

## Chapter 1



**Snow geese in migration**

*USFWS photo*

# Purpose of and Need for Plan

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## Introduction and Background

This CCP is the culmination of a planning process that began in 1999. Meetings with the public, the State, and conservation partners were held to identify and evaluate management alternatives. A draft Comprehensive Conservation Plan and Environmental Assessment (CCP/EA) were distributed in September 2003. This final CCP presents the management goals, objectives, and strategies that we believe will best achieve our vision for the refuge, contribute to the National Wildlife Refuge System (Refuge System) mission, achieve the purposes of the refuges, fulfill legal mandates, and serve the American public.

## Refuge Overview

This CCP covers the Eastern Shore of Virginia and Fisherman Island National Wildlife Refuges (refuges) (see Map 1-1).

### Eastern Shore of Virginia National Wildlife Refuge

The Eastern Shore of Virginia Refuge consists of 1,123 acres. Of that total acreage, 1,015 acres are located at the southern tip of the Delmarva Peninsula in Northampton County, Virginia, at the mouth of the Chesapeake Bay (see Map 1-2). The remaining 108 acres are located on Skidmore Island, which lies one mile east of the mainland.



**Wood thrush, a neotropical migratory bird of the Eastern Shore of Virginia Refuge.**

*USFWS photo*

The Eastern Shore of Virginia Refuge contains a variety of habitats such as maritime forest, myrtle and bayberry thickets, grassland, fresh and brackish ponds, tidal salt marsh, and beach. The refuge and its adjoining woodlands are considered one of the most important migratory bird concentration points along the East Coast. This importance stems from the fact that the Delmarva Peninsula acts as a geographic funnel for migratory birds in the fall. Millions of migratory birds rest and feed on the Eastern Shore of Virginia Refuge until favorable winds assist them in crossing the Chesapeake Bay.

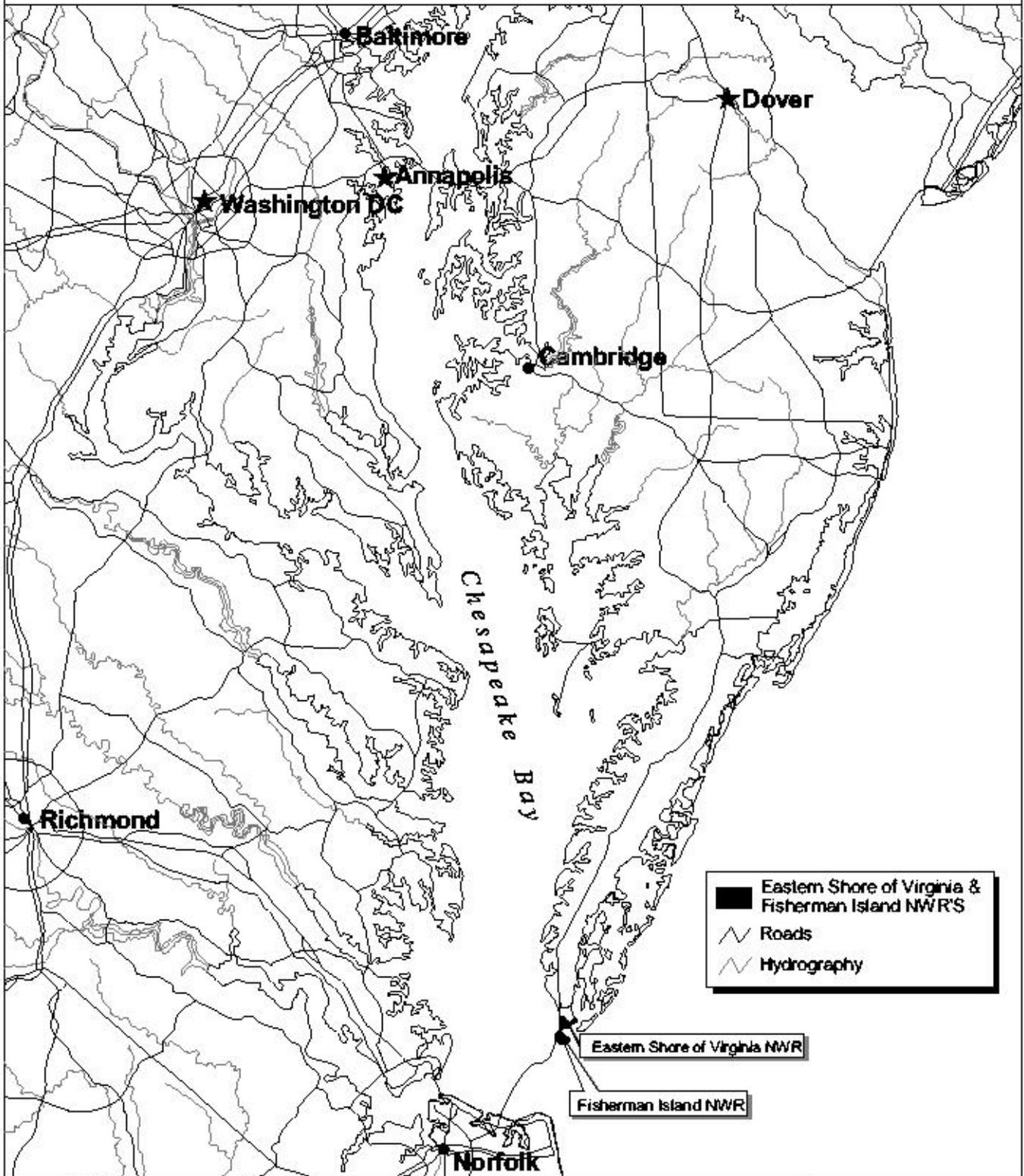
### Fisherman Island National Wildlife Refuge

Fisherman Island is Virginia's southernmost barrier island. It is separated from the Eastern Shore of Virginia Refuge by approximately one-half mile of sea called Fisherman's Inlet (see Map 1-3). Accretion continues to expand the island's size, currently estimated at 1,850 acres.

Habitat succession has formed a mosaic of vegetative communities capable of withstanding the harsh conditions present on the island. The variety of habitats combined with the geographic location of the island, the accessibility of food, protective shrub and thicket cover, and minimal human disturbance make this island an important stopover location for migratory birds. Fisherman Island, however, is not undisturbed. The Chesapeake Bay Bridge-Tunnel (Bridge-

## Vicinity Map

### *Eastern Shore of Virginia & Fisherman Island Refuges*



	Eastern Shore of Virginia & Fisherman Island NWR'S
	Roads
	Hydrography

Eastern Shore of Virginia NWR

Fisherman Island NWR

**Data Sources:**

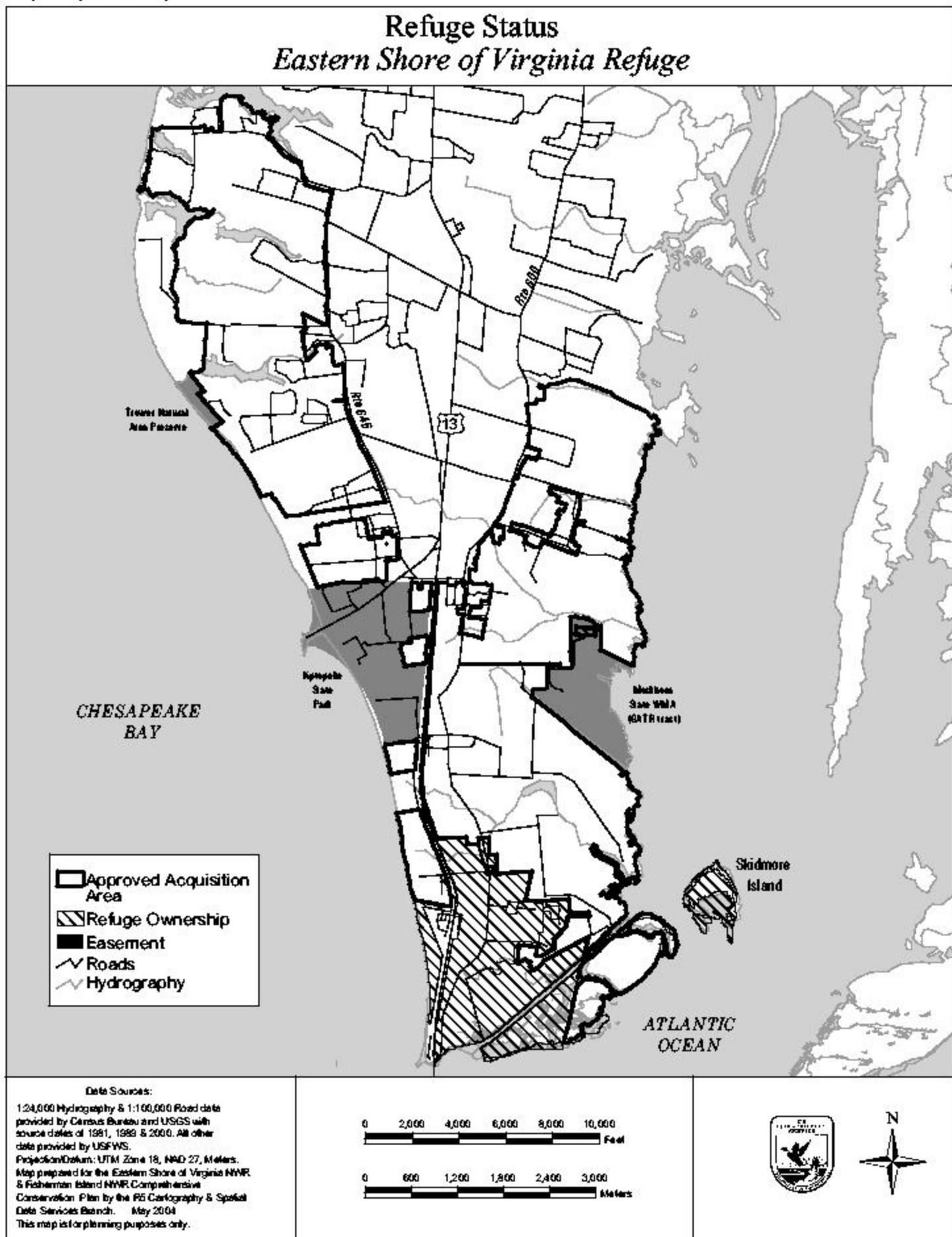
All base data provided by USGS. Ecosystem and Refuge Boundaries provided by USFWS.

Map prepared for the Eastern Shore of Virginia NWR & Fisherman Island NWR Comprehensive Conservation Plan by the RS Cartography & Spatial Data Service Section. March 2003

This map is for planning purposes only.

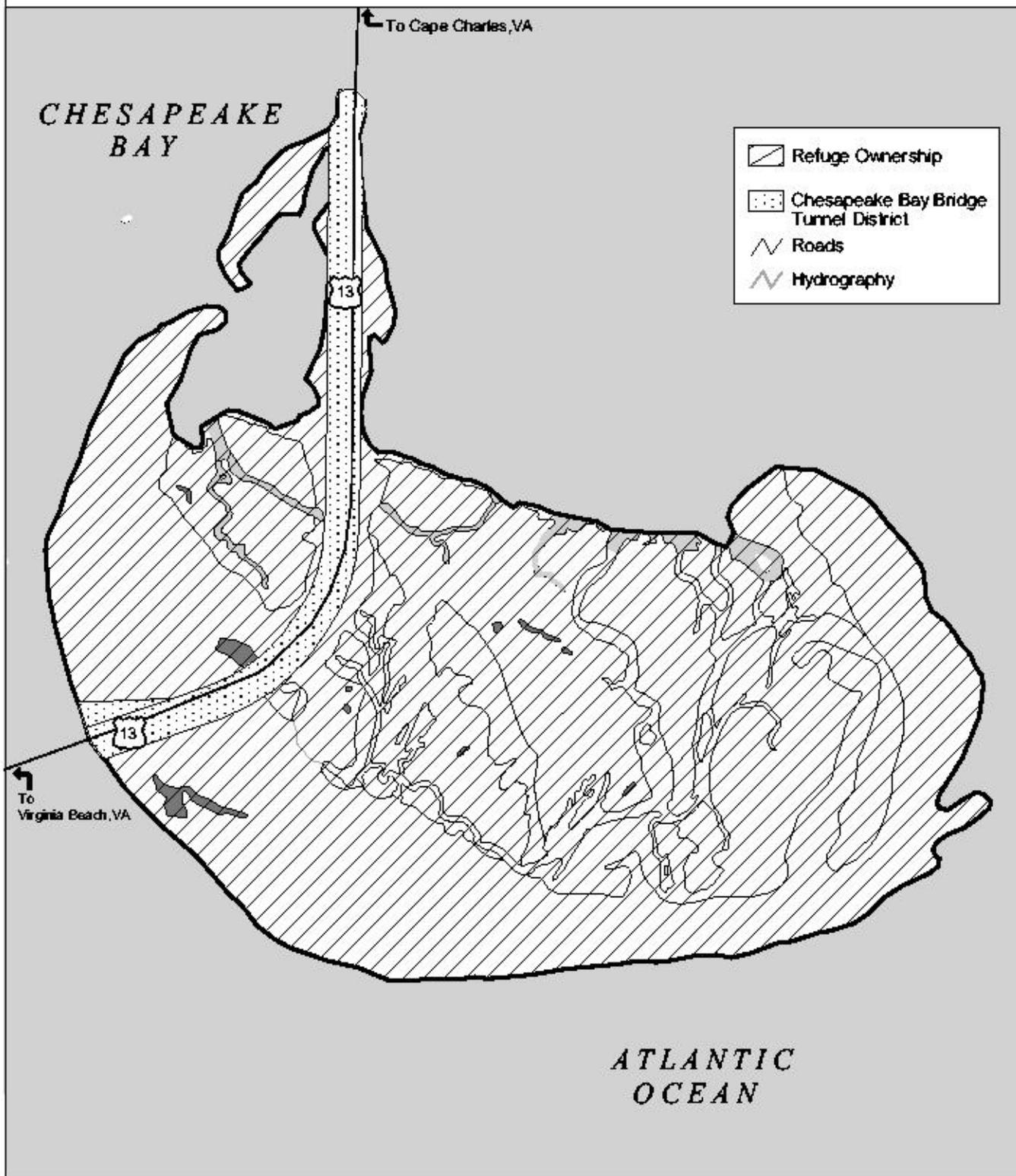


Map 1-2 (Corrected)

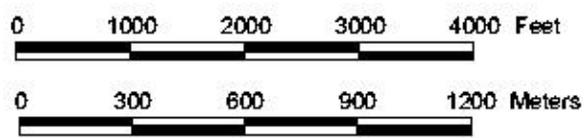


# Refuge Status

## *Fisherman Island Refuge*



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



Tunnel), which links mainland Virginia to the eastern shore, cuts through the western part of the island.

### Refuge Land Acquisition History

Eastern Shore of Virginia Refuge was created in 1984 when 180 acres were transferred to the Service from the U.S. Air Force through the General Services Administration. In 1995 the Chesapeake Bay Bridge-Tunnel Authority (Bridge-Tunnel Authority) conveyed a 70-acre tract to the U.S. Fish and Wildlife Service (Service). This was done in compliance with a requirement of mitigation for the parallel crossing of the Chesapeake Bay

Bridge-Tunnel. In 1997 the Bridge-Tunnel Authority gave the Service a 66-foot-wide abandoned railroad bed (19 acres) in return for a four-acre parcel on Fisherman Island. The parcel on Fisherman Island was used to construct the abutments for the new Chesapeake Bay Bridge-Tunnel. The most recent land acquisition activity was the purchase of the Wise Point Corporation property (376 acres) in 2001. Total acreage for the refuge is now 1,123 acres.

The Eastern Shore of Virginia refuge also includes Skidmore Island, sometimes called “ Long Point Island”, located

approximately 1,000 feet off the mainland. The Service purchased the 108.5 acre-island from the Nature Conservancy in 1987.

Fisherman Island Refuge was established in 1969, but it was not until 1973 that sole ownership rights were transferred to the Service by the Department of the Navy. Recent land acquisition activities include the purchase of Fisherman Island’s eastern half (825 acres) in 1998 and transfer of the remaining 25 acres from the U.S. Navy in 2000 to complete the refuge. Total acreage for Fisherman Island Refuge is now estimated at 1,850 acres, though that number fluctuates with accretion and erosion events.

A summary of the land acquisition history for both refuges is available in the following tables:



**Eastern Shore of Virginia Refuge.**  
*USFWS photo*

Table 1.1 Eastern Shore of Virginia National Wildlife Refuge - Land Acquisition History

<b>Year Acquired</b>	<b>Acres (rounded)</b>	<b>Comments</b>
1984	180	Transfer from U.S. Air Force (tract 4,8,16,17,21,22,23,27)
1986	369	Purchases from The Nature Conservancy (former CBBTD*) (tract 10a-b)
1987	108.5	Purchase of Skidmore Island (tract 10c, 10c-I)
1995	70	Mitigation for Bridge expansion (tract 15, 15a)
1997	19	Railroad ROW (tract 15b, 15c)
2001	376	Wise Point Corporation Tract (tract 11)
<b>Total</b>	1,122.5	

\* CBBTD Chesapeake Bay Bridge-Tunnel District

Table 1.2 Fisherman Island National Wildlife Refuge - Land Acquisition History

<b>Year Acquired</b>	<b>Acres (rounded)</b>	<b>Comments</b>
1973	1,000	Transfer from Navy (tract 10)
1998	835	Eastern portion of island (tract 11)
2000	25	Recent Navy transfer along Rt. 13 (tract 14)
<b>Total</b>	1,850	

## Purpose of and Need for Plan

Developing a Comprehensive Conservation Plan (CCP) is vital to refuge management. The purpose of this CCP is to establish strategic management direction over the next 15 years by:

- Providing a clear statement of the desired future conditions for habitat, wildlife, visitor services, and facilities;
- Providing refuge neighbors, visitors, and partners with a clear understanding of the reasons for management actions;
- Ensuring that refuge management reflects the policies and goals of the National Wildlife Refuge System (Refuge System) and fulfills legal mandates;
- Ensuring the compatibility of current and future public uses and other refuge uses;
- Providing long-term continuity and direction for refuge management;
- Providing direction for staffing, operations, maintenance, and developing budget requests.



**Saltmarsh view, Eastern Shore of Virginia NWR.**

*USFWS photo*

The need to develop a CCP for each of the refuges is two-fold. First, the National Wildlife Refuge System Improvement Act of 1997 (Refuge Improvement Act) requires all National Wildlife Refuges to have a CCP in place by 2012 to help fulfill the mission of the Refuge System. Second, there is currently no master plan establishing priorities and ensuring consistent and integrated management for the two refuges.

## Legislation Establishing Refuge Purposes

Refuges can either be established administratively under several authorities or established with specific legislation by Congress. The Eastern Shore of Virginia Refuge was established administratively through the following authorities:

*Transfer of Certain Real Property for Wildlife Conservation Purposes Act* (16 U.S.C. 667b–667d): “authorizing land to be transferred without reimbursement to the Secretary of the Interior if the land has particular value for migratory birds.”

*Refuge Recreation Act* (16 U.S.C. 460k–460k–4): “authorizing acquisition of lands and interests suitable for: 1) fish and wildlife-oriented recreation, 2) protection of natural resources, and 3) conservation of endangered or threatened species...”

*Migratory Bird Conservation Act* (16 U.S.C. 715–715d, 715e, 715f–715r): authorizing the acquisition of land “...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds.”

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## **National and Regional Mandates Guiding the CCP**

This section presents hierarchically, from the national level to the local level, highlights of legal mandates, Service policy, and existing resource plans that directly influenced development of this CCP.

### **U .S. Fish and Wildlife Service and its Mission**

National Wildlife Refuges are managed by the Service, part of the Department of Interior. The mission of the Service is:

*“...working with others, to conserve, protect and enhance fish, wildlife, and plants and their habitats for the continuing benefit of the American people.”*

Natural resources entrusted to the Service for conservation and protection are: migratory birds, endangered species, interjurisdictional fish, wetlands, and certain marine mammals. The Service manages the Refuge System and National Fish Hatcheries, enforces federal wildlife laws and international treaties on importing and exporting wildlife, assists with state fish and wildlife programs, and helps other countries develop wildlife conservation programs.

### **The National Wildlife Refuge System and its Mission**

The Refuge System is the world’s largest collection of lands set aside specifically for the conservation of wildlife and ecosystem protection. The Refuge System began in 1903 when President Theodore Roosevelt designated three-acre Pelican Island, a pelican and heron rookery in Florida, as a bird sanctuary. Today over 535 National Wildlife Refuges exist in every state and in a few U.S. Territories, totaling more than 93 million acres nationwide. Over 34 million visitors annually hunt, fish, observe and photograph wildlife,

and participate in environmental education and interpretive activities on refuges.

Congress passed the National Wildlife Refuge System Improvement Act in 1997. This legislation established a unifying mission for the Refuge System, a new process for determining compatible public use activities on refuges, and the requirement to prepare CCPs for each refuge. The Refuge Improvement Act states that, first and foremost, the Refuge System must focus on wildlife conservation. It further states that the national mission, coupled with the purpose(s) for which each refuge was established, will provide the principal management direction for each refuge. The mission of the Refuge System is:

*“...to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans”* (National Wildlife Refuge System Improvement Act of 1997, Public Law 105–57).

The Refuge Improvement Act identifies six wildlife-dependent public uses—hunting, fishing, wildlife observation and photography, environmental education and interpretation—that should be facilitated on National Wildlife Refuges and shall receive priority consideration in the CCP process. The Act also declares that all existing or proposed refuge uses must be “compatible” with the purposes of the refuge and the mission of the system. The refuge manager determines if an existing or proposed refuge use is compatible by ensuring the use does not materially interfere with or detract from the fulfillment of the National Wildlife Refuge System mission or the purposes of the refuge.



**Saltmarsh view, Fisherman Island NWR**  
*USFWS photo*

### Land Acquisition Policy

The Service acquires land and waters for the Refuge System consistent with legislation, congressional guidelines and Executive Orders for the conservation of fish and wildlife and their related habitat, and to provide wildlife-dependent public use for educational and recreational purposes (USFWS 1982). Land acquisition planning typically identifies important wildlife habitat in need of protection. Such protection can be obtained by Service acquisition or through the efforts of other agencies, interests or individuals. Acquisition of a new refuge or major additions to existing refuges normally require an Environmental Assessment (EA) or an Environmental Impact Statement (EIS) to comply with NEPA. The EA or EIS process establishes an acquisition boundary and approves land acquisition within that boundary. The CCP/EA implemented the EA process and therefore complies with NEPA.

## Other Service Guidance and Conservation Plans

While the Refuge System mission and the purposes for which each refuge was established provide the foundation for management, National Wildlife Refuges are also governed by other Federal laws, Executive Orders, treaties, interstate compacts, regulations, and conservation initiatives pertaining to the conservation and protection of natural and cultural resources. Listed below are the guidelines that are most pertinent to this CCP.

The U.S. Fish and Wildlife Service Manual and the National Wildlife Refuge System Manual contain Service policies providing guidance on planning and the day-to-day management of a refuge.

### Fulfilling the Promise

A 1999 report entitled “Fulfilling the Promise, The National Wildlife Refuge System: Visions for Wildlife, Habitat, People and Leadership” (USFWS 1999a) is the culmination of a year-long process by teams of Service employees to evaluate the Refuge System nationwide. This report was the focus of the first National Refuge System Conference, held in October 1998 and attended by refuge managers, other Service employees, and representatives from leading conservation organizations. The report contains 42 recommendations packaged with three vision statements dealing with wildlife and habitat, people, and leadership. This CCP deals with all three of these major topics, and we have looked to the recommendations in the document for guidance throughout the plan. For example, the “Fulfilling the Promises” document specifically recommends developing systematic species and habitat monitoring. In this CCP, we establish the need to conduct standardized surveys and to use peer-reviewed protocols to collect baseline and trend data on plants and animals located on the Eastern Shore of Virginia and Fisherman Island Refuges. The 1999 report also recommends forging new alliances through citizen and community partnerships and strengthening partnerships with the business community. One of our goals in the CCP is devoted almost entirely to partnerships and most of the other goals include at least some objectives and/or strategies which direct the refuge to forge new partnerships or strengthen existing ones.

### North American Waterfowl Management Plan

The North American Waterfowl Management Plan (NAWMP), signed by the United States and Canada in 1986 and by Mexico in 1994, offers a strategy to protect North America’s remaining wetlands and to conserve waterfowl populations through habitat protection, restoration, and enhancement (USFWS 1988). The plan was updated in 1998 with an emphasis on strengthening its biological foundation, using a landscape approach, and expanding partnerships. Implementation of this plan is accomplished in the U.S. within 12 regional habitat “Joint Venture” areas.

Partnerships are formed for the purpose of protecting habitat within Joint Venture Areas and involve Federal, state, and provincial governments, tribal nations, local businesses, conservation organizations, and individual citizens. The Eastern Shore of Virginia and Fisherman Island Refuges are located within the Atlantic Coast Joint Venture area, which covers the entire Atlantic Coast states and Puerto Rico. The goal for the Atlantic Coast Joint Venture is to “Protect and manage priority wetland habitats for migration, wintering, and production of waterfowl, with special consideration to black ducks, and to benefit other wildlife in the joint venture area.”



**Gadwall duck with duckling.**

*USFWS photo*

Virginia's eastern shore is one of 10 focus areas identified in the Joint Venture Plan for the State of Virginia. Priority habitats include tidal brackish high marsh bordering the eastern side of the Chesapeake Bay. Those marshes support populations of migrating, wintering, and nesting black ducks. Other dabbling ducks use the area during migration and wintering, as do Canada Geese. Associated wetlands are valuable to numerous species of finfish and shellfish as nursery and production areas. The Joint Venture Plan identifies 57,575 acres in Virginia for protection and 2,825 acres for enhancement.

The Atlantic Coast Joint Venture Plan is being revised to reflect the expanded geographic area and vision of the Joint Venture area. The revised plan will have a stronger scientific basis for habitat and population goals. Focus areas have been revised in cooperation with state partners. These focus areas are based on important waterfowl areas, but also take into account the needs of other migratory birds. Eastern Shore of Virginia and Fisherman Island Refuges are both within the Delmarva Peninsula Focus Area. Information from the Atlantic Coast Joint Venture Plan will be integrated with information from the other major migratory bird initiatives—Partners in Flight, U.S. Shorebird Conservation Plan, and North American Waterbird Conservation Plan—in the seven Bird Conservation Regions in the Joint Venture area. The full revised implementation plan should be available in 2004.

#### **Partners in Flight: Mid-Atlantic Coastal Plain Bird Conservation Plan**

The Partners in Flight (PIF) Program has developed a draft plan for the Mid-Atlantic Coastal Plain Physiographic Area (USFWS 1999b). The challenge, according to the plan, is managing human population growth while maintaining functional natural ecosystems. To meet this challenge, the plan identifies priority land bird species and habitat types, and recommends specific objectives aimed at protecting those species and their breeding habitats. We use the components of this plan as one of the guidelines in directing bird management on the Eastern Shore of Virginia and Fisherman Island Refuges. The plan ranks species conservation importance within a regional area based on a variety of factors including global threats to



**Prairie warbler.**  
*USFWS photo*

the species, high concern for regional or local populations, or responsibility for conserving large or important populations of the species. Examples of high conservation priority species on Fisherman Island include the seaside sparrow, prairie warbler, clapper rail, and American black duck. The Eastern Shore of Virginia Refuge provides breeding habitat for high priority species such as prairie warblers, northern bobwhite, eastern towhee, field sparrow, and yellow-billed cuckoo. Our planning objectives and strategies were devised to benefit breeding populations of these species in conjunction with migrant habitat objectives whenever possible.

The PIF draft plan also ranks habitats based on overall conservation priority. Six of the eight habitat types identified in the plan are currently found on the Eastern Shore of Virginia or Fisherman Island Refuges. These are barrier and bay islands, salt marsh, forested wetland, mixed upland forest, early successional, and fresh/brackish emergent wetland.

### **U.S. Shorebird Conservation Plan**

The United States Shorebird Conservation Plan (Brown, et al. 2001) was developed as a partnership between Federal, state and non-governmental organizations with the purpose of creating conservation goals, identifying critical habitat conservation needs, and promoting education and outreach programs to facilitate shorebird conservation. The plan has set goals at the hemispheric, national, and regional levels. At the regional scale, the Eastern Shore of Virginia and Fisherman Island Refuges fall into the North Atlantic planning region. Undeveloped wetlands and beaches are rare in this region, causing those habitats to be especially important. Species of concern in the region with a high conservation priority for either breeding, migrating, or wintering include piping plover, American oystercatcher, sanderling, whimbrel, and American woodcock. Strategies in the CCP, such as increased monitoring on Fisherman Island Refuge, address the need to protect these high priority shorebird species identified in the U.S. Shorebird Conservation Plan.

### **The Neotropical Migratory Songbird Coastal Corridor Study**

Repeated accounts of population declines for many neotropical migratory songbird species have sparked widespread concern that has given way to national and international conservation initiatives (Mabey et al. 1993). Although research and protection efforts have largely focused on fragmentation and loss of breeding and wintering habitats, migratory stopover habitats like the southern tip of the Delmarva Peninsula are in need of comparable attention. Indeed, because migration is a physiological stressful cycle in avian life, resources take on added significance.

In fall 1991, the Neotropical Migratory Songbird Coastal Corridor

Study (Mabey et al. 1993) examined the distribution and habitat associations of fall migrating landbirds within the coastal regions of four states along the Atlantic Coast—New Jersey, Delaware, Maryland and Virginia. Together, these states make up the Cape May and Delmarva Peninsulas, two areas known for their significant contribution to migratory bird stopover habitat. The study, which was initiated, funded, and guided by the Virginia Coastal Program, identified clear distribution patterns associated with neotropical migrants, suggesting that migrants are more abundant in areas close to coastlines (within 0–0.9 miles) than they are in areas farther from the coast, and that bay coastal zones have higher densities of migrants than seaside coastal zones or interior regions. This study was crucial in our decision to focus habitat management for the Eastern Shore of Virginia Refuge on providing neotropical migrants with food and cover habitat on the lower Delmarva Peninsula. We also relied heavily on this study to formulate our land protection strategies in this CPP, included as appendix E.

### The Ecosystem Approach to Fish and Wildlife Conservation

Throughout the last decade, the Service has placed more emphasis in habitat and wildlife protection at the ecosystem level. To this end, the Service has initiated new partnerships with private landowners, state and Federal agencies, corporations, conservation groups, and volunteers. Implementing an ecosystem approach to management is a top national priority for the Service. To further this priority, 52 Ecosystem Teams were formed across the country, typically using large river watersheds to define ecosystems. Individual Ecosystem Teams are comprised of Service professionals and partners who work together to develop goals and priorities for research and management.

The Eastern Shore of Virginia and Fisherman Island Refuges are contained within two designated Service ecosystems—the Delaware River/Delmarva Coastal Ecosystem and the Chesapeake Bay/Susquehanna River Ecosystem (See Map 1-4).

The Delaware River/Delmarva Coastal Ecosystem encompasses more than 16,000 square miles within six states. It includes all areas that drain into the Delaware River or the Delaware Bay and all areas that drain into the Atlantic Ocean between Cape Henlopen, Delaware and Cape Charles, Virginia, where the Eastern Shore of Virginia Refuge is located. The Delaware River is the last free-flowing major river on the East Coast, and the barrier island system from Assateague Island to Fisherman Island is the largest remaining undeveloped barrier island system along the Atlantic coast.

The Delaware River/Delmarva Coastal Ecosystem Team developed a plan (USFWS 1996a) based on a set of “Resource Priorities,” or goals, reflecting concern for priority species, habitat types of significance to the Service’s trust resources, and geographic focus areas within the ecosystem. Those Resource Priorities are:



**Volunteer banding a tern.**

*USFWS photo*

**Migratory Birds:** Protect, restore, and enhance migratory bird habitats and populations, with emphasis on the coastal migration corridor.

**Wetlands:** Protect, restore, and enhance wetland habitats, with emphasis on Service-owned wetlands and other areas of exceptional values.

**Interior Forests:** Preserve, manage, and prevent further fragmentation of forest habitats suitable for migratory birds, threatened and endangered species, and other interior forest wildlife.



**Bald eagle, occasionally seen on the refuges.**

*USFWS photo*

**Endangered and Threatened Species:** Protect and enhance populations of threatened, endangered, and candidate species and their habitats.

**Interjurisdictional Fish:** Protect and enhance populations of interjurisdictional fish and their habitats.

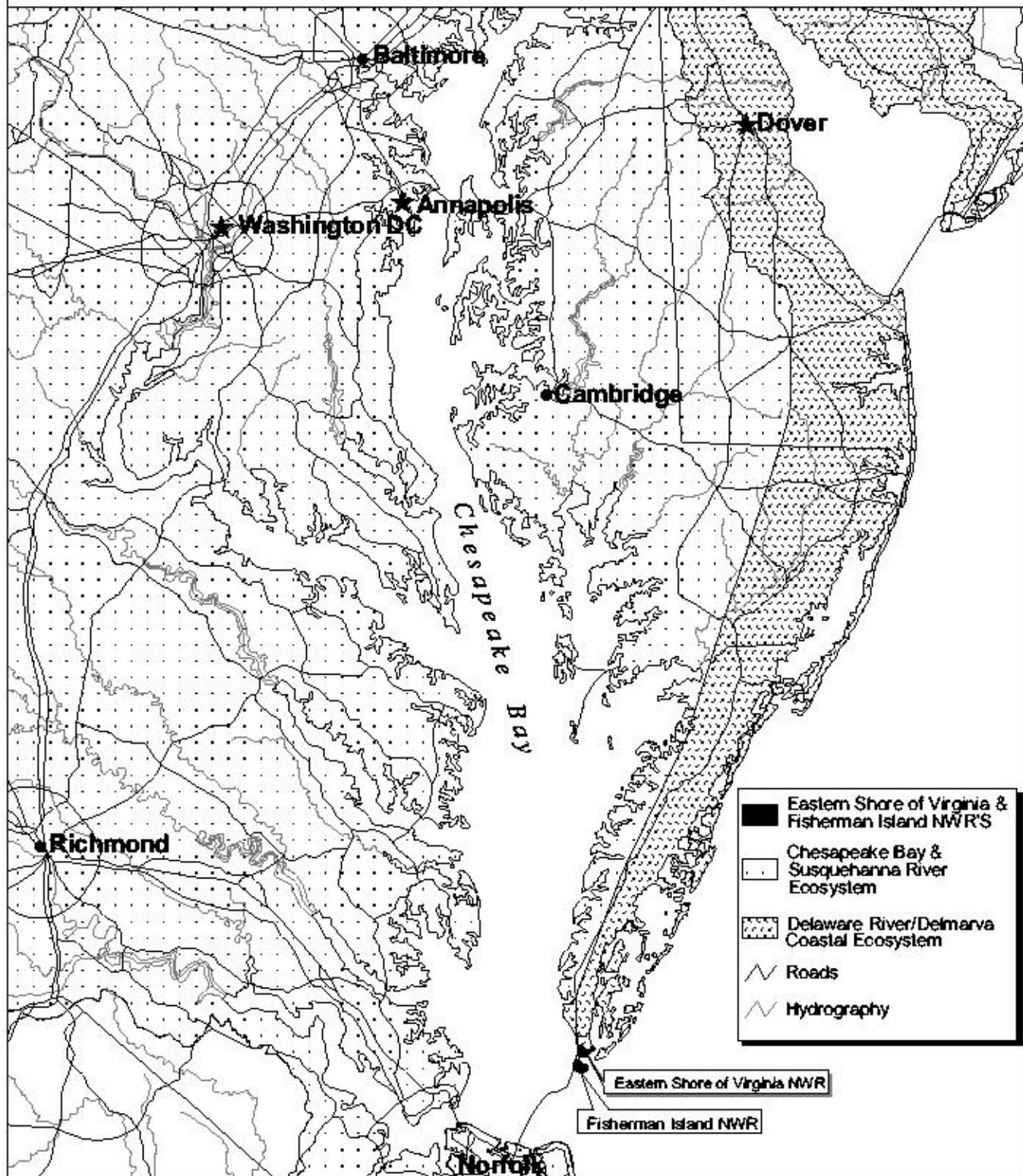
**Service-owned lands:** Protect, restore, and manage trust resources on Service-owned lands.

The Ecosystem team drafted numerous actions necessary to achieve the above Resource Priorities. Many of those actions directly involve Eastern Shore of Virginia Refuge. For example, one of the actions supporting Resource Priority 1 is to protect key migration stopover areas for migratory birds, with an emphasis on the Eastern Shore of Virginia and Cape May, New Jersey. These two areas function together as critical migration habitat on the mid-Atlantic Coast.

The second ecosystem in which Eastern Shore of Virginia Refuge and Fisherman Island Refuge are contained is the Chesapeake Bay/Susquehanna River Ecosystem. This area spans a basin of 64,000 square miles, encompassing portions of Delaware, Maryland, Pennsylvania, New York, Virginia, West Virginia and the District of Columbia. Waters from this expansive landscape flow into the largest estuary in the United States.

Similar to the Delaware River/Delmarva Coastal Ecosystem Team's plan, the Chesapeake Bay/Susquehanna River Ecosystem Team's 1997 plan (USFWS 1997a) contains goals directed toward the protection of migratory birds, wetlands, endangered and threatened species, interjurisdictional fisheries and additional land. The Chesapeake Bay/Susquehanna River Ecosystem Team also included water quality and environmental contaminants as issues to address in its plan.

## Chesapeake Bay/Susquehanna & Delaware River/Delmarva Coast Ecosystems *Eastern Shore of Virginia & Fisherman Island Refuges*



**Data Source:**

All base data provided by USGS. Ecosystems and Refuge Boundaries provided by USFWS.

Map prepared for the Eastern Shore of Virginia NWR & Fisherman Island NWR Comprehensive Conservation Plans by the RS Cartography & Spatial Data Services Section. March 2003

This map is for planning purposes only.

0 20 40 60 Miles



0 30 60 90 Kilometers



## Regional Wetland Concept Plan, Emergency Wetlands Resource Act, Northeast Region

In 1986, Congress enacted the Emergency Wetlands Resources Act to promote the conservation of our nation's wetlands. The Act directed the Department of the Interior to develop a National Wetlands Priority Conservation Plan identifying the location and types of wetlands that should receive priority attention for acquisition by Federal and state agencies using Land and Water Conservation Fund appropriations. In 1990, the Service's Northeast Region completed a Regional Wetlands Concept Plan (USFWS 1990) to provide more specific information about wetland resources in the Northeast. The Regional Plan identifies 850 wetland sites that warrant consideration for acquisition. It also identifies wetland values, functions, and potential threats for each site. There are 205 wetland sites for the state of Virginia, four of which are located either on one of the refuges or within our proposed expanded boundary. Those four sites are Butlers Bluff (50 acres), Fisherman Island (1,500 acres), Magothy Bay (1,600 acres), and Plantation Creek (700 acres).

### Northeastern Beach Tiger Beetle Recovery Plan

The Northeastern beach tiger beetle (*Cincindela dorsalis dorsalis*), a Federal listed species, has been recorded on the Chesapeake Bay side of the Eastern Shore of Virginia Refuge since 1989. The most recent survey of the tiger beetle on Virginia's Eastern Shore found 62 adults on the refuge and 18 on a private beach adjacent to the refuge's property (Knisley and Hill 1999). The refuge, however, has never had sufficient adult tiger beetles to warrant a larval survey. That survey would determine whether the refuge's tiger beetle population is a breeding population.

We will follow the management goals and strategies laid out in the Northeastern Beach Tiger Beetle Recovery Plan (USFWS 1994a) to guide actions related to the tiger beetle population on Eastern Shore of Virginia Refuge. The primary objective of this Recovery Plan is to remove the tiger beetle from the Federal List of Endangered and Threatened Wildlife and Plants. Recovery will require reestablishing and protecting viable populations of the species across its former range along the Atlantic Coast—from Cape Cod to central New Jersey—and permanently protecting viable populations along Chesapeake Bay beaches in Maryland and Virginia. Despite an increase in the number of known populations in the Chesapeake Bay area, the tiger beetle population there is by no means secure. Few sites are protected and many are threatened by human impacts such as habitat alteration and recreational activities.

## Other Recovery Plans

### *Piping Plover*



**Piping Plover.**  
USFWS photo

The Federal-listed piping plover (*Charadrius melodus*) was last recorded breeding on Fisherman Island Refuge in 1992. Refuge records show that plovers occurred in low numbers (1–3 pairs) between 1979 and 1992 except for 1982, 1986, 1987 and 1989, when no breeding birds were recorded. Refuge staff and researchers regularly observed modest numbers (up to six at one time) of feeding plovers during 2002 spring surveys on Fisherman Island Refuge, and sightings of plovers feeding on Eastern Shore of Virginia Refuge have occurred. Reasons for absence of recent nesting activity may include the sparse and declining numbers of breeding birds in this portion of the species' range, sub-optimal (but moderately suitable) habitat, and deterrence of plover courtship activities by roosting herring and great black-backed gulls. If plovers are found breeding on either refuge, we will implement recommended protection measures from the Revised Recovery Plan (USFWS 1996b).

### *Seabeach Amaranth*

Seabeach amaranth (*Amaranthus pumilus*) Federal-listed as threatened in 1993 by the U.S. Fish and Wildlife Service. The amaranth is native to the beaches of the barrier islands of the Atlantic Coast. An annual plant, this species appears to require extensive areas of barrier island beaches and inlets functioning in a relatively natural and dynamic manner, which allows it to expand in the landscape and occupy suitable habitat as it becomes available (USFWS 1996c). The plant often grows in the same areas selected for nesting by shorebirds such as plovers, terns, and skimmers. Threats include beach stabilization efforts (particularly the use of beach armoring, such as sea walls and riprap), intensive recreational use, and herbivory by webworms.

Seabeach amaranth has historically occurred in Northampton County. Since Fisherman Island has dynamic beaches, it is a potential host for seabeach amaranth. We propose strategies for conducting seabeach amaranth surveys on Fisherman Island and for protecting the plant if it is discovered.

### *Delmarva Fox Squirrel*

The Eastern Shore of Virginia Refuge is located in the historic range of the Federal-listed Delmarva fox squirrel (*Sciurus niger cinereus*). No fox squirrels are located on the refuge now, and the Delmarva Fox Squirrel Recovery Team has no specific plans to translocate the squirrel to the refuge. Generally, fox squirrels thrive in mixed deciduous-coniferous forests with large overstory trees, high densities of soft mast-producing hardwoods, and low densities of pine (USFWS 1993a). It is questionable whether the refuge has

enough suitable habitat to support a viable fox squirrel population. Another concern is that the introduced individuals would be genetically isolated and probably would not remain a viable population in the long term. Much of the land adjacent to the refuge is inhospitable (i.e. agricultural fields); thus, emigrating fox squirrels would have reduced survivorship. In addition, the grey squirrel population on the refuge would cause inter-specific competition which could decrease the fox squirrels' chance of survival.

### *Bald Eagle*

Although there are currently no bald eagles (*Haliaeetus leucocephalus*) nesting on either refuge, there are active eagle nesting territories within the CCP's proposed expansion area. We will follow the goals and strategies of the Recovery Plan if and when eagles begin nesting on refuge lands.



**Peregrine falcon.**  
*USFWS photo*

### *Peregrine Falcons*

There has been one nesting pair of peregrine falcons (*Falco peregrinus*) on Fisherman Island Refuge for several years. Although this species was delisted in 1999, we will look to the Recovery Plan for guidance on ways to sustain the nesting peregrine falcons on the refuge.

### *State Recovery Plans*

Currently, there are no recovery plans for State-listed species. However, if any recovery plans become available, we will use them whenever practical to manage State-listed species found on the refuges.

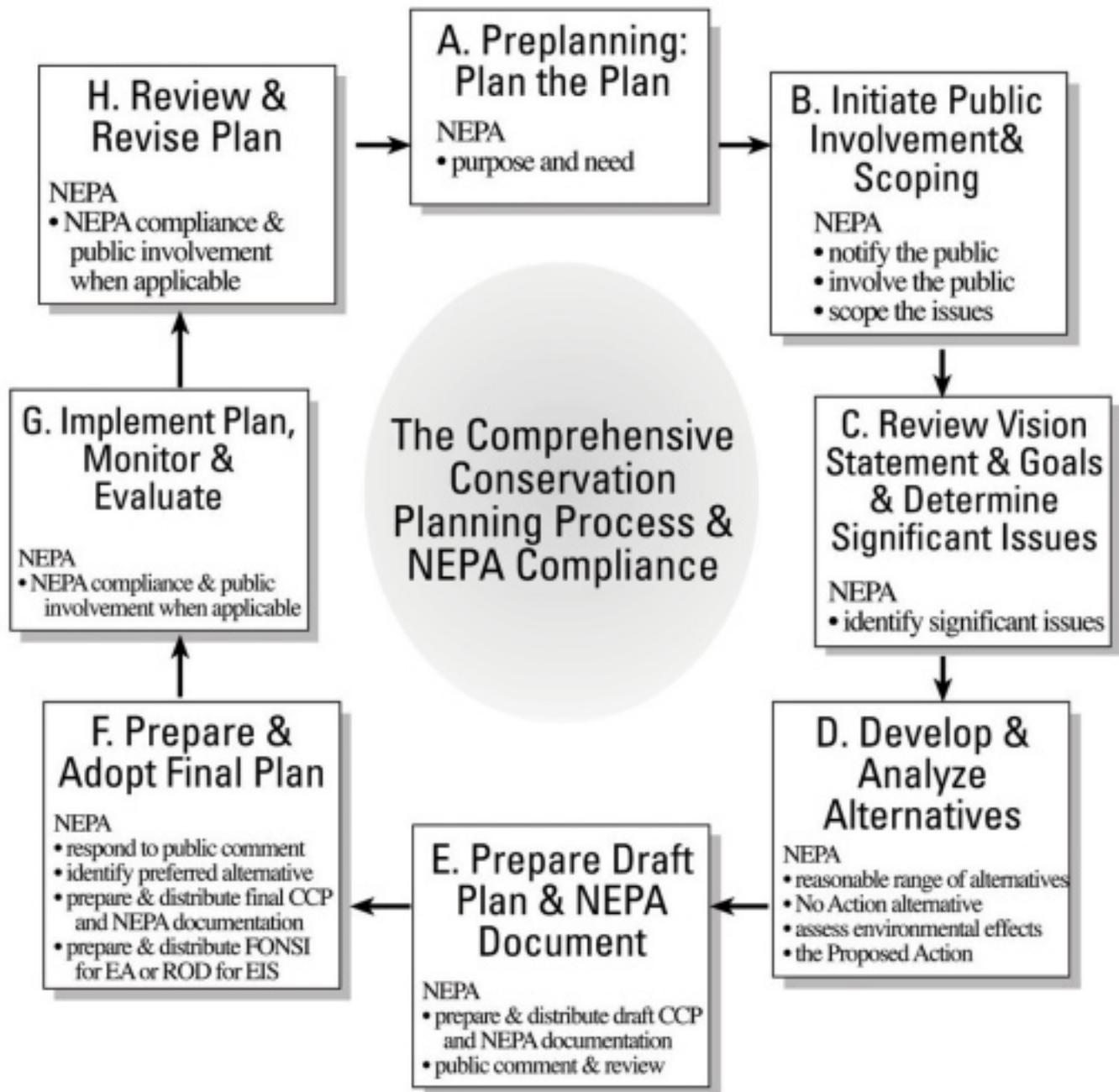
## **CCP Planning Process**

Given the mandate in the Refuge Improvement Act to develop a CCP for each national wildlife refuge, our Northeast Regional Office began the planning process for the Eastern Shore of Virginia and Fisherman Island Refuges in March 1999. Figure 1-1 illustrates the steps of the planning process and how they incorporate National Environmental Policy Act (NEPA) requirements.

First, the core planning team—consisting of field staff, staff from the Service's Northeast Regional Office, and staff from the Service's Washington Office—began the process of identifying the vision, goals, and issues for the refuges. Separate meetings were held to seek input from local and regional biological experts on natural resources.

We compiled a mailing list of more than 900 people made up of diverse individuals and groups including adjacent landowners, sports groups, environmental organizations, State fish and wildlife

Figure 1.1 Steps in the Comprehensive Conservation Planning Process



agencies, local businesses, and other interested and affected people. In August 1999, a newsletter was sent explaining the CCP process and identifying current issues on the refuges. The newsletter contained a workbook insert with questions to help collect the public's ideas, concerns, and suggestions associated with managing the Eastern Shore of Virginia and Fisherman Island Refuges. More than 80 workbooks were completed and returned with responses to the questions.

Three open houses and three public information meetings were held on August 24, 25, and 26 (1999) in Virginia Beach, Cape Charles, and Melfa, Virginia. Between five and 15 people attended each meeting. Meetings were advertised locally through news releases, paid advertisements, radio broadcasts, and through our mailing list. Each meeting consisted of an "open house" session where people could informally learn of the project and have their questions and concerns addressed. The public information meetings included a slide show of the refuges, a brief review of the Refuge System and the planning process, and a question and answer session. Participants were encouraged to actively express their opinions and suggestions.

We distributed another newsletter in November 1999 summarizing public comments from the workbook and from public meetings. The planning team held a series of workshops in November 1999 and January 2000 to discuss with partners issues including habitat management and public use. Individuals and groups participating in the workshops included adjacent landowners, State fish and wildlife agencies, local businesses, and other interested and affected people.

We then established the vision, goal statements, and planning issues and began developing alternative strategies by June 2001. We derived the strategies from public comment, follow-up contacts with partners, and planning team members.

On July 30, 2002 we held two public meetings at the Kiptopeke Elementary School in Eastville, Virginia to discuss the long-term management of the Wise Point boat ramp on the Eastern Shore of Virginia. The refuge acquired the Wise Point property, including the ramp, in January 2002. Since then, we have implemented interim management strategies until this final CCP was available. The purpose of the meeting was to invite public discussion on the management of the boat ramp. Over 65 people attended the meetings.

We released the Draft CCP/EA in September 2003 for a 45-day public comment period. We held public hearings and open houses in October 2003. A summary of public comments is included in Appendix B.

Each year we will evaluate our accomplishments under this CCP, including the completion of more detailed step-down plans. Monitoring will reveal whether resource objectives are being met



**Fisherman Island NWR.**  
*USFWS photo*

and whether we need to change our strategies. We will modify the CCP document and associated management activities as needed, following the procedures outlined in Service policy and NEPA requirements. This CCP will be fully revised every 15 years, or sooner if necessary.

## Refuge Vision

The vision statement was developed to describe the desired future status of the Eastern Shore of Virginia and Fisherman Island Refuges:

*Lying at the tip of the Delmarva Peninsula, the Eastern Shore of Virginia and Fisherman Island National Wildlife Refuges are part of a national system of lands managed to ensure the future of wildlife and its habitats. These refuges serve as one of the country's most valuable stopovers for migratory birds. Nestled between the Atlantic Ocean and Chesapeake Bay, the refuges include a variety of habitats such as maritime forest, shrub thickets, grasslands, beaches, and tidal wetlands. These habitats provide a vital link for millions of songbirds, raptors, shorebirds, and butterflies to rest and refuel before continuing the rigorous journey to their wintering grounds.*

*Future conservation efforts lie in the refuges' commitment to protecting and enhancing the migration corridor through preserving, acquiring, and revegetating hardwood, shrub, and grassland areas. Alliances with nearby landowners will increase available habitat and research will focus on augmenting our knowledge to make biologically sound management decisions. The thousands of people who annually visit this gateway to the Eastern Shore of Virginia will gain an appreciation of the refuges' unique ecological role. In partnership with the local community, the refuges will also promote the area as a regional tourist destination that contributes to the economic stability of and enhances the quality of life on the Eastern Shore of Virginia. Visitors will leave with an understanding that this place of incredible diversity and ecological importance is part of a larger network of protected lands within the National Wildlife Refuge System, set aside specifically for wildlife.*

## Refuge Goals

The following refuge goals are intentionally broad, descriptive statements of purpose. They highlight specific elements of our vision statement and provide the foundation for our management emphasis. The goals are not in any order of priority.

1. Increase the availability of forage and cover habitat for neotropical and temperate migratory birds and migrating monarch butterflies.



**Hermit thrush, a temperate migratory bird.**

*USFWS photo*

2. Maintain the long-term productivity, integrity, and function of the marsh, beach, and interdunal communities.
3. Actively participate in the conservation of healthy hardwood, understory, and grassland habitat for neotropical and temperate migratory birds during future development throughout Northampton County.
4. Provide wildlife-dependent recreational opportunities and community outreach with an emphasis on educating the public about the critical role the Delmarva Peninsula serves for neotropical and temperate migratory birds and migrating monarch butterflies.
5. Integrate the refuge into the larger community of the eastern shore and promote awareness of the unique value of the lower Delmarva Peninsula to neotropical and temperate migratory birds and migrating monarch butterflies.
6. Enhance and restore the quality of the soils, waters, and other abiotic components of the refuge and landscape.

### Planning Issues

Key planning issues were first identified by refuge staff and then proposed for public comment in newsletters and during public scoping meetings. The original issues were then modified based on public input. The above six goals statements, together with the planning issues and the range of options on how to resolve them, formed the basis for developing and comparing the different management alternatives that were analyzed in the Draft CCP/EA. The following issues are in no order of priority:

**Boat ramp:** The Service purchased the Wise Point Corporation in-holding in December 2001. This in-holding provides access to deep water through an existing boat ramp. The boat ramp has historically been used by recreational boaters and commercial watermen. The refuge must balance its responsibility to protect sensitive wildlife habitat with its role in providing opportunities for wildlife-dependent recreational uses.

**Firearms range:** Refuge staff maintain a firearms range adjacent to the refuge, which is owned by Northampton County and used for law enforcement personnel training. The range was built 50 years ago and does not meet current design for contaminant standards. There are elevated levels of lead, arsenic, and antimony in the range area and it is unknown if these contaminants have migrated off-site. In addition, noise generated from range use conflicts with the serenity visitors seek while visiting the refuge.

**Communications tower:** There is a communications tower located on the refuge with a lease that expires in 2007. There has been some

interest by private industry and by Northampton County (County) in increasing the use of the tower. However, the tower is located in a major migratory bird flight path and may cause a number of bird fatalities.

**Contaminant levels:** There are known and suspected areas with elevated levels of contaminants because of past military and agricultural uses in and around the refuge.

**Land acquisition:** The tip of the peninsula is a major migratory bird resting/refueling site recognized by Federal and State resource agencies and the County's own Comprehensive Plan. As the eastern shore develops, the refuge and other natural areas become more critical to these long-distance travelers. The refuge is small in size. Preserving additional lands will help prevent the decline in wildlife.

**Habitat management:** Different species have different habitat needs. Due to the small size of the refuge, active management for every type of habitat and species is limited. Therefore, we have made decisions regarding which habitats should be emphasized and to what extent.

**Invasive plant species:** Non-native invasive plant species have taken over valuable habitat on the Eastern Shore of Virginia and Fisherman Island Refuges. Japanese honeysuckle, kudzu, fennel, and phragmites are just a few of the invasive species that choke out native food sources for neotropical and temperate migratory birds.



**Royal tern colony on Fisherman Island NWR.**

*USFWS photo*

**Fisherman Island:** Fisherman Island serves as a breeding and nursery area for numerous bird species, and supports the largest number of nesting royal terns and brown pelicans in Virginia. Our management goals have been aimed at protecting the sensitive natural resources by minimizing human impact to this ecosystem.

**Hunting program:** Current objectives are to maintain an annual deer hunt. However, modifications may be needed to increase the take of deer and to improve public safety adjacent to roads and trails.

**Beach access:** There is a small population of the Federal-listed Northeastern beach tiger beetle on a beach located on the Chesapeake Bay of the Eastern Shore of Virginia Refuge. This beach abuts other beach property that is privately-owned and operated by the Sunset Beach Resort. The resort's beach is open for public access and has seen an increase in use over the past five to 10 years. There is no physical barrier separating the refuge beach from the private beach, and beach-goers have not distinguished one from the other.

**Cultural resources:** Both refuges are home to many structures, including bunkers and abandoned buildings, that house materials and objects. Some of the materials dating back to World War II may have historic value and can be displayed at the Visitors Center or stored in temperature-controlled rooms. Other items can be donated to public or private organizations for display. Refuge staff need to make decisions on the final outcome of these resources.

## **Step-Down Management Plans**

The Refuge Manual (Part 4 Chapter 3) lists more than 25 step-down management plans that are generally required on most refuges. Step-down plans describe specific management directions that refuges will follow to achieve objectives or implement management strategies. Some require annual revision; others are revised on a 5 to 10 year schedule. Some require additional NEPA analysis, public involvement, and compatibility determinations before they can be implemented. A status list of refuge Step-down plans follows.

### **These plans are current and up-to-date:**

2002 Hunt Plan  
 2000 Pollution Prevention Plan  
 1999 Contingency of Operations Plan  
 1995 Youth Conservation Corp Safety Plan

### **These plans exist, but we consider them out of date and needing revision:**

1991 Wildlife Inventory Plan: A revision of this plan will be incorporated in a proposed Species Inventory and Monitoring Plan (see section below).

1993 Upland Habitat Management Plan: A revision of this plan will be included in a new Habitat Management Plan (see section below).

1994 Public Use Management Plan: This plan, to be updated by 2007, will elucidate management direction and priority for public use programs such as Visitor Center operation, environmental education, outreach events, volunteers, and partnerships.

1998 Safety Plan: This plan, to be updated by 2007, will detail the actions required, as per the Department of the Interior and U.S. Fish and Wildlife Service policy, to: 1) provide a safe environment for all employees, volunteers, and for the public when using our facilities; 2) identify and correct unsafe conditions; 3) eliminate unsafe acts; and 4) encourage accident prevention throughout the workforce.

### **These step-down plans need to be initiated:**

This CCP requires that the following step-down plans to be

completed or updated. Additional management plans may be required as future Service policy dictates.

**Habitat Management Plan (2005):** Management strategies specific to forest, shrub, and grassland habitats will be detailed with an emphasis on forage and cover requirements for migratory bird species. Management strategies will include maintaining various successional stages of grassland and forest. This relates specifically to the objectives, goals, alternatives, purpose, and vision developed for the Eastern Shore of Virginia and Fisherman Island Refuges.

**Prescribed Burn Plan (2006):** This plan will describe the use of fire as a management tool to enhance forest understory regeneration and grassland habitat, to remove undesired species such as non-native invasive plants, and to reduce the fire hazard potential. Specific locations, methods, and timing will be described in accordance with U.S. Fish and Wildlife Service policy and will adhere to all Federal, State, and local guidelines and restrictions.

**Species Inventory and Monitoring Plan (2006):** This plan will provide specific guidance for the systematic accounting of temporal and spatial trends in the abundance and diversity of species. Inventories will obtain, at a minimum, information on the abundance and distribution of vascular plants, vertebrates, and Federally endangered and threatened species. Monitoring efforts will target carefully chosen species in an effort to convey information about the status of the larger ecological system and the integrity of specific habitats or ecosystem processes. Rigorous and quantitative monitoring will be oriented toward management decision to ensure scientifically-based management with proper feedback for adaptive management decisions.



**Red fox and prey.**  
*USFWS photo*

**Predator Management Plan (2006):** This plan will describe the control of identified problem predators such as gulls, fox, coyote, feral cats, and raccoons. The areas of concern are colonial seabird nesting colonies on Fisherman Island Refuge and migratory bird habitat on the Eastern Shore of Virginia Refuge. Management strategies will include both live trapping and lethal removal.

**Invasive Species Management Plan (2007):** This plan will describe the control of non-native plant and animal species such as Japanese honeysuckle, fennel, fescue grass, kudzu, autumn olive, phragmites, and other exotic species which pose a threat to refuge habitat and native species. Specific control methods and timing will be detailed for both the Eastern Shore of Virginia and Fisherman Island Refuges.

**Sign Plan (2007):** This plan will detail where signs are needed on the refuge and what those signs will communicate. While the refuge currently has some written guidelines for signs, it has no formal plan.