1 Purpose and Planning Considerations

1.1 Purpose and Need

1.1.1 Purpose

The proposed action is to establish a national wildlife refuge (NWR, refuge) in Cherry Valley, Pennsylvania. The purpose of the proposed action is to contribute to the mission and goals of the National Wildlife Refuge System (Refuge System) by:

1. Protecting and enhancing habitats for federal trust species and species of management concern, with special emphasis on migratory birds and species listed under the federal Endangered Species Act (ESA), along with protection of wetlands and the Kittatinny Ridge.
2. Creating opportunities for hunting, fishing, wildlife observation and photography, and environmental education and interpretation, while promoting activities that complement the purposes of the refuge and other protected lands in the region.
3. Promoting science, education, and research through partnerships to inform land management decisions and encourage continued responsible stewardship of the natural resources of Cherry Valley.

After reviewing the analysis in this document, including the attached appendices and any public comments, the Regional Director will determine whether to formally recommend to the Director of the U.S. Fish and Wildlife Service (Service, we, our) that a new refuge be established in Cherry Valley. At that time, the document, including any revisions, will be submitted to Service's headquarters for additional review and a final decision by the agency's Director.

1.1.2 Need

Male Scarlet Tanager

Finding Cherry Valley to be of unique value to numerous wildlife species and habitats, and recognizing strong community support for a refuge in the valley, the 109th Congress passed the Cherry Valley National Wildlife Refuge Study Act of 2006 (Study Act; see Appendix A), calling on the Secretary of the Department of the Interior (Secretary) to conduct a study: *"to evaluate the fish and wildlife habitat and aquatic and terrestrial communities located in Northeastern Pennsylvania and identified on the map entitled 'Proposed Cherry Valley National Wildlife Refuge – Authorization Boundary' dated February 24, 2005, for their potential acquisition by the United States Fish and Wildlife Service through donation, exchange, or willing seller purchase, and subsequent*

inclusion in a future Cherry Valley National Wildlife Refuge." The referenced study boundary map is shown in Figure 1-1.

The Study Act calls for a study to determine the benefits Cherry Valley provides to fish and wildlife diversity, threatened or endangered species, aquatic and wetland habitats, wildlife-dependent recreation, scientific research, and environmental education and interpretation. Additionally, the study is to determine how protecting habitats in the valley may support fulfillment of international obligations of the United States (U.S.) with respect to fish, wildlife, and their habitats (e.g., Migratory Bird Treaty Act of 1918). More specifically, the study will determine the total area of lands and habitats within the valley that are recommended for land protection and inclusion into the Refuge System, up to a maximum of 30,000 acres.

The Study Act requires the Secretary to submit a report containing the results of the study to the Committee on Resources, U.S. House of Representatives, and to the Committee on Environment and Public Works, U.S. Senate. The report is to include: 1) a map that identifies and prioritizes specific lands, waters, and interests therein for future acquisition, and that delineates an acquisition boundary, for a potential Cherry Valley NWR, 2) a cost estimate for the acquisition of all lands, waters, and interests therein that are appropriate for refuge status, and 3) an estimate of potentially available acquisition and management funds from non-federal sources.

This document (Study Report) fulfills Section 603 of the Study Act. In addition, the Service is using this document to propose the creation of a new refuge . The National Environmental Policy Act of 1969 (42 U.S.C. 4321 et seq.; Stat. 852), as amended (NEPA) requires that any federal action consider the direct, indirect, and cumulative effects of the action, and that alternatives to the action be considered. Creating a new refuge is a federal action, therefore, the Study Report is also structured and presented as an Environmental Assessment (EA) to assist the Service in complying with NEPA.

The Study Act also requires the Service to consult with others as the study is conducted (Sec. 603 (b)). Therefore, to formally initiate the study, the Service formed the Cherry Valley Study Team (CVST; Table 1-1). The CVST was instrumental in identifying priorities for the study, gathering essential information, assuring that necessary issues and concerns are addressed, and helping to coordinate with the public. The CVST will continue to help bring the report to its final form. Further details about the consultation process are provided in Chapter 6.

Table 1-1. Members of the Cherry Valley Study Team (CVST) created to provide information on establishing a national wildlife refuge in Cherry Valley, Pennsylvania.

Type of Organization	Name of Organization
Federal Agencies	U.S. Fish and Wildlife Service
	National Park Service
State Agencies	Pennsylvania Fish and Boat Commission
	Pennsylvania Game Commission
	Pennsylvania Natural Heritage Program
Local Agencies	Monroe County Conservation District
	Monroe County Planning Commission
Academic Institutions	East Stroudsburg University
	Northampton Community College
Non-governmental Organizations	The Nature Conservancy
	Pocono Avian Research Center

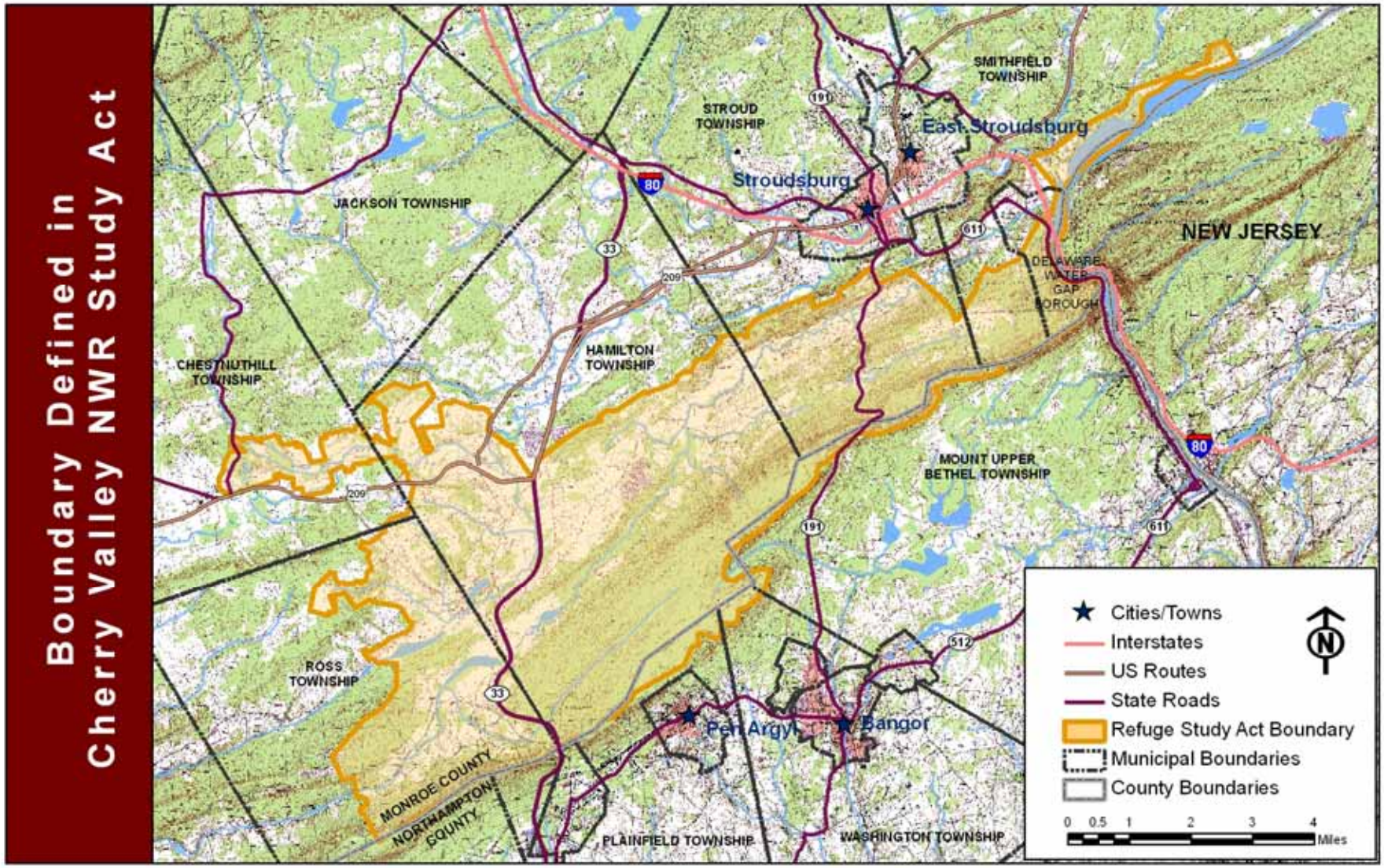

Figure 1-1. Study boundary defined in the Cherry Valley National Wildlife Refuge Study Act of 2006 (Title VI of Public Law.

1.2 Regional Context

Cherry Valley is largely defined by the Delaware River watershed within the Ridge-and-Valley geologic province of the Appalachian Mountains (Figure 1-2). The Ridge-and-Valley province extends from northern New Jersey, westward into Pennsylvania, and southward into Maryland, West Virginia, Virginia, Tennessee, and Alabama (Nationmaster 2008). Cherry Creek and its 13,343 acre watershed define most of Cherry Valley. Fed by many tributaries originating from limestone aquifers, the creek meanders 15 miles through a steep-sided valley between Kittatinny Mountain to the south and Godfrey Ridge to the north, and eventually empties into the Delaware River Gap, a world-renowned geologic feature located at the confluence of Cherry Creek and the Delaware River. Most of the water resources in Cherry Valley can be attributed to groundwater. Additional details on the Cherry Valley environment are presented in Chapter 2 – Affected Environment.

1.3 The Service and the National Wildlife Refuge System: Policies and Mandates Guiding Planning

The Service, as part of the Department of the Interior, administers the Refuge System along with many other conservation programs. The Service 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." Congress entrusts the Service with the conservation and protection of national trust resources such as migratory birds and fish, species listed under the federal Endangered Species Act as amended (ESA), inter-jurisdictional fish, national wildlife refuges, wetlands, and certain marine mammals. The agency also enforces federal wildlife laws and international treaties on importing and exporting wildlife, assists states with their fish and wildlife programs, and helps other countries develop conservation programs. The Service Manual contains the standing and continuing directives on implementing our authorities, responsibilities, and activities (http://www.fws.gov.directives/direct.html). The Service publishes special directives that affect the rights of citizens or the authorities of other agencies separately in the Code of Federal Regulations (CFR).

In 1997, Congress passed the National Wildlife Refuge System Improvement Act (Public Law 105–57) (Refuge Improvement Act), amending the National Wildlife Refuge System Administration Act of 1966. Among other things, the Refuge Improvement Act states that the Refuge System must focus on wildlife conservation, and it 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.

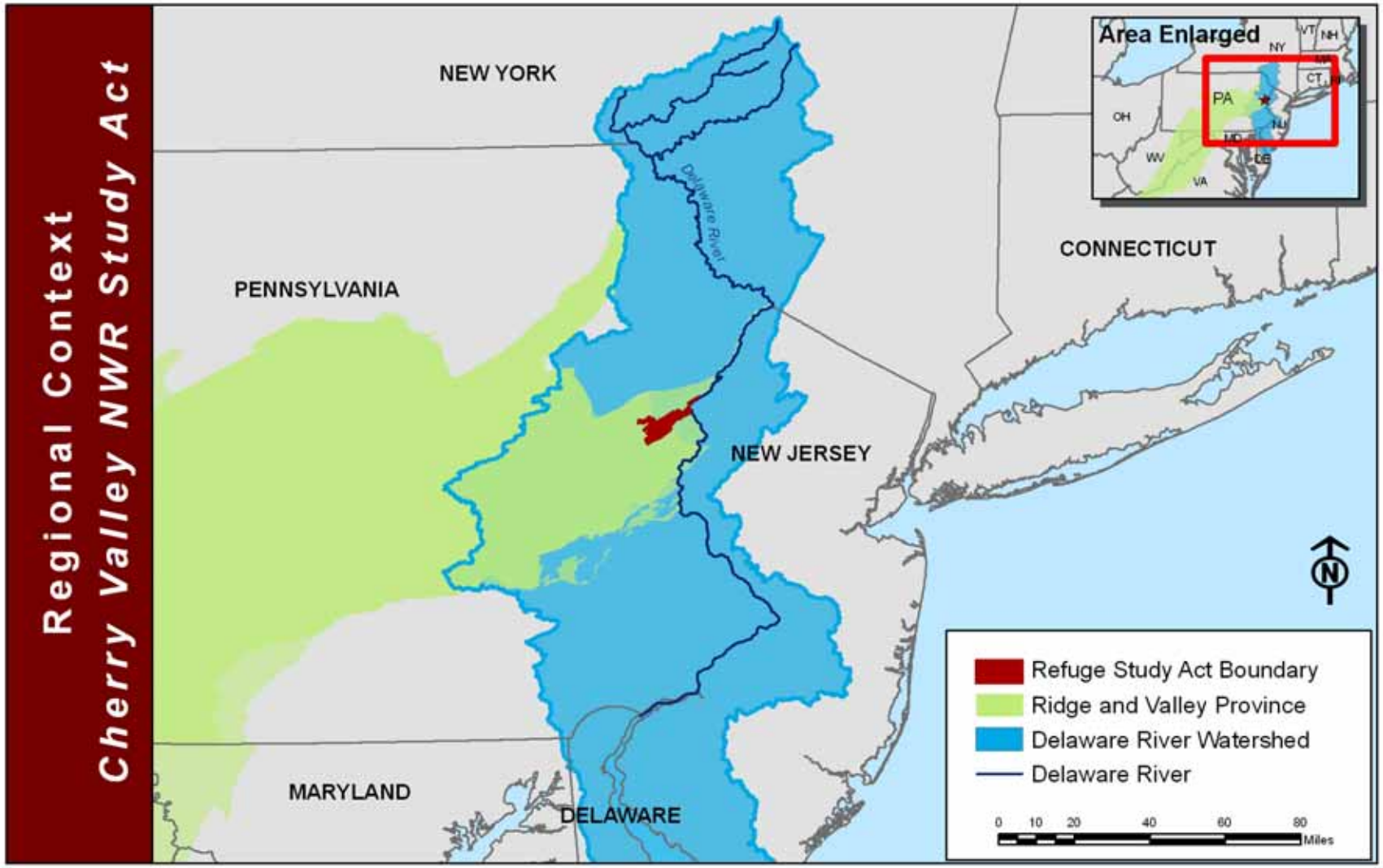

Figure 1-2. Regional location of the study act boundary defined in the Cherry Valley National Wildlife Refuge Study Act, Pennsylvania

It further states that the mission of the Refuge System, coupled with the purpose(s) for which a refuge was established, will provide the principal management direction for refuges. The Refuge Improvement Act established a foundation for Refuge System policies used to effectively implement the Refuge System. These policies are described briefly below and can be found at http://www.policy.fws.gov/library/00fr62483.pdf.

1.3.1 Service Policies

Policy on the National Wildlife Refuge System Mission, Goals, and Purposes (601 FW 1) sets forth the Refuge System mission noted above, how it relates to the Service mission, and explains the relationship of the Refuge System mission, and the purpose(s) of each unit in the Refuge System. In addition, it identifies the following Refuge System goals: conserve a diversity of fish, wildlife, and plants; develop and maintain a network of habitats; conserve those ecosystems, plant communities, and wetlands that are unique within the United States; provide and enhance opportunities to participate in compatible, wildlife-dependent recreation; and, help to foster public understanding and appreciation of the diversity of fish, wildlife, and plants and their habitats. This policy also establishes management priorities for the Refuge System: conserve fish, wildlife, and plants and their habitats; facilitate compatible wildlife-dependent recreational uses; and, consider other appropriate and compatible uses.

Refuge System Planning Policy (602 FW 1, 2, 3) provides guidance for Refuge System planning, including Comprehensive Conservation Plans (CCPs) and step-down management plans. This policy helps to ensure that wildlife comes first in the Refuge System, and that refuge management reflects the Refuge System mission and purpose(s) for which each refuge was established. Among other features, this policy ensures NEPA compliance, including ensuring that opportunities to participate in the refuge planning process are available to our other programs; federal, state, and local agencies; tribal governments; conservation organizations; adjacent landowners; and the public. It also states that the Service will manage all refuges in accordance with an approved CCP.

Appropriate Use Policy (603 FW 1). This policy is used to decide whether various uses are appropriate on a refuge. When we find a use is appropriate, we must then determine if the use is compatible before we allow it on a refuge. This policy also clarifies and expands on the compatibility policy (see below), which describes when refuge managers should deny a potential use without determining compatibility. This policy applies to all proposed and existing uses in the Refuge System only when we have jurisdiction over the use, and does not apply to refuge management activities or situations where reserved rights or legal mandates provide we must allow certain uses.

Compatibility Policy (603 FW 2). The Refuge Improvement Act is the key legislation regarding management of public uses and compatibility with wildlife conservation on

refuges. The Refuge Improvement Act declares that all existing or proposed public uses of a refuge must be compatible with refuge purpose(s). After affirming that a proposed use is appropriate (see above), the refuge manager determines compatibility after evaluating an activity's potential impact on refuge resources, and ensuring that it supports the Refuge System mission and does not materially detract from, or interfere with, refuge purpose(s). This act also stipulates six wildlife-dependent public uses that are to receive enhanced consideration in CCPs: hunting, fishing, wildlife observation and photography, and environmental education and interpretation. Draft compatibility determinations for select public uses on a proposed Cherry Valley NWRcan be found as an Attachment to the draft Conceptual Management Plan (Appendix B) along with additional information on the process.

Maintaining Biological Integrity, Diversity, and Environmental Health Policy (601 FW 3) provides guidance on maintaining or restoring the biological integrity, diversity, and environmental health of the Refuge System, including the protection of a broad spectrum of native fish, wildlife, and habitat resources found in refuge ecosystems. It provides refuge managers with a process for evaluating the best management direction to prevent the additional degradation of environmental conditions and to restore lost or severely degraded environmental components. It also provides guidelines for dealing with external threats to the biological integrity, diversity, and environmental health of a refuge and its ecosystem(s).

Wildlife-Dependent Recreation Policy (605 FW 1). The Refuge Improvement Act establishes that six compatible wildlife dependent recreational uses (i.e., hunting, fishing, wildlife observation, photography, environmental education and interpretation) are the priority general public uses of the Refuge System, and are to receive enhanced consideration over other public uses in refuge planning and management. These often are referred to as the "Big-6" public uses. This policy explains how we will provide visitors with opportunities for those priority public uses on units of the Refuge System and how we will facilitate participation in these priority public uses.

1.3.2 Laws and Mandates

Consideration of other laws and mandates is conducted during planning for a new refuge. Although Service and Refuge System policies and the purpose(s) of each refuge provide the foundation for its management, other federal laws, executive orders, treaties, interstate compacts, and regulations on conserving and protecting natural and cultural resources also affect how we select lands for inclusion into the Refuge System and ultimately how we manage refuges. Many of these are described in the Service's "Digest of Federal Resource Laws of Interest to the U.S. Fish and Wildlife Service" (http://www.fws.gov/laws/lawsdigest/indx.html). As required, the Service would adhere to these laws and mandates upon creation of a new refuge in Cherry Valley.

Federal laws require the Service to identify and preserve its important historic structures, archaeological sites, and artifacts. NEPA mandates our consideration of cultural resources in planning federal actions. The Refuge Improvement Act also requires consideration of archaeological and cultural values. Some additional laws that pertain to cultural, archaeological, and historic resources are described below:

The Archaeological Resources Protection Act (16 U.S.C. 470aa–470ll; Pub.L. 96–95) establishes protections for archaeological resources on federal or Native American lands.

The Historic Sites, Buildings and Antiquities Act (16 U.S.C. 461–462, 464–467; 49 Stat. 666, as amended by Pub.L. 89–249, 79 Stat. 971), popularly known as the Historic Sites Act, declares it a national policy to preserve historic sites and objects of national significance, including those located on refuges (e.g., National Historic and Natural Landmarks). Implementation of this act is strengthened by provisions of *The Archeological and Historic Preservation Act* (16 U.S.C. 469–469c; Pub.L. 86–523; 74 Stat. 220, as amended by Pub.L. 93–291, 88 Stat. 174).

The National Historic Preservation Act of 1966 (16 U.S.C. 470–470b, 470c–470n), Pub.L. 89–665, 80 Stat. 915) provides for the preservation of significant historical features (buildings, objects and sites) through a grant-in-aid program to the states. It establishes a National Register of Historic Places and a program of matching grants under the existing National Trust for Historic Preservation (16 U.S.C. 468–468d).

The Service also owns and cares for some museum properties. The most common are archaeological, zoological, and botanical collections, historical photographs, historic objects, and art. Each refuge maintains an inventory of its museum property. The Service ensures that those collections will remain available to the public for learning and research.

Other resource laws are also integral in refuge planning and may play an important role in refuge establishment or management, notably: Migratory Bird Treaty Act (MBTA; 16 U.S.C. 703-712), Endangered Species Act of 1973 (ESA; 16 U.S.C. 1531–1544), as amended, The Wilderness Act of 1964 (16 U.S.C. 1131–1136), and The Wild and Scenic Rivers Act of 1968 (16 U.S.C. 1271-1287).

Chapter 4, “Environmental Effects,” evaluates this document’s compliance with the legislation noted above (e.g., MBTA), the Clean Water Act of 1977 as amended (33 U.S.C. 1251, et seq.; Pub.L. 107–303), and the Clean Air Act of 1970 as amended (42 U.S.C. 7401 et seq.). Finally, we designed this draft Study Report to comply with NEPA and the Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of NEPA (40 CFR 1500–1508).

1.4 Conservation Plans and Initiatives Guiding Planning

Refuge planning must consider conservation goals and objectives of existing ecosystem plans for the landscapes in which the refuges are located to determine how a refuge can best contribute to the functioning of the ecosystems. The Service must coordinate refuge planning with other governments, other government agencies, nongovernmental organizations, and, to the extent practicable, refuge plans will be consistent with the fish and wildlife conservation plans of the state and the conservation programs of tribal, public, and private partners within the ecosystem. The following plans were considered while developing this document.

1.4.1 Multi-Species and Regional Plans

State of Pennsylvania Wildlife Action Plan (2008). In 2001 U.S. Congress passed the Department of the Interior and Related Agencies Appropriations Act of 2002 which created the State Wildlife Grants (SWG) program. These grants are available to state fish and wildlife agencies "for the development and implementation of programs for the benefit of wildlife and their habitat, including species that are not hunted or fished." Each state had to develop a Wildlife Action Plan (WAP; officially known as a Comprehensive Wildlife Conservation Strategy) focusing on the species of greatest conservation need to be eligible for grants. Pennsylvania's WAP is a blueprint for the Pennsylvania Game Commission and Pennsylvania Fish and Boat Commission to effectively manage and protect game and nongame species and their habitats (Pennsylvania Game Commission and Pennsylvania Fish and Boat Commission 2008). The WAP highlights many sensitive and declining species, and begins to identify and prioritize the pressing research, management, and recovery needs of species and habitats of greatest conservation concern throughout Pennsylvania. Both commissions anticipate that interested individuals and organizations will join them in working toward the worthwhile goal of comprehensive fish and wildlife conservation in the Commonwealth.

Of the species listed as species of conservation concern in Pennsylvania's WAP, as many as 61 occur within or near the Cherry Valley study boundary. This includes at least 13 of the 37 species identified in the WAP as Pennsylvania's species of greatest conservation concern (Pennsylvania Game Commission and Pennsylvania Fish and Boat Commission 2008).

The Appalachian Mountain Bird Conservation Region (AMBCR) originated from the North American Bird Conservation Initiative (NABCI). NABCI is a coalition of many governmental agencies, private organizations, academic organizations, and private industry leaders in Canada, the United States, and Mexico. It was formed to address the need for coordinated bird conservation that will benefit all birds in all habitats. The AMBCR, often referred to as Bird Conservation Region (BCR) 28, is one of 37 BCRs across the United States. BCRs are ecologically distinct regions in North America with similar bird communities, habitats, and resource management issues.

NABCI's approach to bird conservation is regionally-based, biologically driven, and landscape-oriented. It draws together the major bird conservation plans already in existence for water birds, shorebirds, waterfowl, and land birds, fills in knowledge gaps, and implements conservation actions through dynamic partnerships.

Cherry Valley lies within the AMBCR, which includes portions of 15 states and 11 Partners in Flight (PIF) physiographic regions and covers approximately 105 million acres. This region includes the Blue Ridge, the Ridge and Valley Region, the Cumberland Plateau, the Ohio Hills, and the Allegheny Plateau. The primary purposes of BCRs are to facilitate communication among the bird conservation initiatives; facilitate a regional approach to bird conservation; promote new, expanded, or restructured partnerships; and identify overlapping or conflicting conservation priorities. Members of the Appalachian Mountains Joint Venture partnership have developed the Appalachian Mountains Bird Conservation Initiative to guide AMBCR conservation priorities in the region (Appalachian Mountains Bird Conservation Partnership 2005).

The North American Waterfowl Management Plan (NAWMP) is designed to promote partnership-based habitat conservation for waterfowl and other wetland birds. It was first developed in 1996 and has been revised twice since, most recently in 2004 (NAWMP 2004). The NAWMP established "Joint Venture" partnerships across the continent. Joint venture partnerships tribal nations, local businesses, conservation organizations, individual citizens, and involving federal, state, and provincial governments are assembled for the purpose of protecting habitat within those areas. The 2004 plan among the United States, Canada, and Mexico outlines their strategy to restore waterfowl populations through habitat protection, restoration, and enhancement (NAWMP 2004). Cherry Valley falls within the Atlantic Coast Joint Venture (ACJV). The goal of the ACJV is to: "Protect and manage priority wetland habitats for migration, wintering, and production of waterfowl, with special consideration to black ducks, and to benefit other wildlife in the joint venture area." The ACJV Implementation Plan served as a basis for evaluating waterfowl management opportunities within the valley.

Partners in Flight Bird Conservation Plan: Physiographic Area 17, Northern Ridge and Valley. In 1990, PIF was conceived as a voluntary, international coalition of government agencies, conservation organizations, academic institutions, private industry, and other citizens dedicated to reversing the trends of declining bird populations and to "keeping common birds common." The foundation of PIF's long-term strategy for bird conservation is a series of scientifically-based bird conservation plans, using physiographic provinces as planning units. Cherry Valley lies in the Northern Ridge-and-Valley Physiographic Province, Bird Conservation Area 17, which is included in the AMBCR. The goal of each PIF plan is to ensure long-term maintenance of healthy populations of native birds, primarily non-game landbirds. Within each physiographic area, the plans rank bird species according to their

conservation priority, describe desired habitat conditions, develop biological objectives, and recommend conservation actions. Habitat loss, population trends, and vulnerability of a species and its habitats to regional and local threats are all factors used in the priority ranking.

North American Waterbird Conservation Plan (2002). This plan represents a partnership among individuals and institutions with the interest in and responsibility for conserving colonial nesting waterbirds and their habitats (Kushlan et al. 2002). Its primary goal is to ensure that the distribution, diversity, and abundance of populations and habitats of breeding, migratory, and non-breeding waterbirds are sustained or restored throughout the lands and waters of North America, Central America, and the Caribbean (Kushlan et al. 2002). It provides a framework for conserving and managing colonially nesting water-dependent birds, and facilitates continent-wide planning and monitoring, national, state, and provincial conservation, regional coordination, and local habitat protection and management.

In 2006, the Mid-Atlantic New England Working Group began drafting the Waterbird Conservation Plan for the Mid-Atlantic/New England/Maritimes (MANEM) Region (MANEM Waterbird Working Group, in prep.). This plan, being implemented between 2006 and 2010, contains technical appendices on (1) waterbird populations including occurrence, status, and conservation needs, (2) waterbird habitats and locations within the region that are crucial for waterbird sustainability, (3) MANEM partners and regional expertise for waterbird conservation, and (4) conservation project descriptions that present current and proposed research, management, habitat acquisition, and education activities. Summarized information on waterbirds and their habitats provides a regional perspective for local conservation action.

U.S. Shorebird (2001, 2nd Edition) and North Atlantic Regional Shorebird (2000) Plans
Concerns about shorebirds led to the creation of the U.S. Shorebird Conservation Plan (Brown et al. 2001). Developed in a partnership with individuals and organizations throughout the United States, the plan presents conservation goals for each U.S. region, identifies important habitat conservation and research needs, and proposes education and outreach programs to increase public awareness of shorebirds and of threats to them. The North Atlantic Regional Shorebird Plan was created to help address specific regional priorities (Clark et al. 2000).

Birds of Conservation Concern Plan (2002) – Northeast Region, U.S. Fish and Wildlife Service. The Birds of Conservation Concern Plan (BCC) identifies nongame migratory birds that, without strong conservation action, are likely to become candidates for listing under the ESA (USFWS 2002a). The BCC compiles the highest ranking species of conservation concern from these major nongame bird conservation plans: PIF (species scoring >21), U.S. Shorebird Conservation Plan (species ranking 4 or 5), and North American Waterbird Conservation Plan (species ranking 4 or 5). We used the

BCC list to help us focus on which species might warrant special management attention.

Conservation Plan for the Kittatinny Ridge (2006). In 2006, Audubon Pennsylvania published the "Conservation Plan for the Kittatinny Ridge in Pennsylvania" designed to summarize what is currently known about the cultural and natural resources of the Kittatinny Ridge through Pennsylvania, and to provide recommendations on strategies and priorities for protecting the ridge corridor for people and for ecological integrity (Audubon Pennsylvania 2006). The 150-mile long Kittatinny Ridge is recognized as a globally significant migration flyway, concentrating up to 20,000 migrating fall raptors every year. This ridge is home to the world's first conservation area for birds of prey, Hawk Mountain Sanctuary, established in 1934 solely to protect migratory raptors. In 1978 the Pennsylvania Game Commission designated the entire length of the Kittatinny Ridge in Pennsylvania as the "Kittatinny Ridge Birds of Prey Natural Area." Cherry Valley lies northeast of the Hawk Mountain Sanctuary.

The 2006 "Conservation Plan for Kittatinny Ridge Conservation Corridor" describes the value of the ridge in detail and includes protection of ridge habitat as a critical priority (Audubon Pennsylvania 2006). The ridge serves as migration habitat for at least 16 species of North American raptors, including peregrine falcon, bald eagle, broad-winged hawk, Northern goshawk, and black vulture. There are 12 recognized hawk watching sites along the ridge. The large blocks of unfragmented forest throughout the ridge also serve as key breeding sites for many interior-forest birds, including ruffed grouse, wood thrush, ovenbird, scarlet tanager, cerulean warbler, worm-eating warbler, Louisiana waterthrush, Acadian flycatcher, and many others. Some of these are species of conservation concern that may be on the brink of being threatened or endangered, or are on the Audubon National Bird Conservation WatchList (Butcher et al. 2007).

The ridge suffers from loss of habitat, notably through residential and commercial changes in land use, and energy and mining development, and is challenged with over abundant white-tailed deer and invasive species. Recommendations from this plan focus on improving scientific knowledge, land protection, enhanced public policy and involvement, and strengthened environmental education.

Partners in Amphibian and Reptile Conservation (PARC) was created in response to the increasing national declines in amphibian and reptile populations. PARC members include diverse government agencies, conservation organizations, universities, zoological parks and nature centers, pet traders, private industries, and environmental consultants. Its five geographic regions—Northeast, Southeast, Midwest, Southwest and Northwest—focus on regional challenges in amphibian and reptile conservation. Regional working groups allow for region-specific communication. PARC published "Habitat Management Guidelines for Amphibians

and Reptiles of the Northeastern United States" in 2006 (Mitchell, Breisch, and Buhlmann 2006).

The National State Agency Herpetological Conservation Report (NHCR) is a summary report sponsored by PARC (PARC 2004). It provides a general overview of each state wildlife agency's support for reptile and amphibian conservation and research and includes lists of the amphibian and reptile species of concern for each state. The NHCR's purpose is to facilitate communication among state agencies and partner organizations throughout the PARC network to identify and address regional and national priorities for reptiles and amphibians. The next NHCR report will integrate a list of the PARC Species of Conservation Concern with each state's Wildlife Action Plan.

U.S. Fish and Wildlife Service – Fisheries Program Northeast Region Strategic Plan (2004). The Northeast Region Strategic Plan (USFWS 2004) is an extension of the Service's Fisheries Program Strategic Vision document (USFWS 2002b), describing more specifically how the Region will fulfill the goals and objectives identified in the Vision over five years (2004-2008). This plan, developed in cooperation with over 40 partners and stakeholders, addresses the decline of fish and other aquatic resources, and the economic impact of those declines. The plan is implemented with partners through annual project work plans.

U.S. Fish and Wildlife Service – Regional Wetlands Concept Plan (1990). In 1986, Congress enacted the Emergency Wetlands Resources Act (16 U.S.C. 3901(b)) to promote the conservation of our nation's wetlands. This act directs the Department of the Interior to develop a National Wetlands Priority Conservation Plan identifying the location and types of wetlands that should receive priority attention for land protection by federal and state agencies using Land and Water Conservation Fund appropriations. In 1990, our Northeast Region completed a Regional Wetlands Concept Plan to provide more specific information about wetlands resources in the Northeast (USFWS 1990). It identifies 850 wetland sites that warrant consideration for land protection to conserve wetland values in our region. This plan identifies two sites within or near the Study Act boundary: one of these sites occurs within the Cherry Creek watershed and another occurs in the Aquashicola Watershed.

Appalachian Trail MEGA-Transect (2008). The goals of the Appalachian Trail (AT) MEGA-Transect are to enhance management and protection of the AT environment (Dufour and Crisfields 2008). The AT and its surrounding 250,000 acres of protected lands are a priceless ecological resource. AT lands harbor rare, threatened, and endangered species, encompass important water resources, and shelter wildlife. Threats to the environment of the AT (e.g., encroaching development, acid rain, invasive species, polluted water, and climate change) represent threats to the health of everyone downwind and downstream of the AT. Because of the magnitude of this project, partner and volunteer engagement is vital to this effort. Citizen scientists

will play an active role, participating in monitoring activities and providing policy-makers, scientists and land managers with the data needed to protect the AT. A Cherry Valley NWR may offer an opportunity to work collaboratively with this AT initiative.

1.4.2 Species-Specific Plans

Dwarf Wedgemussel Recovery Plan (1993). The dwarf wedgemussel (*Alasmidonta heterodon*) was federally-listed as an endangered species in March 1990. Its recovery plan identifies this goal: "maintain and restore viable populations to a significant portion of its historical range in order to remove the species from the federal list of threatened and endangered species" (USFWS 1993). Currently, the species is not known to occur in Cherry Valley, although it is documented in the Delaware River several miles upstream and downstream from Cherry Valley. It is likely that the valley offers potential habitat for this species. Surveys are needed to fully determine their presence, absence, or the possibilities for their introduction, along with the presence of their host fish, the tessilated darter (*Etheostoma olmstedi*). Besides listing goals and objectives and describing mussel ecology and life history, the Recovery Plan identifies specific, major recovery tasks.

Bog Turtle Northern Population, Recovery Plan (2001). The northern population of the bog turtle was listed as a threatened species under the federal ESA in November 1997. The overall objective for the recovery plan is to protect and maintain existing populations of this species and its habitat, enabling its eventual removal from the federal list of endangered and threatened wildlife and plants (USFWS 2001). The recovery plan identifies a number of specific recovery tasks: 1) protection through existing regulations, 2) secure long-term protection of bog turtle populations, 3) conduct surveys of known, historical, and potential bog turtle habitat, 4) investigate the genetic variability of the bog turtle throughout its range, 5) reintroduce bog turtles into areas from which they have been extirpated or removed, 6) manage and maintain bog turtle habitat to ensure its continuing suitability for bog turtles, 7) conduct an effective law enforcement program to halt illicit take and commercialization of bog turtles, and 8) develop and implement an effective outreach and education program about bog turtles.

Five bog turtle recovery units and their subunits are identified in the plan. Cherry Valley lies within the Delaware [river watershed] recovery unit, which is the most populated of the five units. The Delaware recovery unit is the most ecologically diverse of the five recovery units, encompassing inner Coastal Plain, Piedmont, river valleys, Appalachian plateau areas, and fens. It contains both glaciated and non-glaciated habitats. This unit contains the highest densities of roads and major urban areas and has the highest number of lost sites range wide. There is less agricultural pressure here; however, urban sprawl and habitat fragmentation are major conservation challenges, as is maintaining ground water quality and quantity. The goal for the Delaware unit is to protect 80 viable bog turtle populations and

sufficient habitat to ensure the sustainability of these populations. This recovery unit is divided into east and west subunits, of which Cherry Valley lies in the Delaware west subunit, consisting of the Delaware River watershed west of the Delaware River. To meet the recovery criterion for this unit, at least 20 populations must be protected in the Delaware West Subunit.

Indiana Bat (Myotis sodalis) Draft Recovery Plan (2007). In 1967, the federal government listed the Indiana bat (*Myotis sodalis*) as endangered under the Endangered Species Preservation Act of 1966 (80 Stat. 926; 16 U.S.C. 668aa(c)) because of declines in their numbers documented at their seven major hibernation sites in the Midwest. Although population numbers are down, surveys in most states' hibernation sites indicate that populations increased or at least remained stable in 2004 and 2005. In 2005, Indiana bats were found hibernating in areas near Hibernia and Mount Hope, New Jersey, areas less than 50 miles from Cherry Valley. While Indiana bats have not been documented in Cherry Valley since 1950, the proximity to known populations and presence of suitable habitat make it likely that this species uses the valley for summer roosting and foraging. The valley's Hartman's Cave may offer potential hibernation habitat for the species since it was the 1950 site location. The Service would implement recovery plan tasks (USFWS 2007c) for this species as appropriate if the Indiana bat was documented within the potential refuge boundary.

National Bald Eagle Management Guidelines (2007). In July 2007, the Service issued a final ruling to remove the bald eagle from the federal list of endangered and threatened species. The bald eagle remains under the protection of the Bald and Golden Eagle Protection Act (Eagle Act) and the Migratory Bird Treaty Act (MBTA). The Service developed National Bald Eagle Management Guidelines (USFWS 2007b) to advise landowners, land managers, and others who share public and private lands with bald eagles when and under what circumstances the protective provisions of the Eagle Act may apply to their activities. The guidelines help minimize impacts on bald eagles, particularly where people may constitute a "disturbance," which the Eagle Act prohibits. The guidelines are intended primarily as a tool for landowners and planners who seek information and recommendations on how to avoid disturbing bald eagles.

Conserving the Eastern Brook Trout: Action Strategies (2008). The eastern brook trout (*Salvolinus fontinalis*) is the only salmonid native to Pennsylvania and is the official state fish (EBTJV 2008a). In the U.S., brook trout are declining throughout their range (Hudy et al. 2005). Concern over this species lead state and federal agencies (including the Service and Pennsylvania Fish and Boat Commission), conservation groups, and academics from across their native range to form The Eastern Brook Trout Joint Venture (EBTJV) in 2004 (EBTJV 2007). The EBTJV has developed several documents, including *Conserving the Eastern Brook Trout: Action Strategies* (EBTJV 2008), to help prioritize and guide brook trout conservation and

restoration efforts in the U.S. As part of this document, Pennsylvania has identified specific goals and objectives for its brook trout population (EBTJV 2008). The Service would integrate its activities in Cherry Valley with state goals in this area whenever feasible.

1.5 The Refuge Planning Process

The Service initiated work on the study during the spring of 2007, formulating a general approach to accomplishing the task. Progress has been hampered since funding authorized by the Study Act (Sec. 603 (e)) has not been appropriated by Congress. Nevertheless, the Service continued with the study with the assistance of many dedicated partners. Notably, the Service joined together with The Nature Conservancy to establish baseline information for the study evaluation. A mailing list and e-mail list of all known interested individuals, groups, and organizations were developed to increase awareness of the proposal. In February 2008, we distributed copies of a study planning newsletter to everyone on that list.

Following initial efforts with The Nature Conservancy, the Service invited a number of representatives from select government agencies, universities, and conservation organizations to form the CVST already mentioned above. The CVST met in October and December 2007 to begin gathering relevant information for the study, and to discuss species and habitat priorities for a potential new refuge. The Service and the CVST also began to prepare for public meetings designed to inform private citizens and interested groups and organizations about the refuge proposal and to obtain public participation in the study process.

On March 26 and 27, 2008, two public meetings were held to solicit information about the potential refuge. Over 200 people attended the meetings. The March 26th meeting was attended by Representative Paul Kanjorski. Through the CVST meetings and public meetings, a number of general concerns, issues, and questions arose that were used to guide development of the study (see Section 1.9 Issues, Concerns, and Opportunities).

Since the public meetings were held, the Service and the CVST have used all gathered information along with requirements of the Study Act, NEPA, and the Refuge Improvement Act and its policies to develop the current draft study report, including the refuge alternatives described in Chapter 3. We have also developed a website to support study activities:
www.fws.gov/northeast/planning/Cherry%20Valley/lcphome.html.

Following public meetings on this Study Report to be held during a 30 day comment period, comments received will be summarized. Substantive comments will be addressed in the final Study Report/EA. A planning update newsletter will be developed, posted on the website, and distributed to the mailing list.

Once we have prepared the final Study Report, we will submit it to our regional director. The Study Report/EA will then be sent to the Director of the Service with the regional director's recommendation to approve or not approve a new refuge in Cherry Valley.

1.6 Refuge Purposes

The Service, with assistance from the CVST, considered the purposes and intents of the Study Act along with longstanding legislation available to the Service for establishing refuges to develop the following proposed refuge purposes:

> *"for use as an inviolate sanctuary, or for any other management purpose, for migratory birds…." 16 U.S.C. §715d (Migratory Bird Conservation Act), and*
>
> *"to conserve (A) fish or wildlife which are listed as endangered species or threatened species…or (B) plants…" 16 U.S.C. §1534 (Endangered Species Act of 1973), and*
>
> *"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), 100 Stat. 3583 (Emergency Wetlands Resources Act of 1986), and*
>
> *"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).*

These purposes, if accepted with the approval of an acquisition boundary for a Cherry Valley NWR, would serve as the core justification for management of refuge habitats and public use. All decisions related to a potential refuge would first be based upon their relation to and compatibility with these refuge purposes.

1.7 Refuge Vision Statement

The CVST developed this proposed vision statement to provide a guiding philosophy and sense of purpose for a new refuge:

> *On the Cherry Valley National Wildlife Refuge, birds will freely migrate and raise their young in native habitats of forest, wetlands, and grasslands. Bog turtles will thrive in valley bogs, and other rare wildlife and plants will find a safe harbor. We will manage refuge lands and waters with an emphasis on trust species whose populations have declined, assisting them on the road to recovery.*

The refuge will serve as an outdoor classroom, where students of all ages will study nature's complexity, contributing to our understanding and appreciation of the natural world and the National Wildlife Refuge System. It will also serve as an outstanding area for scientific research intended to benefit this valuable ecosystem. All those who visit will find enjoyment in the presence of healthy and abundant fish, wildlife, and plants, and will leave with a renewed personal commitment to land conservation and stewardship.

In partnership with others, we will contribute to Cherry Valley communities, helping renew the health and vitality of Cherry Valley and its vibrant landscape. We will complement the rich traditions of hunting, fishing, forestry and agriculture on Pennsylvania's eastern border.

1.8 Refuge Goals

The CVST developed three goals after considering the proposed refuge purposes and vision statement, the findings of the Study Act, the missions of the Service and the Refuge System, and the mandates, plans, and conservation initiatives above. These goals are intentionally broad, descriptive statements of purpose. They highlight elements of the vision for the refuge that we would emphasize in its future management.

Goal 1. Protect and enhance habitats for federal trust species and species of management concern, with special emphasis on migratory birds and species listed under the ESA, along with protection of wetlands and the Kittatinny Ridge.

This goal supports the principal findings of the Study Act (Sec. 602) on the need to protect important wildlife and associated habitats that are of special concern. It supports the essential purpose of the Refuge Improvement Act for conserving wildlife, and complements the mission of the Refuge System and the trust resource responsibilities of the Service.

Milton Friend / USFWS

Goal 2. Create opportunities for hunting, fishing, wildlife observation and photography, and environmental education and interpretation, while promoting activities that complement the purposes of the refuge and other protected lands in the region.

This goal supports a component of the Study Act (Sec. 603 (c)) to consider opportunities for wildlife-dependent recreation, and complements similar

provisions in the Refuge Improvement Act and its associated Wildlife-Dependent Recreation Policy. It also provides for a new refuge to complement the AT, wherever possible.

Goal 3. Promote science, education, and research through partnerships to inform land management decisions and encourage continued responsible stewardship of the natural resources of Cherry Valley.

This goal also supports the Study Act's findings (Sec. 602) on the need to protect the unique geologic and water quality features of the valley, rare plant communities, and the need to offer the refuge as an outdoor laboratory for scientific research and environmental education. This goal also supports the Refuge Improvement Act, the Refuge System mission, and its policy on "Maintaining Biological Integrity, Diversity, and Environmental Health Policy."

1.9 Issues, Concerns, and Opportunities

The Study Act (Sec. 603 (b)) and NEPA require consultation with the public and others as the study is performed to assure that interested parties are provided opportunities to participate and that the study benefits from information, concerns, or issues they may have. We define an issue as: any matter requiring management action. For example, that may include actions related to a resource management problem, threat to a resource, an ongoing initiative, upcoming opportunity, conflict in public use, or a public concern. Issues arise from many sources, including the public, our staff, other Service programs, state agencies, other federal agencies, our partners, neighbors, user groups, or Congress.

The key issues derived from the CVST and public consultation, together with the Study Act requirements and the potential refuge goals, form the basis for developing and comparing the management alternatives we analyze in Chapter 3. The wide-ranging opinions on how to address key issues while adhering to the Study Act and potential refuge goals and objectives, contributed to the alternatives offered. Key issues are those the Service has the jurisdiction and authority to resolve. We describe them in more detail below.

1.9.1 Habitat and Species Management

The Refuge System's primary purpose is to conserve, protect, enhance, and restore wildlife and their habitats. This overarching purpose serves as the foundation for all that is done. This Study Report accounts for how a new refuge in Cherry Valley may contribute to that broad purpose, how a refuge would fulfill the intent of the Study Act to protect important valley wildlife and habitats such as bog turtles and migratory birds, and how a refuge generally would help to protect federal trust resources and contribute to the mission of the Refuge System. Chapter 3 – Alternatives – presents how a new

refuge would fulfill these needs, and Appendix B – draft Conceptual Management Plan – provides greater detail on species and habitat management priorities.

We heard from CVST members and many from the public about the urgency to protect essential habitat areas in the valley for the declining bog turtles, migratory birds, rare plant communities, wetlands, and game species. Several participants simply encouraged open space protection and others noted a need to incorporate a new refuge into a healthy landscape that also encouraged organic farming and related new industries. Others recognized the opportunity the refuge could provide for the native brook trout, American eel, and native mussels, including some potential in the future for the dwarf wedgemussel. The following species and habitat issues arose from the CVST and public meetings:

- What species and habitats are most in need of protection by a refuge?
- How would we protect valuable habitat in the valley during expanding changes in land use?
- Could we protect valuable habitats outside the Study Area?
- How could we enhance plant and animal inventories in the valley?
- How would we best protect, restore, and or enhance valley wetlands?
- How might a new refuge manage invasive, exotic, and overabundant species?

1.9.2 Land Protection

Ongoing changes in land use and associated impacts that threaten the integrity of natural resources in Cherry Valley area are increasingly a concern (see Chapter 2 Affected Environment, pages 2-40 and 2-41). Lands that once provided contiguous habitat are being sub-divided, primarily into residential lots. Although local communities and businesses may desire some of that development, the level of concern rises when those activities destroy or degrade important wildlife habitat, degrade water quality, restrict what was once public access to recreation areas, or detract from the valley's rural landscape. In addition, those changes elevate the potential threat from invasive and non-native plants, which are becoming increasingly widespread and difficult to control.

We heard directly from people who would support efforts to acquire and manage important habitat areas for inclusion in the Refuge System. Others were supportive as long as the Service would allow public use and access on those lands. Some individuals indicated that, if a refuge was approved, they would prefer lands be acquired primarily through the purchase of conservation easements, rather than purchase in full fee title. Others expressed concerns that the Service might take land out of the local tax base or might take agricultural land out of production, or possibly eliminate traditional uses such as hunting. We evaluate and address these concerns in Chapter 3 – Alternatives and Appendix B – draft Conceptual Management Plan.

A number of organizations, including state and federal agencies, are involved in protecting and conserving some lands in the valley. The Study Act, however, recognizes that there are additional lands that may best contribute to wildlife conservation. We have worked with the CVST to identify sensitive wildlife habitat in need of protection or restoration, notably habitat benefitting trust resources. Service land protection, through either fee purchase or purchase of conservation easements from willing sellers, is one of the most important tools we use to conserve important areas of wildlife habitat (further details on land protection are available in Appendices E and F). The following issues and concerns arose about land protection and acquisition:

- Could lands outside the study area be considered for the refuge?
- Would a new refuge conflict with traditional agricultural land production or already planned developments in the valley, and could the Service lease land back to farmers?
- Would a new refuge affect organic farming, which is important to the valley and should be encouraged.
- How would the establishment of a refuge affect businesses such as expanding commercial developments, mining, and other resource extraction?
- How would the local tax base be affected? How would property values be affected?
- How should we prioritize lands for protection, and how would we manage the conservation easements purchased for the refuge?
- Would the Service use condemnation to acquire land for the refuge?
- Would land use change for areas owned by the National Park Service if a refuge was established?
- Is Hamilton Township changing zoning regulations as a result of the refuge study?

1.9.3 Public Use and Community Relations

A principal element of any refuge is to conserve wildlife for the continuing benefit of the American people. Our goal is for the refuge to become an integral part of the socioeconomic health and quality of life of the communities affected by it. Our challenge is to understand the visions of the respective communities and our role in them while adhering to our Refuge System mission. We also would need to determine how best to nurture and cultivate mutually beneficial relationships using the resources we have available.

During public meetings we learned that many people are vaguely aware of the Refuge System, but are not necessarily knowledgeable about the opportunities and services that might be offered by a refuge. Some participants desire greater educational opportunities, others wanted hunting and fishing opportunities. Generally, more outdoor recreational activities were favored. Conversely, some also commented that the refuge should not permit hunting while others expressed that a new refuge should not limit current hunting activities, and that a new refuge should not be open to hunters from outside the valley. Yet others expressed feelings that these types of activities are

the best way to increase community interest and involvement in the refuge. In response to those comments and the issues below, our alternatives evaluate a range of quality, wildlife-dependent recreational opportunities, and propose measures to promote Service visibility, community understanding, and support for refuge programs.

Some non-priority public uses may be allowed in order to facilitate wildlife-dependent public uses. For example, cross-country skiing and snowshoeing are not themselves priority public uses, but may be allowed to facilitate wildlife observation and photography, for example. There are other non-priority public uses such as jogging, bicycling, or horseback riding that some visitors would argue also facilitate priority public uses. These activities, however, often take place at a sensitive time of year when wildlife use the refuge for feeding, resting, migrating, or breeding, and the activities often cause unacceptable disturbance to wildlife. Usually there are opportunities for the public to partake in these kinds of activities on other public lands not far from a refuge. The following are key issues or concerns that arose about public uses and community relations.

- What specific opportunities could we provide for the community to enjoy a new refuge?
- How could a refuge increase education and stewardship about the valley?
- How and where could a refuge afford public access to valley lands?
- How would we find ways to complement activities of the Appalachian Trail?
- How could we maintain a vibrant farming community?
- Does the Service consider cultural resources when planning a refuge, if so how?
- It is important to educate new and existing landowners about preserving their property for generations to come.
- Are there ways for the refuge to be a multi-use area that people can use to hunt, fish, hike, bicycle, and ride horses.
- The refuge should not limit current hunting activities.
- How would the Service prevent trespass on private lands?
- If established, the refuge area has potential to be used as an outdoor classroom and natural laboratory where students can learn about the environment and scientists can conduct research.

1.9.4 Refuge Creation and Future Administration

Creating a new refuge stimulates a need for a dependable source of funding to assure success of the new refuge. The potential refuge, if approved, would need to be managed and administered locally in some meaningful fashion and more broadly within the Northeast Region of the Service. Administration typically includes staffing, funding, travel, habitat management, planning, trails management, land protection, research, special use permits, facilities management, law enforcement, information management, visitor services, and community relations. Potential administration of the Cherry Valley

NWR is available in Appendix B – draft Conceptual Management Plan. The following are key issues or concerns that arose about refuge creation and administration.

- How would costs for staffing and maintenance of the refuge be assured and managed?
- What administrative facilities or roads would be needed to manage the refuge?
- Could partnering with local government or conservation organizations be used to help manage a refuge?