



Appendix J

Kayakers enjoying the Carmans River at Wertheim refuge.

Summary and Response to Public Comments

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Introduction

We reviewed and considered all letters received during the public comment period for the Long Island National Wildlife Refuge Complex Draft Comprehensive Conservation Plan and Environmental Assessment (CCP/EA). The Draft CCP/EA was originally released for 30 days of public review from June 19 through July 19, 2006. Based on the analysis in the Draft CCP/EA, and our review of public comments, the Service has selected a Preferred Alternative. The Preferred Alternative basically includes all of Alternative B, the Service-Proposed Action in the Draft CCP/EA, with a few modifications described in the discussion below. We will also issue a Finding of No Significant Impact (FONSI). The FONSI establishes that our decision will not significantly affect the quality of the human environment and does not require preparation of an Environmental Impact Statement.

We received numerous responses by way of oral testimony at public hearings or through submission of written or electronic documents. Comments were received from local and State agencies, conservation and recreation organizations, and local residents.

Twenty-five people attended our public meeting on June 26, 2006, from 7:00 p.m. to 9:00 p.m., at Dowling College (Brookhaven Campus), Shirley, New York. Fourteen people attended the public meeting on June 27, 2006, at Doubleday Babcock Senior Center, Oyster Bay, NY, and five people at Morton NWR, Sag Harbor, NY, on June 28, 2006.

The following discussion summarizes the substantive issues they raised and our responses to them. Many of our responses refer to the full text copy of our draft CCP/EA, and indicate how the final CCP reflects our proposed changes. If you would like to view or download copies of the draft CCP/EA or final CCP, they are available online at <http://library.fws.gov/ccps.htm> or <http://longislandrefuges.fws.gov>. You may also request them on CD-ROM or in print by contacting the refuge headquarters.

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Hunting and Fishing

Comment: There was a wide range of opinions regarding hunting, i.e. those opposed to all forms of hunting and those receptive to some hunting.

We follow with the range of comments:

- Expand hunting opportunity (3)
- In favor of deer hunting (3)
- In favor of goose hunting (2)
- Expand deer hunting opportunity (1)
- Use hunting for management purposes only (1)
- No hunting (3)
- No hunting on Wertheim (2)
- No deer hunting
- No deer hunting on Wertheim (2)
- No youth archery hunting (1)
- Hunting is inhumane (1)
- Expand fishing opportunity (2)

Response: The Service recognizes that in many cases, hunting is an important tool for wildlife management. Hunting gives resource managers a valuable tool to control populations of some species that might otherwise exceed the carrying capacity of their habitat and threaten the well-being of other wildlife species, and in some instances, that of human health and safety. Furthermore, the National Wildlife Refuge System has a long history of support by recreational hunters, including the creation of over 300 units through the use of Migratory Bird Conservation Act of 1919 (16 U.S.C. 715a-715r) using “Duck Stamp” funds. This traditional support has been recognized in subsequent statutory authority for the System, including most recently the National Wildlife Refuge System Improvement Act of 1997. This law, which also provides the System its mission, clearly states that six wildlife-dependent recreational uses, including both hunting and fishing as well as wildlife observation and photography and environmental education and interpretation, when compatible, are the priority general public uses of the System. Furthermore, these uses are to receive “enhanced consideration over other general public uses in planning and management within the System” The Improvement Act also directs the Service to provide “increased opportunities for families to experience compatible wildlife-dependent recreation, particularly opportunities for parents and their children to safely engage in traditional outdoor activities, such as fishing and hunting” From this statutory language, Congress’ intent is clear that the Service provide opportunities for hunting and fishing where it is compatible with the purposes for which the refuge was established. The refuge has weighed the impacts to: 1) fish and wildlife resources and their habitats, 2) other priority public use, and 3) adjacent land use such as residences, commercial property, and open space. We have determined that any negative impacts associated with the proposed hunting would not be significant.

The Improvement Act did not establish a hierarchy among the six uses, but enables refuge managers to facilitate them when they are compatible and appropriate. Therefore, hunting and fishing may be given equal consideration with non-consumptive recreational uses. Appendix C includes our compatibility determinations for the resident Canada goose and white-tailed deer hunts.

Provisions governing hunting and fishing on national wildlife refuges are in the Code of Federal Regulations (50 CFR part 32). We regulate hunting and fishing on refuges to: ensure compatibility with refuge purpose(s); properly manage the fish and wildlife resource(s); protect other refuge values; ensure refuge visitor safety; and provide opportunities for quality recreational and educational experiences. On many refuges where we decide to allow hunting and fishing, our general policy of adopting regulations identical to State hunting and fishing regulations is adequate in meeting these objectives. On other refuges, we must supplement State regulations with more-restrictive Federal regulations to ensure that we meet our management responsibilities and to provide an enhanced degree of safety for both the general public and the hunters. We issue refuge-specific hunting and sport fishing regulations when we open wildlife refuges to migratory game bird hunting, upland game hunting, big game hunting, or sport fishing.

We develop specific management plans for each refuge prior to opening it to hunting or fishing. In many cases, we develop refuge-specific regulations to ensure the compatibility of the programs with the purposes for which we established the refuge and the mission of the System, as well as safety and administrative concerns. These regulations list the wildlife species that you may hunt or those species subject to sport fishing, seasons, bag limits, methods of hunting or fishing, descriptions of areas open to hunting or fishing, and other provisions as appropriate. During annual reviews, we consider public/hunter safety, conflicts with wildlife/habitat management goals, cost, staffing, enforcement, conflicts with other priority recreational uses; and additional/changes to refuge specific regulations.

Comment: Several reviewers suggested we consider an alternative to a public deer hunt for population management, i.e. shooting conducted directly by refuge staff instead of the hunting public.

Response: Should the deer population continue to increase, the refuge may consider additional means of population control beyond a public hunt. Control by refuge staff or contracted sharpshooters would increase the potential of selectively harvesting animals to correct the age/sex ratios of the herd. The opportunity to reduce reproductive potential by increasing the percent of females harvested would likely be greater than under a regulated public hunt.

From a public safety standpoint, this alternative carries a greater potential reduction in safety hazards to individual members of the hunting public, as only refuge staff/contractors will be involved in deer control activities. However, this alternative carries the likelihood of objections from the public to take by refuge staff. It would result in a loss in opportunity for a priority public recreational use as defined in the Refuge Improvement Act. Local deer hunters are likely to be concerned because this alternative precludes potential deer hunting opportunities. This alternative is contrary to Service policy to conduct a reduction of surplus

game animals using a recreational hunt, when it can be used to effectively manage wildlife populations.

Comment: Two reviewers suggested that the use of GonaCon™ (GnRH), a contraceptive agent for deer, should be considered instead of hunting as the means of deer population control.

Response: Population management, alone, is not the only justification for opening the refuge to limited deer hunting. As stated above, hunting is one of the priority public uses established by the Improvement Act.

In addition, the following information was extracted from a US Department of Agriculture (USDA), Wildlife Services website. USDA is the lead Federal agency involved in immunocontraceptive development for wildlife population control. USDA indicates the efficacy of GnRH depends upon the individual animal and its response to the vaccine. GnRH has successfully kept female deer infertile for 2 to 4 years in pen studies. Because it is a single-shot, multiyear vaccine, GnRH may be a practical management tool. Deer need to be injected only once to become infertile for up to 4 years. The vaccine can be used in urban and residential areas, where other management methods, such as hunting, are not an option. However, currently GnRH must be injected into the muscle or tissue of each animal. Eventually, WS scientists hope to produce an oral GnRH vaccine bait that will be attractive to deer but not other animals. The vaccine itself only costs \$2–\$10 per dose. The main cost of using GnRH is associated with the time and money required to capture and vaccinate the deer. The estimated cost of vaccinating a deer ranges from \$500 to \$1,000 if capture and marking are required. If marking individual deer is not required and groups of animals can be vaccinated by remote delivery of the injections, costs would be much lower per treatment. However, the USDA states that contraception alone cannot reduce overabundant deer populations to healthy levels. GnRH is a tool to be used in conjunction with other wildlife management methods.

Comment: Left on their own, deer populations would realize a natural cycle of high-low populations, as the food resources within the habitat vary with the population.

Response: The ability for a deer population to self-regulate is based upon the deer's biological carrying capacity (BCC) for a given area. The BCC of a wildlife population is defined as the maximum number of animals that an area can support without degradation to the animal's health and the environment over an extended period of time. When this number is exceeded, the health of the population begins to suffer, reproduction declines, parasitism and disease increase, and habitat quality and diversity decrease due to overbrowsing of plant species preferred as food by deer (Kroll et. al. 1986). Overbrowsing negatively impacts the habitat and landscape, and overall animal health declines, due to less nutritious food items being available. Damage and conflicts currently occur, therefore it is reasonable to conclude that if deer were allowed to self-regulate to the point that they would reach their BCC, deer damage and conflicts would not cease but likely occur at higher rates.

The cultural carrying capacity (CCC) is defined as the maximum density of a given species that can coexist compatibly with the local human population (Decker and Purdy 1988). This term is useful because it defines when conflicts with deer have exceeded an acceptable level, and provides managers with a target for establishing management objectives. Certain factors may influence the CCC, such as landscape or vegetation impacts, threats to public safety, the potential for illegal killing of deer, and personal attitudes and values. The threshold of wildlife damage acceptance is the primary limiting factor in determining the CCC. Generally, the CCC is reached before BCC.

Comment: Hunting accelerates the proliferation of animals, including deer. Also, hunting has not proven effective in controlling deer populations because populations depend on many factors.

Response: White-tailed deer do not exhibit self-regulatory mechanisms whereby compensatory reproduction (increased production of fawns) occurs following population reductions (accomplished through shooting, hunting, or other mechanisms) when free-ranging population is well below BBC (Keith 1974, Wagner et. al. 1995). Alternately, compensatory reproduction may have occurred elsewhere in the past where fenced/closed deer populations occurred at or above BCC, and where population control measures were taken. Simply put, a population of healthy animals generally has a higher birth rate than a population of unhealthy animals. Reducing an unhealthy herd to an optimal number that is in ecological balance with the available habitat will likely result in a higher birth rate amongst the individuals that remain. In the absence of historical/natural controls over the deer population, e.g. large predators, humans will have to remove a sufficient number of animals annually to maintain population health and stability.

Deer hunting is regulated statewide and is a valuable management tool to assist in maintaining a healthy productive heard. Depending upon the local circumstances, hunting may be used to reduce damage and conflicts at a local level. This type of management approach has been shown to reduce damage and conflicts on a localized basis (Kirkpatrick et. al. 2002). The success or failure of hunting in managing deer populations can be quite variable dependent upon the location that it is used, the hunting methods available, the skills of the hunter, and other deer management strategies being used in the area. While sport hunting is not appropriate for all situations, it is the primary management strategy used by land management agencies when determined practical and effective for a given situation.

Comment: Deer and wildlife impact on an environment is different than irreversible damage and destruction. Trees that have browse lines are not subject to being destroyed.

Response: The statement is generally correct when considering the impact of deer browse on individual mature trees. However, deer can have a profound impact on vegetation, altering species composition to the point that entire forests either fail to regenerate, or regenerate with trees and understory species that are not beneficial to deer or other species of wildlife, or for lumber (Waller and Alverson 1997). Deer browsing damages and destroys landscaping and ornamental trees, shrubs, and flowers. As rural areas are developed, deer habitat may actually be

enhanced because fertilized lawns, gardens, and landscape plants serve as high quality sources of food (Swihart et. al. 1995). Furthermore, deer are prolific, and adaptable, characteristics that allow them to exploit and prosper in most suitable habitat near urban areas, including residential areas (Jones and Witham 1990). The succulent nature of many ornament landscape plants, coupled with high nutrient contents from fertilizers, offers an attractive food source for deer.

Deer overabundance can effect native vegetation and natural ecosystems in addition to ornamental landscape plantings. White-tailed deer selectively forage on vegetation (Strole and Anderson 1992), and thus can have substantial impacts on certain herbaceous and woody species and on overall plant community structure (Waller and Alverson 1997). These changes can lead to adverse impacts on other wildlife species, which depend on these plants for food and shelter. Numerous studies have shown that over browsing by deer can decrease tree reproduction, understory vegetation, vertical structure, density, and plant diversity (Warren 1991). By one count, 98 species of threatened and endangered plants, many of them orchids and lilies, are disturbed by deer browsing (Ness 2003). In the Great Smokey Mountains National Park, Tennessee, an area heavily populated by deer had a reduction in the number of plant species, a loss of hardwood species and a predominance of conifer species compared to an ecologically similar control area with fewer deer (Bratton 1979). In a single park in Columbus, Ohio, a deer herd eradicated more than 150 plant species (Ness 2003).

The alteration and degradation of habitat from over-browsing by deer may displace other wildlife communities (e.g., neotropical migrant songbirds and small mammals) that depend upon the understory vegetative habitat destroyed by deer browsing (VDGIF 1999). Similarly, De Calesta (1997) reported that deer browsing affected vegetation that songbirds need for foraging surfaces, escape cover, and nesting. Species richness and abundance of intermediate canopy nesting songbirds was reduced in areas with higher deer densities (DeCalesta 1997). Intermediate canopy nesters declined 37% in abundance and 27% in species diversity at higher deer densities. Five species of birds were found to disappear at densities of 38.1 deer per square mile and another two disappeared at 63.7 deer per square mile. Casey and Hein (1983) found that 3 species of birds were lost in a research preserve stocked with high densities of ungulates and that the densities of several other species were lower than in an adjacent area with lower deer density. Waller and Alverson (1997) hypothesize that by competing with squirrels and other fruit-eating animals for oak mast, deer may further affect many species of animals and insects.

Comment: “I have contracted lyme disease in 2001, 2003, 2004 and now in 2006. The deer population is out of control with its habitat and is spreading the lyme disease. I strongly recommend that the herd be controlled by a hunt ...”

Response: A popular belief is that a high deer population density correlates directly with high deer tick densities, and consequently high incidence of lyme disease transmission to the human population.

Our limited search of the literature reveals that white-tailed deer typically serve as the host of the adult stage of the deer tick. The presence of deer is therefore required for the tick to complete its lifecycle. Adult ticks overwinter in the leaf

litter after dropping off the deer (Fish 1993). Therefore, distribution of ticks across the landscape is largely determined by the distribution of deer in the fall (Ostfeld et. al. 1996). However, it has been determined that minimal deer population densities are necessary to maintain a relatively high population of ticks. We therefore would not expect to reduce the number of ticks appreciably by reducing the number of deer.

Though adult ticks are quite capable of transmitting the disease to humans, deer are not considered the reservoir for the lyme bacterium. It is believed that most lyme disease in humans is contracted from the bite of infected nymph stage of the tick (Ostfeld et. al. 1996). The larval and nymph stages of the tick are not host specific and will feed upon a wide range of vertebrate species. The white-footed mouse is the primary reservoir/carrier of the bacterium. The tick picks up the bacterium from the reservoir species and may transmit the bacterium to the next animal that it bites.

Most potential larval/nymph hosts, i.e. mammals, birds and reptiles, are unlikely to become infected with lyme (Lane et al. 1991; Anderson & Magnarelli 1993; Mather 1993; Ostfeld & Keesing 2000a), thus many ticks never become infected with Lyme because some hosts exhibit low reservoir competence (Ostfeld and Keesing 2000a). The white-footed mouse has the highest reservoir competence (LoGiudice et. al. 2002); defined as the ability of the host to become infected, maintain the infection, and transmit the infection to the vector/tick. Studies have found that high densities of mice correlate well with high incidence of infected ticks. These studies also show an increased diversity of vertebrate host species in the environment reduces the likelihood that a tick will feed on an individual with a high reservoir competence. This “dilution effect” reduces the density of infected ticks, hence reduced potential for tick-human transmission of lyme (Ostfeld and Keesing 2000a; Ostfeld and Keesing 2000b; LoGiudice et. al. 2002).

White-footed mice are found in the highest densities in relatively small, fragmented woodlands. Small woodlands are typified by reduced diversity of plant and animal species generally, as well as those species that would compete with, or prey directly on, mice (Nupp and Swihart 1998). Larger woodlands (>2 ha) have been found to have reduced incidence of lyme infected ticks (Nupp and Swihart 1998; Krohne and Hoch 1999; Allan et. al. 2003).

In most suburban environments, humans have fragmented the landscape into parcels where ticks and white-footed mice may thrive. Deer may survive very well within this environment, and where their populations have increased, they have altered the ecological balance on the landscape. Through herbivory and spread of invasive plants, deer have contributed to alteration/loss of biodiversity. Diverse assemblages of plants support a wider variety of animal species. Studies show that as small vertebrate diversity increases, the incidence of lyme carrying ticks decreases (Allan et. al.; Buskirk and Ostfeld 1995; LoGiudice et. al. 2002). Refuge objectives outline reduction in the density of the deer herd to restore biological, including vertebrate, diversity. It is possible that reducing the deer herd may increase vertebrate species diversity, potentially reducing the incidence of lyme transmission to humans.

Comment: Some reviewers wished to expand the refuge hunt program to include additional species and refuges (e.g., Oyster Bay, Seatuck, and Morton), while others voiced opposition.

- Open turkey hunting (if/when State opens season) (1)
- No duck hunting (3)
- Expand waterfowl hunting opportunity (1)

Response: Opening the refuge at this time to hunting for additional species, beyond those discussed in this CCP (i.e. white-tailed deer and resident Canada goose at Wertheim), is beyond the scope of this document.

Section 2-54 states, “Within 5 years, work with partners to evaluate the feasibility of a limited duck hunt at Wertheim.” This statement indicates future consideration and evaluation of a duck hunt, only. A formal proposal to open the refuge to hunting for ducks or turkey in the future will require initiation of a new NEPA review and Compatibility Determination. If proposed, there will be additional opportunity for public review and comment.

Comment: Two reviewers indicated that hunting should be used for management purposes only. Justifying opening a waterfowl hunt strictly on the basis of the refuge’s desire to conform to the mandate for enhancing a priority wildlife-dependent recreational activity would be considered a mistake at Wertheim. The opinion of the reviewer was that most neighbors do not object to a resident goose and deer hunt but allowing a general waterfowl hunt will destroy the neighborly friendship that has been fostered locally by the refuge staff and Friends of Wertheim.

Response: Population management, alone, is not the only justification for opening the refuge to a public hunt. As stated above, hunting is one of the priority public uses established by the Improvement Act. Additionally, hunting has been a traditional form of recreation along the Carmans River corridor for generations. Prior to acquisition by the Service, the Wertheim family hunted waterfowl and deer along the lower reaches of the Carmans River. Waterfowl hunting continues today north of the Wertheim refuge in Southaven County Park and south of the refuge in the Great South Bay. Under Service policy, hunting is an acceptable and traditional form of recreation, particularly in areas where those lands have historically supported hunting. Hunting opportunities may be modified on refuge lands for various reasons, including wildlife population considerations, the presence of Federally- or State-listed species, habitat maintenance, safety considerations, maintenance of a high-quality hunting experience, or in rare instances, protection of a research population.

Comment: Several reviewers were worried about safety issues arising from hunting in the relatively congested landscape on Long Island, and hunting skills of inexperienced youth hunters.

Response: Safety is our paramount consideration in developing this hunting program. Hunters must abide by all state and federal safety regulations related to hunting near roads and dwellings. New York State hunting regulations make it

illegal to discharge a hunting weapon so that its load, shot or arrow, passes over any part of a public highway (any road maintained by state, county, or town) or within 500 feet of any dwelling, farm building, or structure in occupation or use.

All new hunters (regardless of age) must pass a New York State Hunter Education course, and an additional Bow Hunter Education course is needed to hunt big game with a bow. A Junior Archery license is for 14-15 year olds to hunt big game, such as deer, and only with bow and arrow. While hunting, all junior bow hunters are required by law to be accompanied by a parent, or adult over 18 with written permission of parent/legal guardian (who also must have current hunting privileges and at least one year's experience). Hunters must be at least 16 years old to hunt big game with a gun. Hunting by persons under the age of 16 is highly regulated in New York State. A more descriptive term for the junior hunting and junior bow hunting licenses would be learner's permits, because hunters under the age of 16 are permitted to hunt only under adult supervision. This legal requirement for licensed adults to take responsibility for the safety of minors seems to be the key to the extraordinary safety record of junior hunters. These restrictions are listed on the NYSDEC Web site at <http://www.dec.state.ny.us/website/dfwmr/license/lichuntres.html>.

On Long Island, the regular hunting season runs October 1 through December 31, and is restricted to archery hunting only. There is a special season open for shotgun in parts of Suffolk County (including Wertheim), for about 3 weeks in January.

Comment: Proposed actions could result in a decrease in habitat quality and be detrimental to fish and wildlife populations. These actions include: 1) increasing amount of trails; 2) locating visitor center in quality wildlife habitat; 3) increasing public shoreline fishing access points; and 4) increasing hunting opportunities for some waterfowl species. Another commenter pointed out that hunting disturbs bird habitat more than walking or biking.

Response: The mission of the Refuge System clearly speaks to the challenge of balancing the needs of wildlife with the interests of the American people. A major challenge in managing and protecting wildlife refuges lies in managing *people*, or more specifically managing their behavior through both direct and indirect approaches. Wildlife and people *can* coexist together through the use of education, interpretation, permitting, activity prohibitions, and enforcement of regulations.

One way of balancing the needs of wildlife and people is by permitting and encouraging wildlife-dependent public uses. Wildlife-dependent recreation is a priority public use of the Refuge System and, as such, is facilitated whenever it is found to be compatible with the purposes and management of the refuge. Attempts to minimize human impacts on refuge lands and wildlife are sometimes carried out through the use of signs and by the presence of refuge law enforcement officers. Visitor impacts are also lessened by limiting public access to certain designated area of a refuge; by containing visitors through the use of trails, boardwalks, and carefully placed ditches and vegetative plantings; by limiting and consolidating visitor use; and by imposing seasonal or permanent closures of certain sensitive areas. The use of observation platforms, mounted view scopes, and even auto tour routes can serve to provide visitors with a unique wildlife experience

while permitting the larger expanse of refuge lands to remain untouched and undisturbed.

There are some who will argue that any form of public use will create a certain level of disturbance to wildlife, and therefore should not be permitted, especially on a “refuge.” Others, however, will make the case that direct exposure to wildlife and refuge lands will promote public awareness and appreciation and will foster conservation stewardship and long-term support for natural resources.

Comment: Hunting does not provide an economic benefit to an area. Another comment noted that national tax dollars should not contribute to hunting on refuges.

Response: Findings published in, *Banking on Nature 2004: The Economic Benefits to Local Communities of National Wildlife Refuge Visitation* reveal recreational visits to National Wildlife Refuges generates substantial economic activity. In Fiscal Year 2004, more than 36.7 million people visited refuges for recreation. Their spending generated \$1.37 billion of sales in regional economies. As this spending flowed through the economy, nearly 24,000 people were employed and \$453.9 million in employment income was generated. About 68 percent of total expenditures are generated by non-consumptive activities on refuges. Fishing accounted for 27 percent and hunting 5 percent of total expenditures. As noted earlier, the Improvement Act clearly states that six wildlife-dependent recreational uses, including hunting, are the priority general public uses of the System.

Comment: One respondent cites text from appendix C-23, Resident Canada goose hunting compatibility determination that indicates, “the principle impacts likely would be the disruption of feeding patterns and the displacement from roost or feeding sites...” of federal and state listed species.

Response: Potential impacts to federally listed species are carefully considered by the USFWS Endangered Species office. Additionally, the State of New York must submit a letter approving the opening of the hunt. Potential impacts are evaluated and Refuge Specific Regulations may be imposed to reduce disturbance or incidental mortality of non-target species.

The resident Canada goose hunt is being implemented, in part, as a widely accepted management tool to limit the increase of a particular species. The hunt is restricted to a period of approximately 3 weeks in September, before a significant number of migratory Canada geese arrive.

Comment: Several reviewers questioned the use of the phrase “inviolate sanctuary” and its appropriate application to refuge purposes and objectives. These reviewers appear to understand the phrase inviolate sanctuary to mean closed to entry and therefore closed to hunting.

Response: The Migratory Bird Conservation Act of 1929, as amended (MBCA), defines the term “inviolate sanctuaries” where take of birds was prohibited. Subsequent amendments to the Duck Stamp Act and the Administration Act authorized the Secretary to allow hunting in these areas up to certain limits.

If a refuge, or portion thereof, has been designated, acquired, reserved, or set apart as an inviolate sanctuary, we may only allow hunting of migratory game birds on no more than 40 percent of that refuge, or portion, at any one time unless we find that taking of any such species in more than 40 percent of such area would be beneficial to the species (16 U.S.C. 668dd(d)(1)(A), National Wildlife Refuge System Administration Act; 16 U.S.C. 703-712, Migratory Bird Treaty Act; and 16 U.S.C. 715a-715r, Migratory Bird Conservation Act). Generally, Regional Directors have the authority to change the number of acres open to hunting. However, before we can open more than 40 percent of an inviolate sanctuary to hunting, we must consider the reasons for doing so, and we must publish these reasons in the *Federal Register*. Because of this requirement, the Director, under delegation from the Secretary, must approve all proposals to open more than 40 percent of an inviolate sanctuary to migratory bird hunting. Refuge managers must carefully evaluate all such proposals to ensure the proposed action will be compatible. Inviolate sanctuary classification imposes no limits on hunting non-migratory birds or other game species.

Comment: Hunting should not be permitted simply because it is a refuge. The fact that this refuge is located in one of the most densely populated regions of the country makes it all the more important that the habitat be free of any pressure from human population.

Response: We agree that human encroachment and disturbance are major concerns for all involved in conservation, preservation and restoration of rapidly shrinking ecosystems. There are areas on Refuges where limiting human interference is a primary management objective, especially when impacts to a threatened or endangered species are possible. However, mandates outlined elsewhere in this document clearly describe our role in wildlife/habitat management and facilitating public uses deemed compatible with refuge purposes.

Comment: Page 2-17 stating that Wertheim is the only unit sizeable enough for deer hunting is contrary to statements made elsewhere about exploring the feasibility of a public hunting opportunity at Seatuck (Page 2-52) and conducting deer management activities at Seatuck, Morton and Conscience Point. The CCP should be rewritten to reflect that due to the size of Wertheim, it is the easiest unit to implement a hunt on or something similar.

Response: We have considered the option of a public archery deer hunt at Seatuck. Utilizing New York regulations and guidelines of a 500' buffer zone, we estimate approximately 18 acres of deer habitat would be available for hunting. This estimate excludes salt marsh and grassland areas where archery deer hunting is not practicable. During the deer cull, we could fit 3 shooters in the safe zone and those three shooters have restricted zones of fire to ensure public safety. For these reasons and the relatively high costs associated with implementing public hunting for a small number of people, Seatuck may not be a feasible public hunting option. Other deer management activities (besides a public hunt) can still be considered at Seatuck, Morton and Conscience Point should overabundant deer become a problem. The CCP will reflect that due to its overabundant deer population and size, that Wertheim offers the best opportunity for a public deer hunt on the Complex

Managing Threatened and Endangered Species

Comment: Page 2-50 incorrectly designates mud turtles as a Species of Special Concern. They are State Endangered.

Response: We corrected the CCP to note the mud turtle status as “State Endangered.”

Comment: Since 2003, NYSDEC have been monitoring nesting piping plover on the sound side of the wetland at Frost Creek (near Oyster Bay NWR), and at Center Island and Stehli Beach. NYSDEC and the refuge should coordinate together.

Response: We agree. We updated the CCP to address piping plover at Oyster Bay (in addition to Morton, Target Rock and Amagansett NWRs).

Furbearer Management/ Trapping

Comment: Several reviewers would like to see the refuge offer a general trapping program. They are concerned about the increasing populations of mammals such as fox, raccoon, and coyote, and they believe development and restrictions on public access increasingly limit opportunities for trapping.

Response: Trapping furbearers is not one of the six priority public uses. In addition, the refuge manager does not want to divert limited staffing and funding to administer this program, but plans to focus those resources on the six priority public uses. However, we may use furbearer management as an administrative tool, when needed, to protect federal trust resources of conservation concern, such as nesting migratory birds. The refuge manager will determine when conditions on the refuge warrant administrative trapping.

Comment: In general, from a wildlife management standpoint, I support all your proposed alternatives. Anything that expands monitoring, increases management capacity, and increases awareness of the importance of managing habitats for the benefit of wildlife is worthwhile. The role that hunting and trapping can play in managing habitat should be highlighted. With plover management at Morton, the electric fencing and enhanced stewardship proposal are great. It seems odd not to include management actions directed at the reason why electric fencing is necessary in the first place though. Predator management is important not only from an endangered species perspective, but with the advent of rabies on Long Island, it may also become important from a human disease vector perspective. USFWS preaches predator control to NGOs and private landowners to increase endangered species productivity and survival, so it seems logical to expect similar action on USFWS-managed properties with similar issues.

Response: On page 2-28 of the draft CCP/EA we stated the following strategy: “Assess red fox, raccoon, Norway rat, crow and gull populations at each refuge, and develop a predator management plan in collaboration with USDA Wildlife Services.” We will continue to work with our partners, including NYSDEC, to address predator management on the Complex.

Invasive/ Nuisance Species Control

Comment: Removing mute swans by lethal and/or non-lethal means should be done by refuge staff only. Another commenter noted “I object to killing swans.”

Response: If necessary, mute swan control measures will be conducted by authorized refuge personnel. Service policy on maintaining biological integrity, diversity, and environmental health of the System clearly states, “unless we determine that a species was present in the area of the refuge under historic conditions, we will not introduce or maintain the presence of that species...”

Even though they provide some aesthetic value for public enjoyment, mute swans are highly invasive of wetland habitats, impact native species of fish and wildlife, damage commercial agricultural crops, and pose a threat to human health and safety. As such, they cause serious nuisance problems and property damage, including economic loss. Because of their consumption of large quantities of submerged aquatic vegetation and their aggressive behavior, mute swan compete directly with many other water birds and fisheries for critical habitats. Due to their strong territorial defense, some pairs will vigorously defend nest and brood sites from intrusion by other wildlife and have attacked humans, causing serious harm. Adult mute swans will only be controlled when/if habitat degradation occurs or swan numbers become excessive.

Comment: “I feel the way it (Open Marsh Water Management - OMWM) is being monitored and evaluated at Wertheim is the only way we will be able to find what works and what doesn’t. Plus it is being done on a small scale – the pilot OMWM study at Wertheim has not ‘dug up and ruined’ all of the marshes. The less spraying that has to be done for mosquitoes the better off we will all be.”

Response: Comment noted; we agree.

Comment: A reviewer requested that guidelines for mosquito spraying on the refuge be clearly spelled out in the final CCP.

Response: A Mosquito Management Compatibility Determination is included in Appendix C of both the draft CCP/EA and final CCP.

Comment: Wertheim refuge has been trying to control Phragmites for years; various techniques have been experimented with but the reviewer has never seen published results.

Response: The Refuge has controlled Phragmites within the Big Fish Creek impoundment and in the upper tidal reaches of Little Neck Run and Yaphank Creek. Phragmites control programs have been developed in numerous salt marshes along the Atlantic seaboard. The Refuge has consulted with land managers and reviewed published literature to help us design our program. The Service monitors the effects of the Phragmites control projects, through ocular estimates, photo points, and the development of GIS maps of Phragmites stands. Because there is a considerable amount of information on Phragmites control available, the Refuge has not engaged in a detailed scientific research study. In the future, if promising control techniques are developed, the Refuge may consider participating in research projects to evaluate these new techniques.

Comment: There should be more written on the negative impacts of overabundant Canada geese. As I recall, there was considerable trouble with re-establishing plantings in the restoration areas at Wertheim due to browsing by resident geese. The issue with resident geese is very similar to your deer management priority in this regard (removal of overabundant species to promote regeneration of native cover types and hence greater biodiversity of trust species).

Response: We agree. Two important factors in the overgrazing of the restoration plantings were the small size of the planted areas and the low fencing used to exclude geese. At the nearby Beaver Dam Creek planting, fencing has successfully prevented overgrazing by geese in the areas planted in 2005 and 2006.

Outreach

Comment: “Friends of Wertheim has been very fortunate because we have had the support of refuge staff and the Northeast Region from day one.”

Response: Thank you. The Friends are an invaluable asset and partner in providing assistance and promoting refuge/Service goals.

Comment: Referring to the refuge’s endeavor’s to improve existing or develop new partnerships with groups involved in or influencing public use and resource conservation activities on and off the refuges, Stony Brook University is purchasing Southampton College from LI University and will continue their Marine Life program. Their combined program could make an excellent partnership/program with the refuge.

Response: We agree.

Comment: One reviewer requested greater mention of the Central Pine Barrens and their various councils and commissions that address land and habitat preservation, law enforcement, and invasive species within the text to signify the combined awareness and intention to preserve and manage this sensitive area. Furthermore, the reviewer suggested the plan address non-Service initiatives to designate and preserve habitat and open space with the Central Pine Barrens, and explore future partnerships.

Response: We agree. The text of the CCP has been revised to better reflect the contributions and features of the Central Pine Barrens.

Comment: Develop a train the trainer program so that STPS hike leaders can educate hike participants on the local flora and fauna on refuge trails.

Response: Long Island National Wildlife Refuge Complex staff welcomes the opportunity to assist the STPS and other interested organized group leaders in their educational and interpretive efforts while utilizing Complex lands. Train the trainer programs, written educational and interpretive materials, and audio-visual products are all possible methods of assistance.

Oyster Bay

Comment: A reviewer requested more information regarding potential strategies and impacts of shellfishing and dredging operations in Oyster Bay. Another reviewer encourages the Service to ensure that commercial shellfishing remain viable and sustainable, as the industry provides has been active to preserve the water quality in the bay.

Response: The specific purpose of the Oyster Bay National Wildlife Refuge as established by the Migratory Bird Conservation Act is “for use as an inviolate sanctuary, or for any other management purpose, for migratory birds.” When the Town of Oyster Bay conveyed to the United States of America, the lands below the mean high water line in Oyster Bay, Cold Spring Harbor, and Mill Neck Creek, the deed included the same purpose for the Refuge. The deed also included “...as a nature preserve for the scientific, educational and aesthetic purposes and in order to preserve its natural beauty both for this generation and for future generations, and that said premises shall be kept and maintained entirely in their natural state and operated for the aforementioned purposes only, without any disturbance whatever of habitat or plant or animal populations and undisturbed by any activities that might adversely affect the flora or fauna, their natural habitat, or which would impair the essential natural character of the premises.” As a result of the deed, the Town of Oyster Bay retained certain rights regarding the regulation of shellfishing. The Service is working with partners such as NYSDEC, Friends of the Bay, National Oceanographic and Atmospheric Administration/Fisheries, and our Ecological Services program to protect and maintain water quality, improve the quality of aquatic and wetland habitats, and assess the impacts of any activities in the Refuge that may degrade habitat or adversely affect fish and wildlife populations. The Service has also begun developing a Habitat Management Plan for the refuge which will contain step-down plans for projects such as monitoring fish and wildlife populations and habitats, and mapping and controlling invasive species.

In regards to dredging operations, any dredging operation within the Refuge boundary will require a Compatibility Determination and a Special Use Permit, in addition to other State and Federal permits. The Refuge staff will assess the impacts associated with each individual project proposal, consult with other natural resource agencies and interested partners, and make a determination as to whether the project will significantly impact fish and wildlife resources or their habitats. In the event that a significant negative impact is likely, the Refuge will work with our partners and the applicant to avoid, minimize or mitigate the impacts as necessary.

Comment: Two reviewers encourage the Service to increase public awareness of the refuge at Oyster Bay, and to weigh in on local threats to the refuge. A staffed office would be an excellent way of increasing the agency’s presence and would have an immediate positive effect on protecting the resources. Increasing visibility through new and additional signage would also be helpful.

Response: The Service is very much interested in working with partners, including the Friends of the Bay and the Waterfront Center, to improve our presence and visibility at Oyster Bay. Exploration of a shared, staffed office is one of the strategies we hope to accomplish.

Comment: Establish a “water trail” around the bay for kayaks and canoes. This basically entails creating a map of access points, routes and points of interest, and making it available to the public. Improvements to access points, rest areas etc. could be made in cooperation with the surrounding municipalities that own many of these areas.

Response: The Complex agrees that a water trail for kayaks/canoes as a means of supporting wildlife-oriented recreation (fishing, wildlife observation, wildlife photography, interpretation and environmental education) as well as improving access and points of interest at Oyster Bay is an excellent idea. The Complex will explore partnerships to expand and improve Oyster Bay National Wildlife Refuge’s wildlife-oriented recreational opportunities as resources allow.

Comment: Extend the existing 5mph zone from 200 feet from shore to at least 500 feet from shore. This would make the bay safer and more desirable for low impact uses such as kayaking, canoeing and rowing, would help protect the shoreline from the erosion created by boat wakes, and would protect shorebirds and wildlife from motor traffic, all without prohibiting motor boats from using the bay. Make the Mill Neck Bay area that runs north and south from the Bayville strip to Beaver Dam a no motor zone (electric only). This area is only accessible to motorboats at high water anyway and would provide a refuge for wildlife from the noise and turbulence of boat traffic, especially on summer weekends, when the rest of the bay becomes a free for all.

Response: Safety and resource protection is of paramount concern to the Service in providing access for boating and other public uses of Oyster Bay National Wildlife Refuge. Based on a preliminary assessment, we feel that the 200 foot “No Wake Zone” provides boats without motors ample area of safe passage. However we will work with the U.S. Coast Guard (under Title 33 and Title 46), the State Department of Environmental Conservation and local authorities to evaluate the need for additional control measures in Oyster Bay, including the Mill Neck Bay area, and make any necessary changes.

Comment: Help provide support and funding to acquire environmentally sensitive parcels of land connected to the Refuge such as the Mill Neck Bay Marina.

Response: As stated in the draft CCP/EA under “Actions Common To All Alternatives,” the refuge noted that in terms of ‘and acquisition, we will continue to acquire refuge inholdings within approved refuge boundaries as willing sellers become available. The refuge will also continue to consider minor acquisitions adjacent to existing refuges that are biologically important or provide connections with other protected lands of our conservation partners. The parcel of land known as the Mill Neck Bay Marina would fall into the category of being adjacent to the refuge, and the tract of land would be biologically important for the refuge to acquire. Although the refuge does not currently own the property, our office along with staff from the U. S. Fish and Wildlife Service Ecological Services office, continually review and monitor projects that occur within the Mill Neck Bay Marina area to ensure compliance with environmental laws and regulations. As new projects arise at the marina, we will work with the marina owners to utilize methods that cause the least amount of wildlife and land disturbance, and to minimize potential impacts to refuge property.

Comment: Encourage the surrounding municipalities to enter into an inter-municipal agreement to create an entity whose sole responsibility would be to protect and enhance the integrity of Oyster Bay Harbor and enforce all legislation that affects the integrity of the estuary on a watershed basis and makes recommendations to the municipalities on maintaining controls in place (i.e. street sweeping, siltation basin maintenance, repairs to roadway drainage washouts etc.). Another reviewer suggested more thought go into not duplicating the efforts of the TR Sanctuary and the Friends of the Bay.

Response: The CCP discusses the Service's plan to improve communication and coordination with partners such Friends of the Bay, National Oceanographic and Atmospheric Administration/Fisheries, and the NYSDEC. We also consult with our Ecological Services Branch and the Coastal Program on specific projects that may impact the Refuge either directly or indirectly. As resources allow, we would be willing to develop memorandums of understanding with the various interested partners and municipalities with regard to various activities that may impact the Refuge. As stated above, activities proposed within the Refuge boundary will require a Compatibility Determination and a Special Use Permit, and may require other State and Federal permits. Personnel within the various agencies are likely to have expertise in different areas and the Refuge staff will seek their input. In the event that a significant negative impact is likely, the Refuge will work with our partners and the applicant to avoid, minimize or mitigate the impacts as necessary.

Comment: Oyster Bay NWR does not meet criteria set for a waterfowl refuge – no activity that disturbs wildlife should be present. Original agreement was that activities traditionally present at time of refuge's conception would continue. A group of influence prevailed upon the Department of Interior to exclude the traditional activity of waterfowl hunting.

Response: The Town of Oyster Bay donated 2,400 acres to the Service in 1968 as a habitat for migratory birds, particularly wintering waterfowl, under authority of the Migratory Bird Conservation Act - it has since expanded to over 3,200 acres. The donation included deed restrictions for mineral rights and shell fishing leases. The refuge is mainly open water, and provides public uses such as fishing, crabbing, oystering, and recreational boating. An activity that disturbs wildlife can be allowed, as long as the use is determined to be compatible (i.e., does not materially interfere with or detract from the mission of the Refuge System, or the purposes for which the refuge was established). Waterfowl hunting occurred on the refuge until 1991, when the use was determined to be illegal as the Service never officially opened the area to hunting in accordance with the rulemaking requirements of the Administrative Procedures Act (5 U.S.C. 553).

Infrastructure

Comment: Extend the existing trail at Elizabeth A. Morton NWR to the end of Jessup's Neck. Allow access for viewing the daffodils during peak bloom.

Response: Protecting the threatened piping plover is a high priority legislated mandate. Accessing the area in question will result in disturbance to vital nesting and brood rearing habitats. Access to the area will remain closed during the breeding season.

Comment: Create a handicapped accessible trail within Conscience Point NWR. Southampton Trails Preservation Society (STPS) offers their assistance to facilitate this project.

Response: Opening and adding trails at Conscience Point NWR will be carefully considered. We must first detail, inventory and map the sensitive habitats and species currently present before we can determine the appropriateness and compatibility of opening the refuge and adding trails. The Service understands the public's desire to be able to view plants and wildlife in representative natural landscapes. Therefore, the Complex plans on exploring partnerships with adjacent landowners to provide access to closed units, where access may involve our providing interpretive information kiosks and observation areas on properties adjacent to the refuge.

Comment: Some reviewers support acquisition and use of the South Haven School on the Montauk Highway as the refuge visitor center and office facility.

Response: The Service's preferred alternative features constructing a new facility on refuge property at the location specified in the CCP. The new permanent headquarters/visitor center will be constructed using an authorized standard design (medium model). The Service remains interested in seeing the school property protected, as it features habitat that can provide for wildlife. The Service did make an earlier attempt to acquire the school property for use as a headquarters/visitor center, but this effort could not be completed. We are concerned that rehabilitation costs for the school facility would be high, will not provide the administrative or public facilities needed, and will not be as cost effective (including operational costs) of a newer and more energy-efficient facility. If new information that addresses Service concerns becomes available at a later date, the Service will consider the information as part of the future decision-making process.

Comment: Some reviewers commented that they would prefer the existing refuge office not be demolished once the new building is completed.

Response: No decision has been made on the future of the existing office building, although the Service is interested in re-establishing habitat along the west side of the Carmans River once the new facility is built.

Comment: A reviewer had concerns regarding the refuge's unstated interim plan to use the observation field on the White Oak trail for offices and housing.

Response: The interim plan to address the immediate needs for a safe working and living environment for refuge staff is mentioned in the draft CCP/EA on pages

2-9, 2-10, and 2-56. The refuge will work with the Friends of Wertheim to further explain details of the interim plan to the public in upcoming newsletters.

Miscellaneous Comments

Comment: One reviewer had concerns regarding the human health effects of particulate matter as a byproduct of prescribed burning.

Response: Refuge fire management activities are subject to and must comply with all applicable Federal, State, and local air pollution control requirements as specified by Section 118 of the Clean Air Act, as amended 1990. Any planned activity requires a permit from the NYSDEC Air Pollution Division through the State Forest Rangers.

Comment: “Your bibliography is ancient and obsolete. How can you plan for the future when you use material from 40 years ago?”

Response: We used a sizable listing of citations, much of which came from peer-reviewed journals. Data collected and conclusions drawn by the authors are not made invalid simply because of its age.

Comment: “It seems that decisions are made by each staff, and when staff changes plans change. I hope the CCP/EA will help to change that.”

Response: As stated on page 1-3 of the draft CCP/EA, the plan will provide strategic management direction over the next 15 years, and provide long-term continuity. However, the plan does allow the refuge manager some flexibility to respond to changing conditions on and around the refuges of the complex, and features adaptive management strategies to utilize with constantly evolving budgets, staff and issues.

Comment: One respondent believes there was inadequate notice given to the wide range of refuge constituents, particularly animal protection groups.

Response: Our public involvement process is described on pages 1-19, 1-20, and Chapter 5, of the draft CCP/EA. Scoping activities were begun in September 2000 with news releases, paid advertisements, and announcements through our mailing list. A number of non-governmental organizations, including animal protection groups, are regularly notified of our Service CCP efforts.

Comment: What (water-based) uses (at Oyster Bay NWR) would be impacted by Alternative B?

Response: Current uses at Oyster Bay NWR would continue as noted in the CCP. The Service would clarify the criteria for legal private structures and the refuge’s authority and responsibility over them. The Service would like to complete the removal of illegal docks. We would work with the Town of Oyster Bay to address the number of boat moorings and fee structure and make any necessary changes. As a result of the deed for the refuge, the Town of Oyster Bay retains certain authority for regulating uses such as shellfishing. We would ensure that refuge

policies are consistent with the intent of the deed. New future uses proposed within the refuge would require a Compatibility Determination and a Special Use Permit, and may require other State and Federal permits. We would explore partnerships to provide new opportunities for wildlife-oriented recreation, and would coordinate with local partners to develop interpretive exhibits and programs. The Service would make every effort to inform user groups/stakeholders of potential changes in policies and provide an opportunity for their input prior to implementation.

Comment: What impact will climate change have on management of the refuge (e.g., sea level rise)?

Response: Sea level rise is both a global and a complex issue, and likely goes beyond the scope of this document. There is probably not enough specific information at this point regarding sea level rise to make sound biological decisions or changing refuge management. The Long Island Complex CCP is a 15-year planning document. At this point, the effects of climate change are likely negligible over the 15 year expected cycle of the plan. As new issues come up, we will address them at that time.

Nevertheless, climate change currently threatens vital coastal marshes, where salt marsh accretion processes may not always keep pace with projected increases in sea level rise. This can lead to marshes becoming too flooded resulting in extensive plant mortality, peat erosion and loss of elevation. If erosion is significant the marsh may be converted to open water or mudflat.

In other instances where salt marshes accrete at the same pace as sea level rise but where there are not adjacent low lying upland areas marshes may be “squeezed out” between rising sea levels (loss due to flooding) and an inability of marsh vegetation to “jump” steep elevation grades, particularly those posed by seawalls or other shoreline structures. A recent phenomenon, sudden wetland dieback, also is causing a decrease in salt marsh vegetation. The extent, cause and duration of this problem remain unknown.

In addition to salt marshes, the refuge complex supports other coastal habitats including beach, intertidal mudflats, marine open water, tidal river, maritime shrubland, and upland forests. These habitats provide critical buffers to the marsh as well as critical habitat to many aquatic and upland species of conservation concern.

Comment: The FAA property at Sayville should be transferred to the Service as previous legislation dictated.

Response: The Service continues to make the transfer of 101 acres from FAA at the Sayville site to the Service complete.