

Chapter 1



American Oystercatcher

Introduction, Purpose and Need, and Planning Background

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Chapter 1: Introduction, Purpose and Need, and Planning Background**1.1 Introduction**

The U.S. Fish and Wildlife Service (USFWS, we, our) developed this draft Comprehensive Conservation Plan (CCP) and draft Environmental Impact Statement (EIS) for Chincoteague National Wildlife Refuge (NWR) and Wallops Island NWR, collectively referred to as “the refuge.” The refuge is part of the National Wildlife Refuge System (Refuge System) — a national network of lands managed for the conservation of fish, wildlife, and plants. This document meets the requirements of a CCP, as required by the Refuge System Administration Act of 1966 as amended by the Refuge System Improvement Act of 1997 (Improvement Act), while simultaneously following the accepted format and incorporating supplemental documentation for an EIS required by the National Environmental Policy Act (NEPA) of 1969. As a result of integrating the document to meet the requirements for both a CCP and an EIS, certain areas of the suggested EIS format have been expanded to include the core of the CCP, such as the inclusion of goals, objectives, and strategies in the description of alternatives in chapter 2 and the expansion of certain sections of chapter 1.

This chapter achieves the following:

- defines our planning analysis area;
- explains the purpose and need for preparing this CCP/EIS;
- documents the mission, policies, mandates, and relevant plans that affect the development of the CCP;
- describes the refuge, including its purposes and habitats;
- identifies refuge operational plans that complement the CCP;
- presents the vision and goals that will direct refuge management; and
- identifies issues and opportunities for consideration in the alternatives.

1.2 Regional Context and Project Area

The refuge is located on a system of barrier islands off the eastern shore of the Delmarva Peninsula, a large peninsula on the East Coast comprised of most of Delaware and portions of Virginia and Maryland (see Figure 1-1). The refuge primarily lies in Accomack County, Virginia. However, the planning area for the CCP/EIS also includes portions of Wicomico, Worcester, and Somerset Counties, Maryland, and Northampton County, Virginia (the Southern Delmarva Peninsula).

Figure 1-1. Overview Map of Chincoteague and Wallops Island NWRs Planning Area



1.3 Purpose and Need for Action

1.3.1 Need

Since we released the previous refuge management document, the Master Plan: Chincoteague National Wildlife Refuge (1993) and its corresponding EIS (1992), both natural processes and human uses have contributed to drastic changes to the refuge's environment. Climate change, sea level rise, and natural processes have altered and will continue to alter the coastal environment. Over the past 20 years, national directives from Congress and USFWS for managing uses and planning for units of the Refuge System have become more comprehensive and attuned to the essential features of natural systems. We designed this CCP/EIS to address management and protection of valuable natural resources into the future, a future where continued change is even more likely to occur.

Public visitation, which has stayed consistent over the past decade with approximately 1.25 million visits annually, is important to raising awareness and appreciation of the refuge and to generating revenue that supports public and wildlife services. Such high visitation provides a need to implement management strategies and direction to minimize human disruption to the natural environment.

Our development of this draft CCP/EIS addresses three major needs. First, the Improvement Act (1997) requires that all national wildlife refuges have a CCP to help fulfill the mission of the Refuge System.

Second, the refuge currently has an outdated master plan. Since 1993, environmental factors have morphed the coastal landscape of the refuge, resulting in a need to revisit our vision statement, goals, objectives, and management strategies to successfully manage the refuge now and into the future. Developing this CCP/EIS provides us with an opportunity to solicit public and partner involvement throughout the planning process that will inform the framework and direction with which to manage the refuge.

Third, our management practices should be consistent with current mandates. This new CCP will ensure the refuge conforms to all relevant current law and policies.

1.3.2 Purpose

We must evaluate and plan for the changing environmental conditions that the refuge currently faces; the natural environment, human uses, and management direction have all changed over the past 20 years. We designed the CCP to address management and protection of valuable natural resources into the future, anticipating to the extent possible how climate change and other factors will affect our ability to achieve refuge purposes. We will plan for approaches that are ecologically sound and sustainable in light of physical and biological change; practical, viable, or economically realistic; and responsive to issues, concerns, and policies.

Thus, in accordance with the Refuge System Planning Policy (Service Manual 602 FW 3), *the purpose of this CCP is to provide the refuge manager with a 15-year management plan for the conservation of fish, wildlife, and plant resources and their related habitats, while providing opportunities for compatible wildlife-dependent recreational uses.* Specifically this CCP is designed to provide a management plan that:

- (1) achieves the refuge's purposes;

- (2) fulfills the mission of the Refuge System;
- (3) maintains and, where appropriate, restores the ecological integrity of the refuge and the Refuge System;
- (4) helps achieve the goals of the National Wilderness Preservation System;
- (5) meets other mandates and the management goals set by the USFWS for the refuge; and
- (6) addresses other significant issues and concerns.

Each of these six elements of the purpose of the CCP is discussed in the sections below. The refuge purposes are discussed in section 1.4; the Refuge System Mission is presented in section 1.5; ecological integrity is defined in section 1.6, the goals of the National Wilderness Preservation System are discussed in section 1.7; and descriptions of other mandates relevant to the refuge are provided in section 1.8. In addition, all of these elements are succinctly addressed in the vision and goals that we established for the refuge as part of this CCP process and that are reported in section 1.13.

NEPA requires a thorough analysis of a *range of alternatives*, which are different ways to achieve the purpose of the CCP, and our vision and goals for the refuge. As illustrated in chapter 2, the purpose and need statement, along with our goals and vision for the refuge (discussed in section 1.13), are the key criteria in establishing this range of alternatives.

By addressing the CCP purposes stated above, this process will result in a management plan that:

- states clearly the desired future conditions of refuge habitat, wildlife, and visitor services;
- provides state agencies, refuge neighbors, visitors, and partners with a clear understanding of the reasons for refuge management actions;
- ensures that refuge management reflects the policies, legal mandates and the mission of the USFWS and the Refuge System and the refuge purposes;
- ensures the compatibility of current and future public use;
- provides long-term continuity in refuge management; and
- provides justification for refuge staffing, facilities, operations and maintenance, and projected budget requests.

1.4 Refuge Purposes

This CCP addresses both Chincoteague and Wallops Island NWRs and, therefore, the statutory purpose of each refuge is described below. Section 1.13 describes the vision statement and goals for the CCP that we developed with our partners to achieve both the purposes of the refuge and of the CCP.

1.4.1 Chincoteague National Wildlife Refuge

The Secretary of the Department of the Interior (DOI) established Chincoteague NWR in 1943 under authority of the Migratory Bird Conservation Act “...for use as an *inviolable sanctuary or for any other management purpose, for migratory birds*” (16 U.S.C. § 715d), especially migrating and wintering waterfowl. Since that time, the objectives have been expanded to include the protection and management of threatened and endangered species and other wildlife, and to

provide for wildlife-oriented public use. Other refuge purposes, and their associated acquisition authorities, now also include:

- “... suitable for— (1) incidental fish and wildlife-oriented recreational development, (2) the protection of natural resources, (3) the conservation of endangered species or threatened species ...” 16 U.S.C. § 460k- “... the Secretary ... may accept and use ... real ... property. Such acceptance may be accomplished under the terms and conditions of restrictive covenants imposed by donors ...” 16 U.S.C. § 460k-2 (Refuge Recreation Act (16 U.S.C. § 460k-460k-4), as amended);
- “... the conservation of the wetlands of the Nation in order to maintain the public benefits they provide and to help fulfill international obligations contained in various migratory bird treaties and conventions ...” 16 U.S.C. § 3901(b) (Emergency Wetlands Resources Act of 1986);
- “... for the development, advancement, management, conservation, and protection of fish and wildlife resources ...” 16 U.S.C. § 742f(a)(4) “... for the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition of servitude ...” 16 U.S.C. § 742f(b)(1) (Fish and Wildlife Act of 1956); and,
- “... for conservation purposes ...” 7 U.S.C. § 2002 (Consolidated Farm and Rural Development Act).

1.4.2 Wallops Island National Wildlife Refuge

Wallops Island NWR was created on March 11, 1971, when 373 acres of land were transferred to the USFWS from the National Aeronautics and Space Administration (NASA) Wallops Flight Center. Formally, Wallops Island NWR was established “... for use as an inviolate sanctuary, or for any other management purpose, for migratory birds” (16 U.S.C. § 715d) and for “... particular value in carrying out the national migratory bird management program.” (16 U.S.C. § 667b)].

1.5 National Wildlife Refuge System Mission

The Refuge System is the world’s largest collection of lands set aside specifically for the conservation of wildlife and the protection of ecosystems. President Theodore Roosevelt established the first national wildlife refuge in 1903, and as of September 30, 2012, the Refuge System consisted of 560 national wildlife refuges, 209 Waterfowl Production Areas, and 50 Coordination Areas encompassing more than 150 million acres of lands and waters in all 50 states and several island territories. The Refuge System is home to more than 700 species of birds, 220 species of mammals, 250 reptile and amphibian species, and more than 1,000 species of fish, and it also provides critical habitat for more than 280 threatened and/or endangered plants and animals. Each year, more than 45 million visitors hunt, fish, observe and photograph wildlife, or participate in environmental education and interpretive activities on refuges.

In 1997, President Clinton signed into law the National Wildlife Refuge System Improvement Act (PL 105-57, hereafter referred to as the Improvement Act), which established a unifying mission for the Refuge System:

“to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans.”

The Improvement Act, which is discussed further in section 1.8.3, also established a new process for determining the compatibility of public uses on refuges, and requires us to prepare a CCP for each refuge and to focus on wildlife conservation.

1.6 Ecological Integrity

In order to fulfill the Refuge System mission, described above, the refuge staff is charged to maintain and, where appropriate, restore the ecological integrity of the refuge. Ecological integrity is the integration of biological integrity, natural biological diversity, and environmental health; and the replication of natural conditions.

Biological integrity is defined as biotic composition, structure, and functioning at the genetic, organism, and community levels consistent with natural conditions, including the natural biological processes that shape genomes, organisms, and communities.

Biological diversity is the variety of life, including the variety of living organisms, the genetic differences among them, and the communities in which they occur.

Environmental health is an abiotic composition, structure, and functioning of the environment consistent with natural conditions, including the natural abiotic processes that shape the environment.

The refuge visions and goals, which we developed partly to help fulfill the Refuge System mission for ecological integrity, are described in section 1.13.

1.7 National Wilderness Preservation System

The Wilderness Act of 1964 established the National Wilderness Preservation System (NWPS) and a process for Federal agencies to recommend wilderness areas to Congress. Its purpose is:

“to secure for the American people of present and future generations the benefits of an enduring resource of wilderness...for the use and enjoyment of the American people in such manner as will leave them unimpaired for future use and enjoyment as wilderness” and “to provide for the protection of these areas, the preservation of their wilderness character, and for the gathering and dissemination of information regarding their use and enjoyment as wilderness” (16 U.S.C §1131. 2011).

Wilderness, as defined by the Wilderness Act, is untrammeled (free from man's control), undeveloped, and natural land, offering outstanding opportunities for solitude and primitive recreation. Essentially, the goals of the Act are to ensure that, despite increasing population and expanding settlement and mechanization, there are still areas of the United States where these factors are not present or felt.

The Refuge System contains 20 percent of America's NWPS, with 20 million acres of designated wilderness on 63 refuges. The Refuge System also protects 1.9 million acres of proposed

wilderness on 21 refuges. By law and policy, we are responsible for preserving the wilderness character of these designated and proposed wilderness areas.

In response to the Wilderness Act, the entirety of Assateague Island was reviewed to see which areas still possessed primeval characteristics. As a result, the central 6,500 acres of Assateague Island was proposed as wilderness in 1974, but has yet to receive designation. Until such a congressional decision is made, Chincoteague NWR currently manages the proposed area within its jurisdiction to preserve its wilderness character. An evaluation of the current land status, Appendix A, provides a 2012 baseline assessment and describes the wilderness character monitoring program for the proposed Assateague Island wilderness.

As part of the 50th Anniversary of the Wilderness Act in 2014, USFWS has proposed to charter a Refuge System Wilderness Council to evaluate the 21 Proposed Wilderness Areas and Wilderness Study Areas within the Refuge System and to prepare a National Strategy to advance priority wilderness proposals to Congress for designation.

1.8 Other Mandates

In addition to the requirements discussed above in sections 1.4 through 1.7, there are other mandates that we must abide by in managing the refuge, including laws, policies for implementing those laws, and executive orders. Some of these are specific to USFWS and others are broader and apply to all Federal agencies. Some of these are summarized in this section.

For each of the USFWS mandates and polices, the Service Manual (found at: <http://www.fws.gov/policy/manuals/>) contains the standing and continuing directives implementing our authorities, responsibilities, and activities, and we amend it as necessary. We publish special directives that affect the rights of citizens or the authorities of other agencies separately in the Code of Federal Regulations (CFR), and the Service Manual does not duplicate them.

1.8.1 U.S. Fish and Wildlife Service and its Mission

The USFWS, as part of DOI, administers the Refuge System to safeguard the nation's fish, wildlife, plants and their habitats.

The USFWS vision is to “...*continue to be a leader and trusted partner in fish and wildlife conservation, known for our scientific excellence, stewardship of lands and natural resources, dedicated professionals, and commitment to public service.*”

The USFWS mission is: “*Working with others, to conserve, protect, and enhance fish, wildlife, and plants and their habitats for the continuing benefit of the American people.*”

The USFWS is the primary Federal agency responsible for conserving, protecting, and enhancing America's fish and wildlife populations and their habitats. These include migratory birds, federally listed endangered or threatened species, inter-jurisdictional fish, wetlands, certain marine mammals, and national wildlife refuges. We also enforce Federal wildlife laws and international treaties on importing and exporting wildlife, manage and protect migratory bird populations, restore national fisheries, administer the Endangered Species Act, and restore native plant habitats. The USFWS also assists states with their fish and wildlife programs and helps other countries develop conservation programs.

1.8.2 *Refuge System Goals*

Through the planning process, the USFWS has proposed specific management goals for the refuge, further defined in section 1.13. The Refuge System has developed a number of goals to help guide the development of CCPs and to improve its administration, management, and growth in a unified and consistent manner. These goals, as captured in the USFWS Service Manual (601 FW 1), are:

- Conserve a diversity of fish, wildlife, plants, and their habitats, including species that are endangered or threatened with becoming endangered.
- Develop and maintain a network of habitats for migratory birds, fish, and marine mammal populations that are strategically distributed and carefully managed to meet important life history needs of these species across their habitat ranges.
- Conserve those ecosystems, plant communities, wetlands of national or international significance, and landscapes and seascapes that are unique, rare, declining, or underrepresented in existing protection efforts.
- Provide and enhance opportunities to participate in compatible wildlife-dependent recreation (hunting, fishing, wildlife observation, photography, environmental education, and interpretation).
- Foster understanding and instill appreciation of the diversity and interconnectedness of fish, wildlife, plants, and their habitats.

1.8.3 *The Improvement Act (1997)*

The Improvement Act amended the Refuge System Administrative Act of 1966 by codifying various USFWS policies and establishing a unifying mission, policy direction, and management standards. This law established several new mandates to make management of the Refuge System more cohesive and standardized and to ensure that the USFWS considers wildlife first when managing refuges. These mandates include a new process for determining the compatibility of public uses on refuges, a requirement to prepare a CCP for each refuge, and a requirement to focus on wildlife conservation.

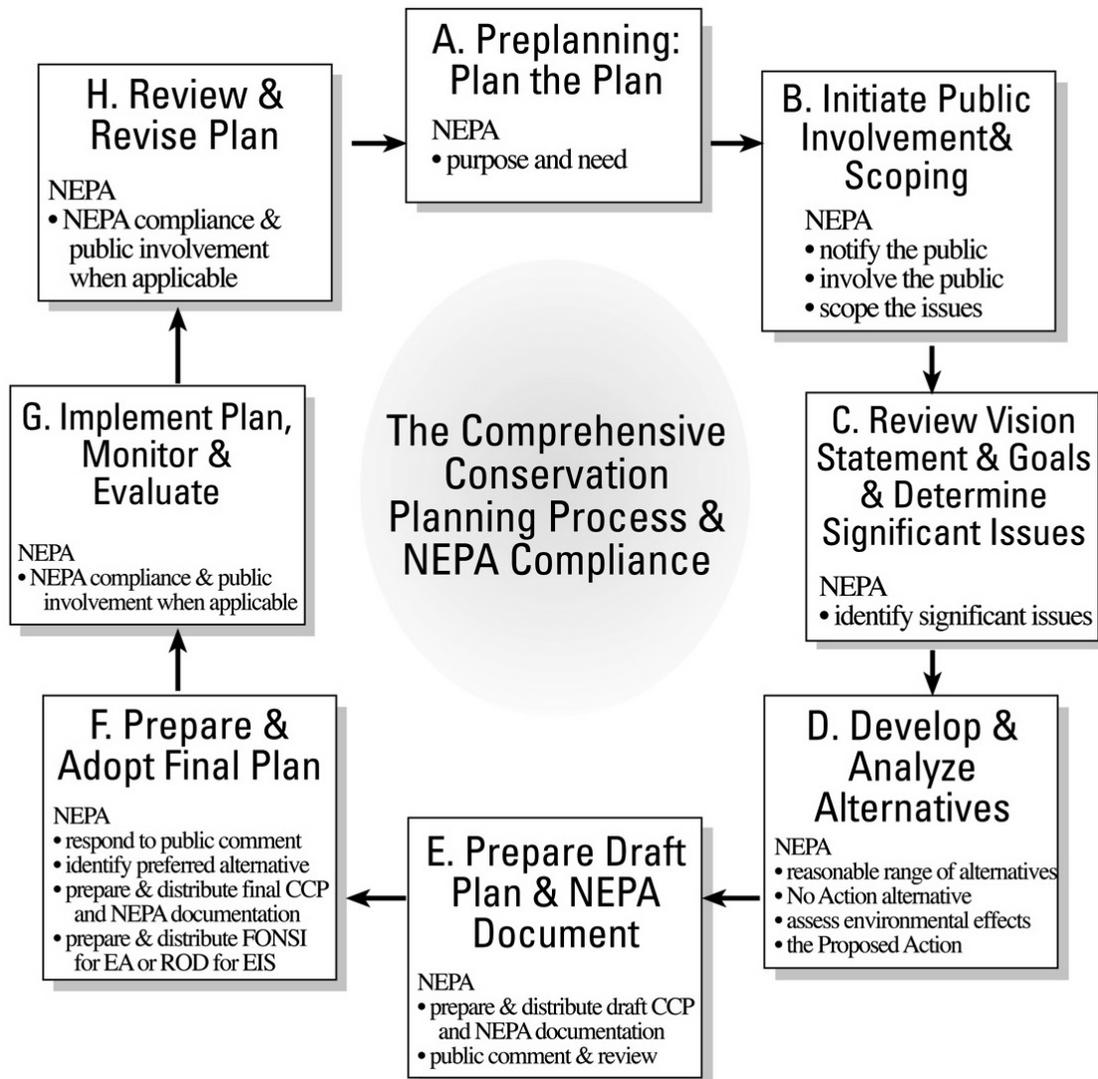
The Improvement Act directs the Secretary of the DOI to ensure that the mission of the Refuge System and purposes of the individual refuges are carried out. It states that the national mission, coupled with the purpose(s) for which each refuge was established, will provide the principal management direction for each refuge, as noted in the purpose statement of this CCP/EIS. It also requires the Secretary to maintain the biological integrity, diversity, and environmental health of the Refuge System, which is also included in the purpose of this CCP/EIS.

The Refuge System Planning Policy

The Refuge System Planning Policy (Service Manual 602 FW 1,2,3) establishes guidance, systematic direction, and minimum requirements for Refuge System planning, including CCPs, and stipulates a systematic decision-making process that fulfills those requirements. The purposes of this CCP that are listed in section 1.3.2 mirror those listed in the Service Manual, which states that we will manage all refuges in accordance with an approved CCP which, when implemented, will achieve refuge purposes; help fulfill the Refuge System mission; maintain and, where appropriate, restore the ecological integrity of each refuge and the Refuge System; help achieve the goals of the NWPS; and meet other mandates.

The policy establishes an eight-step planning process that facilitates compliance with NEPA (Figure 1-2). Each of the individual steps is described in detail in the Service Manual and CCP training materials (Service Manual 602 FW 3). By preparing this CCP, we are implementing the Planning Policy as directed by the Service Manual.

Figure 1-2. Steps in the Comprehensive Conservation Planning Process and its relationship to the National Environmental Policy Act of 1969 (Service Manual 602 FW 1,2,3)



Maintaining Biological Integrity, Diversity, and Environmental Health (BIDEH) Policy

The BIDEH policy (Service Manual 601 FW 1) provides guidance on maintaining or restoring the BIDEH of the Refuge System, including the protection of a broad spectrum of fish, wildlife, and habitat resources in refuge ecosystems, as reflected in the purpose of this CCP. It provides refuge managers with a process for evaluating the best management direction to prevent the additional degradation of environmental conditions and restore lost or severely degraded environmental components. The policy also provides guidance for dealing with external threats to the biological integrity, diversity, and environmental health of a refuge and its ecosystem.

Appropriate Refuge Uses Policy

Federal law and USFWS policy provide the direction and planning framework for protecting the Refuge System from inappropriate, incompatible, or harmful human activities and ensuring that visitors can enjoy its lands and waters, as noted in the purpose statement of this CCP. This policy provides a national framework for determining appropriate refuge uses in an effort to prevent or eliminate those uses that should not occur in the Refuge System. It describes the initial decision process the refuge manager follows when first considering whether or not to allow a proposed use on a refuge.

Compatibility Policy

The Improvement Act identifies six wildlife-dependent public uses as appropriate on national wildlife refuges. These uses—hunting, fishing, wildlife observation, photography, environmental education, and interpretation—will receive priority consideration on refuges and in CCPs. The Act also declares that all existing or proposed refuge uses must be found “compatible” with the refuge’s purpose and consistent with public safety, as affirmatively determined by the refuge manager. Each use is evaluated for its potential impact on refuge resources and its ability to not materially interfere with or detract from the fulfillment of the Refuge System’s mission or the refuge’s purpose.

Findings of appropriateness and compatibility determinations (CDs) are required for all refuge uses, excluding management actions, per the Improvement Act (1997). These statements evaluate an activity’s appropriateness and compatibility with refuge purposes and, in the case of the CDs, outline measures to ensure compatibility that must be followed if the use is to be allowed. The refuge manager may allow or deny any use, even one that is compatible, based on other considerations such as public safety, conflicts with other laws or policy, or available funding. This policy and its regulations, including a description of the process and requirements for conducting compatibility reviews, can be viewed online at: <http://www.fws.gov/policy/603fw2.html>.

1.8.4 The Endangered Species Act

Mandated under section 4(f) of the Endangered Species Act (ESA) of 1973, four Recovery Plans are in effect to protect and enhance threatened and endangered species that are residents of Chincoteague and/or Wallops Island NWRs:

- *Delmarva Fox Squirrel (Sciurus niger cinereus) Recovery Plan* (USFWS 1993b).
http://ecos.fws.gov/docs/recovery_plans/1993/930608.pdf
 - *Delmarva Peninsula Fox Squirrel 5-Year Review: Summary and Evaluation* (USFWS 2011d)

- *Recovery Plan for U.S. Populations of Loggerhead Turtle (Caretta caretta)* (NMFS and USFWS 1993). http://www.nmfs.noaa.gov/pr/pdfs/recovery/turtle_loggerhead_atlantic.pdf
- *Recovery Plan for Seabeach Amaranth (Amaranthus pumilus)* (USFWS 1996b). http://www.cals.ncsu.edu/plantbiology/ncsc/rare/Recovery_Amaranthus.pdf
- *Atlantic Coast Piping Plover (Chadradius melodus) Recovery Plan* (USFWS 1996c). http://www.fws.gov/northeast/pipingplover/pdf/entire_plan.pdf

Current refuge management with respect to these federally listed species has been guided by these Recovery Plans and numerous ESA Section 7/Biological Opinions for refuge projects. For more detailed descriptions of these recovery plans and documents, see Appendix B, Appendix F, and Appendix O.

1.8.5 Other Federal Mandates

Although USFWS and Refuge System laws and policies, along with the purpose of each refuge, provide the foundation for managing the refuge, other Federal laws and executive orders affect how we manage refuges. These are addressed in chapter 4, Environmental Consequences, which evaluates the compliance of the alternatives with these mandates. These include, but are not limited to the following laws (as amended): the National Historic Preservation Act of 1966, the Clean Air Act of 1970, the Clean Water Act of 1977, the Coastal Zone Management Act (CZMA) of 1972, and the Migratory Bird Treaty of 1918.

The following Executive Orders (EOs) are also applicable and addressed in chapter 4: EO 1988, Floodplain Management; EO 11990, Protection of Wetlands; and EO 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations. Finally, we designed this CCP/EIS to comply with NEPA and the Council on Environmental Quality regulations for implementing NEPA (40 CFR, 1500-1508). Other laws and executive orders can be found on the USFWS Laws Digest Web site at: <http://www.fws.gov/laws/Lawsdigest.cfm>; the laws listed here and others are also listed in Appendix C.

1.9 Significant Concerns

Interest in the future management of the refuge is widespread. The concerns and interests of citizens, local and state officials, and non-governmental organizations are diverse. We have heard from businesses and full-time and part-time residents from the town of Chincoteague and neighboring communities; hunters and harvesters of waterfowl, fish, and shellfish, and upland game species; visitors who come to observe birds, the Chincoteague ponies, monarch butterflies, and other wildlife, or who seek solitude and respite in the natural world; beachgoers, horseback riders, and other non-wildlife-dependent recreation users; and State agencies and other programs and organizations concerned about the role and contributions the refuge can play in a larger network of natural areas across the Delmarva Peninsula, the Mid-Atlantic region, and the migratory bird flyway of the Atlantic coast.

Based on input we received and our professional judgment in incorporating the best available scientific and technical information, we have identified several key concerns which this CCP will address. They are:

- Climate change/sea level rise
- Regional conservation

- Balance between public use and habitat and wildlife conservation
- Public access to the refuge, in particular to the recreational beach, and impact on visitor experience and the local economy

We identified the first two concerns based on the policies and initiatives of the USFWS and the DOI, as well as feedback from other resource management agencies. The latter two concerns were the most consistently and strongly voiced themes from public comments received during scoping.

Each of these concerns is summarized below, and is also addressed in the alternatives we developed that are described in chapter 2 and as part of the existing conditions discussed in chapter 3.

1.9.1 Climate Change/Sea Level Rise

Climate change and sea level rise are a growing concern for the refuge and the nation. Rising air and water temperatures, intense precipitation events, drought, sea level rise, strong coastal storms, and intense wind events are all concerns identified by the scientific community for the Mid-Atlantic region. Since the current Master Plan was signed, our awareness and understanding of the impacts of climate change and sea level rise on barrier islands has increased.

Recent repeated coastal flooding and over wash caused by nor'easters and tropical hurricanes have resulted in damage to beach access and parking. Impacts on habitat and wildlife have been either beneficial or negative depending upon the timing and severity of the weather event. We are committed to working with partners to continue research and assessment of future climate change impacts on the Delmarva Peninsula. The effects of climate change and sea level rise at the refuge are discussed in more detail in section 1.14.7 and with regard to its effect on the existing conditions, in section 3.2.5.

1.9.2 Regional Conservation

We are committed to a landscape-level approach to conserve, manage, and restore refuge lands and waters, as well as to facilitate such conservation actions beyond our boundaries. We recognize the conservation importance of the southern Delmarva Peninsula and the regional challenges it faces, including those related to climate change and land use. We are committed to working with partners to examine opportunities to address these challenges, such as improving connectivity between protected lands and providing lands for multiple recreational activities to support the tourism economy, while also providing ecological, educational, and other benefits. Regional conservation is a significant concern and is discussed further in section 1.14.5 and with regard to the existing environment, in section 3.9.5.

1.9.3 Balance Between Public Use and Habitat and Wildlife Conservation

We received many comments requesting that the refuge maintain a balance between people and nature, or recreation and wildlife management. Federal land management agencies often allow multiple uses to occur on their lands, and some agencies, like national forests and the Bureau of Land Management (BLM) have a multiple use mandate and structure. However, statutory and policy framework of the Refuge System clearly defines that wildlife and wildlife conservation must come first on refuge lands and waters. Many of our policies and goals aim to achieve this balance, through allowing for public uses that are deemed appropriate and compatible for each refuge. A balanced approach that upholds that wildlife comes first is reflected throughout the discussion of visitor service issues and concerns in section 1.14.6.

1.9.4 Public Access to the Refuge, in Particular to the Recreational Beach, and Impact on Visitor Experience and the Local Economy

Access to the refuge, in particular to the recreational beach, was the most commonly cited issue by the public. We are committed to preserving access to the refuge, including by personal vehicle, and to continuing to provide a recreational beach. We considered impacts on visitor experience and the local economy throughout this CCP/EIS. Access issues are discussed in section 1.14.6 and in the affected environment chapter in section 3.5.2 and 3.6.2.

1.10 Other Relevant Plans and Initiatives

USFWS manages and administers the Chincoteague NWR and Wallops Island NWR as part of the Refuge System. In addition to the purposes, mandates, and policies that are discussed relative to the purpose of this CCP, as discussed in sections 1.3 through 1.9 above, a variety of international, national, state, regional, and local plans and initiatives affect the context and setting of refuge and therefore, the CCP. These plans and initiatives are related to conservation, public use, climate change, and land use. They are listed below and described in more detail in Appendix B.

1.10.1 International and National Conservation Plans and Initiatives

The plans and initiatives listed below, in chronological order, provide guidance for the CCP/EIS development and for development of refuge management policies, goals, and objectives with regard to the significance of the refuge's natural environment and considerations for its protection and management.

- *North American Breeding Bird Survey (BBS; 1966-present).*
<https://www.pwrc.usgs.gov/BBS/index.cfm?CFID=9765136&CFTOKEN=20581228>
- *North American Waterfowl Management Plan (NAWMP; 1986, 2004, and 2012).*
<http://nawmprevision.org/sites/default/files/NAWMP-Plan-EN-may23.pdf>
- *Partners in Flight: Mid-Atlantic Coastal Plain Bird Conservation Plan (PIF; Watts, 1999).* http://www.partnersinflight.org/bcps/plan/pl_44_10.pdf
- *Regional Wetland Concept Plan, Northeast Region (USFWS; 1990).*
<http://digitalmedia.fws.gov/utills/getfile/collection/document/id/1378/filename/1379.pdf>
- *North American Bird Conservation Initiative (NABCI, 1998).* <http://www.nabci-us.org/>
- *U.S. Shorebird Conservation and North Atlantic Regional Shorebird Plans*
 - The USSCP is available online at: <http://www.shorebirdplan.org/wp-content/uploads/2013/01/USShorebirdPlan2Ed.pdf> (Brown et al. 2001).
 - The North Atlantic Regional Shorebird Plan can be viewed online at: <http://www.fws.gov/shorebirdplan/RegionalShorebird/downloads/NATLAN4.pdf> (Clark & Niles 2000).
- *North American Waterbird Conservation Plan (NAWCP; Version 1, 2002).*
<http://www.nawcp.org/pubs/ContinentalPlan.cfm> (Kushlan et al. 2002).
- *Birds of Conservation Concern (BCC).*
<http://digitalmedia.fws.gov/cdm/ref/collection/document/id/1404>

- *New England/Mid-Atlantic Coast Bird Conservation Region (BCR 30) Implementation Plan*. http://www.acjv.org/BCR_30/BCR30_June_23_2008_final.pdf (Steinkamp 2008).
- *A Blueprint for the Future of Migratory Birds: A Strategic Plan 2004-2014*. http://library.fws.gov/Bird_Publications/blueprint04-14.pdf
- *Conserving the Future: Wildlife Refuges and the Next Generation* (USFWS 2011). <http://americaswildlife.org/wp-content/uploads/2012/01/Final-Document-Conserving-the-Future.pdf>
- *U.S. Fish and Wildlife Service Land-Based Wind Energy Guidelines (2012)*. http://www.fws.gov/windenergy/docs/WEG_final.pdf

1.10.2 National Public Use Plans and Initiatives

- *America's Great Outdoors: A Promise to Future Generations* (AGO; 2011). <http://americasgreatoutdoors.gov/files/2011/02/AGO-Report-With-All-Appendices-3-1-11.pdf>
- Let's Move! And Let's Move Outside. <http://www.letsmove.gov/>
- Youth in the Great Outdoors. <https://youthgo.gov/>
- Connecting People with Nature. <http://www.fws.gov/northeast/cpwn/index.html>

1.10.3 Climate Change and Sea Level Rise Studies

USFWS is concerned with the potential effects of climate change on Assateague Island and the Virginia Eastern Shore, and the potential impact on refuge facilities, infrastructure, and access. We, therefore, consider climate change to be a key consideration for this CCP/EIS. These concerns are further described in section 1.14, Issues and Opportunities.

The two most relevant climate change plans are the following:

- *Rising to the Urgent Challenge: Strategic Plan for Responding to Accelerating Climate Change* (USFWS 2009). <http://www.fws.gov/home/climatechange/pdf/CCStrategicPlan.pdf>.
- *The National Fish, Wildlife and Plants Climate Adaptation Strategy* (2012). <http://www.wildlifeadaptationstrategy.gov/pdf/NFWPCAS-Final.pdf>.

The relevant work on climate change for the refuge includes the following studies and plans, presented in chronological order:

- *A Case Study on Chesapeake Bay and Assateague Island* (EPA, NPS, USFWS 2009). http://www.nwf.org/~media/PDFs/Global-Warming/Reports/SeaLevelRiseandCoastalHabitats_ChesapeakeRegion.pdf?dmc=1&ts=20130325T1459161406
- *Refuges at Risk: the Threat of Global Warming* (Schlyer 2006). http://www.defenders.org/publications/refuges_at_risk_2006.pdf.
- *The Virginia Climate Change Action Plan* (Governor's Commission on Climate Change 2008). http://www.sealevelrisevirginia.net/docs/homepage/CCC_Final_Report-Final_12152008.pdf.

- *Sea Level Rise and Coastal Habitats in the Chesapeake Bay Region, Sea Level Affecting Marshes Model (SLAMM)*¹ (Glick 2008). http://www.nwf.org/~media/PDFs/Global-Warming/Reports/SeaLevelRiseandCoastalHabitats_ChesapeakeRegion.ashx.
- *Application of the SLAMM 5.0.2 in the Lower Delmarva Peninsula* (Nieves 2009). http://www.slammview.org/slammview2/reports/LDP_ChincoteagueFinal.pdf.
- *National Parks in Peril: The Threats of Climate Change Disruption* (Saunders 2009). <http://rockymountainclimate.org/website%20pictures/National-Parks-In-Peril-final.pdf>.

1.10.4 State, Regional, and Local Plans

- *Virginia's Comprehensive Wildlife Conservation Strategy and Wildlife Action Plan* (Virginia Department of Game and Inland Fisheries 2005). <http://www.bewildvirginia.org/wildlifeplan/>.
- *State Comprehensive Outdoor Recreation Plan* (Virginia Department of Conservation & Recreation 2007). http://www.dcr.virginia.gov/recreational_planning/vop.shtml.
- *Accomack County Comprehensive Plan* (County of Accomack 2008). http://www.co.accomack.va.us/Planning/2008_comprehensive_plan_update.html.
- *Town of Chincoteague Comprehensive Plan* (Town of Chincoteague 2010). <http://www.chincoteague-va.gov/pdf/ComprehensivePlan201001.04.10.pdf>.

¹ SLAMM is one of the models used to study the impact of coastal processes, such as sea level rise, on an area and simulate the dominant processes and forecast long-term effects. SLAMM takes into account five processes that determine the impact of sea level rise impact on wetlands: inundation (the rise of water levels and the salt boundary); erosion; overwash (beach migration and transport of sediments); saturation (migration of coastal swamps and fresh marshes onto adjacent uplands due to the water table responding to rising sea level); and accretion (vertical rise due to buildup of organic and inorganic matter).

1.11 Description of the Refuge

This section provides the history and description of the two refuges that are the subject of this CCP/EIS.

1.11.1 *Chincoteague National Wildlife Refuge*

Chincoteague NWR includes approximately 14,000 acres of beach, dune, marsh, and forest habitats. Federal title to refuge land extends to the mean low water line. Actual acreage is difficult to measure due to land erosion and accretion. Under common law, title to accreted lands inures to the uplands owner.

Originally, Chincoteague NWR encompassed 8,808 acres acquired under the Migratory Bird Conservation Act (1929). This land was located primarily on the southern end of Assateague Island, which lies in Accomack County, Virginia, but also included Jerico and Hebron Islands, two small marshes adjacent to the island but located in Worcester County, Maryland. These islands are now managed by the National Park Service (NPS). The northern end of Assateague Island lies in Maryland and is managed by the NPS (Assateague Island National Seashore) and the Maryland Department of Natural Resources (Maryland Assateague State Park). Assateague Island National Seashore was designated in 1965 with provisions for the southern end of Assateague Island to remain a refuge under the management of the USFWS. Since the refuge's creation, the USFWS has acquired additional lands using the Migratory Bird Conservation Fund or the Land and Water Conservation Fund. Today, Chincoteague NWR encompasses approximately 14,032 acres, of which all but 418 acres (as previously mentioned) are located in Accomack County, Virginia. In addition to the Virginia part of Assateague Island, Chincoteague NWR includes all 427 acres of Morris Island (located between Chincoteague and Assateague Islands), 546 acres of the northern end of Chincoteague Island (known as Wildcat Marsh), all 1,434 acres of Assawoman Island, 174 acres of the northern end of Metompkin Island, and 1,412 acres in fee title and 600 acres in easements on Cedar Island. Portions of Assawoman and Metompkin islands were acquired most recently, in 1990. Acreage given is based on realty transaction accounts; the actual acreage changes with land accretion, erosion, and other factors.

We have created and manage approximately 2,600 acres of fresh and brackish-water impoundments on Chincoteague NWR for migrating and wintering waterfowl and other migratory birds. Chincoteague NWR also provides and manages habitat for American black ducks, as part of a long-term effort, in compliance with the North American Waterfowl Management Plan, to reverse significant drops in this species' populations. These efforts also benefit other wildlife, especially shore and wading birds.

Wildlife management strategies at Chincoteague NWR continue to provide quality habitat for migrating and wintering waterfowl which also benefits a greater variety of wildlife, such as wading birds, shorebirds, and neotropical migrants. The refuge supports breeding populations of the endangered Delmarva Peninsula fox squirrel and the threatened piping plover. The American bald eagle (de-listed or removed from the Federal List of Endangered and Threatened Wildlife and Plants in 2007) regularly nests on the refuge, and the American peregrine falcon (de-listed in 1999) is seen quite frequently during its annual autumn migration. The refuge's southern barrier islands are particularly important as spring stopover sites for migrating red knots between late April to early June, with numbers peaking in late May (Niles et al. 2010). Virginia hosts approximately 30 percent of the hemisphere's red knot rufa subspecies population, and Cedar and Metompkin Islands fall in the upper third of islands in terms of numbers of red knots counted

during migration (TNC 1996). The red knot was proposed for listing as a Federal threatened species in September 2013. Additionally, the Atlantic loggerhead sea turtle is a threatened species that nests occasionally on Chincoteague NWR. Refuge management programs are targeted to provide feeding and resting areas for birds in migration, and nesting and brood-rearing habitat for those birds that find Chincoteague NWR suitable for reproduction. To this end, Chincoteague NWR continues efforts toward acquiring land and water for increased conservation of migratory bird resources and to protect important wildlife habitat from the impacts of development.

Chincoteague NWR has been designated as part of a Globally Important Bird Area (IBA) by the American Bird Conservancy and the Audubon Society; one of the top 10 birding Hotspots by the National Audubon Society; and a Site of International Importance within the Western Hemisphere Shorebird Reserve Network (WHSRN), a conservation partnership of stewards and landowners led by the Manomet Center for Conservation Sciences. This coastal barrier island/lagoon system has been designated a World Biosphere Reserve by the United Nations Educational, Scientific, and Cultural Organization in recognition of its great ecological value. Moreover, the DOI designated the area a National Natural Landmark in recognition of its outstanding natural values.

Chincoteague NWR is also an important recreational destination, particularly for people living in the Washington, DC, Baltimore, Philadelphia, and New York City areas. With approximately 1.2 to 1.4 million visits annually, Chincoteague NWR is one of the most visited refuges in the United States, providing visitors with the six wildlife-dependent recreation opportunities (hunting, fishing, wildlife observation and photography, environmental education and interpretation) designated as priority general public uses of the Refuge System by Congress, as well as other public uses that have been deemed appropriate and compatible. The majority of visits are to the recreational beach, which is managed by the NPS under an agreement with USFWS, and subject to a congressional mandate from 1965 when the Assateague Island National Seashore was designated. Visitation to Chincoteague NWR supports the tourism economy of the town of Chincoteague, which is the refuge's gateway community and is located on Chincoteague Island, and through which visitors must travel to access Chincoteague NWR.

Chincoteague NWR Management Units

The management units for Chincoteague NWR are organized by island, with habitats as sub units. Table 1-1 summarizes the management units by name, and then breaks down individual acreage for each sub unit by habitat. Habitats for each management unit, or group of units, are then described in more detail. The differences in habitat among the management units illustrate the need for different management. Figure 1-3 identifies the refuge management units.

Table 1-1. Management Units

Unit	Sub Unit by Habitat (acres)					Total Acreage
	Beach /Dune	Shrub/early successional	Forested Uplands	Impoundments	Salt Marsh	
Assateague Island	970	2,872	1,600	2,650	1,985	10,077
Wildcat Marsh	-	-	71	-	475	546
Morris Island	-	-	21	-	406	427
Assawoman Island	359	-	-	-	1,075	1,434
Metompkin Island	96	-	-	-	78	174
Cedar Island	402				1,610	2,012
Wallops Island NWR	-	57	121	-	195	373
Refuge Total	1,827	2,929	1,813	2,650	5,824	15,043

The areas assigned to each habitat type are approximate, based on a 1994 land cover map, and provide a rough idea of the proportion of each habitat type on the refuge. A dynamic environment and shoreline constantly modified by storm and extreme high tide means that the amount of beach/dune and salt marsh habitat varies from year-to-year and across seasons. Encroachment of shrubs and trees into impoundments further hinders the accurate estimation of cover types at any given point in time.

1.11.2 Wallops Island National Wildlife Refuge

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

Wallops Island NWR is adjacent to the NASA Wallops Flight Facility. In 1971, the Bureau of Sport Fisheries and Wildlife, the precursor to the USFWS, entered into a noninterference - nonexclusive use agreement with the NASA Wallops Flight Facility to manage property (approximately 3,000 acres, "...of any and all lands and marsh...") of Wallops Island, Virginia. These lands were entered into the national data base of land under control (but not ownership) of the USFWS. For the next 35 years this agreement was to be renewed every 5 years and administration and management of these lands were the responsibility of the Chincoteague NWR. These new lands under the nonexclusive use agreement assimilated the purpose(s) of Chincoteague NWR.

In 1975, NASA transferred 373 acres of upland and marsh that now comprise Wallops Island NWR to the USFWS for ownership. In 2006, the agreement between NASA and USFWS expired and NASA requested that the agreement not be renewed. Additionally, NASA asked the USFWS to remove the 3,000 acres it was managing from its national data base. This was done; however, the dialogue that took place between the NASA Wallops Flight Facility and the USFWS concerning the renewal of the use agreement produced a greater understanding of our individual agency missions and responsibilities. This led to extensive discussions concerning current and future challenges jointly faced by both our agencies in light of climate change and its corresponding sea level rise. It became readily apparent that the opportunities presented by working together as part of a larger collaborative effort would provide for a greater scientific

Figure 1-3. Refuge Management Units



understanding of our shared coastal environment, and that the advancements in the use of technologies for the study of these environments could be shared with others. On August 11, 2011, the NASA Wallops Flight Facility, The Marine Science Consortium, and the USFWS entered into a “Nonreimbursable Space Act Agreement” for the purpose of: Technical Collaboration for Data Collection and Studies related to Climate Change, Habitat Shifts, Algorithm Development, Instrument Development, and Small Satellite Development. This new agreement will form the backbone of many future collaborative efforts.

Since its creation in 1971, Wallops Island NWR has been unstaffed, with little monitoring or management, except by A&N Electric Cooperative (and previously by Delmarva Power), utility companies with a power line right-of-way that removes tall growing trees, primarily the non-native autumn olive, and some brush species. Both the NPS and U.S. Department of Agriculture (USDA) Wildlife Services have storage facilities and maintenance areas on the refuge.

Wallops Island NWR is closed to the public except for white-tailed deer hunting. It was opened to public hunting in 2002 to reduce effects of overbrowsing by white-tailed deer, and to reduce the potential of deer collision with vehicles on the adjacent Highway 175 and aircraft at the neighboring NASA flight facility.

1.12 Refuge Operational Plans (“Step-down” Management Plans)

The Service Manual lists more than 25 step-down management plans that may be required on refuges to complement the CCP. Those plans contain specific strategies and implementation schedules for achieving refuge goals and objectives. Some plans require annual revisions; others require revision every 5 to 10 years. Some plans require additional NEPA analysis, public involvement, and CDs before they can be implemented (Service Manual 602 FW 4).

This document incorporates by reference those step-down plans that were previously highlighted by the refuge as necessary for enhanced management. These plans are necessary to continue proper management of the refuge, and should be carried forth in the future.

The following step-down plans are complete or updated annually, and consequently are consistent with current management. We will revise them if necessary per the selected alternative after the CCP is complete.

1.12.1 Fire Management Plan

We completed the most recent Fire Management Plan for Chincoteague NWR in 2009; the plan is updated every 5 years and is currently being updated. The Fire Management Plan addresses wildland fire events with guidelines on the level of protection needed to ensure personal and public safety, and to protect facilities and resources. We have incorporated fire programs needed to mimic natural processes and manage habitats, and other pertinent portions of the fire management, into this CCP.

1.12.2 Prescribed Fire Plan

We require a Prescribed Fire Plan for each prescribed fire on the refuge, and such plans are to be updated every 2 to 5 years. Each plan lays out the management objectives for the prescribed fire, specific prescriptions to achieve the objectives, and contingency planning for managing the fire. We prepared the most recent prescribed fire plans for the refuge in 2009 for the Wash Flats and Fire Management Unit 2 (refuge impoundments), and the plan is currently being updated.

1.12.3 Annual Habitat Work Plans

For each NWR, we develop Annual Habitat Work Plans (AHWP) that review habitat management activities from the previous year, evaluate monitoring programs, and make recommendations for habitat management strategies and prescriptions for the upcoming year. The AHWP incorporates adaptive management practices by evaluating success of management programs on an annual basis. We prepared the most recent comprehensive AHWP for Chincoteague NWR in January 2006, followed by a streamlined version annually. Shorebird and Delmarva Peninsula fox squirrel reports are prepared annually and semi-annually, respectively. We incorporated the results summarized in the 2010 Shorebird and 2008 Delmarva Peninsula fox squirrel reports into this CCP. Likewise, we reviewed and incorporated information from the 2007-09 Impoundment (Water) Management Plan as appropriate.

1.12.4 Predator Management Plan

We manage mammalian and certain avian predators to minimize losses to federally listed species and other ground-nesting birds using an Annual Predator Management Program that we develop each year prior to the nesting season. The Program evaluates the prior year's results and outlines methods for the upcoming year—protective enclosures, trapping, and shooting—to protect nesting species (USFWS 2012g). This annual plan is tied to the Final Environmental Assessment for the Management of Predation Losses to Native Bird Populations on the Barrier and Chesapeake Bay Islands and Coastal Areas of the Commonwealth of Virginia, prepared by the USDA Wildlife Service (USDA 2005).

1.12.5 Hunt Management Plans

We prepared the current Chincoteague and Wallops Island NWR Hunt Management Plans in September 2007 and April 2007, respectively. These plans outline population objectives, identify areas to be open for hunting, and describe how the hunts will be administered for big game (i.e., deer and sika) and migratory birds.

1.12.6 Annual Hunt Program

Each year, we develop the Annual Hunt Program, which is a written document detailing specifics of each year's hunt.

1.12.7 Inventory and Monitoring Plan

The 1993 Chincoteague NWR Wildlife Inventory Plan describes surveys and protocols to monitor population numbers and trends. The information obtained from these surveys and programs is used to guide management decisions. We are currently reviewing the plan for consistency with national and regional guidance; once the Habitat Management Plan (HMP) and CCP are finalized, the inventory and monitoring plan will be revised and finalized.

1.12.8 Pony Management Plan

Chincoteague NWR has resident horses known as Chincoteague ponies on Assateague Island that are owned and managed by the Chincoteague Volunteer Fire Company and that graze in 2 large designated areas on the refuge under a special use permit. In partnership with the Fire Company, we have drafted an Interim Chincoteague Pony Management Plan (2013; Appendix D), which replaces the 1990 Plan. It outlines refuge and Fire Company responsibilities in managing the ponies (USFWS 2013c).

1.12.9 Plans to be Developed

We will develop the following plans after the CCP is finalized:

Habitat Management Plan (HMP)

We intend the HMP to be a dynamic working document that provides long-term vision, specific guidance, continuity, and consistency for managing habitat on the refuge. The document sets a direction for the next 15 years, with reviews every 5 years and the use of adaptive management to assess and modify management activities as research, monitoring and priorities may require. HMPs are often step-down plans from the CCP, but can also be prepared prior to or in conjunction with the CCP/EIS. We developed a draft HMP during the pre-planning phase of this CCP/EIS and incorporated its content, including wildlife habitat goals, objectives, and strategies, into this CCP/EIS. We will revise it as necessary to be consistent with the selected alternative and finalize it after the CCP is complete.

In 1992, we completed the Upland Habitat Management Plan for Chincoteague NWR, outlining goals, objectives, and management actions for 3,440 acres of forest and shrub habitats on Assateague Island (USFWS 1992b). Unfortunately, reductions in staff and changing priorities curtailed our implementation of the plan. We reviewed the Upland Management Plan during preparation of the draft HMP, and incorporated applicable portions into it.

The Virginia Ecological Services Field Office in Gloucester, Virginia, prepared several Biological Opinions which spell out terms, conditions, and conservation recommendations for various management activities on Chincoteague NWR. The most comprehensive and detailed one is the 2008 Biological Opinion (USFWS 2008b; Appendix F). It addresses the timing, location, and types of beach use permitted in areas that harbor piping plover, sea turtles, and seabeach amaranth. It also requires specific monitoring and protective measures (USFWS 2008b). Elements of the Biological Opinion were incorporated into the draft HMP. Biological Evaluations prepared by staff under Section 7 of the Endangered Species Act (and concurred by USFWS Endangered Species Offices in Virginia and Maryland) also set management guidance for other activities in Delmarva Peninsula fox squirrel habitat.

Visitor Services Plan

This plan will be a step-down plan to the CCP and will build upon other management plans, namely the Hunt Management Plan (2007), to document approved recreational activities and identify the structure of the visitor services program. The plan will include visitor services data and research to evaluate and plan for visitor services programs, and will assist in the implementation of the CCP.

1.13 Refuge Vision and Goals

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

Chincoteague and Wallops Island National Wildlife Refuges encompass extraordinary and ever-changing lands at the edge of the sea, a place where unique habitats and wildlife flourish. In partnership with others, the refuges are a

vital part of a larger system of protected lands and waters on the Delmarva Peninsula critical to migratory birds. People from around the world can visit the refuges to learn, recreate, refresh themselves, be inspired by wildlife and wild lands, and renew their connection with nature.

We developed the following goals for the CCP in conjunction with feedback and collaboration with local partners, comprising the refuge's CCP/EIS planning team.² The goals are descriptive and provide broad statements of desired future conditions that work toward achieving the refuge's purposes and vision. We will use the goals presented below to form management objectives and actions, including forming and evaluating alternatives described in this CCP/EIS. The first four goals incorporate the goals from the draft HMP. Chapter 2 provides objectives for each goal by alternative.

Goal 1: Coastal Habitats. Manage quality coastal habitats for biological integrity, diversity, and environmental health of refuge barrier beach and dunes in concert with natural processes as part of the Delmarva Peninsula coastal barrier island system to provide habitat for species of conservation concern.

Goal 2: Managed Wetlands (Impoundments). Manage refuge impoundments to support native wildlife and plant communities, including a diversity of waterbirds, aquatic species, and other species of conservation concern.

Goal 3: Upland Habitats. Manage upland habitats for biological integrity, diversity, and environmental health of coastal forests and shrublands to sustain native wildlife and plant communities, including species of conservation concern.³

Goal 4: Southern Barrier Islands Unit (Assawoman, Metompkin, Cedar). Perpetuate the biological integrity, diversity, and long term viability of natural habitats that support native avian communities and turtles on Assawoman, Metompkin, and Cedar Islands through a partnership approach.

Goal 5: Partnerships. Working with partners, protect and restore vigorous, viable populations of migratory and resident wildlife, fish, and native plants and their habitats found on the Delmarva Peninsula and identified in state, national, and international treaties, plans, and initiatives. Take a leadership role in collaborative regional efforts to achieve broader conservation goals and serve as a catalyst for achieving a multi-state eco-regional partnership. The refuge will continue to work with partners to explore how best to sustain the resiliency of this unique barrier island system, its communities, and its economy, consistent with

² The CCP/EIS Planning Team met consistently throughout the planning process for this CCP/EIS. Attendance varied over time but included representatives from: U.S. Fish and Wildlife Service, National Park Service Assateague Island National Seashore, town of Chincoteague, Accomack County, Accomack County Board of Supervisors, Accomack-Norhampton Planning District Commission, Virginia Marine Resources Commission, Virginia Division of Game and Inland Fisheries, and NASA. The Volpe National Transportation Systems Center served as facilitator.

³ Focal species are those that received special management considerations due to their status (threatened or endangered), economic importance, declining population status, high degree of public interest, or similar attributes.

the refuge's mission and in the face of dynamic coastal processes, climate change, and storm events.

Goal 6: Visitor Services. People of all ages and abilities develop a stewardship ethic while enjoying their refuge experience and increasing their knowledge of the USFWS, Refuge System, and refuge.

Goal 7: Refuge Administration. Maintain and enhance refuge infrastructure and operations responsibly and sustainably for the safety and well-being of the wildlife, cultural resources, public, and employees.

1.14 Issues and Opportunities

As part of the CCP/EIS process, we developed a list of issues and opportunities based on input from public meetings, stakeholder feedback, refuge staff, and planning team meetings. Along with the goals stated above, these issues and opportunities are critical in framing the objectives and strategies for the various alternatives described in chapter 2. While the list of issues and opportunities below is a comprehensive list of those raised during the process to date, it should be recognized that it does not represent every issue which faces the refuge. Furthermore, although all of these issues are recognized here equally, the public commented on beach access, beach parking, and Chincoteague pony management the most during the public review of the alternatives. The issues and opportunities below are not listed in any priority order, but rather are organized by goal area, with those in the first four goal areas again corresponding to and drawing from the draft HMP, and those in the last three goals drawing from various other plans and initiatives. These issues and opportunities are not all relevant to Wallops Island NWR.

1.14.1 Coastal Habitat

Coastal habitats include beach/dune habitat within Chincoteague NWR for nesting, migrating, and wintering shorebirds as well as turtles and seabeach amaranth, and salt marsh and other habitats within the entire refuge that serve a variety of functions.

Beach/Dune Habitat for Coastal Nesting Birds

Currently, our management goal for the piping plover, as outlined in the Biological Opinion (2008), is a fledge rate goal of 1.2 chicks per pair. The fledge rate needed to keep the population stable is 0.83. The least tern is another high priority BCR 30 species and Tier II species in the Virginia Wildlife Action Plan. American oystercatcher, Wilson's plover, gull-billed tern, and black skimmer are other species of concern with high rankings that nest on refuge beaches that would benefit from management actions for piping plover and least tern.

Beach/Dune Habitat for Migrating and Wintering Shorebirds and Migrating Monarch Butterflies

In 1990, the Virginia and Maryland barrier islands were designated as a Western Hemisphere Shorebird Network Site due to the number of shorebirds using the area during migration, with tens of thousands of shorebirds stopping at Assateague Island between the months of April and September. Since Chincoteague NWR is a high public use refuge, we must continually manage activities with consideration of migrating shorebirds. Shorebirds are susceptible to human disturbances during their breeding season, and management policies that limit this disturbance are of a high priority for the refuge. Assateague Island is a critical stopover point for southbound migrating monarchs that use the refuge's resources to rest, refuel, and roost for the night. Nectar

source plants are located in various refuge habitats including Beach Road adjacent to Toms Cove, the Overwash, and tip of the Hook, blooming in succession during the migration period.

Beach/Dune Habitat for Turtles

The loggerhead sea turtle is a Federal and State-listed threatened species with habitat found on the refuge; the northern diamondback terrapin (Virginia Wildlife Action Plan Tier II species) also nests in the sandy beach habitats. There are three main threats to nesting loggerheads on Assateague Island. They are: (1) weather and tides, (2) predation, and (3) human activities. According to refuge files, weather is most likely to cause nest loss or mortality. Currently, no turtle nests have been knowingly lost to predators. Management actions, such as mammalian and avian predator removal and placing protective screening over nests, may have prevented predation.

Federally Endangered Plants and Rare Plant Communities

Seabeach amaranth is native to Atlantic coast barrier island beaches from Massachusetts to South Carolina (USFWS 2008b). Although seabeach amaranth generally grows in sparse to very sparse distribution, the existing population on the refuge is greatly dissipated. Beach stabilization efforts and intensive recreational use, as well as natural species predation, have plagued the species on the refuge. We must evaluate management steps, such as the transplanting and reseeded that was successful in Maryland, in order to implement the most effective recovery method on the refuge. The number of rare species documented in Lucky Boy Fen in Wallops Island NWR is high in proportion to its size. It contains 2 plant species (brown-fruited rush and few-flowered beakrush) considered “critically imperiled” and four plant species (southern bladderwort, ten-angle pipewort, white beakrush, and white-topped fleabane) considered “imperiled” in the state by the Virginia Department of Conservation and Recreation’s Natural Heritage Division. For some of these plant species, Virginia represents the southernmost extent of their range and this is the only habitat that supports these species in the state. Groundwater pollution, encroachment of invasive species and sea level rise are among the greatest threats to Lucky Boy Fen on the refuge.

Salt Marsh Habitats for Nesting, Migrating, and Wintering Birds

Known threats to salt marsh abiding species (like American black duck), besides sea level rise, include the following: (1) grazing by herbivores (i.e. Chincoteague ponies), which alters vegetation structure and species composition resulting in habitat loss for marsh-dependent focal species; (2) direct forage competition, which reduces food resources for wildlife; and (3) mammalian trampling during the nesting season, which can disturb or destroy nests.

1.14.2 Managed Wetlands (Impoundments)

Managed wetland includes impoundments and artificial nesting structures that we maintain on Assateague Island. They provide habitat for migrating, wintering, and breeding wildlife.

Impoundments for Waterfowl, Shorebirds, Waders and associated species

Impoundments supply numerous habitat benefits, including wintering/migratory habitat for waterfowl; fresh/brackish vegetation roots and seed as food for wintering waterfowl; food sources for waterbirds of conservation concern such as snowy egret, glossy ibis, Forster’s and gull-billed terns; and shorebird migratory stopover habitat for many species of conservation concern including short-billed dowitcher, dunlin, and semipalmated sandpiper. Furthermore, the impoundments concentrate large flocks of birds, providing wildlife viewing, and opportunities for photography, education, and interpretation. In order to provide adequate food, in the form of vegetation (seed or roots) and/or aquatic invertebrates, fresh water, and loafing areas requires the

precise management of water levels. All refuge impoundment management strategies depend entirely on precipitation as their sole source of freshwater for the generation of fresh/brackish water plants, and gravity or evaporation for drawdown. Both mechanisms limit management capabilities. Tidal cycles and strong coastal storm events, especially nor'easters and hurricanes, further challenge the attainment of management goals for impoundments. As sea level continues to rise and more frequent overwash events occur, we expect damage to dikes and other impoundment infrastructure. Maintaining water depths at desirable levels may also become more difficult.

1.14.3 Upland Habitats

Upland habitat includes shrub and forested uplands throughout the refuge, with specific conditions for maritime forest on Assateague Island and upland habitat on Wallops Island NWR.

Coastal Shrub Habitat for Breeding and Migrating Landbirds

Bird species that depend on shrubs and other early-successional habitats are declining in the Eastern U.S. due to loss of habitat. Shrubs provide abundance of insect food and berries for birds during the fall migration and/or throughout the winter. The refuge's wax myrtle/bayberry/groundsel shrub community provides migrating birds with an important stopover habitat that supplies the various species with food, water, and protection.

Loblolly Pine Forest for Delmarva Peninsula fox squirrel, Brown-headed Nuthatch and Eastern Towhee

Forest habitat on Assateague Island consists largely of monotypic stands of even-aged, mature loblolly pine trees, aged 65 years or older; some are older than 100 years (Merten, pers. comm., 2010). Without management, such as prescribed burning or selective cutting, these mature age classes are vulnerable to catastrophic loss from insect damage or extreme weather/wind events. The southern pine beetle, a native species, is the only major known insect threat to this forest.

Upland Habitats on Wallops Island NWR

Since its establishment in 1971, Wallops Island NWR has been unstaffed with little monitoring and management. We have made some manipulations to the land, with the goal of creating early successional habitat favored by bobwhite and other species that prefer edge and early succession habitats, in the old-field habitat. However, these changes have been poorly documented. Likewise, some mechanical and chemical treatment of invasive plants such as non-native autumn olive, Phragmites, Nepalese browntop, Japanese siltgrass, Japanese honeysuckle, and several thistles also may have taken place (CNWR 2004).

1.14.4 Southern Barrier Islands Unit (Assawoman, Metompkin, Cedar)

The Southern Barrier Islands Unit consists of Assawoman, Metompkin, and Cedar Islands and share similar mixes of habitats and management conditions.

Beach/Dune Habitat for Breeding Shorebirds and Turtles

The Mid-Atlantic barrier islands provide preferred nesting habitat for terns, skimmers, gulls, American oystercatchers, willets, herons, egrets, other waterbirds, shorebirds, and turtles. During the shorebird breeding season, (March 15 – August 31), the southern islands are managed in partnership with the Commonwealth of Virginia and The Nature Conservancy to reduce disturbance, thereby increasing productivity. Despite this and other protective measures, many wildlife species are in decline throughout the flyway, including common terns, least terns, gull-billed

terns, black skimmers, American black duck, and several herons. The decline of these species is thought to be linked to severe weather events, sea level rise, competition and displacement from nesting habitat by aggressive avian species, mammalian and avian predators, and unmanaged human disturbance.

Beach/Dune and Tidal Marsh Habitat for Migrating/Wintering Shorebirds/Threatened Plants

The ecological significance of Assawoman, Metompkin, and Cedar Islands is recognized through their inclusion in the WHSRN as a site of international importance, and by their designation as part of a Biosphere Reserve. The refuge does not currently conduct or organize systematic winter/migratory shorebird surveys on the southern islands like those conducted by volunteers on Assateague Island.

Virginia's string of barrier islands, which extend from Assateague Island south to Fisherman Island at the mouth of the Chesapeake Bay, is the largest collection of near pristine barrier islands left in the country (USFWS 1988). Aside from small private in-holdings, all of Virginia's barrier islands are protected by either Federal or State agencies, or The Nature Conservancy. Although preferred habitat for seabeach amaranth is found on refuge barrier islands, it is only currently found on Assateague Island. Potential habitat on Cedar and Metompkin islands has not been surveyed.

1.14.5 Partnerships

A crucial component of our refuge management strategy is considering both the impacts of refuge actions on the region and our relevant partners as well as the opportunities for collaboration with partners at the regional level for the purposes of conservation, economic development, and safety.

Regional Conservation

The refuge is located in the southern Delmarva Peninsula, an area of recognized global ecological significance for its remarkable estuarine, coastal, and marine habitats and substantial populations of migratory and breeding shorebirds, colonial waterbirds, landbirds, and raptors. The coastal lagoons and barrier islands represent what is arguably the most significant remaining undeveloped, natural land on the Atlantic coast. In partnership with Federal, State, local, and non-profit organizations we have long recognized the area's conservation importance, and together we have protected over a quarter of the land on the southern Delmarva Peninsula.

Several real and growing challenges threaten the area's rich and diverse natural heritage and the many benefits humans derive from the region's intact habitats and natural systems. These include vulnerability of natural systems to global climate change, especially sea level rise and incompatible land uses and land management activities such as plasticulture, commercial pine plantations, conversion of natural habitats to residential development, shoreline armoring, and increased pumping of ground water for agricultural irrigation, commercial, and residential uses.

We are currently involved in a number of conservation partnerships, including but not limited to the Pocomoke River Conservation Partnership and the Southern Tip Ecological Partnership, and are working with a number of conservation entities, such as The Nature Conservancy, the Virginia Eastern Shore Land Trust, the Assateague Coastal Trust, and the Conservation Fund. We are committed to working with partners to address the regional issues identified above through examining opportunities to improve connectivity between protected lands, protecting and restoring the ecological integrity, functionality and value of diverse habitats, buffering harmful

effects of coastal flooding and storm surges to local communities and infrastructure, and providing lands for multiple recreational activities to support the tourism economy while also providing ecological, educational, and other benefits.

Economic Development

Access to the refuge is through the town of Chincoteague, the economy of which has become increasingly dependent on the tourism dollars brought into the community by refuge visitors. The Town of Chincoteague's Comprehensive Plan clearly states that proximity to the refuge continues to be its largest economic development opportunity, although the NASA facility and adjacent business activity is also considered important and growing, and finfish and shellfish harvest also contributes to local economic activity.

Based on 2010 data, lodging and food businesses comprise about two-thirds of the tourist-related business in Chincoteague (USFWS 2012a). Tourism not only generates revenue for these sectors, but also generates revenue for the town in the form of food and lodging excise taxes. Spending associated with recreational use of the refuge can generate a substantial amount of economic activity in both local and regional economies. The Accomack County Comprehensive Plan (2008), relying on data from the Accomack County and Northampton County Commissioners of Revenue and the Chincoteague Chamber of Commerce, reports that in 2000 about 83 percent of Accomack County's tourist-related tax revenue was generated by the activities and amenities that the town of Chincoteague and the refuge provide to visitors.

Horseshoe crabs live in and around shallow ocean waters of the refuge. They come onto shore in the springtime at the new and full moon tides to mate and lay eggs. Horseshoe crab eggs serve as a significant source of food for migrating birds. Conservation of migratory birds is the primary purpose of the refuge. During a 2011 coordination meeting with NPS, it came to light that commercial harvest of horseshoe crabs is occurring within Toms Cove on lands administered as part of the refuge and in waters administered as part of Assateague Island National Seashore. USFWS policy and law require that a Special Use Permit (SUP) be issued for any commercial activity that takes place on Refuge System lands and waters. No SUP has been issued for the commercial harvest of horseshoe crabs; it is, therefore, an unauthorized activity. In order for any commercial use to be permitted on Refuge System lands or waters, it must be shown to contribute to the purposes of the refuge. We address this commercial use as part of this CCP by finding the commercial harvesting of horseshoe crabs does not contribute to the refuge's migratory bird purpose, does not contribute to the public's understanding and appreciation of the refuge's natural or cultural resources, and is not beneficial to refuge resources; consequently, the use cannot be permitted.

For this CCP/EIS, a regional economic assessment has been completed. This assessment provides a means of estimating how current management and the proposed activities could affect the local economy. This type of analysis provides two critical pieces of information. First it illustrates a refuge's contribution to the local community. Second, it can help in determining whether local economic effects are, or are not, a real concern in choosing among management alternatives. The public has expressed concern about impacts on visitation levels, with subsequent impacts to the tourism industry and related jobs. Additionally, there are concerns about property values, the capital/infrastructure improvements, maintenance, and operating costs of the different alternatives.

Hazard Mitigation

The town of Chincoteague, adjacent coastal communities, and NASA are concerned about future impacts of sea level rise and storm surge on infrastructure and access. We share this concern and will work in coordination with those entities and others to explore potential impacts and identify protective methods to address hazard mitigation. We will also work with our partners to explore how best to advance the study, information exchange, and project resources for adaptive management practices that sustain the resiliency of this unique barrier island system including but not limited to Assateague, Wallops, Assawoman, and Metompkin Islands in the face of dynamic coastal processes and climate change.

Interagency Federal Facility Management

The refuge is adjacent to several other Federal entities. NASA operates the Goddard Space Flight Center's Wallops Flight Facility, a center for aeronautic research. The Virginia Commercial Space Flight Authority leases space for the Mid-Atlantic Regional Spaceport, which is expected to see an increase in commercial space flight activity. In addition, the United States Navy's Surface Combat Systems Center is co-located with NASA and the National Oceanic and Atmospheric Administration Command and Data Acquisition Station has leased land for its adjacent facility from NASA since 1965 (Town of Chincoteague 2006). NASA has a visitor center that is adjacent to the Wallops Island NWR. NPS and USDA both have a use agreement with USFWS for shared facilities, mainly for storage, on Wallops Island NWR. Finally, as mentioned previously, Assateague Island National Seashore maintains staff and services within Chincoteague NWR.

We have coordinated with these Federal partners on many issues and are interested in identifying potential opportunities for future collaboration on wildlife management, scientific research, public education, and shared facilities.

Local Conservation of Tidal Creeks, Estuaries, Mudflats, and Nearshore Marine Waters

Most species found on the refuge depend on off-refuge habitats to fulfill one or more of their life cycle needs. Pollutants, human disturbance, or other activities off-refuge can influence the success of management activities that the refuge undertakes. For example, off-shore oil drilling and development of wind turbines on- or off-coast are potential activities that could impact migratory birds and bats.

1.14.6 Visitor Services

As mentioned previously, Chincoteague NWR provides a range of recreational opportunities, including the six priority wildlife-dependent activities, while Wallops Island NWR is limited to public access for hunting only. The six priority uses predetermined by the Improvement Act as appropriate but are still subject to a positive finding of compatibility with refuge purposes. Other uses must be determined to be both appropriate and compatible. Figure 1-4 identifies the primary public use areas on Assateague Island.

Concerns were expressed by the community that the USFWS would eliminate personal motor vehicle access to the refuge and beach parking. The USFWS has no goal or objective to do so. All public uses are dependent on access to the refuge. Personal motor vehicle access to Assateague Island, including parking at the beach, is very important to visitors and local residents. However, the USFWS does have concerns that climate change, with corresponding sea level rise and storms, will have a significant impact on the sustainability of the road and parking areas that

serve the recreational beach. The location and maintenance of the beach parking and the role of transit – whether to provide another option for visitors or to supplement available beach parking if reduced – need to be carefully considered and evaluated. Many visitors and residents also enjoy bicycling and walking to and within the refuge. Accessibility for all users, including those with mobility impairment, is also important.

Hunting

Hunting is a priority public use of the Refuge System and remains a popular form of wildlife-dependent recreation on the refuge and a vital part of the cultural, social, and economic fabric of the communities near the refuge. Chincoteague NWR provides big game hunting (sika and white-tailed deer) and migratory game bird hunting. On Wallops Island NWR, we only allow hunting of white-tailed deer.

Fishing

Surf fishing, crabbing, clamming, and oyster harvest are among the most popular wildlife-dependent recreational activities conducted on the refuge. The surf fishing areas south of the current parking lots are accessible via over-sand vehicle (OSV) use, which is administered jointly by NPS and the refuge, and is limited to certain times and areas to provide maximum protection to prime nesting habitat for coastal nesting birds. Fishing is allowed on Assawoman Island but requires a refuge permit to land a boat to fish the area. However, parts of the island may be closed based on nesting behavior.

Environmental Education and Interpretation

Refuge staff work with local schools, communities, and educational organizations to provide classroom and hands-on programs, both on and off the refuge, for youth. Activities are conducted throughout the region but on the refuge are concentrated on several trails as well as the Herbert H. Bateman Educational and Administrative Center. NPS offers its own set of programs. The refuge currently provides interpretive opportunities through self-guided interpretation but also through some guided programs.

We are facing a few major challenges, including how to meet the demand for these staff-intensive services, how to expand outreach off of the refuge, and how to provide virtual access to the resources of the refuge through broad band and fiber optic improvements.

Wildlife Observation and Photography

In general, wildlife observation and photography are becoming increasingly popular activities for visitors, and a source of economic growth for many communities where NWRs exist. Chincoteague NWR provides outstanding wildlife viewing opportunities throughout the year along trails, roads, and on the natural beach itself. These sites provide wildlife viewing and opportunities for amateur and professional photographers alike. The public and community desire continued access and additional opportunities for these uses; however, managers must balance opportunities with the need to limit disturbance.

Recreational Beach Use

The beaches of Assateague Island offer a unique experience in the Mid-Atlantic area. These beaches exist primarily in an undeveloped setting unlike other beaches (such as Virginia Beach,

Virginia, or Ocean City, Maryland) that are heavily developed with motels/hotels, boardwalks, eating establishments, and amusement parks. The natural setting draws many families seeking out a more traditional beach-going experience. Beach activities include sunbathing, swimming, shell collection, and campfires (on NPS lands), among other activities. If one wishes, it is possible to obtain an almost wilderness-like beach experience by hiking to areas where few visitors venture.

At the southern end of Assateague Island within the Chincoteague NWR, the NPS manages an “assigned area” consisting of the 1-mile recreational beach and corresponding adjacent 961 parking spaces, provided via a crushed shell surface. The NPS maintains a visitor contact station, restrooms, and pedestrian trails, as well as seasonal bathhouses, showers, and lifeguard-protected swimming beach. The current recreational beach and facilities on Assateague Island are located in one of the most dynamic areas of the island, which places them under constant threat of damage from flooding and erosion. Over the years, storms and accompanying extreme high tides have repeatedly washed out parts or all of the recreational beach parking lots. NPS has rebuilt and relocated the beach parking lots further to the west as they have been washed out. The 1993 Master Plan addressed these conditions by identifying a long-term strategy to pursue alternative means of transportation such as a shuttle system and off-site parking as necessary to maintain beach use in the future. Section 1.14.7 further addresses climate change impacts to facilities.

We have a cooperative relationship with the NPS for management of the recreational beach, defined in a series of agreements dating back to 1966; all of which have assigned certain management responsibilities to each of the two agencies. The agreements have evolved over time, reflecting changes in management goals as well as legislative changes to agency authority and administrative requirements. This management arrangement is defined in a 1990 interagency agreement between the NPS and USFWS and was revised in 2012 Memorandum of Understanding (MOU) (NPS/FWS 2012; Appendix E). USFWS has primary responsibility for managing the wildlife resources within the entire refuge, including the “assigned area.”

This agreement is necessary for the two agencies to comply with various public laws. Public Law 85-57 (1959) authorized the USFWS to grant to the Chincoteague-Assateague Bridge and Beach Authority (Authority) “easements and rights as may be necessary for the construction and maintenance of a bridge across the Assateague Channel and terminating on the Chincoteague National Wildlife Refuge. And also for the construction and maintenance of an access road from the terminus of such bridge to a public beach and recreation area to be developed along the southeastern shore of Assateague Island as designated by the Secretary.”

In 1965, Public Law 89-195 created the Assateague Island National Seashore and authorized the NPS to acquire all the interests of the Authority, including the right and obligation to develop of a recreational beach on the refuge. P.L. 89-195 also states: “Notwithstanding any other provision of this Act, land and waters in the Chincoteague National Wildlife Refuge, which are a part of the seashore, shall be administered for refuge purposes under laws and regulations applicable to national wildlife refuges, including administration for public recreation uses in accordance with provisions of the Act of September 28, 1962 (Public Law 87-714; 76 Stat. 653).”

Figure 1-4. Primary Public Uses of Chincoteague NWR on Assateague Island



Public Law 87-714, also known as the Refuge Recreation Act, authorizes the USFWS to administer areas within the National Wildlife Refuge System for public recreation, regardless of whether the recreation is wildlife-dependent. A recreational use that is not wildlife-dependent is an incidental or secondary use. The Refuge Recreation Act permits public recreation within a national wildlife refuge “only to the extent that is practicable and not inconsistent with other previously authorized Federal operations or with the primary objectives for which each particular area is established.” This compatibility standard was reinforced by the National Wildlife Administration Act of 1966 and the National Wildlife Refuge System Improvement Act of 1997.

These laws create a situation of competing interests. Language from P.L. 85-57 makes it clear that Congress intended for a recreational beach to be constructed and maintained on the refuge. It is also apparent that Congress believed or anticipated that “traditional” beach recreation (swimming, sunbathing, volleyball, etc.) could be compatible with refuge purposes, which today would be a difficult, if not impossible, standard to achieve. It may have been possible to meet these dueling mandates in the 1960s, before the ESA was passed, when beach users were fewer in number, and when more wildlife habitat existed in the area than today. It was also a time before the town of Chincoteague’s economy became so dependent on tourism from beach goers.

The USFWS Compatibility Policy contains exceptions for when the compatibility standard will not be applied to a refuge use. The policy reads:

“Exceptions may apply when there are rights or interests imparted by a treaty or other legally binding agreement, where primary jurisdiction of refuge lands falls to an agency other than us, or where legal mandates supersede those requiring compatibility. Where reserved rights or legal mandates provide that we must allow certain activities, we should not prepare a compatibility determination. In the case of reserved rights, the refuge manager should work with the owner of the property interest to develop stipulations in a special use permit or other agreement to alleviate or minimize adverse impacts to the refuge.”

The policy also states: *“Compatibility provisions of the Refuge Administration Act do not apply to activities authorized, funded, or conducted by another Federal agency that has primary jurisdiction over the area where a refuge or a portion of a refuge has been established, if those activities are conducted in accordance with a memorandum of understanding between the Secretary or the Director and the head of the Federal agency with primary jurisdiction over the area.”*

In order to comply with what we believe was the intent of Congress in passing P.L. 85-57, the USFWS has conveyed primary jurisdiction for beach use and recreation within the “assigned area” to the NPS. We have worked with them to minimize adverse impacts to the refuge, and developed a MOU to document operating procedures and respective responsibilities. Therefore, we will not prepare a CD for those activities administered by the NPS within the “assigned area.”

Other Recreational Uses

Other uses on Chincoteague NWR include walking, bicycling, horseback riding, boating, and commercial uses. Non-wildlife dependent recreation beach uses such as swimming, sunbathing, kite flying, campfires, and beachcombing are confined to the 1 mile assigned area of the NPS. All of these uses are limited to specific areas of land and/or times based on wildlife management objectives and might include permits and fees associated with use. There are no campsites on Chincoteague NWR. Visitors are not allowed to feed wildlife and are not allowed to bring alcohol

or pets onto the refuge, including in vehicles. Other restricted activities include use of skateboards, roller or in-line skates, and segways, and the collection of plants, animals, or artifacts. However, we allow the collection of one gallon per person per day of unoccupied seashells. Motorized vehicles are not allowed on trails and mopeds are not allowed on Wildlife Loop.

1.14.7 Refuge Administration

Refuge administration covers communication, staffing, and management of specific areas, such as wilderness and cultural and historic resources.

Outreach, Communication, and Emergency Communication

USFWS considers communication systems important for stakeholder consultation, public outreach, and emergency management. We have identified, received funding for, and implemented a variety of communication improvements over the past 5 years, including a variable message sign, partnership with the local radio station, reactivation of the 1610 AM radio station, and traffic counters for beach parking. In addition to these improvements focused on traveler information, traffic, and emergency response, we have identified the potential for further improvements, especially in terms of broad band and fiber optic capacity, which will allow for improved use of the refuge Web site and social media to provide environmental education and to better engage the public, in particular those unable to visit or who live far away.

Staffing & Volunteer Program/Friends Group

Chincoteague NWR has staff in the areas of visitor services, law enforcement, biology, administration, fee collection, management, and maintenance. In addition to refuge staff, NPS provides 6 permanent and 15 seasonal employees to provide lifeguard, law enforcement, maintenance, and interpretive services at Toms Cove and the recreational beach. Since its creation in 1971, Wallops Island NWR has been unstaffed, with limited monitoring or management, except in the past by Delmarva Power and now A&N Electric Cooperative, a utility company with a power line right-of-way that removes tall growing trees, primarily the non-native autumn olive, and some brush species.

Staff is supplemented by year-round volunteers as well as local and national youth and adult groups such as Road Scholar, Youth Conservation Corps (YCC), and the Student Conservation Association (SCA). These individuals and groups provide assistance with wildlife and habitat management programs, wildlife and habitat surveys, invasive species removal, trash pick-up, interpretive education, and other projects. Chincoteague NWR also receives significant support from its non-profit friends group, the Chincoteague Natural History Association (CNHA), which produces and provides interpretive and educational material for refuge visitors and for local teachers. Additionally CNHA provides funds for student interns, operates a bus tour, operates 2 retail stores, provides lighthouse keepers that welcome and guide visitors at the Assateague Lighthouse, and provides a conduit for matching grants for workshops and programs.

Wilderness

In 1974, the USFWS recommended that 1,740 acres on Assateague Island be established as part of the National Wilderness Preservation System, as defined by the Wilderness Act of 1964. Of this, 1,300 acres are located in Chincoteague NWR (882 acres in Virginia and 418 acres in Maryland) and 440 acres are within the boundaries of Assateague Island National Seashore in Maryland. A Wilderness Area proposal was submitted to Congress on January 13, 1977,

recommending 4,760 acres, mostly located in Maryland, as potential wilderness and to become part of the wilderness when nonconforming uses and structures were eliminated. No action has been taken in regard to this recommendation and there exists no “Congressionally designated wilderness lands” within Chincoteague NWR and Wallops Island NWR (USDOI 1974).

Cultural and Historic Resources

Assateague Island has several cultural and historic resources. Several cemeteries and the ruins of the former Assateague Village from when the island was inhabited remain. The current Assateague Lighthouse was completed in 1867, and the U.S. Coast Guard (the Coast Guard) considered it to be an aid to navigation. In 2004, the Coast Guard transferred ownership of the Assateague Island Lighthouse to the USFWS. The Coast Guard still operates the light, while the USFWS and CNHA share the maintenance of the historic structure. Tours of the lighthouse are provided by CNHA. In August 2008, the lighthouse began a restoration effort, which was completed in 2013.

In addition, following storms, remains of sailing vessels and their cargos are often uncovered and visible on the beach for short periods of time. We manage these resources by balancing preservation and protection with interpretation and public access.

Concerns were expressed by the community that the USFWS would reduce or eliminate the number of Chincoteague ponies grazing on the refuge. The USFWS has no goal or objective that would eliminate ponies from Assateague Island. The ponies are a main source of enjoyment for visitors throughout the year, and the Annual Pony Swim and Auction each July attracts an estimated 40,000 visitors and provides funding for the Chincoteague Volunteer Fire Company. The USFWS does have a concern that climate change, with corresponding sea level rise, and pony grazing will significantly impact the salt marsh. In both northern and southern grazing units the salt hay/grasses that come from these marshes are the basic forage upon which the ponies feed both summer and winter and are critical for the life cycle of many native species of animals. Over the life of this CCP, the refuge will work with the Chincoteague Volunteer Fire Company to ensure the health and well-being of Chincoteague ponies and refuge habitats.

Climate Change and Sea Level Rise

The increasing trend in sea level rise currently affecting the Delmarva Peninsula and surrounding areas is primarily driven by water influx from melting polar and glacial ice sheets. The synergistic actions of thermal expansion of the ocean waters (driven by increases in average global temperature), coastal subsidence, and coastal erosion are also greatly influencing the rate and intensity of sea level rise effects upon the refuge .

The rise in relative sea level for the Delmarva Peninsula will have a significant negative impact on the barrier island system where the refuge is located. Such changes from sea level will result in the submergence of the lowest tidal wetlands, erosion of coastal beaches, increased flooding of lowlands, and the alterations in salinity regimes in coastal waters. Low salt marshes could be converted to tidal flats, and existing tidal flats could become permanently inundated shallow water habitats. In places of more pronounced erosion, marshes could change directly to shallow waters. Currently, salt water is penetrating further and further inland, which is changing the local ecology. While this process has occurred in the past, the pace at which these changes are happening has accelerated and their magnitude has increased in recent times.

Climate change may also increase storm frequency and intensity which will further transform shorelines and coastal resources (IPCC 2013). The shoreline of Assateague Island, already impacted by erosion from the current sea level rise rate, is even more vulnerable with predicted increases of 2mm/year (Figure 1 5). If the rate increases by a little as 2mm/year, the island may break up into smaller sections (segmentation). This same rate will likely pose increased risk to back barrier marshes (Figure 1 6). The impacts of a 7mm/year rise would be a concern to coastal communities. (See Appendices E and F for more information).

With current climate change and sea level rise rates, the continued management of the refuge lands will become increasingly difficult based on the projected one meter rise in sea level by 2100 adopted by the Commonwealth of Virginia. Based on this prediction, the refuge has several facilities and resources that may be vulnerable to sea level rise and storm surge, including the recreational beach parking as described in section 1.14.6.

Figure 1-5. Map showing that Assateague Island may already be near its threshold condition and that just a 2mm/year rise in the rate of sea level rise will push it over the threshold which may initiate barrier beach migration and segmentation. (Source: Titus et al. 2009)

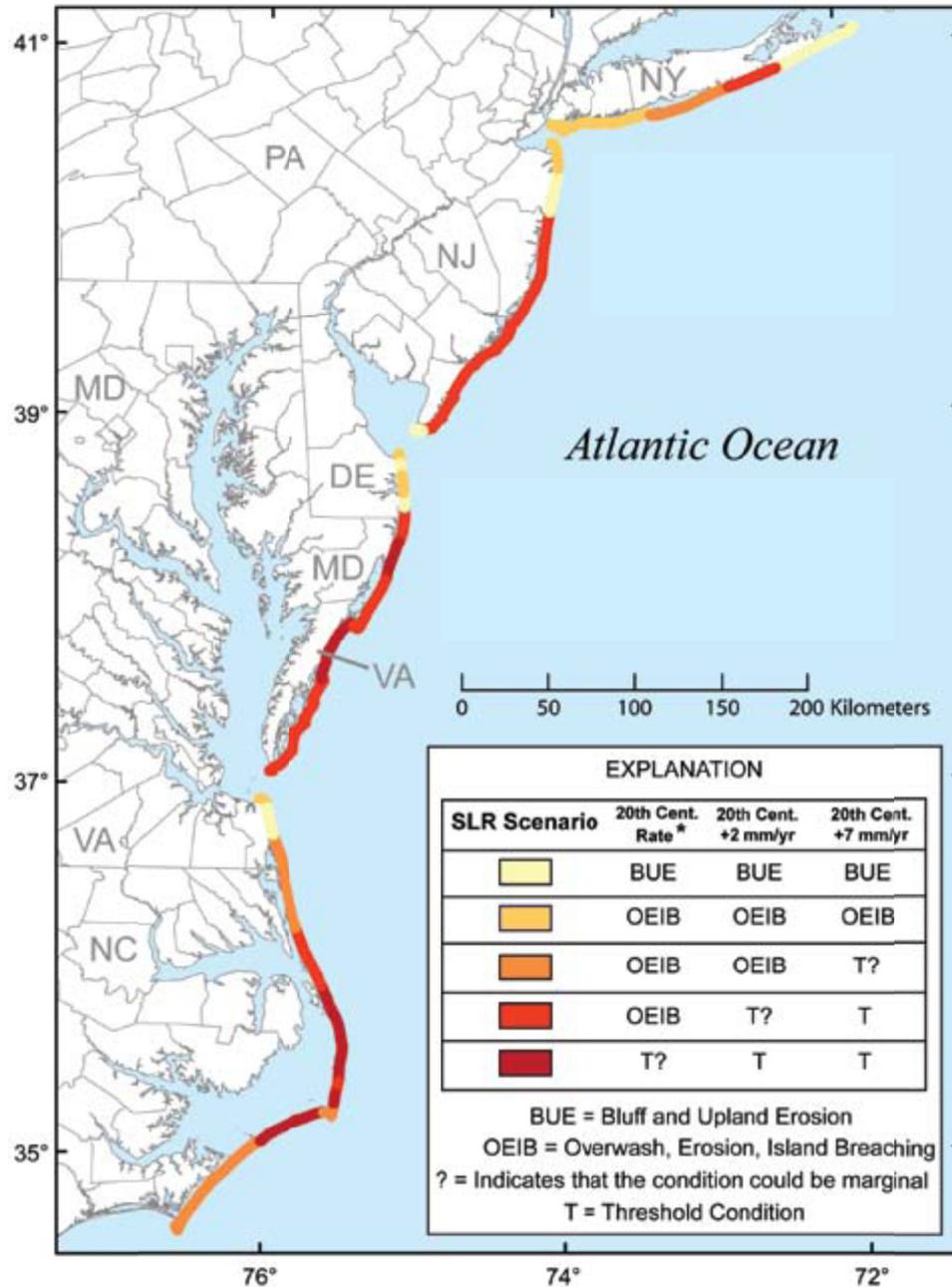
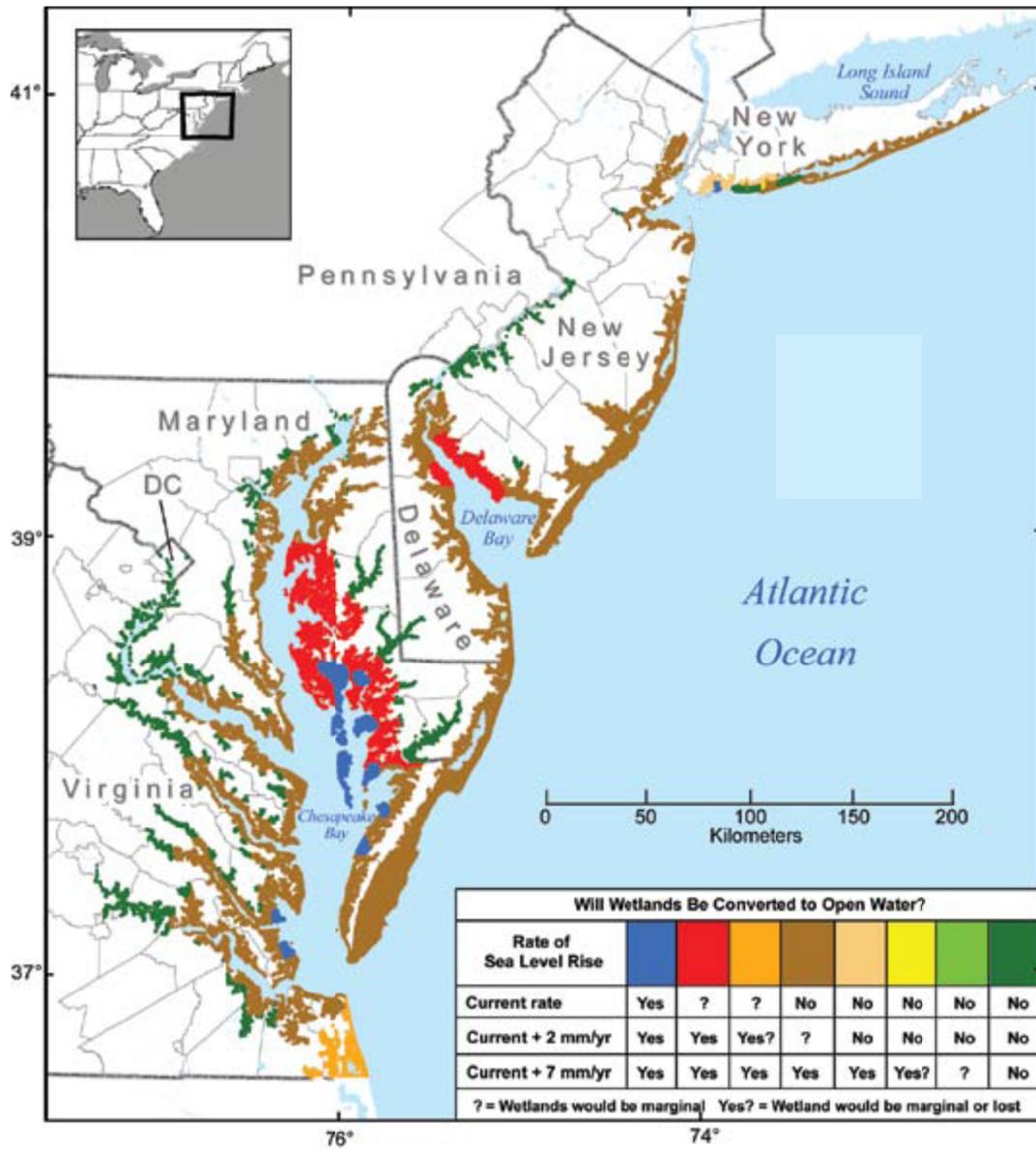


Figure 1-6 Map showing where tidal wetlands may be converted to open water at three rates of sea level rise. A 2mm/year rise in the rate should continue the conversion of low marsh to tidal flat and may even transform these marshes to open water. (Source: Titus et al. 2009)



1.15 Decision to be Made

The USFWS Regional Director will select a preferred alternative based on the USFWS and the Refuge System missions, the purposes for which the refuge was established, other legal mandates, and public and partner responses to this CCP/EIS. The alternative selected could be one of the proposed actions, the no action alternative, or a combination of actions or alternatives presented. The final decision will identify the desired combination of species protection, habitat management, public use and access, and administration for the refuge. A Record of Decision (ROD) will present and explain the decision, and certify that USFWS has met agency compliance requirements and that the CCP, when implemented, would achieve the purposes of the refuge and help fulfill the Refuge System mission. Once the Regional Director has signed the ROD and the CCP is complete, the public will be notified in the *Federal Register*, and implementation would begin.

After its completion, the CCP will be reviewed, evaluated, and subsequently updated approximately every 15 years. However, if and when significant new information becomes available, ecological conditions change, major refuge expansion occurs or the need to do so is identified, the plan can be reviewed sooner. All plan revisions would require NEPA compliance.