

Appendix D

Compatibility Determinations

Compatibility Determination

Use: Wildlife Observation, Wildlife Photography, Interpretation and Environmental Education

Refuge Name: Eastern Shore of Virginia National Wildlife Refuge

Establishing and Acquisition Authority(ies): Eastern Shore of Virginia National Wildlife Refuge (Eastern Shore of Virginia Refuge) was established under 16 U.S. Code 667b, Public Law 80-537, an Act authorizing the transfer of certain real property for wildlife, or other purposes. Additional parcels of land were acquired under the Migratory Bird Conservation Act, 16 U.S.C. 715d.

Refuge Purpose(s): 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, or other purposes)

..... 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 (Refuge Recreation Act)

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

National Wildlife Refuge System Mission: 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(s):

A. What is the use? Is the use a priority use?

The uses are wildlife observation, wildlife photography, environmental education and interpretation. These uses are priority public uses, as identified in the National Wildlife Refuge Improvement Act (USFWS 1997).

B. Where would the use be conducted?

All uses are conducted on Eastern Shore of Virginia Refuge. A 1.5-mile trail system from the Visitor Center to the Winslow Bunker offers year-round opportunities for observing Neotropical migratory species such as birds and butterflies. Two overlooks along the trail — one on top of the Winslow Bunker and another at the edge of a salt marsh — provide opportunities for viewing migrating birds overhead and wading birds such as herons and egrets at the marsh's edge. An observation window in the Visitor Center and a photo blind overlook a freshwater pond with a variety of bird species.

C. When would the use be conducted?

All uses will be conducted within regular refuge hours, which are a half-hour before sunrise to a half-hour after sunset.

D. How would the use be conducted?

A photo blind opposite the refuge headquarters offers opportunities for wildlife photography, as does the 1.5-mile trail system and its two overlooks. The staff conducts educational programs and guided interpretive walks for over 6,000 people each year and an additional 45,000 people participate in self-guided activities and non-staff conducted educational programs. On Eastern Shore of Virginia Refuge, these activities occur along trails and in the Visitor Center. Refuge staff visit local schools and hold several events on the refuge, such as birding festivals. Interpretive signs along the refuge’s trail system offer opportunities for environmental interpretation.

We will continue with the above uses and add the following to improve the educational and interpretive programs for the public:

- Design and construct an environmental study area to include a half-mile trail, three teaching stations and a pavilion. Remodel a building to include a wet lab, indoor classrooms, hands-on exhibits and a teacher resource library.
- Develop new Visitor Center exhibits including a diorama and video focusing on Neotropical migrants.
- Upgrade Visitor Center exhibits.
- Enhance environmental education programs, including “adopt-a-classroom” program and teacher workshops.
- Develop a three-mile bike trail along an old railroad right-of way that runs parallel to U.S. Route 13. The trail will include two interpretive exhibit panels on migratory birds and their habitat.
- Open 0.6 miles of the Wise Point Road to foot traffic and construct a 200-foot boardwalk that leads to a marsh overlook. The boardwalk will end in an observation platform measuring 16 feet x 19 feet, with an interpretive panel.
- Hire a recreation assistant to help develop new interpretive displays, outreach exhibits, educational lesson plans, annual teacher’s workshops, photography workshops and monthly educational programs (Proposed RONS project).

E. Why is the use being proposed?

Wildlife observation, wildlife photography, environmental education, and interpretation are priority public uses as defined by 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), and if compatible, are to receive enhanced consideration over other general public uses.

Availability of Resources: Most of the projects below are already included in the Service’s Maintenance Management System (MMS) or Refuge Operations Needs System (RONS) database for funding. Some projects, under the CCP, have been proposed for inclusion in one of these two databases. For a complete list of current and proposed MMS and RONS databases, see Appendix F.

Design and construct an environmental study area to include a half-mile trail, three teaching stations and a pavilion. Remodel a building to include a wet lab, indoor classrooms, hands-on exhibits and a teacher resource library. (MMS Project #00003)

Cost Estimate.....\$42,000

Develop new Visitor Center exhibits including a diorama and video segment; (RONS project #93111)

Equipment costs.....	\$32,000
Services/Supplies.....	\$30,000
Miscellaneous.....	\$ 3,000

Total Cost.....\$65,000

Replace Visitor Center exhibits (MMS project #98507)

Cost Estimate.....\$125,000

Enhance environmental education programs. (RONS project #93107)

Equipment costs.....\$34,000

Facilities costs.....\$48,000

Services/Supplies.....\$4,000 first year, \$4,000 recurring

Miscellaneous.....\$10,000 first year, \$2,000 recurring

Total Cost.....\$102,000

Develop a three-mile bike trail along an old railroad right-of way that runs parallel to U.S. Route 13. The trail will include two interpretive exhibit panels on migratory birds and their habitat. (RONS project #00009)

First-year cost.....\$44,000

Recurring costs.....\$ 6,000 (Project duration 2 years)

Open .6 miles of the Wise Point Road to foot traffic and construct a 200-foot boardwalk that leads to a marsh overlook. The boardwalk will end in an observation platform measuring 16 feet x 19 feet, with an interpretive panel. (Proposed RONS project)

First-year cost.....\$22,000

Recurring costs.....\$ 3,000 (Project duration 2 years)

Hire a recreation assistant to help develop new interpretive displays, outreach exhibits, educational lesson plans, annual teacher's workshops, photography workshops and monthly educational programs. (Proposed RONS project)

FTE's..... 1 (GS-5)

First-year cost.....\$40,000 for FTE, \$10,000 for materials

Recurring costs.....\$34,000 (Project duration 15 years)

Anticipated Impacts of the Use: We predict impacts from the renovation of a building for environmental education will be minimal because we are not constructing a new building. The only new construction will be a trail and pavilion located along the trail. Construction will cause minimal disturbance because it is already a disturbed area. The site of the planned trail is also in a disturbed area, except for a portion of the trail that will run through a small amount of forest habitat (50-100 feet). Adding a trail will require mowing a strip of land and possibly laying down gravel in some areas. This will impact vegetation, causing some soil compaction which ultimately reduces vegetation composition and structure. Construction of a boardwalk will create disturbance to a portion of the pond by installing posts. The pond measures about one acre and is shallow. In dry years, there is no standing water. The pond receives occasional water bird use. More birds use the pond to the north, which will not be disturbed by the new trail.

Opening a portion of the Wise Point Road may cause disturbance to Neotropical avian species. Some research suggests human intrusion in wildlife habitats, such as walking on trails, can cause disturbance to wildlife. One example is a study (Gutzwiller et al., 1997) that showed human intrusion influences avian singing behavior in some species. During breeding season, the seasonal timing of male song affects the timing of territory establishments, male attraction, pair formation, egg laying, and transmission of information about breeding songs to young (Gutzwiller, et al., 1997). Therefore, if human intrusion

affects singing, it could ultimately affect reproduction and survival of some species. Another study (Riffell et al., 1996) suggests that when repeated human intrusion recurs over an extended period of time, impacts on avian reproductive fitness have the potential to accumulate temporally at the individual, population and community levels. However, the refuge's main role in the life cycle of avian species is not during breeding, but during migration, where less literature is available about the impacts from human intrusion.

Constructing the Wise Point Road trail will have minimal impact since there is already a paved road there. The Wise Point Road is in an already disturbed area, at 50-100 yards from Route 13, a major four-lane highway. We will, however, disturb vegetation to create a 200-foot boardwalk with a platform overlook onto the salt marsh. This may impact a small amount of salt marsh. Providing trails for public use could also result in litter, vandalism, removing plants and/or animals, and trespassing into closed areas.

The three-mile bike trail will run along an old railroad right-of-way which is in FWS ownership. The bike trail will measure about 8 feet-wide; the right-of-way is a total of 66-feet wide. The trail will run north from the refuge, parallel to U.S. Route 13, a major highway, with about 100-150 feet buffering the trail from the road. The east side of the trail will border agricultural land. Given the proximity of the trail to a major highway and to agricultural fields, the wildlife values are reduced. The configuration of the land as a long, thin corridor also makes it less valuable as habitat. Therefore, disturbance to wildlife will be minimal.

Public Review and Comments: As part of the Comprehensive Conservation Plan (CCP) process for Eastern Shore of Virginia Refuge, this compatibility determination has undergone extensive public review, including a comment period of 45 days following the release of the Draft Comprehensive Conservation Plan/Environmental Assessment (Draft CCP/EA).

Determination (check below):

Use is Not Compatible

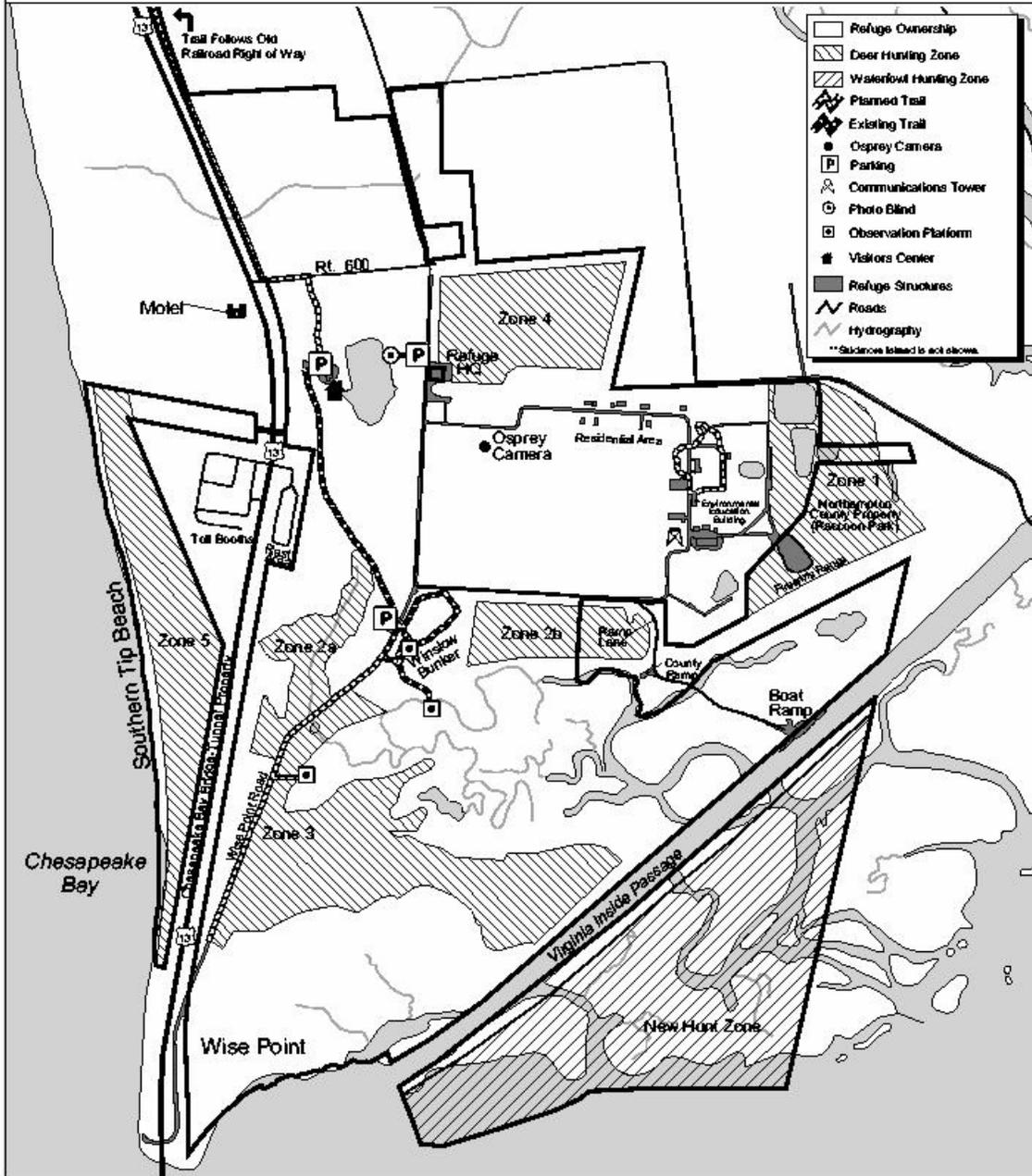
Use is Compatible With Following Stipulations

Stipulations necessary to ensure compatibility: Public use areas will be monitored at various times of the year to assess wildlife disturbance. We will include information about proper etiquette and the effects of human impacts on habitat and wildlife resources in refuge publications and flyers, on kiosks and in interpretive programs. Periodic law enforcement will ensure compliance with regulations and area closures, and will discourage vandalism.

To limit wildlife disturbance, the new environmental education trail will only be used for scheduled outdoor educational activities. This will be about twice a day during the spring, once a week during the summer and less in the fall and winter. The area will be monitored throughout the year and, if necessary, trail use will be restricted during certain times to minimize disturbance to wildlife. The boardwalk to the pond will be built over wetland vegetation so as to minimize disturbance to vegetation.

We will limit access to the Wise Point Trail by offering only guided tours during the fall migration of Neotropical and temperate migrants. This will help minimize disturbance to birds who are feeding and resting during their south migration. All other times of the year, the trail will be open to visitors during normal refuge hours. If salt marsh is impacted to build the boardwalk and overlook on the Wise Point Road trail, we will restore an equal

Public Use Opportunities Eastern Shore of Virginia Refuge



Data Sources:
 1:24,000 Hydrography & 1:100,000 Road data provided by USGS with source data of 1981 & 1989. All other data provided by USFWS. Projection/Datum: VT M Zone 18, NAD 27, Meters.
 Map prepared for the Eastern Shore of Virginia NWR & Fisherman Island NWR Comprehensive Conservation Plan by the RS Cartography & Spatial Data Services Section - March 2003.
 This map is for planning purposes only.



Compatibility Determination

Use: Commercial and Recreational Boat Access and Commercial Boat Docking at the Wise Point Boat Ramp.

Refuge Name: Eastern Shore of Virginia National Wildlife Refuge

Establishing Authority: Eastern Shore of Virginia National Wildlife Refuge (Eastern Shore of Virginia Refuge) was established under 16 U.S. Code 667b, Public Law 80-537, an Act authorizing the transfer of certain real property for wildlife, or other purposes. Additional parcels of land were acquired under the Migratory Bird Conservation Act, 16 U.S.C. 715d.

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..... 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)

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Description of use(s):

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

Recreational and commercial boat access and historically permitted commercial boat docking (must meet certain criteria) at the Wise Point boat ramp. Recreational and commercial fishermen and recreational boaters have requested use of the Wise Point boat ramp to gain access to fishing and hunting grounds on both the Atlantic Ocean and Chesapeake Bay. Commercial watermen that historically docked at Wise Point are requesting continued overnight docking privileges. Recreational and commercial boat access and commercial boat docking are not identified in the National Wildlife Refuge System Improvement Act of 1997 (USFWS 1997) as priority public uses.

(b) Where would the use be conducted?

The Wise Point boat ramp is located at the terminus of Ramp Lane (see Map D-1) and adjacent to the deep waters of the Virginia Inside Passage. The facilities and access to this site include approximately 15 acres of tidally influenced salt marsh, maritime forest, shrub thickets and a dredge spoil site. Other areas that will be affected incidental to use include the barrier islands and extensive tidal marshes along the southern terminus of the Delmarva Peninsula [e.g., Fisherman Island Refuge, Skidmore Island (Service ownership); Smith, Myrtle and Ship Shoal Islands (The Nature Conservancy ownership); Mockhorn Island (State Wildlife Management Area)]. These barrier islands and tidal marshes are one of the only

remaining undeveloped barrier systems in the mid-Atlantic region. Their extensive coastal salt marshes, bays, barrier beaches and interdunal ponds provide high value migration, wintering and breeding habitat for extensive numbers and variety of colonial nesting waterbirds and wading birds, migrating and wintering waterfowl and migrating Neotropical songbirds. The barrier/marsh system has been identified as a priority for protection in the North American Waterfowl Management Plan: Atlantic Coast Joint Venture (USFWS 1988) and as a United Nations Biosphere Reserve. The islands have been designated as a Western Hemisphere Shorebird Reserve Network of international importance.

(c) When would the use be conducted?

The Wise Point boat ramp will be open daily to recreational anglers and boaters, waterfowl hunters, and commercial watermen during normal refuge hours (½ hour before sunrise to ½ hour after sunset) with extended hours during certain seasons. The ramp will be open for 24-hour access to a limited number of permitted commercial watermen that were using the area on a commercial basis and paying a commercial rate at the time of U.S. Fish and Wildlife Service (Service) purchase (12/26/2001). The refuge may be closed at certain times (e.g., gun hunt, prescribed burning), thus impacting access to the boat ramp at those times.

(d) How would the use be conducted?

The entrance road will be improved and widened (in certain areas) to allow for vehicles to safely pass each other. Also, the parking lot will be improved and enlarged (in areas that are upland and presently maintained by mowing) and a boat ramp, commercial dock and commercial off-loading site will be constructed. Supporting facilities will include restrooms, lighting, an electric gate, overflow/satellite parking and signage (interpretive, regulatory and directional).

After improvements have been completed, and the area is safe for general use, a concessionaire will be contracted to manage the site. If an acceptable concessionaire is not found, management will be through the refuge fee program.

(e) Why is this use being proposed?

The Wise Point boat ramp is located on the deep waters of the Virginia Inside Passage which was constructed in the 1950's and bisects the refuge. Despite miles of shoreline in Northampton County, public deep water access is limited. There are six public boat access points in Northampton County (not including Wise Point), with the closest ramp on the Atlantic Ocean located 10 miles north in Oyster. On the Chesapeake Bay the closest public ramp is 3.5 miles away, at Kiptopeke State Park. Both of these ramps are used beyond capacity during certain summer days and other popular fishing times. Additionally, the Wise Point site is ideal because of its proximity to the Chesapeake Bay Bridge Tunnel, a popular fishing location. The ramp location also affords a relatively safe harbor because of the islands and marshes to the east which provide protection to boaters during storms and high winds.

There was limited historic use by both recreational and commercial users before the area became part of the Eastern Shore of Virginia Refuge. Since the area was established as a Refuge there is an expectation that this site will be available to the public because of both the demand and limited suitable sites for boat launching in the county. Additionally, there were 21 commercial watermen paying for and using this site on a commercial basis. Many of these commercial watermen have Commonwealth-leased grounds and permits for locations in close proximity to the Wise Point ramp. These watermen have a vested interest in gaining access that is proximate to their established work sites. Northampton County, which has little revenue from industrial and manufacturing businesses, is trying to balance maintaining the rural atmosphere of the County and their fiscal needs. The Wise Point boat ramp will bring dollars to the County through use by recreational boaters, ecotourism and commercial watermen in the form of job opportunities, taxation on commercial catch, and purchase of fuel, food and lodging. Thus, the Service will be a partner with the County in maintaining the area with these rural qualities.

Availability of Resources:

Improvements to the boat ramp and associated facilities are included in the Service’s Maintenance Management System (MMS) database (51650-02003, \$445,000) and are estimated as follows:

Boat ramp.....	\$55,000 (2-lane concrete base)
Bulkhead.....	\$196,000
Courtesy tie-off.....	\$54,000
Commercial dock and mooring.....	\$104,000
Contracting, permits and miscellaneous.....	\$36,000

The entrance road and parking lot improvements and associated facilities are part of a Federal Highway TEA-21 project and are estimated as follows:

Entrance road upgrade.....	\$250,000
Pull offs.....	\$35,000
Parking area improvements and enlargement.....	\$60,000
Satellite parking development.....	\$10,000
Restrooms, lighting and fee station.....	\$20,000
Electric gate and signs.....	\$20,000
Interpretive and regulatory signs.....	\$5,000

Additional one-time costs that will not be covered by TEA-21 are:

Purchase two vehicles.....	\$40,000
Upgrade environmental education building as offices.....	\$35,000

Total estimated construction and upgrade costs.....\$920,000

Daily and annual fee structures will be offered for recreational boaters. Day-use permits will cost \$10 and an annual pass will cost \$120 (rates will change over time). Commercial waaterman using the area and paying a commercial rate when the Service purchased the site will pay an annual fee of \$1,500 for those who dock their boats and \$600 for those who do not dock their boats (no new docking privileges will be granted). New commercial waterman and commercial waterman that were not paying a commercial fee when the Service purchased the property will be allowed to use the site commercially and will be charged \$400 annually. These new commercial users will not be granted use of the docks, reserved parking, nor 24 hour, seven days a week access. However, they will be allowed to use the unloading area for commercial catch.

If a concessionaire is contracted, they will be responsible for selling passes and ensuring the smooth and orderly operation of the boat ramp. Under this scenario, one full-time and two seasonal Law Enforcement Officers will be hired (2.08 FTEs) and administrative, management and maintenance time will be needed to manage the site. Additionally, there will be added expenses for annual maintenance, fuel and energy costs. The estimated annual costs for this option are delineated below. If the ramp is managed as a refuge fee program, an additional seasonal Law Enforcement Officer, two fee collectors and additional oversight will be needed by refuge staff.

Annual refuge costs for the upkeep and administration of the recreational and commercial boat access and commercial boat docking at the Wise Point boat ramp under a concessionaire includes:

Full-time LE Officer (GS-7/9)	\$64,000
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Seasonal LE Officer (0.66 FTE) (GS-5)	\$21,000
Seasonal LE Officer (0.42 FTE) (GS-4)	\$13,000
Administrative oversight	\$ 7,000
Fuel and energy costs	\$ 4,000
Road and parking lot upkeep (grading and aggregate).....	\$12,000
Maintenance of electric gate	\$ 2,000
Dumpster contract.....	\$ 1,000
Restroom maintenance	\$ 1,500
Brochures, annual permit tags, sign maintenance.....	\$ 2,500

Annual Boat Ramp Costs.....\$128,000

Under the concessionaire scenario, entrance and user fees will go to the concessionaire to defray the costs of managing the boat ramp. Therefore, the annual costs for managing the boat ramp, from the Service’s perspective, will come from budget allocations. The information below shows funding received in fiscal year 2004. Additional funding will be required to manage this ramp in a safe and orderly manner.

FY 04 Budget Allocation included:

Salaries.....	\$559,391
Base Maintenance.....	\$26,800

Total Available Funds.....\$586,191

Anticipated Impacts of the Use: Once improvements are complete and the area is reopened to recreational boaters, there will be increased ramp usage and increased boat traffic in the surrounding waters. This increase will cause wildlife disturbance and will have an impact on water quality (both from turbidity and increased oil and gas). The Wise Point ramp will also give boaters easy access to a number of sensitive barrier islands and saltwater marshes. The barrier islands have large numbers of beach nesting (e.g., American oystercatcher) and colonial nesting (e.g., royal tern) birds that will be adversely impacted by noise, human presence, pets and litter. The concern is that nesting pairs and whole colonies could be lost if human disturbance is not controlled. Additionally, there is a concern that litter could increase the gull population, which could cause increased predation on the colonial and beach nesting birds and eggs. It is during the warm nesting season that a larger number of boaters are likely to be using the ramp and have an interest in accessing nearby beaches for strolling, shell collecting, picnics and rest breaks.

Marsh birds (e.g., black ducks, tri-colored herons, snowy egrets) will also be adversely impacted by boaters navigating the marshes. These impacts will include human presence, pets (i.e., running or barking dogs), engine noise and boat wakes.

Improvements to the boat ramp will cause some one-time disturbances to biological resources. Boat ramp and dock construction and installing mooring posts will require dredging and pumping, which will cause some temporary water turbidity. Additionally, dredging and pier/ mooring post removal may bring some previously submerged contaminants (e.g., oil, DDT) to the surface.

Installation of a culvert(s) under Ramp Lane will alter the hydrology of the impoundment. This impoundment was historically a tidally-influenced salt marsh, which was impounded by creation of the road that essentially cut the marsh off from cyclic tides. Installing a culvert(s) will improve the hydrology and assist in reverting this area to salt marsh. With the daily flushing of salt water, the invasive *Phragmites* that rings the impoundment will also be adversely impacted, and *spartina* and other salt

marsh vegetation will return. However, because of siltation and other changes that have occurred since this area was impounded, it will not immediately be the same quality marsh it once was.

Adding pull-offs to Ramp Lane to enhance driving safety will require some filling of salt marsh and cutting of vegetation along the upland areas of the road. Although engineering specifications have not been completed it is estimated that approximately one-third of an acre of wetlands will be filled and one-half acre of uplands will be cleared for pull-offs. Additionally, approximately one-half acre of uplands will be cleared for a satellite parking area.

Grading and graveling the entrance road and parking lot will cause some siltation in adjacent waters. This will cause water turbidity affecting wetland vegetation, benthic organisms and fisheries.

An electric gate will be installed which will require trenching to run electricity to the gate and installation of a magnetic plate under the road surface.

Finally, the Eastern Shore of Virginia Refuge will experience an increase in traffic within its boundaries which will cause wildlife disturbance and may also increase litter and vandalism.

Public review and comment: As part of the Comprehensive Conservation Planning (CCP) process for Eastern Shore of Virginia Refuge, this compatibility determination has undergone extensive public review, including a comment period of 45 days following the release of the Draft Comprehensive Conservation Plan/Environmental Assessment (Draft CCP/EA).

Determination (check below):

Use is Not Compatibility

Use is Compatible With Following Stipulations

Stipulations to ensure compatibility: To reduce wildlife disturbance on nearby barrier islands no pets will be allowed in the boat ramp area (thereby not allowing any pets on boats). Additionally, no personal watercrafts (PWC) will be allowed on the Eastern Shore of Virginia Refuge. Denying PWC access through this boat ramp will reduce the noise, wake and disturbance that these watercrafts often cause. Large closed area signs will be installed on the refuge barrier islands to inform boaters these areas are off-limits to foot access and boat landing. Law enforcement staff will be hired to patrol Skidmore Island and Fisherman Island Refuges. Law enforcement patrols will minimize the number of boaters illegally landing on these refuges. Additionally, law enforcement will discourage vandalism, litter and other illegal activities, as well as help ensure smooth management of the boat ramp area.

Outreach will be conducted at the boat ramp through personal contact, brochures, or signs to alert boaters to refuge regulations, specifically the restrictions on barrier island landings due to their ecological sensitivity. Parking for this boat ramp (total combined spaces at the ramp and satellite parking) will be capped at 75 parking spaces. Increasing boat access beyond this level may adversely affect the sensitive wildlife resources within the

Eastern Shore of Virginia Refuge and the surrounding barrier islands and marshes that harbor large numbers of migratory and resident birds and also provide a nursery for the abundant fisheries resources in this area.

An environmentally sound human waste disposal system (e.g., composting toilets) will be used. Solar lighting, with down-shielded lights, will also be used. No water or electrical service will be run to the site and no fish cleaning will be allowed on-site, thereby reducing the amount of food available to gulls, raccoons and other predators. An interpretive sign installed at the boat ramp will explain the sensitivity of the barrier islands and marshes and how boaters can minimize human disturbance. A training course will be developed for commercial tour guides (e.g., kayak tours) and all tour guides will be required to take a training course before taking trips from the Wise Point boat ramp. The course will focus on minimizing human disturbance to wildlife resources on barrier islands and marsh areas.

Speed bumps will be placed along the entrance to minimize vehicle speeds and a system will be designed to inform the boating public when the parking areas are full, prior to arriving at the launch site. This will reduce the number of vehicles entering when there is no parking available. Both of these details will reduce wildlife disturbance on the Eastern Shore of Virginia Refuge.

Boat docking will be phased out over time. Since the boat dock and mooring posts are in direct and sole support of a commercial use, it cannot be justified on a national wildlife refuge. Once the commercial watermen (those that met certain criteria when the land was purchased) retire or terminate commercial fishing from this site their docking rights will be relinquished. However, their other special rights (24-hour access, set aside parking) may be passed on to one heir (after the second generation all special rights will be terminated). This heir has to be a named individual (not a business) and must actively participate in commercial fisheries from this site.

We will partner with the Commonwealth to extend the no-wake zone in the Virginia Inside Passage, adjacent to refuge property. This will decrease turbidity and disturbance from increased boat usage. Baseline water quality and sediment surveys will be conducted and bi-annual surveys will be performed to determine the impacts of increased boat usage on biotic and abiotic elements. To prevent fill used for grading the entrance road and parking lot from eroding into the water, silt fencing will be used during construction.

Justification: Eastern Shore of Virginia Refuge was established to protect and manage migratory birds. This use has been determined to be compatible given that it will be managed at a level and in a manner that does not result in hazards to visitors, unresolvable conflicts between user groups, nor significant habitat degradation or wildlife disturbance, and provided that the stipulations referenced are implemented. Commercial and Recreational Boat Access and Commercial Boat Docking at the Wise Point boat ramp will not materially interfere with, or detract from, the mission of the National Wildlife Refuge System or the purposes for which the refuge was established. This use will not pose adverse effects on trust species or other refuge resources and will not interfere with other uses being conducted on the refuge.

Signature:

Refuge Manager:

Susan M. Rice
(Signature and Date)

Concurrence:

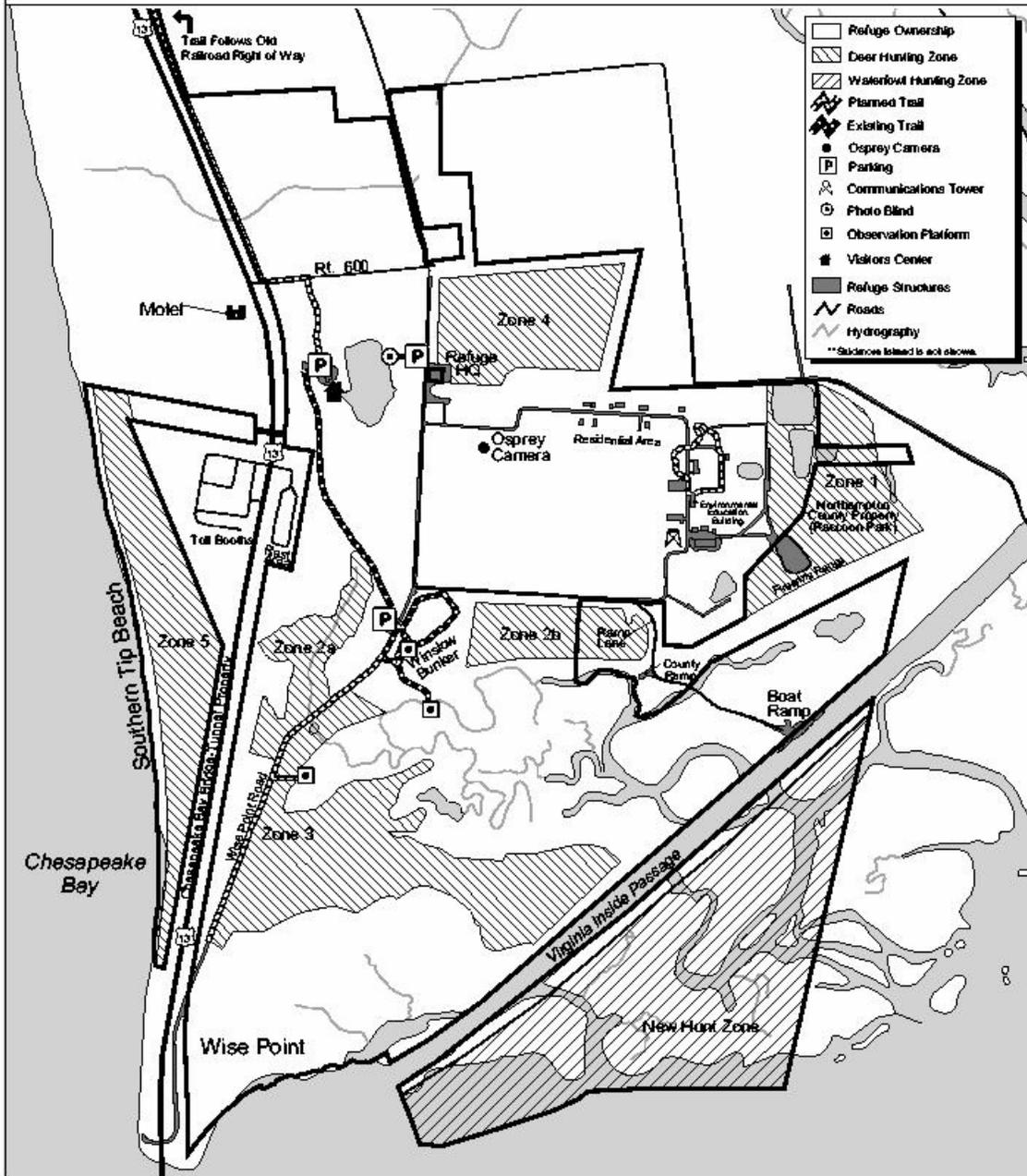
Regional Chief:

Anthony D. Leje
(Signature and Date)

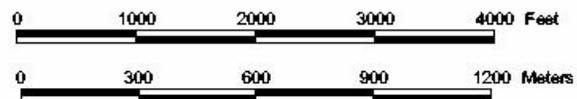
Mandatory 10-year Re-evaluation Date:

5/26/2014

Public Use Opportunities Eastern Shore of Virginia Refuge



Data Sources:
 1:24,000 Hydrography & 1:100,000 Road data provided by USGS with source dates of 1981 & 1989. All other data provided by USFWS. Projection/Datum: VT M Zone 18, NAD 27, Meters.
 Map prepared for the Eastern Shore of Virginia NWR & Fisherman Island NWR Comprehensive Conservation Plan by the RS Cartography & Spatial Data Services Section - March 2003.
 This map is for planning purposes only.



Compatibility Determination

Use: Hunting

Refuge Name: Eastern Shore of Virginia National Wildlife Refuge

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Refuge Purpose(s):..... 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, or other purposes)

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Description of Use(s):

A. What is the Use? Is the use a priority use?

The use is public hunting. Hunting is identified in the National Wildlife Refuge System Improvement Act of 1997 (USFWS 1997) as a priority public use.

B. Where would the use be conducted?

The Eastern Shore of Virginia National Wildlife Refuge has held an annual deer hunt since 1993. Hunting occurs on approximately 185 acres, which are divided into five hunt zones. Most of the hunt zones consist of deciduous forest, coniferous forest or a mix of the two, as well as some shrub habitat. These habitats support small and large mammals year round and Neotropical migratory birds during their spring and fall migrations.

As determined in the CCP we will open a portion of the newly acquired Wise Point property to deer hunting (see Map D-1). This will add approximately 40 acres to the current 185 acres open to hunting on the refuge. Hunting on this new land will be conducted in the same way as on the acreage currently open to hunting. Habitats on this acreage are similar to habitats on lands currently hunted.

We will also open a portion of the newly acquired Wise Point property to waterfowl hunting. The area that will be open to waterfowl hunting is approximately 135 acres (see Map D-1). The area is comprised

of tidal marsh bisected by extensive tidal creeks and channels. This area supports waterfowl and wading birds, and provides habitat for finfish and shellfish.

C. When would the use be conducted?

Refuge hunts will be conducted during the State big game and waterfowl hunting seasons and will be in accordance with Federal and State regulations. To minimize disturbance to Neotropical migrants, hunting with guns will commence in late fall (late November and December). Waterfowl hunting will adhere to state regulations for bag limits, species, and methods of taking.

How would the use be conducted?

The archery deer hunt will accommodate a maximum of 23 hunters per day. It is 12 days long with hunting from Monday through Saturday for two consecutive weeks. The archery hunt generally starts at the end of October and extends into November. The shotgun season is seven days long with hunting on Wednesdays and Saturdays in November and December. Both hunts fall within the parameters of the State hunting seasons. Refuge trails and access through the refuge remain open to the public during the archery hunt, but not during the shotgun hunt. The Visitor Center, refuge headquarters and photo blind are the only facilities open during the shotgun hunt. The hunt program achieves the biological objective of reducing the density of the white-tailed deer population.

We will work with the State to modify the deer hunt program to further reduce the deer population because refuge staff has observed heavy browsing in many areas. Taking more deer will further reduce the browse effects on vegetation. This will enable the forest understory to grow and produce more food and cover for Neotropical migrants. It will also provide additional food and cover for species such as small mammals, reptiles and invertebrates.

Waterfowl hunting will be allowed by boat only, and only in the area that lies to the southeast of the Virginia Inside Passage (see Map D-2). Waterfowl hunt season dates and bag limits will fall within the parameters of the State’s waterfowl season and will be administered in a way that will cause the least disturbance to Neotropical migratory birds. Delaying hunting until December will also mitigate conflicts between waterfowl hunting and other wildlife-dependent recreational activities.

Why is the use being proposed?

The refuge deer hunt achieves the biological objective of reducing the density of the white-tailed deer population. High densities of white-tailed deer can cause serious habitat degradation by heavily browsing on forest understory and shrubs. Heavily browsed vegetation leaves less food and cover habitat for migratory birds, a trust resource which the refuge is charged with protecting. A controlled refuge hunt will help keep the deer population within the carrying capacity of the habitat.

Waterfowl hunting provides a wildlife-dependent recreational opportunity and helps achieve refuge management goals and objectives. In addition, waterfowl hunting in these areas is an historic, traditional sustainable activity. Much of the marsh area on the Eastern Shore of Virginia is owned by the State and is already open to migratory bird hunting.

Availability of Resources: Below is a list of costs required to administer and manage the deer hunt on Eastern Shore of Virginia Refuge. We predict opening an additional 40 acres for the deer hunt will not affect these costs.

Refuge Personnel = 1/2 FTE per hunt day @ \$100/day.....	\$1,900
Dispensing hunt information	\$1,525
Hunter selection/lottery drawing.....	\$100
Hunter notification/mailing, etc.	\$300

Hunter brochure (design, printing).....	\$1,475
Permits/regulations/forms.....	\$600
Take down signs/closing and moving check station.....	\$100

Total estimated for hunt costs.....\$6,000

A permit fee of \$15 per participant has been collected to defray the cost of the deer hunt. The refuge has had an average of 127 hunters per year over the past three years. Therefore an average of \$1,905 is collected in permit fees. Therefore, the total net cost of the hunt is \$4,095 (\$6,000 - \$1,905). We will increase permit fees in order to recover more of our operating costs. The permit fee will increase to \$30 per participant (for all hunts conducted at both the Eastern Shore of Virginia and Fisherman Island Refuges).

Funds required to administer and manage waterfowl hunting activities will be similar to or less than deer hunting, depending on how many days we allow hunting. Below are estimated costs for administering a waterfowl hunt:

Refuge Personnel = 1/2 FTE per hunt day @ \$100/day.....	\$1,900
Dispensing Information during year.....	\$1,525
Permits/regulations/forms.....	\$600
Install and remove signs.....	\$100

Total estimated for waterfowl hunt costs..... \$4,125

Anticipated Impacts of this use: Habitats subject to deer damage include forest understory and shrub habitat that migratory songbirds depend on for food resources. Controlled deer hunting helps keep the deer population within the carrying capacity of the habitat. Heavily browsed vegetation leaves less food and cover habitat for Neotropical migratory birds, a trust resource which the refuge is charged with protecting. Modifying the hunt program to further reduce the deer population will reduce the browse effects on vegetation. This will enable the forest understory to grow and produce more food and cover for Neotropical migrants. It will also provide additional habitat for small mammals, reptiles and invertebrates.

The presence of hunters may disturb other wildlife, especially the noise from the firearms use, and hunters may trample vegetation, however these impacts are expected to be minimal. In addition, because refuge trails and most of the road system are closed during the firearms season, this causes conflicts with other users.

Opening a portion of the Wise Point marshes to waterfowl hunting will have short term disturbance on the waterfowl resting and feeding in the area. Opening 135 acres to waterfowl hunting will have few cumulative impacts since most of the marsh area on the Eastern Shore of Virginia is owned by the State and is already open to migratory bird hunting.

Hunting provides game meat and recreation for hunters. Hunters who visit the area also contribute to the local economy by staying at hotels and eating in restaurants. Providing waterfowl and deer hunting opportunities helps preserve the cultural heritage of the Eastern Shore of Virginia, where people have hunted and fished for generations.

Compatibility Determination

Use: Archery Hunting for White-tailed Deer

Refuge Name: Fisherman Island National Wildlife Refuge

Establishing and Acquisition Authority(ies): Fisherman Island National Wildlife Refuge (Fisherman Island Refuge) was established under 16 U.S. Code 667b, Public Law 80-537, an Act authorizing the transfer of certain real property for wildlife, or other purposes. An additional parcel of land on the island was acquired under the Migratory Bird Conservation Act, 16 U.S.C. 715d.

Refuge Purpose(s): 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, or other purposes)

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

National Wildlife Refuge System Mission: 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(s):

A. What is the use? Is the use a priority use?

Fisherman Island Refuge will open a biologically-managed white-tailed deer hunt. Hunting is identified in the National Wildlife Refuge System Improvement Act of 1997 (USFWS 1997) as a priority public use. A management hunt refers to a hunt that is open to the public but is conducted based on biological needs and is not necessarily held annually. Refuge staff will perform habitat surveys for browse damage assessment and will work with State partners to assess the health and size of the white-tailed deer population. These data will be used annually to decide whether to open the refuge to hunting.

B. Where would the use be conducted?

Approximately 75 acres of upland vegetation, adjacent to the unimproved entrance road onto Fisherman Island and north and west of the Chesapeake Bay Bridge-Tunnel roadway, will be open to an archery management hunt for white-tailed deer (see Map D-2).

C. When would the use be conducted?

The hunt will be administered during the State big game hunting season and in accordance with State regulations. This archery hunt will be conducted during the Eastern Shore of Virginia National Wildlife Refuge's gun hunt season (conducted in late November and December), to minimize disturbance to Neotropical migrants.

D. How would the use be conducted?

Hunting will take place in designated hunt stand locations in the uplands adjacent to the unimproved entrance road on the west side of U.S. Route 13. We will work with the State to determine safe number of hunters for this habitat. However, it is estimated the area will accommodate between 4-6 hunters per day. This archery hunt will follow the same schedule as the Eastern Shore of Virginia Refuge shotgun hunt, typically on Wednesdays and Saturdays for seven days from late November through mid-December. However, hunt days may change if more hunters participate or if take would increase with a change of schedule, i.e., having consecutive hunt days may draw more hunters. The hunt days will be consistent

with the hunt days at the Eastern Shore of Virginia Refuge. Hunters will bring all harvested deer to the Eastern Shore of Virginia Refuge check station. One deviation of this hunt from the gun hunt is that deer will not be field dressed on Fisherman Island Refuge, rather a site will be provided on the Eastern Shore of Virginia Refuge for hunters that want to field dress their deer before departure. A second deviation will be that this will be an antlerless deer hunt only.

Safe access onto the island will be described in published annual refuge hunting regulations. All hunters will be required to attend an annual hunter orientation. The hunt program will be reviewed annually to ensure deer management goals are achieved (i.e., the resident white-tailed deer population is being reduced) and the program is providing a safe, high quality hunting experience for participants.

E. Why is the use being proposed?

Initiating a deer hunt on Fisherman Island Refuge will achieve the biological objective of reducing the density of the white-tailed deer population. High densities of white-tailed deer can cause serious habitat degradation by heavy browsing on forest understory and shrubs. Heavily-browsed vegetation leaves less food and cover habitat for migratory birds, a trust resource which the refuge is charged with protecting. A controlled management hunt may keep the deer population at levels that reduce habitat damage. However, if a public hunt is not successful in meeting these objectives other management techniques will be considered.

Availability of Resources:

The cost of opening Fisherman Island Refuge to hunting includes the following expenses:

Conducting hunter orientation.....	\$2,000
1 FTE per hunt day @ \$150/day	\$1,050
Dispensing hunt information	\$900
Hunter selection/lottery drawing	\$100
Hunter notification/mailing	\$150
Hunter brochure (design, printing)	\$900
Permits/regulations/forms.....	\$600
Posting hunt area and deer stand locations.....	\$500
Take down signs	\$100
Conducting habitat surveys	\$1,500
Total	\$7,800

Some aspects of managing this hunt will be tied into managing the existing hunt on the Eastern Shore of Virginia Refuge. However, additional costs will be incurred since the hunt will be conducted in a geographically distinct area, and because we are requiring hunter orientation and use of deer stands. Some costs will be recouped in permit fees (\$630 if all slots were filled). Presently a permit fee of \$15 per participant is being collected to defray the cost of the hunt on the Eastern Shore of Virginia Refuge. However, we are only recuperating about 40 percent of the costs of conducting the hunt. Therefore, the hunt permit fee for all hunts conducted at both the Eastern Shore of Virginia and Fisherman Island Refuges will increase to \$30 to recover more of our operating costs.

Anticipated Impacts on Service Lands, Waters or Interest: Opening Fisherman Island Refuge to an archery hunt will help reduce the impacts of deer browse on the island. It will provide additional food and cover for species such as songbirds, small mammals, reptiles and invertebrates. The hunt will cause some trampling of unstable dunes and vegetation. Damage to vegetation and within these unstable soils and dunes will likely incur when hunters are tracking wounded deer.

Opening Fisherman Island Refuge to a deer hunt could increase the predator population. For instance, if hunters field-dress deer on the island the entrails could attract predators and provide food to improve the health of these predators so that they could better survive the winter months. This is considered a potentially serious problem, as most other barrier islands along the Virginia coastline are plagued with avian predator issues. Because of this potential problem, no field dressing will be allowed on Fisherman Island.

Weekly tours that are conducted on Saturdays during the fall and winter will be moved to Sundays to eliminate safety issues that this will cause.

Public Review and Comments: As part of the Comprehensive Conservation Planning (CCP) process for Eastern Shore of Virginia and Fisherman Island Refuges this compatibility determination has undergone extensive public review, including a comment period of 45 days following the release of the Draft Comprehensive Conservation Plan/Environmental Assessment (Draft CCP/EA).

Determination (check below):

Use is Not Compatible

Use is Compatible With Following Stipulations

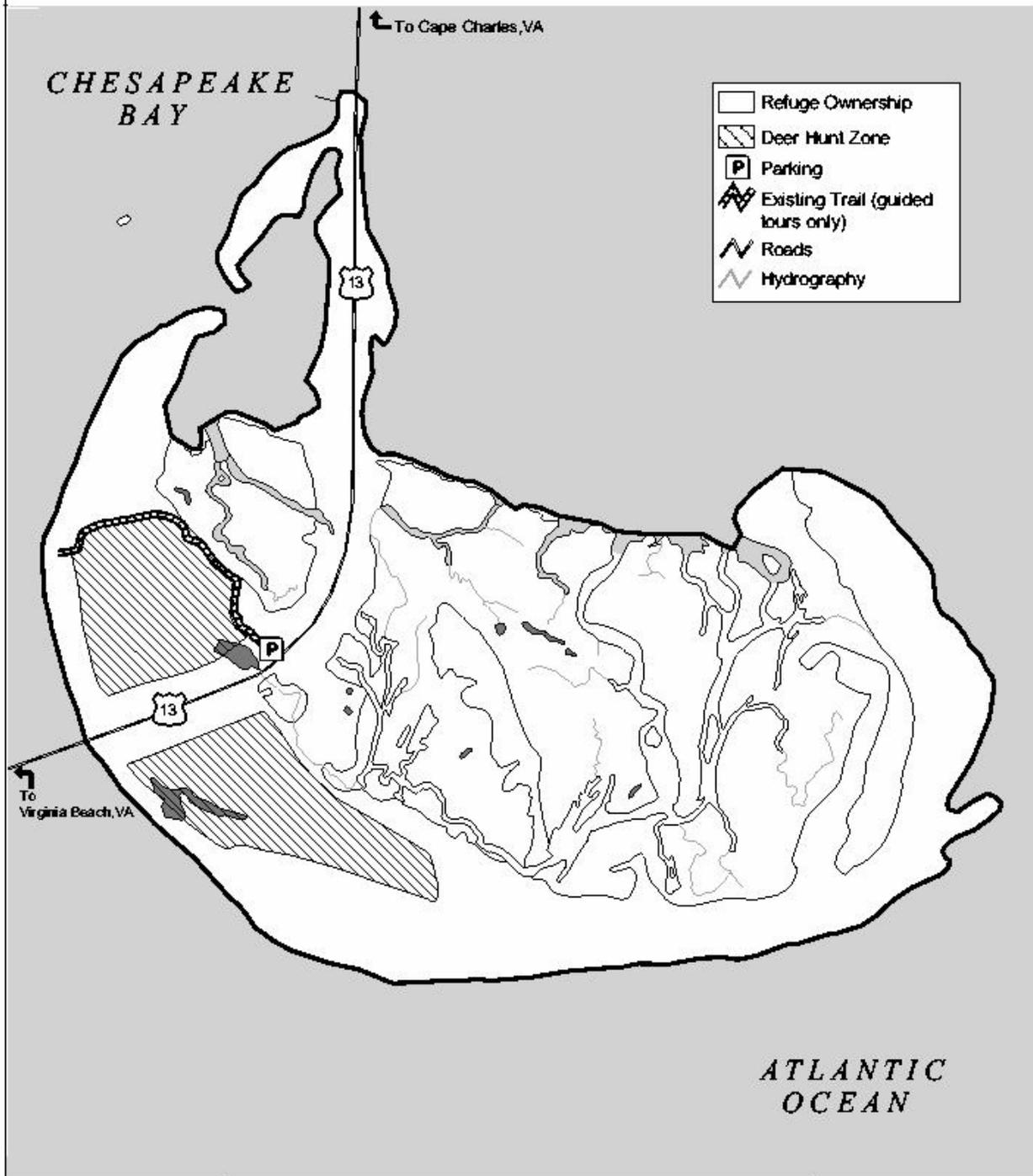
Stipulations to ensure compatibility: The hunt program will be conducted in accordance with State hunt regulations. It will be reviewed annually to ensure deer management goals are achieved and that the program is providing a safe, high quality hunting experience. Hunt season dates and bag limits will be adjusted as needed to achieve reduction of the resident breeding population of white-tailed deer. We will work with the State to determine safe numbers of hunters. The components of an Environmental Assessment (EA) will be satisfied through the Draft CCP/EA. A hunt plan will be written and approved before hunting occurs. The plan will be reviewed each year the management hunt is to take place and will provide overall documentation of permitted hunting, including the relationship of hunting to other refuge objectives.

To mitigate impacts that might cause an increase in the predator population, hunters will be required to field dress deer off the refuge. An area on the Eastern Shore of Virginia Refuge will be designated for this purpose. The refuge's no littering policy will be strictly enforced to reduce food and litter that may attract predators. This stipulation will assist in meeting our objective of reducing the number of deer on the refuge.

Hunting from deer stands will be required and access to these stands will be designated. Hunters will provide their own stand, but it must be placed in a designated location. This will reduce the amount of trampling to sensitive barrier island vegetation. Additionally, it will increase the safety of hunters that are on the island. A hunter orientation will be required of all hunters wishing to hunt on Fisherman Island. The orientation will include information on: safe access on and off the island, designated deer stand locations, and methods of reducing impacts on fragile barrier island vegetation.

This archery hunt will be conducted on the same dates as the Eastern Shore of Virginia Refuge's shotgun hunt for white-tailed deer. The late November/December dates occur after most Neotropical migrant birds have departed the area, thus ensuring disturbance is minimized. Additionally, research on Neotropical migrants takes place periodically on Fisherman Island during the migration season. The later hunt date will eliminate possible conflicts and safety issues between the two user groups.

Public Use Opportunities Fisherman Island Refuge



- Refuge Ownership
- Deer Hunt Zone
- Parking
- Existing Trail (guided tours only)
- Roads
- Hydrography

Data Sources:
 1:24,000 Hydrography & 1:100,000 Road data provided by USGS with source dates of 1981 & 1989. All other data provided by USFWS. Projection/Date: UTM Zone 18, NAD 27. 1989.
 Map prepared for the Eastern Shore of Virginia NWR & Fisherman Island NWR Comprehensive Conservation Plan by the RS Cartography & Spatial Data Services Section. March 2003.
 This map is for planning purposes only.

0 1000 2000 3000 4000 Feet



0 300 600 900 1200 Meters



Compatibility Determination

Use: Wildlife Observation, Wildlife Photography, Interpretation and Environmental Education

Refuge Name: Fisherman Island National Wildlife Refuge

Establishing and Acquisition Authority(ies): Fisherman Island National Wildlife Refuge (Fisherman Island Refuge) was established under 16 U.S. Code 667b, Public Law 80-537, an Act authorizing the transfer of certain real property for wildlife, or other purposes. An additional parcel of land on the island was acquired under the Migratory Bird Conservation Act, 16 U.S.C. 715d.

Refuge Purpose(s):..... 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, or other purposes)
..... for use as an inviolate sanctuary, or for any other management purpose, for migratory birds..... 16 U.S.C. 715d (Migratory Bird Conservation Act)

National Wildlife Refuge System Mission: 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(s):

A. What is the use? Is the use a priority use?

The uses are wildlife observation, wildlife photography, interpretation and environmental education. These uses are priority public uses, as identified in the National Wildlife Refuge Improvement Act (USFWS 1997).

B. Where would the use be conducted?

There is a 1.5 mile unimproved trail on Fisherman Island National Wildlife Refuge that goes from the parking area by the Chesapeake Bay Bridge Tunnel (Bridge-Tunnel) to the Chesapeake Bay. The staff at the Eastern Shore of Virginia National Wildlife Refuge (Eastern Shore of Virginia Refuge) conducts educational programs and guided interpretive walks on Fisherman Island Refuge from October 1 to March 15. Visitors learn about the U.S. Fish and Wildlife Service (Service) and the important role Fisherman Island Refuge plays in wildlife protection. Wildlife observation is the primary activity on the refuge. A small percentage of visitors who participate in wildlife observation are also interested in photographing wildlife.

C. When would the use be conducted?

All uses will be conducted within regular refuge hours, which are a half-hour before sunrise to a half-hour after sunset.

D. How would the use be conducted?

As determined in the CCP we will continue with the above uses. There will be no additional opportunities for wildlife observation and photography, environmental education or interpretation on the refuge.

E. Why is the use being proposed?

Wildlife observation, wildlife photography, environmental education, and interpretation are priority public uses as defined by 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), and if compatible, are to receive

enhanced consideration over other general public uses.

Availability of Resources: Because we are not expanding opportunities for wildlife observation and photography, environmental education or interpretation, no additional refuge resources will be required.

Anticipated Impacts of the Use: The four uses will provide visitors with a unique opportunity to observe wildlife and learn about the critical habitat we manage on the refuge.

Visitor use on Fisherman Island Refuge could potentially disturb colonial and beach nesting birds. Visitors could also trample sensitive beach vegetation and cause damage to beach dunes. Walking on the trail and beach tends to displace birds that are close to those areas.

Public Review and Comments: As part of the Comprehensive Conservation Plan (CCP) process for Eastern Shore of Virginia and Fisherman Island Refuges, this compatibility determination has undergone extensive public review, including a comment period of 45 days following the release of the Draft Comprehensive Conservation Plan/Environmental Assessment (Draft CCP/EA).

Determination (check below):

Use is Not Compatibility

Use is Compatible With Following Stipulations

Stipulations necessary to ensure compatibility: To limit disturbance to colonial and beach nesting birds during the migrating and breeding seasons, we will not allow visitors on Fisherman Island Refuge between March 30 and October 15. When visitors are allowed, they will be escorted by a guide and will be restricted to the road to prevent trampling of sensitive vegetation.

Closing the refuge to public use from March 15 to September 30 has an insignificant effect on the local economy. Most of the visitors who participate in guided refuge tours do not stay overnight. Visitors may eat at local restaurants before or after visiting the refuge, so restaurants could gain if tours of the refuge were held all year round.

Justification: 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. Environmental education, interpretation, wildlife observation and photography are identified in the National Wildlife Refuge System Improvement Act of 1997 as priority public uses. These activities will not materially interfere with or detract from the fulfillment of the National Wildlife Refuge System mission or the purposes of the refuge.

Signature: Refuge Manager: Susan M. Rice
(Signature and Date)

Concurrence: Regional Chief: Anthony J. Legler
(Signature and Date)

Mandatory 15-year Re-evaluation Date: 5/26/2019

Compatibility Determination

Use: This interim compatibility determination covers priority, wildlife-dependent public uses (environmental education, interpretation, wildlife observation, photography, hunting and fishing) on lands designed for acquisition.

Refuge Name: Eastern Shore of Virginia National Wildlife Refuge

Establishing and Acquisition Authority(ies): Eastern Shore of Virginia National Wildlife Refuge (Eastern Shore of Virginia Refuge) was established under 16 U.S. Code 667b, Public Law 80-537, an Act authorizing the transfer of certain real property for wildlife, or other purposes. Additional parcels of land were acquired under the Migratory Bird Conservation Act, 16 U.S.C. 715d.

Refuge Purpose(s): 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, or other purposes)

..... 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 (Refuge Recreation Act)

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

National Wildlife Refuge System Mission: 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(s):

A. What is the use? Is the use a priority use?

The uses are environmental education, interpretation, wildlife observation, photography, hunting and fishing. These uses are priority public uses, as identified in the National Wildlife Refuge Improvement Act (USFWS 1997).

B. Where would the use be conducted?

The parcels identified in the Land Protection Plan (Appendix E) for Eastern Shore of Virginia Refuge, identify areas where the Service will seek to acquire land from willing sellers. Levels of current wildlife-dependent public use are not known for most of these areas. Since most of the parcels are in private ownership, we assume low to moderate levels of existing public use.

We have identified individual tracts of land for acquisition; however, without conducting some baseline resource inventories of these lands, it is difficult to determine which lands will be best able to support wildlife-dependent recreational uses. In general, we will allow wildlife observation, photography, interpretation and environmental education wherever these activities will least affect Neotropical

migratory bird populations and endangered species. We estimate there will be at least one but no more than two trails each on the Chesapeake Bay southern tip and seaside tracts of the designated land acquisition area. If and when we acquire parcels adjacent to Kiptopeke State Park, we will work with the Park to establish a trail and other connections to give visitors a larger area on which to engage in wildlife-dependent recreational uses.

When we acquire parcels along the Chesapeake Bay, we may open those areas to shoreline fishing and possibly other wildlife-dependent public uses.

C. When would the use be conducted?

All uses will be conducted within regular refuge hours, which are a half-hour before sunrise to a half-hour after sunset. Hunting will be offered within legal hunting hours.

D. How would the use be conducted?

We will allow deer and small game hunting on lands to be acquired provided there will be minimal disturbance to Neotropical migratory species. Deer and small game hunting will fall within the parameters of the State hunting seasons and will generally be permitted on forested tracts measuring 75 acres or more in size.

We will allow waterfowl hunting on any marsh blocks we acquire that are 200 acres or larger. Our waterfowl hunt season will fall within the parameters of the State waterfowl season.

Finally, we will partner with Northampton County and with local municipalities to help support local community fishing and hunting events.

E. Why is the use being proposed?

Hunting, fishing, wildlife observation, wildlife photography, environmental education, and interpretation are priority public uses as defined by 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), and if compatible, are to receive enhanced consideration over other general public uses.

Availability of Resources: No refuge resources will be devoted to interim public uses. Expenditures for the improvement of public use opportunities will be identified as projects in an updated Public Use Plan and in the Refuge Operating Needs System (RONS).

Before interim uses will be allowed under this compatibility determination, properties acquired will be posted. Posting will occur regardless of the potential for wildlife-dependent public uses at a site.

Anticipated Impacts on Service Lands, Waters or Interest: Within the designated acquisition areas, current levels of use are not known for the six priority wildlife-dependent uses defined in the National Wildlife Refuge System Improvement Act of 1997 (i.e., hunting, fishing, wildlife observation and photography, environmental education and interpretation). Impacts of such uses are expected to be minimal, provided the uses are only allowed in accordance with the stipulations listed below.

Some research suggests human intrusion in wildlife habitats, such as walking on trails, can cause disturbance to wildlife. One example is a study (Gutzwiller et al., 1997) that showed human intrusion influences avian singing behavior in some species. During breeding season, the seasonal timing of male song affects the timing of territory establishments, male attraction, pair formation, egg laying, and transmission of information about breeding songs to young (Gutzwiller, et al., 1997). Therefore, if human intrusion affects singing, it could ultimately affect reproduction and survival of some species. Another study (Riffell et al., 1996) suggests that when repeated human intrusion recurs over an extended period of time, impacts on avian reproductive fitness have the potential to accumulate temporally at the individual,

population and community levels. However, the refuge's main role in the life cycle of avian species is not during breeding but rather during migration.

Some wildlife disturbance and trampling of vegetation will occur from deer, small game and waterfowl hunting, as hunters walk around in designated areas. Shotgun noise from game and waterfowl hunting will cause some wildlife disturbance. Hunting can also cause conflict with other wildlife-dependent recreational uses such as wildlife observation and photography.

Opening land to public use can often result in litter, vandalism, and other illegal activities on Refuge lands.

Public Review and Comments: As part of the Comprehensive Conservation Plan (CCP) process for Eastern Shore of Virginia Refuge, this compatibility determination has undergone extensive public review, including a comment period of 45 days following the release of the Draft CCP/EA.

Determination (check below):

Use is Not Compatible

Use is Compatible With Following Stipulations

Stipulations to ensure compatibility: Public use areas will be monitored at various times of the year to assess wildlife disturbance. We will include information about proper etiquette and the effects of human impacts on habitat and wildlife resources in refuge publications and flyers. Periodic law enforcement will ensure compliance with regulations and area closures, and will discourage vandalism.

To limit wildlife disturbance caused by human intrusion, we will limit access on some trails during the fall migration period to protect feeding and resting habitat for migratory birds. During this time, we will offer only guided tours or we may close trails for certain periods of time. All other times of the year, trails will be open to visitors during normal refuge hours.

We will only open shoreline areas of Chesapeake Bay properties to public use if we find there are no tiger beetles present. If tiger beetles are found, we will survey the population, just as we plan to survey the population on the southern tip beach. Depending on what we learn about the population, we may allow seasonal use of the shoreline during the winter months, since tiger beetles are known to be able to withstand a moderate amount of public use.

To minimize disturbance to Neotropical migratory species, we will permit small game hunting only after the major migration period (after December 1), and we will not allow pursuit dogs. All areas will be posted and monitored for disturbance.

We will minimize conflicts between hunters and other users by hunting later in the season, when many of the prime photography and wildlife observation opportunities have past.

We will ensure resource protection and visitor safety on lands to be acquired by hiring law enforcement personnel to patrol areas and educate people about appropriate activities on refuge lands.

Justification: 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. Hunting, fishing, environmental education, interpretation, wildlife observation and photography are identified in the National Wildlife Refuge System Improvement Act of 1997 as priority public uses. These activities can be accomplished without conflicting with the primary mission of Eastern Shore of Virginia Refuge. These activities will not materially interfere with or detract from the fulfillment of the National Wildlife Refuge System mission or the purposes of the refuge.

Signature: Refuge Manager: Susan M. Price
(Signature and Date)

Concurrence: Regional Chief: Anthony D. Legler
(Signature and Date)

Mandatory 15-year Re-evaluation Date: 5/26/2019

References

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Gutzwiller, Kevin J., Elizabeth A. Kroese, Stanley H. Anderson, and Charles A. Wilkins. 1997. Does human intrusion alter the seasonal timing of avian song during breeding periods? *The Auk*. 114(1):55-65.

Riffell, Samuel K., Kevin J. Gutzwiller, and Stanley H. Anderson. 1996. Does repeated human intrusion cause cumulative declines in avian richness and abundance? *Ecological Applications*. 6(2), pp. 492-505.

U.S. Fish and Wildlife Service. May 1988. North American Waterfowl Management Plan: Atlantic Coast Joint Venture. 106 pp.

U.S. Fish and Wildlife Service. 1997 National Wildlife Refuge Improvement Act 1997. Public Law 105-57- Oct. 9, 1997.

Compatibility Determination

Use: Research conducted by non-Service personnel

Refuge Name: Eastern Shore of Virginia National Wildlife Refuge

Establishing and Acquisition Authorities: The Eastern Shore of Virginia National Wildlife Refuge, located in Northampton County, Virginia, was established in August 1984, by an Act Authorizing the Transfer of Certain Real Property for Wildlife, or other purposes (16 U.S.C. 667b-667d), as amended, and Lands acquired under the Refuge Recreation Act (16 U.S.C. 460k-460k-4) as amended, for one or more of the following purposes: “...(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.

Refuge Purpose(s): “... 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, or other purposes)

“... 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 (Refuge Recreation Act)

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

National Wildlife Refuge System Mission: The mission of the National Wildlife 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(s):

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

The use is research conducted by non-Service personnel. Research conducted by non-Service personnel is not a priority public use of the Refuge System.

(b) Where would the use be conducted?

The location of the research will vary depending on the individual research project that is being conducted. The entire refuge is open and available for scientific research. An individual research project is usually limited to a particular 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 of the research project.

(c) When would the use be conducted?

The timing of the research will depend on the individual research project that is being conducted. Scientific research will be allowed to occur throughout the year. An individual research project could be short term in design, requiring one or two visits over the course of a few days. Other research projects could be multiple year studies that require daily visits to the study site. The timing of 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 public health and safety.

(d) How would the use be conducted?

The mechanics of the research will depend on the individual research project that is conducted. The methods of each research project will be scrutinized before it will be allowed to occur. No research project will be allowed to occur if it does not have an approved scientific method or if it compromises public health and safety.

(e) Why is this use being proposed?

Research by non-Service personnel is conducted by colleges, universities, Federal, State, and local agencies, non-governmental organizations, and qualified members of the general public to further the understanding of the natural environment and to improve the management of the refuge's natural resources. Much of the information generated by the research is applicable to management on and near the refuge. Most research projects on the Eastern Shore of Virginia focus on avian migration. For example, researchers from the Center for Conservation Biology (CCB), affiliated with the College of William and Mary, have been mist netting saw-whet owls during fall migration for almost 10 years in order to study migration ecology and winter distribution of these birds. Another researcher from CCB has been banding raptors during fall migration for more than 20 years. This project has been looking at the concentration of flight paths of migrating raptors at the tip of the Delmarva Peninsula. The peregrine falcon is one of the project's focus species.

Researchers from the Coastal Virginia Wildlife Observatory (CVWO), a non-governmental organization, conducted a spring banding project of Neotropical migrants from 1999 through 2002. The main purpose was to determine migration ecology of this suite of birds. CVWO has also conducted butterfly and skipper surveys since 1995. Beginning in 1998, researchers also began tagging migrating monarch butterflies to learn about the migration ecology of these insects.

The Service will encourage and support research and management studies on refuge lands that will improve and strengthen natural resource management decisions. The refuge manager will encourage and seek research relative to approved refuge objectives that clearly improves land management and promotes adaptive management. Priority research addresses information that will better manage the Nation's biological resources and are generally considered important to: agencies of the Department of Interior, the U.S. Fish and Wildlife Service, the National Wildlife Refuge System, and State Fish and Game agencies; and that address important management issues or demonstrate techniques for management of species and/or habitats.

The refuge will also consider research for other purposes which may not be directly related to refuge-specific objectives, but contribute to the broader enhancement, protection, use, preservation and management of native populations of fish, wildlife and plants, and their natural diversity within the region or flyway. These proposals must comply with the Service's compatibility policy.

The refuge will maintain a list of research needs that will be provided to prospective researchers or organizations upon request. Refuge support of research directly related to refuge objectives may take the form of funding, in-kind services such as housing or use of other facilities, 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.

Availability of Resources: The bulk of the cost for research is incurred in staff time to review research proposals, coordinate with researchers and write Special Use Permits. In some cases, a research project may only require one day of staff time. In other cases, a research project may take an accumulation of weeks, as the Refuge biologist must coordinate with students and advisors and accompany researchers on

site visits. The Refuge biologist spends an average of seven weeks a year working full time on research projects conducted by outside researchers on both Fisherman Island and Eastern Shore of Virginia Refuges. At an hourly wage of approximately \$25 (for a GS-11), this adds up to about \$7,000 annually for resources spent on outside research for both refuges combined.

Anticipated Impacts of the Use: The Service encourages approved research to further the understanding of natural resources. Research by other than Service personnel adds greatly to the information base for Refuge Managers to make proper decisions. Disturbance to wildlife and vegetation by researchers could occur through observation, mist-netting, banding, and accessing the study area by foot or vehicle. It is possible that direct mortality could result as a by-product of research activities. Mist-netting saw-whet owls, for example, can cause stress, especially when birds are captured, banded and weighed. There have been occasional mortalities to these birds, namely when predators such as raccoons and cats reach the netted birds before researchers do. Occasionally, a raptor has been injured during capture.

Overall, however, allowing research to be conducted by non-Service personnel will have very little impact on Service interests. If the research is conducted with professionalism and integrity, potential adverse impacts far outweigh the knowledge gained.

Public Review and Comment: As part of the CCP process for Eastern Shore of Virginia and Fisherman Island NWRs this compatibility determination has undergone extensive public review, including a comment period of 45 days following the release of the Draft CCP/EA.

Determination (check one below):

Use is Not Compatible

Use is Compatible With Following Stipulations

Stipulations necessary to ensure compatibility: All researchers will be required to submit a detailed research proposal following Service Policy (FWS Refuge Manual Chapter 4 Section 6). The refuge must be given at least 45 days to review proposals before initiation of research. If collection of wildlife is involved, the refuge must be given 60 days to review the proposal. Proposals will be prioritized and approved based on need, benefit, compatibility, and funding required.

Special Use Permits (SUP) will be issued for all research conducted by non-Service personnel. The SUP will list all conditions that are necessary to ensure compatibility. The Special Use Permits will also identify a schedule for annual progress reports and the submittal of a final report.

The Regional refuge biologists, other Service Divisions, and State agencies will be asked to review and comment on complex proposals.

All researchers will be required to obtain appropriate State and Federal permits.

Researchers will be required to take certain precautions aimed at avoiding incidental take or injury of any animals. For example, if an owl caught in a mist net is taken by a predator, the net will be closed until the predator is found, trapped and removed. If a raptor injury occurs during banding, the bird will be taken to a vet and the operation will be temporarily shut down.

Justification: The Service encourages approved research to further understanding of refuge natural resources. Research by non- Service personnel adds greatly to the information base for Refuge Managers to make proper

Compatibility Determination

Use: Research conducted by non-Service personnel

Refuge Name: Fisherman Island National Wildlife Refuge

Establishing and Acquisition Authority: Fisherman Island National Wildlife Refuge was established under 16 U.S. Code 667b, Public Law 80-537, an Act authorizing the transfer of certain real property for wildlife, or other purposes. An additional parcel of land on the island was acquired under the Migratory Bird Conservation Act, 16 U.S.C. 715d.

Refuge Purpose(s): 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, or other purposes).

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

National Wildlife Refuge System Mission: The mission of the National Wildlife 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(s):

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

The use is research conducted by non-Service personnel. Research conducted by non-Service personnel is not a priority public use of the Refuge System.

(b) Where would the use be conducted?

The location of the research will vary depending on the individual research project that is being conducted. The entire refuge is open and available for scientific research. An individual research project is usually limited to a particular 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 only those areas that are necessary to conduct the research.

(c) When would the use be conducted?

The timing of the research will depend on the individual research project that is being conducted. Scientific research will be allowed to occur throughout the year. An individual research project could be shortterm in design, requiring one or two visits over the course of a few days. Other research projects could be multiple year studies that require daily visits to the study site. The timing of each research project will be limited to the minimum required to complete the project. If the refuge is opened to hunting, special precautions will be required to ensure public health and safety during the hunt season.

(d) How would the use be conducted?

The mechanics of the research will depend on the individual research. The methods of each research project will be scrutinized well before it will be allowed to occur. No research project will be allowed to occur if it does not have an approved scientific method or if it compromises public health and safety.

(e) Why is this use being proposed?

Research by non-Service personnel is conducted by colleges, universities, Federal, State, and local agencies, non-governmental organizations, and qualified members of the general public to further the understanding of the natural environment and to improve the management of the refuge's natural resources. Much of the information generated by the research is applicable to management on and near the refuge. Most research projects on Fisherman Island study shoreline dynamics and geology, migrating birds, and colonial and beach nesting birds. For example, research on shoreline and landscape dynamics of Fisherman Island has been used to determine the origin and development of the island. A student from the College of William and Mary has been monitoring the productivity of American oystercatchers, and has banded the chicks to determine wintering migration distribution.

A group of volunteer researchers has conducted colonial waterbird surveys in mid-June on all the Virginia barrier islands, including Fisherman Island, for 30 years, to discover trends associated with these birds. Another researcher has been studying water resources and vegetation patterns on Fisherman Island.

The Service will encourage and support research and management studies on refuge lands that will improve and strengthen natural resource management decisions. The refuge manager will encourage and seek research relative to approved refuge objectives that clearly improves land management and promotes adaptive management. Priority research addresses information that will better manage the Nation's biological resources and are generally considered important to: agencies of the Department of Interior, the U.S. Fish and Wildlife Service, the National Wildlife Refuge System, and State Fish and Game agencies, and that address important management issues or demonstrate techniques for management of species and/or habitats.

The refuge will also consider research for other purposes which may not be directly related to refuge-specific objectives, but contributes to the broader enhancement, protection, use, preservation and management of native populations of fish, wildlife and plants, and their natural diversity within the region or flyway. These proposals must comply with the Service's compatibility policy.

The refuge will maintain a list of research needs that will be provided to prospective researchers or organizations upon request. Refuge support of research directly related to refuge objectives may take the form of funding, in-kind services such as housing or use of other facilities, 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.

Availability of Resources: The bulk of the cost for research is incurred in staff time to review research proposals, coordinate with researchers and write Special Use Permits. In some cases, a research project may only require one day of staff time to review proposal and write a Special Use Permit. In other cases, a research project may take an accumulation of weeks, as the Refuge biologist must coordinate with students and advisors and accompany researchers on site visits. The Refuge biologist spends an average of seven weeks a year working full time on research projects conducted by outside researchers on both Fisherman Island and Eastern Shore of Virginia Refuges. At an hourly wage of approximately \$25 (for a GS-11), this totals \$7,000 annually for resources spent on outside research for both refuges combined.

Anticipated Impacts of the Use: The Service encourages approved research to further the understanding of natural resources. Research by other than Service personnel adds greatly to the information base for Refuge Managers to make proper decisions. Disturbance to wildlife and vegetation by researchers could occur through observation, banding, and accessing the study area by foot or vehicle. It is possible that direct mortality could result as a by-product of research activities. For example, royal tern chick mortalities have occurred during banding. Mortalities have also occurred when gulls preyed on chicks returning to their nest after being banded.

There have been no known mortalities in the American oystercatcher colony due to researcher presence. However, these birds are easily disturbed and will readily fly off their nest when a researcher approaches. Nest abandonment can leave eggs or chicks vulnerable to heat or predators.

Overall, however, allowing research to be conducted by non-Service personnel will have little impact on Service interests. If the research project is conducted with professionalism and integrity, potential adverse impacts far outweigh the knowledge gained.

Public Review and Comment: As part of the CCP process for Eastern Shore of Virginia and Fisherman Island NWRs this compatibility determination has undergone extensive public review, including a comment period of 45 days following the release of the Draft CCP/EA.

Determination (check one below):

Use is Not Compatible

Use is Compatible With Following Stipulations

Stipulations Necessary to Ensure Compatibility: All researchers will be required to submit a detailed research proposal following Service Policy (FWS Refuge Manual Chapter 4 Section 6). The refuge must be given at least 45 days to review proposals before initiation of research. If collection of wildlife is involved, the refuge must be given 60 days to review the proposal. Proposals will be prioritized and approved based on need, benefit, compatibility, and funding required.

Special Use Permits (SUP) will be issued for all research conducted by non-Service personnel. The SUP will list all conditions that are necessary to ensure compatibility. The Special Use Permits will also identify a schedule for annual progress reports and the submittal of a final report.

Regional refuge biologists, other Service Divisions, and State agencies may be asked to review and comment on complex proposals.

All researchers will be required to obtain appropriate State and Federal permits.

Research that involves banding birds will be conducted early in the day to avoid heat stress to chicks and eggs. Researchers will minimize the number of times they visit a bird colony to minimize nest abandonment. In the case where a large number of birds are banded at once, the researcher will be required to recruit a group of trained volunteers to ensure the banding goes quickly.

