

## Appendix B



Mark Wilson/USFWS

*American black duck*

## **Findings of Appropriateness and Compatibility Determinations**

## **COMPATIBILITY DETERMINATION**

**USE:** Wildlife Observation, Wildlife Photography, Interpretation, and Environmental Education  
Compatibility Determination

**STATION NAME:** Eastern Neck National Wildlife Refuge (Chesapeake Marshlands  
NWR Complex)

### **ESTABLISHING AND ACQUISITION AUTHORITIES:**

The Chesapeake Marshlands National Wildlife Refuge Complex (CMNWRC) is composed of four nationally significant wildlife areas: Eastern Neck NWR, Blackwater NWR, Martin NWR, and Susquehanna NWR with several separate divisions.

Eastern Neck NWR was established by executive order on December 27, 1962, under the Migratory Bird Conservation Act (MBCA) (16 U.S.C. 715 d) “for use as an inviolate sanctuary, or for any other management purpose, for migratory birds.” Additional tracts were acquired through 1966 under the MBCA authority to bring the refuge to its approved acquisition boundary containing 2,286 acres. By virtue of its strategic location at the confluence of the Chester River and the Chesapeake Bay, it is of significant value to migrating and wintering waterfowl on Maryland’s Upper Eastern Shore.

### **REFUGE PURPOSE(S):**

All tracts were acquired under the authority of the Migratory Bird Conservation Act (16 U.S.C. 715 d), the purpose of the acquisition is “...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds.”

### **NATIONAL WILDLIFE REFUGE SYSTEM MISSION:**

“To administer a national network of land and waters for the conservation, management, and where appropriate, the 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 (National Wildlife Refuge System Improvement Act of 1997, Public Law 105-57).”

### **DESCRIPTION OF USE:**

This evaluation is to determine the compatibility of Wildlife Observation, Wildlife Photography, Interpretation, and Environmental Education with the purposes for which the affected tracts were acquired.

#### **(A) What is the use? Is the use a priority use?**

The use is wildlife observation, wildlife photography, interpretation, and environmental education. These uses include special events such as the owl prowls, waterfowl watch, and the big sit. Expansion of these programs may include holding special events in support of International Migratory Bird Day, National Wildlife Refuge Week, or Earth Day. The National Wildlife

Refuge System Improvement Act of 1997 identified wildlife observation, wildlife photography, interpretation, and environmental education as four of the six, priority, wildlife-dependent recreational uses to be facilitated in the Refuge System. The Act encouraged the Service to provide opportunities for these uses when found compatible with the purposes for which the refuge was established.

**(B) Where would the use be conducted?**

Wildlife observation, wildlife photography, and interpretation would be conducted on the Tundra Swan Boardwalk, Visitor Contact Station at Refuge Headquarters with access to Tidal Marsh Trail and observation blind, Bayview Butterfly observation platform, Bayview Trail with observation blind, Bayscape Garden and Trail, Wildlife Trail with observation blind, Duck Inn Trail, Boxes Point Trail, Ingleside Recreation Area, Bogles Wharf, and Wickes historic site. Opportunities for wildlife observation and wildlife photography also exist along county roads passing through the refuge, as well as gravel access roads throughout the refuge and around the refuge via the watertrail. Environmental Education would be conducted primarily at Ingleside Recreation Area, shoreline restoration sites, and Tubby Cove Boardwalk and platform. Special events may be held at a variety of locations on the refuge.

**(C) When would the use be conducted?**

These uses would be conducted daily, year-round from sunrise to sunset. Ingleside Recreation Area would be open from sunrise to sunset from April 1 through September 30. Special Events would have specific dates and times. These uses would be specifically regulated or closed during times of refuge management activities where safety is a concern. Occasionally permits would be issued to allow use after normal hours and other special uses.

**(D) How would the use be conducted?**

Wildlife observation, wildlife photography, and interpretation would be conducted through self-guided or partner-guided means. Access to trails is limited to foot traffic. Vehicle and bicycle traffic is restricted to designated roads. Any access to closed areas for these activities would require a permit from the refuge manager. Environmental education for teachers and/or students would be self-guided or partner-guided activities. Staff involvement would be limited to a general orientation about the refuge, the National Wildlife Refuge System and U.S. Fish and Wildlife System. Volunteers would also assist in conducting these uses. Visitor Contact Station conference room would be available for meetings and classroom needs.

**(E) Why is the use being proposed?**

These uses would be conducted to provide compatible educational and wildlife-dependent recreational opportunities for visitors to enjoy the resource and to gain understanding and appreciation for natural resource conservation, Eastern Neck NWR, and the National Wildlife Refuge fish and wildlife.

The Kent County School District has curriculum requirements that include field trips to the refuge for every fourth-grade student. The use of environmental education would allow the school district to continue to provide a natural setting for their curriculum needs. U.S. Fish and Wildlife policy

gives guidelines for environmental education that range from connecting people’s lives to the natural world, to strengthening conservation literacy and knowledge, to stressing the role of the Refuge System in conservation , and finally to instilling a sense of stewardship and understanding of our conservation history.

These uses would not only allow us to follow the guidelines, but also would give partners and volunteers opportunities to enjoy the refuge while assisting others. The authorization of these uses would produce a more informed public, and advocates for Service programs. Likewise, these uses would 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.

Photographers will also be provided opportunities to photograph wildlife in their natural habitats. These uses would also provide wholesome, safe, outdoor recreation 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 public use program, and can then become advocates for the refuge, the Refuge System, and the Service.

**Availability of Resources:**

The National Aquarium in Baltimore provides staff and grant funding for annual school group visits. They are assisted by the Friends of Blackwater and other refuge volunteers. Maryland Department of Natural Resources and Kent County coordinate with Kent County schools to bring fourth graders to the refuge each year for environmental education programs.

Other resources include: a Visitor Contact Station, conference room, outside restrooms at Visitor Contact Station and Tubby Cove, Cape Chester House (for volunteer and partner housing), trails and other facilities, kiosks, signs, and brochures. A portion of the funds needed to maintain the four priority uses is in the form of salaries to maintain the trails, to provide protection and monitoring, maintenance materials, updating of interpretation and outreach information, and on-going interaction between partners and refuge staff. A Visitor Services Specialist, a Maintenance Worker GS-8, and a new Wildlife Refuge Specialist, would administer, maintain, and monitor the program. Law Enforcement would be provided by the Chesapeake Marshlands NWR Complex Law Enforcement Officer. Routine and emergency maintenance of County roads (Eastern Neck and Bogle’s Wharf Roads) would be provided by Kent County personnel.

**Cost Breakdown:**

The following is a breakdown of annual operating costs for the program:

Service Staffing Costs

Visitor Services Specialist GS-0025-7 .....	\$14,175
Maintenance staff.....	\$25,000
Wildlife Refuge Specialist.....	\$16,575
Law Enforcement with support cost.....	\$920
Total .....	\$56,670

Facility and Equipment Costs

2 Kiosks with interpretive panels and bulletin cases. . . . .	15,000
Resurface and re-curb Bayview Butterfly Trail. . . . .	\$10,000
Informational signs . . . . .	\$1,500
Brochures –fishing, trails, butterfly, historical & cultural resources . . . . .	\$8,000
General refuge brochure . . . . .	<u>\$4,000</u>
Total . . . . .	\$38,500

**Anticipated Impacts on Refuge Purpose(s):**

The following is a summary of the environmental, socioeconomic, and cultural/historical impacts of these programs as more thoroughly described in the Environmental Assessment prepared for the Eastern Neck NWR Comprehensive Conservation Plan of which this document is an attachment.

Wildlife observation, photography, interpretation, and environmental education can affect the wildlife resource positively or negatively. A positive effect of public involvement in these priority public uses will be a better appreciation and more complete understanding of the refuge wildlife and habitats. That can translate into more widespread, stronger support for Eastern Neck Refuge, the Refuge System and the Service. Pedestrian travel (walking and biking) has the potential of impacting waterfowl, marshbirds and other migratory bird populations feeding and resting near the trails and on beaches during certain times of the year. Use of upland trails is more likely to impact songbirds than other migratory birds.

*Short-term impacts:* Short-term impacts have an immediate effect on wildlife. The refuge priority uses being evaluated may impose minor negative impacts on specific station physical resources such as trails and roads, and on natural resources such as vegetation and wildlife. Impacts may include erosion, deterioration, trampling, and temporary disturbance. Wildlife disturbances typically results in a temporary displacement without long-term effects on individuals or populations. Some species will avoid the areas people frequent, such as the developed trails and the buildings, while others seem unaffected by or even drawn to the presence of humans. Increased visitation and increased opportunities for consumptive and non-consumptive uses would also increase the likelihood of damage or disturbance of cultural and historic resources on the refuge. However, those effects should not be significant, since almost all public uses described herein occur in specific footprints on the refuge, such as refuge trails.

*Long-term impacts:* Long term impacts are anticipated to be minimal since only certain areas are open to the public, and sensitive areas, such as bald eagle nesting sites, will be closed as needed. An indirect long term impact is the potential for visitors to unintentionally introduce and/or spread invasive species. Once established, invasive plants can out-compete native plants, thereby altering habitats and impacting wildlife. The threat of invasive plant establishment will always be an issue, and will require annual monitoring, treatment and public education.

*Cumulative impacts:* Impacts may be minor when we consider them alone, but may become important when we consider them collectively. Our principal concern is repeated disruptions of nesting, resting, or foraging birds.

Our knowledge and observations of the affected areas show no evidence that these four, priority, wildlife dependent uses cumulatively will adversely affect the wildlife resource. We also have not observed significant resource degradation, long-term consequences, or cumulative effects on any of the refuges with established programs. However, opening refuge lands to public use can often result in littering, vandalism, or other illegal activities on the refuges. Although we do not expect substantial cumulative impact from these four priority uses in the near term, it will be important for refuge staff to monitor those uses and, if necessary, respond to conserve high-quality wildlife resources.

Refuge staff, in collaboration with volunteers, will monitor and evaluate the effects of these priorities public uses to discern and respond to any unacceptable impacts on wildlife or habitats. To mitigate those impacts, the refuge will close areas where such birds as eagles are nesting.

### **Public Review and Comment:**

This compatibility determination will be submitted for public review and comment as an appendices to the Environmental Assessment for the Draft Comprehensive Conservation Plan for the Eastern Neck NWR in full compliance with NEPA.

### **Determination:**

Use is Not Compatible

Use is Compatible With the Following Stipulations

### **Stipulations Necessary to Ensure Compatibility:**

- We will permit these four priority uses at Ingleside Recreation Area only from April 1 through September 30
- We will install signs for visitor information, safety, and resource protection.
- We will conduct an outreach program to promote public awareness and compliance with public use regulations.
- Off-trail use or use during a refuge's closed hours requires a special use permit unless the activity is in conjunction with a Refuge staff- or volunteer-led program.
- Certain areas on refuges may be closed to public access at any time at the Refuge Manager's discretion to protect sensitive habitats, species of concern, minimize conflicts with other refuge activities, or due to human health and safety concerns
- We will conduct baseline inventories of the physical condition of the shoreline, beaches and trail systems biannually to monitor how pedestrian use affects plant life. Use any changes in physical conditions to identify any management interventions required to protect refuge resources.

- We will conduct biological inventories to provide baseline information for measuring change. If monitoring and evaluation of the use indicate that compatibility criteria are being exceeded, take appropriate action to restore compatibility, including modifying or discontinuing the use.
  
- We will conduct routine law enforcement patrols throughout the year. The patrols will promote compliance with refuge regulations, monitor public use patterns and public safety, and document visitor interaction. The patrols will record visitor numbers, visitor activities, and activity locations to document current and future levels of refuge use.

**Justification:**

The National Wildlife Refuge System Improvement Act of 1997 (Pub. L. 105–57) identifies six legitimate and appropriate uses of wildlife refuges: hunting, fishing, wildlife observation and photography, and environmental education and interpretation. Where these uses have been determined compatible, they are to receive enhanced consideration over other uses in planning and management.

We have determined four of the six priority wildlife dependent uses to be compatible at their current levels and under the stipulations listed above. Under those conditions, we do not expect them to materially interfere with or detract from the mission of the System or diminish the purposes for which the refuges were established.

**Signature:** Refuge Manager: \_\_\_\_\_  
(Signature and Date)

**Concurrence:** Regional Chief: \_\_\_\_\_  
(Signature and Date)

**Mandatory 15-year Reevaluation Date:** \_\_\_\_\_

## COMPATIBILITY DETERMINATION

**USE:** Big Game Hunting Compatibility Determination

**STATION NAME:** Eastern Neck National Wildlife Refuge (Chesapeake Marshlands NWR Complex)

### **ESTABLISHING AND ACQUISITION AUTHORITIES:**

The Chesapeake Marshlands National Wildlife Refuge Complex (CMNWRC) is composed of four nationally significant wildlife areas: Eastern Neck NWR, Blackwater NWR, Martin NWR, and Susquehanna NWR with several separate divisions.

Eastern Neck NWR was established by executive order on December 27, 1962, under the Migratory Bird Conservation Act (MBCA) (16 U.S.C. 715 d) “for use as an inviolate sanctuary, or for any other management purpose, for migratory birds.” Additional tracts were acquired through 1966 under the MBCA authority to bring the refuge to its approved acquisition boundary containing 2,286 acres. By virtue of its strategic location at the confluence of the Chester River and the Chesapeake Bay, it is of significant value to migrating and wintering waterfowl on Maryland’s Upper Eastern Shore.

### **REFUGE PURPOSE(S):**

All tracts were acquired under the authority of the Migratory Bird Conservation Act (16 U.S.C. § 715 d), the purpose of the acquisition is “...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds.”

### **NATIONAL WILDLIFE REFUGE SYSTEM MISSION:**

“To administer a national network of land and waters for the conservation, management, and where appropriate, the 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 (National Wildlife Refuge System Improvement Act of 1997, Public Law 105-57).”

### **DESCRIPTION OF USE:**

This evaluation is to determine the compatibility of white-tailed deer and Eastern wild turkey hunting with the purposes for which the affected tracts were acquired.

#### **(A) What is the Use? Is the use a priority use?**

The use is big game hunting for white-tailed deer and wild turkey. The National Wildlife Refuge System Administration Act of 1997 (Public Law 105-57), identified hunting as one of the six, priority, wildlife-dependent recreational uses to be facilitated in the refuge System, and the act encouraged the Service to provide opportunities for these uses when compatible with the purposes for which the refuge was established .

Deer hunting was a traditional use on Eastern Neck long before it became part of the National Wildlife Refuge System. When the refuge was established all hunting was halted. It soon became apparent that the ever increasing deer herd was having significant impacts on both upland plant communities and the amount of food crops available for waterfowl. In the beginning the refuge's cooperative farm was given permission to destroy depredating deer. To provide public hunting opportunities and assist with the crop depredation program the refuge public deer hunts were implemented. A limited spring turkey hunt was later coordinated with the National Wild Turkey Federation to provide additional hunting opportunities for youths.

**(B) Where would the use be conducted?**

Approximately, 1,900 acres of the refuge's 2,286 acres are used for deer hunting. Most deer hunting takes place in forested uplands and forested wetlands adjacent to farm fields. Some deer hunting occurs in the marshes surrounding the uplands.

Turkey hunting is conducted in four designated units on the refuge. The area open for turkey hunting is similar to that open for deer hunting. Each year an evaluation will be conducted prior the hunt to determine if portions of each hunt may be closed to protect sensitive natural resources

See attached Public Hunting Maps

**(C) When would the use be conducted?**

White-tailed deer hunting takes place in the fall between September and December. Currently, we provide one day of archery hunting, two days for muzzleloading hunting, two days for shotgun hunting, a youth hunt and a disabled hunt. Designated scouting days will also be identified. Hunting would be permitted one-half hour before sunrise to one-half hour after sunset.

Turkey hunting takes place in the spring during April and May. Hunting would be permitted one-half-hour before sunrise until 12:00 PM. A minimum of two half day hunts will be conducted during the spring season.

**(D) How would the use be conducted?**

During the deer and turkey hunts, hunters walk-in to the hunting areas from designated parking areas. Off-road vehicle use is prohibited except by disabled hunters by permit only. Hunting opportunities will be provided for 600 deer hunters annually on a on a first come, first served, by mail in basis. Deer hunting would take place approximately seven days each fall season. Opportunities will be provided for disabled, youth, archers, muzzleloader, and shotgun hunters. Hunting opportunities will be provided to a minimum of six youth turkey hunters annually. Turkey hunting opportunities would be provided for youth hunters ages 10 through 15. Many of the logistics would be similar to the deer hunts. In order to maintain a quality hunt, turkey hunting opportunities will be provided on a much more limited basis. A check station will be operated by volunteers and staff. All deer and turkey harvested must be checked out through the check

station. Administrative fees would be charged for applying for each deer hunt. Fees are used to hire a hunt program coordinator and to offset other hunt related expenses.

The refuge would evaluate the hunt program on an annual basis and make adjustments as needed. The program objectives would be to ensure a compatible, quality, safe, wildlife-dependent recreational hunting experience.

**(E) Why is the use being proposed?**

Providing hunting opportunities is one of the USFWS six priority wildlife-dependent public uses. Controlling deer numbers reduces depredation of crops provided for wintering waterfowl. Providing a youth turkey hunt give an opportunity to young hunters to learn more about our natural resources, Eastern Neck NWR, the National Wildlife Refuge System and the U.S. Fish and Wildlife Service. These hunts are designed to provide a quality, compatible, wildlife oriented experience.

**Availability of Resources:**

The majority of work related to running the deer hunt program is paid for by the Friends of Eastern Neck Refuge (FOEN). A hunt coordinator is hired by the FOEN. The Hunt Coordinator administers most aspects of the deer hunt program, responds to all questions and provide information to the public, process hunt applications and permits, conduct mailings; provides visitor assistance for the hunt programs, improves customer service, and makes a positive impression to customers and the public and otherwise assists hunters in following regulations and enjoying a good hunting experience. FOEN will continue to fund the annual publication of regulations, permit applications, maps, and leaflets. Any remaining revenue generated from the administrative process and permit application fees would be used to replace signs, provide materials to help maintain parking areas and roads.

The infrastructure (parking lots, signs, gates and hunter check station (trailer) and some equipment are already available at Eastern Neck NWR. Other needed equipment would be supplemented through the Chesapeake Marshlands NWR Complex hunt program. We will not need to procure, construct, or create any new facilities or infrastructure at this time. Refuge staff provides management assistance for maintain existing infrastructure, posting and assisting with check station operation. There should be only minimal administration and management costs for the government associated with management of the deer hunt.

The youth turkey hunt is administered by refuge staff in partnership with the Wild Turkey Federation. The administrative costs for this limited hunt are minimal and can be handled within current staffing and budget allocations.

**Cost Breakdown:**

The following is the list of annual costs the Refuge requires to administer and manage the big game hunt program.

Refuge Costs:

Posting/gate closing (9 days @ 2 hrs/day @ \$25/hr) . . . . .	\$450
Assisting with check station (9 days @ 3 hrs/day @ \$25/hr) . . . . .	\$675
Law enforcement (9 days @ 3 hrs/day @ \$25/hr) . . . . .	\$675
Fuel, travel, meals and lodging (9 days @ \$150/day). . . . .	\$1,350
 Total cost to refuge. . . . .	 \$3,150

**Anticipated Impacts on Refuge Purpose(s):**

The following is a summary of the environmental, socioeconomic, and cultural/historical impacts of the hunt programs. Impacts from these hunts are expected to be minimal on refuge resources other than other species of wildlife that are being hunted. Close monitoring of the impacts of these hunts have occurred over the last several years and have not been substantial.

*Short-term impacts:* Hunting activities may impose minor negative impacts on specific station physical resources such as trails and roads, and on natural resources such as vegetation and wildlife. Impacts may include erosion, deterioration, trampling, and temporary disturbance. Vehicles will be restricted to roads and parking areas, to minimize impacts to sensitive habitats. Wildlife disturbances typically results in a temporary displacement without long-term effects on individuals or populations. Impacts on waterfowl using the refuge will be minimal due to the timing of the hunts, and sensitive areas, such as bald eagle nesting sites, will be closed to access, if necessary.

Impacts on other public uses will be minimal. The refuge will be closed to non-permitted visitors during the twelve hunting days of the year. Allowing refuge hunts will stimulate the local economy by bringing in money from out of town hunters that will be staying in motels, eating in restaurants, buying gasoline and shopping locally.

Hunting could have some impact on cultural/historical resources. Eastern Neck has a rich cultural resource history and was used by Native Americans. The potential loss or damage of important sites increases by the presence of hunters in areas normally closed to the general public. This could lead to the potential disturbances and inadvertent discoveries and/or exposures of cultural resources.

*Long-term impacts:* Habitats subject to deer damage include refuge cropland, forest understory and shrub habitat that migratory and wintering waterfowl and migratory songbirds depend on for food resources. Controlled deer hunting helps keep the deer population within the carrying capacity of the habitat. Reduction in the deer herd reduces crop depredation leaving more crop resources for migratory and wintering waterfowl. Providing habitat and food resources for waterfowl is the primary purpose for the refuge. Additionally, heavily browsed vegetation leaves less food and cover habitat for neotropical migratory birds, another trust resource which the refuge is charged with protecting. Managing a public deer hunting program will help 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 and invertebrates.

An indirect long term impact is the potential for hunters to unintentionally introduce and/or spread invasive species. Once established, invasive plants can out-compete native plants, thereby altering

habitats and impacting wildlife. The threat of invasive plant establishment will always be an issue, and will require annual monitoring, treatment and hunter education.

*Cumulative impacts:* Impacts may be minor when we consider them alone, but may become important when we consider them collectively. Our principle concern is impacts to the refuge and state deer populations. Five of the refuge hunts occur before the corresponding State season, and deer move between the mainland and the refuge depending on hunting pressures. This allows the deer herd to more readily recover from the refuge and State season hunts. The deer herd on the mainland is monitored by the state. It will be important that the State continue annual monitoring and evaluate the effects of the refuge seasonal hunt on the mainland's deer population. Refuge staff will collaborate with the State, and apply adaptive management as needed.

Overall, cumulative impacts are expected to be minimal.

### **Public Review and Comment:**

This compatibility determination will be submitted for public review and comment as an appendices to the Environmental Assessment for the Draft Comprehensive Conservation Plan for the Eastern Neck NWR in full compliance with NEPA.

### **Determination: (Check One)**

Use is not Compatible

Use is Compatible with the Following Stipulations

### **Stipulations Necessary to Ensure Compatibility:**

Hunt program stipulations have been developed through many years of running hunt programs on refuges.

- Special regulations governing hunt programs will be codified in the Code of Federal Regulations, Title 50.
- Specific regulations will be highlighted in refuge hunt applications and brochures. Hunters are required to sign their permit acknowledging they have read all refuge regulations and agree to abide by them.
- Refuge managers and law enforcement personnel will be needed to continuously monitor hunt programs to ensure hunters are complying with regulations and that the hunt program is compatible with the purposes for which the refuge was established.
- All hunters must possess a valid Maryland State hunting license, any required stamps, a signed refuge hunt permit and photo identification. Refuge hunt permits are not transferable.

- No more than 100 permits will be issued for any one deer hunt. All initial hunt permits must be obtained through the mail. Standby hunters will be issued permits for no show hunters on the day of the hunt.
- Youth hunters must be at least 10 years old but less than 16 years old. They must be accompanied by a licensed or exempt from licensed, unarmed adult, 21 or older. An adult must remain with the youth at all times.
- Only hunters possessing authorized permits will be allowed to enter areas opening to hunting.
- All hunters are required to check in and out at the Hunter Check Station.
- All deer and turkey killed must be properly tagged in the field and presented for examination at the Hunter Check Station.
- Hunters are required to seek refuge employee assistance to retrieve deer or turkeys from closed areas.
- Only weapons that meet Maryland State regulations are permitted. No handguns or breech loading rifles are allowed.
- Scouting is allowed on designated days listed in the regulations for permitted hunters only. Check in and out is not required on scout days.
- All weapons are prohibited on the refuge during non-hunt days.
- Permitted youth hunters must be accompanied by permitted adult age 19 or older when scouting.
- A minimum of 400 square inches of solid-colored fluorescent orange clothing is required on the head, chest, back of all deer hunters during the youth, muzzleloader and shotgun hunts. All participants must wear a solid fluorescent orange hat or cap when walking to or from their hunting positions.
- Pets or other domestic animals are not allowed in hunt areas.
- Commercialized guiding of refuge hunts is prohibited.

**Justification:**

The National Wildlife Refuge System Administration Act of 1997 (Public Law 105-57), identified hunting as one of the six, priority, wildlife-dependent recreational uses to be facilitated in the refuge System, and the act encouraged the Service to provide opportunities for these uses.

It has been determined in the preceding sections that deer and spring turkey hunting programs are compatible. Palmer et al. (1980) and Cypher (1988) state that the only biologically sound

and cost effective method to keep a deer population in balance with its environment is through regulated hunting. Over-browsing by an unmanaged deer population has a detrimental effect on understory vegetation and on regeneration of hardwoods (Butt 1984). Likewise, an unmanaged deer population causes severe crop depredation on refuge property and on the property of adjacent land owners. This crop depredation results in negative socioeconomic impact on the private landowners as well as competition with migratory waterfowl and the endangered Delmarva fox squirrel. Croplands can account for 41% of the annual diet in deer even though other prime food sources are available (Dusek et al. 1989).

A regulated deer hunt is essential to accomplish the goal of managing a healthy deer population, resulting in high productivity and recruitment for both consumptive and non-consumptive wildlife-orientated recreation. Dickerson (1983) noted the drastic effect of the “no hunting” approach to deer management. He examined harvested deer from a state park in New York where hunting had been prohibited for 71 years. Through these observations, he concluded that due to the lack of hunting, the deer herd was in the worst physical condition of any he had observed in New York and possibly the northeast.

Limited spring turkey hunting in accordance with the restrictions and numbers of hunters proposed would have insignificant impacts on biological resources, with the exception that obviously a few gobblers would be killed. However, their removal from the population would not have significant impacts on the species or its abundance.

These proposed hunts on Eastern Neck NWR will not materially interfere with or detract from the purpose for which the refuge was established.

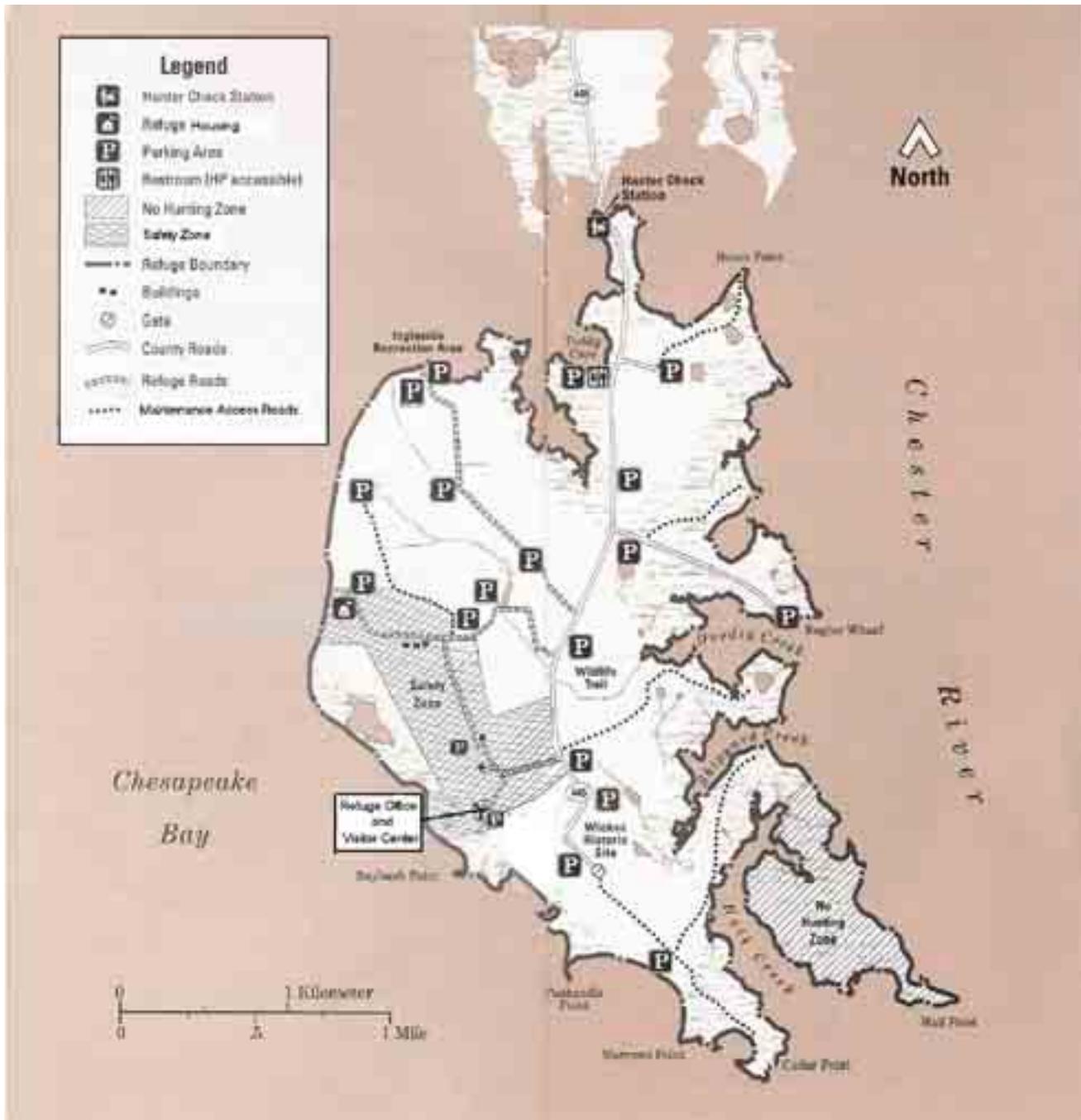
**Signature:** Refuge Manager: \_\_\_\_\_  
(Signature and Date)

**Concurrence:** Regional Chief: \_\_\_\_\_  
(Signature and Date)

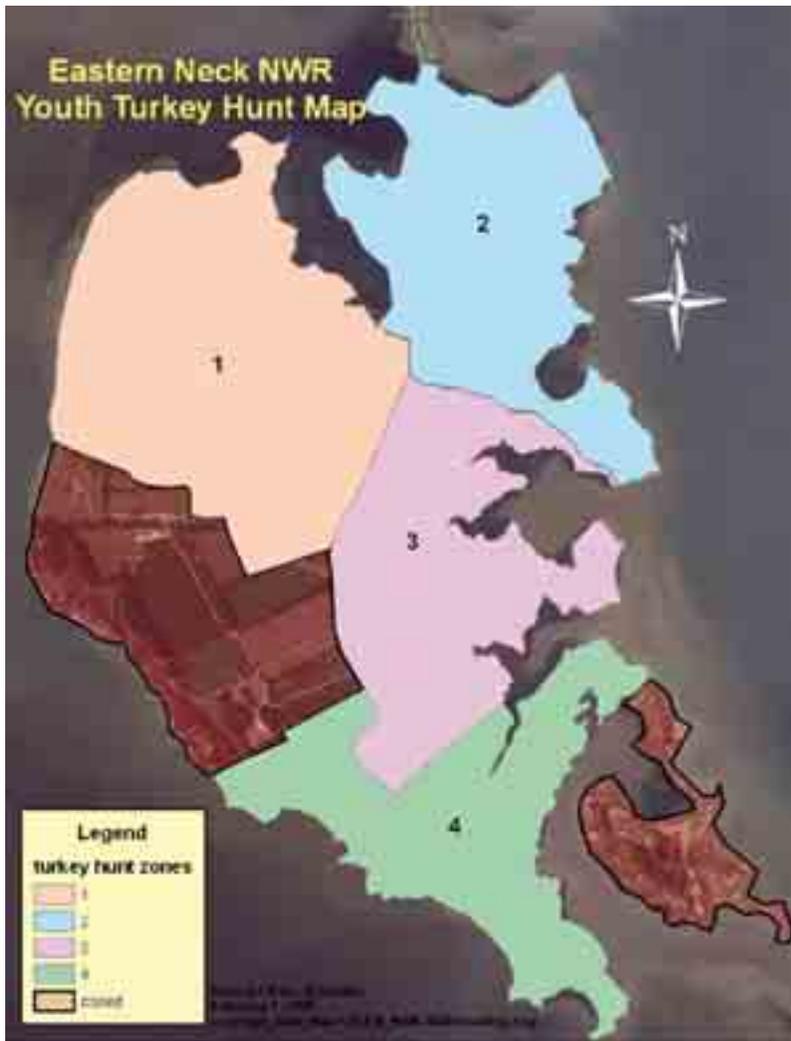
**Mandatory 10-year Reevaluation Date:** \_\_\_\_\_

**Attachments:** Public Hunting Maps

Map B.1. Eastern Neck Refuge deer hunt program map



Map B.2. Eastern Neck Refuge turkey hunt program map



**References:**

- Butt, J.P. 1984. Deer and trees on the Allegheny: how could hunters keep the deer and the forest service keep regeneration when the deer were eating the regeneration? *Journal of Forestry* 82(1984):468-471.
- Cypher, B.L., E.A. Cypher. 1988. Ecology and management of white-tailed deer in northeastern coastal habitats: a synthesis of the literature pertinent to the National Wildlife Refuges from Maine to Virginia. U.S. Fish and Wildlife Service, Biological Report 88(15). 52pp.
- Dickinson, N.R. 1983. An example of the effect of underharvesting on a deer population. N.Y. *Fish and Game Journal* 30(1983):231-232.
- Dusek, G.L., R.J. Mackie, J.D. Herriges, Jr., B.B. Compton. 1989. Population ecology of white-tailed deer along the lower Yellowstone River. *Wildlife Monographs* 104:1-68.
- Palmer, D.T., D.A. Andrews, R.O. Winters, and J.W. Francis. 1980. Removal techniques to control an enclosed deer herd. *Wildlife Society Bulletin* 8(1):29-33.

## **COMPATIBILITY DETERMINATION**

**USE:** Fishing and Crabbing Compatibility Determination

**STATION NAME:** Eastern Neck National Wildlife Refuge (Chesapeake Marshlands NWR Complex)

### **ESTABLISHING AND ACQUISITION AUTHORITIES:**

The Chesapeake Marshlands National Wildlife Refuge Complex (CMNWRC) is composed of four nationally significant wildlife areas: Eastern Neck NWR, Blackwater NWR, Martin NWR, and Susquehanna NWR with several separate divisions.

Eastern Neck NWR was established by executive order on December 27, 1962, under the Migratory Bird Conservation Act (MBCA) (16 U.S.C. 715 d) “for use as an inviolate sanctuary, or for any other management purpose, for migratory birds.” Additional tracts were acquired through 1966 under the MBCA authority to bring the refuge to its approved acquisition boundary containing 2,286 acres. By virtue of its strategic location at the confluence of the Chester River and the Chesapeake Bay, it is of significant value to migrating and wintering waterfowl on Maryland’s Upper Eastern Shore.

### **REFUGE PURPOSE(S):**

All tracts were acquired under the authority of the Migratory Bird Conservation Act (16 U.S.C. § 715 d), the purpose of the acquisition is “...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds.”

### **NATIONAL WILDLIFE REFUGE SYSTEM MISSION:**

“To administer a national network of land and waters for the conservation, management, and where appropriate, the 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 (National Wildlife Refuge System Improvement Act of 1997, Public Law 105-57).”

### **DESCRIPTION OF USE:**

This evaluation is to determine the compatibility of fishing and crabbing with the purposes for which the affected tracts were acquired.

#### **(A) What is the Use? Is the use a priority use?**

The use is fishing to include fishing access. This is an existing use. The National Wildlife Refuge System Improvement Act of 1997 identified fishing as one of the six, priority, wildlife-dependent recreational uses to be facilitated in the Refuge System, and the act encouraged the Service to provide opportunities for these uses.

**(B) Where would the use be conducted?**

Access for fishing and crabbing would be at the Entrance Bridge, Tundra Swan Boardwalk, Duck Inn Trailhead at Chester River, Boxes Point Trailhead at Chester River, Ingleside Recreation Area and Bogle's Wharf. Special Event fresh water fishing would be at the Headquarter's Pond only during time of Youth Fishing Derby.

**(C) When would the use be conducted?**

Fishing and crabbing at the Entrance Bridge, Tundra Swan Boardwalk, Duck Inn Trailhead at Chester River, Boxes Point Trailhead at Chester River and Bogle's Wharf will be conducted year-round. Entrance Bridge and Bogle's Wharf would be open during hours set by Maryland DNR Fishing at Tundra Swan Boardwalk, Boxes Point Trail and Duck Inn Trail would be from sunrise to sunset year round. Fishing and crabbing at Ingleside Recreation Area would be conducted from April 1 through September 30 from sunrise to sunset. Special Event fresh water fishing at the Headquarter's Pond would be conducted only during time of the Youth Fishing Derby which is usually held in June.

**(D) How would the use be conducted?**

Fishing and crabbing would be conducted with no staff involvement except during the Youth Fishing Derby. During the Youth Fishing Derby, staff and volunteers would monitor the participants and provide a variety of partner-led activities. Maryland Department of Natural Resources would stock the Headquarter's Pond prior to the Derby. The Friends of Eastern Neck would provide refreshments and prizes for participants. Other staff involvement would come from general maintenance of the fishing access sites and routine law enforcement patrols.

**(E) Why is the use being proposed?**

The Service does not have jurisdiction over the shallow and deep waters surrounding the island and therefore we do not regulate fishing or other water-based activities within the navigable waters of the State, or within areas where water bottoms are State-owned. However, we do provide access to these activities from refuge lands, and conduct enforcement of rules and regulations at five fishing/crabbing areas.

Fishing and crabbing have been historical, consumptive recreational uses on the refuge that we believe are compatible with our resource objectives. Approximately 500 anglers use the refuge to access fishing areas each year; however, this number tends to fluctuate with the quality and availability of crabbing.

We will strive to meet these guiding principles for a refuge recreational fishing program identified in Service policy (605 FW3 and 4):

1. Effectively maintain healthy and diverse fish communities and aquatic ecosystems through the use of scientific management techniques;

2. Promote visitor understanding of, and increase visitor appreciation for, America’s natural resources;
3. Provide opportunities for quality recreational and educational experiences consistent with criteria describing quality as defined in 605 FW 1.6;
4. Encourage participation in this tradition deeply rooted in America’s natural heritage and conservation history; and,
5. Minimize conflicts with visitors participating in other compatible wildlife-dependent activities.

**Availability of Resources:**

Resources involved in the administration and management of the use: Volunteers to monitor the monofilament recovery and recycling containers, maintenance staff to maintain fishing access sites and to maintain water level in Headquarters’ Pond for Youth Fishing Derby, visitor services staff and wildlife refuge specialist to provide assistance and oversight at Youth Fishing Derby, Complex law enforcement staff to provide routine patrols and Maryland Department of Natural Resources to stock Headquarters’ Pond for Youth Fishing Derby.

Special equipment, facilities, or improvements necessary to support the use:

Monofilament recovery and recycling containers at each fishing access site: One donated and two will be constructed with funds donated by Friends group

**Cost Breakdown:**

The following is the list of annual cost for the Refuge requires to administer and manage the program.

Preparation of signs, maps, trails, info (30 hrs @ \$30/hr) .....	\$900
Fishing Event (12 hrs @ \$30/hr) .....	\$360
Maintenance of fishing facilities (60 hrs@\$30/hr) .....	\$1,800
Law Enforcement (30 hrs @ \$24/hr).....	\$720
Support cost (fuel, travel expenses).....	\$300
 Total .....	 <u>\$4,080</u>

Non-Refuge Costs Provided by Partnerships, Grants, and Donations

Monofilament recovery and recycling containers .....	\$100
------------------------------------------------------	-------

**Anticipated Impacts of the Use:**

*Short-term impacts:* Anticipated impacts of fishing and crabbing are expected to be minimal. Although fishing and crabbing causes mortality to fish and crabs, season dates and limits are set with the long-term health of populations in mind. Populations of most species are regularly monitored by state agencies and have determined that a controlled sport fishing harvest would not adversely affect overall fish population levels.

Recreational fishing opportunities may cause temporary disturbances such as the flushing of feeding, resting, or nesting birds, especially waterfowl, and other wildlife species. This disturbance may displace individual animals to other parts of the refuge; however, this disturbance would be limited in scope due to the limited number of areas accessible to anglers. Most visitors understand the protection afforded by the Refuge, and the Service will continue to provide educational materials and adequate signage, these instances should remain rare. Access for fishing is limited to the use of maintained roads and parking areas.

Visitors who are fishing and crabbing may introduce litter and lead sinkers that may harm shorebirds. No lead sinkers will be permitted during the Youth Fishing Derby to prevent lead poisoning to wading birds that use the Headquarters' Pond. Discarded fishing line and other fishing litter can entangle migratory birds and mammals and cause injury and death. This will be reduced through the use of monofilament recovery and recycling containers at fishing access sites. Fisherman and crabbers, like other visitors, have the potential to damage vegetation and increase erosion.

*Long-term impacts:* There are no anticipated long-term impacts of this use as long as fish and crab populations continue to be monitored by the state. Increased fishing and crabbing would cause some displacement of habitat and increase some disturbance to wildlife, although this is expected to be minor given the avoidance or minimal intrusion into important wildlife habitat especially during the waterfowl wintering season.

*Cumulative impacts:* Overall Refuge visitation may increase due to local tourism. Therefore, all uses on the Refuge may increase over time. However, fishing and crabbing is limited to specific areas so that it would have little cumulative impact with other uses. Fishing and crabbing will be monitored to see if the amount of use occurring on the Refuge is becoming too great. Therefore, there are no anticipated cumulative impacts.

**Public Review and Comment:**

This compatibility determination will be submitted for public review and comment as an appendices to the Environmental Assessment for the Draft Comprehensive Conservation Plan for the Eastern Neck NWR in full compliance with NEPA

**Determination (check one below):**

- Use is Not Compatible
- Use is Compatible with the Following Stipulations

**Stipulations Necessary to Ensure Compatibility:**

- We require a valid Maryland sport fishing license. We do not require a refuge permit.
- Anglers must comply with all refuge regulations concerning restrictions on the time of day or time of year for fishing.
- Access for fishing and crabbing would be at the Entrance Bridge, Tundra Swan Boardwalk, Duck Inn Trailhead at Chester River, Boxes Point Trailhead at Chester River, Ingleside Recreation Area and Bogle’s Wharf. Special Event fresh water fishing would be at the Headquarter’s Pond only during time of Youth Fishing Derby.
- We require all fish and crab lines to be attended.
- Anglers must not clean their catch or dispose of offal on refuge lands or in refuge waters, and must carry all litter off the refuge.

**Justification:**

Fishing is a priority, wildlife-dependent use of the System, through which the public can develop an appreciation for fish and wildlife (Executive Order No. 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). Service policy is to provide opportunities for priority wildlife-dependent uses when they are compatible with the purposes for which the refuge was established and consistent with sound fish and wildlife management. These uses are to receive enhanced consideration during planning and management. Fishing or crabbing while wading, implemented with the above stipulations, will not materially interfere with or detract from the mission of the System or the purposes for which the refuges were established.

**Signature:** Refuge Manager: \_\_\_\_\_  
(Signature and Date)

**Concurrence:** Regional Chief: \_\_\_\_\_  
(Signature and Date)

**Mandatory 15-year Reevaluation Date:** \_\_\_\_\_

## Appropriate Refuge Use: Cooperative Farming

### FINDING OF APPROPRIATENESS OF A REFUGE USE

Refuge Name: Eastern Neck National Wildlife Refuge

Use: Cooperative Farming

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.**

### **Justification for a Finding of Appropriateness of a Refuge Use**

**Refuge:** Eastern Neck National Wildlife Refuge

**Use:** Cooperative Farming Justification of Appropriateness of Use

**Justification:**

Eastern Neck NWR was established under the authority of the Migratory Bird Conservation Act “...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds.” Eastern Neck Refuge is the only protected land in the Chester River and Kent County Bayshore Focus Area, which supports some of the most important wintering habitat in the state for American black duck and wintering geese (ACJV 2005 Focus Area Report).

The refuge cooperative farming program is an integral component of the refuge’s habitat management efforts. In lieu of paying rent for the use of refuge farm fields, the cooperator supports the accomplishment of refuge habitat management objectives by performing cropland-related services related to our annual habitat management program.

Utilizing croplands will benefit wintering and migratory waterfowl by providing a protected haven and supplemental sources of high energy foods to build fat reserves prior to migration. Therefore, this use is determined to be an appropriate use of Eastern Neck NWR.

## **COMPATIBILITY DETERMINATION**

**USE:** Cooperative Farming

**STATION NAME:** Eastern Neck National Wildlife Refuge (Chesapeake Marshlands NWR Complex)

### **ESTABLISHING AND ACQUISITION AUTHORITIES:**

The Chesapeake Marshlands National Wildlife Refuge Complex (CMNWRC) is composed of four nationally significant wildlife areas: Eastern Neck NWR, Blackwater NWR, Martin NWR, and Susquehanna NWR with several separate divisions.

Eastern Neck NWR was established by executive order on December 27, 1962, under the Migratory Bird Conservation Act (MBCA) (16 U.S.C. 715 d) “for use as an inviolate sanctuary, or for any other management purpose, for migratory birds.” Additional tracts were acquired through 1966 under the MBCA authority to bring the refuge to its approved acquisition boundary containing 2,286 acres. By virtue of its strategic location at the confluence of the Chester River and the Chesapeake Bay, it is of significant value to migrating and wintering waterfowl on Maryland’s Upper Eastern Shore.

### **REFUGE PURPOSE(S):**

All tracts were acquired under the authority of the Migratory Bird Conservation Act (16 U.S.C. § 715 d), the purpose of the acquisition is “...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds.”

### **National Wildlife Refuge System Mission:**

“To administer a national network of land and waters for the conservation, management, and where appropriate, the 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 (National Wildlife Refuge System Improvement Act of 1997, Public Law 105-57).”

### **Description of Use:**

This evaluation is to determine the compatibility of cooperative farming with the purposes for which the affected tracts were acquired.

#### **(A) What is the Use? Is the use a priority use?**

The use is cooperative farming through a cooperative agreement. Cooperative farming is not a priority public use identified by the National Wildlife Refuge System Administration Act of 1997 (Public Law 105-57), but it is an integral and historical management tool at Eastern Neck NWR.

The Chester River and Kent County Bayshore Focus Area supports some of the most important wintering habitat in the state for American black duck and wintering geese (ACJV 2005 Focus Area Report). Eastern Neck Refuge is the only protected land in the focus area, and within the core wintering area for the Atlantic Population of Canada geese. State Mid-winter Waterfowl Survey data indicate that the Chester River has the largest over-wintering population of migratory Canada geese of any tributary in the state. The Chesapeake Waterfowl Management Plan, the North American Waterfowl Management Plan, and the Canada Goose Management Plan for Maryland recognize the importance of the refuge in managing for these species.

Due to wetland loss and degradation, natural food resources are inadequate to sustain (and certainly to increase) the current levels of waterfowl use on Eastern Neck Refuge. Furthermore, very few “hot foods” (e.g., corn and sorghum, which are high in carbohydrates and energy) are available off refuge; those that are, are consumed early in the winter season. When birds have to travel long distances to seek food off the refuge in severe winter weather, their energy reserves are quickly depleted. Consequently, the refuge plants row crops and cool-season grasses or forbs each year, presently through a cooperative agreement, to sustain wintering migratory waterfowl during critical periods of nutritional and physical stress.

In the CCP, under the preferred alternative, the total acreage allocated to cooperative farming would be reduced from the existing 557 acres to 386 acres. The fields would be configured into fewer, larger fields which would enhance the security characteristics of the refuge croplands while retaining their productivity of “hot foods.” This configuration would be a more efficient and effective operation, and improve the value of the croplands to wintering waterfowl.

Furthermore, the refuge cooperative farming program would be re-evaluated to ensure that the greatest habitat value is provided in the most practical, efficient and effective manner.

**(B) Where would the use be conducted?**

The refuge cooperative farming program has changed drastically since the refuge was established in the 1960s'. In 1966 when acquisition was completed, lands in the cooperative farming program included 1,020 acres. Over the years this acreage has been reduced by about 50% so that the current program includes approximately 550 acres. This acreage will be reduced to approximately 386 acres by consolidating existing agriculture fields and hedgerows (see attached map).

All cropland fields are bordered by either grass or forested buffer strips that contain or filter runoff. Impoundments have been constructed to contain, hold and filter runoff before it enters drainage system to the bay watershed. These impoundments provide excellent habitat for waterfowl, marsh and wading birds and other migratory birds. Additional impoundments are planned as funding becomes available.

**(C) When would the use be conducted?**

Cooperative farming activities for corn and soybeans would normally would begin in mid-May and continue until mid-October, annually. Cooperative farming for winter wheat and other cover crops would begin mid-October and continue until mid-June, annually.

**(D) How would the use be conducted?**

The preferred alternative in the CCP would reduce the current 557 acres of the most productive croplands to 386 acres. This acreage would include fewer larger fields, which would enhance the security characteristics of the croplands for waterfowl, while retaining their productivity for “hot foods.” This would be accomplished by removing hedgerows, and converting the acres to agriculture production.

The refuge would also re-evaluate the current cooperative farming program to ensure that the most efficient, practical and effective management method is utilized. The evaluation may result in a recommendation that further reduces the acreages included in the cooperative farming program.

Under a cooperative agreement, the refuge would work with a local farmer to plant, cultivate and harvest agricultural crops within refuge croplands. A portion of the crops would be left unharvested for wildlife, while the rest of the crop would be harvested by the local farmer. Refuge staff, equipment and operation dollars would only be used to mow clover fields twice a year and to mow down standing corn for better utilization by migratory waterfowl.

Cropland fields would be bordered by filter strips and buffers, and runoff would be directed into existing sediment basin ponds prior to entering natural wetland systems. Conservation tillage and no-till farming practices would be widely utilized and preferred over conventional methods. This would significantly minimize erosion and siltation.

Crops are managed on a rotation of corn, to soybeans, to clover. This rotation is desirable not only for waterfowl management, but also from the standpoint of good soil conservation management practices. The use of legumes such as soybeans and clover that fix nitrogen reduces the input of chemical fertilizers and liquid nitrogen. The soils in refuge fields are tested annually to determine fertilizer needs. Additionally, after the corn is harvested in the fall, a cover crop of winter wheat is no till planted in the corn stubble. This provides additional high quality browse for migratory waterfowl and other wildlife, reduces soil erosion, and utilizes any excess nutrients that may be in the soil which helps minimize nutrient loading into the watershed.

Crop rotation reduces the need for herbicides and has all but eliminated the need for insecticides. Herbicide use is limited to previously approved compounds that are the least problematic and the least harmful of available products. Pesticides are not permitted except in the rare case of an epidemic whereby the pest exceeds a certain threshold level that could destroy a crop as determined by an Integrated Pest Management agent.

Corn and milo crops are left standing until after the waterfowl hunting seasons. Following closure of the waterfowl hunting season, the crops are made available by mowing or knocking them down. The intended purposes of reserving these crops are: (1) to provide sources of high energy foods to build fat reserves prior to migration; (2) to provide food resources on the refuge to minimize depredation of winter wheat crops on adjacent private lands; and (3) to minimize long distance travel to food during the coldest periods of the year

**(E) Why is the use being proposed?**

Eastern Neck NWR was established for the management of migratory birds. Before the refuge was established in 1962, Eastern Neck was “the” place to hunt waterfowl on the eastern shore due to the concentrations of waterfowl. The refuge has been designated as a globally significant birding area based on the refuge harboring 1% of the world population of Tundra swans during their winter migration and significant populations of other waterfowl species.

There are significant statistics relating to the contributions that croplands on refuges make to waterfowl management and the achievement of refuge purposes. Publications such as Reinecke, et al. (1989); McFarland, et al. (1966); Ringelman, et al. (1989); and others, have repeatedly validated the scientific importance of cropland management to waterfowl.

The success of these cropland management programs relates to the large body size of waterfowl enabling them to store fat, protein, and minerals. These reserves can be mobilized for egg formation, migration, molt, or in times of food shortage. Although strategies for depositing and using nutrient reserves differ among species, and are dependent upon the seasonal availability of foods, cropland grains are among the most extensively exploited food resources (Ringelman 1990).

Clutch size and perhaps nesting dates of mallards and Canada geese are thought to be directly related to the amount of reserves obtained on their wintering grounds. During breeding and molting periods, waterfowl require a balanced diet with high protein content. Grain crops, most of which are not very high in protein, are seldom used during these periods. However, during fall, winter, and early spring, when vegetative foods make up a large part of the diet and energy producing carbohydrates (hot foods) are the main nutritional requirement, grain crops such as corn and milo are preferred forage.

Standing crops, such as corn, are made available by mowing or knocking them down during post-hunting season periods. The intended purposes of reserving these crops are: (1) to provide sources of high energy foods to build fat reserves prior to migration; (2) to provide food resources on the refuge to minimize depredation of winter wheat crops on adjacent private lands; and (3) to minimize long distance travel to food during the coldest periods of the year.

Flight is the most energetic requirement for waterfowl, and by late January there are few areas left in the county where waterfowl have not already gleaned all waste grain thus necessitating long travel distances. For example, a 2.5-lb. mallard would require 3 days of foraging to replenish fat reserves following an 8-hour flight, if caloric intake were 480 kcal/day (the amount of intake from corn in an unharvested field) (Frederickson and Reid 1988). Refuge crops are mowed or knocked down at different intervals until the waterfowl have migrated north to ensure a constant supply of fresh feed from late January until mid-March.

**Availability of Resources:**

The infrastructure (cropland, dikes, roads and storage facilities) are available at Eastern Neck NWR. Equipment is currently available through the Chesapeake Marshlands NWR Complex to

facilitate the cooperative farming program. This means that they would not need to be procured, constructed, or created. No new equipment or equipment replacement would be anticipated during the 15 year expected duration of this plan.

**Cost Breakdown:**

The following is the list of annual costs the refuge requires to administer and manage the cooperative farming program.

Administration/Mowing (45 days @\$180/day).....	\$3,000
Fuel/Equipment Maintenance .....	\$1,400
Total .....	\$3,400

**Anticipated Impacts on Refuge Purpose(s):**

The following is a summary of the impact of this program as more thoroughly described in the Environmental Assessment prepared for the Eastern Neck NWR Comprehensive Conservation Plan of which this document is an attachment.

Effects on aquatic, wetland, and terrestrial habitats would be minimal. Again, only historical croplands would be cultivated. No new drainage systems would be created, and the actions used to minimize and mitigate runoff and erosion described above would result in very minor, if any, impacts on surrounding wetlands and aquatic systems.

The approved CCP includes a reduction of cropland acreage from approximately 557 to 386 acres. Restoration of 171 acres of prior converted croplands to moist soil management impoundments and forested habitat would greatly improve the utilization of these lands for wildlife. Approximately, 142 acres of historical cropland on Eastern Neck NWR would be reforested to provide connective travel corridors thus minimizing forest fragmentation. An additional 30 acres would be converted to moist soil management to benefit waterfowl (see the Moist Soil Management Program for further details).

The greatest impact of a cooperative farming program would be on wildlife populations, specifically wintering waterfowl, and to a lesser degree Neotropical migrants. Cooperative farming has been used extensively on national wildlife refuges to provide food for migrating and wintering waterfowl and to lessen depredations on private cropland.

Surveys at several refuges showed that about one-third of all feeding by waterfowl was on cultivated crops. Seventy-five percent of the geese and 30 percent of the ducks using national wildlife refuges in the Southwestern States were harbored on refuges where cropland management was practiced. Three million birds were maintained for several weeks in California on three small refuges totaling only 17,000 acres, where cropland management was practiced to minimize private cropland depredation (Givens, et al. 1964). These are significant statistics

relating to the contributions that croplands on refuges make to waterfowl management and the achievement of refuge purposes. Publications such as Reinecke, et al. (1989); McFarland, et al. (1966); Ringelman, et al. (1989); and others, have repeatedly validated the scientific importance of cropland management to waterfowl.

Observations and censuses have demonstrated that many other resident and migratory bird species would also benefit from the cooperative farming program. In the summer, Eastern meadowlarks and several sparrow species use the clover fields. Since the winter wheat would be left to mature, wild turkeys would use these fields as preferred nesting and brooding areas. Passerines seeking seeds or invertebrates would also heavily use the mature wheat. The eastern bluebird, in particular, seems to favor these areas during most of the year. Many species of raptors, including red-tailed hawks and kestrels, are often seen hunting in these areas.

Maintaining field borders would particularly benefit sparrow species, including song sparrows (*Melospiza melodia*), swamp sparrows (*Melospiza georgiana*), field sparrows (*Spizella pusilla*), chipping sparrows (*Spizella passerina*), white-throated sparrows (*Zonotrichia albicollis*), and savannah sparrows (*Passerculus sandwichensis*) (Marcus, et al. 2000). Fields with field borders contain approximately three times the sparrows than fields without borders.

Second only to its importance for waterfowl, the ladino clover would provide for a Lepidopteran spectacle. Literally millions of butterflies and skippers use these sweet clover fields throughout the summer and during early fall migrations. When they are kept mowed, the clover fields are perpetually blooming.

#### **Public Review and Comment:**

This compatibility determination will be submitted for public review and comment as an appendix to the Environmental Assessment for the Draft Comprehensive Conservation Plan for the Eastern Neck NWR in full compliance with NEPA

**Determination:** (Check One)

Use is Not Compatible

Use is Compatible With the Following Stipulations

#### **Stipulations Necessary to Ensure Compatibility:**

Management will be in compliance with approved Best Management Practices and IPM plans. Cropland management has been conducted on Eastern Neck NWR annually since establishment in 1962. The attached list of general and special conditions is included in the cooperative farming agreement we issue each year and are required to ensure compatibility. If monitoring determines that this use materially interferes with or detracts from the Refuge System mission or purposes of the refuge, the use would be modified, curtailed or eliminated.

**Justification:**

Cooperative farming has been an integral management component for migratory waterfowl and trust species since Eastern Neck NWR was established in 1962. Utilizing croplands has benefited wintering and migratory waterfowl by providing a protected haven and sources of high energy foods to build fat reserves prior to migration. Due to wetland loss and degradation, natural food resources are inadequate on the Refuge, and very few and reliable “hot foods” are available off refuge. The cooperative farming program will not materially interfere with or detract from the purpose for which the refuge was established. It will contribute to the achievement of the refuge purpose and the National Wildlife Refuge System mission.

**Signature:** Refuge Manager: \_\_\_\_\_  
(Signature and Date)

**Concurrence:** Regional Chief: \_\_\_\_\_  
(Signature and Date)

**Mandatory 10-year Reevaluation Date:** \_\_\_\_\_

**Attachments:** 1) cooperative farming agreement general and special conditions; 2) land use map

## COOPERATIVE FARMING AGREEMENT

### General Conditions

- A. RESPONSIBILITY OF COOPERATOR. (1) The Cooperator will furnish the seed, fertilizer, labor, materials, and equipment, and bear all expenses incident to the seeding planting, cultivating, and harvesting of all crops, unless otherwise specified in “Special conditions”; (2) The Refuge Manager must be notified at least three days in advance of any intended harvesting operation; and (3) the Cooperator agrees, by operating on the premises with all existing facilities, fixtures, or improvements, to maintain these facilities in their existing condition as of the date of this agreement. At the end of the period specified or upon earlier termination, he shall give up the premises in as good order and condition as when received except for reasonable wear, tear, or damage occurring without fault or negligence. The Cooperator will fully repay the Service for any and all damage directly or indirectly resulting from negligence or failure on his part, or the part of any of his associates to use reasonable care.
- B. USE LIMITATIONS. The Cooperator’s use of the described land is limited to the agricultural purposes indicated and does not unless provided for in this agreement, allow him to restrict other authorized entry to, or use of, this area including activities by the Service necessary for (1) protection and maintenance of the premises and adjacent lands administered by the Service and (2) the management of wildlife and fish using the premises and other Service lands.
- C. DAMAGE. The United States shall not be responsible for any loss or damage to property including but not limited to growing crops, animals, and machinery; or injury to the Cooperator, or his relatives, or the officers, agents, employees, or any others who are on the premises by direction or by the consent of the Cooperator or his associates; or for any damages or interference caused by wildlife or employees or representatives of the Government carrying out their official responsibilities. The Cooperator agrees to save the United States or any of its agencies harmless from any and all claims for damages or losses that may arise or be incident to the flooding of the premises resulting from any associated Government river and harbor, flood control, reclamation, or Tennessee Valley Authority activity; PROVIDED, that when excess precipitation, or other natural phenomenon occurs prior to planting or during the growing season, alternate or supplementary crops may be planted and the yield may be divided in lieu of the crops and division originally specified herein.
- D. OPERATING RULES AND LAWS. The Cooperator shall keep the premises in a neat and orderly condition at all times, and shall comply with all municipal, county, and State laws applicable to his operations under this agreement as well as all Federal laws and regulations governing National Wildlife Refuges and the areas described in this agreement. He shall comply with all instructions applicable to this agreement issued by the Refuge Manager. He shall take all reasonable precautions to prevent the escape of fires and shall render all reasonable assistance in the suppression of refuge fires.

- E. COMPLIANCE. Failure of the Service to insist upon a strict compliance with any of the permit's terms, conditions, and requirements shall not constitute a waiver or be considered as giving up of the Service's right to thereafter enforce any of the permit's terms, conditions, or requirements.
- F. REVOCATION POLICY. This agreement may be revoked by the Refuge Manager, upon written notice, for non-use or noncompliance with the terms, hereof, or for the violation of general and/or specific laws or regulations governing National Wildlife Refuges. The agreement is, however, at all times subject to discretionary revocation by the Director of the Service. Upon such revocation, the Service, by and through any authorized representative may take possession of the premises for its own and sole use: PROVIDED. That the Service shall make available to the Cooperator his rightful share of growing crops.
- G. TERMINATION POLICY. If this agreement is terminated by consent of both parties, for lapse of time, or otherwise, the Cooperator shall immediately give up possession to the Service representative reserving the rights specified in section H, below. If he fails to do so, the Service may invoke such legal proceedings as may be appropriate.
- H. REMOVAL OF COOPERATOR'S PROPERTY. Upon termination or expiration of this agreement, the Cooperator may, within a reasonable period as determined by the Refuge Manager, but not to exceed sixty days, remove all crops, materials, structures, and/or other equipment, except items furnished by the Service. Upon failure to remove any of the above items within the aforesaid period, they shall become the property of the United States.
- I. TRANSFER OF PRIVILEGES. This agreement is not transferable and no privileges herein mentioned may be sublet or made available to any person or interest not mentioned in this permit. No interest hereunder may accrue through lien or be transferred to a third party without the approval of the Regional Director of the U.S. Fish and Wildlife Service and the permit shall not be used for speculative purposes.
- J. OFFICIALS BARRED FROM PARTICIPATING. No member of Congress or Resident Commissioner shall participate in any part of this agreement or to any benefit that may arise from it, but this provision shall not pertain to this agreement if made with a cooperation for its general benefit.
- K. NONDISCRIMINATION IN EMPLOYMENT. The Cooperator agrees to be bound by the equal opportunity clause of Executive Order 11246, which is attached hereto and made a part of this agreement.

**Special Conditions**

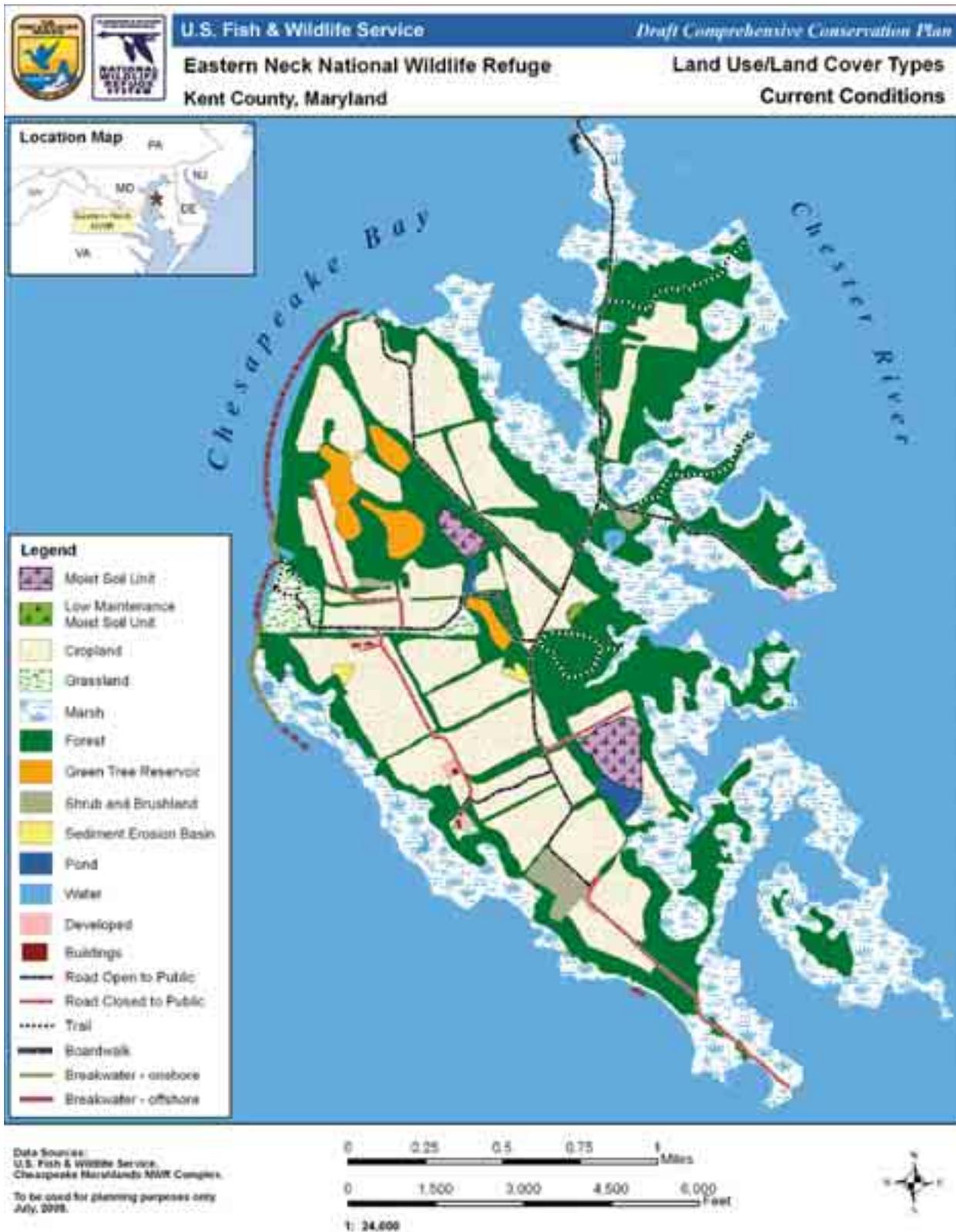
- A. The cooperator may commence farming operation anytime after the agreement has been signed.
- B. In order to allow for proper rotation of crops grown for the refuge by the Cooperator, specific crops must be seeded/planted and harvested according to the following schedule. Planting/harvesting may not occur during any of the refuge’s designated deer hunting days (see Refuge Manager for hunt schedule). Any expected deviation from this schedule must be approved by the Refuge Manager at least two (2) weeks prior to the deadline.

<u>Crop</u>	<u>Planted</u>	<u>Date to be</u> <u>by</u>	<u>Har</u>	<u>Date to be</u> <u>vested by</u>
Ladino Clover	March	10	N/A	
Corn	May	15	October	15
Soybean	July	31	November	14
Winter Wheat	October	15	July	31

- C. Cooperator is responsible for the Nutrient Mangement Plan.
- D. Cooperator may trap raccoons/woodchucks in accordance with State law and dispatch them humanely, as needed, to minimize crop depradation. Cooperator will coordinate with the Refuge Manger before conducting such management activities.
- E. Cooperator must maintain a record and dates and rates of application of all fertilizers, herbicides, pesticides and lime as well as estimated harvest. Cooperator must submit this information to the Refuge Manager by December 15 each year.
- F. The cooperator or his agent shall not apply any fertilizer, herbicide, or pesticide without prior approval of the Refuge Manger. **Cooperator may only apply types/amounts of fertilizer and pesticides that were submitted/approved in December of the previous year. If deviations in the type/amounts of fertilizer/pesticides are required, they must be approved by the Refuge Mantger at least 2 weeks prior to application. Unapproved deviations from these pre-approved types/amounts of fertilizer/herbicide/pesticide is considered a serious violation of this agreement.**
- G. The cooperator or his agent must read and strictly comply with all label instructions of any pesticide used. He must also remove from the refuge all empty pesticide containers resulting from his farming operation at the end of each day.
- H. Johnson grass, mile-a-minute, and Canada thistle (noxious weeds) control will be the responsibility of the Cooperator in/around all leased fields, including waterways and filter strips within fields and buffer strips around fields. Prior to July 1, Canada thistle, mile-a-minute, and Johnson grass must be controlled with glyphosate to prevent seed production. After July 1, control should be by mowing as frequently as necessary to prevent seed production.

- I. Cooperator shall leave a 15' buffer strip (minimum) free of crops 360° around each field, except for where a road exists, to control nutrient run-off and allow Refuge vehicle access. Waterways and buffer strips will not be tilled or planted. Cooperator shall maintain grassed waterways and buffer strips according to plans and specifications of the Soil Conservation Service (SCS). Refuge staff may also mow/maintain 15' buffer strips (minimum) and grassland waterways at their discretion.
- J. Refuge share of crops will be determined by Refuge Personnel at least two weeks prior to the time of harvest and crops shall be left standing at the specified locations. Harvest may not commence until such sites/amounts are designated. The share will be based on yield and current market prices.
- K. Cooperator shall park equipment left on the refuge only in designated areas. Chaff, excess soil, or other debris must be removed from equipment prior to parking at or near the maintenance area. Storage or parking of equipment or supplies must be approved by the Refuge Manager.
- L. Cooperator will remove all equipment from Refuge property by November 15<sup>th</sup> of each year. No equipment is to be stored on Refuge property after this date.
- M. Waste oil, oil filters, seed bags and other refuse must be removed from the refuge.
- N. Cooperator is encouraged to double-crop soybean fields with winter wheat for harvest. Fields that are double-cropped must have wheat seeded by October 15 and be harvested by July 31. Fields that are not planted with a cover crop may be planted by Refuge staff.
- O. Cooperator will plant winter wheat in corn fields, allow for geese usage throughout the winter, and harvest remaining wheat by July 31.
- P. Cooperator will not fell or remove any trees that may fall into the fields without prior approval of the Refuge Manager.
- Q. Within wheat fields also designated to be planted in clover, Cooperator may only apply herbicides and/or pesticides that have approved USFWS pesticide use permits (PUPs) and are formulated/approved to NOT harm clover.

Map B.3. Existing Land Use/Land Cover



**References Cited:**

ACJV (Atlantic Coast Joint Venture). 2005. Revised Waterfowl Implementation Plan, June 2005, Mid-Atlantic Region, Focus Area Description, Chester River and Kent County Bayshore Focus Area.

Frederickson, L.H. and F.A. Reid. 1988. Nutritional values of waterfowl foods. USFWS, Waterfowl Management Handbook, Leaflet 13.1.1, Washington, D.C.

Givens, L.S., M.C. Nelson, and V. Ekedahl. 1964. Farming for waterfowl. *Waterfowl Tomorrow*. pp. 599–610.

Marcus, J.F., W.E. Palmer, and P.T. Bromley. 2000. The effects of farm field borders on overwintering sparrow densities. *The Wilson Bulletin*. 112(4). pp. 517–523.

McFarland, L.Z., and H. George. 1966. Preference of selected grains by geese. *J. Wildl. Manage.* 30:9–13.

Reinecke, K.J., R.M. Kaminski, D.J. Moorhead, J.D. Hodges, and J.R. Nassar. 1989. Mississippi alluvial valley. Pages 203–247 *in* L. M. Smith, R.L. Pederson, and R.M. Kaminski, eds. *Habitat management for migrating and wintering waterfowl in North America*. Texas Tech University Press. Lubbock, Texas

Ringelman, J.K. 1990. Managing agricultural foods for waterfowl. Fish and Wildlife Leaflet 13.4.3. *Waterfowl Management Handbook*. Washington, D.C.

Ringelman, J.K. 1990. Habitat management for molting waterfowl. Fish and Wildlife Leaflet 13.4.4. *Waterfowl Management Handbook*. Washington, D.C.

Ringelman, J.K., W.R. Eddleman, and H.W. Miller. 1989. High plains reservoirs and sloughs. Pages 311–340 *in* L. M. Smith, R.L. Pederson, and R.M. Kaminski, eds. *Habitat management for migrating and wintering waterfowl in North America*. Texas Tech University Press. Lubbock.

## Appropriate Refuge Use: Operation of Ingleside Recreation Area

### FINDING OF APPROPRIATENESS OF A REFUGE USE

Refuge Name: Eastern Neck National Wildlife Refuge

Use: Operation of Ingleside Recreation Area

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.**

## **COMPATIBILITY DETERMINATION**

**USE:** Operation of Ingleside Recreation Area by Kent County

**STATION NAME:** Eastern Neck National Wildlife Refuge (Chesapeake Marshlands NWR Complex)

### **ESTABLISHING AND ACQUISITION AUTHORITIES:**

The Chesapeake Marshlands National Wildlife Refuge Complex (CMNWRC) is composed of four nationally significant wildlife areas: Eastern Neck NWR, Blackwater NWR, Martin NWR, and Susquehanna NWR with several separate divisions.

Eastern Neck NWR was established by executive order on December 27, 1962, under the Migratory Bird Conservation Act (MBCA) (16 U.S.C. 715 d) “for use as an inviolate sanctuary, or for any other management purpose, for migratory birds.” Additional tracts were acquired through 1966 under the MBCA authority to bring the refuge to its approved acquisition boundary containing 2,286 acres. By virtue of its strategic location at the confluence of the Chester River and the Chesapeake Bay, it is of significant value to migrating and wintering waterfowl on Maryland’s Upper Eastern Shore.

### **REFUGE PURPOSE(S):**

All tracts were acquired under the authority of the Migratory Bird Conservation Act (16 U.S.C. § 715 d), the purpose of the acquisition is “...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds.”

### **National Wildlife Refuge System Mission:**

“To administer a national network of land and waters for the conservation, management, and where appropriate, the 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 (National Wildlife Refuge System Improvement Act of 1997, Public Law 105-57).”

### **Description of Use:**

This evaluation is to determine the compatibility of the operation of the Ingleside Recreation Area by Kent County through a Memorandum of Understanding (MOU) with the purposes for which the affected tracts were acquired.

#### **(A) What is the Use? Is the use a priority use?**

The Ingleside Recreation Area is administered by Kent County through their Commissioners for seasonal public recreation purposes to the extent compatible with wildlife requirements. The specific terms of this arrangement are specified in the Memorandum of Understanding between the USFWS, Department of the Interior and the County of Kent, Maryland established in 1975.

The MOU specifies that public recreation will be limited to photography, hiking, nature study, bicycling, and access to fin fishing, shell fishing, crabbing, wading and picnicking associated with such pursuits.

Most of the activities identified in the MOU are supported by the National Wildlife Refuge System Improvement Act of 1997 which identified six priority, wildlife-dependent recreational uses to be facilitated in the Refuge System. These activities are hunting, fishing, wildlife observation, interpretation, wildlife photography and environmental education. Activities such as hiking, bicycling, wading and picnicking help to facilitate the priority uses allowed.

**(B) Where would the use be conducted?**

This use will be conducted in the area called the Ingleside Recreation Area more specifically identified under item 1 in the MOU. This is an 11.2 acre tract of land located in the northwest portion of the refuge, adjacent to the Chesapeake Bay.

**(C) When would the use be conducted?**

The use of the Ingleside Recreation Area is limited to April 1 through September 30 during daylight hours. The area is closed during the rest of the year to provide protection to wintering and migrating waterfowl.

**(D) How would the use be conducted?**

A MOU between the Service and Kent County outlines the management agreement for the Ingleside Recreation Area. The County assumes the responsibility and costs of maintaining and operating the area. The maintenance will include restoration repairs, grading of roads and parking lots, mowing and garbage pickup. The county will be responsible for repairs and/or replacement of picnic tables existing on the area.

As described above the County's control is limited from April 1 through September 30 during daylight hours. After hours and during the closure period the Service will exercise jurisdiction and management authority.

**(E) Why is the use being proposed?**

Fishing, crabbing and shell fishing are historic uses of Eastern Neck Island and the Chesapeake Bay area. The shallow water area adjacent to the Ingleside Recreation Area is a shallow flat area that is ideal for these pursuits. Fishing along with the other activities allowed by the County at the Recreation Area are priority public use activities identified in the 1997 Refuge Improvement Act and the Service is encourage to facilitate these activities when compatible with refuge purposes. The County is interested in maintaining this historic use in this area and maintaining the Recreation Area. The MOU allows the area to remain open for public use while reducing the overhead cost to the Service.

**Availability of Resources**

The cost in the management of this area is minimal to the Service. A minor amount of administrative costs are incurred on an annual basis to oversee the MOU and coordinate with County Official. Overall there is net benefit to the Service to be able to provide wildlife-dependent recreational opportunities with little cost to the refuge.

**Cost Breakdown:**

The following is a list of the annual costs the Refuge requires to administer the program:

Administrative costs.....	\$1,500
Law Enforcement (25 hrs @ \$24/hr).....	\$600
Support costs (fuel, travel expenses) .....	\$300
 Total .....	 \$2,400

The following are one time facility costs:

Facility and Equipment costs:

Repair launching site at Ingleside Recreation Area .....	\$2,000
----------------------------------------------------------	---------

**Anticipated Impacts on Refuge Purpose(s):**

Wildlife observation, photography, interpretation, and environmental education may affect the wildlife resource positively or negatively. A positive effect of public involvement in these priority public uses will be a better appreciation and more complete understanding of the refuge wildlife and habitats. Better public understanding may translate into more widespread, stronger support for Eastern Neck Refuge, the Refuge System and the Service. Pedestrian travel (walking and biking) has the potential of impacting waterfowl, marshbirds and other migratory bird populations feeding and resting near the trails and on beaches during certain times of the year. Use of upland trails is more likely to impact songbirds than other migratory birds.

*Short-term impacts:* Anticipated impacts of the Ingleside Recreation Area are expected to be minimal. Although fishing and crabbing causes mortality to fish and crabs, season dates and limits are set with the long-term health of populations in mind. Populations of most species are regularly monitored by MD Department of Natural Resources staff and have determined that a controlled sport fishing harvest would not adversely affect overall fish population levels.

Recreational fishing opportunities may cause temporary disturbances such as the flushing of feeding, resting, or nesting birds, especially waterfowl, and other wildlife species. This disturbance may displace individual animals to other parts of the refuge; however, this disturbance would be limited in scope due to the limited number of areas accessible to anglers. Most visitors understand the protection afforded by the Refuge, and the Service will continue to provide educational materials and adequate signage, to limit disturbance to waterfowl. Access for fishing is limited to the use of maintained roads and parking areas.

Visitors who are fishing and crabbing may introduce litter and lead sinkers that may harm shorebirds and waterfowl. No lead sinkers will be permitted during the Youth Fishing Derby to prevent lead poisoning to waterfowl or wading birds that use the Headquarters' Pond. Discarded fishing line and other fishing litter may entangle migratory birds and mammals and cause injury and death. This will be reduced through the use of monofilament recovery and recycling containers at fishing access sites. Fisherman and crabbers, like other visitors, have the potential to damage vegetation and increase erosion.

Short-term impacts have an immediate effect on wildlife. The refuge priority uses being evaluated may impose minor negative impacts on specific station physical resources such as trails and roads, and on natural resources such as vegetation and wildlife. Impacts may include erosion, deterioration, trampling, and temporary disturbance. Wildlife disturbances typically results in a temporary displacement without long-term effects on individuals or populations. Some species will avoid the areas people frequent, such as the developed trails and the buildings, while others seem unaffected by or even drawn to the presence of humans. Increased visitation and increased opportunities for consumptive and non-consumptive uses would also increase the likelihood of damage or disturbance of cultural and historic resources on the refuge. However, those effects should not be significant, because almost all public uses described herein occur on specific footprints on the refuge, such as refuge trails.

*Long-term impacts:* Long term impacts are anticipated to be minimal because only certain areas are open to the public, and sensitive areas, such as bald eagle nesting sites, will be closed as needed. An indirect long term impact is the potential for visitors to unintentionally introduce and/or spread invasive species. Once established, invasive plants can out-compete native plants, thereby altering habitats and impacting wildlife. The threat of invasive plant establishment will always be an issue, and will require annual monitoring, treatment and public education.

*Cumulative impacts:* Impacts may be minor when we consider them alone, but may become important when we consider them collectively. Our principal concern is repeated disruptions of nesting, resting, or foraging birds. Our knowledge and observations of the affected areas show no evidence that public use at Ingleside will adversely affect the wildlife resource. We also have not observed significant resource degradation, long-term consequences, or cumulative effects on any of the refuges with established programs. However, opening refuge lands to public use can often result in littering, vandalism, or other illegal activities on the refuges. Although we do not expect substantial cumulative impact from public use at Ingleside in the near term, it will be important for refuge staff to monitor such uses and, if necessary, respond to conserve high-quality wildlife resources.

Refuge staff, in collaboration with volunteers, will monitor and evaluate the effects of public use at Ingleside to discern and respond to any unacceptable impacts on wildlife or habitats. To mitigate those impacts, the refuge will close areas where birds such as eagles are nesting.

Overall Refuge visitation may increase due to local tourism. Therefore, all uses on the Refuge may increase over time. However, fishing and crabbing is limited to specific areas so that it would have little cumulative impact with other uses. Fishing and crabbing will be monitored to see if the amount of use occurring on the Refuge is becoming too great. Therefore, there are no anticipated cumulative impacts.

**Public Review and Comment:**

This compatibility determination will be submitted for public review and comment as an appendices to the Environmental Assessment for the Draft Comprehensive Conservation Plan for the Eastern Neck NWR in full compliance with NEPA.

**Determination:** (Check One)

Use is Not Compatible

Use is Compatible With the Following Stipulations

**Stipulations Necessary to Ensure Compatibility:**

Compliance by Kent County with the terms of the MOU will ensure compatibility.

**Justification:**

Ingleside Recreation Area is not located in key habitats required for endangered species or other species of concern. Impacts to wintering migratory waterfowl are offset by closing the area October 1 to March 31 each year. The activities that take place in the Recreation are predominately wildlife-dependent and are supported by the 1997 Refuge Improvement Act. Fiscal costs to the Service are nearly nonexistent but the fiscal benefits are significant by having the County responsible for the management of this area.

The operation of Ingleside Recreation Area of Eastern Neck NWR by Kent County for wildlife dependent recreation activities will not materially interfere with or detract from the mission of the National Wildlife Refuge System or the purposes for which Eastern Neck was established.

**Signature:** Refuge Manager: \_\_\_\_\_  
(Signature and Date)

**Concurrence:** Regional Chief: \_\_\_\_\_  
(Signature and Date)

**Mandatory 10-year Reevaluation Date:** \_\_\_\_\_

**MEMORANDUM OF UNDERSTANDING  
BETWEEN THE  
U.S. FISH AND WILDLIFE SERVICE  
DEPARTMENT OF THE INTERIOR  
AND THE  
COUNTY OF KENT  
MARYLAND**

This UNDERSTANDING entered into by the Department of the Interior through the U.S. Fish and Wildlife Service, hereinafter referred to as the Service, and Kent County, Maryland, hereinafter referred to as the County, witnesseth that:

WHEREAS the Service, pursuant to the Recreational Use of Conservation Areas Act (Pub. L. 87-714, as amended; 16 U.S.C. 460k to 460k-4), is authorized to provide for recreational use of areas within the National Wildlife Refuge System to the extent that such use will not conflict with the primary purposes for which the areas were established; and

WHEREAS it is the desire of the parties of this Agreement to cooperate in the maintenance of the Ingleside Recreation Area, Eastern Neck National Wildlife Refuge, Kent County, Maryland, to be administered by the County through their Commissioners for seasonal public recreation purposes to the extent compatible with wildlife requirements; and

WHEREAS the County represents itself as authorized and willing to assume the responsibility and costs of maintaining and operating portions of the aforesaid Refuge more fully described hereinafter;

NOW, THEREFORE, it is mutually agreed, in consideration of the covenants and releases hereinafter contained, that

1. For the purposes of maintaining portions of the said Refuge, the Service grants to the County the seasonal use and control of the following lands:

Commencing at Corner 1 of the U.S. Tract (12) in the centerline of Eastern Neck Island Road, a 3/4" x 12" iron pipe set 1" below grade; thence N 27 degrees 30' E with line 1-2 of said Tract (12), and along the center of Eastern Neck Island Road approximately 697 feet to Corner 1, the Place of Beginning, a point in the centerline of Eastern Neck Island Road and the junction of Ingleside Road; thence in a corridor 25' either side of the centerline of said Ingleside Road on a bearing N 44 degrees 30' W a distance of 3498 feet to a point in a curve; continuing with the centerline and corridor N 1 degree 30' W, 1510 feet to a point in the centerline adjoining a line of trees being Corner 2; thence in a line from Corner 2 with the line of trees N 77 degrees 30' E; 65 feet to Corner 3; N 2 degrees 00' W, 329 feet to Corner 4; N 5 degrees 30' E, 300 feet to Corner 5, a point in the mean high water line of the Chesapeake Bay; thence westerly with the said line of mean high water along the east shore of Chesapeake Bay approximately 1200 feet to Corner 6, a point in the mean high water line of Chesapeake Bay; thence in a line S 23 degrees 45'

E, 30 feet to Corner 7; S 70 degrees 00', 388 feet to Corner 8; S 12 degrees 30' E, 441 to Corner 9; S 41 degrees 45' E, 185 feet to Corner 10; S 75 degrees 30' E, 245 feet to Corner 11; S 57 degrees 30' E, 82 feet to Corner 12; N 77 degrees 30' E, 32 feet to Corner 2; thence on reciprocal bearings to the Place of Beginning, being a portion of U.S. Tract (15) containing 11.2 acres, more or less, exclusive of the access corridor acreage.

2. The County agrees not to use or to permit the use of said above-described lands or any portion thereof, for any purposes which is inconsistent or incompatible with the purposes herein specified, nor grant or assign any rights under this Agreement.

3. It is mutually understood and agreed that the United States has the sole right to grant rights and privileges on the above-described lands relative to uses or entry upon lands not specifically authorized by this Agreement and including, but not limited to, surface exploration or prospecting for minerals, geophysical surveys, easements or rights-of-way for roads, highways, pipelines, telephone lines, electric power transmission lines, or any public utilities and surveys incident thereto, etc., on or affecting the above-described lands.

4. The County agrees to notify promptly the Service through the Refuge Manager, Eastern Neck National Wildlife Refuge, of any intention to abandon the project.

5. The County shall not remove or permit to be removed sand, gravel, or any products of the land. The County shall not interfere with any person entering on the above-describe lands under the authority of the United States.

6. The County will take all reasonable action to protect and preserve the area and perform maintenance as may be required to prevent habitat destruction.

7. The County agrees to file an annual report to the Refuge Manager as of January 1, reciting the use made of the land and maintenance performed thereon, and expenditures made thereon during the preceding calendar year ending December 31.

8. The County will assume custody, maintenance, and use of the lands for public recreation purposes without restrictions as to race, creed, color, sex, or national origin. However, such public recreation will be limited to photography, hiking, nature study, bicycling, access to fin fishing, shell fishing, crabbing, wading, and picnicking associated with such pursuits. Pets will be permitted in designated parking areas if on a leash not exceeding ten feet in length.

9. The County will at the termination of the Agreement deliver up and surrender the property in as good a condition as of the date hereof.

10. The County will have seasonal control of the area from May 1 through September 30 during daylight hours. After hours and during the closed period the Service will exercise jurisdiction.

11. The County maintenance will include, but not be limited to, restoration repairs, grading of roads and parking lots, mowing and garbage pickup.

12. The County will have use of those picnic tables and permanent grills existing on the area. Subsequent repairs and/or replacement will be the responsibility of the County.

13. No powered watercraft of any kind will be launched from the Ingleside Recreation Area boat ramp with the exception of outboard driven craft with a rating of 5 HP or less.

14. No member of or delegate to Congress or resident commissioner shall be admitted to any share or part of this Agreement, or to any benefit to arise therefore, separate and apart from any benefit accruing to the general public.

15. All activities on the above described lands are subject to the laws and regulations governing uses of the National Wildlife Refuge System.

This Agreement shall become effective as of the date of a letter or notice from the Service informing the County that execution of the Agreement has been completed and that the above-described lands are available for use by the County. This Agreement shall remain in force for a period of five years with option of renewal for additional periods as may be mutually agreed upon by the Service and the County. At any time the County abandons the project or fails to utilize the lands for the purposes described herein, or at the discretion of the Service, the privileges herein granted may be revoked in whole or in part.

IN WITNESS WHEREOF the parties have executed this Cooperative Agreement on the day, month, and year opposite their signatures thereof.

THE COUNTY COMMISSIONERS OF KENT COUNTY, MARYLAND

BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
PRESIDENT

BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
MEMBER

BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
MEMBER

U.S. FISH AND WILDLIFE SERVICE, DEPARTMENT OF THE INTERIOR

BY: \_\_\_\_\_ DATE: \_\_\_\_\_  
REGIONAL DIRECTOR

## Appropriate Refuge Use: Research Conducted by Non-Service Personnel

### FINDING OF APPROPRIATENESS OF A REFUGE USE

Refuge Name: Eastern Neck National Wildlife Refuge

Use: Research Conducted by Non-Service Personnel

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.**

## **Justification for a Finding of Appropriateness of a Refuge Use**

**Refuge:** Eastern Neck NWR

**Use Justification:** Research Conducted by Non-Service Personnel

### **Justification:**

The Service encourages and supports research and management studies on refuge lands that will improve and strengthen decisions on managing natural resources. The refuge manager encourages and seeks research that clearly relates to approved refuge objectives, improves habitat management, and promotes adaptive management. Priority research addresses information on better managing the Nation's biological resources that generally are important to agencies of the Department of Interior, the National Wildlife Refuge System, and State Fish and Wildlife Agencies that address important management issues, or demonstrate techniques for managing species or habitats.

Researchers will be required to apply for a refuge special use permit and submit a final report to the refuge upon completion of their work. For long-term studies, we may also require interim progress reports. In addition, we ask researchers to present the findings of their work at the Annual Chesapeake Marshlands Science meeting in either a poster or oral presentation. We encourage researchers to publish their research in peer-reviewed publications. All reports, presentations, posters, articles or other publications will acknowledge the Refuge System and the Eastern Neck NWR as partners in the research. We will ask researchers to acknowledge the refuge to ensure that the research community, partners, and the public understand that the research could not have been conducted without the refuge having been established, its operational support, and that of the Refuge System.

Natural and cultural resources research has been determined to be an appropriate use on Eastern Neck NWR.

## **COMPATIBILITY DETERMINATION**

**Use:** Research by Non-Service Personnel

**Station Name:** Eastern Neck National Wildlife Refuge (Chesapeake Marshlands NWR Complex)

### **Establishing and Acquisition Authorities:**

The Chesapeake Marshlands National Wildlife Refuge Complex (CMNWRC) is composed of four nationally significant wildlife areas: Eastern Neck NWR, Blackwater NWR, Martin NWR, and Susquehanna NWR with several separate divisions.

Eastern Neck NWR was established by executive order on December 27, 1962, under the Migratory Bird Conservation Act (MBCA) (16 U.S.C. 715 d) “for use as an inviolate sanctuary, or for any other management purpose, for migratory birds.” Additional tracts were acquired through 1966 under the MBCA authority to bring the refuge to its approved acquisition boundary containing 2,286 acres. By virtue of its strategic location at the confluence of the Chester River and the Chesapeake Bay, it is of significant value to migrating and wintering waterfowl on Maryland’s Upper Eastern Shore.

### **Refuge Purpose(s):**

All tracts were acquired under the authority of the Migratory Bird Conservation Act (16 U.S.C. § 715 d), the purpose of the acquisition is “...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds.”

### **National Wildlife Refuge System Mission:**

“To administer a national network of land and waters for the conservation, management, and where appropriate, the 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 (National Wildlife Refuge System Improvement Act of 1997, Public Law 105-57).”

### **Description of Use:**

This evaluation is to determine the compatibility of scientific research with the purposes for which the affected tracts were acquired.

#### **(A) What is the Use? Is the use a priority use?**

Research and studies by non-Service personnel will be permitted throughout the refuge. The research will focus on the study of flora, fauna, ecology, cultural history, archaeological and public uses of Eastern Neck.

This use is not a priority public use, but these studies provide analysis and information about the biological, cultural, natural and public use history of the Eastern Neck ecosystem. Such

information will be useful to managers making decisions on habitat management, public use, and related management decisions for the conservation of the natural resources of Eastern Neck NWR. Collections of water, soil, plants, and invertebrates will be allowed in conjunction with research when appropriate. For each research project, a Special Use Permit will be prepared describing the specific research activities.

The Directors of the U.S. Fish and Wildlife Service (FWS) and the U.S. Geological Survey (USGS) have endorsed the guidelines and recommendations included in the 2006 final report of the National Ecological Assessment Team entitled “Strategic Habitat Conservation” which encourages the integration of scientific information with management decisions (FWS 2006). Similarly, “Fulfilling the Promise” published in 1999, explained the importance of conducting “good science” on lands managed by the National Wildlife Refuge System within the U.S. Fish and Wildlife Service (FWS 1999). Managers and biologists are required to demonstrate that sound scientific information is used to manage lands within the National Wildlife Refuge System. In addition, wildlife professionals are encouraged to follow the rigorous scientific guidelines as described by The Wildlife Society in their most recent publication entitled “Techniques for wildlife investigations and management” (Braun 2005). Collecting, analyzing, and using the most credible scientific information is vital to effectively managing lands within the National Wildlife Refuge System including Eastern Neck National Wildlife Refuge.

Managers and biologists are increasingly asked to provide quantitative scientific information to support management practices on lands managed by the National Wildlife Refuge System (Cooperrider 1986, FWS 2006). Scientific information is needed primarily in four areas including: (1) baseline inventory to determine the occurrence and spatial distribution of flora and selected fauna; (2) a long-term monitoring program to determine temporal trends in selected flora and fauna; (3) an adaptive management program to guide significant habitat and population management actions such as invasive species control, moist soil and cropland management, prescribed burning, marsh restoration, and forest management programs; and (4) detailed research in habitat-species relationships (e.g. waterfowl use of refuge habitats and habitat requirements for threatened and endangered species and forest interior dwelling species).

**(B) Where would the use be conducted?**

These studies will be conducted throughout the Eastern Neck National Wildlife Refuge. The exact locations of the studies will be determined by the focus of the study. Each proposal will be evaluated by refuge and Complex staff and other subject matter experts to determine the value of the study and study sites.

**(C) When would the use be conducted?**

Depending on the research project, activities could be conducted at any time throughout the year. Individual research projects may require one or two visits per year; while other projects may require daily visits. The time allowed for each project will be limited to the minimum required to complete the project. This activity will be limited during designated hunts. The Wildlife Trail and other non-hunt areas will be available during the hunts while other areas of the refuge will be

closed to these activities due to safety concerns. If public use events, such as the annual fishing derby, conflict with research projects, the public use event shall be given priority as deemed appropriate by the Project Leader for the Chesapeake Marshlands NWR Complex.

The majority of research projects for flora would be conducted during the growing seasons (spring, summer, early fall). Research projects for fauna would be based on the life cycles and migration patterns of the organisms under study. For example, waterfowl use is heaviest during the fall and winter while shorebird use is greater during the spring and late summer. Bat and amphibian surveys would be conducted during evening hours while forest interior dwelling bird species would be studied during the hours near sunrise.

**(D) How would the use be conducted?**

Researchers will be required to submit a written proposal that outlines the methods, materials, timing, and justification for proposed project. These proposals will be reviewed by refuge and Complex staff to assess the appropriateness of the research for the Refuge, environmental impacts, assure that the projects do not interfere with other resources operations, and provide suggested modifications to the project to avoid disruptions to refuge wildlife and operations.

Research will be restricted to those projects that will be expected to enhance the body of knowledge about the natural and cultural history of the Eastern Neck ecosystem. Researchers will be expected to obtain and present any additional federal, state, and archaeological permits if applicable. We will not allow any research project that lacks an approved study plan and protocol or compromises public health and safety.

Some research studies may require access by boat. Boat access will be limited to public boat landings. Boat operators in Service boats must have taken and passed the Motorboat Operator's Certification Course (MOCC).

**(E) Why is the use being proposed?**

The Service encourages and supports research and management studies on refuge lands that will improve and strengthen decisions on managing natural resources. The refuge manager encourages and seeks research that clearly relates to approved refuge objectives, improves habitat management, and promotes adaptive management. Priority research addresses information on better managing the Nation's biological resources that generally are important to agencies of the Department of Interior, the National Wildlife Refuge System, and State Fish and Wildlife Agencies that address important management issues, or demonstrates techniques for managing species or habitats.

Scientific research is needed to follow the vision and direction outlined in Strategic Habitat Conservation (FWS 2006) and Fulfilling the Promise (FWS 1999) and to more effectively manage the natural resources at Eastern Neck NWR.

The refuge may also consider research for other purposes which may not be directly related to refuge-specific objectives, but would contribute to the broader enhancement, protection, use,

preservation and management of populations of fish, wildlife and plants, and their natural diversity within the region or flyway. Such research projects may generate information that is relevant to management questions that may arise in the future or that may be useful to other refuges within the Complex or within Region 5. These proposals must comply with the Service’s compatibility policy.

The refuge may develop a list of research needs that will be provided to prospective researchers or organizations upon request. Refuge staff interact with members of the scientific community on a regular basis and often generate ideas for future research projects through such interactions. Each year at the Chesapeake Marshlands NWR Complex Science Meeting, researchers and Complex staff discuss previous, current, and future research needs to assist FWS in managing their resources in the most effective and efficient ways possible. 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:**

This activity can be supported within existing funding levels for the refuge. Any research projects that will be conducted by non-FWS staff will be reviewed, coordinated, processed and approved or modified under a Special Use Permit on a project by project basis.

**Cost Breakdown:**

The following is the list of annual costs to the Refuge and to scientific research partners to administer and manage the research program on an annual basis.

Refuge Personnel Costs

Protocol review (10 @ \$30/hour) .....	\$300
Coordination with Research Partners (10 hrs @ \$30/hr) .....	\$300
Special Use Permit development and review (5 hrs @ \$30/hr) .....	\$150
Annual Science meeting (10 hours @ \$30/hr).....	<u>\$300</u>
 Total .....	 \$1,050

Non-Service Costs Provided by Partnerships, Grants, and Donations

Protocol development and review (1,000 hours @ \$30/hour). ....	\$30,000
Coordination with Research Partners (100 hrs @ \$30/hr) .....	\$3,000
Special Use Permit development and submission (50 hrs @ \$30/hr) .....	\$1,500
Data collection and analysis (5,000 hrs @ \$30/hr) .....	\$150,000
Annual Science meeting (50 hours @ \$30/hr).....	<u>\$1,500</u>
 Total .....	 \$186,000

### **Anticipated Impacts on Refuge Purpose(s):**

*Short-term impacts:* Research activities may disturb fish and wildlife through observation, a variety of wildlife capture techniques, banding, and accessing the study area by foot or vehicle. For example, the presence of researchers may cause disruption of birds on nests or breeding territories, or increase predation on nests. Efforts to capture birds may cause disturbance, injury, or death to groups or to individual birds. The energy cost of disturbance may be appreciable in terms of disruption of feeding, displacement from preferred habitat, and the added energy expended to avoid disturbance.

It is possible that direct or indirect mortality could result as a by-product of research activities. Mist-netting or other wildlife capture techniques, for example, may cause mortality directly through the capture method or intrapredation, and indirectly through capture injury or stress caused to the organism. If such mortalities do occur, there will be no impact to the overall population.

Wildlife habitats may also be impacted by research. Sampling activities may cause compaction of soils and the trampling of vegetation, the establishment of temporary foot trails and boat trails through vegetation beds, disruption of bottom sediments, and minor tree damage when equipment is temporarily placed. The removal of vegetation or sediments by core sampling methods may cause increased localized turbidity and disrupt non-target plants and animals.

Installation of posts, equipment platforms, collection devices and other research equipment in open water may present a hazard if said items are not adequately marked and/or removed at appropriate times or upon completion of the project. Negligible vehicle emissions, contaminants from vehicle fluids and very minor erosion from roads may result from vehicle access to the research sites.

Research efforts may also discover methods that result in a reduction in impacts described above. As new and innovative techniques become available, FWS will encourage researchers to use the least intrusive research methodologies and techniques.

*Long-term impacts:* No long-term impacts are expected and the Refuge Manager can control the potential for long-term impacts through Special Use Permits.

*Cumulative impacts:* Cumulative impacts would only occur if multiple research projects were occurring on the same resources at the same time or if the duration of the research is excessive. No cumulative impacts are expected and the Refuge Manager can control the potential for cumulative impacts through Special Use Permits. Managers retain the option to prohibit research on the Refuge which does not contribute to the purposes of the Refuge or the mission of the Refuge System, or causes undue resource disturbance or harm.

### **Public Review and Comment:**

This compatibility determination will be submitted for public review and comment as an appendix to the Environmental Assessment for the Draft Comprehensive Conservation Plan for the Eastern Neck NWR in full compliance with NEPA.

**Determination:** (Check One)

**Use is Not Compatible**

**Use is Compatible With the Following Stipulations**

**Stipulations Necessary to Ensure Compatibility:**

- Collections will be restricted to permittees who have consulted refuge staff concerning special requirements needed to assure that the collections do not disrupt sensitive flora and fauna and to assure that collections do not disrupt refuge operations.
- Highly intrusive or manipulative research is generally not permitted in order to protect native wildlife populations and habitats in which they live.
- Permittees must present appropriate state and federal permits that may be required in addition to refuge permit.
- Research projects will follow all state of Maryland environmental and wildlife regulations.
- Field activities will be monitored to assure compliances with permit conditions and assess impacts.
- If the proposed research methods would impact or potentially impact complex resources (habitat or wildlife), it must be demonstrated that the research is necessary (i.e. critical to survival of a species, will enhance restoration activities of native species, will help in control of invasive species or provide valuable information that will guide future complex activities), and the researcher must identify the issues in advance of the impact.
- Research Special Use Permits will be issued only for bona-fide natural resource and cultural research purposes to individuals representing agencies, universities or other organizations.
- Researchers must clearly mark posts, equipment platforms, fencing material and other equipment left unattended so as to not pose a hazard. Such items shall be removed as soon as practicable upon completion of the research including flagging.
- Cultural and archeological surveys will be coordinated with the Regional Historical Preservation Officer and the appropriate State Historic Preservation Officer to assure compliance with the Archeological Resource Protection Act.
- All research activities will be performed in accordance with recommendations and guidelines described in the Special Use Permits for each research project.
- To the extent possible, within existing budget and personnel constraints, we will conduct research projects that promote the new vision and direction of the Fish and Wildlife Service as outlined in “Strategic Habitat Conservation: final report of the National Ecological and Assessment Team” (FWS 2006).

**Justification:**

Research is compatible with the mission and trust resource responsibilities of the U.S. Fish and Wildlife Service and is, in fact, necessary to effectively manage those trust resources. Research and monitoring activities have been conducted at Eastern Neck NWR since it was established in 1962.

Research by third parties plays an integral role in Refuge management by providing information needed to manage the Refuge on a sound scientific basis. Investigations into the biological, physical, archeological, and social components of the Refuge provide a means to analyze management actions, impacts from internal and outside forces, and ongoing natural processes on the Refuge environment. Research provides scientific evidence as to whether the Refuge is functioning as intended when established by Congress.

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 decisions. Research 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.

**Signature:** Refuge Manager: \_\_\_\_\_  
(Signature and Date)

**Concurrence:** Regional Chief: \_\_\_\_\_  
(Signature and Date)

**Mandatory 10-year Reevaluation Date:** \_\_\_\_\_

**Attachments:** None

**References Cited:**

- Braun, C. E., editor. 2005. Techniques for wildlife investigations and management. Sixth edition. The Wildlife Society, Bethesda, Maryland, USA. 974pp.
- Cooperrider, A. Y., R. J. Boyd, and H. R. Stuart, eds. 1986. Inventory and monitoring of wildlife habitat. U.S. Department of Interior, Bureau of Land Management Service Center, Denver, Colorado. xviii. 858pp.
- Fish and Wildlife Service. 2006. Strategic Habitat Conservation: final report of the National Ecological Assessment Team. Fish and Wildlife Service Report, U.S. Department of the Interior. 45pp.
- Fish and Wildlife Service. 1999. Fulfilling the Promise. Fish and Wildlife Service Report, U.S. Department of the Interior. 92pp.

## Inappropriate Refuge Use: Berry Picking

### FINDING OF APPROPRIATENESS OF A REFUGE USE

Refuge Name: Eastern Neck National Wildlife Refuge

Use: Berry Picking

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.**

### **Justification for a Finding of Inappropriateness of a Refuge Use**

**Refuge:** Eastern Neck National Wildlife Refuge

**Inappropriateness Justification:** Berry Picking

#### **Justification:**

Berry picking is not one of the six priority wildlife dependent recreational uses identified in the National Wildlife Refuge Improvement Act of 1997. This use does not appreciably contribute to the public's understanding and appreciation of the Refuge's natural and cultural resource, nor is the use beneficial to these resources.

This use can contribute to short-term disturbances of nesting birds and other wildlife, as well as trampling of native vegetation, compaction and erosion of sensitive habitats. Berry pickers will need to leave roads and trails to find berry producing plants. Numerous studies have confirmed that people can cause a variety of disturbance reaction in wildlife, including flushing or displacement, heart rate increases, altered foraging patterns and even in some cases, diminished reproductive success. Based on this information, it is likely that berry picking would have similar impacts.

Impacts to native vegetation could occur from movement of people over the landscape. Trampling of vegetation, erosion, littering and vandalism can result from increased public use. An indirect long term impact is the potential for visitors to unintentionally spread invasive species. Wineberry, a non-native invasive species that looks similar to raspberry, is present in dense thickets on the Refuge, and a popular berry picking plant. This plant poses a threat to native plants, and spreads by seed and vegetative means. Time and effort has been put into managing this species throughout the Refuge. Berry pickers may unintentionally spread this plant further on and off the Refuge by moving berries from one place to another. This would be counterproductive to refuge management activities and have a negative impact to refuge habitats.

Berry picking is determined to be an inappropriate use of Eastern Neck NWR based upon the above impacts to wildlife and native vegetation, concerns about potential spread of invasive species, and the fact that the use is not a priority wildlife dependent recreational activity.

## Inappropriate Refuge Use: Competitive Events

### FINDING OF APPROPRIATENESS OF A REFUGE USE

Refuge Name: Eastern Neck National Wildlife Refuge

Use: Competitive Events

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.**

### **Justification for a Finding of Inappropriateness of a Refuge Use**

**Refuge:** Eastern Neck NWR

**Use:** Competitive Events Inappropriateness Justification

**Justification:**

Competitive events would include, but are not limited to, dog trials, cross country running, and bicycle racing. These uses are not wildlife dependent recreational uses under the National Wildlife Refuge Improvement Act of 1997. These events on refuges are not necessary for the safe, practical, and effective conduct of existing wildlife-dependent recreational uses. The effects of this use pose a threat to habitat and wildlife resources, and temporarily displace wildlife. Competitive events do not appreciably contribute to the public’s understanding and appreciation of the Refuge’s natural and cultural resource, nor is the use beneficial to the Refuge’s resources. They would also impact other refuge uses which are wildlife dependent recreational uses.

Competitive events may also have impacts to the refuge’s natural resources. These events can contribute to short-term disturbances of nesting and wintering birds and other wildlife due to the large number of people in attendance. Impacts to native vegetation may also occur from movement of dogs and people over the landscape. Invasive species could be spread further into marsh and forest habitats through the additional traffic. Increased erosion of trails and other sensitive areas could occur with the increased traffic that competitive events produce as well. Additionally, dog trials are prohibited by federal regulation (50 CFR 27.91).

Therefore these uses are not appropriate uses on Eastern Neck National Wildlife Refuge.

## Inappropriate Refuge Use: Geocaching

### FINDING OF APPROPRIATENESS OF A REFUGE USE

Refuge Name: Eastern Neck National Wildlife Refuge

Use: Geocaching

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.**

**Justification for a Finding of Inappropriateness of a Refuge Use**

**Refuge:** Eastern Neck NWR

**Use:** Geocaching Inappropriateness Justification

**Justification:**

Geocaching does not comply with existing Federal Regulations. The placement of any object on a National Wildlife Refuge is a violation of several Federal regulations including but may not be limited to the following:

16USC668dd, 50 CFR 27.93, Abandonment of Property

16USC668dd, 50 CFR 26.21a, Trespass

16USC668dd, 50 CFR 27.63, Search for and removal of other valued objects

16USC668dd, 50 CFR 27.97, Private Operations

Due to the historic and cultural resources within Eastern Neck NWR, geocaching could impact the Service's ability to protect and manage these resources. Finally, geocaching is not a wildlife dependent recreational activity and could potentially impact other refuge management activities on the refuge.

Based upon the above concerns, geocaching has been determined to be an inappropriate use on Eastern Neck NWR.

## Inappropriate Refuge Use: Horseback Riding

### FINDING OF APPROPRIATENESS OF A REFUGE USE

Refuge Name: Eastern Neck 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.**

**Justification for a Finding of Inappropriateness of a Refuge Use**

**Refuge:** Eastern Neck NWR

**Use:** Horseback Riding Inappropriateness Justification

**Justification:**

Horseback Riding is not a wildlife-dependent recreational activity and not one of the priority wildlife dependent public use activities identified in the 1997 National Wildlife Refuge System Improvement Act. Additionally, horseback riding could be a significant source for the introduction of invasive species on the refuge. Invasive species management is a major concern on Eastern Neck NWR and limiting a potential source of introduction is a major management objective.

Other management concerns that impact this use are 1) that the refuge does not have appropriate parking facilities to accommodate the use; 2) there are not adequate trails on the refuge to accommodate horseback riding and; 3) adding horseback riding to a small island could cause conflicts with other wildlife-dependent public uses as well as management activities.

Therefore, horseback riding has been determined as an inappropriate use on Eastern Neck NWR.

## Inappropriate Refuge Use: Non-Service Group Events

### FINDING OF APPROPRIATENESS OF A REFUGE USE

Refuge Name: Eastern Neck National Wildlife Refuge

Use: Non-Service Group Events

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.**

### **Justification for a Finding of Inappropriateness of a Refuge Use**

**Refuge:** Eastern Neck NWR

**Use:** Non-Service Group Events (Weddings, Family Reunions, Funerals, etc.)

**Justification:**

Non-Service group events would include, but are not limited to, weddings, funerals, family reunions, birthday parties, etc. These ceremonies are not wildlife dependent recreational uses under the National Wildlife Refuge Improvement Act of 1997. They do not appreciably contribute to the public’s understanding and appreciation of the Refuge’s natural and cultural resource, nor is the use beneficial to these resources.

Non-Service group events may also have impacts to the refuge’s natural resources. These events can contribute to short-term disturbances of nesting and wintering birds and other wildlife due to the large number of people in attendance. Impacts to native vegetation could occur from movement of people over the landscape. Trampling of vegetation, erosion, littering and vandalism can result from large groups of people. Therefore, non-Service group events have been determined as inappropriate uses of Eastern Neck National Wildlife Refuge.

## Inappropriate Refuge Use: Swimming and Sunbathing

### FINDING OF APPROPRIATENESS OF A REFUGE USE

Refuge Name: Eastern Neck National Wildlife Refuge

Use: Swimming and Sunbathing

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.**

**Justification for a Finding of Inappropriateness of a Refuge Use**

**Refuge:** Eastern Neck NWR

**Use:** Swimming and Sunbathing

**Justification:**

Swimming and sunbathing are not wildlife dependent recreational uses under the National Wildlife Refuge Improvement Act of 1997. The uses may disturb current priority public uses on the refuge. Many refuge visitors use some of the areas where swimming and sunbathing would take place for wildlife observation, interpretation and wildlife photography.

Wildlife and their habitats may be impacted by swimming and sunbathing. Chronic disturbance may partly or entirely displace birds from sensitive areas. Heavy use of the beachfront from this activity may result in significant build up of trash on refuge shorelines.

Swimming and sunbathing have never been allowable uses at Eastern Neck NWR. These uses have been determined to be inappropriate uses of the refuge.