603 FW 1), of the ten decision criteria used to determine appropriateness of horseshoe crab harvesting on Chincoteague National Wildlife Refuge (NWR), we answered "no" to seven.
- The refuge was established under 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). The harvesting of horseshoe crabs would directly contribute to a decline of spawning horseshoe crabs on refuge. A decline in horseshoe crabs, and in particular horseshoe crab eggs, would adversely impact use of the refuge by shorebirds.
- No Special Use Permit (SUP) to harvest horseshoe crabs from the refuge has ever been issued, nor has a request to harvest horseshoe crabs from the refuge ever been received. Therefore, it is an unauthorized activity.

The Atlantic States Marine Fisheries Commission has implemented a fishery management plan to regulate the harvest of horseshoe crabs with the goal of ensuring sustainable population levels. The science, quotas, and harvest regulations of horseshoe crab management are not the primary issues that the USFWS must address. Policy and law requires that "uses" taking place on national wildlife refuge lands and waters must be determined to be both "appropriate" and "compatible" with the primary purposes for which the refuge was established. A refuge use that results in the generation of a commodity that can be sold for income or revenue, or traded for goods or services, is considered a refuge management economic activity. The standard for allowing a refuge management economic activity on a national wildlife refuge is higher than other non-economic uses. In order to be appropriate and compatible, an economic activity on a

national wildlife refuge must contribute to the achievement of refuge purposes or the Refuge System mission.

Horseshoe crab harvesting is not identified as a priority public use of the Refuge System under the Refuge System Administration Act of 1966 (16 U.S.C. 668dd-668ee), as amended by the Refuge System Improvement Act of 1997 (Public Law 105-57). Harvesting horseshoe crabs from Chincoteague NWR has been found not appropriate. This use would not contribute to the achievement of the national wildlife refuge purposes or the Refuge System mission, and could, based on available information, contribute to a decline of horseshoe crabs on refuge. A decline in horseshoe crabs could negatively impact shorebirds by reducing available food supplies during critical migration periods.

FINDING OF APPROPRIATENESS OF A REFUGE USE

Refuge Name: Wallops Island National Wildlife Refuge

Use: Research and Studies Conducted by non-USFWS staff

This form is not required for wildlife-dependent recreational uses, take regulated by the State, or uses already described in a refuge CCP or step-down management plan approved after October 9, 1997.

Decision Criteria:	YES	NO
(a) Do we have jurisdiction over the use?	✓	
(b) Does the use comply with applicable laws and regulations (Federal, State, tribal, and local)?	✓	
(c) Is the use consistent with applicable Executive orders and Department and Service policies?	✓	
(d) Is the use consistent with public safety?	✓	
(e) Is the use consistent with goals and objectives in an approved management plan or other document?	✓	
(f) Has an earlier documented analysis not denied the use or is this the first time the use has been proposed?	✓	
(g) Is the use manageable within available budget and staff?	✓	
(h) Will this be manageable in the future within existing resources?	✓	
(i) Does the use contribute to the public's understanding and appreciation of the refuge's natural or cultural resources, or is the use beneficial to the refuge's natural or cultural resources?	✓	
(j) Can the use be accommodated without impairing existing wildlife-dependent recreational uses or reducing the potential to provide quality (see section 1.6D, 603 FW 1, for description), compatible, wildlife-dependent recreation into the future?	✓	

Where we do not have jurisdiction over the use ("no" to (a)), there is no need to evaluate it further as we cannot control the use. Uses that are illegal, inconsistent with existing policy, or unsafe ("no" to (b), (c), or (d)) may not be found appropriate. If the answer is "no" to any of the other questions above, we will **generally** not allow the use.

If indicated, the refuge manager has consulted with State fish and wildlife agencies. Yes ✓ No ___

When the refuge manager finds the use appropriate based on sound professional judgment, the refuge manager must justify the use in writing on an attached sheet and obtain the refuge supervisor's concurrence.

Based on an overall assessment of these factors, my summary conclusion is that the proposed use is:

Not Appropriate_____ **Appropriate** ✓

Refuge Manager:_____ Date:_____

If found to be **Not Appropriate**, the refuge supervisor does not need to sign concurrence if the use is a new use.

If an existing use is found **Not Appropriate** outside the CCP process, the refuge supervisor must sign concurrence.

If found to be **Appropriate**, the refuge supervisor must sign concurrence.

Refuge Supervisor:_____ Date:_____

A compatibility determination is required before the use may be allowed.

FWS Form 3-2319
02/06

Justification for a Finding of Appropriateness of a Refuge Use

Refuge Name: Wallops Island National Wildlife Refuge

Use: Research and Studies Conducted by non-USFWS staff

Narrative:
The U.S. Fish and Wildlife Service (USFWS) encourages quality, scientific research because it provides critical baseline information on Federal trust and other refuge resources and helps evaluate the management effects on those resources. Research results will also help inform, strengthen, and improve future refuge management decisions, as well as inform management decisions on other ownerships in the Delmarva Peninsula and possibly elsewhere in the Northeast Region. Due to its proximity to other federal research facilities and its secure location, Chincoteague and Wallops Island National Wildlife Refuges (NWRs) provide a unique setting to conduct other nationally significant scientific research in support of other federal agencies' missions.

Generally, research projects utilize methods that only have a minimal potential to adversely impact cultural resources, water, soils, or native wildlife and plants. This is not an all-inclusive list, but examples of the types of research that may be allowed include: mist-netting for banding or tagging birds, point count surveys, fish and amphibian tagging, electrofishing, radio-telemetry tracking, use of cameras and recorders, use of live or other passive traps, or non-destructive searches of nests, dens, or burrows.

The objectives, methods, and approach of each research project will be carefully scrutinized by the refuge manager before it will be allowed on the refuge. The refuge manager would approve the timing (e.g., project length, seasonality, time of day) of the research prior to the start of the project to minimize impacts to wildlife and habitats, ensure safety, and reduce conflicts with other compatible refuge uses. If the research project is conducted with professionalism and integrity, potential temporary or minor adverse impacts are likely to be outweighed by the knowledge contributed to our understanding of refuge resources and our management effects on those resources, as well as the opportunity to inform, strengthen, and improve future refuge management decisions.

Approved research/study proposals will be issued a Special Use Permit (SUP) with appropriate restrictions to lessen disturbance to wildlife, identify restricted areas, and other limits as needed. Refuge staff will monitor research activities for potential impacts to the refuge and for compliance with conditions listed on the SUP. The refuge manager may determine that previously approved research and SUP be terminated due to observed impacts. The refuge manager will also will have the ability to cancel a SUP if the researcher is not in compliance with the stated conditions.

Appendix R

USFWS

Brown pelican

Summary of Public Comments and USFWS Responses on the Draft Comprehensive Conservation Plan and Environmental Impact Statement for Chincoteague and Wallops Island National Wildlife Refuges

Appendix R
Summary of Public Comments and USFWS Responses on the Draft Comprehensive Conservation Plan and Environmental Impact Statement for Chincoteague and Wallops Island National Wildlife Refuges

Introduction

In May 2014, the U.S. Fish and Wildlife Service (USFWS, we, our) completed the draft comprehensive conservation plan and environmental impact assessment (draft CCP/EIS) for Chincoteague and Wallops Island National Wildlife Refuges (NWR, the refuge). The draft CCP/EIS outlines three alternatives for managing the refuge. Alternative B is identified as the "preferred alternative."

We initially released the draft CCP/EIS for 60 days of public review and comment from May 15, 2014 to July 14, 2014. In response to public requests, we extended that period another 30 days, to August 15, 2014. We held two public open house meetings in Chincoteague, and additional meetings in Melfa, Virginia and Pocomoke City, Maryland. As part of this public involvement process, USFWS also held a public hearing on June 26, 2014, from 6 p.m. to 9 p.m. at the Chincoteague Center with 28 people formally raising a variety of issues and concerns. We evaluated all the letters and e-mails sent to us during that comment period, along with comments recorded at our public hearing.

This document summarizes the public comments that raised issues and concerns within the scope of this final CCP/EIS and our responses to them. Based on our analysis in the draft CCP/EIS and our evaluation of those comments, we have modified alternative B, which remains our preferred alternative in the final CCP/EIS. Our modifications include additions, corrections, or clarifications of our preferred management actions. We have also determined that none of those modifications warrants our publishing a revised or amended draft before publishing the final CCP/EIS.

There are some important changes in the final:

- We revised alternative B, objective 6.5, to state that the assigned area (consisting of the 1-mile recreational beach, associated parking and new Visitor Contact Station (VCS)) would now be the recreational beach, associated parking and new VCS, then extend south 1 more mile to the terminus of Swan Cove Bike Trail (2 miles total), thus doubling the length of the assigned area.

- We have reconsidered our intent to close the Beach Road causeway across Toms Cove to all public access once other equivalent public access to the new recreational beach is provided (Alternative B, Section 2.5.3, and objectives 6.5 and 6.6). Oversand vehicles (OSV) and hiking access would continue via Beach Road across Toms Cove south to Fishing Point September 16 through March 14. Access for environmental education programs would require a permit. Beach Road would continue to be open to vehicles year-round as far as the vicinity of the South Pony Corral.

- We have revised the area for oversand vehicles (OSV) (Alternative B, objective 6.2). In the draft CCP/EIS, we had proposed expanding the OSV zone from the new recreational beach to Fishing Point on Toms Cove Hook. With the exception of the new ½-mile, year-round OSV zone (to facilitate priority uses) south of recreational beach, the entire OSV would have been immediately closed March 15 to September 15 or until the last shorebird fledged. We now propose to develop the new ½-mile, OSV zone to facilitate the six priority uses (March 15 through September 15) south of new recreational beach, and add this to the new assigned area. We would also continue current management of the Overwash and Hook area for shorebirds until the new recreational beach is established, at which time the March 15 through September 15 closure would go into effect. OSV access from September 16 to March 14 would continue via Beach Road.

- We have changed our strategy on the Toms Cove VCS, managed by the National Park Service (NPS). Instead of closing the Beach Road causeway and demolishing the VCS (to build a new VCS at the relocated beach area), the existing Toms Cove VCS would be open year-round for environmental education programs only, and maintained by NPS until it becomes unserviceable. We would still build and operate with NPS a new VCS at the relocated recreational beach site.

- We have revised our bike to beach access. Instead of eliminating the Swan Cove Trail and pursuing an alternative route north (objective 6.6), we will keep current access open via Swan Cove Trail and include the beach terminus within the new assigned area. We will not propose an alternative route north to the relocated public beach (e.g., from Wildlife Loop to Mallard (C Dike)).

- We have revised our proposal for access north via the Service Road. We will not eliminate all public access on the Service Road north of the new recreational beach; we now propose the Service Road would continue to be open year-round to hikers north to the refuge/National Seashore boundary.

- We modified language for launch viewing under Section 2.5.1. After an unmanned commercial rocket headed for the International Space Station to deliver supplies exploded just after launching on October 28, 2014, the future of access to the recreational beach for launch viewing is yet to be determined. However, the refuge would still like to work with the tourism industry, National Aeronautics and Space Administration (NASA), and the Virginia Commercial Space Flight Authority and Mid-Atlantic Regional Spaceport to provide safe access for public viewing of rocket launches from the NASA-Wallops Island launch complex. Visitor safety at the current recreational beach site during launches is of concern to the refuge, as well as NASA. Alternative viewing sites are available that pose less of a risk to viewers than the current recreational beach parking lot. Those alternatives will be assessed as potential launch viewing sites, in coordination with refuge law enforcement and NASA officials.

- Since release of the draft CCP/EIS, the status of two species of concern has changed. Red knot, a shorebird species, was proposed to be listed as threatened under the Endangered Species Act (ESA) during the planning process, and was finally listed as threatened in December 2014. The Delmarva Peninsula fox squirrel was proposed for delisting from the endangered species list in September 2014, but that action has not been finalized yet.

- Since release of the draft CCP/EIS we committed to a partnership to address coastal resiliency on the Eastern Shore of Virginia through the Mid-Atlantic Coastal Resiliency Institute (MACRI), which is "a multi-disciplinary institution dedicated to integrated climate change research with the goal of helping local and regional leaders make coastal communities and habitats more resilient through scaled science and research informing public policy. Its several partners provide specific expertise in environmental monitoring and forecasting, modeling about coastal vulnerability and risk assessment, and moreover access to climate change space-based data." The USFWS is committed to exploring the implementation of resiliency strategies informed by the latest science available.

- We combined the compatibility determinations from the draft CCP/EIS for "Research and Studies Conducted by Outside Agencies, Universities, and Others" and "Temporary/Short-term activities conducted by other Federal, State, or local governments" into a single new compatibility determination "Research and Studies Conducted by non-USFWS staff."

- A section of the Affected Environment (chapter 3) on cultural resources was inadvertently left out of the draft CCP/EIS. This section, which has been coordinated with the Virginia Department of Historic Resources, is included in the final CCP/EIS.

- We added a "significant concern" to Section 1.9. "*Public safety and community resilience to storm damage and flooding*" is a concern that arose primarily during the public comment period with release of the draft CCP/EIS.

Our Regional Director will issue a final record of decision (ROD), after

- We provide the final CCP/EIS to interested or affected parties for a 30-day period of review, and

- Our Regional Director reaffirms that the final CCP supports the purpose and need for the CCP, achieves the purposes for which the refuge was established, helps fulfill the mission of the National Wildlife Refuge System (Refuge System), and complies with all legal and policy mandates.

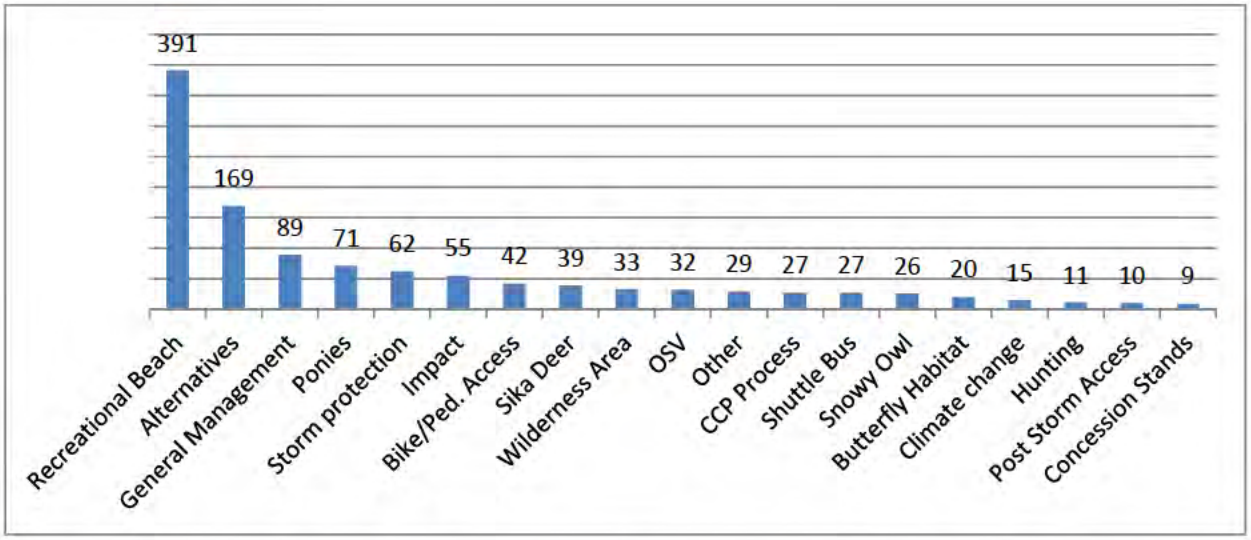
Once she has signed and dated the ROD, we will publish a notice of the availability of the final documents in the *Federal Register.* That notice will complete the planning phase of the CCP process, and we can begin its implementation phase.

Summary of Comments Received

A total of 236 emails and 94 letters were received, including official comments from the Town of Chincoteague, the Chincoteague Chamber of Commerce, The Nature Conservancy, NPS, Environmental Protection Agency (EPA), various departments from the Commonwealth of Virginia, and other local interest groups. In addition, a petition was submitted supporting Alternative "A plus," an alternative with elements of both alternative A and B, with approximately 600 individuals signing. Another petition supporting the preferred alternative (alternative B) was submitted with

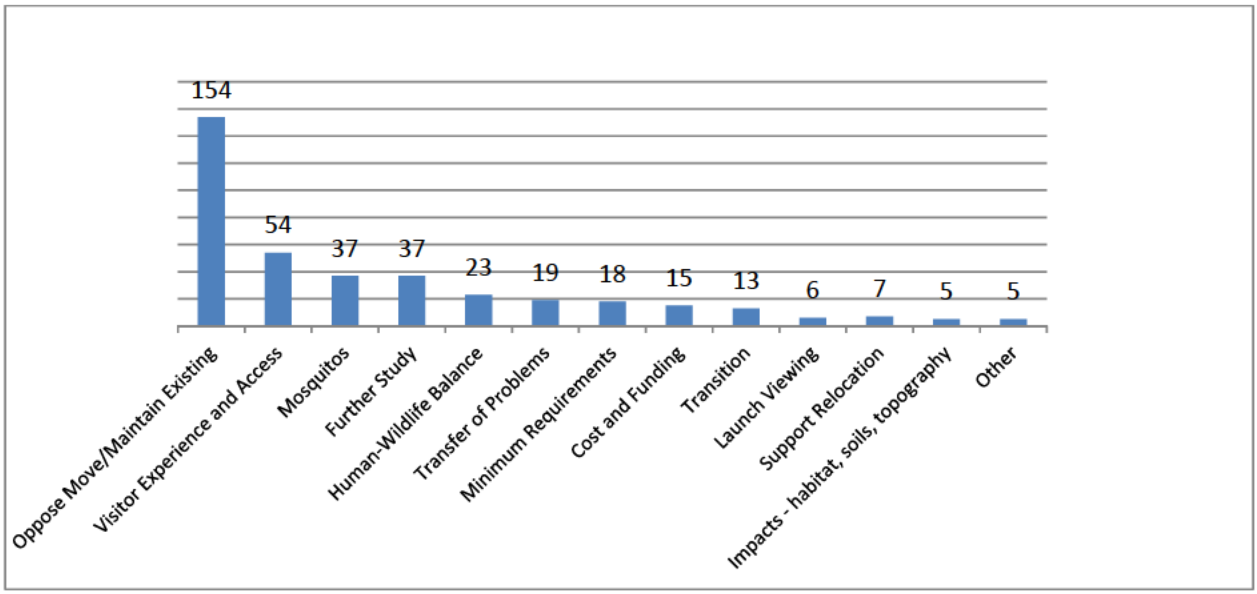
112 individuals signing. Figure R-1 below provides a general categorization of comments received by topic.

Figure R-1: General Categorization of Comments by Topic



The majority of comments received, approximately 391 as seen in Figure R-1 above, were related to the recreational beach. Specific comments were directed at beach access, beach nourishment, timing and funding, along with general questions about the proposed relocated beach. Many comments received were opposed to the proposed beach relocation or requested the beach be maintained at the current location. In addition, numerous comments were received regarding maintaining the overall visitor experience, beach access, and concerns over mosquitoes. Commenters also requested further study, noted their concern with human and wildlife interactions, citing a transfer of problems from the existing recreational beach location to the proposed site, and associated costs. See Figure R-2 below for a breakdown of comments on the recreational beach by sub-topic.

Figure R-2: Tally of Recreational Beach Sub-Topics



While comments in support or opposition to a particular alternative are not considered substantive comments, approximately 120 comments and 712 signatures from petitions were received in support for one of the alternatives. In addition to offering support for an alternative, several specific comments and questions were raised related to the preferred alternative addressing cost, timing of the beach relocation, and visitor experience or requested further study.

Overview of other comments:

- Eighty-nine comments were received that raised concerns or questions related to the general management of the refuge. These included comments related to habitat management, wildlife monitoring, piping plover date closure periods, predator control, and hunting.

- Approximately 62 comments were received requesting that the USFWS maintain dunes at southern Assateague Island in order to provide storm protection to Chincoteague Island. Several comments were received regarding post-storm beach access and questions related to climate change.

- Thirty-three comments were received related to the proposed wilderness area with a majority of those commenters expressing their opposition to the proposed wilderness area while several commenters supported the wilderness area.

- Fifty-five comments were received related to impacts which ranged from concerns related to habitat impacts, to shell fishing impacts or economic impacts as they pertained to the preferred alternative.

- Forty-two comments were received requesting greater access and improved trails for bike and pedestrian use throughout the refuge. In addition commenters also requested specific access to the new recreational beach via a pedestrian only trail.

- Thirty-two comments were received related to OSV use and generally requested expansion or restriction of OSV use on the refuge.

- Twenty-seven commenters were received related to the implementation of shuttle buses on the refuge. The majority of these comments were voicing opposition and a few commenters voiced support for the implementation of shuttle buses.

- The following comments were also submitted: 71 related to ponies, 39 to sika deer, 26 to snowy owls, and 20 to butterflies. These comments ranged from requests to improve habitat for butterflies and the snowy owl to opposition or support for the sika deer reduction component of the CCP. In addition, over 71 comments were received regarding the protection of the pony herd size and requested continued viewing access. 11 comments were also received directly related to hunting on the refuge. These comments ranged from general support or opposition to questions related to refuge access for non-hunters.

- Nine comments were received voicing support or opposition to concession stands at the recreational beach.

- Twenty-nine comments were received that did not fall into the aforementioned categories. These comments ranged from questions related to horseback riding, golf carts, dog access, tour buses, and other miscellaneous questions and comments.

We received a variety of letters from local, State, and Federal governmental agencies, including the following:

- Accomack County Board of Supervisors
- Accomack County Planning and Community Development Department
- Assateague Island National Seashore, National Park Service (NPS)
- Town of Chincoteague
- U.S. EPA, Region III
- Virginia Department Game and Inland Fisheries (DGIF)
- Virginia Department of Conservation and Recreation (DCR)
- Virginia Department of Environmental Quality (DEQ)
- Virginia Department of Forestry
- Virginia Department of Historic Resources
- Virginia Marine Resources Commission (VMRC)

We also received comments signed by representatives from the following organizations:

- Assateague Mobile Sportfishermen's Association
- Chincoteague Chamber of Commerce
- Chincoteague Volunteer Fire Company
- Eastern Shore of Virginia Tourism Commission
- Safari Club International
- The Nature Conservancy (TNC), VA Coast Reserve
- Virginia Eastern Shore Land Trust
- Virginia Society of Ornithology
- Virginia Tourism Corporation

In the discussions below, we address and respond to every substantive comment we received. Substantive comments are those that suggest our analysis is flawed in a specific way. Generally,

substantive comments meet at least one of the following criteria:

- Challenge the accuracy of information presented.
- Challenge the adequacy, methodology, or assumptions of the environmental or social analysis and supporting rationale.
- Present new information relevant to the analysis.
- Present reasonable alternatives, including mitigation, other than those presented in the document.

Our discussion does not include responses to non-substantive comments.

In order to facilitate our responses, we grouped similar comments together and organized them by subject heading. Directly beneath each subject heading, you will also see a list of unique letter identification (ID) numbers. Table R.1 at the end of this appendix relates each letter ID number to the name of the individual, agency, or organization that submitted the comment. The transcript from the public hearing of June 26, 2014, at the Chincoteague Center is also included at the end of this appendix as Attachment R-1.

In several instances, we refer to specific text in the draft CCP/EIS and indicate how the final CCP/EIS was changed in response to comments. The full versions of both the draft CCP/EIS and the final CCP/EIS are available online at: *http://www.fws.gov/northeast/chinco*). For a CD-ROM or a print copy, please contact staff at Chincoteague National Wildlife Refuge:

Chincoteague National Wildlife Refuge
8231 Beach Road
P.O. Box 62
Chincoteague Island, VA 23336-0062
Phone: 757/336 6122

USFWS Responses to Comments by Subject

Agencies

(Letter ID #1)

Comment: The following state agencies indicated they had no comment on the CCP/EIS: DEQ's Tidewater Regional Office Water Protection Permit program, VPDES, VPA, municipal separate stormwater systems (MS4), groundwater, Air Permit Program, and petroleum storage tank and compliance staff. DEQ's Division of Air Programs Coordination indicates that the Chincoteague and Wallops National Wildlife Refuges are in an ozone attainment area. DEQ's Tidewater Regional Office's Air Permit Program staff has no comments.

> Response: The USFWS thanks these agencies for reviewing the draft CCP/EIS and will continue to coordinate with each of them on issues within their jurisdiction.

Agency Coordination

Cooperating agencies

(Letter ID #37, 40, 78, 115, 128, 185, 312)

Comment: The Service has not engaged agencies or stakeholders that should have been engaged or did not properly engage agencies that should have had a more formal role in the CCP/EIS process. During the comment period, Accomack County requested designation as a cooperating agency under NEPA. Others noted that the NPS was not a cooperating agency to the CCP/EIS, and some feel there was insufficient public involvement.

> Response: The USFWS has worked diligently to engage a variety of agencies and stakeholders throughout the planning process, as documented in chapter 5. Guidance on designating cooperating agency status specifically mentions that the intent of elevating agencies to cooperating agency status is for those agencies with jurisdiction by law or special expertise, and that the most appropriate time for cooperating agency involvement is early in the NEPA process. The guidance also states that cooperating agency status "neither enlarges nor diminishes the decision-making authority of any agency involved in the NEPA process." We found no jurisdictional issues that involve the County. We do have jurisdictional ties to the NPS and the Commonwealth of Virginia. NPS, VMRC and VDGIF were members of the Core Planning Team for the draft CCP/EIS. It has been the practice of the USFWS to involve as many stakeholders as possible in our CCPs, albeit without the formality of cooperating agency status. We provided many opportunities for all governmental entities to share expertise and opinion throughout the NEPA process.

General

(Letter ID #185, 202, 336)

Comment: I urge the U.S. Fish and Wildlife Service to pause the process and reach out to experts in the U.S. Park Service, Army Corps of Engineers, NASA/Wallops' new MACRI, and VIMS to expand the CCP before choosing a new management plan. The final site for beach relocation should be selected with input (if not decision-making authority) from the Corps of Engineers.

> Response: We understand that the proposed relocation of the recreational beach requires significantly more detail before it could be implemented, and we plan to conduct another

NEPA analysis regarding the proposed relocation. We have invited local officials to participate closely in any future analysis and design, and have reached out to the agencies mentioned to also participate in that process. The final CCP could be subject to revisions at any time based on new information. At this point, we believe there is far more to be gained from proceeding with this process, and develop specific implementation strategies through another, more focused NEPA process that involves a high degree of public participation.

NASA
(Letter ID#220)

Comment: Of special interest to the CCP and any potential expansion of the authorized boundary is the area to the south of the Wallops facility that lies within current and potential future launch hazard zones. While their reasons differ, the Service and NASA share a common interest in preventing inappropriate development in this area, and the CCP, where appropriate, should emphasize the importance of working together on this front.

Response: We have worked with other governmental agencies to protect land where mutual objectives can be met. One example is working with the Department of Defense (DoD) on the Readiness and Environmental Protection Integration (REPI) Program aimed at preserving DoD's training missions, while also conserving valuable fish and wildlife habitats. While there are no refuge boundary expansions proposed in the CCP, we recognize the need to work with communities and other agencies and organizations to prepare for the loss of existing wildlife habitats due to climate change and other environmental stressors. Any new proposals for expanded land protection will require additional NEPA analysis and extensive public involvement. We will ensure that NASA, any affected communities, and a wide range of partners are consulted and involved in any future land protection proposals.

NPS
(Letter ID#112, 185, 312)

Comment: The CCP should be coordinated with the National Park Service (NPS) General Management Plan for Assateague Island National Seashore. Why are there were no recommendations or input in the Draft CCP/EIS from the NPS regarding relocating the recreational beach? Was the NPS excluded from the CCP/EIS process?

Response: The USFWS has worked closely with the Assateague Island National Seashore staff throughout the CCP/EIS process, as documented in chapter 5. USFWS conducted a 3-day pre-planning meeting with the Seashore staff in December 2007 regarding overlaps between the agencies' respective long-range planning processes, the USFWS's CCP and the NPS's general management plan (GMP). In September 2008, refuge staff participated in the Seashore's GMP kickoff meeting and the Seashore staff participated in the initial meeting of the core planning team for the CCP. NPS submitted comments to the USFWS during the public scoping period in September 2010, and the public comment period on the preliminary alternatives in 2011, and attended public meetings held on the CCP/EIS. The Seashore staff actively participated in all meetings of the core planning team (see Section 5.4) and in other coordination meetings, as described in Section 5.5. Also shown in Section 5.5 are meetings conducted with Seashore staff specifically to address coordination between the CCP and GMP. Finally, the NPS submitted a letter during the comment period on the draft CCP/EIS that acknowledges the long-time partnership of the agencies,

expresses appreciation for the opportunity to be involved in the CCP process, and supports alternative B as the preferred alternative.

Alternative
Not considered
(Letter ID#407)

Comment: A restoration project to build beach elevations along the Tom's Cove spit and bayside marsh habitat has not been considered as an alternative to the 28-acre impact of relocating all visitor facilities approximately 1.5 miles to the north. The Town requests assurance that responsible federal management actions are maintained at Tom's Cove.

Response: Engineered actions were considered by the USFWS, as shown in Section 2.4.1 of the CCP/EIS. Among the ideas considered was an alternative proposed by the Town of Chincoteague in October 2011 called the "1-2-3 Common Sense Plan" which included installation of snow fencing to build a dune system, transportation and placement of inlet dredge material, and beach nourishment. In response to coastal resiliency for all alternatives considered, as stated on page 2-10 of the draft CCP/EIS, "the refuge would work with the town of Chincoteague to explore potential impacts and identify protective methods to address hazard mitigation, in coordination with others, such as Accomack County, Commonwealth of Virginia, NPS, National Aeronautics and Space Administration (NASA), Federal Emergency Management Agency (FEMA), and USACE. The refuge would also work with partners to explore how best to advance the study, information exchange, and project resources for adaptive management practices that sustain the resiliency of this unique barrier island system including but not limited to Assateague, Wallops, Assawoman, and Metompkin islands in the face of dynamic coastal processes and climate change." We further note that "the refuge has several facilities and resources that may be vulnerable to sea level rise and storm surge, including the NPS recreational beach parking area. To minimize facility damage, maintenance costs, and access disruptions in the future, in all alternatives the refuge would consider potential risks and strategies when making decisions about infrastructure that would last beyond the 15 year period covered by the CCP." This would include the important resources located at Toms Cove.

Not considered
(Letter ID#233)

Comment: Develop a compromise alternative between Alternatives B and C.

Response: The alternatives evaluated in the CCP/EIS represent a range of alternative management strategies, as required by NEPA. Alternative A is the status quo or no action alternative. Alternative B is a balanced approach that would continue many of the established habitat and wildlife strategies and would also pursue additional management activities for both natural resources and public use. Alternative C would direct resources towards maximizing habitat and wildlife management strategies and would reduce public use activities and public access to the refuge.

Not considered
(Letter ID#291)

Comment: One commenter noted that the CCP did not discuss alternative government actions that may reduce the rate of sea level rise, specifically the use of solar radiation management. Furthermore, the commenter notes that the case of NRDC v. Morton, 458 F.2d 827 (D.C. Cir. 1972), holds that an EIS must discuss all reasonably available alternatives, whether or not their implementation is within the jurisdiction of the agency proposing the action that is the subject of the EIS.

Response: While the CCP/EIS considers the effects of sea level rise on the refuges, the use of solar radiation management would not address the purpose of the CCP. The purpose of the CCP is articulated in Section 1.3.2 of the CCP/EIS and described in detail in subsequent sections of chapter 1.

Not considered
(Letter ID#69, 289, 312)

Comment: Engineered actions were dismissed from the CCP without factoring in the economic impacts to the community. It is very likely that human intervention on the seashore both north of the Assateague Beach (at Ocean City, MD) and south (at Wallops Island, a Federal facility) might be having an impact on the Assateague Beach. It would seem prudent to conduct engineering studies and probabilistic analyses to prove or disprove this assumption before simply reacting to the storm overwash situations by moving the recreational beach to another location, which in itself might be subject to erosion and overwash in the next 15 years.

Response: Engineered actions were considered by the USFWS, as shown in Section 2.4.1 of the CCP/EIS. However, it was determined that these components would not contribute to achieving the purpose of the CCP and would, in fact, detract from achieving the purpose. The NPS and USFWS do not believe that beach nourishment and engineering strategies would be a responsible and sustainable management tool for use on southern Assateague Island, for the reasons provided in Section 2.4.1. Engineered actions would have a substantial economic impact to the community. The USACE provided an estimate of the scope and cost of beach nourishment for a project this size. The analysis estimated that a beach nourishment project could require an initial estimated investment of $24 million, with recurring maintenance costs of $8.3 million necessary every 3 to 7 years, for a total cost of nearly $49 million over the 15-year life of the CCP, not including wetland mitigation (USACE 2012; Appendix J). This is more than twice the cost of any of the other alternatives, which range in cost over 15 years from $11.7 to 22.2 million. In addition, USACE policy requires that 35 to 50 percent of planning, implementation, and maintenance costs for beach nourishment be borne by a state or local government partner (USACE, "Continuing Authorities Program"), which would total $17 to 24 million for the 15-year CCP planning period.

With regard to the effects of other human intervention, activities in a dynamic environment like the coastline frequently have effects on other nearby areas, and it is as likely that the maintenance activities at Assateague Beach affect other areas as vice-versa. The proposed relocation of the recreational beach and associated parking is in response to historic and anticipated impairment to the current recreational beach and parking from natural hazards, such as heavy storm damage to parking lots, overwash events, sea level rise, and the natural movement of barrier beach land forms. The beach relocation site was selected through a careful analysis to provide a sustainable situation in which the longevity of the beach was

one of many factors considered. The relocation is intended to provide a more protected location for the recreational beach and parking.

Not considered
(Letter ID#198)

Comment: Move the existing beach slightly north as the beach drifts, incorporating a new visitor center and increased volunteer staffing.

Response: In Appendix N, as part of a structured decision making analysis to locating the best site for a recreational beach and parking lot, we did consider and evaluate areas slightly north of the current recreational beach. Referred to as Section 2, the area just north of the current beach scored well overall, but not as high as Sections 3 or 4, which was determined to be the best proposed site for alternatives B and C. We understand that the proposed relocation of the recreational beach requires significantly more detail before it could be implemented, and we plan to conduct another NEPA analysis regarding the proposed relocation.

Not considered
(Letter ID#106)

Comment: Select a combination of Alternative A with elements of Alternative B that may benefit existing habitats.

Response: Section 2.5.1 lists existing management actions that would continue under all alternatives, and there are many additional elements that are similar under alternatives A and B. Based on public comments received, elements of alternative A such as maintenance of Swan Cove trail and access via the Service Road have been incorporated into the preferred alternative B.

Not considered
(Letter ID#323)

Comment: The following modification to the beach relocation alternatives (B and C) was suggested: include a wildlife loop type experience with smaller pod parking along the way to spread out visitors along the shoreline rather than squeezing them in one-mile.

Response: The design of the new recreational beach and beach parking has yet to be determined and will be accomplished through a collaborative effort with NPS and other State and Federal agencies, including the USACE, as well as the local community. The refuge would develop and implement a site design plan for parking and access to a new beach location, approximately 1.5 miles north of the existing beach. In comments on the draft CCP/EIS regarding beach access and parking from NPS, we concur that "...8.5 acres is not a limit, but a guideline, that can be changed as needed with the actual design of a facility that provides the required 961 spaces and related facilities as part of a well-thought-out plan." Please refer to Objective 6.5 Recreational Beach Use for more information.

Not considered
(Letter ID#272)

Comment: A petition containing approximately 600 signatures stated that the plan for moving the recreational beach to the north is still not ready and stated support for an alternative that would be based on alternative A, except that it would require actions to build up and maintain the land base necessary to protect the Island from minor storm damage. This plan would allow for a long term transition to alternative B only when studies and design of the relocated recreational beach are approved under an agreement with the National Park Service, Town of Chincoteague and Accomack County. Other comments associated with this petition are addressed as comments on visitor experience, storm protection for the Town of Chincoteague, mosquito control, the size of the relocated beach and parking, balance between wildlife and visitor needs and keeping the beach open after a major storm.

> Response: We understand that the proposed relocation of the recreational beach requires significantly more detail before it could be implemented, and we plan to conduct further NEPA analysis regarding the proposed relocation. The current recreational beach would be maintained and operated as it is currently, while we begin to develop and analyze the specific details of relocating the beach and parking to a more sustainable and appropriate location for wildlife and visitors to the seashore. In the draft CCP/EIS we proposed this action for both alternatives B (page 2-50) and C (page 2-74). Other topics stated in the petition are addressed in the response to comments.

Alternative A

General

(Letter ID#279)

Comment: What is the financial and personnel commitment required to maintain the parking lots if Alternative A is selected?

> Response: Due to the unpredictability of future storm events and availability of emergency funds, it would be difficult to outline with any certainty the timeline or future annual costs of maintaining the current beach location. However, we do provide in the draft CCP/EIS a summary of past expenses associated to maintenance and repair for the recreational beach parking (pages 3-85 to 3-88). The refuge will continue to share annual maintenance costs with the NPS, of which the refuge's share is approximately $200,000. Please note that under alternative A, consistent with the 1992/1993 Master Plan and EIS, the refuge would continue to allow NPS to maintain 961 automobile parking spaces (which is currently on approximately 8.5 acres) at the recreational beach as long as a suitable land base directly behind the recreational beach remains, and as long as funding is available. As sea level rise and natural forces reduce the land base capable of supporting current parking, the refuge would reduce the number of parking spaces accordingly, and would work with the town of Chincoteague and the NPS to identify suitable off-site parking and to implement an alternate means of transportation such as a shuttle system.

General

(Letter ID#224)

Comment: Alternative A, or the "Do Nothing" plan, does not address any current issues such as dune replenishment or management of the impoundments for wintering waterfowl. It does nothing which is not an alternative at all.

Response: As noted in Section 2.1 of the CCP/EIS, the regulations for implementing NEPA require the alternatives analysis in the EIS to "include the alternative of no action" [CFR Part 1502.14(d)]. In the case of updating a plan such as the CCP, "no action" is no change from current management direction or level of management intensity. [CEQ Forty Questions, Question 3]. Thus, alternative A is a "no action" alternative. No action is evaluated as a viable alternative and is also used as a baseline to compare against to determine the impacts of the action alternatives, alternatives B and C.

Support
(Letter ID#015, 016, 017, 020, 021, 022, 025, 037, 038, 039, 043, 046, 047, 050, 052, 053, 054, 055, 056, 057, 058, 060, 064, 069, 070, 072, 087, 092, 097, 108, 113, 128, 129, 147, 166, 170, 171, 172, 173, 182, 187, 193, 203, 226, 227, 245, 257, 258, 259, 260, 264, 266, 273, 277, 282, 295, 301, 315, 323, 325, 326, 329, 333, 337, 353)

Comment: Sixty-five individual commenters supported alternative A as described in the CCP/EIS. Others supported alternative A with suggested modifications, including saving the historic Coast Guard Station, a new visitor center and increased volunteer staffing and measures to prevent washovers. The reasons for supporting alternative A include avoiding wildlife and habitat impacts associated with moving the beach, parking is more convenient than in the other alternatives, it provides the best balance for visitors and wildlife, it provides a better visitor experience than the other alternatives, there is no compelling reason for moving the beach, it is more economical and less expensive to maintain than the other alternatives, it is more fiscally responsible, it is safe, and moving the beach would have an adverse economic impact.

Response: In addition to the impacts compared in chapter 4, Table 2-1 in chapter 2 shows that measuring how well the various alternatives can meet the purpose and need of the project has been considered in the process. While the status quo alternative was carried forward for analysis, we believe that alternative B was the best alternative to recommend for implementation.

Alternative A/B
Support
(Letter ID#265, 5)

Comment: One commenter preferred Alternatives A or B because they maintain the existing number of parking spaces and another expressed general support for these alternatives.

Response: Under the preferred alternative, USFWS is committed to maintaining parking for a recreational beach at the current level of 961 parking spaces.

Alternative B
Balance
(Letter ID#155)

Comment: The wilderness designation, endangered species and marine reserves would unbalance alternative B unless the public recreation area is set aside from critical habitat and wild lands.

Response: No new areas are being proposed for wilderness designation under the preferred alternative. A total of 1,300 acres of land within the refuge was recommended for

wilderness designation in 1974; however, no action has ever been taken in regard to the recommendation, and there exist no congressionally designated wilderness lands within the refuge. No marine reserves exist at the refuge, and none are proposed. The refuge has balanced habitat and species management with a public recreational beach for 50 years, and will continue to do so into the future.

Boat Access
(Letter ID#077, 206)

Comment: There is no provision in alternative B for access to the relocated recreational beach by motorized boats. Currently motorized boats have year round access on the bayside of parking lots #3 & 4. Will a boat landing still be allowed in the current year-round locations? What about on the cove side of the hook when no birds are nesting?

Response: Under the preferred alternative B the refuge would allow the landing of motorized or non-motorized vessels along the bay side of Toms Cove from approximately September 16 to March 14. During that period when the Hook area is closed (March 15 to September 15), the landing of recreational vessels would be prohibited along the Toms Cove shoreline for the protection of threatened and endangered species in accordance with statutory mandate.

Cost
(Letter ID#55, 56, 70, 77, 326, 53)

Comment: Six commenters suggested that at $12 million, alternative B is too expensive, the estimate is too low, and or/the funds may not be available for the relocation. Commenters requested the total cost of alternative B, including costs to build the roads, visitor's centers, shelters, and parking lots and to alter impoundments.

Response: The itemized estimate for alternative B in the draft CCP/EIS was approximately $22.2 million dollars (Appendix I, page I-2), of which $6.6 million dollars were non-beach related costs. Continued refinements to the selected alternative, and the subsequent forthcoming analysis, will likely alter the actual cost of the actions when fully implemented. Additional detailed cost estimates will be included in future designs and NEPA documentation.

Further Studies
(Letter ID#054, 057, 053, 082, 115, 191, 215, 224)

Comment: Commenters asked about economic and environmental studies that support alternative B and said further planning and studies are required. Three commenters said alternative B is not supported by adequate economic or environmental analysis and others feel there are too many unknowns. One commenter asked where the Regional Economic Assessment is located.

Response: Appendix M is the "Chincoteague National Wildlife Refuge Economic Analysis in Support of Comprehensive Conservation Plan." While Appendix M (Section 6.0, Analysis of Alternatives) noticeably addresses the potential economic impacts of alternatives A and C, the impacts for alternative B are not as clearly explained in the appendix. The analysis showed that the number of available parking spaces correlated to visitation, and that visitation correlated to economic impact. Since alternative B maintains the same number of

parking spaces as the baseline (961), visitation, and therefore economic impact, is expected to be the same as the baseline assessment. As originally stated on page 4-34 of the draft CCP/EIS, "Alternative B would maintain the 8.5 acres of land for beach parking and relocates the beach approximately 1.5 miles north of the current area (management action 2s). USFWS assumes that visitation would not change as a result of the relocation, as the same number of spaces would be available, and the short-term transition between the locations would be carefully managed outside the peak visitation period.... Therefore, USFWS assumes that there would not be any negative economic impact per year resulting from alternative B compared to the base year of 2009."

NEPA – time frame and cost
(Letter ID#279)

Comment: If alternative B is selected, another NEPA process would be required; is that NEPA study funded? What are the timeframes for those additional NEPA studies?

Response: Future analyses requiring NEPA documentation would be accomplished within existing budgets. Partnership capabilities, level of detail, and scope of the project will better determine the overall timeframe to develop an Environmental Assessment (EA) for a future project. However, we estimate that the EA would require less than 12 months to complete.

Opposed
(Letter ID#028, 109, 127, 129, 157, 160, 227, 298, 056, 204, 218, 239, 251)

Comment: Thirteen commenters expressed opposition to alternative B. Some of those are opposed to relocation of the recreational beach and others do not want to see habitat destroyed to accommodate the beach, parking and other facilities; others state no reason.

Response: As described on page 4-8 of the draft CCP/EIS, relocation of the recreational beach would require some destruction of existing habitat (approximately 27 acres). However, mitigation for these adverse impacts would result from future management of the North Wash Flats area that would cease vegetation removal and allow for the natural vegetation to grow back in an area of approximately 300 acres, improving the habitat for spring and fall migratory neotropical birds. Thus, a net benefit would occur.

Support
(Letter ID#006, 012, 018, 026, 029, 032, 034, 036, 084, 100, 112, 117, 118, 192, 214, 220, 228, 230, 232, 234, 256, 261, 262, 263, 263, 284, 288, 290, 306, 316, 321, 327, 330, 332, 348, 354, 401, 402, 408)

Comment: A petition containing 112 signatures and 42 individual commenters express support of alternative B, the Service's preferred alternative. These commenters include the Virginia Eastern Shore Land Trust, the Nature Conservancy, Safari Club International, Assateague Mobile Sport fishermen's Association, Virginia Department of Historic Resources, Virginia Department of Game and Inland Fisheries and National Park Service (NPS). Where they cited a reason, most supporters cited alternative B as a balanced approach that protects habitat while allowing for recreation and other visitor experiences within the refuge. Others cited the need for a sustainable recreational beach and parking area.

> Response: Alternative B is the preferred alternative of the USFWS. It provides a balanced approach and would make a positive contribution towards meeting all of the elements of the purpose for the CCP.

Timing
(Letter ID#279)

Comment: Is there a reasonable timeframe for the new beach to be useable?

> Response: In the draft CCP/EIS (page 2-68); we originally stated that the complete transition of the recreational beach and associated parking would occur within 8 years. We further stipulated that this timeframe could be sooner if funding is available. This timeframe includes additional design, analysis, outreach, and construction.

Timing
(Letter ID#2)

Comment: It is not yet time to adopt or implement alternative B (Town).

> Response: Alternative B represents an approach for managing the refuge over a 15-year time frame, and is comprised of a variety of goals, objectives, and strategies that could be accomplished during the life of the plan. While some strategies could potentially be implemented immediately after the ROD is signed, other actions like beach relocation would require additional analysis and documentation prior to implementation.

Visitor Experience
(Letter ID#067, 104, 182, 190)

Comment: Alternative B will result in a diminished visitor beach experience.

> Response: Anticipated impacts on the recreational beach experience are documented in Section 4.13.5, with both adverse and beneficial effects noted. We agree with NPS that in the next phase of planning, the parties can design a beach experience that, while different from the current one, will still engage visitors and provide the kind of recreational opportunity for which the area has justifiably become famous.

Alternative B/C

Opposed

(Letter ID#50, 64, 072, 102, 104, 111, 145, 182, 187, 190, 293, 323, 325)

Comment: Twelve commenters opposed alternatives B and C. Reasons cited include disturbing additional habitat for roads, parking and beach; disturbing an area of the refuge that is quiet and peaceful; the cost of relocating the beach and related facilities; not wanting to lose access to the existing beach and Tom's Cove; diminished visitor experience; the economic impact of lost tourism, and being generally opposed to the beach relocation.

> Response: We have acknowledged that adverse impacts would occur with implementation of alternative B or C, including habitat disturbances and increased costs. However, we do not anticipate any lost tourism or significant economic impact from implementing the preferred alternative, and that the net impacts would generally be positive. We also note that maintaining the status quo (alternative A) would not address the issues and meet the purpose and need as well as alternative B.

Southern land mass

(Letter ID#70)

Comment: If the present recreational beach and the road to it are left to erode naturally, how does USFWS protect the southern land mass which includes Swan Cove and the pony corral area?

> Response: There are no proposals within alternative B or C to allow Beach Road to erode naturally. Allowing natural processes to occur does not equate simply to erosion. Natural processes often include erosion and also accretion, as is being observed at the southern tip of Toms Cove Hook. Barrier islands tend to naturally "roll over," often keeping a similar width but moving westward. We expect sea level rise to have an increasing effect on erosion, which is why we discuss sea level rise and climate change implications throughout the document, and propose to work with others to study and respond to these challenges.

Alternative C

Opposed

(Letter ID#043, 197,224, 245, 271, 329)

Comment: Six commenters expressed opposition to alternative C. The reasons for opposition include reduced parking capacity, a devastating effect on the local economy and that it does not appear to benefit the public or wildlife.

> Response: Alternative B, the preferred alternative, was selected over alternative C for various reasons listed in chapter 2. Specifically, it was determined that alternative B would result in a positive contribution in regards to achieving the refuge purpose, mission, and mandates while maintaining and restoring the ecological integrity of the refuge system and achieve our stated goals. In addition alternative B would address significant local concerns including: climate change and sea level rise; regional conservation; a balance between public use and wildlife conservation; public access to the refuge, in particular to the recreational beach; impact to visitor experience; and impact to local economy.

Support

(Letter ID#075, 183, 204, 218, 239, 240, 241, 243, 246, 248, 249, 251, 292, 400)

Comment: Thirteen commenters support alternative C, primarily because it reflects the refuge's stated mission and goals of wildlife and habitat preservation. Others feel it supports balance between wildlife and the six priority public uses or it protects the local economy by having the least impact on the refuge and eliminates recreational vehicles on the beaches.

> Response: While alternative C reflects the refuge's stated mission and goals of wildlife and habitat preservation, it is less balanced than alternative B, the USFWS preferred alternative. Due to a reduction by half in the number of parking spaces for the beach, public use and access to the refuge is less than the preferred alternative. In addition, alternative C could have an adverse impact to local economy, as the reduction in beach parking could result in a loss of $36.3 million, or 32 percent of current annual baseline expenditures in Accomack and Worcester Counties, an impact that is not anticipated as a result of alternative B.

Alternatives A/C

Shuttle system cost

(Letter ID#007)

Comment: Alternatives A and C include a shuttle system, the CCP/EIS should include cost for riders.

> Response: Currently, visitors pay per carload (as opposed to per person) at the fee booth. We have not determined any fee structure for any shuttle system. According to Federal law, establishing a new recreation fee (or making changes to existing fees) would require NPS or USFWS to complete a process with public input and participation. There must be advance notice and an opportunity for public involvement, and the agency must publish a notice in the *Federal Register*, local newspapers and other local publications 6 months in advance.

Beach access

Existing

(Letter ID#206, 274, 307)

Comment: Some commenters requested that the current beach be kept accessible with limited parking, even after the beach is relocated.

> Response: We have modified the preferred alternative to maintain some accessibility at the current beach, even after it is relocated. Permitted oversand vehicles and hikers will be able to access the current beach via Beach Road from September 16 to March 14. The Toms Cove Visitor Center would be maintained by NPS for environmental education purposes only until it becomes unserviceable.

Handicapped access

(Letter ID#006, 028, 045, 218, 281, 283, 292)

Comment: Handicapped access was discussed by eight commenters. One simply noted that handicapped access needs to be as convenient as possible for the handicapped and elderly to the enjoy the beach experience and another noted that alternative B would work if the parking has designated handicapped spaces close to the shoreline. Information was requested on how far the parking would be from the relocated beach and if it is handicapped accessible and another said the

parking is too far from the beach for the handicapped and elderly. Others requested that the beach not be moved because the beach and views from the car would not be accessible for the handicapped, elderly and families with small children. Still others asked that the beach not be relocated because it would be less accessible to the handicapped and families with small children.

> Response: We agree that handicapped accessibility is a key and necessary component for all to enjoy the refuge and beach experience. Under the preferred alternative, we will work with NPS to improve accessibility by increasing accessible spaces at the beach, improve signage and markings, consider wheelchair matting for designated spaces and beach wheelchairs, add removable wheelchair beach ramps, and add seasonal mobility-impaired parking areas and access ramps (dependent on final configuration of parking).

Reduce restrictions
(Letter ID#066, 143, 191, 209, 210, 215, 216, 302)

Comment: Eight commenters called for unrestricted access to the whole of the current beach area, with limitations placed on those areas necessary for breeding by plover, sea turtles, etc., as currently restricted during parts of the year.

> Response: The recreational beach in the assigned area managed by NPS will still maintain unrestricted access year-round. Outside of the recreational beach, USFWS will continue to manage the beach and dunes to meet our mandates and goals with protective measures in place for important species and habitats.

Beach closings

Support
(Letter ID#142, 149)

Comment: Keep the south beach closed during nesting times.

> Response: Under the preferred alternative, we state that we will continue current management of the overwash and Toms Cove Hook area for shorebirds until the new recreational beach is established, at which time the March 15 through September 15 closure would go into effect.

Beach relocation

Access
(Letter ID#043)

Comment: Moving the only beach access to the location contemplated under alternatives B & C would effectively preclude anyone except oversand vehicle users from accessing the entire beach area south of the current recreational beach/parking area.

> Response: We have modified the preferred alternative to maintain some accessibility at the current beach, even after it is relocated. Permitted oversand vehicles and hikers will be able to access the current beach via Beach Road from September 16 to March 14.

Additional information
(Letter ID#007)

Comment: While we recognize that additional NEPA analysis will be conducted for the relocated beach and parking area, it would be helpful to provide additional information about how the beach will be constructed, material used, protection, etc.. Temporary impacts should also be considered.

> Response: We have added additional information and analysis appropriate for a long range master plan, including for the relocated beach and parking area. Federal agencies are encouraged to tier their NEPA analysis to avoid repetition of issues and to focus on the issues for decision at each level of review. Tiering is appropriate when the sequence of statements or analyses is from a plan EIS to a site-specific analysis. We have noted that necessary future NEPA analysis will tier to this EIS in accordance with 40 CFR 1508.28, and we will consider all conditions and environmental effects (temporary, long term, and cumulative) described in this EIS, and address any exceptions and whether the determinations are still valid.

Boat access
(Letter ID#47, 134)

Comment: At the proposed non-motorized boat launch parking area, will there be ample parking space for all users? Also, access would be further restricted by the tides, possible only around high tide at the proposed location.

> Response: We recognize the proposed non-motorized boat launch area requires significantly more detail and have identified this area as a popular site for many types of visitor activities in addition to kayaking/canoeing including fishing, crabbing, and wildlife observation. It is our intent during the engineering process for this area to plan for an adequate amount of parking for all types of potential uses as well as vessel access during periods of low tide.

Cost
(Letter ID#037, 050, 104, 122, 137, 178, 215, 224, 326, 329)

Comment: The analysis requires a better and more detailed estimate of the cost of relocating the beach and associated facilities, as it is likely more than the estimated $12 million.

> Response: The itemized estimate for alternative B in the draft CCP/EIS was approximately $22.2 million dollars (Appendix I, page I-2), of which $6.6 million dollars were non-beach related costs. Continued refinements to the selected alternative, and the subsequent forthcoming analysis, will likely alter the actual cost of the actions when fully implemented. Additional detailed cost estimates will be included in future designs and NEPA documentation.

Fees
(Letter ID#161)

Comment: How much is the beach relocation going to increase the fees to access the beach?

> Response: There is no plan to raise beach access fees as a result of relocating the recreational beach. However, beach access fees could be raised for other reasons over the planning period of 15 years, whether the recreational beach is relocated or not.

Funding
(Letter ID#007, 037, 185, 278, 279)

Comment: The following questions about funding beach relocation were asked: Who will be the lead federal agency in attempting to secure funding for the new beach project? What are the steps to secure Fish and Wildlife Service funding for the new beach project? What is the time frame for securing funding for the relocation of the beach? Is the additional NEPA process required currently funded? What happens if alternative B is selected and the funding is not available? Page 2-11 states that refuge management would continue to use a phased implementation of the approved alternative identified in the Final EIS/CCP, which will be dependent upon future budget approvals and available funding. Additional discussion should be included regarding the phasing and prioritization.

> Response: The USFWS will take the lead on requesting funding to implement the proposed action, including beach relocation. We expect that the NPS will support our requests and may request complementary funding from their budgetary processes. There are a number of ways that we can work to secure funding to implement alternative B, including direct appropriations via the President's annual budget request to Congress, transportation grants, and climate change adaptation grants. As noted in the CCP, we hope to complete the beach relocation project within 8 years, but this estimate can change in either direction depending on the availability of funds. We are seeking funding to begin the additional NEPA process but as of this date, funding has not been secured. As we seek funding for the additional NEPA analysis, project design, and project construction, we will maintain the current beach location and facilities to the extent possible, with the understanding that storm events, and our ability to secure restoration funds, will influence the degree to which we can maintain the current level of service.
>
> The CCP is a 15-year management plan that provides long-term guidance for management decisions on the refuge and set forth goals, objectives, and strategies needed to accomplish refuge purposes. We also identify our best estimate of future needs. This plan details program levels that are sometimes substantially above current budget allocations and, as such, are primarily for USFWS strategic planning and program prioritization purposes. The CCP does not constitute a commitment for staffing increases, operational and maintenance increases, or funding for future land acquisition. When possible, we often identify time frames for implementation of objectives and strategies within the next 15 years. Refuge management would continue as established by the Final EIS for the Chincoteague NWR Master Plan approved in 1992, with a phased implementation of the approved alternative. Once the Regional Director has signed the ROD and the CCP is complete, the public will be notified in the *Federal Register*, and implementation would begin.

Habitat
(Letter ID#185, 202)

Comment: Accomack County believes that the recreational beach in the Refuge must be improved and maintained as a recreational beach and not as (present or future) habitat and another commenter asked what will happen if Piping Plover relocate to the new beach.

> Response: The recreational beach in the new assigned area, managed by NPS under agreement with USFWS, will allow unrestricted access year-round. Outside of the

recreational beach, USFWS will continue to manage the refuge, beach, and dunes to meet our mandates and goals with protective measures in place for important species and habitats. In Section 1.14.6 of the Draft CCP/EIS, we discussed the relationship between NPS and USFWS mandates in managing beach recreational activities within refuge boundaries. We have a cooperative relationship with the NPS for management of the recreational beach, defined in a series of agreements dating back to 1966; all of which have assigned certain management responsibilities to each of the two agencies. The agreements have evolved over time, reflecting changes in management goals as well as legislative changes to agency authority and administrative requirements. USFWS has primary responsibility for managing the wildlife resources within the entire refuge, including the "assigned area." This agreement is necessary for the two agencies to comply with various public laws. In order to comply with what we believe was the intent of Congress in passing P.L. 85-57, USFWS has conveyed primary jurisdiction for beach use and recreation within the "assigned area" to the NPS. We have worked with them to minimize adverse impacts to the refuge, and developed a Memorandum of Understanding (MOU) to document operating procedures and respective responsibilities. In addition, the proposed location for the recreational beach was chosen based on a number of factors, including less habitat impacts and occurrences of threatened and endangered plants and animals, including piping plovers. In the unlikely event that a piping plover relocates to the new recreational beach, we would still operate under conditions set forth in the Biological Opinion (Appendix F). This would occur under USFWS or NPS jurisdiction.

Human-wildlife balance

(Letter ID#009, 020, 036, 051, 052, 125, 131, 134, 162, 175, 181, 183, 185, 194, 202 ,215, 255, 267,289, 322, 323, 325, 343)

Comment: Commenters remarked on the balance (or perceived imbalance) between a one-mile recreational beach and the area of beach that are preserved for wildlife use. Some commenters simply asked for balance without taking a view point. Others stated that access to the beach is as critical for humans as it is for wildlife, that Congress intended to address both these priorities in PL 85-87, or that there are plenty of other areas for the birds on the refuge and the Eastern Shore coastline. Some commenters asked for an expansion of the recreational beach and some stated that in the past, the NPS managed 5 miles of beach (others said 4 miles) and that it should be restored or expanded to that size.

Response: Chincoteague NWR was established in 1943 to provide habitat for migratory birds. Since that time, objectives have been expanded to protect and manage threatened and endangered species and other wildlife, and provide for wildlife dependent public use. Since designation of the Assateague Island National Seashore in 1965, we have been committed to preserving access to the refuge, including by personal vehicle, and provide a destination recreational beach that supports the tourism economy of the town of Chincoteague. The refuge has continually sought to balance wildlife and recreational use, and with our preferred alternative, would enhance and expand some public use opportunities, as well as construct a new joint USFWS and NPS visitor contact station. The recreational beach managed by the NPS has been 1 mile since adoption of the master plan over 20 years ago, although the assigned area of the Toms Cove Hook area managed jointly by USFWS and NPS has been periodically modified to accommodate law enforcement, species protection, oversand vehicle management, or staffing. The draft CCP/EIS (alternative B and C) would have maintained approximately the same size assigned area, but shifted north 1.5 miles. Based on comments received, we now propose (alternative B and C) to expand the assigned

area an additional mile south; thus, the assigned area would be increased from approximately 1 mile of shoreline to 2 miles.

Impacts - habitat
(Letter ID#007)

Comment: Page 2-77 states that the relocated beach parking for alternative C will be in a less sensitive area for wildlife habitat. Is this true for the parking area for alternative B as well? They appear to be in the same location on the maps.

Response: Parking for alternatives B and C are in the same location; however, the parking area for alternative C is smaller and this would result is a less habitat impact than alternative B. The reference to relocation of the parking refers to a difference from alternative A and that will be revised in the final CCP/EIS.

Impacts - parking
(Letter ID#046, 052, 119, 126, 127, 128, 141, 142)

Comment: Opposed to anything that would reduce parking or reconfigure it from the accessible way it is now.

Response: Alternative A assumes that the refuge would lose a significant number of beach parking spaces due to the projected intensity and frequency of coastal storms and sea level rise. The NPS surveyed the current recreational beach and determined that there will likely be sufficient area to provide for 400 parking spaces over the next 15 years, but the remaining 561 spaces currently available may lose their landbase over time. Under the preferred alternative B, the number of parking spaces, and the size of the parking lot(s), will not be less than what currently exists, although the exact configuration will be further designed and analyzed in a future document.

Impacts - soils, topography
(Letter ID#006)

Comment: Preliminary discussions regarding the relocation of the recreational beach alternatives and the management of the dunes, both immediately adjacent to the 1-mile recreational beach, but also on either side of the beach, were discussed. This would likely have impacts to both soils and topography, which do not appear to be included in this analysis.

Response: Recontouring dunes and topography in the area of the proposed recreational beach, and adjacent lands, would have impacts to resources including geology and soils. Although we will work closely with NPS and the USACE in designing and evaluating these changes, we include additional information on potential effects in the final CCP/EIS.

Impacts -wetlands/aquatic resources
(Letter ID#007)

Comment: Page 3-87 states that "each time a strong coastal storm hits Assateague Island; the island rolls over on itself, moving the island in a westward direction. This is a normal barrier island response to coastal storms and sea level rise. When this happens, the bayside wetlands immediately adjacent to the island are covered with sand that has washed across the island; this provides a new

upland site on which to rebuild the parking lots that were destroyed. However, a new wetland/upland boundary has to be determined so the new parking lot is aligned with the new upland." Please consider all appropriate regulations to protect aquatic resources and sensitive buffer areas. Also, the EIS states that there will be wetland impacts resulting from the relocation of the recreational beach and parking area for alternatives B and C. Efforts should be made to avoid and minimize impacts to natural resources. Information should be provided about these habitats and impacts.

> Response: We will consider all appropriate regulations to protect aquatic resources and sensitive buffer areas, and we will avoid and minimize impacts to refuge wetlands and other natural resources whenever possible. The USFWS remains committed to working closely with Federal and State resource agencies, prior to and during any future project construction associated with this CCP, to continue monitoring and collection of additional environmental data, provide relevant supplemental information as needed, and to apply adaptive management and best management practices as appropriate.
>
> Please refer to the Structured Decision Making in Appendix N to better understand the process to determine the least environmentally damaging strategy for the relocation of the beach and beach parking area. Furthermore, additional analysis will be conducted through the step-down NEPA process associated with the planning of the new recreational beach and parking area. Please refer to 4.5.2 Impacts on Vegetation in Alternative B for more information.

Impacts-further study

(Letter ID#105, 120, 128, 129, 131, 138, 175, 185 191, 194, 197, 202, 206, 215, 224, 258, 295, 298, 301, 312, 329)

Comment: Commenters said additional studies need to be conducted prior to relocating the beach. These studies include: evaluating sustainability/stability of land mass at the beach relocation site and identifying impacts of the beach relocation on other land masses, including the south hook/Toms Cove; the change in the visitor experience and the impact of that on visitation and the local economy. Additional plans needed before relocating the beach include a Storm Damage Reduction Plan and a Site Plan. Details such as the elevation of the beach, retention or non-retention of dunes, and beach maintenance by nourishment (if necessary and funded) should be included in the Plan.

> Response: We understand that the proposed relocation of the recreational beach requires more study and detail before it could be implemented, and we plan to conduct another NEPA analysis specific to the proposed relocation. We have added additional information and analysis appropriate for a long range master plan, including for the relocated beach and parking area. Federal agencies are encouraged to tier their NEPA analysis to avoid repetition of issues and to focus on the issues for decision at each level of review. We have invited local officials to participate closely in any future analysis and design, and have reached out to other agencies to participate in that process. Furthermore, our economic analysis shows that visitation, and therefore economic impact, is expected to be the same as the baseline assessment. In other words, we do not anticipate any significant change in visitation or the local economy based on relocating the beach and related infrastructure (roads, parking, and visitor facilities) north 1.5 miles.

Launch viewing

(Letter ID#066, 128, 194, 209, 210, 215)

Comment: Several commenters requested that the existing recreational beach be maintained for space launch viewing, saying the view of launches the view would not be as clear and not be visible at takeoff from the relocated beach.

> Response: The future of access to the recreational beach for launch viewing is yet to be determined. Visitor safety at the current recreational beach site during launches is of concern to the refuge, as well as NASA. Alternative viewing sites are available that pose less of a risk to viewers than the current recreational beach parking lot. Those alternatives will be assessed as potential launch viewing sites, in coordination with refuge law enforcement and NASA officials. Please refer to 2.5.1 Existing Management Actions That Continue Under All Alternatives for more information.

Management
(Letter ID#006)

Comment: Page 2-68, Objective 6.5, Strategies: In the very preliminary discussions about the future management of this new recreational beach, USFWS and NPS have considered manipulation of the artificial dunes to allow for a more naturalized and broader beach area. A decision to manipulate the dunes will likely come only after additional study. Should this possibility be mentioned here as a potential strategy?

> Response: Modifications and designs to manipulate the dunes at the new recreational beach site will be further informed through the next NEPA process which will involve local, state, Federal parties, partners, and other cooperating agencies. The USACE and USGS will be important scientific collaborators who will assist in the analysis to ensure that we provide a sustainable recreational beach while at the same time maintains the current level of visitor satisfaction.

Minimum requirements
(Letter ID#006, 009, 037, 043, 046, 051, 112, 124, 155, 181, 185215, 259, 267, 277, 279, 312, 3,11,,)

Comment: NPS looks forward to the opportunity to work with USFWS, local governments and the public to further define the new recreational beach location. In this follow-on planning, NPS believes that the parties can design a beach experience that, while different from the current one, will still engage visitors and provide the kind of recreational opportunity for which the area has justifiably become famous. Careful attention to the design of parking for cars, RVs and buses, boardwalks, accessibility, changing stalls, rinse-off facilities, vault toilets, shelter areas, dune management and other related needs can ensure a quality experience at the new beach location. Critical to the success of the new plan will be finding an appropriate balance between visitor experience and resiliency from future storms. NPS noted that in order to provide the high quality visitor experience that USFWS, NPS, the Town of Chincoteague and Accomack County envision for the recreational beach, sensitive design will be required. NPS and several others stated that they hope that the 8.5 acres is not a limit, but a guideline, that can be changed as needed with the actual design of a facility that provides the required 961 spaces and related facilities as part of a well-thought-out plan. It needs to accommodate horse trailer parking, bicycle parking and OSV parking. One commenter noted that a recreational beach & parking area relocated approximately 1.5 miles north of the current location in accordance with alternatives B or C would accommodate

significantly fewer users because the beach there is much narrower. The relocated beach should be the same length as the existing beach and further study should be conducted to accommodate all the people and uses on the existing recreational beach.

> Response: We concur with the comments from NPS that "...8.5 acres is not a limit, but a guideline, that can be changed as needed with the actual design of a facility that provides the required 961 spaces and related facilities as part of a well-thought-out plan." The 8.5 acres related to the current parking lot size, the 961 car spaces, and the 1-mile recreational beach, are all necessary in this EIS at this point to effectively compare and contrast the potential impacts of the no action alternative to the other alternatives. These numbers allow us to determine that if the beach is relocated, how many acres at the current site we can expect to reclaim as habitat (rather than as parking lots), and what is the potential footprint of impacts at the proposed site. Because USFWS is committed to working with NPS and others to future design, refine and analyze beach relocation infrastructure in a separate NEPA document, if the actual footprint becomes larger, then it can more appropriately be considered at that stage.

Mosquitos and other biting insects
(Letter ID#036, 037, 043, 045, 046, 051, 061, 062, 063, 070, 094, 118, 124, 128, 134, 144, 145, 148, 155, 156, 158, 160, 174, 181, 198, 202, 207, 212, 213, 245, 274, 277, 280, 294, 303, 307, 406,)

Comment: Several commenters expressed their concern with the proposed beach location and biting insects, including black flies, ticks, green flies and mosquitos. Several questioned what control measures would be taken should the beach be relocated. In addition, several commenters specifically requested Adulticide and other active controls be used should the beach be relocated.

> Response: The most recent directive from the USFWS's headquarters regarding mosquito control on lands of the Refuge System is included as an attachment to Appendix C. When a public health authority advises the USFWS of a threat to health and safety of the public from mosquitoes arising from a refuge, we will work with the public health authority to allow them to reduce the public health risk on the refuge, as long as the activities are in full accordance with our regulations, policies and permitting procedures. Please refer to Objective 6.5 Recreational Beach Use for more information.

Opposed
(Letter ID#015, 021, 050, 071, 074, 080, 081, 090, 093, 096, 099, 103, 104, 106, 107, 115, 123, 128, 130, 133, 139, 142, 144, 146, 148, 150, 151, 155, 158, 163, 164, 175, 178, 187, 188, 189, 207, 208, 209, 210, 211, 216, 226, 244, 280, 287, 293, 298, 302, 305, 308, 309, 320, 322, 329, 336, 337)

Comment: Commenters expressed their opposition to moving the recreational beach to the north. Several of these commenters requested that the beach be improved and maintained at the current location. Some of these called relocating the beach an unnecessary expense that would result in habitat impacts.

> Response: Recent repeated coastal flooding and over wash caused by nor'easters and tropical hurricanes have resulted in damage to beach access and parking. The USFWS investigated beach nourishment during the early stages of developing potential alternatives for the CCP, and contacted the USACE to obtain an estimate of the scope and cost of beach nourishment for a project this size. The analysis estimated that a beach nourishment project could require an initial estimated investment of $24 million, with recurring

maintenance costs of $8.3 million necessary every 3 to 7 years, for a total cost of nearly $49 million over the 15 year life of the CCP, not including wetland mitigation (USACE 2012; Appendix J). This is more than twice the cost of any of the other alternatives, which range in cost over 15 years from $11.7 to 22.2 million. In addition, USACE policy requires that 35 to 50 percent of planning, implementation, and maintenance costs for beach nourishment be borne by a state or local government partner (USACE, "Continuing Authorities Program").

NEPA requires alternatives to be reasonable from a technical, economic, and common sense perspective, and compared to other alternatives evaluated, an alternative that includes the beach nourishment and coastal engineering element is not reasonable from an economic or common sense perspective. In light of these considerations, the NPS and USFWS do not believe that beach nourishment and engineering strategies would be a responsible and sustainable management tool for use on southern Assateague Island. In addition, the proposed location for the recreational beach and access road were chosen based on a number of factors, including factors that limit habitat impacts. The proposed location was found to have the least occurrences of threatened and endangered plants and animals and also exhibits the least amount of shoreline movement, providing the most long-term solution to providing a recreational beach.

Parking
(Letter ID#288)

Comment: Locate a portion of the new parking in a location to ensure sufficient parking in the event of storm damage. Work with the Town to identify an offsite parking facility within close proximity to the refuge and existing Town bike trails, noting this would ensure that parking would be able to be maintained in the event of closures due to storm damage.

Response: Alternatives A and C both considered the use of off-site parking and a shuttle service to supplement parking when limits are exceeded or during closures. However, as a compromise to address public concerns, and in recognition that relocation of the beach and associated parking will greatly reduce risks to both, a voluntary shuttle with associated off-site parking was removed from the preferred alternative. The intent of relocating the recreational beach is to provide facilities that are less vulnerable to storm damage and therefore provide more reliable parking and beach access.

Public input
(Letter ID#407)

Comment: Several commenters requested that public input be considered during planning for the new beach.

Response: Relocation of the recreational beach will be addressed in detail in a subsequent planning and NEPA process. The USFWS will invite the public to participate in that process similar to the way the public was invited to participate in the CCP/EIS process, as documented in chapter 5.

Support
(Letter ID#006, 100, 204, 218, 240)

Comment: The NPS stated that they concur with the proposed plan to relocate the beach, noting it will ensure this recreational opportunity is provided to the public over the long term. Other commenters also expressed their support for the proposed beach relocation, noting that it will provide a sustainable future for the beach and wildlife.

Response: The USFWS thanks the NPS and other commenters for supporting the preferred alternative.

Timing
(Letter ID#279)

Comment: Are there any projections or time horizons that suggest when the current parking levels at the existing beach would be reduced to less than 500 parking spaces?

Response: The USFWS and NPS are unable to reliably predict at what point in the future period (15 years) that the parking lot spaces would be lost. We are also unable to predict whether the parking lot losses would all occur due to a single storm event or whether they would be lost incrementally over a period of years. In conjunction with the NPS, we surveyed the current recreational beach area and determined that the landbase directly behind parking lots 1 and 2 will likely have sufficient area to provide for 400 parking spaces over the 15-year planning period covered by the CCP, but they will require constant rebuilds as strong coastal storms will erode and/or wash them away. These lots lie immediately north and south of Beach Road. However, the fates of parking lots 3 and 4, which represent the southernmost parking areas, are less certain. These lots have a combined current capacity of 561 parking spaces and it can be projected that the landbase for these parking lots may be partially or fully lost over time. For the purposes of analysis, the effect of losing these lots and the potential corresponding impact to visitation (and economics) are compared directly to the base year of the analysis without adjustment. From an economic standpoint, a conservative estimate was made comparing a situation in which all 561 are lost to the base year of 2009.

Transfer of problems
(Letter ID#046, 047, 050, 078, 089, 112, 118, 121, 128, 129, 131, 187, 190, 221, 254, 265, 308, 312, 333)

Comment: The new beach will face the same issues as the existing beach. If the management strategy is the same for the relocated beach, the same issues will be present once the beach is relocated. For example, what is the effect of placing the new parking lot behind a pond that is below sea level?

Response: The relocation of the 1-mile recreational beach and parking is in response to historic and anticipated impairment to the current recreational beach and parking from natural hazards, such as heavy storm damage to parking lots, overwash events, sea level rise, and the natural movement of barrier beach land forms. The proposed location for the new recreational beach, parking and access road were chosen based on a number of factors, including that it exhibits the least amount of shoreline movement, thus providing the most long-term solution. While the specific details and configuration of the proposed parking lot have yet to be fully designed, we anticipate the lot will be protected in part by a berm, and that the elevation of the lot would not be less than the existing lot.

Transition
(Letter ID#271)

Comment: Improve NPS management of the current recreational beach to provide increased storm damage resiliency until such time as the site design, the economic analysis, and a storm damage reduction plan by the USACE are completed and approved for relocation of the existing visitor facilities.

> Response: The current recreational beach will be managed by the NPS until the new beach area is designed, approved, and completed, and transition from one beach location to the other will not have any loss of access. We will continue to address storm damage resiliency and storm damage reduction with our partners, including the USACE, through the transition period, which incorporates all design and construction. The economic analysis is included in Appendix M, and discussed in chapter 4.

Transition
(Letter ID#006, 037, 181, 185, 187, 191, 215, 356, 407)

Comment: A transition plan is required to ensure that the visitor experience is maintained throughout the process of recreational beach relocation if alternative B is selected. Will the current level of commitment to the current beach parking lot (in terms of financial and personnel) be maintained to respond to storm events when the parking lots are covered/buried by sand until the new beach proposed by alternative B is complete? Any changes should be made slowly in order to minimize strain on the ecosystem, economy, and visitor experience.

> Response: We are committed to ensuring that visitor experience is maintained as much as possible throughout any transition process. As discussed in Section 3.8.1, NPS is the principal Federal agency charged with the restoration and rehabilitation of the recreational beach parking lots located at Chincoteague NWR. In the past, NPS has relied on supplemental Emergency Relief for Federally Owned Roads (ERFO) funds to perform emergency storm damage repairs and routine parking lot maintenance. We cannot guarantee that future emergency funding would be available, but to the extent possible, we will work with NPS to respond to storm events until the beach is relocated to its new proposed location. We fully understand that storm events, and our ability to secure restoration funds, will influence the degree to which we can maintain the current level of service. For transition, we state in the CCP/EIS that "the refuge in consultation with NPS would provide management strategies for maintaining the current beach in the interim until the newly located recreational beach is ready for visitor use. The refuge would provide a transition plan for moving from the current beach location to the new beach location, including proposed processes and management strategies to ensure access to a recreational beach is available for visitors."

Visitor experience
(Letter ID#037, 135, 154, 155, 161, 178, 185, 202, 244, 245, 311, 328)

Comment: The new recreational beach would not provide the same visitor experience the existing beach offers and there are no studies to prove that the visitor experience would be the same. The mayor requested that the NPS have the right to do whatever they want in a designated beach area to provide for the past visitor experience.

Response: While we have noted that the current recreational beach and the proposed recreational beach location do not provide identical visitor experiences, we believe that the overall visitor experiences would be very similar, with pros and cons associated with each site. The beach relocation site was selected through a careful analysis to provide a sustainable situation in which the longevity of the beach was just one of many factors considered. The recreational beach in the new assigned area, managed by NPS under agreement with USFWS, will allow unrestricted access year-round. In Section 1.14.6 of the draft CCP/EIS, we discussed the relationship between NPS and USFWS mandates in managing beach recreational activities within refuge boundaries. USFWS has primary responsibility for managing the wildlife resources within the entire refuge, including the assigned area. USFWS has also conveyed primary jurisdiction for beach use and recreation within the assigned area to the NPS. We have worked with them to minimize adverse impacts to the refuge, and developed a MOU to document operating procedures and respective responsibilities.

Visitor experience - ponies
(Letter ID#45, 55, 93, 145)

Comment: Commenters noted that the relocation of the recreational beach would limit viewing of the ponies and shorebirds while driving to the beach.

Response: Many pony viewing opportunities will remain despite the proposed route to the new recreational beach and parking area. Pony viewing will still be available along Beach Road as it has been. The location of the new parking area and associated beach will offer additional opportunities to see ponies that inhabit the North pony unit. The revised alternative B will still allow access on foot for shorebird viewing in Swan Cove pool. Please refer to Appendix N, Structured Decision Making process, for more information.

Visitor experience - ponies
(Letter ID#034)

Comment: The Friends Group Policy cuts off the regular bus tours on the Service Road. The new beach access road would stop 1.5 miles south of the northern pony area and visitors will have no access to the 100 ponies in the northern enclosures. Visitor access to the area is requested where the ponies are visible.

Response: The revisions to alternative B will keep the Service Road open year-round to hikers, and allow for the Chincoteague Natural History Association bus tours to continue. Visitor experience will be improved as a result.

Wildlife closure
(Letter ID#118)

Comment: Will the new beach be subject to closure for migrating birds, as the current beach is?

Response: The current recreational beach has never been closed for nesting/migrating birds. Furthermore, we do not expect a closure to occur at the new recreational beach site due to nesting/migrating birds. The location for the new recreational beach and parking area was chosen specifically because of the low probability of use by nesting shorebirds. Therefore, it is unlikely that the beach will have to be closed. Please refer to Appendix N,

Structured Decision Making process, for more information on this subject. In the unlikely event that endangered or threatened species were to nest on the new recreational beach, strategies are in place to continue to allow recreational use of the beach to continue while still protecting nests.

Storm evacuation
(Letter ID#338)

Comment: Would the few planned narrow and lengthy walkways to the parking lot be sufficient to safely evacuate the beach of 3000 people in the event of a sudden and powerful storm?

Response: Safety of the visiting public is very important, and Goal 7 of the CCP specifically identifies safety. Having well-maintained visitor facilities is important for encouraging and welcoming visitors, and reflects on our responsibility to spend taxpayer dollars effectively and efficiently. It is also important to protect public safety and refuge resources, both of which can be directly impacted or compromised when facilities deteriorate, or emergencies arise. In addition, the refuge is committed to incorporating universal access and Americans with Disabilities Act standards into all new facilities. Any necessary walkways from parking lots to the proposed beach will be further considered, designed, and analyzed, with our partners, in the subsequent NEPA process and document.

Bike/Pedestrian access
Alternative B
(Letter ID#128)

Comment: In alternative B, hiking, biking and off road vehicle use would be more limited.

Response: Revisions to alternative B retain or expand existing recreational opportunities, including hiking access up the Service Road, and hiking or biking to Swan Cove. Seasonal OSV access will continue to be provided via Beach Road under the revised alternative, as well as the new one mile OSV route south of the new recreational beach.

Dedicated facilities
(Letter ID#014, 050, 083, 126, 134, 152, 153, 168, 183, 200, 267)

Comment: Several commenters voiced their support for separate bike and pedestrian facilities to access the beach, noting this provides a unique visitor experience. Currently, biking on the wildlife loop is now car free until 3 pm, which will no longer be the case with beach traffic using it to get to the new northern beach. What is planned to provide dedicated bike facilities? The final CCP should show no net loss of bike and pedestrian trails. Bike trails should reach both the public beach and a separate beach, as it is now, to provide an incentive to bicycle to the island rather than drive a vehicle. Please include extensive bike trails and access at more than one point in your plan.

Response: Planning of the new access road/bike trail is anticipated to begin shortly after the release of the final CCP. Since the planning will require a step-down NEPA process, which will involve a public comment period, recreational users of the refuge will have the opportunity to provide comments on the proposed design. We support the use of bicycles to access many areas of the refuge and currently provide approximately 7 miles of paved bike trails, which will increase nearly 10 miles under the revised alternative B. Revisions to

alternative B would allow continued use of the Service Road for hiking, and additional biking opportunities will be available due to the addition of the recreational beach and parking lot 1.5 miles north of the beach/parking lot. In addition, cyclists' use of Swan Cove trail will remain unchanged under the revised alternative B.

Dedicated facility
(Letter ID#176)

Comment: Include plans to keep the current bike access trail as it is, and to not move the path to a location putting its terminus at the same location as the car parking area. Please keep it in its current form!

Response: Based on feedback during the public comment period, we will maintain the Swan Cove Bicycle Trail, and will no longer pursue "an alternative bicycle trail from Wildlife Loop north to the south end of the relocated recreational beach, near the OSV zone entrance" as was proposed in the draft CCP/EIS. The terminus of the trail at the beach would also be included in the new assigned area under NPS jurisdiction.

Impact - hunting
(Letter ID#283)

Comment: With expansion of hunting opportunities will there be more/frequent/longer trail closures? (Objective 6.1) This would correspond to a reduction in hiking and biking opportunities.

Response: Changes in hiking and biking access during hunting season has yet to be determined. The refuge will continue to prioritize wildlife-dependent recreational use, which includes hunting, while at the same time providing multi-use groups with a safe and rewarding refuge experience. Please refer to 1.9.3 Balance Between Public Use and Habitat and Wildlife Conservation for more information.

Service Road
(Letter ID#014, 083, 126, 143, 283, 301)

Comment: Several commenters requested the refuge support and encourage hiking and biking on the Service Road, noting this allows for wildlife observation in a remote area.

Response: Under the revised alternative B, hiking will continue on the Service Road. Under objective 6.6, we note that we will include bicycle lanes on the new access road to the relocated public beach. Visitors will continue to have opportunities to bike on over 9 miles of paved trails on the refuge.

Service Road access - support
(Letter ID#034, 066, 091, 139, 191, 209, 210, 215, 226, 294, 302)

Comment: Several commenters requested that the Service Road remain open for hiking and biking, noting this road provides unique wildlife viewing opportunities. Several commenters also requested the Refuge continue the tradition of allowing vehicle access on the Service Road one time each year at Thanksgiving.

Response: Under the revised alternative B, hiking will continue on the Service Road. Once repairs are completed on the Service Road, access for Waterfowl Week will resume (held during the week of Thanksgiving).

Service Road/Swan Cove
(Letter ID#006)

Comment: NPS notes that the relocation of the recreational beach would necessarily cause the relocation or elimination of certain recreational activities, including bay access, and some hiking opportunities especially those on the Service Road and on the Swan Cove Trail. Perhaps there is an opportunity to replace these experiences with other similar or new ones outside of the refuge, possibly owned and operated by the Town of Chincoteague, Accomack County, or the State of Virginia. We note that if the local and state governments would like to pursue this option, technical assistance to help them do so may be available from NPS or the Department of the Interior.

Response: Under the revised alternative B, hiking will continue on the Service Road and there will be no change to Swan Cove bike trail access. Also under revised alternative B, access to Toms Cove for environmental education programs held by the NPS and Chincoteague Bay Field Station will continue.

Swan Cove Trail
(Letter ID#031, 250, 284)

Comment: Please keep the Swan Cove Trail open for biking and hiking, noting that this provides for birding and wildlife viewing. One commenter asked if there would be a replacement for this trail.

Response: Based on feedback during the public comment period, we will maintain the Swan Cove Bicycle Trail in the preferred alternative. There is no replacement trail now proposed. The terminus of the trail at the beach would be included in the new assigned area under NPS jurisdiction.

Wildlife Loop Trail
(Letter ID#033, 047, 156, 167, 179)

Comment: Several commenters requested that the wildlife loop or similar beach access be provided for biking and hiking. One commenter noted that increasing the distance to a different beach for biking and hiking would be a hardship for some. In addition, the bike and pedestrian beach access should be away from the beach that allows fishing and OSV use to ensure an undisturbed beach experience. Several commenters also voiced their concern with the proposed plan, stating that utilizing the wildlife loop for the new beach access would disturb wildlife habitat.

Response: We determined through the Structured Decision Making process that relocating the beach 1.5 miles north to the proposed location would be the least impactful alternative. Current bike access to Swan Cove will remain unchanged and the bike trail that was proposed between Swan Cove and the new recreational beach is no longer being considered.

Bus tours

Support
(Letter ID#014, 083, 301)

Comment: Maintain the bus tours as they presently are. The schedule and nominal fee meet the needs of the visiting public because the tour provides access for all ages and for those with physical limitations who would otherwise never be able to experience Assateague Island and the ponies. The bus tour helps alleviate casual hiking into the north portion of the Refuge to see the ponies.

> Response: The revisions to alternative B will keep the service road open year-round to hikers and allow for the Chincoteague Natural History Association bus tours to continue. Visitor experience will be improved as a result.

Butterfly habitat

Create barrier
(Letter ID#061, 062, 063, 094, 143, 144, 158, 174, 191, 207, 212, 213, 215, 216, 274, 280, 287, 294, 303, 307)

Comment: The Refuge should create an artificial barrier that can be utilized by butterflies to prevent them from being swept into the ocean.

> Response: Our initial plan is to establish annual temporary fencing from August to October at locations to be determined that would best benefit monarch butterfly nectaring and roosting. Decisions for monarch butterfly management will be driven by the latest and best science available. While our current strategies primarily involve vegetation management, we will consider all viable alternatives available to benefit monarch butterflies. Please refer to alternative A and B, Objective 1.2, under Management Strategies for more information.

CCP process

Impacts - cumulative
(Letter ID#271)

Comment: The draft EIS for Chincoteague NWR does not meet the high standard set by a NASA/Wallops Flight Facility draft EIS, and will not allow for evaluation of cumulative federal impacts from either the proposed Wallops Programmatic EIS, or the National Park Service draft GMP due to be released in the next 6 to 9 months.

> Response: The cumulative effect analysis considers the impacts on the environment which results from the incremental impact of our proposed actions 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. We have worked closely with both NASA and NPS to understand potential and reasonably foreseeable actions, whether or not those actions have been published in a public document. Furthermore, those agencies have provided input into this long-range master plan for the refuge, and will likely consider our proposed actions in their cumulative effects analyses.

Public and stakeholder involvement
(Letter ID#029, 112, 125, 131, 132, 133, 187, 191, 202, 215, 227, 255, 271, 285, 311, 316, 317, 327, 331, 407)

Comment: Several commenters requested that the Refuge work with the community in a collaborative and transparent manner, with many commenters stating they felt as though public input was not considered in the CCP process. One commenter noted that the Refuge should not be allowed to expand without a majority of residents agreeing.

> Response: The USFWS has worked diligently to engage a variety of agencies, stakeholders, and the community throughout the planning process, as documented in chapter 5. It has been the practice of the USFWS to involve as many stakeholders as possible in our CCPs, and we provided numerous opportunities for the community to provide input throughout the NEPA process. As a result of comments received from the public during the scoping process, as well as other deliberations among the refuge and the planning team, we developed and updated draft alternatives. Further changes and refinements, based on input from the community, are noted in this appendix and in the final CCP/EIS.

CCP/EIS process

Comment period appendices

(Letter ID#020, 128, 201, 215, 279)

Comment: Extend the comment period to at least August 15. Certain appendices were omitted and that the USFWS should make those available in a separate document prior to closing the comment period. What would happen if the public involvement process revealed issues or concerns?

> Response: The comment period on the draft CCP/EIS was extended from 60 days (May 15 to July 14, 2014) to 90 days, and the deadline for comments was extended from July 14, to August 15, 2014. All of the Appendices to the draft CCP/EIS have been made available since the beginning of the comment period on the refuge website at http://www.fws.gov/refuge/Chincoteague/what_we_do/draftccp.html and on the CD-ROMs that were available with paper copies of the draft CCP/EIS. The USFWS addresses substantive issues and comments raised during the draft CCP/EIS comment period in the final CCP/EIS.

Concepts/ Policies

(Letter ID#271)

Comment: The concepts and policies contained in the CCP such as BIDEH, Wilderness and Endangered Species critical habitat should not be uniformly applied to barrier islands. These policies should be modified for the unique differences between Assateague Island National Seashore and the Southern Barrier Island group NWR (Assawoman, Metompkin, and Cedar Islands).

> Response: These policies are mandated at the national level and listed in the CCP/EIS to guide management practices. The refuge will work to ensure that management practices are modified to accommodate the difference between the various barriers islands.

Climate change

Climate change

(Letter ID#077, 220, 338)

Comment: With regard to climate change, one commenter asked, if the Service is committed to using the best climate science and adaptive management strategies available to inform management actions resulting from sea level rise, why move the present visitors' beach access area? Others commended the Service on addressing these issues, including the Virginia Department of Historic Resources, which noted that the Service explicitly addresses the need for working with partners on hazard mitigation actions consistent with refuge goals. The Nature Conservancy greatly appreciates that the Service is both committed to building and sustaining coastal resilience at the refuge, and to working with the community to reduce risk of coastal hazards caused by climate change.

> Response: The USFWS is committed to using the best climate science available to inform its management with regard to climate change and sea level rise. Appendix G and Appendix H of the CCP/EIS discuss the most current accepted thinking on global climate change and its specific effect on the mid-Atlantic seaboard of the eastern U.S., which is experiencing among the highest rates of sea level rise on earth. The Background section of Appendix N of the CCP/EIS provides a detailed description of the reasons that the recreational beach facilities must be moved, and chief among these reasons is the increasing rate of erosion of the existing recreational beach. In other words, the ocean is washing away the current recreational beach and parking lots. The NPS and the USFWS believe due to historic and expected changes to the shoreline, and the cost of continuously rebuilding and maintaining these facilities, they are not sustainable in their current location.

Climate change
(Letter ID#007, 161, 220, 220, 220, 287, 291, 316, 316, 320, 400)

Comment: There were a number of comments on sea level rise. One commenter denied that sea level rise is taking place, but most comments were concerned with the actions taken to address sea level rise. EPA requested that Page 2-73 text be expanded to discuss other areas that may be impacted by climate change and sea level rise in addition to the beach parking and related facilities. The Nature Conservancy recommends that the Service consider using more recently published reports and scientific literature to support predictions of sea level rise, rates of coastal erosion, and storm intensity and frequency and supplied some sources for such information. The Conservancy also recommends that the Service eliminate any references to a specific predicted annual rate of sea-level rise because rate at which rise is taking place is very difficult to predict. It suggested an alternative way of addressing the rate. One commenter asked if the southern end of the Refuge would eventually be underwater and another requested that the ocean water not be allowed to come through to the wildlife loop. DCR supports the inclusion of data gathering efforts to measure and monitor the effects of climate change and sea level rise for all alternatives. The Nature Conservancy recommends the USFWS expand and link protected lands to improve the size, heterogeneity, connectivity, and resiliency of critical habitats along a full elevation gradient that includes natural shorelines, tidal salt marshes, scrub shrub, riparian and upland forests and isolated wetlands.

> Response: Barrier island biologic and geologic systems are dynamic processes, even without the anticipated impacts from sea level rise and climate change. Climate change is widely recognized in the scientific community and beyond as a growing issue of concern. Specific rates of rise used in the CCP are based on scientific studies, which may vary over time based on the actual rate of sea level rise and climate change progression. While the entire project area and facilities are subjected to impacts of climate change and sea level rise, much of our discussion in this CCP is focused on the beach and related infrastructure as

storms and events have historically affected these refuge resources the most. Recent guidance published in *Planning for Climate Change on the National Wildlife Refuge System* (USFWS 2014) states that all CCPs should identify climate change as an issue affecting resources on and around refuges. CCPs should call for actions, plans, studies, monitoring, modeling, outreach, or related efforts toward climate change adaptation, mitigation, and engagement. In addition to being scientifically defensible, this approach will ensure consistency among Refuge System planning documents and public outreach efforts. Refuge leadership will utilize the best climate change science and adaptive management strategies available to inform any proposed management actions for coastal environments. The USFWS is currently engaged in numerous partnerships to address coastal resiliency on the Eastern Shore of Virginia, including Mid-Atlantic Coastal Resiliency Institute (MACRI), which is "a multi-disciplinary institution dedicated to integrated climate change research." For more information on climate change and sea level rise, please refer to 1.9.1 Climate Change/Sea Level Rise; 1.10.3 Climate Change and Sea Level Rise Studies; 1.14.7 Climate Change and Sea Level Rise; 3.2.5 Climate Change and Sea Level Rise; 4.16.4 Climate Change; and Appendix G Some Notes on Sea Level Rise and Projected Impacts on Chincoteague National Wildlife Refuge.

Climate change/sea level rise
(Letter ID#220)

Comment: Without more explanation of barrier island inlet processes and support from scientific literature, statements in section 1.14.7 are misleading and oversimplify the situation. Barrier island segmentation is a worst case scenario dependent on many factors such as sediment supply and tidal inlet dynamics in addition to the rate of sea level rise and impacts of extreme storms. We submit that while sea level rise certainly poses significant threats to refuge resources, the Service needs to communicate the ecological consequences of these threats with more attention to the ecological context and processes involved.

Response: Some of the CCP content pertaining to climate change and sea level rise began development in 2008. We will update to reflect advances in climate change science and predictions made since the draft was written. The Coastal Resiliency Tool currently under development by TNC, will be useful in determining the ecological consequences of sea level on refuge habitats. With predictive models still under development, it is difficult to predict how refuge habitats will change as a result of sea level rise, but we acknowledge that significant ecological changes including barrier island fragmentation and increased overwash conditions will likely occur as a result of the combination sea level rise and the effects of strong storms. Sea level rise and climate change sections of the draft CCP will be carefully reviewed with the intent of clarifying the predicted geological processes and ecological consequences of sea level rise and extreme storms on refuge habitats. For more information, please refer to 1.9.1 Climate Change/Sea Level Rise; 1.10.3 Climate Change and Sea Level Rise Studies; 1.14.7 Climate Change and Sea Level Rise; 3.2.5 Climate Change and Sea Level Rise; 4.16.4 Climate Change; and Appendix G Some Notes on Sea Level Rise and Projected Impacts on Chincoteague National Wildlife Refuge.

Concession stands
Opposed
(Letter ID#100, 131, 143, 149, 175, 190, 197, 209, 210)

Comment: Some commenters are opposed to the Refuge allowing concession stands at the beach and others want them allowed.

> Response: The refuge currently has no plans to enter into concession contracts for services on the recreational beach. However, future evaluation of the use of concessions could occur to maintain or enhance a high quality visitor experience.

Cultural Resources

Archaeological surveys

(Letter ID#402)

Comment: DHR would like to call the attention of the USFWS to a prehistoric site eroding out of the shoreline on [exact location omitted]. Although [not located on the refuge], the site does illustrate both the potential for prehistoric resources and the threat of erosion to the cultural resources on the Refuges. DHR encourages the USFWS to consider funding archaeological surveys as a part of the CCP, as funding levels allow. It would be advisable to identify and monitor these resources, which are already under threat

> Response: We recognize the value of the refuge's cultural resources and strive to protect these resources. We agree that a survey of refuge lands would be valuable from an inventory and protection standpoint and will take your comment into consideration.

La Galga

(Letter ID#095, 286)

Comment: Discuss the shipwreck La Galga in the CCP noting that the public should have an opportunity to comment on this historic resource. One commenter requested the status of an application regarding the National Register determination for the La Galga shipwreck, noting that the final CCP would be incomplete if this finding is not finalized. Appendix D-7 incorrectly quotes material from *The Hidden Galleon* about the origin of the horses, regarding that the ponies on Assateague were "eradicated" in the 1749 storm. Please make this correction in the final CCP.

> Response: A section of the Affected Environment (chapter 3), on cultural resources was inadvertently left out of the draft CCP/EIS. This section, which discussed the La Galga, is included in the final CCP/EIS. Determination of eligibility for the National Register is a separate issue from the CCP/EIS, and will be addressed as necessary. The USFWS will follow procedures set forth in 36 CFR 60 to nominate identified significant historic properties.
>
> Appendix D is the 2013 Interim Chincoteague Pony Management Plan, and will be updated in coordination with the Chincoteague Volunteer Fire Company after completion of the CCP. In future documents when referring to this event as discussed in *The Hidden Galleon*, we will properly state that there was a great storm in 1749 that flooded the coast. On the north end of Assateague, only 1 horse survived out of 60 and only 5 cattle survived out of 500.

Dog access

Support

(Letter ID#192)

Comment: Allow dogs on the beach or trails during on or off-season.

Response: In order to ensure for the enjoyment of our substantial number of visitors as well as to meet our statutory mandate to protect the refuge's wildlife, we currently have no plans to allow pets of any type, including dogs, to access the refuge.

Emergency planning

Community resiliency
(Letter ID#311)

Comment: There should be a community resiliency plan in the CCP

Response: The refuge will work with the Town of Chincoteague to explore potential impacts and identify protective methods to address hazard mitigation, in coordination with others. For more information on this particular topic, please refer to 2.5.1 Community Resiliency, and Objective 5.3 Community Resiliency.

Errata

Wildlife
(Letter ID#401)

Comment: The narrative describing the legal status of sea turtles that occur in Virginia should be reworded to clarify that the state status is the same as the federal status for each species.

Response: Thank you for your comments. The recommended changes have been incorporated into the final CCP/EIS.

Wildlife
(Letter ID#401)

Comment: The Virginia Department of Game and Inland Fisheries (DGIF) noted on pages 2-21 and 2-22 regarding Breeding Species; the list of species that may breed in the Refuge-owned salt marsh habitats should also include willets, black ducks, and possibly black-necked stilts.

Response: Thank you for your comments. The recommended changes have been incorporated into the final CCP/EIS.

Wildlife
(Letter ID#401)

Comment: The Virginia Department of Game and Inland Fisheries (DGIF) noted that the American oystercatcher is defined as a species of concern in Virginia on page 2-22 in the CCP. It is actually a Tier II Species of Greatest Conservation Need, indicating that it is a species which has a high risk of extinction or extirpation (DGIF 2005). On page 2-22 of the CCP, it should be clarified that oystercatchers nest on topographical high spots in low salt marsh islands.

Response: Thank you for your comments. The recommended changes have been incorporated into the final CCP/EIS.

Wildlife

(Letter ID#401)

Comment: The Virginia Department of Game and Inland Fisheries (DGIF) noted that Whimbrels are described as an important local wintering species, when in fact they only occur in Virginia during spring and fall migration.

Response: Thank you for your comments. The recommended changes have been incorporated into the final CCP/EIS.

Existing beach

Maintain

(Letter ID#028, 039, 052, 056, 066, 068, 070, 071, 076, 077, 079, 080, 081, 085, 088, 100, 104, 105, 106, 107, 118, 119, 121, 123, 124, 125, 127, 128, 129, 133, 135, 137, 143, 145, 147, 150, 155, 157, 159, 164, 169, 175, 178, 179, 187, 188, 189, 190, 191, 193, 211, 215, 219, 221, 224, 226, 245, 254, 263, 276, 277, 280, 287, 295, 301, 305, 308, 312, 319, 320, 325, 329, 334)

Comment: Seventy-three commenters think that it would be more cost effective to periodically replace dunes and repair and enlarge the existing beach rather than move the beach to the north. Several commenters requested that the Refuge leave the beach where it currently is and rebuild the dunes, install snow fence, and plant grasses at the existing beach, noting that this practice was utilized in the past and protected the beach from storm damage.

Response: Section 2.4, Appendix I, and Appendix J all discuss costs and cost effectiveness of various beach alternatives. To compile a summary of dune management records at Chincoteague NWR, annual narratives from the years 1963 through 2003 were reviewed and information about dune management was extracted. Between 1981 and 2003, dune management activities were recorded by the refuge more frequently, either as a result of an increased amount of dune management efforts (due to creation of dunes or repairs from storm damage) or a more consistent effort by the administrative staff responsible for writing annual narratives. During this time, a repetitive pattern seemed to develop in the fate of the man-made dunes. As the dunes were built, overwhelmed by storms and knocked down, and then rebuilt, it became obvious to park and refuge managers that the artificial dune system failed to prevent significant facility and infrastructure damage. In addition, it was evident that the recreational beach had begun to narrow, restricting the area available for beach use, especially during high tide. NPS and USFWS, using research and experiences at several national seashores along the Atlantic coast, have come to the conclusion that continually building and maintaining artificial dunes can actually accelerate ongoing erosion, rather than protect against it. "A high, continuous, artificial dune designed to prevent overwash may actually exacerbate erosion of the foreshore" (Godfrey and Godfrey, 1976). This probably happens because "dunes interfere with the energy dissipation process and thus accelerate the rate of beach erosion. During extreme events a high dune becomes vertically scarped; this impenetrable barrier to storm waves forces the runoff seaward and may actually reflect the waves" (Leatherman, 1979). Evidence also suggests that artificial dunes could threaten the island's stability and resistance to narrowing and breaching, a threat to Toms Cove, its fishery, and ultimately to Chincoteague Island. Dunes prevent overwash, which bring sand to the bayside (thereby supporting the creating and maintenance of salt marsh) and to an island's interior (thereby elevating the island and increasing its sand supply). "Thus, islands held in one place become lower and narrower and inherently less stable" (Godfrey and Godfrey, 1976). Recently, NPS and USFWS have set

the berm and parking lots at an elevation that prohibits overwash during normal lunar high tides and minor nor'easters but allows for overwash during larger storms. With this compromise, NPS and USFWS hope to limit monthly parking lot repair from high tides and storms while still allowing the overwash that is crucial to keeping the island stable. However, permanent, higher dunes risk the narrowing and risk of breaching that could unintentionally threaten Toms Cove and Chincoteague Island, and the island has not yet widened enough to allow for the creation of tall dunes.

Maintain
(Letter ID#106)

Comment: Fill the bay side of Tom's Cove in order to protect the existing beach parking lot.

Response: Filling the bay would irreversibly damage marine resources that currently thrive there (please refer to section 2.4.1 Beach Nourishment for more information on this topic). In regards to protecting the existing beach parking lots, the current recreational beach will be managed by the NPS until the new beach area is designed, approved, and completed; thus, transition from one beach location to the other will not have any loss of access. We are committed to ensuring that visitor experience is maintained as much as possible throughout any transition process. We are committed to maintaining the existing beach and beach parking lots as resources and supporting land base are available. Please refer to sections 2.5.2 and 2.5.3 for more information.

Fees
Fees
(Letter ID#173, 190)

Comment: One commenter recommended charging non-residents a fee for crossing the bridge and allowing residents to have a windshield sticker to raise revenue. Another commenter noted that increased fees could be used to restore the existing parking lot.

Response: The refuge has a well-established recreational fee program that raises funds to maintain refuge visitor facilities and programs. Consideration has been given to increasing entrance fees but no final decision has been reached.

Fishing
Restrictions
(Letter ID#197)

Comment: Prohibit fishing from prime swimming areas during the summer months for safety reasons.

Response: Fishing is one of the priority uses of the Refuge System and is to be facilitated when compatible. The NPS currently prohibits fishing in a portion of the recreational beach patrolled by NPS lifeguards. This prohibition remains in each of the proposed alternatives.

General
MOU
(Letter ID#271)

Comment: The MOU revised in 2012 was completed without public review, (Appendix E of the CCP) and does not represent a worthy effort. Furthermore, the CCP should be revised to increase NPS management authority for coastal beach management within a larger 'assigned area'.

> Response: While there is no legal requirement for public review for MOU between cooperating agencies, we will reach out to the public as the next MOU is developed. We currently enjoy a very productive cooperative relationship with the NPS in the management and maintenance of the recreational beach and parking area, formally known as "the assigned area." The assigned area will move 1.5 miles north with the new recreational beach and parking area. For decades, our partnership with the NPS has successfully provided a quality recreational beach experience and parking for visitors. The USFWS has no additional plans to further expand the spatial extent of the assigned area beyond what is now described under the revised Alternative B. Please refer to 1.14.6 Visitor Services.

General
(Letter ID#294)

Comment: Provide more enforcement and ban kayaking from the refuge as they park and walk along the shoreline in areas they aren't supposed to.

> Response: As part of the CCP process we have attempted to identify opportunities for increased recreation that is still appropriate and compatible for the refuge. In our view kayaking provides a unique opportunity to engage in priority wildlife-dependent recreation including wildlife observation, fishing and photography. We will continue to enforce refuge regulations to the maximum extent possible with available staff and funding.

General
(Letter ID#007)

Comment: Page 2-63 should include additional information about the lifeguard housing on Wallops Island NWR.

> Response: We recognize that the availability of housing for the USFWS and the NPS seasonal workers in the area is an issue. There are no specific plans (blueprints, etc.) developed at this time to share, but the strategy proposed under alternative B is to revise the use agreement, with environmental compliance, within 3 years. Please refer to Objective 5.4 Federal Interagency Collaboration and Facility Management for more information.

Horseback riding
Support
(Letter ID#020, 226, 265)

Comment: A commenter requested that horseback riding be continued on the Refuge including the beach.

> Response: Horseback riding will continue under our preferred alternative, please see section 2.5.3.

Hunting

Impacts
(Letter ID#204)

Comment: Several commenters noted their concern with increased hunting where it would disturb wintering American Black Ducks, a priority resource of concern for the refuge, citing the 2011 Habitat Management Plan. It seems unavoidable that the new route to the beach would result in more traffic close to the impoundments causing further impacts to this species.

> Response: Increased traffic along the new route would primarily occur during the busy summer season, when impoundments are typically drawn down and American Black Ducks are minimally present. Cost benefit analysis will be developed to determine whether hunting nuisance species, such as snow geese, will be advantageous. The hunt management plan, being developed after the CCP process, will address this issue. Please refer to the Structured Decision Making process regarding increased traffic disturbance in Appendix N, and section 4.7.2 Impacts on Birds in Alternative B, for more information.

Impacts - safety
(Letter ID#113, 200)

Comment: The increased hunting proposed in alternative B does not provide adequate information to protect the public during the hunting season. Furthermore, increased hunting poses an increased risk to non-hunters and may deter non-hunting activities. The plan notes that wildlife photography is becoming more popular yet it proposes a plan that will restrict bird watchers. Why not balance the approach? Rather than have the refuge closed to all but hunters the majority of the year, announce scheduled culls and for safety close the bulk of the refuge for 1 week/hunting month.

> Response: Hunting is one tool used to manage and maintain wildlife populations at a level compatible with the environment while providing wildlife-dependent recreational opportunities and permitting the use of a valuable renewable resource. However, we understand there is a legitimate safety concern when non-hunters enter areas being hunted. Under alternative B we would continue to inform our non-hunting visitors when portions of the refuge are closed for hunting through our website, signs, rope lines, and law enforcement officer patrols. Currently during the approximately 2-month hunting season a significant portion of the refuge remains open for wildlife observation. Under the preferred alternative B we would continue to seek a balance between hunting and non-hunting visitors.

Opposed
(Letter ID#113, 197, 285)

Comment: Several commenters are opposed to increased hunting within the Refuge or hunting of geese and others are opposed to all hunting.

> Response: Hunting is one tool used to manage and maintain wildlife populations at a level compatible with the environment while providing wildlife-dependent recreational opportunities and permitting the use of a valuable renewable resource. Closing the refuge to hunting would conflict with the Improvement Act, which lists hunting as an appropriate and priority use of the Refuge System; directs that hunting shall receive priority consideration

in refuge planning and management; mandates that hunting opportunities should be facilitated when feasible; and directs USFWS 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, "no hunting" would conflict with Executive Order #13443: "Facilitation of Hunting Heritage and Wildlife Conservation." The order directs the DOI and its component agencies, bureaus, and offices, "to facilitate the expansion and enhancement of hunting opportunities and the management of game species and their habitat." The expansion of hunting opportunities would mean that other visitors would be more likely to see or hear signs of hunting from adjacent areas, which could adversely affect their wildlife observation. However, this impact would be minimized as hunting would occur during off-peak visitation times. Hunting of new species would reduce the number of those species that visitors could see; however, these species are being identified because of their overabundance and impacts to other species.

Support
(Letter ID#204, 233, 305, 306, 401)

Comment: Several commenters supported Canada goose and light goose hunting, noting this would increase the amount of food for waterfowl. A reduction of the over-abundant resident Canada goose population may result in increased use of impoundments by nesting and migratory water birds, perhaps even restoring black duck breeding activity on the Refuge. Others requested hunting of mourning doves and turkey. One commenter requested that turkey should be included in the big game youth hunting program on the Refuge.

Response: These activities are considered in the CCP Alternative B Objective 6.1. Hunting is one tool used to manage and maintain wildlife populations at a level compatible with the environment while providing wildlife-dependent recreational opportunities and permitting the use of a valuable renewable resource. Our strategy toward management of Canada geese, light geese, turkey, and mourning dove will be further refined in the hunt management plan.

Impact
Wildlife - Delmarva Fox Squirrel
(Letter ID#203)

Comment: I am concerned that I did not see much thorough analysis of the impacts to the Delmarva Peninsula fox squirrel. In the description of the affected environment (section 3.4) the species habitat was briefly discussed but it appears that the issue of impacts to this species was not addressed in environmental consequences for each alternative. Anticipated impacts to vegetation/habitat are not addressed in the section which outlines the impacts to the Delmarva Peninsula fox squirrel. I question that this potentially impacted vegetation may be suitable for this species. The CCP/EIS needs a more rigorous discussion of the short and long-term impacts order to evaluate the potential impacts to this species.

Response: The refuge would continue to provide protective conservation measures for federally listed species and their habitats on the refuge as indicated in recovery plans and relevant regulations. Although the Delmarva Peninsula fox squirrel has been proposed for delisting from the endangered species list since the draft CCP/EIS was published, it has not been finalized yet. Besides chapter 4, please refer to the Structured Decision Making process

in Appendix N to see additional consideration of this species and its habitat. Reference 3.4.1 Common Delmarva Peninsula fox squirrel. The proposal for delisting can be seen at: http://www.regulations.gov/#!documentDetail;D=FWS-R5-ES-2014-0021-0002 "Endangered and Threatened Wildlife and Plants: Removal of the Delmarva Peninsula Fox Squirrel from the List of Endangered and Threatened Wildlife.". Further evaluation of potential impacts to the squirrel will be conducted through consultation with our Ecological Services Division.

Economic
(Letter ID#164, 187, 219, 259)

Comment: Relocating the recreational beach would adversely affect the economic viability of the Town of Chincoteague and Accomack County. The existing recreational beach is a unique draw to visitors because of the easy parking access and the access from the recreational beach to other facilities, including the calm waters of Tom's Cove, crabbing and boat access to the recreational beach.

Response: Please see response to comment below for additional information regarding economic impacts to Chincoteague. We have modified the preferred alternative to maintain some accessibility at the current beach, even after it is relocated. Permitted OSVs and hikers will be able to access the current beach via Beach Road from September 16 to March 14. The Toms Cove Visitor Center would be maintained by NPS for environmental education purposes only until it becomes unserviceable. The refuge would also allow the landing of motorized or non-motorized vessels along the bay side of Toms Cove from approximately September 16 to March 14. During that period when the Hook area is closed, the landing of recreational vessels would be prohibited along the Toms Cove shoreline for the protection of threatened and endangered species in accordance with statutory mandates.

Economic
(Letter ID#070, 128)

Comment: What is the economic impact of alternative B on Chincoteague?

Response: Because alternative B would maintain at least 8.5 acres of land for beach parking (961 spaces), USFWS assumes that visitation would not change as a result of the beach relocation, as the same number of spaces would be available, and the short-term transition between the locations would be carefully managed outside the peak visitation period. Although alternative B includes several expanded visitor services, no significant increase in visitation would be expected. Therefore, USFWS assumes that there would not be any change in the economic impact of visitation resulting from alternative B. However, enforcement of Federal laws that would effectively eliminate illegal horseshoe crab harvesting in the Toms Cove area would likely result in a negative impacts to some commercial watermen. The annual value of horseshoe crab harvesting on the refuge is estimated at a maximum of approximately $55,261. In contrast, alternatives A and C assume a loss of beach parking that would result in a loss of economic activity to the Accomack and Worcester Counties in the range of $37 million annually.

Economic
(Letter ID#185)

Comment: A recreational beach on Assateague Island must be maintained and recreational opportunities on the beach should be enhanced. Assateague Island is profoundly important to Accomack County. The Chincoteague and Wallops Island National Wildlife Refuges are huge attractions that create enormous volumes of economic activity upon which our community depends. The beach is undeniably the main attraction of the Chincoteague Refuge. Continuing beach access and enhancing the beach experience for visitors is Accomack County's top priority.

> Response: Under the preferred alternative, the refuge would continue to allow NPS to maintain 961 automobile parking spaces (8.5 acres) at the recreational beach. In recognition of the vulnerability of the current parking, the refuge would develop and implement a site design plan for parking and access to a new beach location, approximately 1.5 miles north of the existing beach. The new recreational beach would offer accessible parking in close proximity to the beach. The refuge in consultation with NPS would provide management strategies for maintaining the current beach in the interim until the newly located recreational beach is ready for visitor use. The refuge would provide a transition plan for moving from the current beach location to the new beach location, including proposed processes and management strategies to ensure access to a recreational beach is available for visitors. Please see CCP/EIS Section 2.5.3 for more information.

Economic - fisheries
(Letter ID#185)

Comment: Aquaculture in Chincoteague Bay supports 100 or more jobs and continues Eastern Shore working traditions established more than three centuries ago. The Draft CCP blithely casts aside any notion that these long-held traditions in our community should continue. The proposed Assateague Wilderness and Marine Research Reserve should be set aside and reconsidered with further state and local input. To this end, Appendix A should be removed from the CCP. Our legitimate local interests in our traditional fisheries and marine harvests need to be heard and considered, with input also from the Governor of Virginia and Virginia agencies, including the Virginia Marine Resources Commission.

> Response: The CCP recognizes the importance of aquaculture to the local economy in Appendix M. There is nothing in the CCP that suggests these activities should not continue. The proposed Assateague wilderness area was established in 1974 and has had no effect on aquaculture in Chincoteague Bay. The map of the 1974 proposed wilderness area in the draft CCP was incorrect in that the area only includes land and does not include any open water. This error was discovered during the public review process and we have corrected it in the final CCP. A Wilderness Review is a required component of all CCPs and Appendix A satisfies that requirement, as well as making recommendations for monitoring the wilderness character of the area. The CCP does not propose a Marine Research Reserve, but does express preliminary support should it be proposed in the future.

Environmental Justice
(Letter ID#20)

Comment: Alternative A has no impact on Environmental Justice concerns while alternatives B and C do have negative impacts. In looking at the current beach users it is apparent that there is a lack of diversity. Your choice, alternative B, will further reduce that diversity, which is not tolerable.

Response: Executive Order 12898, General Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (1994), requires all Federal agencies to incorporate environmental justice into their missions by identifying and addressing the disproportionately high and/or adverse human health or environmental effects of their programs and policies on minorities and low-income populations and communities. As defined by the EPA on their web site, environmental justice is the "fair treatment and meaningful involvement of all people, regardless of race, color, national origin or income, with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies." Fair treatment means that no group of people, including a racial, ethnic, or socioeconomic group, should bear a disproportionate share of the negative environmental consequences resulting from industrial, municipal, and commercial operations or the execution of Federal, state, local, and tribal programs and policies. Under the preferred alternative it was determined that there could be a small negative impact on all users in order to access the Service Road north of the new recreational beach. However, this impact would not be disproportionately higher on environmental justice communities.

Golf carts
(Letter ID#007)

Comment: Page 2-10 mentions alternative vehicles such as golf carts being allowed on town and refuge roads. Additional information should be provided describing any potential impacts resulting from these vehicles. For example, would additional lanes be needed?

Response: Under the preferred alternative the refuge would allow alternative vehicles such as golf carts or other small electric vehicles on refuge roads, potentially increasing parking capacity at the recreational beach parking lots. We assume these vehicles would be appropriately licensed by the State and Town to be driven on public roads. We do not anticipate a large number of visitors using these vehicles, nor any significant impacts to traffic, safety or air quality. This change would not require additional lanes be built within the refuge.

Habitat
(Letter ID#046, 071, 078, 081, 164, 218, 281, 292)

Comment: What are the environmental impacts of the beach relocation, particularly the impacts to wildlife and habitat of disturbing previously undisturbed and pristine areas for parking and roads? One commenter noted that it might be more appropriate to downsize the area of impact at the parking lot by making it smaller than the existing lots or at least not increasing the footprint over that which currently exists at the Refuge.

Response: Environmental impacts of all alternatives are detailed in chapter 4. The areas selected for the proposed road widening and parking lots are not undisturbed and pristine, and consist of a mixture of scrub shrub, wetland, and forested habitats, with their associated vegetation. Vegetation would also be altered and/or removed from the vicinity of Mallard Pool (C Pool) and Pintail Pool (D Pool) resulting in a loss of that habitat, mostly myrtle/bayberry shrub. The removal of vegetation would be mitigated by expanding the road in currently impacted areas as much as possible (i.e., expansion into the current manmade borrow ditches that were created to build the road originally), and where not possible, only impacting minimal scrub shrub or forest vegetation where no threatened or endangered species are known to occur. Alternative C does consider a smaller parking area

with a smaller footprint impact, and this does have fewer wildlife and habitat impacts as compared to alternative B; however, the smaller footprint also has greater impacts to recreation and economic resources.

Habitat
(Letter ID#54)

Comment: What habitat will you have to destroy to fulfill alternative B?

Response: As described on page 4-8 of the draft CCP/EIS, relocation of the recreational beach would require some destruction of existing habitat (approximately 27 acres). This would primarily be a mixture of scrub shrub, wetland, and forested habitats. However, mitigation for these adverse impacts would result from future management of the North Wash Flats area that would cease vegetation removal and allow for the natural vegetation to grow back in an area of approximately 300 acres, improving the habitat for spring and fall migratory neotropical birds. Thus, a net benefit would occur. Please refer to 4.5.2 Impacts on Vegetation in Alternative B for more information.

Interpretive

(Letter ID#006)

Comment: The recreational beach may change the availability and mix of interpretive opportunities currently provided by NPS. NPS looks forward to working with CNWR staff to find appropriate and meaningful interpretive activities for visitors that take full advantage of the relocated beach and the new vehicle turn-around, crabbing dock and launch point for non-motorized boats suggested by the CCP for Beach Road. The CCP notes that the "Beach Road causeway across Toms Cove would be closed to all public access once other equivalent public access to the new recreational beach is provided". NPS currently provides guided interpretive programs that explore various aspects of the bay and marsh. Would programs led by interpreters or volunteer guides be allowed? Would the new terminus and parking lot be sized to accommodate buses and robust use of the area for educational and interpretive purposes? It is our understanding that nothing in the CCP would prohibit year-round authorized vehicular access for NPS maintenance and related activities. Page 2-73, Strategies, bullet 2. We congratulate USFWS on its plan to develop tours and controlled access to Assateague Village, and would ask the NPS also be allowed to provide interpretation of the area as well. NPS hopes to continue to provide a vibrant menu of lifelong learning opportunities for children and adults, in partnership with the refuge.

Response: Revisions to alternative B retain access to Toms Cove via Beach Road, including NPS vehicular traffic for maintenance purposes. NPS and Chincoteague Bay Field Station environmental education and interpretive programs will continue unchanged. Interpretive and environmental education programs at Assateague Village by the NPS will be considered.

Regional
(Letter ID#356)

Comment: Regarding scientific study and analysis for beach erosion and hurricane/major storm damage of the current beach and the proposed location for the new beach (preferred alternative B): Science now views the barriers islands as a cohesive system. Anything done or not done to one island will impact the others around it. The CCP's focus, as written, does not address this. Its focus is

narrow and does not consider Assateague as one part of a larger system. What are the most likely environmental consequences of the alternatives on Chincoteague and Wallops Islands? The same question needs to be studied for Tom's Cove which has enormous economic value for our fishing and aquaculture industries.

> Response: The USFWS is currently engaged in numerous partnerships to address coastal resiliency on the Eastern Shore of Virginia. We will work with partners to provide specific expertise in environmental monitoring and forecasting, modeling about coastal vulnerability and risk assessment, and moreover access to climate change space-based data." The USFWS is committed to exploring the implementation of resiliency strategies informed by the latest science available. Please refer to chapter 4 Environmental Consequences for more information regarding potential impacts of the alternatives.

Regional
(Letter ID#271)

Comment: Because the proposed CCP is a change in federal barrier island management actions from stability to vulnerability, alternative B should not be implemented until outstanding environmental impact and public safety issues are resolved for the entire 17+ miles of Assateague Island coast in Virginia.

> Response: Nothing in the preferred alternative described in the CCP proposes a management change from stability to vulnerability, or would have that result. In fact, as specifically stated in chapter 1, "The town of Chincoteague, adjacent coastal communities, and NASA are concerned about future impacts of sea level rise and storm surge on infrastructure and access. We share this concern and will work in coordination with those entities and others to explore potential impacts and identify protective methods to address hazard mitigation. We will also work with our partners to explore how best to advance the study, information exchange, and project resources for adaptive management practices that sustain the resiliency of this unique barrier island system including but not limited to Assateague, Wallops, Assawoman, and Metompkin Islands in the face of dynamic coastal processes and climate change." We believe that the barrier islands of Maryland and Virginia should be viewed as interconnected, ecological units. The issue of coastal resiliency in the face of climate change and storm events is complex. We will continue working cooperatively with agencies (i.e., USACE, NPS, NASA, and Virginia Institute of Marine Science), better understand the ecological dynamics of this barrier system and potential solutions to improve resiliency for both wildlife and people.

Safety
(Letter ID#182)

Comment: Alternative B is inadequate as presented to ensure public safety and effective mosquito and biting insect control.

> Response: The most recent directive from the USFWS's headquarters regarding mosquito control on lands of the National Wildlife Refuge System is included as an attachment to Appendix C. When a public health authority advises the USFWS of a threat to health and safety of the public from mosquitoes arising from a refuge, we will work with the public health authority to allow them to reduce the public health risk on the refuge, as long as the

activities are in full accordance with our regulations, policies and permitting procedures. Please refer to Objective 6.5 Recreational Beach Use for more information.

Shellfishing
(Letter ID#186, 229, 405)

Comment: Potential conflicts could arise in areas where the Commonwealth leases state-owned subaqueous lands for oyster or clam fishing activities adjacent to or near the Refuges. This is because the federal government may have some jurisdiction up to a half-mile wide corridor around the Refuges which may overlap with state-owned bottom lands. Leasing of such lands is not prohibited by federal law, but may require leaseholders to obtain federal permits from the USFWS.

Response: We concur that potential conflicts could arise, and would require additional coordination with appropriate state and federal partners. The subaqueous lands referenced are outside USFWS jurisdiction.

Shellfishing - economic
(Letter ID#039, 057, 066, 115, 122, 128, 134, 186, 189, 224, 318, 319)

Comment: Commenters asked about the economic and other impacts of not protecting the shell fishing (oyster, clam, horseshoe crab) and fin fishing grounds in Toms Cove, noting there are natural and aquaculture grown oysters and clams in Toms Cove. They feel this industry would be destroyed by the overwash, affecting the local economy. One commenter noted that the bivalve trail is not an alternative for recreational shellfishing because it is bug infested and not easily accessible.

Response: Overwash is part of the natural process of building and maintaining barrier islands, and overwash to date on Toms Cover Hook has not destroyed the aquaculture industry. We will continue to work with partners to identify strategies to increase resiliency in the face of climate change that would include the aquaculture industry. In consultation and cooperation with the NPS and the VMRC, the commercial harvest of horseshoe crabs that takes place on refuge lands does not contribute to the refuge's migratory bird purpose, does not contribute to the public's understanding and appreciation of the refuge's natural or cultural resources, and is not beneficial to refuge resources; consequently, the use cannot be permitted. Enforcement of Federal laws that would effectively eliminate horseshoe crab harvesting in the Toms Cove area would likely result in a negative impacts to some commercial watermen and the annual value of horseshoe crab harvesting on the refuge is, estimated at a maximum of approximately $55,261.

Storm protection
(Letter ID#191, 298)

Comment: What will be the long term impact on the Tom's Cove area, and the Island of Chincoteague of moving the beach north and allowing the current beach to degrade? The CCP did not include a risk analysis of breaches on the north end of Assateague - this scenario would cause catastrophic flooding on Chincoteague.

Response: We do not expect increased vulnerability as a result of moving the recreational beach 1.5 miles north, nor do we expect increased vulnerability as a result of constructing the new recreational beach and parking area. However, we will "continue working with

coastal geologists to model the impacts of storm flooding events and other dune breaching scenarios on Assateague Island" (objectives 1.1 and 5.3).

Wildlife
(Letter ID#204)

Comment: The Virginia Society of Ornithology encourages the Refuge to take a closer look at the cumulative impacts to wintering birds from the proposed change in public beach access and increased hunting opportunities.

> Response: We evaluated impacts to birds (including cumulative impacts) in section 4.7.2 Impacts on Birds in Alternative B. We will continue to manage the refuge to meet refuge purposes, "… especially migrating and wintering waterfowl."

Economic - visitor
(Letter ID#271)

Comment: Since the beach has not been designed, the economic impact and visitor experience impact of alternative B has not been adequately assessed.

> Response: The economic analysis (Appendix M) determined that visitation and economic impact are correlated, and visitation and parking capacity are correlated. Parking capacity would not change as a result of the beach relocation, as the same number of spaces would be available, and the short-term transition between the locations would be carefully managed outside the peak visitation period. We concur with NPS, who "believes that the parties can design a beach experience that, while different from the current one, will still engage visitors and provide the kind of recreational opportunity for which the area has justifiably become famous. Careful attention to the design of parking for cars, RVs and buses, boardwalks, accessibility, changing stalls, rinse-off facilities, vault toilets, shelter areas, dune management and other related needs can ensure a quality experience at the new beach location. Critical to the success of the new plan will be finding an appropriate balance between visitor experience and resiliency from future storms."

Economic - visitor
(Letter ID#072, 118, 119, 137, 139, 141, 151, 158, 159, 160, 161, 162, 180, 182, 185, 214, 227, 273, 277, 282, 308, 331, 334, 343, 406, 407)

Comment: Several commenters expressed their concern with the Refuges future planning may reduce the number of visitors and cause negative impacts to the local economy. Because the recreational beach is undeniably the main attraction of the Chincoteague Refuge, and is therefore enormously important to the Accomack County economy, a recreational beach must be maintained and recreational beach opportunities expanded. Continuing beach access and enhancing the beach experience for visitors is Accomack County's top priority. The Refuge's priority should be to ensure the best beach and access is maintained to support the local economy noting that the popularity of the Refuge is based on the existing beach and the experience it provides. Furthermore, several commenters stated that recreational use is just as vital to the future of the economic engine of Chincoteague Island as is survival of threatened and endangered species cited in the CCP.

> Response: Please see response above regarding local economic impacts and visitor experiences. We have noted throughout the CCP/EIS that the recreational beach is the primary reason for visits to the refuge. USFWS understands the importance and fully supports recreational use at the refuge. In Chapter 1, Need: "Public visitation, which has

stayed consistent over the past decade with approximately 1.25 million visits annually, is important to raising awareness and appreciation of the refuge and to generating revenue that supports public and wildlife services. Such high visitation provides a need to implement management strategies and direction to minimize human disruption to the natural environment." By law, USFWS cannot change the principle uses of the refuge, and we have primary responsibility for managing the wildlife resources within the entire refuge, including the assigned area. However, we also have a cooperative relationship with the NPS for management of the recreational beach, defined in a series of agreements dating back to 1966; all of which have assigned certain management responsibilities to each of the two agencies. USFWS has conveyed primary jurisdiction for beach use and recreation within the assigned area to the NPS, and we have worked with them to minimize adverse impacts to the refuge, and developed a MOU to document operating procedures and respective responsibilities.

Law enforcement

Law enforcement

(Letter ID#401)

Comment: The Virginia Department of Game and Inland Fisheries (DGIF) recommend that USFWS increase law enforcement presence on the southern islands, especially on North Metompkin, where the island is narrow. The narrow width of this island results in humans traversing piping plover nesting sites to get from one side of the island to the other. DGIF recommends that the USFWS have at least one law enforcement officer on call to handle wildlife violations on the southern islands from Memorial Day to Labor Day each year.

Response: Thank you for your comments. The Assateague Island portion of the refuge receives a significant amount of visitation during the summer breeding season for shorebirds that increases the workload of our current law enforcement staff and limits our ability to patrol Assawoman and Metompkin Islands. Under the agency's preferred alternative we have requested an additional land management officer to be added to our staff. It is our intent to utilize this position to provide greater coverage to the lower islands in our complex during the summer breeding season.

Management

Barrier island

(Letter ID#062, 063, 094, 110, 129, 130, 144, 158, 174, 191, 207, 212, 213, 215, 216, 221, 274, 280, 281, 294, 303, 307)

Comment: The refuge should manage barrier island habitat for stability and resiliency rather than rapid environmental change.

Response: The USFWS is currently engaged in numerous partnerships to address coastal resiliency on the Eastern Shore of Virginia. Our partnerships look at climate change research with the goal of helping local and regional leaders make coastal communities and habitats more resilient through scaled science and research informing public policy. With partners we hope to provide specific expertise in environmental monitoring and forecasting, modeling about coastal vulnerability and risk assessment, and moreover access to climate change space-based data." The USFWS is committed to exploring the implementation of resiliency strategies informed by the latest science available.

Ecological system
(Letter ID#220)

Comment: Protect healthy, functioning coastal watersheds, perennial freshwater streams and tidal creeks to support unique freshwater fish assemblages and other native freshwater biota in addition to improving the water quality of coastal bays and estuaries for oyster reefs, submerged aquatic vegetation, blue crabs, sharks, sea turtles, benthic invertebrate communities, fisheries, and the clam aquaculture industry.

> Response: The USFWS thanks you for reviewing the draft CCP/EIS and providing your support.

Habitat
(Letter ID#220)

Comment: We look forward to continuing to work very closely with the Service on all fronts related to beach nesting birds, and offer our strongest possible support for this issue remaining a top priority for the Service under the final CCP.

> Response: The USFWS thanks TNC for reviewing the draft CCP/EIS and providing suggestions and support.

Habitat
(Letter ID#106, 183, 218, 220, 251)

Comment: Several commenters requested that the USFWS do more to reduce invasive species throughout the Refuge and to improve and maintain a diverse native habitat.

> Response: We agree that addressing invasive species is an important consideration. The refuge would continue to conduct a number of strategies to address invasive species and their impacts, such as scout and remove invasive species such as Phragmites and Asiatic sand sedge by chemical, mechanical, or other means, and using all current and future surveys to refine this strategy. We would also continue to use refuge education programs and outreach efforts to educate visitors, hunters, and other groups about how they can help decrease the spread of invasive plants. Please reference 2.5.1, Existing Management Actions That Continue Under All Alternatives, for more information.

Mean low water
(Letter ID#333)

Comment: One commenter inquired about determining the mean low tide watermarks, noting that it will change due to erosion and if fishing is impeded based on the survey results, the Refuge may be opening themselves up to a lawsuit.

> Response: We agree that the mean low watermark changes over time. According to the Virginia Institute of Marine Science, mean low water is defined as "the average of all the low water heights observed of a 19-year period." We do not anticipate our marking of the mean low water line to establish refuge jurisdiction will interfere with permitted or otherwise legal fishing activities.

NPS
(Letter ID#020, 076, 108, 109, 128, 137, 215)

Comment: Commenters requested that the NPS take over management of the Refuge.

> Response: USFWS and NPS currently operate the recreational beach and parking area under a cooperative management agreement. This agreement will migrate to and cover activities within the new recreational beach and parking areas.

Piping plover
(Letter ID#007)

Comment: Page 2-15 states that if the piping plover fledging rate drops below 1.0 chick per pair over a 10-year period, management strategies and prescriptions would be re-evaluated. The 10 year time frame should be explained. Since the goal is to meet recovery goals for the species would a shorter time frame provide better results?

> Response: In accordance with research on piping plovers, our current management target allows for population growth necessary to meet current recovery goals. Using 1.0 rather than a previous 0.93 chicks per pair as the trigger to re-evaluate management allows more time to find solutions and implement them. These management actions, though directed specifically at the piping plover, would also benefit other high ranking species such as the least tern, American oystercatcher, black skimmer, Wilson's plover, and gull-billed tern due to their similar habitat needs. Please refer to Piping Plover Recovery goals and objectives at this link: http://www.fws.gov/northeast/pipingplover/ for more information.

Piping plover
(Letter ID#)

Comment: What are the recovery numbers for the Piping Plovers? How will moving the beach change these numbers? Commenters also questioned the ability of the Piping Plover to ever rebound.

> Response: An anticipated benefit of moving the location of the beach and beach parking area 1.5 miles north is expected to increase piping plover nesting activity in the overwash area. For more information on the latest recovery numbers for piping plovers, and projections for their recovery, please refer to Piping Plover Recovery goals and objectives at this link: http://www.fws.gov/northeast/pipingplover/. Also, we address piping plovers more in section 4.6.2 Impacts on Federally Threatened and Endangered Species in Alternative B.

Piping plover
(Letter ID#251)

Comment: One commenter noted that the CCP's reference to shorebird monitoring should state surveys start two hours before low tide. In addition, if a favorable low tide only occurs in the afternoon, then shorebird surveys should be started on the impoundments from south to north, and the beaches surveyed from north to south to ensure accuracy.

Response: Thank you for your comment. This will be addressed in our inventory and monitoring plan.

Policies
(Letter ID#037)

Comment: One commenter stated that beach restoration and maintenance policies are not clearly defined.

Response: In addition to the requirements discussed in the CCP/EIS in Sections 1.4 through 1.8, there are additional mandates that we must abide by in managing the refuge, including laws, policies for implementing those laws, and executive orders. Some of these are specific to USFWS, and others are broader and apply to all Federal agencies. Over the past 20 years, national directives from Congress and USFWS for managing uses and planning for units of the Refuge System have become more comprehensive and attuned to the essential features of natural systems. USFWS and Refuge System laws and policies, along with the purpose of each refuge, provide the foundation for managing the refuge. Other laws and executive orders can be found on the USFWS Laws Digest Web site at: http://www.fws.gov/laws/Lawsdigest.cfm; the laws listed here and others are also listed in Appendix C. Appendix B also discusses other mandates that help guide our management.

Prescribed burning
(Letter ID#285)

Comment: Stop practicing prescribed burning, noting that it causes health problems.

Response: Prescribed burning is conducted in accordance with the regulations that govern fire management activities on national wildlife refuges, which includes air quality standards. Burn management plans are created with air quality standards in mind for local communities. Specific examples include burning only on days with adequate atmospheric lift so that smoke rises as opposed to settling in populated areas or when wind conditions exist that blow smoke away from populated areas. Prescribed burning is a proven habitat management tool and an efficient and effective means for vegetation control and enhanced nutrient cycling.

Wildlife
(Letter ID#249)

Comment: Reduce the Canada goose population, as this would likely promote American Black Duck breeding habitat availability.

Response: Management strategies for addressing the Canada goose population can be found in Objective 2.1 Impoundments for Waterfowl, Shorebirds, Waders, and Associated Species; Objective 2.5.2 Alternative A Current Management; and Objective 6.1 Hunting and Trapping. Further discussion of impacts are in chapter 4.

Wildlife
(Letter ID#202)

Comment: We are opposed to predator control on the refuge.

Response: Predator control is one management tool employed at the refuge to support protected species. Predator control is cited in the 1995 Atlantic Coast Recovery Plan as an effective method of protecting piping plover by providing safe nest areas, and the 1993 Recovery Plan for the protection of the Delmarva fox squirrel. In addition, the Biological Opinion completed for this EIS/CCP found that predator control has contributed to the positive recovery of the aforementioned species, including the loggerhead, green, and leatherback sea turtles.

Mitigation research

Renewable energy

(Letter ID#007)

Comment: Page 2-73 please consider expanding the last bullet. What is involved in the pursuit of designation from the Department of Interior to be a pilot site for mitigation research, such as testing the impacts of renewable energy on wildlife? Will there be additional NEPA documentation for these activities?

Response: We will work with others to determine the feasibility of becoming a pilot site for mitigation research. In the event of natural or manmade disasters, we will continue to pursue resources as they become available for restoration and research. Any ensuing projects would likely require NEPA compliance.

OSV

Access - support

(Letter ID#103, 222, 245, 354)

Comment: Leaving the over wash area open in the spring would provide anglers with ample room to spread out and find areas of fishing that are better than others. The system works well now so why not leave the area from the newly created parking lots to the Coast Guard station open for seasonal OSV use? Is there a reason for eliminating the seasonal OSV access all together? If a 0.5 mile year round OSV zone was established, would the vehicle limit be 6? Under the current management plan the seasonal closure limits OSV users to a limit of 18 vehicles on 1.5 miles of beach. I'd like to see the preferred alternative changed to keep OSV access as is under the current management plan. OSV zone should be expanded to the north and south of the over wash area, with closures as needed during nesting seasons, noting this would allow the Refuge to permanently close the hook area to OSV use.

Response: Revised alternative B continues current management of Overwash and Hook for shorebirds until new recreational beach is established, at which time the March 15 through September 15 closure would go into effect. Revised alternative B also establishes a new ½-mile OSV zone to facilitate the six priority uses (March 15 through September 15) south of new recreational beach. The USFWS has adopted the NPS strategy for the number of vehicles allowed per linear mile of beach. This equates to approximately 12 vehicles per mile, a density we consider compatible with wintering shorebird requirements at this location. We consider this to be an acceptable density of OSV use that takes into consideration both recreational use and conservation efforts.

Access - support

(Letter ID#191, 215)

Comment: Several commenters requested continued access to the OSV area for vehicles and horse-back riding, when those activities do not interfere with breeding and nesting.

> Response: Under revised alternative B, OSV use and horse-back riding outside of the shorebird nesting and breeding season will continue.

Discontinue all
(Letter ID#183, 197, 204, 233, 240, 241, 249, 251, 251, 292)

Comment: Commenters requested that all OSV be prohibited from the Refuge, noting associated costs, impacts to migrating shorebirds, habitat damage, and reduced visitor experience.

> Response: Revisions to alternative B will continue to allow OSV access via Beach Road. This revision reduces proposed OSV usage by approximately 1 mile from the draft CCP/EIS. In an effort to manage a variety of public uses, we have attempted to reduce conflicts and maximize quality recreational experiences for a wide array of visitors. Please refer to 1.9.3 Balance Between Public Use and Habitat and Wildlife Conservation; 1.9.4 Public Access to the Refuge; 4.13 Visitor Use and Access, and our compatibility determinations for more information.

Enforcement
(Letter ID#251) Comment: How would enforcement of the OSV zone be accomplished?

> Response: OSV zone enforcement is accomplished by a variety of means including the issuance of permits, law enforcement patrols, random equipment compliance check points and the posting of regulations on regulatory signs. In addition, the NPS publishes a brochure which includes all OSV zone regulations on their website and available in print at the NPS visitor centers in both Maryland and Virginia.

Finding
(Letter ID#251)

Comment: Recreational beach driving should be evaluated as a stand-alone use subject to a compatibility determination (CD) and finding of appropriateness.

> Response: We chose to cover OSV use in the compatibility determinations prepared for each of the six priority uses. It was determined that OSV use would not pose a significant impact to wildlife "because the OSV use is now only allowed in support of priority public uses like surf fishing and driving is restricted outside of the intertidal zone".

Impacts - habitat
(Letter ID#007, 251)

Comment: Allowing OSV during the fall shorebird migration conflicts with Objective 1.2 of Managing Barrier Beach and Dune Habitat for Migrating/Wintering Shorebirds. However, impacts to other shorebirds cannot entirely be extrapolated to all shorebirds because piping plovers are summer breeders and migrants, and do not winter on the Refuge. Another commenter noted that based on information presented it is unclear what benefit comes from OSV access in alternative B.

There appear to be many benefits to species of concern and habitat by further limiting or eliminating their use.

> Response: OSV activities are currently spatially limited based on bird nesting behavior. Under the CCP, hard dates are established (March 15 to September 15) for OSV closure to benefit nesting and migrating shorebirds. The USFWS has adopted the NPS strategy for the number of vehicles allowed per linear mile of beach. This equates to approximately 12 vehicles per mile, a density we consider compatible with wintering shorebird requirements at this location. We recognize that OSV activity can impact migrating shorebirds. Refer to Objective 1.2. Also considered during the development of the draft CCP was the historical use of the overwash and hook by fisherman whose primary means of conveyance is OSV. In an attempt to reach a balanced approach between wildlife conservation and fishing access, a use compatible with refuge goals, we determined that some level of OSV use was acceptable in terms of disturbance to migrating shorebirds. Please refer to Objective 6.2 Fishing and OSV Use for more information.

Limit closure
(Letter ID#283)

Comment: In regards to nighttime OSV restrictions, in order to allow fishing at night, can the Refuge only close areas on the nights of expected turtle hatches and within the areas of existing nests?

> Response: Greater detail for rationale and restrictions toward nighttime OSV use can be seen in the Biological Opinion (Appendix F), and in the compatibility determinations (Appendix P).

Oppose closure
(Letter ID#148, 283, 332, 354)

Comment: Several commenters noted their opposition to the closure of the OSV zone during the months when the beach is used the most, noting that this puts fishing in conflict with beach goers.

> Response: In an effort to manage a variety of public uses, we have attempted to reduce conflicts and maximize quality recreational experiences for a wide array of visitors. Revised alternative B also establishes a new ½-mile OSV zone to facilitate the six priority uses, including fishing (March 15 through September 15) south of new recreational beach. Please refer to 1.9.3 Balance Between Public Use and Habitat and Wildlife Conservation; 1.9.4 Public Access to the Refuge; and 4.13 Visitor Use and Access for more information.

Oppose date stamp
(Letter ID#050, 124, 134, 177, 332)

Comment: Several commenters are opposed to the calendar based nesting season closures to the OSV zones. Several commenters requested the Refuge follow the NPS protocol regarding nesting season closures.

> Response: Motorized vehicle use on beaches is an extreme threat to piping plovers, as well as other shorebirds that nest on beaches and dunes. To mitigate for these potential negative impacts, the refuge has instituted seasonal closures for surf fishermen, horseback

riders, and OSV users. The beach habitats of Toms Cove Hook are the most productive on the refuge for nesting and staging shorebirds. With establishment of the new recreational beach, the Toms Cove Hook portion of the surf fishing, horseback riding and OSV zone would be closed from March 15 through September 15 annually, and later if unfledged birds remain in the area. The closure period also encompasses the peak times of spring and fall migration, thus providing undisturbed habitat for shorebirds during the most critical times of year, and is cushioned to provide greater benefits to migratory and nesting shorebirds. Please refer to 2.5.3 Alternative B (Balanced Approach - Visitor Use and Experience) for more information.

Oppose expansion
(Letter ID#200, 218)

Comment: Commenters oppose the expansion of the OSV area, noting this will encourage non-wildlife dependent activities. In addition commenters noted that the beach should be closed to OSVs until after fall shorebird migration has ended around the end of October, noting that opening the beach on September 15th would impact sensitive migratory birds and nesting sea turtles.

Response: We considered the historical use of the overwash and hook by fisherman whose primary means of conveyance is OSV. In an attempt to reach a balanced approach between wildlife conservation and fishing access, a use compatible with refuge goals, we determined that some level of OSV use was acceptable in terms of disturbance to migrating shorebirds. Revisions to alternative B retain the Beach Road OSV seasonal access point, and eliminate approximately 1 mile of OSV use between the current recreational beach and the proposed recreational beach locations (as proposed in the draft CCP/EIS).

Support limit
(Letter ID#354)

Comment: One commenter requested that the OSV limit should remain at 18 vehicles.

Response: The USFWS plans to continue to limit the number of vehicles allowed to 12 per linear mile of beach.

Parking
Reduce restrictions
(Letter ID#204)

Comment: One commenter requested that the number of beach parking spaces be reduced to 480 spaces, noting that implementation of a shuttle service would ensure visitation is not limited. In addition, this strategy would decrease traffic on the Refuge and provide additional habitat.

Response: We did evaluate an alternative with 480 spaces (alternative C). While we agree that this action would decrease traffic on the refuge and provide additional habitat (as compared to the preferred alternative), the smaller footprint would also result in greater impacts to recreation and economic resources. Thus, while alternative C reflects the refuge's stated mission and goals of wildlife and habitat preservation, it is less balanced than alternative B, the USFWS preferred alternative.

Pedestrian access

Coast Guard Station
(Letter ID#66)

Comment: Maintain access for pedestrians to the old coast guard station.

> Response: We have modified the preferred alternative to maintain some accessibility at the current beach, even after it is relocated. Hikers would be allowed access at the current beach to the Coast Guard Station from September 16 to March 14. We will continue current management of the overwash and Toms Cove Hook area for shorebirds until the new recreational beach is established, at which time the March 15 through September 15 closure would go into effect.

Swan Cove/Toms Cove
(Letter ID# 046, 066, 122, 134, 181, 198)

Comment: Keep Beach Road open to pedestrians to provide wildlife viewing at Tom's and Swan's Cove.

> Response: Please see previous response. Pedestrian access via Beach Road will continue under the revised alternative B, with the exception of the March15 to September 15 closure for shorebird nesting and migration.

Ponies

Herd size
(Letter ID#401)

Comment: The DGIF noted the non-native ponies damage the natural vegetative communities within the Refuge. The DGIF recommends reducing the number of ponies to 125 animals and restricting them to an area on the island where they can be easily viewed by the public, but where their adverse ecological impacts are minimized.

> Response: We currently graze fewer than 150 ponies and the intent is to keep the herd under that number. We recognize that ponies reduce vegetation that could otherwise be available to wildlife, while at the same time recognizing that in the absence of extensive use of fire to control vegetation; this grazing activity could also provide habitat benefits. The USFWS recognizes and supports the strong cultural tie that exists between the town of Chincoteague and the Chincoteague ponies and intends to preserve this legacy. For more information regarding the pony herd, please refer to 2.5.3 Alternative B (Balanced Approach), Cultural Resource Management and Objective 2.1 Impoundments for Waterfowl, Shorebirds, Waders, and Associated Species. Also, refer to Appendix D Pony Management Plan.

Feral
(Letter ID#059, 083, 095, 191, 286, 301)

Comment: The term feral is used by the USFWS to degrade the wild horses. The ponies are a re-introduced species to North America having originated here first and brought back to North

America by the Spanish and settlers. Commenters requested that the CCP acknowledge that the ponies may be of Spanish origin and specifically from a Spanish shipwreck.

> Response: The origin of the ponies is unknown, although there are several theories. One popular legend is that a Spanish galleon carrying a cargo of ponies sank off Assateague in the 1700s, and some of the ponies were able to swim to shore. Another theory is that the "Chincoteague Ponies" are descendants of colonial horses brought to Assateague Island in the l7th century by Eastern Shore planters when crop damage caused by free roaming animals led colonial legislatures to enact laws requiring fencing and taxes on livestock. The term "feral" can be defined as "existing in a natural state, as animals or plants; not domesticated or cultivated; wild" (http://dictionary.reference.com/browse/feral).

General
(Letter ID#294)

Comment: A permit should be required to take photos of the ponies to ensure safety and aid in crowd management.

> Response: Refuge staff goes to great lengths to ensure the safety of visitors through the utilization of crowd management techniques and by providing guidance on behavior around ponies. However, incidents with ponies have occurred in the past and will likely continue to occur, despite our efforts to effectively separate ponies from the public during events. Please refer to Appendix D, Pony Management Plan, for more information.

Herd size, viewing, fencing
(Letter ID#003, 014, 028, 045, 051, 057, 061, 062, 063, 066, 083, 085, 094, 110, 118, 126, 128, 129, 130, 133, 135, 139, 143, 144, 158, 159, 160, 163, 172, 174, 181, 188, 191, 202, 207, 209, 210, 211, 212, 213, 215, 216, 221, 224, 226, 227, 244, 254, 274, 275, 277, 280, 281, 287, 294, 301, 302, 303, 307, 313, 326)

Comment: Sixty one commenters requested the pony herd be maintained at 150, noting that a reduction in the herd size could have an adverse effect on the future population of the herd and the local economy. Reduction in the space for the herd could also have adverse consequences. Provide ample viewing areas with parking. Commenters are opposed to the wilderness area stating it would restrict viewing access. Commenters also requested the refuge reconsider the fenced regions because in the past the fencing has put lives of herd at risk during storms.

> Response: Along with the strong cultural tie in the community, the ponies are also a habitat management tool. Therefore, while there is no plan to reduce the size of grazing areas, ponies could be rotated to maximize habitat benefits. Alternative B prescribes no change in pony management. The 1974 proposed wilderness area appears to have had no measurable effect on pony viewing access. Fencing is used in some areas to minimize contact between ponies and visitors.

Impact
(Letter ID#108)

Comment: Overgrazing from the ponies has polluted the water. The USFWS has failed to lower the herd size as the grazing size was reduced. Furthermore the fencing is poor and causes harm to other wildlife.

Response: Since the establishment of the refuge, the actual amount of grazing on the refuge has been reduced from two grazing permits to only one, with the number of animals being reduced by half in the early 1950s when the second permit was discontinued. Additionally, restrictions have also been added to reduce any possible impacts to the migratory bird habitat. Since the early 1950s, the number of ponies has been fairly constant at around 150 adult animals; therefore, their impacts can be considered to be fairly constant. However, continued grazing by Chincoteague ponies in the salt marshes of the two grazing compartments is expected to reduce and/or eliminate the accumulation of detritus (decaying vegetation). This buildup of decaying vegetation is thought to be vital if salt marsh root systems are to keep pace with rising sea levels. Reducing grazing pressure on the salt marsh is consistent with the Chincoteague Volunteer Fire Company (CVFC) goal of maintaining a viable healthy population of Chincoteague ponies on the refuge. For more information, please refer to Appendix P, Compatibility Determination for the Grazing of Chincoteague Ponies.

North Wash Flats
(Letter ID#401)

Comment: DGIF recommends not removing fencing from the North Wash Flats wetland impoundment because it was installed as a component of a waterfowl enhancement project. The fencing was installed to assist in keeping the ponies out of the impoundment, in the future, it could be used as a management tool to control or prevent pony grazing.

Response: We have a modified a strategy in Objective 2.1 to read: "Within 3 years, evaluate whether Chincoteague pony grazing can be used more effectively to meet habitat needs of shorebird and waterfowl species and if so, work with the Chincoteague Volunteer Fire Company to adjust grazing compartments and/or pony numbers in order to accomplish this. We will use this evaluation to determine whether the pony exclosure fencing should be removed."

Post-storm access

Impact
(Letter ID#006, 70, 162, 124, 131, 133, 155, 171, 271)

Comment: Commenters said there needs to be an action plan and strategy in the CCP to keep the beach open after a storm when overwash has impacted parking lots and roads in the Tom's Cove area. The NPS offered to participate with USFWS, the Town of Chincoteague and Accomack County to develop strategies to address access after damage caused by coastal storms to the existing parking lot location, and urges the partners to do so as soon as feasible.

Response: A strong partnership exists between Chincoteague NWR and Assateague Island National Seashore to manage the current recreational beach and parking area. The agencies intend to work together to the greatest extent possible in the event of a storm potentially damaging the recreational beach and parking area to prevent interruptions to recreational user access. The availability of financial or human resources following a storm event will determine to what degree and how quickly repairs are made. For more information, please refer to section 2.5.3.

Post-storm access
(Letter ID#131)

Comment: A commenter requested opening the beach immediately following a storm so that visitors and surfers may experience the storm's aftermath.

> Response: In order to ensure for the safety of both the visiting public as well as agency employees we may close all or a portion of the refuge following a storm event to allow our maintenance division time to address damage to infrastructure.

Recreational beach

Priority use
(Letter ID#407)

Comment: The recreational beach and protected recreational beach parking should be considered a high priority use of the Refuge, considering this is the primary reason for most visits to the Refuge.

> Response: By law, USFWS cannot change the principle uses of the refuge. However, in the draft CCP/EIS, we do note throughout the importance of the recreational beach and visitation to the community, and that it is the primary reason for visits to the refuge.

Relocated beach

Further study
(Letter ID#052, 076, 194, 208, 224, 287, 322,)

Comment: Several commenters requested that a study be completed by the ACOE to see what effect relocating the beach would have on Chincoteague Island. Combine with other ACOE comments.

> Response: We will continue to work cooperatively with other agencies, including the USACE, to understand the ecological dynamics of this barrier system, and potential solutions to improve resiliency for both wildlife and people. We understand that the proposed relocation of the recreational beach requires more detail before it could be implemented, and we plan to conduct another NEPA analysis regarding the proposed relocation. We have invited local officials to participate closely in any future analysis and design, and have reached out to other agencies, such as the USACE, to also participate in that process.

Shuttle bus

Idling
(Letter ID#007)

Comment: Page 2-83 discusses the shuttle service. The shuttle should avoid idling time to minimize air quality impacts.

> Response: Alternative C is the only alternative evaluated in detail that includes a shuttle and it is not the USFWS's preferred alternative. Beach relocation and its impacts would be further studied in an additional NEPA document, and if a shuttle is included, this issue will be addressed (i.e., mitigation strategies to reduce or avoid shuttles idling).

Opposed
(Letter ID#043, 072, 078, 090, 133, 145, 150, 157, 158, 161, 172, 175, 190, 197, 224, 266, 277, 281, 287, 308)

Comment: Twenty commenters expressed their opposition to the implementation of shuttle buses noting that it would restrict beach access and be inconvenient. Several commenters felt that reducing overall parking in addition to adding shuttle buses would impact visitation and the economy.

> Response: It is the position of USFWS that transit is an important component of responsible management to provide visitors with an alternative option to driving along with bicycling and walking, to address high levels of demand on peak beach visitor use days, and to address impacts on current recreational beach parking resulting from rising rates of sea level and climate change effects. As such, transit is necessary for alternative A, not only to be consistent with the 1993 Master Plan, but also to ensure the same level of access in the future, given the uncertainty in being able to maintain the current level of parking. Transit is also necessary in alternative C due to the reduction in beach parking and the need to provide access during peak visitation. However, as a compromise to address public concerns, and in recognition that relocation of the beach and associated parking will greatly reduce risks to both, a voluntary shuttle was removed from the preferred alternative B.

Storm evacuation
(Letter ID#070, 131, 160)

Comment: Several commenters were concerned with evacuation of the beach by shuttle buses were in the event of a fast-moving storm

> Response: Originally the preferred alternative included shuttle service to ensure access to the recreational beach during peak visitation. In conjunction with the shuttle service storm shelters would be constructed. However, as a compromise to address public concerns, and in recognition that relocation of the beach and associated parking will greatly reduce risks to both, a voluntary shuttle was removed from the preferred alternative B.

Support
(Letter ID#018, 113, 233)

Comment: Three commenters noted their support for incorporation of a shuttle bus to the beach. Commenters noted shuttle service would minimize traffic on the wildlife loop and on the refuge in general, providing greater beach access. In addition, commenters stated shuttles would provide alternative access after storms impact existing facilities.

> Response: The beach relocation is intended to provide a more protected location for the recreational beach and parking, but prior to the relocation, the refuge, NPS, and town of Chincoteague may consider short-term strategies to address access after damage caused by coastal storms at the existing beach. As a compromise to address public concerns, and in recognition that relocation of the beach and associated parking will greatly reduce risks to both, a voluntary shuttle was removed from the preferred alternative B.

Sika deer

Eradication - oppose
(Letter ID#028, 061, 062, 063, 085, 094, 112, 118, 129, 142, 143, 144, 158, 174, 188, 191, 196, 200, 207, 209, 210, 211, 212, 213, 215, 216, 221, 264, 274, 277, 280, 281, 287, 294, 303, 307)

Comment: Thirty-seven commenters are opposed to eradication of the Sika deer. Other commenters noted they would like to see the Sika Deer population remain at the level it was 10 years ago. Will the Sika Deer be completely eliminated?

> Response: While grazing by sika and resident white-tailed deer is a potential threat to achieving habitat objectives if population numbers are not managed by hunting, there is no current plan to completely remove sika deer from the refuge. In alternative C, in coordination with DGIF, we propose to work to phase out the sika population through continued recreational hunt and professional contracts within 5 years; however, that is not our preferred action. For more information, please refer to 4.13.1 Impacts on Hunting and Trapping Opportunities and Alternative B Objective 6.1 Hunting and Trapping.

Eradication - support
(Letter ID#249, 233, 401)

Comment: Three commenters supported removing Sika Deer from the Refuge and one asked for reduction in the Canada goose population, noting this would increase the amount of food for waterfowl. In addition several commenters noted removal of the Sika Deer would provide benefit to native forest and understory plant species.

> Response: Please see previous response. We agree that hunting can be used as a management tool to harvest surplus wildlife populations and achieve populations levels appropriate for the available habitat and to support other wildlife populations. Under alternative C, we note that current hunting practices could be expanded to incorporate different species, such as fox and raccoon, and trapping opportunities to further reduce the stress of predators for threatened and endangered species. Efforts to reduce sika and non-migrant Canada goose could aid in the refuge's initiative to decrease the non-native, nuisance, or overabundant species that currently impact native species habitat.

Snowy owl
Provide habitat
(Letter ID#61, 062, 063, 066, 094, 143, 144, 158, 174, 191, 207, 209, 210, 212, 213, 215, 216, 221, 274, 280, 281, 294, 302, 303, 307)

Comment: Twenty three commenters requested the Refuge provide habitat for the Snowy Owl to encourage use during the migratory season.

> Response: The occurrence of snowy owls on the Eastern Shore of Virginia during migration is a recent phenomenon which we have yet to address in terms of habitat prescriptions. Our upcoming habitat management planning process will address habitat needs for migratory birds currently utilizing the refuge. Ancillary benefits to snowy owls could result from management for more commonly occurring migratory birds, but there is currently no plan to manage specifically for snowy owls.

Tracking devices

(Letter ID#294)

Comment: Please ban scientists from putting tracking devices on Snowy owls because the devices attract additional visitors.

> Response: The refuge does not put tracking devices on snowy owls. The comment seems to refer to "Project SNOWstorm" which is a collaboration between dozens of scientists and organizations to study the ecology of wintering snowy owls. While partners of this effort includes state and Federal agency staff, USFWS is not a current partner.

Southern Tip partnership

Southern Tip partnership

(Letter ID#220)

Comment: We emphasized the importance of the Southern Tip Partnership's focus on advancing a systematic and focused effort to achieve the dual goals of land protection and habitat restoration. We want to offer the Service specific encouragement to work with all of its partners on the Eastern Shore to develop and, even more importantly, implement the Nature Conservancy's Comment Letter on Chincoteague CCP Page 7 of 7 final CCP and any associated Land Protection Plan. Given the conservation importance of this landscape and the dramatic challenges it faces in the coming decades, a bold and visionary approach to conservation efforts at Chincoteague NWR is necessary to conserve an invaluable but diminishing natural and working landscapes and a major recreational and economic resource for the local community and the public at large.

> Response: Although the CCP does not propose additional land protection for Chincoteague NWR, we remain committed to work with communities, other governmental agencies, and non-governmental partners to evaluate predicted land use and climate-related changes on the lower Delmarva Peninsula with the intent of maintaining robust fish and wildlife populations within working landscapes for the economic and other societal benefits they provide.

Storm protection

Chincoteague Island

(Letter ID#049, 076, 078, 082, 083, 090, 118, 138, 142, 146, 151, 169, 185, 194, 202, 208, 215, 216, 227, 406)

Comment: Commenters requested that the dunes at Toms Cove be rebuilt in order to protect Chincoteague Island from storms, which would also save the existing beach and provide piping plover habitat. Other related comments include: beach stabilization is funded for Wallops Island and the Refuge policy should comply with the Virginia Coastal Zone Emergency and Management Policy. Why are volunteers not allowed to plant beach grass and put up sand fences in the winter? It appears beach nourishment is rejected on grounds pertinent to habitat maintenance rather than beach maintenance. Beach nourishment is a common and accepted strategy to maintain recreational beaches. At the very least, beach nourishment should be considered, together with other strategies for beach maintenance, by the Secretary of Interior and Secretary of the Army in their formulation of plans for each erosion control and hurricane protection mandated by the Assateague National Seashore Act of 1965. The proposed removal of dunes and facilitation of breaches and inlets seems inconsistent with Virginia coastal policies.

Response: The USFWS and the NPS have a 50 year history of attempting to maintain manmade dunes for protection from storms at the recreational beach site, to no avail. The USFWS is currently engaged in numerous partnerships to address coastal resiliency on the Eastern Shore of Virginia. The USFWS is committed to exploring the implementation of resiliency strategies informed by the latest science available. Overwash conditions are beneficial to many coastal species, including piping plovers and seabeach amaranth. However, based on concerns brought up during the public comment period, we have removed any reference of intent to facilitate breaches in artificial dune systems. The NPS and USFWS do not believe that beach nourishment and engineering strategies would be a responsible and sustainable management tool for use on southern Assateague Island, for the reasons provided in Section 2.4.1. This issue of storm protection and resiliency is important to USFWS, and as stated on page 2-10 of the draft CCP/EIS, "the refuge would work with the town of Chincoteague to explore potential impacts and identify protective methods to address hazard mitigation, in coordination with others, such as Accomack County, Commonwealth of Virginia, NPS, National Aeronautics and Space Administration (NASA), Federal Emergency Management Agency (FEMA), and USACE. The refuge would also work with partners to explore how best to advance the study, information exchange, and project resources for adaptive management practices that sustain the resiliency of this unique barrier island system including but not limited to Assateague, Wallops, Assawoman, and Metompkin islands in the face of dynamic coastal processes and climate change."

Chincoteague Island
(Letter ID#006, 019, 037, 045, 051, 052, 057, 058, 068, 078, 079, 081, 089, 105, 115, 120, 121, 137, 162, 171, 178, 179, 181, 186, 189, 191, 203, 215, 245, 263, 295, 298, 308, 312, 319, 320, 334, 337)

Comment: Chincoteague Island (the town of Chincoteague) depends on the storm protection that Assateague Island provides. The Refuge should not be permitted to let southern Assateague Island erode away by moving the beach to the north because it would eliminate the storm protection for Chincoteague. The Army Corps needs to develop a shore protection plan for Assateague and Chincoteague Islands. Several commenters requested further study is completed to ensure protection of Assateague from storm surge. The final EIS should provide that the Corps of Engineers, as the law requires, will be called upon to develop a shore protection plan for Assateague and Chincoteague Islands.

Response: Please see our previous response. As noted, we intend to collaborate with the USACE and others on the issue of coastal resiliency. Some commenters have also noted that the 1965 law that created the Assateague Island National Seashore calls for the Secretary of the Interior and the Secretary of the Army to "cooperate in the study and formulation of plans for beach erosion control and hurricane protection of the seashore..." but believe that this has yet to be accomplished. However, the study called for in the 1965 law was in fact completed in 1980 ("Atlantic Coast of Maryland and Assateague Island, Virginia Main Report," United States Army Corps of Engineers, Baltimore District, May 1980). More information on storm protection can be found in section 1.14.15 Partnerships (Hazard Mitigation), and Objective 7.5 Climate Change and Sea Level Rise.

Chincoteague Island
(Letter ID#220)
Comment: TNC requests the Refuge maintain or restore natural shorelines and connected upland habitats to facilitate the gradual inland migration of tidal salt marshes and other coastal habitats

while also buffering harmful effects of coastal flooding and storm surges to local property and infrastructure due to accelerated sea level rise.

> Response: Shoreline management on the refuge will be informed by the most current science available which will be made available through partnerships, which could include MACRI. As we note in chapter 1, "we are committed to working with partners … to improve connectivity between protected lands, protecting and restoring the ecological integrity, functionality and value of diverse habitats, buffering harmful effects of coastal flooding and storm surges to local communities and infrastructure, and providing lands for multiple recreational activities to support the tourism economy while also providing ecological, educational, and other benefits. Although the CCP does not propose additional land protection for Chincoteague NWR, we remain committed to work with communities, other governmental agencies, and non-governmental partners to evaluate predicted land use and climate-related changes on the lower Delmarva Peninsula with the intent of maintaining robust fish and wildlife populations within working landscapes for the economic and other societal benefits they provide."

Chincoteague Island
(Letter ID#076)

Comment: A minimum elevation should be created and maintained along the center of Assateague from the area of Parking Lot 1 down to the old Coast Guard Station, filling in any breaches as they may occur, to assure the protection of the population of Chincoteague, in addition to maintaining some measure of protection for the very expensive Federal assets at Wallops Island.

> Response: Shoreline management on the refuge will be informed by the most current science available which will be made available through partnerships, which could include MACRI. Additional information on shoreline management can be found in section 2.5.1 Existing Management Actions That Continue Under All Alternatives; Objective 7.5 Climate Change and Sea Level Rise; and 1.14.15 Partnerships (Hazard Mitigation).

Sustainability
Sustainability
(Letter ID#288)

Comment: I would like to see more sustainable and low impact provisions for all of the alternatives. As such I think it would be prudent to showcase Chincoteague NWR as the most sustainable refuge in the system and an example for future management at other refuges. There is no appreciable cost preventing the refuge run on clean energy such as solar or wind power, as sustainable energy would only have to power limited facilities (Visitor's Center, Maintenance buildings etc...). This could also mean a possibly LEED certified Visitor's Center for the beach, complete with grey water filtration, sustainable power, and other 'green' systems.

> Response: The USFWS strives to incorporate sustainable energy systems into designs, as well as using "green" building products and techniques whenever possible. We will continue to look for the most affordable, sustainable products available to us. The USFWS is committed to reducing our carbon footprint. For more information: http://www.fws.gov/home/climatechange/strategy.html).

Toms Cove

Maintain access

(Letter ID#046, 066, 122, 134, 181, 198)

Comment: Several commenters requested that Tom's Cove remain accessible for a variety of uses. One commenter suggested that the solid causeway be replaced with a low culvert bridge allowing Swan Cove to rejoin Tom's Cove, noting that this would allow for parking and continued use of Tom's Cove. Several commenters also requested that the east side of Tom's Cove remains open noting that the protected waters of Tom's Cove provide for a variety of recreational uses. In addition, the NPS provides kayaking ecology tours around the shores of the cove. Furthermore, commenters requested continued access and parking facilities within close proximity to easily access Tom's Cove.

> Response: The revisions to alternative B include preservation of access to Toms Cove via Beach Road. This access would be primarily for recreational users and also for the NPS and Chincoteague Bay Field Station environmental education programs. We recognize the constraints to tidal flow created by Beach Road and will work in the future on a less restrictive design. Please refer to Objective 2.1 Impoundments for Waterfowl, Shorebirds, Waders and Associated Species for more information.

Visitor access

Access

(Letter ID#126)

Comment: The final CCP must continue to offer wildlife areas for amateur and professional photographers along with waterway access for cruise boat operators.

> Response: Nothing in the CCP affects cruise boat operators using waterways below mean low water, which is the refuge's jurisdictional boundary. Alternative B provides ample opportunities for nature photography, which is a priority use of the Refuge System.

Visitor access

(Letter ID#104, 109, 045, 014, 083, 128)

Comment: Commenters are concerned with reduced visitor access for recreation including for birding, lighthouse climbing, beach-going, and other activities in the refuge, such as those by the "friends" groups (e.g. Chincoteague Natural History Association). Some feel that recreation is and should be the primary purpose of the shoreline and that FWS is intent on eliminating humans from the refuge.

> Response: Public visitation, which has stayed consistent over the past decade with approximately 1.25 million visits annually, is important to raising awareness and appreciation of the refuge and to generating revenue that supports public and wildlife services. Such high visitation provides a need to implement management strategies and direction to minimize human disruption to the natural environment. Revisions to alternative B include changes that will increase recreational opportunities and access for people. Goals 6 of the CCP remains: "People of all ages and abilities develop a stewardship ethic while enjoying their refuge experience and increasing their knowledge of the USFWS, Refuge System, and refuge."

Visitor experience
Maintain existing
(Letter ID#066, 120, 121, 122, 126, 128, 160, 187, 224, 311, 335)

Comment: Several commenters requested that the unique visitor experience of Chincoteague be preserved on the Refuge and the beach. Several commenters also noted that maintaining the existing visitor experience was vital to the local economy.

> Response: NPS and USFWS believe that, with our partners, "... we can design a beach experience that, while different from the current one, will still engage visitors and provide the kind of recreational opportunity for which the area has justifiably become famous. Careful attention to the design of parking for cars, RVs and buses, boardwalks, accessibility, changing stalls, rinse-off facilities, vault toilets, shelter areas, dune management and other related needs can ensure a quality experience at the new beach location. Critical to the success of the new plan will be finding an appropriate balance between visitor experience and resiliency from future storms." To maintain some of the unique visitor experiences at the current recreational beach (Toms Cove), we have modified the preferred alternative to permit some accessibility even after it is relocated. Permitted OSVs and hikers will be able to access the current beach via Beach Road from September 16 to March 14. The Toms Cove Visitor Center would be maintained by NPS for environmental education purposes only until it becomes unserviceable. The refuge would also allow the landing of motorized or non-motorized vessels along the bay side of Toms Cove from approximately September 16 to March 14.

Visitor Services
Plan required
(Letter ID#20)

Comment: The visitor services plan should be developed prior to finalizing the CCP to allow for public comment and review.

> Response: A visitor services plan will be a step-down plan to the CCP and will build upon other management plans, namely the Hunt Management Plan (2007), to document approved recreational activities and identify the structure of the visitor services program. The plan will include visitor services data and research to evaluate and plan for visitor services programs, and will assist in the implementation of the CCP. Prior to finalizing the visitor services plan, the public will be given an opportunity to comment.

Wilderness Area
General
(Letter ID#406)

Comment: There is a big difference between voluntarily managing acreage in the center of Assateague Island for wilderness and designating wilderness; such designation would prohibit public access, restrict traditional water-dependent uses, and outlaw storm damage repair.

> Response: In response to the Wilderness Act, the entirety of Assateague Island was reviewed to find areas that possessed primeval characteristics in accordance with the

Wilderness Act. As a result, the central 6,500 acres of Assateague Island was proposed as wilderness in 1974, but has yet to receive designation. No change to the status of this area was proposed as a result of the CCP. In accordance with the Wilderness Protection Act, the USFWS is responsible for preserving the wilderness character of these designated and proposed wilderness areas. The Refuge will continue to manage the proposed wilderness area until congressional action takes place converting this area into wilderness. In the CCP, there is no change proposed in the status or area proposed for wilderness designation.

Opposed
(Letter ID#066, 083, 094, 110, 139, 143, 144, 158, 159, 165, 174, 181, 191, 209, 210, 212, 213, 215, 216, 221, 224, 238, 274, 275, 301, 302, 307, 311, 312, 317,)

Comment: Thirty commenters are opposed to closing the northern end of the island for the wilderness area. Commenters noted this wilderness designation would have impacts on the local economy, shellfish industry, and tourism industry and impact the overall visitor experience. Several commenters also felt that the wilderness area designation would prevent dune management and shoreline stabilization placing Chincoteague Island at unacceptable risk from storm damage. In addition, commenters are opposed to the wilderness area noting that the designation would threaten the wild ponies and restrict viewing access.

> Response: Please see pervious response. An evaluation of the current land status, Appendix A, provides a 2012 baseline assessment and describes the wilderness character monitoring program for the proposed Assateague Island wilderness. By law and policy, the USFWS is responsible for preserving the wilderness character of these designated and proposed wilderness areas. Under the preferred alternative no change to the access, use or management of the proposed wilderness area would occur. The maps identifying the existing proposed wilderness area will be updated to only include the land and not the water within the refuge.

Support
(Letter ID#285)

Comment: One commenter requested that the entire site, presumably all of the Refuge, be designated a wilderness area.

> Response: The entirety of Assateague Island does not meet the required criteria for wilderness area. In addition, this would be inconsistent with USFWS mission and purpose of the refuge.

Wilderness Area
(Letter ID#322)

Comment: One commenter was concerned with the method in which the boundary for the wilderness area was drawn and requests due diligence and review prior to finalizing the boundary

> Response: The boundary of the wilderness area is incorrect in the draft EIS/CCP. The final EIS/CCP has addressed this error.

Wildlife

General
(Letter ID#400)

Comment: The Virginia Department of Conservation and Recreation offered to provide USFWS and the National Park Service with digital information about documented natural heritage resources within the Refuges for use in GIS mapping and planning tools or access to the Natural Heritage Data Explorer. The Virginia Department of Game and Inland Fisheries (DGIF) maintains a database of

wildlife locations, including threatened and endangered species, trout streams, and anadromous fish waters that may contain information not documented in its letter.

Response: The USFWS thanks you for reviewing the draft CCP/EIS and providing input.

Habitat
(Letter ID#401)

Comment: DGIF recommends incorporation of native plants that produce fruits high in antioxidants, such as arrowwood (Viburnum spp.) and Virginia creeper (Alan, eta/, 2013; Bolster, eta/, 2013) in restoration efforts for the benefit migratory songbirds.

Response: The USFWS will work to adapt restoration strategies that coincide with this research. This strategy has been added to Objective 2.1.

Monitoring
(Letter ID#400, 401)

Comment: The Virginia Department of Conservation and Recreation's recommends a re-survey of the Refuge in order to accurately document the current location and extent of natural heritage resources and to allow for appropriate planning based on current information. The Virginia Department of Game and Inland Fisheries (DGIF) recommend that the USFWS work cooperatively with the National Air and Space Administration (NASA) to gain daily access to Assawoman Island for biological monitoring and management.

Response: The USFWS collaborates with Virginia DCR on several projects including management of rare plant communities on the refuge. A re-survey of refuge lands to more accurately document the current location and extent of natural heritage resources will be considered in future step-down planning efforts, such as the Habitat Management Plan (HMP). More information can be found in Objective 1.4 Federally Endangered Plants and Rare Plant Communities.

Monitoring
(Letter ID#401)

Comment: The Virginia Department of Game and Inland Fisheries (DGIF) recommends that USFWS consider daily sea turtle monitoring during the appropriate nesting season on Assateague and Assawoman Islands. The DGIF recommends adopting new sea turtle nest monitoring and management protocols pursuant to the Virginia and Maryland Sea Turtle Conservation Plan.

Response: We concur with DGIF, and will consider daily sea turtle monitoring during the appropriate nesting season on Assateague and Assawoman Islands. We will also use the Virginia and Maryland Sea Turtle Conservation Plan to guide our actions.

Predator control
(Letter ID#285)

Comment: Leave foxes and raccoons alone and refrain from predator control.

Response: Predator control is one management tool employed at the refuge to support the population of protected species. Predator control is cited in the 1995 Atlantic Coast Recovery Plan as a method for protecting piping plover by providing safe nest areas and the 1993 Recovery Plan for the protection of the Delmarva fox squirrel. In addition, the Biological Opinion completed for this EIS/CCP found that predator control has contributed to the positive recovery of the aforementioned species, including the loggerhead, green, and leatherback sea turtles.

Predator control
(Letter ID#200)

Comment: The CCP discusses the removal of raccoons and foxes from the island. Are Grey Foxes included in this management strategy? The grey fox has become alarmingly rare and I am opposed to any reductions unless there is data supporting this management strategy.

Response: Predator management activities will be completed at the request of the refuge with approval of the refuge manager. Reduction of the red and gray fox populations is included in the predator management strategy. Predator control is one management tool employed at the refuge to support the population of protected species. This is supported by studies that show a reduction in predators improves nesting success of the piping plover and other endangered and threatened species (Page 3-47 draft CCP/EIS). In addition, the use and benefits of predator control is documented in the Biological Opinion for this CCP/EIS.

Table R-1 List of Commenters

Letter #	Last Name or Organization	First Name	Type Submittal	Notes
001	Virginia, Commonwealth of		Letter	Cover letter with state agency comments: listed as 401-407
002	Town of Chincoteague		Letter	
003	Chincoteague Volunteer Fire Company		Letter	
004	Accomack County Planning & Comm Develop Dept		Letter	removed - duplicate of 279
005	Virginia Eastern Shore Land Trust		Letter	
006	National Park Service		Letter	
007	US Environmental Protection Agency (EPA) Region III		Letter	
008	Nature Conservancy		Letter	
009	Tarr (Mayor of Chincoteague)	Mayor John	Letter	
011	National Park Service		Letter	removed - duplicate of 006
012	Petition Supporting Alternative B		Petition	112 signatures (combined 012, 44, 73, 86 into one document)
014	Cahall	Kathleen	Letter	
015	Konow	Joan	Letter	
016	Zanghi	Sal	Letter	
017	Zanghi	Barbara	Letter	
018	Payne	Randolph & Nancy	Letter	
019	Adams	Ina Rae	Letter	
020	Dennis	Carol	Letter	
021	Bowden	Carolyn	Letter	
022	Raw	Patricia	Letter	
023	Hearing Speaker List Speakers are listed as 311-337.		Letter	removed - hearing speaker list
024				removed - general correspondence - not a comment
025	Linebarger	Edith	Letter	
026	Lane	Ruth	Letter	
027	Maryland Gazette			Part of a newspaper clipping - unreadable - removed
028	Matise	Norma	Letter	
029	Roske	Monique	Letter	
030	Trayvor	Lisa	Letter	
031	Hodgson	Dale	Letter	
032	Nickol	James	Letter	
033	Weiss	Walter	Letter	
034	Thackray	Barbara M.	Letter	
035	Hearing Speaker sign in list			removed

Letter #	Last Name or Organization	First Name	Type Submittal	Notes
036	Tavolaro	John F.	Letter	
037	Rosenberger Sr.	Raymond R.	Letter	
038	Pape	Nancy & James	Letter	
039	Kelly	Georgianna	Letter	
040	Accomack County Administrator		Letter	
041	Tarr (Mayor of Chincoteague)	Mayor John	Letter	removed - duplicate of 340
042	George	Charles	Letter	
043	Young	H. Peter	Letter	
045	Marz	Bob & Carole	Letter	
046	Forcina	Gian Piero	Letter	
047	Forcina	Teresa A.	Letter	
048	Bloxom	Robert	Letter	removed - duplicate of 186
049	Moran	Edward	Letter	
050	Leonard	Donna	Letter	
051	Bowden	Denise	Letter	
052	Bakula	Donna	Letter	
053	Liddle	Alberta	Letter	
054	Johnson Jr.	Alfred C.	Letter	
055	Walker	Barbara	Letter	
056	Williams	Nancy	Letter	
057	Hook-Toelington	Jane	Letter	
058	Bowden	Janice	Letter	
059	Amrhein	John	Letter	
060	Sackett	Ronald D.	Letter	
061	Koposko	Anthony	Letter	
062	Koposko	Kallie	Letter	removed - duplicate of 061
063	Koposko	Michelle	Letter	
064	Bowden-Sackett	Joyce	Letter	
065	Foley	Pamela	Letter	removed - duplicate of 216
066	Scully	Alison	Letter	
067	Belts	Rick	Letter	
068	Belts	Amanda	Letter	
069	Wolffe	Glenn	Letter	
070	Wolffe	Jane	Letter	
071	Meredith	Barbara	Letter	
072	Brundage	Jeanine	Letter	
074	Bowden-Sackett	Joyce	Letter	
075	Werner	James D.	Letter	
076	Richardson	Ellen	Letter	

Letter #	Last Name or Organization	First Name	Type Submittal	Notes
077	Conklin	Henry & Nancy	Letter	
078	Meredith	Joseph	Letter	
079	Vehasco	John	Letter	
080	J.	Olli	Letter	
081	Fickery	Fredrick J.	Letter	
082	Ficken	Gail	Letter	
083	Steele	Barbara & Roger	Letter	
084	Grover	Jocelyn	Letter	
085	Quinn	Debra	Letter	
087	Winder	Carol Sue	Letter	
088	Keeny	Kathy	Email	
089	Arnold	Anne	Email	
090	Selby	Joan & Ralph	Email	
091	Lane	Ruth	Email	
092	Marabito	Janet	Email	
093	No name provided	Mary	Email	
094	Tuttle	Kasey	Email	
095	Amrhein	John	Email	
096	Marsh	Debbie	Email	
097	Ricketts	Sonya	Email	
098	Sappington	Jim	Email	
099	Holland	Jennifer	Email	
100	Dowd	Bruce	Email	
101	Dennis	Carol	Email	removed - duplicate of 020
102	Pastore	Andrea	Email	
103	Pastore	Stefanie	Email	
104	Weiskopf	Bill & Vicki	Email	
105	Lodge	Tricia	Email	
106	Taylor	Matthew	Email	
107	Sparkman	John & MaryAnn	Email	
108	Moore	Myfe	Email	
109	Beigelow	Frederick & Janice	Email	
110	VanHorn	Amy	Email	
111	Pastore	Raymond	Email	
112	Flaningam	Louisa	Email	
113	Curtis	Owen	Email	
114	Curtis	Owen	Email	removed - duplicate of 113
115	Conklin	Richard & Carolyn	Email	
116	Virginia Tourism Corporation		Email	

Letter #	Last Name or Organization	First Name	Type Submittal	Notes
117	Seybolt	Calvert	Email	
118	Halbert	Ron & Dana	Email	
119	McHenry	Sandra	Email	
120	Shotwell	Evelyn	Email	
121	Sramek	Helen	Email	
122	Clark	Tommy	Email	
123	Thornton	Joseph	Email	
124	Morrow	Eric	Email	
125	Dennis	Kim	Email	
126	Chincoteague Chamber of Commerce		Email	
127	Whalen	Ivy	Email	
128	Mason	Donna	Email	
129	Ellis	Dawn	Email	
130	Pritt	Kathy	Email	
131	Evans	Rachel	Email	
132	Glimcher	Jennifer	Email	
133	McCubbin	Patrick	Email	
134	Knaub	Jeff	Email	
135	Barnes	Kris	Email	
136	Stanfield	Theresa	Email	
137	Russell	David & Kathleen	Email	
138	Kerlin	Judy	Email	
139	Noll	Debra	Email	
140	Kerlin	Judy	Email	removed - duplicate of 138
141	Lane	Denise	Email	
142	Roberto	Janine	Email	
143	Wallace	LJ	Email	
144	Prall	Michelle	Email	
145	Nickol	Anne	Email	
146	Ross	David	Email	
147	Harris	Sandy	Email	
148	Serignese	Tony	Email	
149	Beauchamp	Ryan	Email	
150	Farrell	Joan	Email	
151	Farrell	Vicky	Email	
152	Grady	Maureen	Email	
153	Okie	Susan	Email	
154	Quillen	Jeffrey	Email	
155	Jenkins	Beth	Email	

Letter #	Last Name or Organization	First Name	Type Submittal	Notes
156	Stevens	Ronald	Email	
157	Thistle-Natalie	Amanda	Email	
158	Lytle	Bill	Email	
159	Davis	Dan	Email	
160	Benson	Carol	Email	
161	Harris	Kathy	Email	
162	Cretella	Diana	Email	
163	Roos	Linda	Email	
164	Chris Alexandria International		Email	
165	Billings	Sue	Email	
166	Ricketts	John	Email	
167	Clark	Chris	Email	
168	Emmerson	Brett	Email	
169	Ward	Tom	Email	
170	Elliot	Estelle	Email	
171	Morin	Jen	Email	
172	Bowders	Ann	Email	
173	Walton	Laurie	Email	
174	Bunte	Cyndy	Email	
175	Salmon	Albert	Email	
176	Clark	Chris	Email	
177	Justice	Bill	Email	
178	Cunningham	Doug	Email	
179	Cunningham	Nancy	Email	
180	Miner	Steve	Email	
181	Lynwood Lewis, Jr.	Senator	Email	
182	Howell	Glenda & Glen	Email	
183	Bankester	Lenny	Email	
184	Bankester	Lenny	Email	removed - duplicate of 183
185	Accomack County Board of Supervisors		Email	
186	Bloxom (Virginia House of Representatives)	Rep. Robert	Email	
187	Refuge Inn		Email	
188	Seefeldt	Kathleen	Email	
189	Murrow	Karen & Bill	Email	
190	Rau	Stephanie	Email	
191	Sloss	Ellen	Email	
192	Barnaby	Karen	Email	
193	Stark	Family	Email	

Letter #	Last Name or Organization	First Name	Type Submittal	Notes
194	Stuart	Kathleen	Email	removed - duplicate of 194
195	Stuart	Kathleen	Email	
196	Shea	Matt	Email	
197	Franklin	Donna	Email	
198	Kashuba	Mary Beth	Email	
199	Kashuba	Mary Beth	Email	removed - duplicate of 198
200	X	Bev	Email	
201	Pawelski	Lisa	Email	
202	Thornton	Wanda	Email	
203	Layser	Tim	Email	
204	Virginia Society of Ornithology		Email	
205	Virginia Society of Ornithology		Email	
206	McGarvey	Kate	Email	
207	Conlan	Dale	Email	
208	Ha	Doug	Email	
209	Steyer	John	Email	
210	Thomas	Greg	Email	
211	Borseth	Amy	Email	
212	Caruso-Teresei	John Teresi & Marie	Email	
213	Nugent	Gail	Email	
214	Wisniewski	William	Email	
215	Dendler	Michael	Email	
216	Foley	Pam & Jim	Email	
217	Scully	Alison	Email	removed - duplicate of 066
218	Buffa	Joelle	Email	
219	Malloy	Connie	Email	
220	The Nature Conservancy		Email	removed - duplicate of 008
221	Steyer	Cynthia	Email	
222	Scharle	Brian	Email	
223	Brown	Susan	Email	removed - duplicate of 239
224	Esther	Arthur & Mary	Email	
225	Esther	Arthur & Mary	Email	removed - duplicate of 224
226	Shisler	Richard	Email	
227	Deitch	Harry	Email	
228	Shaner	Jacob	Email	
229	Wolffe	Jane	Email	removed - duplicate of 070
230	Ailes	Marilyn	Email	
232	Farley	Patricia	Email	
233	Goodman	Nick	Email	

Letter #	Last Name or Organization	First Name	Type Submittal	Notes
234	Elliot-Fisk	Debbie	Email	
235	Connell	Kathleen	Email	
236	Grover	Jocelyn	Email	removed - duplicate of 084
237	Grover	Jocelyn	Email	removed - duplicate of 084
238	Misura	Susan	Email	
239	Brown	Wesley	Email	
240	Neale	Laura	Email	
241	Abe	Kimberly	Email	
242	Paisley	Janet	Email	
243	Davidson	Lynn	Email	
244	Wardell	Mary Ellen	Email	
245	DeLuca	Ralph & Kathy	Email	
246	Rodney	Karen	Email	
247	National Park Service		Email	removed - duplicate of 006
248	Lukei, Jr.	Reese	Email	
249	Rice	Sue	Email	
250	Allen	Scott	Email	
251	Buffa	Joelle	Email	
252	Virginia Eastern Shore Land Trust		Email	removed - duplicate of 005
253	Gattuso	Peter	Email	
254	Fletcher	Marian	Email	
255	Kean	Joan	Email	
256	Wiggert	Barbara	Email	
257	Duffey	Michael	Email	
258	Dennis	Jed	Email	
259	Bidoglio	Marsha	Email	
260	Snyder	Pat	Email	
261	Wolf	Ken	Email	
262	Lukacs	Karen	Email	
263	Turner	Jean	Email	
264	O'Connor	Frances	Email	
265	Coleman	Ron	Email	
265	Long	Ellen	Email	
266	Northam	Margaret	Email	
267	Okie	Susan	Email	
268	Weiss	Walter	Email	
269	Young	H. Peter	Email	removed - duplicate of 043
271	Tarr (Mayor of Chincoteague)	Mayor John	Email	

Letter #	Last Name or Organization	First Name	Type Submittal	Notes
272	Petition Supporting "Alternative A+"		Petition	Approximately 600 signatures (combined several submissions into one document)
273	Eitner	Greg	Email	
274	McGhee	Austin	Email	
275	Heiser	Karen	Email	
276	Finch	Heather	Email	
277	Szymanski	Lois	Email	
278	Lytle	Bill	Email	
279	Accomack County Planning & Community Development Department		Email	
280	Weed	Grant	Email	
281	Martin	Debra	Email	
282	Palmieri	Gary	Email	
283	Knapp	Gretchen	Email	
284	Reidy	Tom & Maragret	Email	
285	Public	Jean	Email	
286	George	Charles	Email	
287	Mann	Curtis	Email	
288	Hinds III	Louis	Email	
289	Stone	John	Email	
290	Wien	Diane	Email	
291	Stoel	Tom	Email	
292	Picardi	Tony	Email	
293	Pastore	Nick	Email	
294	Ritter	Master Captain Debbie	Email	
295	Brasure	Baxter	Email	
296	Tarr (Mayor of Chincoteague)	Mayor John	Email	removed - duplicate of 009
297	Finch	Heather	Email	removed - duplicate of 276
298	Layser	Tom	Email	
299	Public	Jean	Email	merged with 285 and removed
300	Virginia Department of Environmental Quality		Email	Cover letter for 400-407
301	Steele	Barbara	Email	
302	Morin	Joan	Email	
303	Holland	Jennifer	Email	
304	Public	Jean	Email	merged with 285 and removed
305	Adshead	Jeannie	Email	
306	Safari Club International		Email	
307	McGhee	Laura	Email	
308	Mulderig	Rita	Email	

Letter #	Last Name or Organization	First Name	Type Submittal	Notes
309	Ilgenfritz	Pat	Email	
310	Cahall	Kathleen	Email	removed - duplicate of 014
311	Tarr (Mayor of Chincoteague)	Mayor John	Hearing	
312	Thornton	Wanda	Hearing	
313	Armhein	John	Hearing	
314	George	Charles	Hearing	
315	Lyons	Terri	Hearing	
316	Bieri, Director of Virginia Coast Reserve for The Nature Conservancy	Jill	Hearing	
317	Birch	Randy	Hearing	
318	Bowden	Thomas	Hearing	
319	Mason	Tommy	Hearing	
320	Frese	Jim	Hearing	
321	Payne	Nancy	Hearing	
322	Jester	John	Hearing	
323	Carey	Jessica	Hearing	
324	Phillips	Kathy	Hearing	(Assateague Coastal Trust / Coast Keeper)
325	Leonard	Donna	Hearing	
326	Bowden	Denise	Hearing	
327	Fehrer	Joe	Hearing	
328	Flaningam	Louisa	Hearing	
329	Mason	Donna	Hearing	
330	Lukacs	Karen	Hearing	
331	Stanfield	Jessica	Hearing	
332	Fleming (Assateague Mobile Sportfishermen's Association Board Member)	Terry	Hearing	
333	Winbrow	Charles "Ray"	Hearing	
334	Howard	Terry	Hearing	
335	Taylor	Gene	Hearing	
336	Thomas	Peggy	Hearing	
337	Turlington	Jane	Hearing	
338	Gelletly	Kay	Email	
339	Sappington Jr.	James B.	Email	removed - duplicate of 098
340	Tarr (Mayor of Chincoteague)	Mayor John	Email	General correspondence - not a comment/not included
341				removed - not a comment
342				removed - not a comment

Letter #	Last Name or Organization	First Name	Type Submittal	Notes
343	Virginia Eastern Shores Tourism Commission		Email	
344				removed - not a comment
345				removed - not a comment
346				removed - not a comment
347				removed - not a comment
348	U.S. Fish and Wildlife Service Virginia Field Office		Email	
349	Virginia Department of Historic Resources		Email	
351	US EPA Region III		Email	removed - duplicate of 007
352	Merritt	Susan	Email	removed - not a comment
353	Stewart	Roden	Letter	
354	Krieg, Jr.	Francis J.	Letter	
355	Mason	Donna	Letter	removed - duplicate of 128
356	Rigell (U.S. House of Representatives)	Congressman Scott	Letter	
400	Virginia Department of Conservation and Recreation		Letter	
401	Virginia Department Game and Inland Fisheries		Letter	
402	Virginia Department of Historic Resources		Letter	
403	Virginia Department of Forestry		Letter	
404	Virginia Department of Environmental Quality		Letter	
405	Virginia Marine Resources Commission		Letter	
406	Accomack County		Letter	Letter to Governor included in Comm of VA comments
407	Town of Chincoteague		Letter	included in Comm of VA comments
408	Warner and Kaine (U.S. Senate)	Senator John/Tim	Letter	

ATTACHMENT R-1
TRANSCRIPT OF PUBLIC HEARING, June 26, 2014

TRANSCRIPT OF PUBLIC HEARING

IN RE: U.S. Fish and Wildlife Service (FWS)

Draft Comprehensive Conservation Plan (CCP)

and

Environmental Impact Statement (EIS)

for

Chincoteague and Wallops Island National

Wildlife Refuges, (NWR)

Date of Hearing: Thursday, June 26, 2014

Time: 6:10 p.m.

Location: Chincoteague Center

6115 Community Drive

Chincoteague, Virginia 23336

Reported by: David M. Schafer, AA, CCR

TRANSCRIPT OF PUBLIC HEARING

IN RE: U.S. Fish and Wildlife Service (FWS)
Draft Comprehensive Conservation Plan (CCP)
and
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Chincoteague and Wallops Island National
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Date of Hearing: Thursday, June 26, 2014
Time: 6:10 p.m.
Location: Chincoteague Center
6115 Community Drive
Chincoteague, Virginia 23336

Reported by: David M. Schafer, AA, CCR

C-O-N-T-E-N-T-S

Opening Comments:
Tom Roster, Acting Manager.....4
Joe McCauley, Chief of Realty.....6
PUBLIC COMMENTS:
Jack Tarr 23
Wanda Thornton 28
John Amrhein 34
Charles George 40
Terri Lyons 45
Jill Bieri 47
Randy Birch 51
Thomas Bowden 54
Tommy Mason 55
Jim Frese 57
Nancy Payne 61
John Jester 62
Jessica Carey 67
Kathy Phillips 71
Donna Leonard 72
Denise Bowden 79

Joe Fehrer 83
Louisa Flaningam.....85
Donna Mason 90
Karen Lukacs 94
Jessica Stanfield 97
Terry Fleming 99
Charles "Ray" Wimbrow 102
Terry Howard 107
Gene Taylor 110
Peggy Thomas 111
Jane Turlington 112

P-R-O-C-E-E-D-I-N-G-S

MR. ROSTER: Good evening, folks. We'll get the hearing going here. Welcome and thank you for coming out on this beautiful evening down here in Chincoteague.

My name is Tom Roster. I'm one of the few folks that will be helping out with tonight's hearing, and you'll be introduced to some of the other ones as we get the program going.

Tonight's public hearing is devoted to comments and concerns that you have on the draft Comprehensive Conservation Plan and Environmental Impact Statement for Chincoteague National Wildlife Refuge as well as Wallops Island National Wildlife Refuge.

To make sure to allow you to put your comments into this public record, we have a stenographer here that is taking down everything that is being said tonight. If you want to speak, we ask that you sign up at the door. And we're going to assign numbers so that we can make sure

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that we get everybody in.

This is not your only opportunity to make comments. We've had some open houses through this week at the refuge, as well as up and down the Delmarva Peninsula, in Pocomoke and Melfa last night.

The results of this public comment period is open until August 15, and you'll be able to pick up information of how to submit those either via mail or email, and that information is over at the desk if you are so inclined and if you don't want to speak tonight, as well as it can be additional to the comments you make tonight.

We also have some light refreshments over there for your enjoyment.

Just a couple of housekeeping items here. As I mentioned before, if you'd like to speak, please sign up, so that we know who's going to be ready for speaking and then we can call you up on your time.

When you come up to speak, please use the

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microphone, as well as state your name for the stenographer. He'd like to have you repeat your name to make sure he gets it into the record.

If there's a lot of folks speaking tonight, we would hope that you'd keep it brief and make sure we get as many people in as possible. We're looking at three to four minutes. At the end, if there's time, if people want to speak again, that's a potential, but we want to make sure that everyone gets heard.

This is for you to make your comments to us, and for us to listen. This is not meant to be a question and answer session.

With that, I will turn it over to Joe McCauley, who will give you a brief intro about tonight. Thank you.

MR. McCAULEY: Good evening, everybody, and welcome. Usually when I stand up in front of a crowd like this I might try to start off with a little bit of humor. I'm going to forego that because I understand that the issues that we are

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here to talk about are serious issues, and I understand, from having talked to many of you, there's deep concern, there's worry, and I guess I can say there's fear; I can kind of feel it, I can feel it in the room, and I acknowledge that, because there are unknowns.

What we're talking about here in large degree are some proposals, things we're proposing to do. We haven't settled on any particular course of action and so, in essence, there is no certainty about how this will all end up.

But what I really do believe and hope is that when this process is said and done that we can come together with some consensus and move forward on how this refuge is managed over the next 15 years, these refuges, Wallops and Chincoteague, because that will be vital. At the end of the day, that's what it's going to take for this refuge to remain a vital part of your lives, our lives and the lives of so many visitors that come here from all over the world. So the stakes are high. We aren't

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denying that.

So with that, I just have a few brief opening remarks. In this country, you know, we, the people of this country, for well over a hundred years have made it clear that we value our national resources; we value our clean air, clean water, we value tremendously our fish and wildlife resources, we want them to be abundant, we want to be able to enjoy them and use them, and for all the things that they provide us that we don't see every day, the flood protection that our wetlands provide to us and all those functions that birds provide besides being fun to look at. You know, birds consume tons of insects every day that if left out would destroy our forests. So we value in this country our fish and wildlife. We've made that abundantly clear throughout our history.

And the way that we demonstrate that is by who we elect and who we put in Congress and the House and Senate and who we elect as our President, because at the Federal level that's how things

happen; Congress passes laws, the President signs them into law and that becomes the law of the land. And we are a nation of laws.

And, you know, examples include the Endangered Species Act passed in 1973, in the Nixon administration. We decided that we didn't want to see species become extinct on our watch if we could help it.

Another more recent example and a law that's very relevant to why we're here this evening is the Amendment to the National Wildlife Refuge System Administration Act passed in 1997. We call it the Refuge Improvement Act. That's the short name for it. When that Act was passed, almost unanimously in the House of Representatives, which is hard to even imagine today, anything being passed unanimously, but it was, with one dissenting vote, that's the law that called for every refuge in the system, all 560-plus now refuges, every state in the union and most of our territories that have a national wildlife refuge, what Congress said is that

every refuge has to be in a Comprehensive Conservation Plan. And that plan is intended to describe to anyone who cares --

UNIDENTIFIED MALE FROM THE FLOOR: Was that when they shut down the government? Was that any -- was that part of your plan?

THE COURT REPORTER: I couldn't understand that, sir.

UNIDENTIFIED MALE FROM THE FLOOR: Was that part of it? Was when they shut down the government part of the government's strategy to (unintelligible) --

THE COURT REPORTER: Sir, I can't understand him.

UNIDENTIFIED MALE FROM THE FLOOR: (Unintelligible) ...shut down? Think about it.

MR. McCAULEY: So, you know, I sensed there was emotion in the room, so that confirmed it.

I was talking about the Refuge Improvement Act. That Act calls for a comprehensive

plan to be prepared for every refuge to guide that refuge in achieving its wildlife and conservation mission over a 15-year, plus or minus, planning horizon. So that's what we're doing here, we're following that law. And for the last four years or so we've been working at this plan.

Those plans that Congress told us to do are intended to be very public, the process was specifically designed to be very public. And you see that now; you're here and we're engaging in that public communication process. We've been doing it for years, for a couple of years for sure, when we went out a couple years ago during the scoping part of the process, where we went out and asked people what the uses were that they thought were important and we should cover. And we put out some ideas that we had, preliminary draft alternatives, and we got a lot of feedback, we heard really loud and clear from you folks about things that you liked and things you didn't like about where we were headed. And we made some changes between then and now that you'll see

reflected in this draft document.

So I hope that gives you some confidence that we do listen and we're not afraid to make changes when those changes are warranted and we have good rationale for it. As long as we can have a plan at the end day to help us meet our wildlife mission, that's what this is about.

That same Act, that Refuge Improvement Act, did other things. It told us which uses are priority uses for the refuge system. Congress said there's six uses that you should encourage on every refuge if you can, and those six uses are environmental education, fishing, hunting, nature interpretation, wildlife observation and wildlife photography. And we offer all those things and we think we offer them in really exceptional ways.

Now, there's an issue that I think is going to come up tonight, because it's come up over the last week, and I think I'm just going to hit it head-on.

Congress said that any commercial use

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that occurs on any national wildlife refuge in the country has to meet a high standard. If folks are going to extract something, whether it be timber or oil or whatever from a national wildlife refuge, fish, it has to be shown to contribute to the purposes of that refuge. And most -- a lot of refuges have similar purposes; for migratory bird conservation is a very common one. That's a purpose that this refuge has, is to conserve migratory birds and their habitat.

We also have a purpose that tells us we need to preserve threatened and endangered species.

So those are the purposes under which we have to evaluate both commercial and noncommercial uses.

The noncommercial uses have a standard that says those uses must not interfere with or detract from the purpose of the refuge.

The standard for a commercial use is different. It says if you are going to allow commercial use, that use has to contribute to the

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purposes of that refuge. That's what the law says, and it's clear, it's clear to interpret that. It doesn't give any kind of caveat that, you know, it can contribute to the economy or it can contribute to science. It has to contribute to the purposes of that particular refuge. And that's a very straightforward part of the law.

But implementing it has been challenging because, in this case, on this refuge, we understand that commercial harvest of horseshoe crabs occurs within the intertidal zone within the jurisdiction of the refuge. And so for us to continue to permit that, we have to show that that contributes to the purposes of the Chincoteague National Wildlife Refuge. And we can't find a way to make that determination, and so, therefore, going forward that use is proposed to be -- we're proposing that we will enforce that law and that use will not be permitted.

And I know what that means to those of you who engage in that; I've talked to you. We had

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a conversation this afternoon at the open house at the refuge where I talked to a gentleman for a good hour about this issue. And I know that the explanation that I give really doesn't sound very compelling, it sounds really bureaucratic. I get it. I find myself saying it and I'm, like, man, this is not resonating. Because, you know, the answer is, well, what harm does it do? Are we hurting the horseshoe crab population? Are we hurting shorebirds? Are we messing up the shoreline? And my answer to all that is no, not that I'm aware of. That's not the point. We're not quibbling with the quota that the Atlantic States Marine Fishery sets, we're not quibbling about how light of a technique it is when you just reach down and put it in the boat, you're not disturbing the bottom, you're really not, it's at night, you know. So I get all that.

And I can tell you from a human standpoint it is extremely difficult for any manager to say I'm sorry, you can't do this, you can't

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continue to earn a chunk of your livelihood in this way. It is not easy. And I don't know how to say it any plainer than that. It's really hard. But to do anything different, to look the other way would not be responsible.

I hope that all of you in this room have a high expectation of your public servants, of which I am proud to be one. I've been a public servant for over 30 years and I relish it, I love serving the American people, and I take my job extremely seriously. And I would hope that you would expect that of me, to take my job seriously, all of us that work for the Fish and Wildlife Service or the Park Service or any agency. You have every right to expect us to do our job thoroughly, without bias and do it effectively and economically. You have that right to have that expectation. And I, for one, and I speak, I think, for my colleagues, we try to deliver that every day.

So to look the other way is just not an option. And I understand and I don't see any other

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way to deal with this issue. So I know it's going to come up, and I just thought that I would say that to get our kind of point out.

This, as I said, intends to be a very public process and we've tried to be available. All this past week we've had four open houses; before that, I was available. I tried to get the word out as best I could that I was available to talk to anybody one on one about anything that's in this draft plan. And some people took me up on it, and I really enjoyed sitting down with some of you one on one because I was able to get a different perspective. And I hope that I was able to share it and maybe provide a different perspective. And that's really effective when people, you know, when emotions get lowered down and you can just talk like human beings and share ideas and thoughts, and I just think that that's been extremely helpful, I hope on both sides. It certainly has been for me.

And I'll give you a couple examples that I think might also address issues that may come up

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tonight. One of the issues that came up that we hadn't really heard much about up until this week really is the wilderness, the proposed wilderness issue. It's shown on our maps as big hatched areas at the north end of the refuge and extends out into the water. And at the north end of the refuge, that line coincides with the Assateague Island National Seashore Proclamation Area.

And so the concern that started coming to us was, you all are going to regulate the shellfish bed in the water, in that hatched area, and you're not going to allow motorized boats in there and I won't be able to earn my livelihood there. And so that caught us a little off guard, because that's not how the area has been managed for the last 37 years, if that's how long that designation has been on the books.

And so we don't plan, the Fish and Wildlife Service doesn't plan to do anything any differently in that area. So we're a little caught off guard with that issue.

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But I spoke to Debbie Darden, who's the Superintendent at Assateague National Seashore, and she and I both looked in our files and we found something pretty interesting. What we found is that the map that's been in play since 1977 does not accurately reflect the proposal, what's in the narrative for this proposal, this proposed wilderness. And it became clear to Debbie and I as we looked at this that the proposed wilderness was only intended to include the land area, it's not including any of the water area.

And if you read the last page of this short document, it says very clearly that the proposed wilderness -- it's not even an approved wilderness -- that would take an act of Congress to do -- but, regardless, it kind of doesn't matter with regard to the water because it's not included, and it says very clearly in this document that this proposal will not affect the harvest of shellfish resources, it will not affect the use of motorized watercraft. It says it in black and white. I can

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show you.

And so I hope that we can take that issue off the table. Debbie and I made a commitment that in the final CCP and in the Parks General Management Plan that's also being prepared that we will work to correct that mistake and that the maps that come out will accurately reflect that area and will only affect the land.

So that came to light because of the conversation that we were having with you all and, in fact, we went and researched it. It was really helpful. It was really, I think, a great example of how communication can really provide a clarification and a better product at the end of the day.

I'm almost done.

So one other issue I just want to clarify and that is that the purpose of this CCP is to guide the refuge management over the next 15 years. And I know there are larger issues at play here because of the concern about storm frequency and severity, and I know that's a real issue, too, that's on a lot of

folks' minds, and it's on our minds, too. We have an awful lot of infrastructure between the ocean and the Town of Chincoteague. And so we know that's an issue, and we're not -- we're not trying to dodge that issue. We want to be a part of the discussion that looks at that issue on a broad basis covering the whole shore, and we're already engaged in that process with other federal agencies, and we're going to keep staying engaged in that, but it's not something we can deal with with this comprehensive plan; it's beyond the scope of this comprehensive plan which has got a more narrow focus.

And so we're going to stay in the game. We're at the table now with the signing of the MACRI Agreement that was just signed a couple weeks ago, the Mid-Atlantic Coastal Resiliency Institute was formed. Our regional director, the top person in our region of Fish and Wildlife, came down and signed that agreement, demonstrating our commitment to that process. So we're in the game and we understand we have a role to play.

And we're just going to try to separate those two issues as best we can and try to get this plan completed and then continue to work as needed on the larger coastal issues.

And then one last comment, and that is, as Tom said, we're not going to get into a Q and A here tonight. We hoped to provide that opportunity all week and previous to this week. And if folks feel like we haven't given enough opportunity for discussion and Q and A, we have until August 15 to have those discussions, and so I'll make myself personally available, as I have been for the last -- since the draft was released in mid-May, to have those discussions. But to be quite honest, you know, to get into a Q and A in this kind of setting I've found to be not productive.

UNIDENTIFIED MALE FROM THE FLOOR: Sir, what is productive in this meeting, then?

MR. McCAULEY: Well, I can tell you what hasn't been productive.

UNIDENTIFIED MALE FROM THE FLOOR: I can

ask a question. What's productive?

MR. McCAULEY: Well, I will leave that to the audience, sir.

Anyway, I think it's time we get on to hear from you and see what you all have to say, so I'm going to give it back to you now and --

MR. ROSTER: Me and Tom.

MR. McCAULEY: So we're going to hear from you. And I thank you for indulging me. I went on a little longer than I thought, but I thought there were a few things that were important to get out on the table, so thank you, and thank you for coming.

MR. ROSTER: All right. We'll get going here, folks, with your comments. Like I mentioned, three to four minutes. We'll try to make sure we get as many people through as we can.

And we have first up, we have Jack Tarr.

MR. TARR: Good evening. I don't know if it's my place, but I would like to thank Congressman Rigell's office for being here and Senator Lewis's

office for being here and Delegate Bloxom, who's in the back, back there. I appreciate them being here looking after our community.

I'd like to start off, I think, first, Tom, I know you have been in this process for a long time with us, and Joe has come onboard here lately, and I'd like to thank you all for listening at the scoping meetings and making some changes to the plan that was positive.

We did come back with full parking with 961 spaces, and I think that was in Alternate A and B.

The recreational beach has been addressed now in the CCP; it wasn't addressed before. We appreciate that.

And there's been the pony herd has been addressed and no reduction in size.

And a shuttle service was addressed and that's going to be used in place of the full parking and done by others.

So you all did listen and we appreciate

that, you know, from our community.

The three alternatives that you've presented to the community, one was the wilderness area. That did bring up a big red flag. We don't like that out in the bay, you know. If you want to keep it on your property, it's fine, so, and for all the reasons, you know, that's just the working watermen's having their job and taking more area from them. It just doesn't work.

The community resilience as stated in the plan, you know, it's our feeling that that should have happened before the plan was put together. It probably should have been addressed for all three alternatives, not addressed later. I know you say it's a bigger issue. But if we move to any place or if we stay where we're at, it's an issue and it's an issue that should have been addressed in this 15-year plan.

Alternate B, there's some concerns with that as a preferred alternative. I'm not going to address all the concerns tonight, just a couple of

them. One is the eight and a half acres. And we understand that's just for parking. But when you combine that area with the 961 parking spaces, the horse trailers parking, bicycle parking, OSD use, and then the park service is going to have to come in and try to make that a real beach, so the one mile of beach is getting awful small and the eight and a half acres may not work, and so we'd like to see the eight and a half acres addressed if Alternative B comes out as the preferred alternative.

Something else that could be done with either Alternative A or B; we didn't go into this game asking for more, we're asking for 961 parking spaces. We already have closures during July 4 weekend and several other of our big weekends. Maybe additional parking should have been asked for. So this evening I'm asking for additional parking in either alternative, and then that parking could be -- Joe, you know, we talked about emergency planning -- that parking could be separate from the

961 places, placed in a place that's more safe and we could use that as an emergency plan and also parking. There's ways you could add more parking, you know, that I think in either alternative that would help

And I think the last and most important is that the town has won many awards over the last few years. We won those awards because of the Fish and Wildlife Service and the Park Service running the beach. That has gave our visitors a beautiful experience. So whatever we do with the parking lot, whether they stay in Alternative A or B, we have to make sure we don't lose that experience. The experience is why we're getting 1.5 million visitors a year, it's why you are getting a chance to educate those people in environmental issues and things. So whatever happens in this plan, we really have to concentrate on the beach experience. And if we're going to lose some of that beach experience by moving north, or we can't get the beach experience in the one-mile beach, we should consider going back

to back to a four-mile beach or go back to a beach that is long enough that the Park Service can have the right to do whatever they want there in that designated area to give the beach experience that we've had in the past. And I think that, hopefully, that will be your minds as we leave this meeting this evening.

And I think that I've been told by Bill and some others, you know, after this meeting there's going to be a review of all the comments, you know, a lengthy period, some other things going on. We want to be at the table for those meetings. You know, we'll come to Boston, we'll do whatever we have to do to be at the table. We'd like to review these comments with you, we'd like to build this plan with you, not just leave us outside. Thank you.

MR. ROSTER: Wanda Thornton.

MS. THORNTON: Good evening, everyone. It's so nice to see so many people come out for this important issue.

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I, too, would like to thank Congressman Rigell's office and Senator Lewis and, of course, Robert Bloxom.

I want to thank Tom and I want to thank Joe. I think you've been very cordial, you've tried to accommodate us. We may not be on the same page, but you have been gentlemen, and I appreciate that.

To me, the protection of Chincoteague is very critical to the county, the town and our 1.5 million visitors we have every year. The Fish and Wildlife Service needs to consider its responsibilities not just to wildlife but the protection of the surrounding area and implement measures to protect the area from tide, storms, wave action and sea-level rise, as this same thing was discussed in Prime Hook.

Over the last dozen or more years, the policy of not maintaining the dunes that served to protect the health, safety and welfare of our residents is putting Chincoteague in great jeopardy. Modify the Fish and Wildlife policy of not restoring

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the dunes to comply with the Virginia Coastal Zone Emergency and Management Policy. Permit beach replenishment to protect Assateague and Chincoteague.

Fund a study to document the effects of the jetties in Ocean City, Maryland, and the restoration of Wallops beach to determine the effect it is having on our portion of Assateague Island in Virginia.

Remove Assateague from the proposed wilderness area and the designation of one-half mile, which you have agreed to do. You told me that the other day. I think that protecting our shellfish industry here is extremely important. It not only helps with the local economy, it puts great infusion in our economy but it also serves as a livelihood for our residents.

I think we need more expert analysis on B, such as best elevation for parking, sustainability and maintenance. A biologist is not the expert to choose to pick the location -- and

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that's what happened here, a biologist picked the location -- I understand he was probably watching out for the piping plovers, but if we're going to move, we need to watch out for parking for the residents and our visitors -- elevation and sustainability in a parking lot to accommodate 961 parking spaces. I agree with Jack, eight and a half acres we don't feel like is enough.

You need to give specific details on area, maintenance, management plans, mosquito control, transportation and accessibility to the ocean. We've been told that -- I -- we've been told that the north beach would be managed in the same manner that the southern beach is managed, which means a low berm and a wash-over area, and also it will occur every time we have an abnormal high tide.

If this is what management policies we will face, then I have to ask you, why are we moving? What will we gain by relocating north? I think I've had this discussion with Joe. I think that moving north and maintaining the same type of

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wash-over that we have now could inundate the interior of Assateague Island, therefore causing more damage than where we're at right now.

Since the Park Service will be changed -- will be charged with the maintenance of all the parking area, I haven't seen any of their recommendations or input, and I think it needs to be included somewhere.

The CCP Plan should be coordinated with some portions of the Park Service GMP Plan. And since both agencies have responsibilities on Assateague Island, we need to find some way to coordinate the CCP plan and the General Management Plan of Assateague Island National Seashore.

U.S. Fish and Wildlife has been under guidance since 1999 to actively solicit participation of state and local governments as cooperating agencies under the National Environmental Policy Act, to share state and local expertise and to address the issues under state and local jurisdiction in the CCP planning process.

1 This was not done. And if that had been, maybe new
2 issues that could have been addressed then could
3 have been resolved before we got to this point.
4 In a resolution passed by Accomack County
5 Board of Supervisors on June 18, we asked to be a
6 participating agency, along with many of the
7 Virginia state agencies, the Town of Chincoteague,
8 the Eastern Shore Tourism Commission, VMRC, Virginia
9 Economic Development Authority, the U.S. Army Corps
10 of Engineers and others. And I agree with what Jack
11 said; this set the stage for us asking for a seat at
12 the table and the other agencies having a seat at
13 the table as we progress.
14 I have attached the resolution from the
15 Accomack County Board of Supervisors to these
16 comments, and I would like to turn them in and have
17 it made a part of this record.
18 I appreciate the fact that you're here
19 tonight to listen to concerns of our citizens, and I
20 thank you very much.
21 MR. ROSTER: I would like to add that if

1 you did prepare written statements, the stenographer
2 would to love to have that so that he makes sure he
3 gets the record correct.
4 Next up we have John Amrhein.
5 MR. AMRHEIN: Some of you all may
6 remember the late Doctor Amrhein. I'm not related
7 to him but I have met him several times and we
8 talked about maybe our connections back in Germany
9 and Switzerland that we may have shared together.
10 Anyway, what I'm here to talk about is
11 the CCP and the coastal resources. And the number
12 one coastal resource that I'm interested in are the
13 ponies. And I want to thank the Fish and Wildlife
14 Service for elevating them to that status, which is
15 very important to you people and it's important to
16 me.
17 And why is it important to me? Well, 30
18 years ago -- actually, 34 years ago, in 1980, I set
19 out to find a Spanish ship that was wrecked off of
20 Assateague. And I thought it was going to be an
21 easy thing, we'd be out of there in a couple weeks

1 and move on. And I spent the summer looking for it,
2 didn't find it.
3 To make a long story short, ultimately we
4 realized that the beach had changed and the ship was
5 buried in the refuge. It was a ship that could
6 easily be found because of instructions from the
7 captain.
8 And when I came to that conclusion, I
9 knew about the horses, I knew about the Spanish
10 shipwreck legend, but I never connected it to the
11 ship that I was looking for, called La Galga. It
12 ran ashore at Assateague in 1750. So when that
13 happened, I said this is not a treasure hunt, this
14 is a connection with history. And that's when I
15 became totally connected with the project. I never
16 expected to really get any money off this thing,
17 because we knew from the records there wasn't much
18 to be had. But what's there is history.
19 So from that point on I did a lot more
20 research; I researched in Spain, I did a lot of my
21 research here, I've poured through records in the

1 Worcester County courthouse and Accomack County
2 courthouse, and I've come to the conclusion that we
3 go back to 1946, when Marguerite Henry was here.
4 She was drawn here by the fact that the
5 horses supposedly came from a Spanish shipwreck.
6 She wouldn't have come here if she thought they were
7 merely abandoned by a negligent farmer and that's
8 where they came from. She came because of the
9 shipwreck legend, and she hung out with the Beebe
10 family. We know about that. Everybody knows about
11 the story.
12 So when I got to the point in 1983 that
13 we knew the shipwreck was inland, I was introduced
14 to Ryan Beebe, the great-nephew of grandma. At
15 first he didn't want to talk to me. And then he
16 did. We got a map out and he merely put his finger
17 on the wreck. And he told me the story as it was
18 told to him, that went into a little bit more than
19 what's in the book "Misty", that's verified in the
20 Spanish archives. And he told me that the ship went
21 into an inlet and was, he said, within two weeks,

1 but in the Spanish archives I would later read that
2 before they left the ship was covered in sand, it
3 broke up about two months later, after the locals
4 had their time with it, got the cannon off and all
5 that.
6 But we believe there is a lot more. So I
7 went into the refuge with the gear, we located the
8 site. I told the government about it. It was soon
9 forgotten. And then I wrote a book about it. We
10 did more research. I spent a lot of time on the
11 Eastern Shore going to the courthouse on this stuff.
12 And I learned a lot of things. One, the
13 legend is very well documented in newspapers and
14 magazines prior to Ms. Henry coming here. So we
15 know she had to have known about that.
16 So from there I went forward and
17 documented all the references about the legend going
18 back to about 1877 that came from the shipwreck.
19 And what happened, we'd gotten away from that idea
20 or theory because in 1968 the National Park Service
21 did a base map study, whatever you want to call it,

1 of Assateague, and the historian, I don't think he
2 knew that I might be here questioning what he had to
3 say about it today. So he did a cursory exam of a
4 couple of documents and he came to the conclusion
5 that what we have today is just a result of pastured
6 horses. He was correct that the people on
7 Assateague, up and down, they brought the horses
8 over in the late 1770s. That's absolutely true.
9 But they were cared for, they never found a horse
10 pastured.
11 I found records in Accomack County and
12 Worcester County that said that in the estate
13 inventory, you know, when people die, the court
14 would order somebody over to Assateague and
15 inventory their cattle and horses. They weren't
16 about avoiding taxes at the courthouse. It's
17 recorded. Okay?
18 And the other theory that's published was
19 that they were avoiding horse fencing laws. Well, I
20 have a reference that there were really were some
21 fences on Assateague back then.

1 MR. ROSTER: Time's up.
2 MR. AMRHEIN: Okay. The news that I'm
3 going to give you today is this: I'm bringing an
4 archeological team in this week. We have permission
5 from our friends here. We're going to the site and
6 we're going finish mapping it to develop a plan for
7 the future. And my friend Charles, my attorney
8 here, is guiding me through the process of getting
9 this nominated or at least determined eligible for
10 the National Register of Historic Places. That is a
11 huge thing for you people in Chincoteague. It could
12 bring in money, it could bring in outside money.
13 We don't have to ask the government anymore.
14 UNIDENTIFIED MALE FROM THE FLOOR: What's
15 it going to bring to you?
16 MR. AMRHEIN: I'm sorry. You're upset.
17 Anyway --
18 UNIDENTIFIED MALE FROM THE FLOOR: What's
19 it going to bring to you?
20 MR. AMRHEIN: Charles, I think you may
21 want to finish up. Anyway, I encourage anybody to

1 go to --
2 UNIDENTIFIED MALE FROM THE FLOOR: Hey,
3 what -- what's it (unintelligible)?
4 MR. AMRHEIN: -- and you can read more
5 about it.
6 THE COURT REPORTER: I'm sorry. Could
7 you repeat that, sir?
8 MR. AMRHEIN: I encourage you to go to
9 the La Galga website and you can read much more on
10 the significance of this shipwreck. It has
11 international significance. Thank you.
12 MR. GEORGE: Hey, ladies and gentlemen,
13 thank you very much. My name is Charles George.
14 I'll make it brief. I'm an attorney.
15 THE COURT REPORTER: Sir, could you slow
16 down just a little bit and speak up?
17 MR. GEORGE: I'm a maritime attorney and
18 I'm also an environmental attorney and do a lot of
19 work with National Register type things. I was
20 brought in by Mr. Amrhein.
21 I'm just going to be brief in what we're

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1 going to do here. I think it's very important
2 because I think all of these things ultimately are
3 economically based. All you folks sitting here have
4 a lot of interest in what's going on. The good
5 business has to do with the tourists that you need
6 and that's what keeps the refuge going, keeps the
7 businesses going, and you want the profit kind of
8 tourists. I don't know that you want to have Bike
9 Week here with motorcycles going up and down. I
10 know some people want it, but I think this place is
11 a little different. I don't have anything against
12 motorcycles; I've got one, too.
13 But I think the bottom line here is what
14 we are trying to do, and I think it's important.
15 We're trying to bring a national resource and a
16 treasure out. And in many ways it's been hidden.
17 Mr. Amrhein had a six-year battle running
18 with the folks at the Fish and Wildlife and
19 Department of Interior, and for six years they've
20 been real recalcitrant and have rebuffed everything
21 and they were doing things that weren't right.

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1 But I got involved, and it looks like
2 management changed and we've got the new people, and
3 I'm here to give out gold stars today. I think
4 these folks -- and I mean this -- you ought to give
5 them a hand because these folks are actually very
6 cooperative. And I have dealt with many agencies
7 where they weren't, they were just awful. These
8 folks are trying hard. So I want to give out some
9 gold stars and I want to let everybody know what
10 we're doing.
11 We want to see if we can find this wreck
12 and make sure that it is properly cared for and
13 planned for. And it appears that the CCP has a
14 version, according to Tom over there, the one that
15 you saw that inadvertently left out the La Galga.
16 Now it's going to be in it. Now, that's good news,
17 because that's important because, folks, it belongs
18 to you. And if this vessel can be recovered and we
19 can put a museum together, that would be a good
20 thing for everybody.
21 Just to let you know, I represent people

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1 like --
2 THE COURT REPORTER: Sir, you're going to
3 have to slow down. The man's name?
4 MR. GEORGE: Oh, I'm sorry. Clive
5 Cussler. Anybody know who Clive is? Did you read
6 the book? Did anybody see the movie "To Raise the
7 Titanic"? That's who Clive is. Clive is the one
8 who paid for the Hunley. Does anybody know about
9 the Hunley, the submarine that was brought up? We
10 paid for that. And he is very much the benefactor
11 and cares about history.
12 So we're looking at a lot of caring
13 people who really care about what this type of
14 development can bring and what it can contribute and
15 help this community, so we can turn it into
16 something that will be valuable.
17 Now I'll leave you with this. The
18 business model that we have put together, the case
19 that we have put together for the government is
20 going to be based on the same thing that happened
21 with the Bertrand in the DeSoto National Wildlife

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1 Refuge. It's the same model. They found a vessel
2 that was embedded in the ground, they brought it up,
3 they brought up the artifacts from it, and they
4 turned it into a museum. It became a very important
5 museum and now it is the centerpiece of the wildlife
6 refuge, and the traffic is up, I don't know, 500
7 percent or something. That's important, because
8 that's good for you folks. These people buy things,
9 they come to your village and they come to your town
10 and they spend money, they come back, some of them
11 retire here, and other people bring their families
12 and they'll continue to come. I think that's what
13 this is all about. What's also important here is
14 that this belongs to you.
15 I thank you very much. I didn't mean to
16 speak so fast; it's a bad habit. I can tell you
17 that court reporters all over this nation have
18 complained about that with me as well. Thank you,
19 folks.
20 MR. ROSTER: Terri Lyons.
21 MS. LYONS: Hello. Thank you for letting

me speak. My name is Terri Lyons. I'm not a long-term resident here, I'm not a historian, I didn't dig back and get all my facts and do my research, but I just want to give you my opinion.

Many years ago I fell in love with Assateague Island as I came here as a visitor for several years. I love the beach, the nature, the ponies and most certainly the peaceful feeling that I got when I visited. I loved it so much that I decided to move from my 55-year hometown of Roanoke, Virginia, on the mountain side of Virginia, to the seashore.

Over the years I've discovered that the Chincoteague National Wildlife Refuge is far from being managed as a natural place. I've learned that the wildlife management includes programs to kill off the Sika deer, red fox, and they have paid personnel that go out and squash the eggs of Park and Mute Swan. Also, the wild ponies that I, like thousands of others, love dearly and have roamed the island since the sixteen hundreds are considered

undesirable by the U.S. Fish and Wildlife Service. Myself, I personally fear the U.S. Fish and Wildlife Service with their outrageous rules and closed public entry policy.

If I'm in my kayak and step out on the back bay side of this 15-mile-long coastal refuge or put my dog in the car to take him for a walk on the beach or pick up a piece of driftwood or collect more than one gallon of shells to take home or, heaven forbid, I should have a long day at work, get a beer, go to the beach to relax, I am committing a federal crime.

From the choices presented, I very strongly support Alternative A. Leave Assateague Island as is.

It is also my personal opinion that we have the wrong agency under the Department of Interior in charge of our seashore. We need Assateague Island, both Virginia and Maryland, to be managed as a national seashore by the National Park Service. One 35-mile barrier island, one set of

policies and an agency that cares about all species, including humans.

MR. ROSTER: Jill Bieri.

MS. BIERI: Thank you for the opportunity to be here tonight to make public comment on the CCP.

My name is Jill Bieri and I'm the Director of the Virginia Coast Reserve for the Nature Conservancy. The Conservancy has been working to protect the barrier islands and the coastal habitats on the coast of Virginia for nearly 50 years now.

We're currently reviewing, probably as all of you are, the large document that is the CCP, and we will be providing written comments on a number of specific issues. We're looking at issues like climate change adaptation, future land protection opportunities, habitat restoration and the management of beach nesting birds.

In our view, the draft CCP is a well thought out comprehensive plan that manages and

prioritizes a number of natural resources and human-related challenges. The Conservancy does support the Service's preferred alternative, or Alternative B, in the draft CCP.

While the specifics about what that work will actually look like are appropriately left to future more detailed planning efforts -- and I agree with everyone that spoke before me, that everyone should be at the table, that it should be in direct cooperation with local and regional partners -- the Conservancy submits that the Fish and Wildlife Service has framed the broader issue very well. And I just want to make a point of a couple of the broader issues that they have framed very well.

We believe that the Fish and Wildlife Service understands the Chincoteague National Wildlife Refuge is located in the heart of the southern Delmarva Peninsula, an area of recognized global ecological significance for its remarkable estuarine, coastal and marine habitats and substantial populations of migratory and breeding

shorebirds. The coastal lagoons and the barrier islands represent what is arguably the most significant remaining wilderness on the Atlantic Coast. Understanding and valuing this larger landscape-scale context is essential.

The Nature Conservancy also appreciates the importance of the Fish and Wildlife Service recognizing that the southern Delmarva Peninsula faces several serious and growing threats to its long-term ecological and economic viability, most notably sea-level rise. While complex sediment dynamics and marsh migration means that not all of the acres will actually be submerged by rising water, it is clear that, unless steps are taken, sea-level rise will have profound effects, often negative, on the region's coastal habitats and that impact will be disproportionately severe on existing protected lands.

In the CCP the Service recognizes that addressing the sea level change threats will require acting and working not only within its boundary but

also helping to facilitate and galvanize conservation work beyond the boundaries.

We appreciate that the Fish and Wildlife Service has embraced the fact that it will succeed in these efforts only by working directly with local and regional partners, both because the scale of the challenge exceeds the ability of one entity to address and because local perspectives, expertise, connections and support will be essential to move this work forward.

Within the CCP it is also recognized that regional conservation efforts must focus not only on protecting and connecting key habitats for wildlife, but also seek to utilize and restore these habitats so they can better buffer human communities from other climate change impacts and provide additional recreational and economic benefits for people.

The Nature Conservancy offers our support for the Service's commitment to regional conservation. Thank you.

MR. ROSTER: Randy Birch.

MR. BIRCH: Thank you all for your time. I'm not much of a speaker, but I am a resident of Chincoteague, have been all my life. My grandmother and great-grandmother grew up on Assateague. I've worked on the water here all my life.

And these people that are here tonight, a lot of us feel like we're being stepped on somewhat, I think, including myself.

I'm a full-time waterman; this is where all my income comes from. Also, I'm interested in my community. And what's bad for one person is, of course, like a domino effect; what's bad for me is bad for a lot of others, motel owners, restaurants, gift shops.

This is a small community. We've got a unique little place here. What applies maybe north of us or south of us and some of the other barrier islands up and down the coast may not apply here. I'm not saying we're better than anybody else or -- we think we have got a good thing here.

I don't see where there's been a big

problem in any angle other than beach erosion and all, which can be handled a little different, in my opinion. But to change, to change some of the things that we're being told, change a lot of our lives. We eat, breathe and sleep this, a lot us that's lived here all our life. I'm very narrow minded, I'm not much for change.

But to tell you the truth, I thought tonight, part of it was going to be a question and answer period so a lot of people would understand a lot of these proposals and all, maybe. I don't fully understand them all, and I don't know what everybody -- I really thought this was going to be a question and answer period in addition. I appreciate you all's time.

I also go out waterfowl hunting in the wintertime. I was told, hearsay was that this was going to affect this wilderness area up north. Now I'm told it's not going to. Supposedly, something that's been on the books since the seventies, it's never been enforced or never been put into place,

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the horseshoe crab deal. This has been on the books since the sixties. Now, all of a sudden, Fish and Wildlife want to enforce it. It's never been a problem, never been a problem with overfishing, never been a problem with anything being damaged.

The only problem that appears now is it's going to take a little piece of the pie out of my income. When I say me, I don't mean me personally, I mean some of us working.

There's only 15 or 16 permits in the state of Virginia for hand-harvesting horseshoe crabs. I don't want to make this a main topic. But if there's been a problem, we've not heard about it. Now, all of a sudden, even though it's been, supposedly been on the books, as they call it, for years, now we're just starting to hear about it. The same thing a few short years ago with the Park Service permits.

If there's not been a problem, don't fix something that's not broke. Everything is running smooth. We want to get along with Fish and Wildlife

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and the Park Service. They've done a good job over here. We're really happy we don't have a Wal-Mart over here or a boardwalk.

It's a really unique little place here, and we'd like to keep it that way. If there's a problem, we all need to get together and we can talk about it to fix it. But for the government to come in and take over and strong-hand our way of life is a little bit, it's a little bit hard for us to swallow.

Thank you all for your time.

MR. ROSTER: Thomas Bowden.

MR. BOWDEN: How are you all? I'm not much of a speaker. I never come out to places like this.

I've been harvesting crabs since 1969 with John Marchetti. I've had a good living at it; I've raised all my kids, family and grandkids.

And just the 15 permits that's been here, it's going to hurt. It's a big part of their money. They make it during the five days. And now the

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horseshoe crab population, I probably bought this year 92,000 of them out of the 172,000. It's going to hurt me real bad if they cut it down, because I'm also, like I said, a buyer and a catcher. And I don't have a whole the lot to say about it. That's all it is. I don't speak much to people. When I do, it's usually not like this.

Thank you for your time. Maybe you can change it.

MR. ROSTER: Tommy Mason.

MR. MASON: My name is Tommy Mason. I'm a lifelong resident of Chincoteague. If I live about 15 more days, I'll be here 70 years on Chincoteague.

I know you're not going to put sand on the beach. That's what needs to be done, is put sand on the beach. I agree with Wanda, that we need to do something to the dunes.

In the wintertime, I ride over to the beach in the early morning, and the tide will be right out. There is a shoal off shore that is

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protecting our beach. And it's just a few places where the dunes was washing through. So if they took a small bulldozer and pushed these dunes up and protect the beach, you wouldn't have the roads, the roads wouldn't wash away. And if the beach would wash away -- My wife and I, we own a hotel on Chincoteague, and I've been growing oysters for 50 years and clams for 30 years. Tom's Cove is one of the best natural resources on the East Coast. There's probably a hundred people that make a living in Tom's Cove harvesting oysters, clams, crabs and fish. So you're going to hurt a lot of people.

Plus the beach protection of Chincoteague from the storms, if we have a storm and we don't have no beach, this side of Chincoteague will be destroyed. But in my opinion, it looks like the beach, it might come back. I think the good Lord is going to bring the beach back, and the fish and wildlife.

The gentleman on the end said that he likes his job and respects his job. Us people on

Chincoteague, we like the job we've got, we respect it, and we like living here and it's a good place to live and raise your family. And I think if you'd just leave things alone, I think the good Lord will bring things back and it will be fine. Thank you.

MR. ROSTER: Jim Frese.

MR. FRESE: Good evening, ladies and gentlemen. I'm Jim Frese. I live over on the east side. Unfortunately, I'm just a youngster when it comes to the longevity of living here; however, my father brought me down here beginning in the nineteen forties. I've been coming ever since. I've been in love with Chincoteague so much so that I bought my first piece of property down here in 1984. I retired in 1990 and moved here that same day.

Now, over the years I have heard from a lot of the old-timers what they have gone through in protecting what has been their rights since time practically began, and that is beach, among other things. That's only one of them but that's a big

one.

I can remember hearing stories when I would come down about a group of citizens who could not get their way with the Federal Government and maintaining their promise to maintain the beach. They went to Washington at their own expense and they got that corrected; hence, we still have that beach.

Every single year, almost without exception, somebody is trying to take that beach away, and that somebody begins with the National Fish and Wildlife Service. Year after year we have come here, we've gone to other places on the island, had hearing after hearing after hearing. It has been almost as if one person were speaking. Without any question, they wanted to maintain that beach, maintain that parking, period. The Federal Government has heard that many, many times.

And I think we're getting through a little bit, because now we're down to three alternatives. But frankly, after 25, 30, 40 years,

shouldn't that really be settled and the government say to the Chincoteague citizens, folks, it's yours, we're going to help you keep it?

Now I would like to touch on a couple other things. We talk about responsibility, and the National Wildlife Service has a lot of responsibilities to the ducks and the geese and all that sort of thing, and we're all for that, everybody's for that. But I would remind everybody that Assateague Island is a barrier island put there by God, and it should be the responsibility of those in power to do everything they can to maintain that protection for the land masses west of it, one of which is Chincoteague Island.

In the eighteen fifties, when the first -- or I think it was the eighteen forties the first lighthouse was built in approximately where the present one is and that ended Assateague Island at that time. Since then Assateague Island, as we all know, has grown further to the south, and until 1933 it was a pretty rapid growth.

In 1933 there was a hurricane that came through and it opened up an inlet into what is now Ocean City. And in their great wisdom they said, gee, this is great, we like the water, we're going to build groins out here to protect this inlet. And they did. And what happened, it choked off the movement of the thorough movement of sand southward. When it did, that started the reduction of Assateague Island.

Last year at this time -- switching subjects a little bit, and the other one I want to address is this -- quote -- ocean rising. Tommy Mason said that he had been oystering in Tom's Cove for better than 45 years and that he could determine no ocean rising. Well, I couldn't do it for 45 years, but I'll tell you what I did do 24 years ago, I started measuring and noting the ocean rise, if any, not from the rocks up to the surface but rather from the bottom of a fixed pier down to the water, because it looks right out of my kitchen. And, folks, I can't see any ocean rising and I don't

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1 frankly believe it.
2 Now, all I'm asking for, and I think all
3 of the people are asking for on Chincoteague Island,
4 is leave Item A alone, don't give us that other
5 stuff. And if you want to really do something, you
6 want to protect Assateague Island, good, do
7 something to stop that erosion. And I'm not
8 engineer enough to know what to do but I know
9 something can be done, but there seems to be no
10 effort whatsoever to look into it. Anyhow, keep
11 Item A, or the first, please. Every year, every
12 year the people of Chincoteague, among others, and
13 our political leaders have all supported it. Please
14 keep the beach where it is, keep the parking where
15 it is. Thank you very much.
16 MR. ROSTER: Nancy Payne.
17 MS. PAYNE: Hi. My name is Nancy Payne.
18 I'm a business owner on Chincoteague, a resident,
19 and we've had property on Chincoteague for over 35
20 years, so we've been here not as long as many but
21 quite a long time.

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1 And I come tonight with a list of 38
2 people who are supporting the move to Plan B, moving
3 north, moving the parking lot north. And among
4 those 38 people there are property owners, business
5 owners, residents and a few longtime people who have
6 come here to visit the island for years and years
7 and years, not just casual pop-in visitors. So I
8 will present these, the names, addresses, and the
9 signatures are here. Thank you.
10 MR. ROSTER: John Jester.
11 MR. JESTER: Hi. I'm John Jester. We've
12 heard much about sand dunes. Well, there's a reason
13 for that. In 1962 the March storms were flooding,
14 very quickly. Following that, the Corps of
15 Engineers built sand dunes for a reason, to build
16 barriers. What concerns me is the plan has -- your
17 plan has no references about preserving the beach.
18 The initial legislation in 1965 or
19 whatever it was talked about preserving the barrier
20 island, not letting the island go. And that's what
21 you are here demonstrating to us, your plan is to

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1 let this go. By letting the island go, you're
2 endangering our community.
3 My second point, the wilderness, Joey
4 answered that question. But I guess my point, my
5 point would be now, would be that how long to
6 build -- to come up with this plan and you just
7 discovered when you drew that line someone didn't do
8 their due diligence and do a good -- do a good
9 review to find out if you were taking in all that
10 area, and you should have known that a long time
11 ago. So I would question the people who put the
12 plan together.
13 My third point is move to the north. It
14 has -- it does have some good benefits, but you're
15 asking us to pick a plan that we don't have very
16 little information about, move the area and do a few
17 things, but, as you know, the word of the Federal
18 Government is not too good now. And I'm a person
19 who spent their career with the Federal Government.
20 We need to have more specifics on what that means
21 and what was the plan, how would the beach be

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1 prepared, the parking and everything. It's too
2 vague right now for us to make any real good
3 decision.
4 And what is really lacking is where is
5 your Corps of Engineers' stamp of approval? They
6 are the experts of the beach, not Fish and Wildlife
7 biologists. I have nothing against biologists, I
8 love biology, but I think we need to have some
9 people who know about the movement of the water and
10 what's going on with the beach and what's going on
11 with our inlet.
12 My fourth point, I guess, is a term I
13 heard, I used a lot when I was in Washington, "death
14 by a thousand cuts". You don't notice one cut or
15 two cuts or three cuts but after a while you start
16 bleeding out of each eye. This is what many of us
17 feel like now with Assateague. And we grew up in
18 Assateague as part of our community, it was a
19 neighborhood.
20 And when they created the national
21 seashore, that was fantastic. And I would make a

point that the whole reason that was created was because a few men on Chincoteague got the idea to build a bridge. Without that bridge there would be no worldwide reputation of an Assateague Refuge.

But what's happened since then? We had a five-mile beach when we started. Now we're down to a mile. Now you say, well, you can use that beach in other times of the year. But who goes to the beach in December and January and February? You know, so what good is it? You know, you'd freeze your butt off.

So what's happened is that we've been squeezed into a mile and we have additional rules. People who run tour boats go down Assateague channel. It's rule after rule after rule. After a while, you know, how far goes it go? So that would be the question, you know, how many rules do we have to have? You keep squeezing and squeezing and squeezing.

We're all very proud of the refuge here; it has a great reputation. You know, we love

nature. You made a point about nature. We love nature, we grew up with nature here. We actually have more nature on our island now; we have deer, eagles fly over our heads, ducks at our feet, geese. We love nature. If you look at the people who visit us, they love nature, too. You don't have -- we're not a -- we're a family resort. We don't have wild parties here. People that come here don't go there to destroy piping plovers or whatever.

Just like I mentioned to you before, I resent the fact that -- and I looked at it -- someone would destroy -- destroy a nest if I get too close to your edge. You can't have four miles of beach because of one nest. That really makes us feel like we're a criminal before we begin. We can't put our foot on the beach, on the tip of the beach, or we will be in violation. So the question is, how far do these rules go? You know, we like to work. It should be a win-win plan; we agree with that.

And because of, I think, the cooperation

of the community, we do have a world-class operation here. We'd like to see a plan that has a win-win option. Thank you.

MR. ROSTER: Pastor Jessica Carey.

MS. CAREY: I'm Pastor Jessica Carey. I'm from Chincoteague and I have long shore roots. My dad is Tim Carey. He used to teach school here on Chincoteague, at the high school. He's currently on the school board and he's written many grants to help preserve the education for Chincoteague, as well as the Eastern Shore of Virginia.

We often hear that the Chincoteague National Wildlife Refuge is the crown jewel of refuges. It's the crown jewel of refuges because you must travel through it to get to the beaches to admire the most beautiful beaches in America. We also have the Tom's Cove oysters and crabs that we're known for.

People come here to admire and they flock to admire the stagnant ponds, the signature features of the wildlife refuges across the nation, our

pristine lands claimed and the old fashion way of life that's preserved for families.

I oppose Alternative B and C for the reason that neither of those plans will improve the visitors' beach experience or educational experience.

I once asked a past manager, why is one mile of the beach so defined for public use, why must people be given such harsh limitations, why must my disabled, special needs child be told he can't take a whole bucket of shells home because he might be committing a crime, and why can't the service dog come that he may really need? And the answer I got was that FWS cannot afford more than one mile of public beach.

The FWS needs to realize that the shore, seashore they are responsible for, the crown jewel that makes them popular, should be a priority. For the money, certainly a better plan than a 40-foot roadway to a limited one-mile beach could be achieved. Why not another wildlife loop type

experience with a similar kind -- with a smaller pod parking along the way, or something such as Mr. Amrhein suggested for educational purposes, spreading out our visitors along the shoreline rather than squeezing them in one-mile, causing a blanket on top of blanket experience during the busy season? If the FWS cannot afford to share more than one mile of the 15 miles it owns, perhaps this is a sign to determine who can afford to own and manage the jewel that makes Assateague Island so very special.

I support Alternative A. I support Alternative A because work that we have, keep it as close to as is as possible. In the world of wildlife and protected species, they're a small matter, not just some. We must learn to have compassion for all things.

I support the idea of having our national seashore management by the agency that can do and has done a fabulous job at the Virginia and the Maryland beaches. Since 1965 the FWS claimed they

cannot manage the public beach. It has been a struggle for the FWS; however, it does not fit in the mission with NPS. Why not study a possible land transfer within the Department of Interior and give ownership and management of this shoreline to the agency who would not be struggling to share the jewels, who has in their budget money to spend on visitor services and who is better suited to comply with the Seashore Act of 1965 which gave people five miles of beach to enjoy. The National Park Service should be the primary administration of the seashore, while the FWS could put more effort into areas such as the manmade habitat of north and south wash flatland, which appear to me to be a disgraceful mistake made many years ago, basins which collect rain water which quickly turn stagnant due to failing water-controlling structures and mismanagement.

Let the FWS concentrate on the environments they have created. Let NPS do what they do best, and leave the wildlife refuge for

future generations. Let our children and children's children and all future generations enjoy the crown jewel of all refuges, the Chincoteague National Wildlife Refuge, by supporting Alternative A. Thank you, and God bless.

MR. ROSTER: Kathy Phillips.

MS. PHILLILPS: Hi. It's good to see all of you here. I'm Kathy Phillips, with Assateague Coastal Trust, and I'm your Assateague Coast Keeper.

I'm just here tonight to support the Alternative Plan B.

We feel that this lengthy process has gone on for many years now to give everyone an opportunity to put their comments forward, everyone has had opportunity to speak, and we feel that the National Wildlife Service has taken a lot of that to heart and has done a very admirable job of trying to -- you can't please everybody -- but at least trying to come up with a plan through Alternative B that will still give public access to the beaches but do what they are charged to do, which is to

protect wildlife habitat and the natural resources of this area.

I'd also just like to say that the last time that I spoke at a public hearing down here in Chincoteague was in front of the town planning commission or planning board related to rezoning certain areas of the town of Chincoteague. And I would hope that everybody tonight would understand that basically we're going through the same process here, how to best zone the wildlife refuge area so that multiple uses can exist within that area, just as you set laws and regulations in zoning here in the town of Chincoteague, again, to best manage your town as much as possible.

So thank you very much. We will be submitting full written comments, so I don't have something to give to you this evening, and we'll have those in by the deadline. Thank you.

MR. ROSTER: Donna Leonard.

MS. LEONARD: My name is Donna Leonard, and I am going to have a little humor, because I

could talk all night long. Somewhere along the line I got the word that I have two minutes. So for the past couple days I've been with a stopwatch, got my time down to two minutes. I've got so much more to say than two minutes. So I'm going to make my two-minute speech and then add a little, little few ad-lib kind of comments that I have.

First of all, I would like to say, from the options available, I do support Alternative A. I do believe it is reasonable, much more economical than spending $12.4 million on moving north, and I do think that it's the least destructive of the natural habitat.

I'm not a big fan of the impoundments that are on Assateague and that have been created cookie-cutter fashion all over the national wildlife refuge system. I find they are a really good place to breed mosquitoes because the water does gets very stagnant, the water-controlling structures are no longer operational. I'm getting off my two minutes.

I did speak two weeks about Swan Cove

being used as an area that could be used for parking. You know, Swan Cove doesn't have any swans in it anymore because those swans have been determined to be a nuisance, they're a non-native species, you don't find swans. So I think you should change the name of Swan Cove to Parking Lot One. It could be diked off in the middle, about where the water-controlling structures are, so that there is still a pond there, there are still some unnatural water -- or wastewater management areas or impoundments or whatever is politically correct to call them now in 2014. There's a land base there in Swan Cove that is the land base we need. It says, we'll allow parking as long as the land base is there. Swan Cove is pretty wide. That area goes all the way back to the lighthouse if you do not consider that natural habitat. It's not natural habitat, it's just manipulation of the Fish and Wildlife Service. You can never convince me that that is natural habitat.

Since the master plan, which I was

involved with in 1988, we had five miles; a little bit taken away, a little bit taken away, a little bit more taken away. The beach areas designated for people by Congress has been continuously reduced. And it does seem once something is taken away, we never, ever get it back.

I oppose Alternatives B and C. I oppose the destruction of more habitat than has already been occurred under Fish and Wildlife Service management practices. I oppose the extreme cost involved. I feel if you are going to spend $12.4 million on new facilities and more roadways, and you divide that by 20, if the maximum amount that has been spent for parking lots in a year's time is $600,000, that gives you about 20 years to have money to put into the replenishment and the restructuring of our parking lots as they might be needed when we do have storms. It's not every year, but we all know when we have some big ones those parking lots are going to get washed out.

I do believe that politics would have to

be involved. If plans B or C have to be approved by an environmental impact statement, there's no way that should be allowed to happen. I'm very surprised that the Assateague Coastal Trust, which was previously the Committee to Preserve Assateague, is in favor of further destruction of what's pretty much natural between C and D dike. It's not an impoundment now but the natural grass is growing there and there's a big area there that is considered a scrub zone, or the scrub pine zone, bushes that are certainly used by migrating songbirds and other little feathered friends that come through.

When Congress passed the Seashore Act in 1965, the Fish and Wildlife Service declared, oh, no; parking lot, bathhouses, lifeguards, changing rooms, picnic tables, un-uh, we don't do that, that's not in our mission. So they very loudly claimed in 1965, when Congress designated this beach to us, the people, that they couldn't do that, it wasn't in their writings that they could supply

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these people services. That was 49 years ago. The Fish and Wildlife Service was unable to do the job then and it's unable to do the job they are doing now.

Assateague Island can be managed, as others have said and proven on the Maryland side, by the National Park Service. The National Park Service in 1965 came in, came to our rescue and said, you might not be able to do parking lots, but we can, it's in our ball game, it's in our mission, we can do it.

And so for the past 49 years, thank goodness, we have had the National Park Service to rebuild our parking lot, supply our lifeguards, supply our bathhouses, restroom facilities, two picnic tables. The mission of the Park Service is to promote and regulate the use of the national parks, which purpose is to conserve the scenery and the natural and historic objects and the wildlife therein, and to provide for the enjoyment of the same in such a manner and by such a means as will

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leave it unimpaired for the enjoyment for future generations.

I publicly appeal to the Department of Interior to analyze the need for duplicate management and determine if reorganization is feasible. Millions of dollars can be saved, people would not need to be herded like cattle into a one-mile zone, and future generations will have continued access to one undeveloped beach which amounts to 7 percent of our coastline on the Eastern Shore of Virginia.

We, the people, have never asked for more than Congress gave us, and 93 percent should be enough for the endangered piping plover to either thrive or be destroyed by natural causes.

Times have changed since the creation of the Chincoteague National Wildlife Refuge in 1943. The Greater Snow Goose, once threatened, is now looked at by the Fish and Wildlife Service as a vegetative destructive menace. Explosive devices are used to drive them out of refuges now. So the

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reason that this refuge was established is no longer a reason to be here.

Barrier island beaches change, needs of species change, and by the decision of someone in the Federal Government, I'm not sure who but I would like to meet them, management could change to meet the needs of 2014.

Since both the Fish and Wildlife Service and National Park Service are under the Department of the Interior, why have duplicate management when one can do the job?

MR. ROSTER: Denise Bowden.

MS. BOWDEN: Hello. I'm Denise Bowden. I am a native 'teaguer. I hate to use the word native, but I'm born and raised on Chincoteague, so I've lived here now all my life.

I am strongly opposed to any other alternative with the exception of A. We need to stay where we are for numerous reasons.

John Jester said up here a few minutes ago about the situation that the Federal Government

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is in, we're in the hole, we're in the red, we stay there, we have been for a long time. What is it going to take to move up north to Alternative B at a cost of 12 million in the plan right now, a plan that took three years to get out? By the time that it's implemented, it's going to be double that. There is no way that you can say it's going to cost $12 million right now and five years from now, if it's implemented, it's going to be $12 million. It's not. Like I said a couple weeks ago in our beach meeting, it's been my experience that the Federal Government doesn't buy a Number 2 pencil unless it costs $10. So that to me is a very conservative figure, $12 million, and this country can't afford it. And like Donna said, $12 million can go a long way to fixing parking lots when they overwash, which is not all the time.

We're already three years into this, and now we're going to wait to August 15 before everything is said and done. And then how much longer down the road is it going to be? When you

have to do this every 15 or 20 years, we're going to be right there again all over again.

A few years ago there was the proposal and it was implemented to raise the fee-booth fee. That extra money was to go toward parking lot maintenance.

Joe said last week or two weeks ago that the U.S. Fish and Wildlife gives National Park Service $200,000 from the fee-booth collections. The former Park Service manager, Chris Tickliter said that some of that money goes to pay for lifeguards, some of it goes for something else, a little bit goes for something else, until you are down to hardly anything for parking lot maintenance. That wasn't the agreement, and we need to go back to that and relook at that, revisit that part in there.

To me, when I look around this room, I know you all have a job to do -- and I wouldn't want to be in your shoes for anything in the world -- when I look around this room and see people like Tommy Mason and Mike McGee and Ray Wimbrow and Tommy

Bowden and all them here, these people have a job to do, too. They're the hotel owners and they're restaurant owners, there's the fire company, we have a job to do, and that job is to survive.

And I know where you all are coming from, conservation and making sure that we don't have a loss of habitat. But there's no way in the world that you or anybody else is going to convince me that we can't do this together that's going to benefit us and our livelihood and what you do in conservation for the refuge.

We have 150 -- or up to 150 ponies on that beach. I don't believe for one minute that you can say that they're not natural to this area. If that's the case, I mean, horses aren't natural to anything in the United States, they were brought over here from Europe, but they have been here for 400-plus years. That's as natural as it gets; I mean, born and raised like we are. I mean, for them, in Alternative C, to even be reduced by one, just one, has an economic trickle down on this

community. It only takes one disease, it only takes one sickness or anything like that to go through a herd, if you already reduce them and then something like that happens. The livelihood of this town depends on 150 ponies. That's the way it is.

You know, I could go on and say more. I have notes scribbled all around. I can't even read my own handwriting.

But when I get up here and get aggravated about these things and I look at the Federal Government and look at the position this country is in right now, when you all come out here with something like this and want to limit what we do for our livelihood, it tells me once again that the Federal Government wants to shut down America one town at a time, and that's the way I see it.

MR. ROSTER: Joe Fehrer.

MR. FEHRER: Good evening. I'm Joe Fehrer. I'm the Lower Shore Project Manager for the Nature Conservancy. I want to thank you for this opportunity to speak tonight.

The Conservancy applauds and supports the time and effort the refuge has spent to move the CCP forward and get it to this point. We also support Alternative B, as it truly is a balanced approach, one that ensures the refuge's mission and goals are met and protects the Town of Chincoteague's recreational interests.

I'm somewhat hesitant to say anything about the relocation of the recreational beach, because the Conservancy's expertise does not extend to parking lots, but we do have a lot of experience with barrier islands.

The current beach parking area and causeway, as we all know, are highly vulnerable to mudding and storm surge. Since 1997 the beach in that area has retreated 450 feet westward, an average of 28 feet per year. The site proposed in Alternative B, 1.5 miles north, has moved only 60 feet westward over that same time frame. This is one of the most stable areas on the island. The service road is about a mile shorter, it's located

well inland and protected from storm surge.

And finally, we would like to see the refuge and community establish and maintain a mutually beneficial relationship. This will take trust, collaboration and leadership. We feel this will increase the ecological and economic value of the refuge, which will ultimately benefit wildlife and people. Thank you very much.

MR. ROSTER: Louisa Flaningam.

MS. FLANINGAM: Thank you very much. I thank you for having this meeting. I, too, did think it was going to be a little bit more questions and answers.

My name is Louise Flaningam. My husband and I have the Captain Timothy Hill House here on Chincoteague Island. And I do -- I'm the last person in the world that is going to say that I know very much about this issue.

We came here in 2002. That's when we bought our house. And I've been thinking long and hard about this beach issue and trying to find out

as much as I can. And I certainly appreciate what our elected officials have had to say and all of the work you have been doing in trying to bring this to a head, in a sense, and to give us choices.

But the thing that has gotten me is that, doing the research that I had to do for the National Register of Historic Places and for the Virginia Landmark Register, which we were honored with having that designation given to us in 2011, I spent an awful lot of time, even though the house is significant for the architectural history, I had to put it in time and in history and the island and all of that that was going on, so there was a tremendous amount that had to be looked at, and I spent so much time looking at a lot very, very old maps. Kirk Mariner was very helpful; he shared a lot of maps with me. I wish I could get to them right now but, unfortunately, we're moving and a lot of my office in shrink-wrap and storage; otherwise, I'd have my maps with me.

But I looked at maps from the late

sixteen hundreds, seventeen hundreds, all the through the eighteen hundreds, and the one thing at that time, not being all that familiar with the geography of this area, that struck me was the size of Assateague Island in relationship to Chincoteague. Basically -- well, we all know where the lighthouse was situated in 1830 -- basically, the end of Assateague Island was basically where the end of Chincoteague Island was. Because Chincoteague inlet was big and wide open, you could have some pretty large sailing vessels through that inlet at that time.

And since the house, the Hill house was built about 1800, at that time Chincoteague inlet was wide open, Assateague channel, I believe, was a good bit larger. Of course, everybody's livelihood was on the water. But since that time Assateague has grown and sand got deposited. I used to spend a lot of time in my childhood going down to the Outer Banks and to Ocracoke and places like that, and they saw significant changes to that from a little tiny

spit going out to Ocracoke to huge beaches.

I know of rows of houses on the Outer Banks and where my family and friends lived and those houses are gone. On Folly Island down off South Charleston -- I'm originally from South Carolina -- the houses are gone.

So mother nature gives and mother nature takes away. And providence, we don't -- we can pray and hope for the best, but I am afraid of what is in store for us.

And I see just since 2002, since I have been coming here, I see the changes out on Assateague. I hope -- I don't know, I don't have this information -- but I hope and pray that things have been looked into and researched and tried and that everybody's been trying their best to preserve this beach, because I'd like to see it stay the same, too. But my fear is that that isn't going to happen and therefore, from my point of view -- you know, I believe the Federal Government is running out of money, too. Everybody is screaming about how

much money is in the budget, whatever -- my feeling is that the Federal Government is willing to write a check and help us out and secure that, a beach area on what is the stable part of Assateague. I'm not a scientist. I'm just going by what I saw in those maps. And I know the stable part of that island is furthest north. And if there is a way that we can create the same experience that we have in the southern part, I would really support doing that, because I'm afraid if we wait too long, there isn't going to be any money there, because there are thousands of communities around this country that are being severely damaged by weather things, and I'm afraid -- everybody wants help -- and I'm afraid -- I'd like us to get to the head of the line, if that makes any sense.

So that's my feeling of why I'm thinking seriously about supporting the Alternative B, with the caveat that everybody still does a little bit more work on it and comes with up with things, because I've heard some really good points tonight

which I hope that the refuge and everybody is taking into consideration and that our elected officials will help push on some of those points that you all brought up and some other points that people have brought up, so if we're going to move north, then do it the best way we can and create the same environment and keep our community going and people will still have the same wonderful experience that I remember in coming to Assateague Island when I was a child. And I thank you all very much.

MR. ROSTER: Donna Mason.

MS. MASON: I'm Donna Mason. Joe, Tom, I know you have heard everything I have so say, or pretty much, I think you have. Maybe you haven't. In any case, most of you know me.

And we do appreciate this opportunity to come out. I didn't prepare a speech tonight. I did think it was going to be question and answer. But we still all have a lot of questions and we still don't have all the answers that we need.

Personally, I would like to see C taken

off the table. I don't see a redeeming quality in Alternative C whatsoever. I'll start there. Then maybe a combination of A and B is in order. Let's talk about it, let's see what we can come up with. I want to keep it at A. I want to stay right where it is for as long as we possibly can. Start there. Let's say that. Let's do that.

And then let's talk about Tom's Cove, let's talk about the things they don't want to talk about, because we can't make this decision in a vacuum; we are not deciding where the beach is going to be and it's not going to impact Chincoteague and it's not going to impact Tom's Cove, it's going to impact everything. And every decision we make from now on is going to impact the future of us and the future of Chincoteague and the future visitors and our livelihoods and our lives. This is very important.

And this decision that we make, that we come to, hopefully an agreement that will be productive, that will take care of the animals and

the birds and the people and, you know, maybe it's time to put the people first. I would like to see that happen.

But in any case, I think we can all work together. We've managed to live together. We've had the same agreement for what, 20-some years, maybe? It's been working so far.

I'd also like to see some beach replenishment. That seems like a dirty word. Every time I bring it up, nobody wants to have that conversation with me. I'd love to have that conversation.

I know people that would be glad to see sandbags on the beach. I know we could get millions of volunteers; all the people who visit here would be willing to throw in some money, I know everybody would be willing to throw in their time. We mentioned Christmas trees, now you can't put Christmas trees because somebody might step on the pine shats. Okay. Well, let's do sandbags. They're going to step on sand, anyway. Let's try

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that.

In any case, let's think about other ways to keep the beach where it is. The beach has been manipulated where it is. You knock down the sand dunes for whatever reason. That beach would be probably be a whole lot more stable if the sand dunes were still there.

The beach that you're talking about moving to, why is that stable? Okay? Maybe because the sand fence is still there? Maybe because the stand dunes are still there? Hmm. Well, that seems like a novel experience. Anyway, let's keep all this stuff in mind.

We do need our political people, we do appreciate our representatives being here. Wanda, Jack, you made great points. You know, let's all work together, let's come up with a plan that makes the most sense, is the most economical.

That 14 million bucks, which I still think is a conservative estimate, or 12 million or whatever it is they're throwing out, I don't think

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that's going to come close to touching what it would take.

And we have no study saying that that beach will be anymore stable five years from now than the beach we're on now, I don't think.

In any case, get rid of Alternative C. Let's look at Alternative A and how we can make it better for everybody. I'm not in favor of Alternative B. Thank you.

I wrote a letter, and I do encourage all of you to write a letter. And how long do we have to get that in?

MR. ROSTER: August 15.

MS. MASON: August 15.

MR. ROSTER: Karen Lukacs.

MS. LUKACS: Thank you. Hi. I don't know many of you, I know some of you. I've lived here since 2002. I have a house on Fourth Street, near the high school. And I came here for the ocean, that's why I came here, because I used to go to Bethany and I used to go to Dewey and I used to

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go to Rehoboth and I used to go to Ocean City and then I even tried some in North Carolina. But then I found Chincoteague, and Chincoteague was an undisturbed beach.

What does that mean, undisturbed? That means there was wildlife there. And why was there wildlife there? Because nobody put any groins next to it, nobody tried to replenish the sand there, nobody tried to manipulate it in any way. And this is what I love about this beach.

And I'm a teen body surfer. And what happens when you replenish sand on a beach is it creates a horrible thing called shorebreak. You won't see any surfers up on the Delaware and Maryland side anymore, because they've destroyed all the surfing by adding sand. Shorebreaks break people's necks, that's what happens.

I love the beach the way it is and I get out there at low tide and body surf all the way in.

I'm, obviously, you can tell, I'm for Plan B. I like the balanced approach.

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I love this town. I moved here and, you know, I moved here for the beach, but I love the people I've met here. I want to stay here. And I don't -- I think you have a balanced approach for the economy of this town by using Plan B and not -- and not -- and thinking -- you know, don't think about the past, think about what is it going to be in the future.

And that beach is not stable, it's been moving; I've watched it move. And no matter how many sand dunes you put on it, those sand dunes aren't going stay there, they're going to move with that beach because that's what nature does.

I would like to compliment the National Fish and Wildlife Service. I've been to a number of meetings and I'm encouraged about the studies they've done. I think they've done a very thorough job.

I'm sorry that the town council people and also some of the board here -- I wish I could be a volunteer here, but I can't, that's not

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1 possible -- I'm sorry that you all have felt in some
2 ways left out of the discussion. I don't think
3 there was any intention to do that. But I'm glad to
4 hear that going forward with whatever plan ends up
5 being, whether it's A, B or C, that the town and
6 town council and perhaps the business association of
7 the town will be able to sit down with the National
8 Fish and Wildlife Service and work out some of their
9 differences. Thank you. I support plan B.
10 MR. ROSTER: Jessica Stanfield.
11 MS. STANFIELD: Good evening. My name is
12 Jessica Stanfield, and I'm a recent graduate from
13 Chincoteague High School.
14 I had the pleasure of speaking before the
15 local town council on this very topic back in May,
16 and the same conversation and process are occurring
17 again tonight.
18 I have lived most of my life on
19 Chincoteague and have grown up with the islanders,
20 seeing the great love the town people have for
21 Chincoteague, and have watched the beach on

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1 Assateague change over the years.
2 The reason that all of these nice people
3 are gathered here today is to show their support and
4 concern for how the changes to the beach will affect
5 our way of life.
6 I am unfamiliar with the numbers, the
7 graphs, the charts, the sand movement and all the
8 scientific data, but at the end of the day we are
9 mostly concerned about how the impact of Assateague
10 beach will have on tourism and consequently the
11 economy of our beloved town.
12 The people of Chincoteague have built
13 their lives around the annual influx of visitors.
14 Of course, these visitors traveled so far to enjoy
15 this wonderful town and to relax on the beach. If
16 for some reason the access or desire to live at the
17 beach is affected, we may lose the valuable visitors
18 and their extremely valuable financial contribution.
19 The people of Chincoteague are afraid of
20 the obscurity and of the future and the daunting
21 unanswered questions about what truly is the best

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1 plan for the beach. What we want to know is that
2 our way of life will not only be preserved and
3 continue to exist but thrive.
4 As Mayor Jack Tarr mentioned, the awards
5 and accolades that the island has been honored with
6 is not only to the credit of the Town of
7 Chincoteague but also the Fish and Wildlife Service.
8 There must be a way to continue to work
9 together to develop a plan for renovation and
10 restoration or relocation that could solidify and
11 guarantee the future success of our beloved island.
12 Thank you for your time
13 MR. ROSTER: Terry Fleming.
14 MR. FLEMING: Good evening. My name is
15 Terry Fleming. I'm a board member of Assateague
16 Mobile Sportfishermen's Association. The president,
17 Bill Justice, he wanted to come and do this, but he
18 couldn't do it tonight, so I agreed that I would
19 make the statement for him.
20 AMSA, which is Assateague Mobile
21 Sportfishermen's Association, is a recreational

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1 fishing access organization that currently has
2 approximately over a thousand members that it
3 represents, and partners with many well-respected
4 organizations to form a voice of recreational users
5 to Assateague Island in both Maryland and in
6 Virginia.
7 AMSA was formed from the local fishermen
8 nearly 50 years ago and has done multiple projects
9 over the past years with the National Park Service
10 and Fish and Wildlife since they began managing the
11 island.
12 I am pleased to offer the current
13 position of AMSA and its board of directors and
14 membership for consideration as Fish and Wildlife
15 attempts to complete the CCP which will set the
16 management practices for the next 15 to 20 years on
17 Chincoteague.
18 Overall, we do agree that Plan B is the
19 favorable option, minus the fact that the
20 date-stamped closure is the best practice to have in
21 our opinion. We strongly disapprove of the closing

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of the OSV zone in the months when the beach is used the heaviest. AMSA would much rather the Fish and Wildlife handle the shorebirds that are listed per the Endangered Species Act and once closed follow the recovery plan that has been written for its guidelines. AMSA isn't sure why the Fish and Wildlife feels the need to date-stamp the closures when everyone can see that the National Park Service is doing a more than sufficient job.

To close the beach by date would take away access for many visitors, including the handicapped, disabled veterans and many people with many physical challenges that would take them away from the recreation that they enjoy for an unnecessary extended period of time.

In closing, please take into consideration the policies that are being followed by the National Park Service; detours around the areas where the nests exist; once hatched, determine where the chicks are foraging for their food sources, and if it isn't at the beach, don't close

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the beach.

AMSA members, general public and the National Park Service has set the example and shows there can be a reasonable solution other than a date-stamped closure, and we feel that Fish and Wildlife can make it work also.

Thank you, everyone, for the consideration that will be given our position when completing the CCP.

And this is all signed with Bill Justice, the AMSA president, also the past vice president of the United Mobile Access Preservation Association.

MR. ROSTER: The last person we have is Ray Wimbrow.

MR. WIMBROW: Hi. My name is Charles Wimbrow. I go by Ray. I'm not a public speaker, but there are a couple issues here that directly reflect me and worry me a little bit. I heard earlier about the horseshoe crab. I'm a hand-harvest horseshoe crabber and have been so for many years; I am one of 16. After hearing that this

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is kind of a dead issue, I have been in constant communication with the MRC, who also opposes this.

From what I can understand and being over to Newport News probably a dozen times this year, the Fish and Wildlife only own to low tide, mean low tide watermark. The mean low tide watermark runs off a ten-year average, which means it's something that is kind of here or kind of there, there is no one specific point. My problem with that is simple; you're going to have to survey everything out there, you're going to have to put a mean low tide mark out there. When you put a mean low tide mark out there, you're going to have to have a dozen to enforce it, because you're not going to know if someone's past it or inside or outside of it.

The other part of that is what if you get some erosion then? You're going to have to resurvey that, because then if you impede my fishing and you don't have a legal right to do so, you're opening yourself up to a lawsuit.

So there's a lot of gray area here with

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this horseshoe crabs. There's not been any offenses, any problems. We go out there. I'm friends with a lot of people on the Fish and Wildlife. We know who we see off land. We take what we're allowed. We have a quota every year.

I implemented the moratorium and control date on the hand-harvest fishers, therefore bringing the number down from 38 to 15 just for this reason, and we're still dealing with it. So I'm really against that.

My second issue is with Plan B. You can call me paranoid. I feel that the Federal Government is taking baby steps. That's usually how they get things done, they take baby steps, they do it behind your back; they go and they do a little bit here, a little bit there over the long term until they get their way.

Years ago I had a nice long talk with Mr. Hines. He told me the reason the dunes were pushed down on parking lot 1, 2 and 3 was because they caused erosion, the waves would wash up on the dune,

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take the sand out to sea and erode it away. My answer to that was, well, in the fall it comes back.

I'm an avid surfer. I've been on that beach surfing for 25 years. If you want to know what happened to that beach, ask a surfer. We know the bottom contour of the water, we know the bottom contour all the way to shore, and we know what's going on with the dune process.

Now they want to put it behind the dunes. They said this is the biggest set of dunes that there is on the beach, the most established set of dunes on the beach.

I'm also a contractor. I am not an engineer but I have a little bit of common sense. If you're having problems with erosion on a parking lot, then why would you put it behind a pond that's already below elevation? That makes absolutely no sense to me. You're going to move it behind Mallard Pond that already contains water below elevation. Why would you do that if you're having erosion as it is?

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The other thing that concerns me, they want to put parking lots in the back of Mallard Pond in Plan B, they want to put two safety areas in the front for pop-up thunderstorms, and they want to put a walk over the pond so you can access the beach and the shuttles go around the pond. Now if the shuttle gets on the island, that's the baby step, getting it on the island. Once it's on there, you're not getting it off, it's on there. You come out of the parking lot after five or six years, the next environmental impact statement is going to say well, the emissions from these cars are killing the algae in that pond, so we're going to have to cut down on the parking. So then they're going to start looking backwards now and saying the campground. So look at the baby steps

In my belief, Plan B is what they want you to take. That's why it was put there. It's like everything else is worse than Plan B so you would take Plan B.

Plan A is where we should be. It's where

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we've been all the time and where we need to stay. I support Plan A. Thank you.

MR. ROSTER: That was our last signed-up speaker. We'll open it up, but the same rules apply; you come up, state your name and make sure that we get it on the record, and then the same three to four minutes for speaking. So if anybody would like to --

MR. HOWARD: My name is Terry Howard. It's T-E-R-R-Y H-O-W-A-R-D. And I've got a twin brother named Gary.

Anyhow, with that said, the selection that we make in regards to Alternative A, B or C is very critical in a lot of ways in terms of how it impacts our economy and just how our -- the direction our community is going. All of that is very important.

I painted houses for a long time, my brother and myself. If I were to paint my house today and I had leaks in my roof, and the ceilings were all the same, I wouldn't go buy a thing to

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paint the ceiling without fixing the leak because I'd get rid of the old leak and have a new one the next time it rained.

I think I'm kind of concerned that we may be getting our priorities a little bit out of kilter insofar as which alternative we take or which one is selected and a lot of other things. This idea of protecting Chincoteague with the beach at Assateague is critical, because without Assateague we're vulnerable to the Atlantic Ocean.

I grew up here on this island, I've been here for 76 years. I remember my father and a lot of the elders talking about floods and storms. And to be honest about it, I thought they were exaggerating, until 1962, when I woke up one morning and I saw water in my neighbor's yard, thinking it was rain water. I went on and fixed my scrapple and eggs, and by the time I got done with that, that water was about fifty or a hundred foot up. It was not rain. I found out that not only was my father and a lot of other people not exaggerating, they

1 were being conservative.
2 So we need to -- maybe the plan, it all
3 should have been hand in glove insofar as the
4 replenishment of the beach, protection of the beach
5 at Chincoteague, maybe it should have all been hand
6 in glove. And I understand that we can't stop a
7 process that we're in the middle way of right now
8 selecting an alternative, but it's got to be done.
9 And I also understand that there is a
10 move with one of our governmental entities insofar
11 as taking steps to correct the situation. I don't
12 know what the majors are. And to be honest, I think
13 people that are talking about it are not sure just
14 what needs to be done.
15 But it is encouraging to me to know or to
16 hear, and I heard it today with Mr. Ritter, our town
17 manager, at the open house, and it was encouraging
18 to me, and I've heard it three or four others times,
19 her name escapes me, I believe her first name is
20 Linda, she's one of the people that's in charge --
21 maybe you all know her last name -- they're taking

1 steps to get this process underway so something can
2 be done to stabilize the beach.
3 I hope these steps -- we just heard a lot
4 of talk about baby steps. That's good, too, because
5 we all took baby steps before we took the big steps.
6 So I think even though they may be baby steps now, I
7 hope they get to be giant leaps and we make a giant
8 effort to get this beach stabilized and to have
9 protection so that we can have some of those choices
10 made in the alternatives, we can still be here, we
11 won't be washed out to sea and we can be here and go
12 on with our economy and our way of life. Thank you
13 for listening.
14 MR. ROSTER: Gene Taylor.
15 MR. TAYLOR: My name is Gene Taylor.
16 T-A-Y-L-O-R.
17 How many of us here are 50 or over?
18 And Ms. Jessica Stanfield was out here
19 just a few minutes ago, and I listened to her
20 comments. That's what we have to prepare for, our
21 youth. I liked what she said. She don't want

1 everything to stay the same. We want things to
2 improve, to be better, a better experience for our
3 visitors, better things happening for our little
4 birds, better things happening for our watermen.
5 When I ran for council, the first thing I
6 said, I want to get along with the county and our
7 government, and I tried my best to do that. I
8 intend to do that. If we work together, seriously,
9 we can make things better for our purposes; we can
10 have a better beach experience, not only for our
11 people that were born and raised here, but for our
12 visitors, we can have things better for our
13 watermen. We need to get together and make all that
14 happen for our youth. Thank you very much.
15 MR. ROSTER: Anybody else?
16 MS. THOMAS: My name is Peggy Thomas.
17 I've been here all my life, and this is not the
18 first time I've been down to discuss the
19 (unintelligible).
20 I want to tell you something. I don't
21 have much respect for them, I really don't. I wish

1 did, but I don't. But I think we need to keep that
2 beach like it is. I'm living in a house that come
3 off this beach. And I think we need to leave it
4 just like it is and I think everybody will be happy.
5 Thank you very much.
6 MR. ROSTER: Anybody else?
7 MS. TURLINGTON: I wasn't planning on
8 speaking.
9 THE COURT REPORTER: Your name, please.
10 MS. TURLINGTON: My name is Jane
11 Turlington.
12 THE COURT REPORTER: Spell the last name.
13 MS. TURLINGTON: T-U-R-L-I-N-G-T-O-N.
14 I've lived here all my life. And I know a lot of
15 you who have spoke have lived here and suggested
16 that we go with Plan B. I have been on that beach.
17 As you can tell, I still love the beach. I've
18 raised my two children there, had my grandchildren
19 there this week.
20 I've seen that beach when we had to climb
21 like 30-some steps. I've climbed it with a playpen

every day. We went up to one platform and we took so many more steps up to another one. I'll be 64 in November, and maybe from the age of 18 to 64 -- what would that be, like 46 years? -- that beach has existed, and I think we need to leave it as it is. And yes, Chincoteague needs protection, but I think the beach needs to stay here.

As Jessica said -- I worked with her in school; she's a very intelligent girl -- this is our future. I want my children, my grandchildren to have a future to come back to the beach, and I think, I ask you, I beg you to support A.

MR. ROSTER: Anybody else? All right. Thank you for coming out tonight. We appreciate it.

I just want to remind you that final comments are due August 15. There's forms over here with the mailing address, as well as the email address where you can submit those comments. Thank you very much.

(Proceeding concluded at 8:25 p.m)

I, David M. Schafer, a Notary Public, do hereby certify the foregoing a true and accurate transcript to the best of my abilities of the aforementioned Public Hearing.

As Witness, my hand and Notarial Seal, this 3rd day of July 2014, at Delmar, Maryland.

_____

David M. Schafer

My Commission expires August 2014

Appendix S

USFWS

Diamondback terrapin

Federal Consistency Determination

FEDERAL CONSISTENCY DETERMINATION

Comprehensive Conservation Plan and Environmental Impact Statement

for

Chincoteague and Wallops Island National Wildlife Refuges
Accomack County, Virginia

U.S. Fish and Wildlife Service
Department of the Interior

This Federal consistency determination (FCD) provides the Commonwealth of Virginia with the U.S. Fish and Wildlife Service's (USFWS, we, our) Consistency Determination under the Coastal Zone Management Act Section 307(c)(1) and Title 15 Code of Federal Regulations (CFR) Part 930, Subpart C, for implementing the Comprehensive Conservation Plan and Environmental Impact Statement (CCP and EIS for Chincoteague and Wallops Island National Wildlife Refuges (NWR), located in Accomack County, Virginia. This CCP would guide management of the refuges over the next 15 years. The information in this Consistency Determination is provided pursuant to 15 CFR §930.39. The USFWS seeks concurrence from the Virginia Coastal Zone Management Program (CZMP) that alternative B (the Service-preferred alternative) as detailed in the draft CCP and EIS is consistent, to the maximum extent practicable, with the enforceable policies of the CZMP.

To streamline the administrative requirements of the CCP development process and environmental review, the USFWS prepared a combined document that evaluates the potential environmental impacts from implementing a CCP. The CCP/EIS was prepared in accordance with the National Environmental Policy Act of 1969 (NEPA), as amended (42 USC §§ 4321-4347); the Council on Environmental Quality regulations for implementing NEPA (40 CFR §§ 1500-1508); and the Department of the Interior (516 DM 8) and Service (550 FW 3) policies. The CCP/EIS also complies with Section 106 of the National Historic Preservation Act of 1966, as amended. Refer to section 1.8 and 1.10.4 of the CCP/EIS for additional information regarding regulatory compliance.

Background

Chincoteague NWR includes approximately 14,032 acres of beach, dune, marsh, and forest habitats. Established in 1943 to provide habitat for migratory birds (with an emphasis on conserving greater snow geese), the refuge today provides habitat for waterfowl, wading birds, shorebirds, and song birds as well as other species of wildlife and plants. The refuge also provides wildlife-dependent recreational opportunities such as fishing, hunting, wildlife photography and observation, interpretation, and environmental education. Today, all but 418 acres are located in Accomack County, Virginia. In addition to the Virginia part of Assateague Island, Chincoteague NWR 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 1,412 acres in fee title and 600 acres in easements on Cedar Island.

Wallops Island NWR is located on the mainland, east of Wattsville in Accomack County, Virginia, 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. 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 collision with vehicles on the adjacent Highway 175 and aircraft at the neighboring National Aeronautics and Space Administration (NASA) flight facility.

Project Description

As detailed in chapter 2 of the CCP/EIS, alternative B (the Service-preferred alternative) would continue established habitat and wildlife management strategies but would pursue additional management activities for resources and public use. A "balanced approach" upholds the statutory and policy framework of the National Wildlife Refuge System (Refuge System) that states that wildlife and wildlife conservation must come first on refuge lands and waters. Figure 2-3 and Figure 2-4 of the CCP/EIS provide an illustration of major spatial elements of the alternative.

Natural Resource Management. Under alternative B, the refuge would protect and maintain all lands it administers, primarily focusing on the needs of threatened and endangered species, with additional emphasis on the needs of migratory birds and resident wildlife. The refuge would continue to preserve approximately 2,650 acres of wetland impoundments, but make adjustments in accordance with a new impoundment management plan that takes into account various factors, such as the habitat needs of black ducks and monarch butterflies, climate change and natural coastal processes, and relocated beach access and parking. Natural coastal processes would continue to shape habitat on the barrier islands. The refuge would continue to protect and enhance the wilderness character of the 1974 proposed wilderness area, and there would be no change in its size (1,300 acres) or location.

Beach Access and Parking. In recognition of the vulnerability of the current parking, the refuge would develop and implement a site design plan for parking and access to a new beach location, approximately 1.5 miles north of the existing beach. In comments on the draft CCP/EIS regarding beach access and parking from the National Park Service (NPS), we concur that "...8.5 acres is not a limit, but a guideline, that can be changed as needed with the actual design of a facility that provides the required 961 spaces and related facilities as part of a well-thought-out plan." Because USFWS is committed to working with NPS and others to future design, refine and analyze beach relocation infrastructure in a separate NEPA document, if the actual footprint becomes larger, then it can more appropriately be considered at that stage. The new recreational beach would offer accessible parking in close proximity to the beach.

The refuge in consultation with NPS would provide management strategies for maintaining the current beach and parking areas in the interim until the newly located recreational beach is ready for visitor use. The refuge would provide a transition plan for moving from the current beach location to the new beach location, including proposed processes (such as construction in phases) and management strategies to ensure access to a recreational beach is always available for visitors.

Visitor Use and Experience. Existing public uses would continue with some exceptions. Hiking would continue to be allowed on the Service Road north of the new recreational beach parking, but

private vehicles would be restricted unless authorized under special use permit or special day use privileges/openings. A joint NPS and USFWS Visitor Contact Station would be developed near the new recreational beach. Oversand vehicle (OSV) and hiking access would continue via Beach Road across Toms Cove south to Fishing Point September 16 through March 14. Access to Toms Cove for environmental education programs would require a permit. Beach Road would continue to be open to vehicles year-round as far as the vicinity of the South Pony Corral, where we would also provide multi-habitat viewshed, access to trails, and viewing of Chincoteague ponies and wildlife. Construction in this area would include a vehicle turn-around area with parking, crabbing dock, and launch point for non-motorized boats. Assawoman Island would be completely closed to all forms of public use, including fishing, from March 15 through September 15 or thereafter, until the last shorebird fledges. Swan Cove Bicycle Trail would be remain and become part of the new assigned area.

The refuge would maintain and where possible expand current hunting opportunities by including additional species, extending hours, and providing special events and opportunities for youth and women. The refuge would add mourning doves, light geese, and non-migratory Canada goose hunting opportunities to the refuge's migratory bird hunting program. Additionally, the refuge would allow migratory bird hunting on Federal holidays within the Commonwealth of Virginia hunting seasons. The refuge would also add turkeys to the big game hunting program and pursue development of a trapping program for furbearers. The refuge would continue sika hunting and would conduct research to identify a desired population size. The refuge would continue to manage opportunities for recreational shellfish and crab harvest.

OSV use would be permitted for priority public uses, including wildlife observation, fishing and to access hunting zones. We propose to develop a new ½-mile, OSV zone to facilitate the six priority uses (March 15 through September 15) south of new recreational beach, and add this to the new assigned area. We would also continue current management of the Overwash and Hook area for shorebirds until the new recreational beach is established, at which time the March 15 through September 15 closure would go into effect. OSV access from September 16 to March 14 would continue via Beach Road. The refuge would allow recreational horseback riding in the OSV zone from approximately September 16 to March 14. The refuge would allow visitor access by foot to the OSV zone from approximately September 16 to March 14.

Partnerships. The refuge would pursue partnerships to enhance land conservation, environmental education and interpretation on the Delmarva Peninsula.

Cultural Resource Management. With partners, the refuge would restore the light keeper's house and historic landscaping at Assateague Lighthouse and develop new cultural resource and interpretation amenities, including a virtual tour of the lighthouse. The refuge would allow access to the cemetery near Beach Road and develop tours and controlled access opportunities for Assateague Village. The refuge would work with NASA to develop a boardwalk and kiosk from the NASA Visitor Center in or adjacent to Wallops Island NWR.

The "Chincoteague ponies" have a strong cultural tie to the community, and the refuge would implement a Chincoteague pony management plan that meets multiple objectives: visitor viewing, habitat management, and pony health. The refuge would allow grazing of the current pony population, with a maximum pony herd size of 150, per the management agreement with the Chincoteague Volunteer Fire Company.

We identified that coordination and consultation with various State agency offices responsible for enforcing the policies of the CZMP is an important action to be implemented by the refuge as it implements the CCP. The CCP/EIS was developed with sufficient detail to account for the greatest potential impacts that could result from proposed actions identified under all alternatives. However, additional NEPA analysis will be necessary for certain types of actions, even once we adopt a final CCP. During the planning process for those plans and actions, we will consult with the Virginia Department of Environmental Quality (VDEQ) to determine if additional FCDs are needed.

Alternative B represents an approach for managing the refuge over a 15-year time frame, and is comprised of a variety of goals, objectives, and strategies that could be accomplished during the life of the plan. While some strategies could potentially be implemented immediately after the Record of Decision is signed, other actions like beach relocation would require additional analysis and documentation prior to implementation. Modifications and designs to manipulate the dunes at the new recreational beach site will be further informed through the next NEPA process which will involve local, state, Federal parties, partners, and other cooperating agencies.

Effect on Resources

Implementation of the preferred alternative would impact the natural and human environments, varying in duration, context, type, and intensity. Chapter 4 and the summary tables comparing consequences (Tables 4-1, 4-5, 4-6, 4-7, and 4-8) of the CCP/EIS detail impacts in the local, regional, and national contexts, over the short- and long-term, and identifies the intensity of beneficial and adverse impacts that would directly, indirectly, and cumulatively result from implementation of alternative B.

In summary, implementation of alternative B would affect the land or water uses or natural resources of Virginia in the following manner:

Air Quality. Moderate, indirect, long-term benefits of air filtering and carbon sequestration would result from managing more than 1,600 acres of mature loblolly pine forest and 2,500 acres of coastal shrubland to improve the health and vigor of trees and vegetation. The main source of emissions at Chincoteague NWR is from gasoline operated passenger cars and trucks, from which the main pollutant is carbon monoxide. Alternative B would not have a significant impact on air quality due to the minor changes in vehicle activity and because the area surrounding Chincoteague NWR meet the National Ambient Air Quality Standards set by the Environmental Protection Agency (EPA) as required by the Clean Air Act. Localized increases in emissions from visitors' vehicles would be negligible compared to current off-refuge contributions to pollutant levels and likely increases in air emissions in the Accomack County airshed from land development over the next 15 years. Any adverse effects on air quality from refuge activities would be more than offset by the benefits of maintaining the refuge in natural vegetation.

Alternative B would relocate beach parking north approximately 1.5 miles from its current location. Final location of the relocated beach parking lots is expected to be closer than the current recreational beach, which may result in decreased vehicle miles travelled (VMT) of passenger vehicles, a positive outcome. However, new uses such as space tourism and separation of existing uses (recreational beach from crabbing and clamming areas) could cause additional vehicle use by visitors which would create seasonal or temporal decreases in air quality.

None of our actions would violate EPA standards, and all actions would be undertaken to ensure compliance with the Clean Air Act. To reduce potential adverse impacts on local air quality, we would follow guidance provided State agencies regarding refuge activities that have the potential to adversely impact air quality in the vicinity, including the minimization of vehicle idling, use of precautionary measures to restrict emissions of volatile organic compounds and oxides of nitrogen, and minimization of fugitive dust.

Water Resources. Long-term, minor to moderate, direct and indirect beneficial impacts on water resources in the refuge vicinity would result from the continued protection of soils, wetlands, and waterways within the refuge boundary. Our increased efforts to inventory and monitor aquatic resources would inform specific refuge management decisions that have the potential to impact water resources in the refuge vicinity.

Management of the Beach Road causeway, which would restrict it from year-round routine visitor use, and eventual modification of that area would have a positive impact on tidal flow and water quality for Swan Cove Pool (F Pool). The increased tidal rhythm through impoundment culverts would now be allowed to mimic the natural tidal rhythm of Toms Cove, which would lead to improved water quality, dissolved oxygen, pH, and salinity levels for the new flow area.

The disturbance of Mallard and Pintail (C and D Pools) to allow for the construction of new public beach parking could have negative impacts on water quality for all impoundments to the south. Since impoundment flow is connected from north to south by culverts, anything that occurs in upper watershed beginning at Pintail Pool (D Pool) would flow though the impoundments south of them. Land-disturbing activities on the refuge, such as management of impoundments and widening of refuge roads, have the potential to result in negligible to moderate, direct, short-term and indirect, long-term adverse impacts on local water quality.

To reduce potential adverse impacts on local hydrology and water quality, we would employ best management practices when conducting land-disturbing activities. As needed, we would consult with State offices regarding permitting applicability and requirements to ensure compliance with applicable Federal and State laws and regulations, as well as local ordinances.

Soils. Long-term, moderate, direct beneficial impacts on soils would result from maintaining the land cover with natural vegetation, minimizing soil disturbance to the maximum extent practicable, and allowing public use only in designated areas. Proposed management actions in alternative B that would affect soils include: change in management for the North Wash Flats (NWF) area, moving of the recreational beach and parking, and widening of the Service Road to permit access to the new recreational beach.

Current management of the NWF removes natural scrub shrub vegetation to create more suitable habitat for coastal nesting shorebirds, such as piping plover and American oystercatcher. Alternative B would cease the vegetation removal and allow for the natural vegetation to grow back in the 300-acre area, improving the habitat for spring and fall neotropical migratory birds. This increased amount of natural vegetation would create a significant beneficial impact for the habitat and soil. Increased vegetation in an area would help to prevent soil erosion and disturbance, as well as improve the soils structure and microbial communities by returning nutrients into the ground.

Negative impacts to soil would result from the construction of the new recreational parking as well as the widening of the new beach access road. Alternative B provides for 8.5 acres of parking in a

new location, for which soil would be impacted. Approximately 18 acres of soil would be impacted from the expansion of the current Service Road to access the new beach parking. Although no soil in either case would be removed from the refuge, leveling and grading practices would be used, with the need to use fill in some areas. If this were to occur, the current soil may be moved or covered with fill. Furthermore, the increased area of hard compact surface (i.e., new road and increased parking) would increase the potential for erosion in those areas during heavy storm and rain events. Mitigation for these impacts would include allowing the natural growth of vegetation around these areas, which would aid for the capture of soil and decreased erosion. Best construction practices would be followed during the parking and road expansions, and mitigation measures such as erosion prevention screens would be employed to minimize impacts. Since the proposed actions associated with the relocated beach parking and road expansion are conceptual and not finalized, specific details for these actions are currently unknown. Recontouring dunes and topography in the area of the proposed recreational beach, and adjacent lands, would have impacts to many resources including geology and soils. Although we will work closely with NPS and the U.S. Army Corps of Engineers (USACE) in designing these future changes, further environmental assessments and analysis for impacts on soils would need to be completed prior to construction. Allowing the existing parking site (8+ acres) to revert to natural conditions would result in a positive impact to soils.

We would employ and maintain sediment and erosion control measures to minimize the potential for soils to migrate during land-disturbing activities. We would continue to maintain existing vegetation and employ erosion control measures as needed along the refuge's shoreline. We anticipate working with other Federal and State agencies to investigate options for reducing erosion of lands along Assateague Island. In the long-term, increased refuge visitation in the designated public use area has the potential to result in negligible and direct adverse impact soils via compaction. To reduce potential adverse impacts to soils, we would consult with State offices regarding permit applicability prior to conducting activities that have the potential to impact tidal wetlands, disturb land, or contaminate soils.

Forested Habitats. Forest habitat on Assateague Island consists largely of monotypic stands of even-aged and mature loblolly pine trees, which are vulnerable to catastrophic loss from insect damage or extreme weather/wind events, without management. We would manage the biological integrity and diversity of 1,600 acres of mature loblolly pine forest on Assateague Island by diversifying the structure and age class using small openings (2 to 10 acres) that favor hardwood regeneration, to support a minimum population of 200 Delmarva Peninsula fox squirrels as well as breeding habitat for brown-headed nuthatch and eastern towhee. Creating a mosaic of pine and hardwood trees of varying age classes and structural diversity would make the forest more resistant to damaging insect outbreaks, and create habitat characteristics more favorable to the Delmarva Peninsula fox squirrel, bobwhite, brown-headed nuthatch, and eastern towhee. The southern pine beetle does not attack hardwood trees and younger age-class trees provide a barrier to bark beetle spread.

Forested habitats have shown the greatest loss of any cover type on the Delmarva Peninsula, and forest cover on the Peninsula is fragmented. Given that most forests in the area are small private woodlots, maintaining an approximately 175-acre block of mature forest with a significant hardwood component on Wallops Island NWR would provide an important habitat type for migrant and resident landbirds. The construction of new lifeguard housing facilities and a boardwalk at or near Wallops Island NWR would result in an adverse impact for forested vegetation such as loblolly pine. This impact would be minimal due to the small size of the facilities

and the boardwalk, but further investigations and environmental analysis to assess impacts would need to be conducted prior to construction. Efforts would be made to assure minimal vegetation would be impacted.

Impacts to forested habitat from new or expanded visitor uses would be minimal since visitors use pre-selected paths and hiking trails which the refuge created to traverse through habitat, and avoid future vegetation impacts. For hunters, impacts to wildlife habitat would 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.

The impacts to vegetation resulting from the expansion of the beach access road would result in removal of approximately 18 acres of scrub shrub and forest vegetation. The exact footprint and design of the expanded beach access road is unknown at this time, although the amount of impact is a conservative estimate; it accounts for the existing roadway at this location and acknowledges that road construction would be an expansion of a current footprint. Further environmental analysis would be required for the beach access road expansion prior to construction. The removal of vegetation would be mitigated by expanding the road in currently impacted areas as much as possible (i.e., expansion into the current man-made borrow ditches that were created to build the road originally), and where not possible, only impacting minimal scrub shrub or forest vegetation where no threatened or endangered species are known to occur.

Non-forested Habitats. Long-term, moderate, direct beneficial impacts on wetland habitats and vegetation would result from our continued protection and minimal intervention efforts to protect the ecological integrity of the refuge's impoundments, wetlands and marsh, as well as adjacent aquatic habitats.

Vegetation would be altered and/or removed from the vicinity of Mallard Pool (C Pool) and Pintail Pool (D Pool) resulting in a loss of that habitat, mostly myrtle/bayberry shrub. Mitigation for these adverse impacts would result from management of the NWF, as outlined in the section on Soils, that would cease vegetation removal and allow for the natural vegetation to grow back in an area of approximately 300 acres, improving the habitat for spring and fall migratory neotropical birds. In other words, while 8.5 acres of this habitat type would be negatively impacted by construction of the parking lot, 300 acres would be allowed to grow back naturally and improve the overall habitat on the refuge for the native species.

Impacts of OSV and horseback riding would not be significant because access would continue to be limited throughout the season, and vehicles would still be required to stay within the intertidal zone. The opening of the OSV zone from September 16 to March 14 creates negative impacts by exposing the area to potential vegetation trampling and habitat alteration. The closing of the zone to protect nesting shorebirds from March 15 to September 15 has beneficial impacts for vegetation; decreasing the amount of time that trampling would be possible. All of these impacts would not be significant due to the restricted area in which these activities are permitted, and the lack of vegetation that occurs on the beach.

Horseback riding would take place along the Atlantic Ocean beachfront below the high tide zone between September 16 and March 14. This area is devoid of vegetation. It is anticipated however, that allowing this use would have minimal impact to vegetation near parking area assigned for horse trailer parking. Current plant communities that occur in these areas are not rare or highly sensitive to disturbance based on available information. Through the development of brochures, maps, and established travel corridors we would minimize the impacts to vegetation along the entire horseback riding/OSV zone.

The improvement or replacement of all water control structures would have beneficial impact on all freshwater impoundments into Toms Cove and Chincoteague Bay. By updating flow capabilities, of Mallard Pool (C Pool), Shoveler Pool (B-North Pool), and Snow Goose Pool (B-South Pool), water could drain freely into Toms Cove through Swan Cove (F Pool) more efficiently. This would maintain low salinity levels and improve water quality for moist soil vegetation and associated wildlife.

We will consider all appropriate regulations to protect aquatic resources and sensitive buffer areas, and we will avoid and minimize impacts to refuge wetlands and other natural resources whenever possible. The USFWS remains committed to working closely with Federal and State resource agencies, prior to and during any future project construction associated with the CCP/EIS, to continue monitoring and collection of additional environmental data, provide relevant supplemental information as needed, and to apply adaptive management and best management practices as appropriate.

Birds. Long-term, moderate, direct beneficial impacts on birds would result from implementation of the CCP. Habitat conservation and management is the highest priority of the refuge, consistent with the original establishment purposes for the protection of migratory birds. More than 320 species of birds are known to use the refuge regularly for nesting and brood rearing, feeding, resting and staging during migration, or wintering.

Visitor use activities (hunting, fishing, recreational beach use, walking, biking, horseback riding, OSV use) currently occurring on the refuge have been analyzed for impacts to birds. And such activities are expected to have a negative short term impact on birds. These activities are known to create disturbance to migratory and breeding birds and can cause alteration of habitats by trampling vegetation, compacting soils, and increasing the potential of erosion. For other visitor use activities, impacts would be minimal since visitors are required to use pre-selected paths and hiking trails which the refuge created to traverse through habitat, and avoid future vegetation impacts. No significant impacts would result on the refuge from these visitor services, but current monitoring efforts would continue.

Human disturbance to coastal nesting birds would be greatly diminished since the recreational beach would be relocated north, and OSV use would be limited to September 16 to March 14. The moving of the recreational beach and parking areas, along with the expansion of the beach access road, would result in negative impacts to approximately 27 acres of migratory bird habitat, but the impacts would be mitigated. This management strategy would cease vegetation removal from the NWF and allow for natural succession improving habitat for spring and fall migratory neotropical birds. Beneficial impacts for migratory waterfowl are also expected as this management strategy would increase thermal cover for waterfowl in the winter, increase the food sources for water birds and improve shorebird migratory stopover habitat.

The change in hunt management would have positive impacts for bird species on the refuge, mostly by the elimination of predation and competition. Further, adding resident Canada goose and light goose hunting on Assateague Island would reduce their populations on the refuge and their negative impact to habitat.

Fisheries. The refuge has a minimal assemblage of fish species in the freshwater impoundments. The refuge currently manages the impoundment habitats for birds, and not necessarily for fish, but impacts that occur in this habitat for birds would potentially affect fish as well. Since the impoundments are managed annually and on a strict regime through water control structures, the habitat remains a beneficial area for all aspects of the fish lifecycle.

Improvements to the tidal flow of Swan Cove Pool (F Pool) resulting from modification and replacement of water control structures within Beach Road causeway would have a positive impact on fish and other aquatic species. Increased water flow and tidal rhythm would allow fish and aquatic invertebrates such as crabs and mollusks passage into this restored salt marsh.

Mammals. The refuges support populations of mammalian species common to habitats of the Delmarva Peninsula (plus the Delmarva fox squirrel, which is endemic to the area and rare). As a taxonomic group, mammals would benefit from the refuge land protection and management of riparian habitats, forests, grasslands, shrub, and wetlands proposed for listed species, waterfowl, and migratory birds. Likewise, refuge habitats would benefit from careful attention to the impacts on mammals resulting from any of its activities.

Short- and long-term, minor, direct adverse impacts to mammals would result from noise disturbance and the reduction of food and cover caused by construction. The refuge would also implement new hunting and trapping programs for raccoon and red fox populations. These new programs would minimize predation on nesting piping plovers and other coastal birds – a beneficial outcome for birds, yet adverse for mammals.

Refuge strategies for conserving and maintaining biological integrity, diversity, and environmental health, restoring native plant communities, improving habitat conditions for the endangered Delmarva Peninsula fox squirrel, and controlling invasive or nuisance species would be management actions that have net beneficial impacts to mammals. The actions would directly or indirectly benefit mammalian populations over the long term by ensuring the continuation of quality natural habitats for resident mammalian wildlife.

Controlling invasive plant species, particularly those that quickly colonize an area and form dense, monotypic stands such as phragmites, would benefit mammals by maintaining the balance of food resources and native vegetative communities with which they evolved or adapted to for cover, nesting, and diverse food resources. For smaller, insectivorous mammals, maintenance of native plant diversity and structural integrity by controlling invasive species would have a positive impact as those species rely on biodiversity and availability of invertebrate food resources that are only associated with native floral assemblages.

UFWFS recognizes the U.S. Department of Agriculture (USDA) Animal and Plant Health Inspection Service (APHIS) as the expert in reducing mammalian predation on natural resources. Chincoteague NWR and APHIS agree to work together and with other interested parties to benefit threatened and endangered wildlife, bird species of management concern, and wildlife nesting habitat. The objective of the project is to: (1) conduct avian and mammalian predator management throughout the refuge complex to support the refuge's effort to enhance migratory

bird populations of selected bird species, and to carry out wildlife management objectives of the complex; (2) assist the complex with the management and eradication of invasive species such as nutria; and (3) assist the complex with the monitoring and management of wildlife disease surveillance and outbreaks.

Hunting is an important visitor use activity that results in a net positive impact for mammals by helping control the current sika elk and white-tailed deer populations. Overall it serves both a wildlife-dependent recreational use and a method of population control that would benefit other non-hunted mammals, conserve migratory bird habitats, reduce vehicle/deer collisions, and reduce overbrowsing of vegetation.

Negative impacts from hunting on non-hunted mammals, such as voles, moles, mice, shrews, and bats, are expected to be negligible. Except for some species of migratory bats, these species have very limited home ranges and hunting would not affect their populations regionally. Impacts of hunting to migratory bat species would be negligible. These species are in torpor or have completely passed through Virginia by peak hunting season in November through January. Vehicles are restricted to roads and harassment or taking of any wildlife other than legal game species is not permitted.

Amphibians and Reptiles. Other than the Federal listed species of turtles, 20 other amphibian and reptile species have been recorded on the refuge. Although no specific management policies are set in place for these species, the management of other species and habitats where these 20 species have been recorded would have direct impacts on these species. These species are commonly found in areas of the refuge with very limited visitor use, such as forest, vernal pools, refuge impoundments, and salt marsh areas. Impacts from visitor use actions such as hunting would not be significant due to the hibernation or torpor actions by cold-blooded reptiles and amphibians that limit their activity during the current hunting season when temperatures are low. Research is conducted on island dwarfisms in toads, a phenomenon common on Mid-Atlantic barrier islands, and what possible variables could cause this trait.

Incidental mortality of reptiles and amphibians occurs on refuge roads between March and October. However, we expect negligible impacts since best management practices would be implemented in the design and engineering of the roads and parking lots. For example, underground crossings, culverts, and timing of construction could be viable options to mitigate potential adverse impacts. Therefore, it would not affect their overall populations. Illegal harvest of reptiles and amphibians for the pet trade and/or consumptive use can and could have a negative impact on these populations. The dewatering of the impoundments from May through August concentrates fish, amphibian and reptile species in deeper channels. Waterbirds such as snowy egrets, glossy ibis, terns, and herons take advantage of this abundant food supply.

Invertebrates. The alteration of Mallard and Pintail (C and D Pools) in order to allow the building of approximately 8.5 acres of recreational beach parking would have a negative impact on invertebrates, mainly monarchs, due to the removal of Bidens. Although this would be a permanent negative impact, it would not be a significant impact because of the small acreage that would be affected, and because there are several nearby habitats where monarchs could nectar, including Shoveler and Snow Goose (B Pools). The planting of seaside goldenrod seedlings along small dunes in the vicinity of the former recreational beach, as well as on the backsides of dunes along Wild Beach and Toms Cove Hook would have a beneficial impact towards monarchs, and

could work to mitigate the negative effects of Bidens removal. Seaside goldenrod is the most important nectar source for monarchs on the refuge, and also acts a nesting location.

Improvements to the tidal flow of Swan Cove Pool (F Pool) resulting from modification and replacement of water control structures within Beach Road causeway would have a positive impact on aquatic invertebrates and fish species. Increased water flow and tidal rhythm would allow fish and aquatic invertebrates such as crabs and mollusks passage into this restored salt marsh.

Control of mosquitoes may have adverse impacts on birds, fish, amphibians, bats, and other wildlife since they are a known food source for these species. This impact would not be significant because it only occurs in a small area. Limiting disturbance and management activities would increase the number of snags and woody debris available as refuge forests continue to age. Protection of freshwater marsh, shrub, and aquatic habitats would have moderate, direct long-term impacts on invertebrate populations.

Public Uses and Access. In general, there are both beneficial and adverse impacts to all visitor uses that would result from elements either currently occurring, or proposed changes under alternative B. The refuge would continue to promote wildlife-oriented recreational opportunities that are compatible with the purpose for which the refuge was established, and would also maintain a recreational beach and many of the other recreation uses that are currently available at the refuge. The benefits of providing these activities would include helping to meet existing and future demands for outdoor recreation, interpretation, and education in the region. Visitors that are interested in these uses would benefit from high quality opportunities to engage in them. Another action that would likely benefit all users is the proposed implementation of a visitor survey every 5 years, which would allow visitors to share feedback on visitor use activities and to indirectly benefit from that information shaping refuge management over time. In addition, identifying and removing old abandoned structures on the refuge would enhance public safety and views.

Assuming that overall visitation would not change as a result of the beach relocation, as the same number of spaces would be preserved, and the short-term transition between the locations would be carefully managed outside the peak visitation period, there would not be a measurable or negative impact. The expansion of several visitor services, such as hunting, may result in increased visitation but is not expected to be significant. We would maintain access to a recreational beach, incorporate Americans with Disabilities Act standards and universal access into new buildings, and develop bilingual/multilingual materials. These commonalities serve to either maintain or increase the beneficial economic impacts of tourism for the region by improving the accessibility of the refuge.

In terms of timing and location, visitor use and access would continue to be regulated to protect federally listed species and their habitats, such as the piping plover, tern, and shorebird habitat on Toms Cove Hook. As a result, potential users of this area would be adversely affected by the closures. The main visitor use constraints would occur from the continued closure of Toms Cove Hook and the Overwash area from March 15 through September 15 for alternative B. Conversely, management actions to sustain and increase wildlife populations, in coordination with partners, could provide additional opportunities (benefits) for all six of the wildlife-dependent uses.

Visitors would experience continued access to the refuge by bicycle, foot, and private vehicle. Access to several areas of the refuge, including the Woodland Trail, Lighthouse Trail, Herbert H.

Bateman Educational and Administrative Center, and Wildlife Loop and associated trails, would be maintained. Private motor vehicle access to Assateague Island would be maintained and the refuge would work with the town of Chincoteague to allow golf carts on the refuge and public roads, in order to provide a variety of modes of transportation to and in the refuge, thereby enhancing overall access to the refuge. Visitors would benefit directly from having multiple access options (walking, biking, shuttle system, and automobiles) from the pursuit of a well-planned transportation system by the refuge, in partnership with the town of Chincoteague. All visitors would benefit, because even those that still use automobiles would benefit from reduced roadway congestion and more available automobile parking.

Under alternative B, the relocation of the recreational beach and seasonal closure of the Beach Road causeway would result in reduced access to Toms Cove for non-motorized boats; however, this would be offset because refuge would develop a launch point at new Beach Road/South Pony Corral site. In addition, relocation of the recreational beach would benefit bicyclists' access and beach access via bicycle, with introduction of new on-road bicycle lanes that would provide improved, safer, and more direct access and could result in an increase in overall beach visitation, and reduced beach parking demand. However, this may be offset by more visitors choosing to bike to the beach, resulting in more crowded bicycle trails.

Under alternatives B, a slight increase in hunters due to new hunting opportunities could result in increased violations and safety concerns for other visitors. However, the use by hunters occurs during the off-season for the majority of visitation and, the increase in hunter education and the introduction of bilingual hunting regulations would help mitigate such violations and concerns. Relocation of the beach would change the use of part of the Wildlife Loop such that Loop non-motorized traffic would need an alternative or to share the right of way with beach traffic. This could result in adverse impacts in the form of increased crowding, discomfort, and safety incidents.

Visitors would experience continued communication and outreach, which would have educational benefits and let them be aware of different visitor service restrictions or opportunities; continued access to the Assateague Lighthouse; and continued staffing of visitor programs as well as wildlife and maintenance programs that provide visual, safety, and other benefits to visitors.

Consistency Determination

The CZMP contains the following applicable enforceable policies. For each enforceable policy, specific actions to be implemented under alternative B are described.

Fisheries Management. Administered by Virginia Marine Resources Commission (VMRC) and Virginia Department of Game and Inland Fisheries (VDGIF), this program stresses the conservation and enhancement of shellfish and finfish resources and the promotion of commercial and recreational fisheries (Code of Virginia §28.2-200 through §28.2-713, §29.1-100 through §29.1-570, or §3.1-249.59 through §3.1-249.62).

> We anticipate conducting additional investigation, assessment, and analysis of management alternatives to reduce adverse impacts to shellfish and finfish habitat especially in the Toms Cove area. In consultation and cooperation with the NPS and the VMRC, we determined that the commercial harvest of horseshoe crabs that takes place on refuge lands does not contribute to the refuge's migratory bird purpose, does not contribute to the public's understanding and appreciation of the refuge's natural or cultural resources, and is not beneficial to refuge resources; consequently, the use cannot

be permitted. We state we will enhance our existing partnerships (which include VMRC and VDGIF), and we will maintain and assess expansion of current fishing opportunities including shellfishing and crabbing.

Subaqueous Lands Management. Administered by VMRC, this program establishes conditions for granting permits for encroachments in, on, or over State-owned submerged lands throughout the Commonwealth (Code of Virginia §28.2-1200 through §28.2-1213).

We anticipate conducting additional consultation with the VMRC prior to implementing actions that would affect subaqueous lands or qualify as encroachments on property of the Commonwealth. We agree with VMRC that potential conflicts could arise in areas where the Commonwealth leases State-owned subaqueous lands for oyster or clam fishing activities adjacent to or near the refuges, and would require additional coordination with appropriate State and Federal partners. While the Federal government may have some jurisdiction up to a 1/2-mile wide corridor around the refuges which may overlap with State-owned bottom lands, these subaqueous lands are outside USFWS jurisdiction. We would consult with State agencies early in the project planning phase to ensure consistency with the enforceable policies of the CZMP. Permitting and site plan approvals would be acquired prior to implementing construction activities with the potential to adversely impact subaqueous lands.

Wetlands Management. Administered by VMRC and VDEQ, the wetlands management program preserves and protects tidal wetlands (Code of Virginia §28.2-1301 through §28.2-1320 or § 62.1-44.15.5).

The protection of wetlands is of high management priority for our agency and at this refuge. We strive to avoid adverse impacts on wetlands and surface waters. However, where avoidance cannot be achieved, we strive to minimize adverse impacts by minimizing land disturbance and impervious cover. As identified in our CCP/EIS, we would establish a long-term monitoring program to inform management actions aimed to protect wetlands on the refuge and adjacent to the refuge. In the future, we anticipate consulting with the State for individual projects for which site-specific planning has not yet been completed.

Future projects with the potential to impact wetlands and waterways include the proposed engineering of new water control structures to improve tidal flow to Swan Cove Pool (F Pool); improve or replace all water control structures to maximize flow capabilities; relocate the recreational beach and parking (and necessary road widening and infrastructure); and, construct in the Beach Road/South Pony Corral area a vehicle turn-around with parking, crabbing dock, and launch point for non-motorized boats. Early in the planning phase for each of these projects, we would consult with VMRC and VDEQ (and appropriate partners) to identify the most appropriate best management practices to be employed to ensure the protection of wetlands and surface waters, as well as identify permitting or plan approvals required prior to project implementation.

Dunes Management. Administered by VMRC, the purpose of this program is to prevent the destruction and/or alteration of primary dunes (Code of Virginia §28.2-1400 through §28.2-1420).

There have been a number of significant storms recorded over the last 200 years, some which have caused great damage to the refuge, such as the March 1962 nor'easter that destroyed most of Assateague Island's natural foredune, and the storm in January 1992,

which destroyed much of the dune line on the lower portion of the island and greatly reduced the primary dune line to the north. On Chincoteague NWR, the primary dunes have been altered and managed with NPS for 40 years. In the NPS assigned area, NPS tried different strategies, including planting dune grass, repairing dunes, relocating dunes and eventually rebuilding only dunes that were mandatory for protecting NPS infrastructure. As the dunes were built, overwhelmed by storms and knocked down, and then rebuilt, it became obvious to park and refuge managers that the artificial dune system failed to prevent significant facility and infrastructure damage. In addition, it was evident that the recreational beach had begun to narrow, restricting the area available for beach use, especially during high tide.

The proposed relocation of the recreational beach and associated parking would be in response to historic and anticipated impairment to the current recreational beach and parking from natural hazards, such as heavy storm damage to parking lots, overwash events, sea level rise, and the natural movement of barrier beach land forms. The relocation is intended to provide a sustainable situation so that the habitat and recreation portion of the beach can be sustained for as long as possible for both the wildlife of the refuge, and the visitors to the seashore. The refuge would develop and implement a site design plan for parking and access to a new beach location, approximately 1.5 miles north of the existing beach. In comments on the draft CCP/EIS regarding beach access and parking from NPS, we concur that "...8.5 acres is not a limit, but a guideline, that can be changed as needed with the actual design of a facility that provides the required 961 spaces and related facilities as part of a well-thought-out plan." Because USFWS is committed to working with NPS and others to future design, refine and analyze beach relocation infrastructure in a separate NEPA document, if the actual footprint becomes larger, then it can more appropriately be considered at that stage. Recontouring dunes and topography in the area of the proposed recreational beach, and adjacent lands, would have impacts to resources including geology and soils. Since Accomack County has not yet adopted the model Coastal Primary Sand Dune Zoning Ordinance, VMRC is charged with reviewing the impacts associated with any projects that may fall within the Coastal Primary Sand Dunes/Beaches of Accomack County. VMRC has stated that authorization for activity on dunes or beaches on Assateague or Wallops Island federal property would most likely not be required, unless the activity would affect land or water use, or natural resources, of Virginia's coastal zone around the federal property. Nevertheless, we anticipate consulting with the State for individual projects for which site-specific planning has not yet been completed.

Non-point Source Pollution Control. Administered by the VDEQ, the Virginia Erosion and Sediment Control Law and Regulations are intended to minimize non-point source pollution entering Virginia's waterways (Code of Virginia §10.1-560 et seq).

As identified in our CCP/EIS, we would occasionally manage nonnative plant species using herbicides. We would take all appropriate steps to minimize the potential to contaminate soils or cause runoff into wetlands or water when applying herbicide, including using the minimum effective dosage, using application methods that minimize non-target effects, applying during optimal growth stage for effectiveness, applying in optimal weather conditions, and adhering to licensing requirements and other Federal, State, and local regulations. We would minimize the potential for adverse impacts to the environment and humans by using only approved herbicides, developing and following a spill plan, and using

the herbicide as instructed by the manufacturer and according to pesticide use plans approved by our regional contaminants coordinator.

Hazardous materials and wastes would be stored, transported, and disposed of in accordance with applicable laws and regulations. We would consult with VDEQ regarding identification of approved solid waste and hazardous waste disposal sites, as well as opportunities to reuse and recycle non-hazardous materials.

Early in the planning phase for facility maintenance and construction projects, we would consult with VDEQ to identify the most appropriate best management practices to limit potential for non-point source pollution generation, as well as identify permitting or plan approvals required prior to project implementation. Actions with the potential to disturb 2,500 square feet or more of land and/or generate non-point source pollution include relocation of the recreational beach and parking (with clearing and grading activities, installation of staging areas, parking lots, roads, buildings, utilities, borrow areas, soil stockpiles, and related land-disturbing activities), and construction in the Beach Road/South Pony Corral area of a vehicle turn-around with parking, crabbing dock, and launch point for non-motorized boats.

Point Source Pollution Control. Administered by the State Water Control Board, the National Pollutant Discharge Elimination System permit program regulates point source discharges to Virginia's waterways (Code of Virginia §62.1-44.15).

None of the actions proposed in our CCP/EIS are anticipated to generate a new point source discharge, or alter of any existing point source discharge, into Virginia's waterways. We would consult with VDEQ regarding future maintenance or construction projects to determine which actions would be considered a new point source discharge and proceed with permitting and project approvals as needed.

Shoreline Sanitation. Administered by the Department of Health (VDH), this program regulates the installation of septic tanks to protect public health and the environment (Code of Virginia §32.1-164 through §32.1-165).

We anticipate conducting regular maintenance on the existing septic system serving the refuge's visitor contact station to ensure its proper functioning. We anticipate consulting with VDH regarding septic system maintenance, groundwater well operation, and potential upgrades to ensure protection of public health and the environment.

Air Pollution Control. Administered by the State Air Pollution Control Board, this program implements the Federal Clean Air Act through a legally enforceable State Implementation Plan (Code of Virginia §10.1-1300 through 10.1-1320).

As identified in our CCP/EIS, none of our actions would violate EPA standards for air quality. All actions would be undertaken to ensure compliance with the Clean Air Act. To reduce potential adverse impacts on local air quality, we would follow guidance provided the VDEQ's Division of Air Program Coordination and/or Tidewater Regional Office regarding construction project design and implementation, including the minimization of vehicle idling, use of precautionary measures to restrict emissions of volatile organic compounds and oxides of nitrogen, and minimization of fugitive dust. On a project-specific basis, we would consult with State agencies regarding permit requirements for boilers or

fuel-burning equipment that may be used during facility maintenance or construction activities. We would continue to coordinate with State offices regarding prescribed burning as needed.

Coastal Lands Management. Pursuant to the Coastal Zone Management Act of 1972, as amended, Federal activities affecting Virginia's coastal resources or coastal uses must be consistent with Virginia's CZM Program. While Chesapeake Bay Preservation Areas (CBPA) are not designated on Federal lands, this does not relieve Federal agencies of their responsibility to be consistent with the provisions of the Chesapeake Bay Preservation Area Designation and Management Regulations (Regulations), as one of the enforceable programs of the CZM Program. Federal actions on installations located within Tidewater Virginia are required to be consistent with the performance criteria of the Regulations on lands analogous to locally designated CBPAs. Projects that include land disturbing activity must adhere to the general performance criteria of the Regulations, especially with respect to minimizing land disturbance (including access and staging areas), retaining indigenous vegetation and minimizing impervious cover.

In addition to the above requirements, any land disturbance over 2,500 square feet must comply with state erosion and sediment control and state/local stormwater management requirements.

The refuge has lands analogous to either the Resource Protection Area (RPA) or the Resource Management Area (RMA), but as a Federal resource, not included in either. Nevertheless, we would consult with State offices to ensure the protection of coastal lands to the extent practicable. We would consult with VDEQ regarding best management practices, minimizing land disturbance and impervious cover, and the protection of native vegetation. As stated earlier, we will consult with the appropriate agencies to ensure that projects that include land disturbing activity adhere to the general performance criteria of the Regulations, especially with respect to minimizing land disturbance (including access and staging areas), retaining indigenous vegetation and minimizing impervious cover.

Although not required for the purposes of consistency, in accordance with 15 CFR §930.39(c), we considered the advisory policies of the CZMP as well.

Geographical Areas of Particular Concern. Coastal natural resource areas (e.g., wetlands; aquatic spawning, nursery, and feeding grounds, significant wildlife habitat areas, public recreational areas, and underwater historic sites) are vital to estuarine and marine ecosystems and receive special attention from the Commonwealth because of their conservation, recreational, ecological, and aesthetic values. Coastal natural hazard areas are vulnerable to continuing and severe erosion and are susceptible to wind, tidal, and storm- related damage.

The diversity of conservation, ecological, recreational, and aesthetic values associated with Chincoteague and Wallops Island NWRs are detailed in chapter 3 of the CCP/EIS. As a unit of the Refuge System, the paramount purpose of this refuge is to serve as an inviolate sanctuary for migratory birds. The refuge has been opened for six priority wildlife-dependent recreational uses, as well as general and specialized uses; each of these uses has been found to be compatible with the refuge's purpose (see appendix P).

As discussed earlier in this FCD, we anticipate consulting with VDEQ regarding coastal or shoreline structures (including septic system maintenance, groundwater well operation, and potential upgrades to ensure protection of public health and the environment) on the

refuge in the future. We aim design and site facilities where the potential for property damage due to storms or shoreline erosion can be minimized.

Implementation of alternative B would have no direct impact on commercial ports, commercial fishing piers, or community waterfronts in the refuge vicinity.

Shorefront Access Planning and Protection. The Commonwealth values maintenance of shorefront access for public recreational uses, while protecting the historic features of waterfront properties.

Implementation of alternative B would have no direct impact on Virginia's 25 miles of public beaches.

Implementation of alternative B would be consistent, to the maximum extent practicable, with the 2007 Virginia Outdoors Plan. Our partnership efforts with the the NPS and others exemplify our commitment to accommodate public uses of the refuge that are appropriate and compatible. We would increase the availability and quality of wildlife-dependent recreational uses on the refuge, as well as increase our outreach efforts through partners with shared conservation goals.

Implementation of alternative B would have no direct impact on waterfront recreational land acquisition opportunities in the Commonwealth.

As detailed in chapter 3 of the CCP/EIS, the refuge has a long history of human settlement and development. We would use a proactive approach to interagency coordination for the protection of the refuge's cultural resources. Through our partnerships, we would promote cultural resource stewardship and appreciation both on and off the refuge in educational programs and interpretive media.

Finding
Based on this information, data, and analysis, the USFWS finds that alternative B (the preferred alternative) of the CCP/EIS for Chincoteague NWR and Wallops Island NWR is consistent, to the maximum extent practicable, with the enforceable policies of the CZMP. Although not required for the purposes of consistency, we find that alternative B is in line with the CZMP advisory policies when following them will not materially interfere with, or detract from, the fulfillment of the National Wildlife Refuge System mission or the purposes for which the refuge was established.

Concurrence Response
The entire draft CCP and EIS were available on the refuge's website for a 90-day public review and comment period, from May 15, 2014 through August 15, 2014. We also mailed paper and CD-ROM copies of the draft CCP and EIS to VDEQ for their review on May 15, 2014. VDEQ is responsible for coordinating Virginia's review of Federal environmental documents prepared pursuant to NEPA and responding to appropriate Federal officials on behalf of the Commonwealth.

VDEQ will coordinate the review of this FCD (and CCP/EIS) with agencies administering the enforceable and advisory policies of the CZMP. Additionally, VDEQ can publish a public notice of this proposed action on its website in accordance with 15 CFR §930.2. After review and compilation of agency responses, the VDEQ can concur with our consistency finding, provided all

applicable permits and approvals are obtained. Details about applicable permits and approvals will be provided in their letter, and would be available for public review at the refuge upon request.