



**U.S. Fish and Wildlife Service**

# **Cherry Valley National Wildlife Refuge**

## *Hunting Plan*

### *August 2021*



*Credit: USFWS*

*Appendix A – Compatibility Determination*  
*Appendix B – Categorical Exclusion*  
*Appendix C – Intra-Service Section 7 Evaluation*

**Cherry Valley National Wildlife Refuge  
Hunting Plan**

**August 2021**

**U.S. Fish and Wildlife Service**

**Cherry Valley National Wildlife Refuge  
2138 Croasdale Road  
Stroudsburg, PA**

Submitted By:  
Project Leader

\_\_\_\_\_  
Signature

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Date

Concurrence:  
Refuge Supervisor

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Signature

\_\_\_\_\_  
Date

Approved:  
Regional Chief  
National Wildlife Refuge System

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

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# CHERRY VALLEY NATIONAL WILDLIFE REFUGE HUNTING PLAN

## **I. Introduction**

National wildlife refuges are guided by the mission and goals of the National Wildlife Refuge System (Refuge System), the purposes of an individual refuge, U.S. Fish and Wildlife Service (Service) policy, and laws and international treaties. Relevant guidance includes the National Wildlife Refuge System Administration Act (NWRSA) of 1966, as amended by the Refuge System Improvement Act of 1997, Refuge Recreation Act of 1962, and selected portions of the Code of Federal Regulations and Fish and Wildlife Service Manual.

Cherry Valley National Wildlife Refuge (NWR, refuge) was officially established in 2010 and is located in Monroe and Northampton Counties in Pennsylvania. The refuge has an active acquisition program within the 20,466-acre acquisition boundary, and currently stands at 5,471 total acres. Cherry Valley NWR is managed as part of the Lenape NWR Complex. Other refuges in the Lenape Complex include: Wallkill River NWR, Great Swamp NWR, Shawangunk Grasslands NWR, and Great Thicket NWR. The Refuge Complex headquarters is located in Sussex, New Jersey.

The refuge was established pursuant to the Migratory Bird Conservation Act of 1929 (16 U.S.C. §715), the Endangered Species Act of 1973 (16 U.S.C. §1534), Emergency Wetlands Resources Act of 1986 (16 U.S.C. §390J(b)) and Fish and Wildlife Act of 1956 (16 U.S.C. 742f (a)(4), (b)(1)).

The primary purposes of Cherry Valley NWR are:

- “for use as an inviolate sanctuary, or for any other management purpose, for migratory birds....” 16 U.S.C. § 7J5d (Migratory Bird Conservation Act).
- “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).
- “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. § 390J(b), JOO Stat. 3583 (Emergency Wetlands Resources Act of 1986).
- “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)(J) (Fish and Wildlife Act of 1956).

The mission of the Refuge System, as outlined by the NWRSA, as amended by the Refuge System Improvement Act (16 U.S.C. 668dd et seq.), is to:

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

The NWRSSA mandates the Secretary of the Interior in administering the Refuge System to (16 U.S.C. 668dd(a)(4):

- Provide for the conservation of fish, wildlife, and plants, and their habitats within the Refuge System;
- Ensure that the biological integrity, diversity, and environmental health of the Refuge System are maintained for the benefit of present and future generations of Americans;
- Ensure that the mission of the Refuge System described at 16 U.S.C. 668dd(a)(2) and the purposes of each refuge are carried out;
- Ensure effective coordination, interaction, and cooperation with owners of land adjoining refuges and the fish and wildlife agency of the States in which the units of the Refuge System are located;
- Assist in the maintenance of adequate water quantity and water quality to fulfill the mission of the Refuge System and the purposes of each refuge;
- Recognize compatible wildlife-dependent recreational uses as the priority general public uses of the Refuge System through which the American public can develop an appreciation for fish and wildlife;
- Ensure that opportunities are provided within the Refuge System for compatible wildlife-dependent recreational uses; and
- Monitor the status and trends of fish, wildlife, and plants in each refuge.

Therefore, it is a priority of the Service to provide for wildlife-dependent recreation opportunities, including hunting and fishing, when those opportunities are compatible with the purposes for which the refuge was established and the mission of the Refuge System.

Currently, 280 acres are open to hunting from the original hunting opening package completed in 2012. Lands that are posted, are of sufficient size and/or distance from safety zones such as roads and occupied buildings, do not risk damage to sensitive habitats or species and that have safe public access points will be opened to hunting. Hunting restrictions (deer-only, archery-only, limited number of permits, etc.) may be put in place on a parcel-by-parcel basis as needed to protect refuge habitats and wildlife populations.

Once refuge lands are open to hunting, refuge staff will monitor hunt-related impacts to these lands and reserves the right to close properties or impose restrictions if needed.

The Service proposes to expand hunting opportunities at Cherry Valley NWR to better align with Pennsylvania State programs. We propose the following changes to the existing hunting plan:

1. Species changes: Porcupine and hare will be added to align with the State.
2. Huntable Acreage: Open an additional 5,196 acres of newly acquired land to hunting.
3. Method of take changes: Propose aligning with use of dogs consistent with Pennsylvania regulations.
4. Hunter orange: already in alignment.
5. Permit Fees: Propose a reduction in number and cost of refuge permits required for hunters to obtain.

## **II. Statement of Objectives**

The Cherry Valley NWR Feasibility Study and Environmental Assessment (FSEA) identified the need to provide opportunities for priority wildlife-dependent recreation, including hunting, within the 20,466-acre acquisition boundary (Figure 1). The FSEA also established (amongst others) the following goals:

- To protect and enhance habitats for Federal trust species of management concern, with special emphasis on migratory birds and species listed under the Endangered Species Act (ESA), along with protection of wetlands and the Kittatinny Ridge.
- To create opportunities for hunting, fishing, wildlife observation and photography, environmental education and interpretation, while promoting activities that complement the purposes of the refuge and other protected lands in the region.

Allowing the harvest of white-tailed deer and other game species through hunting can assist the refuge in achieving these goals. Specifically, the objectives of the hunting program at Cherry Valley NWR are to:

- Provide quality hunting opportunities for the public, especially youth and persons who qualify for state disabled hunting permits on refuge lands consistent with State regulations;
- Utilize hunting as a refuge management tool to enhance biological diversity and habitat quality through management of game populations, especially white-tailed deer, consistent with State regulations; and,
- Foster good neighbor relations by coordinating with adjacent landowners and other partners to protect and enhance the health and integrity of Cherry Creek and other watersheds within the refuge acquisition boundary.

The FSEA's Conceptual Management Plan stated we would open newly acquired lands for hunting if they can biologically, ecologically, and safely accommodate hunting within State guidelines. Newly acquired lands that traditionally have been hunted would remain open until we have completed our planning processes. Before closing any newly acquired lands, we would complete a separate public review process, but we would generally allow hunting. Any hunting on the refuge would be based on the State of Pennsylvania's hunting seasons and in accordance with the refuge's Hunting Plan and annual review.

### **III. Description of Hunting Program**

#### **A. Areas to be Opened to Hunting**

The Cherry Valley NWR hunting program is designed to provide compatible public hunting opportunities that support refuge objectives, while minimizing conflicts with non-hunting user groups. The hunt area is comprised of riparian corridors, old fields, scrub-shrub meadows, forests, and wetlands.

Big game, upland game, and migratory bird hunting would be permitted on the refuge. Small, isolated parcels that are not conducive to hunting due to size, proximity to developed lands, or lack equitable access may remain closed at the refuge manager's discretion. A permanent mentored hunting area will exist at the former Cherry Valley Golf Course Tract (or Headquarters Tract) located at 2138 Croasdale Road in Stroudsburg. This area will be reserved for refuge-managed mentored hunting programs for youth, persons, and novice hunters with a focus on women and adults. Godfrey's Ridge, Headwaters, and Aquashicola Hunt Areas would be opened to all hunting. Hunt area boundaries are subject to change as land is acquired (Figure 2).

#### Hunt Area Acreages (as of March 2021)

Aquashicola Hunt Area = 329.49 acres  
Godfrey's Ridge Hunt Area = 175.42 acres  
Headwaters Hunt Area = 4,479.60 acres  
Mentored Hunt Area = 241.50 acres  
Schmitt = 62.07 acres  
Closed = 183.55 acres

#### **B. Species to be Taken, Hunting Periods, Hunting Access**

Hunting seasons will be set annually by the Pennsylvania Game Commission (PGC) as stipulated within their Hunting and Trapping Digest/Guide, and will be reiterated in the refuge's hunting brochure. The refuge hunt program may contain additional refuge-specific regulations.

*Big Game Hunting* – We allow the hunting of white-tailed deer, black bear, and wild turkey on designated areas of the refuge in accordance with State seasons and regulations.

*Upland/Small Game Hunting* – We allow the hunting of coyote, bobcat, fox, crow, ruffed

grouse, opossum, raccoon, weasel, skunk, porcupines, pheasant, bobwhite quail, chukar, rabbit/hare, squirrel, and woodchuck on designated areas of the refuge in accordance with State seasons and regulations except that night hunting is prohibited and falconry is not a permitted method of take.

*Migratory Bird Hunting* – We allow hunting of all migratory bird species on designated areas of the refuge in accordance with State seasons and regulations.

Nationwide, there is concern about the bioavailability of spent lead ammunition (bullets) and sinkers on the environment, endangered and threatened species, birds (especially raptors), mammals, and other fish and wildlife susceptible to biomagnification. Lead shot and bullet fragments found in animal carcasses and gut piles are the most likely source of lead exposure (Kelly et al. 2011). Many hunters do not realize that the carcass or gut pile they leave in the field usually contains lead bullet fragments. Research continues on the effects of lead ammunition and the fragments it can deposit in killed game. We will continue to encourage use of non-toxic ammunition and fishing tackle, and will educate hunters and anglers about lead and impacts.

The Service will make a reasonable effort to allow hunters access to all huntable portions of the refuge. The intention is to provide safe, quality hunting opportunities that consider the welfare of the refuge wildlife resources. Hunter parking lots and access points will be delineated on the refuge hunt maps.

### **C. Hunter Permit Requirements**

The refuge is broken into three hunting tracts: (1) Godfrey's Ridge tract, (2) Headwaters tract, and (3) Aquashicola tract. Hunters must obtain an annual Cherry Valley NWR hunting permit via lottery application, in addition to all applicable State licenses/permits prior to hunting or scouting. The hunting permits are tract specific and are limited one permit per hunter. The lottery application will be available online at: <https://cherry.recaccess.com> each year from July 1 to July 20.

The refuge hunting permit would cost \$35 (\$30 refuge fee, \$5 lottery entry fee), would be valid for the entire Pennsylvania hunting license year, and would include all huntable game for the awarded hunt tract. This is a decrease in cost compared to the current fee program, where permits for each hunt are sold individually for \$30 or purchased as a combination permit for \$100. Youth hunting permits would remain free of charge.

Permit fees help to defray costs of administering the hunt program, including permit oversight, website maintenance, and hunt brochure/map updates. Fees also go towards maintaining and improving public use areas on the refuge, including hunter parking lots and associated signage. Additionally, the number of permits issued by the refuge help to monitor hunter use and access. Permits also ensure hunters acknowledge the refuge rules and regulations prior to engaging in the season's activities.



#### D. Consultation and Coordination with the State

The refuge consulted with the State extensively during the 2013 Cherry Valley FSEA process and received input from State biologists and administrators. The State was supportive of the current action. More recently, the Service’s Region 1 (Legacy Region 5) Hunting/Fishing Chief reached out to consult with the State in September of 2019 on proposed alignments. We will continue to reach out to State partners on hunting and fishing coordination.

#### E. Law Enforcement

The enforcement of violations normally associated with the management of a national wildlife refuge is the responsibility of commissioned Federal Wildlife Officers (FWOs). Other officers, Special Agents, State Conservation Officers, and local police officers often assist Cherry Valley NWR in the enforcement of its laws and regulations. The following methods will be used to control and enforce hunting regulations:

- Refuge area boundaries will be clearly posted;
- The refuge will provide a brochure that shows hunt areas;
- Law enforcement officers will randomly check hunters for compliance with Federal and State laws as well as refuge-specific regulations pertinent to hunting; and
- Information will be made available at refuge headquarters, website, and kiosks.

Procedures for obtaining law enforcement assistance are based on legal jurisdiction, pending where the incident occurred.

#### F. Funding and Staffing Requirements

Costs associated with administering the hunt program total approximately \$20,000 annually. This is based on salaries for personnel, creation and distribution of hunting information, permit system administration, signage, and other miscellaneous expenses (Table 1).

**Table 1. Funding and Staffing Requirements**

<b>Identifier</b>	<b>Cost</b>
Staff (Admin Assistant, Refuge Specialist, Refuge Manager) Hunt Program	\$12,000
Maintain roads, parking lots, trails*	\$1,000
News releases, fact sheets, reports for Hunt Program	\$1,000
Maintain signage – hunt lot signs, boundary signs	\$1,000
Law enforcement	\$5,000
<b>Total Annual Cost</b>	<b>\$20,000</b>

*\*Refuge trails and roads are maintained for a variety of activities. Costs shown are a percentage of total costs for trail/road maintenance on the refuge and are reflective of the percentage of trail/road use for hunting. Volunteers account for some maintenance hours and help to reduce overall cost of the program.*

## **IV. Conduct of the Hunting Program**

### **A. Hunter Permit Application, Selection, and/or Registration Procedures**

The refuge is broken into three hunting tracts: (1) Godfrey's Ridge tract, (2) Headwaters tract, and the (3) Aquashicola tract. Hunters must obtain a tract specific annual Cherry Valley NWR hunting permit for each tract they wish to hunt. A lottery application process will be used to manage hunter numbers for each tract.

The lottery application will be available online at: <https://cherry.recaccess.com> each year from July 1 to July 20. Hunters would be charged an application fee of \$5 to enter the refuge hunt lottery and may select their hunting tract preference. If awarded, hunters may purchase their refuge tract permit for \$30.

Permits are tract-specific and are not transferrable. Limited to one permit per person. Permits are valid for the Pennsylvania license year and include all huntable game.

With over 5,000 acres available for hunting, the refuge aims to manage for about 15 to 20 acres of land per hunter per day afield. The lottery process allows refuge management to ensure safe, quality hunts and compatibility with refuge purposes at each of the hunting tracts. Number of permits per hunt area will change with the acquisition of new land. If use is sustainably compatible, i.e. no over-crowding of access points/hunters afield or conflicts with other user groups or neighboring landowners, we may allow open permit sales at the refuge manager's discretion.

Refuge-specific hunting regulations and current hunt maps are available to download and/or print from the permit website above. Hunters are required to acknowledge that they have reviewed the refuge regulations prior to purchasing a permit.

### **B. Refuge-Specific Hunting Regulations**

To ensure compatibility with refuge purposes and the mission of the Refuge System, hunting must be conducted in accordance with State and Federal regulations, as supplemented by refuge-specific regulations, and information sheets/brochures. Stipulations are detailed in the Hunting Compatibility Determination (Appendix A). The following hunting procedures apply at Cherry Valley NWR (50 CFR 32.57):

- Hunters must obtain a refuge hunt permit (FWS Form 3-2439, Hunt Application - National Wildlife Refuge System). We require hunters to possess a signed refuge hunt permit at all times while scouting and hunting on the refuge.
- Hunters may enter the refuge 2 hours before State posted legal shooting time in the morning and must leave no later than 2 hours after legal shooting time in the evening. Night hunting is prohibited.
- For migratory bird and upland game hunting, we allow the use of dogs consistent

with State regulations.

- We prohibit organized deer drives. We define a “deer drive” as an organized or planned effort to pursue, drive, chase, or otherwise frighten deer into moving in the direction of any person(s) who is part of the organized or planned hunt and known to be waiting for the deer.

### **C. Relevant State Regulations**

The refuge conducts its hunting program within the framework of State and Federal regulations. Hunting at the refuge is at least as restrictive as the State of Pennsylvania and in some cases more restrictive. Additionally, the refuge coordinates with the State as needed to maintain regulations and programs that are consistent with the State’s management programs. Hunters are responsible for knowing and complying with all applicable Pennsylvania regulations, including safety zones.

### **D. Other Refuge Rules and Regulations for Hunting**

- Scouting is permitted, with a refuge hunt permit, 2 weeks prior to any season opening. Firearms or archery equipment are prohibited while scouting. Hunter orange must be worn if scouting during any firearms season.
- Only portable tree stands may be used. Screw-in steps are not permitted. All stands must be removed by March 31.
- The use of falcons is prohibited.
- Target practice is prohibited.
- Parking permits (included with hunting permit) must be clearly visible on vehicle dashboard. Overnight parking is prohibited. Blocking gates or roadways with vehicles is prohibited.

## **V. Public Engagement**

### **A. Outreach for Announcing and Publicizing the Hunting Program**

The refuge maintains a mailing list for news release purposes of local newspapers, radio stations, and websites. Special announcements and articles may be released in conjunction with hunting seasons. In addition, information about the hunt will be available at Cherry Valley NWR headquarters or on the Cherry Valley NWR website/social media accounts.

### **B. Anticipated Public Reaction to the Hunting Program**

Based on the favorable comments received during the public comment period for the 2013 Hunting Plan and Environmental Assessment, little negative public reaction was expected for

the expansion of the hunt program proposed. The Hunting Plan and Compatibility Determination (CD) were coordinated with all interested and/or affected parties, including States' staff. The public was notified of the availability of the Hunting Plan and accompanying CD with a 90-day review and comment period, from April 7 to July 6, 2021. We informed the public through local venues, the refuge website, and social media. A total of three comment letters were received. A brief summary of the comments, and our responses, can be found in Appendix B (Categorical Exclusion). No substantive changes were made between draft and final versions.

### **C. How Hunters Will Be Informed of Relevant Rules and Regulations**

Refuge-specific hunting regulations and current hunt maps are available to download and/or print from the permit website at any time. Hunters are required to acknowledge that they have reviewed the refuge regulations prior to purchasing a permit. Requiring hunters to obtain a permit each year helps to ensure refuge rules and regulations are reviewed and abided by.

General information regarding hunting and other wildlife-dependent public uses can be obtained at the Lenape NWRC headquarters at 1547 Route 565, Sussex, New Jersey 07461 or by calling (973) 702-7266. Dates, forms, hunting unit directions, maps, applications, and permit requirements about the hunt will also be available on refuge kiosks and on the refuge website at: [www.fws.gov/refuge/Cherry\\_Valley](http://www.fws.gov/refuge/Cherry_Valley).

## **VI. Compatibility Determination**

Hunting and all associated program activities proposed in this plan are compatible with the purposes of the refuge. See attached Hunting Compatibility Determination (Appendix A).

## **VII. References**

- U.S. Fish and Wildlife Service. 2008. Cherry Valley National Wildlife Refuge Draft Feasibility Study and Final Environmental Assessment. Prepared by Carl Melberg, Hadley, MA. 418 pp.
- U.S. Fish and Wildlife Service. 2012. Cherry Valley National Wildlife Refuge Hunting Opening Package. Prepared by Michael Horne, Stroudsburg, PA. 90 pp.

**Figure 1.** Cherry Valley FSEA (20,466-acre acquisition boundary and land cover classifications)

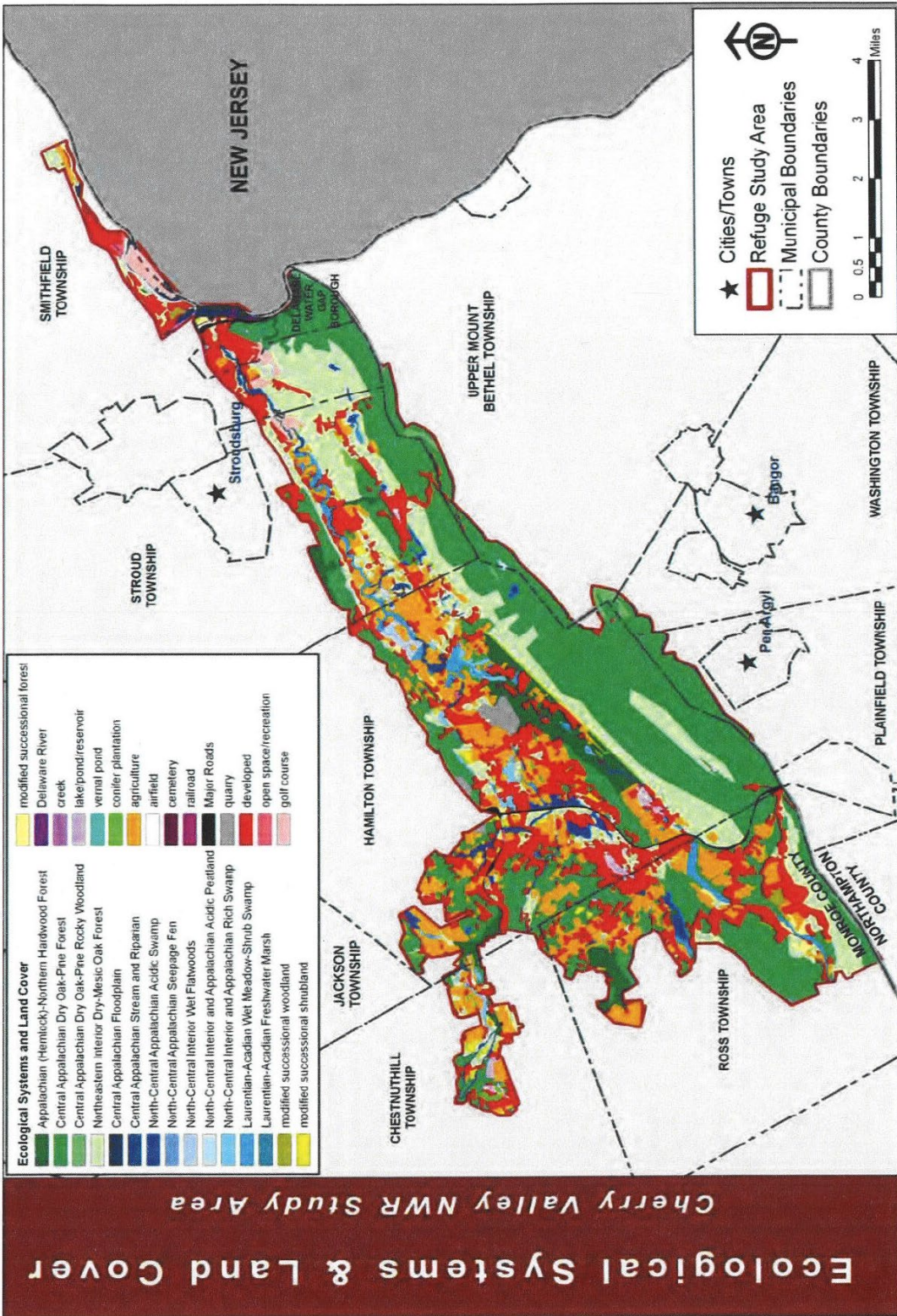
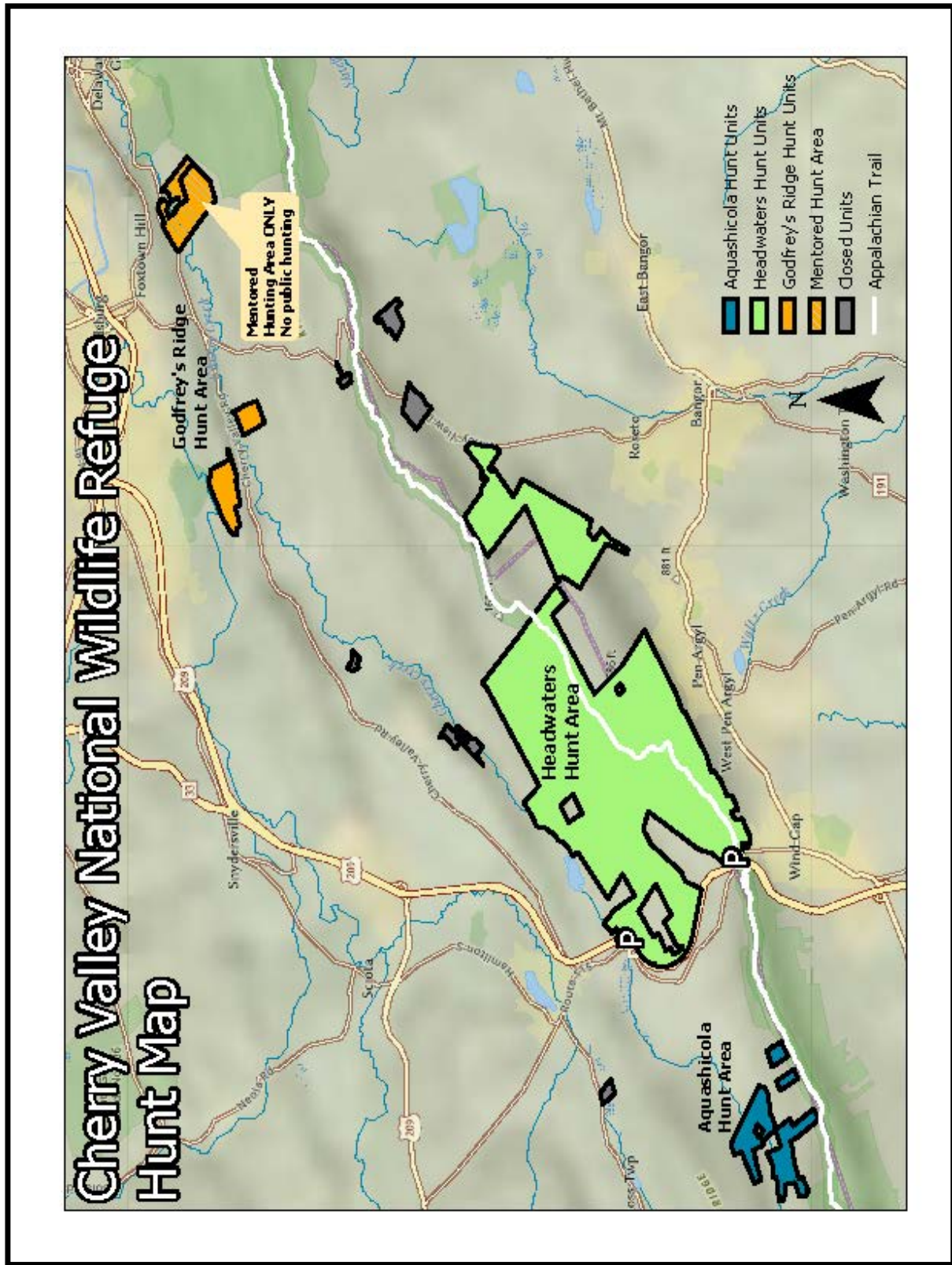




Figure 2. Cherry Valley NWR Hunting Map (5,471 acres)



## **COMPATIBILITY DETERMINATION**

**USE:** Hunting

**REFUGE NAME:** Cherry Valley National Wildlife Refuge

**DATE ESTABLISHED:** October 18, 2010

**ESTABLISHING and ACQUISITION AUTHORITIES:**

1. Migratory Bird Conservation Act of 1929 (16 U.S.C. § 715)
2. Endangered Species Act of 1973 (16 U.S.C. § 1534)
3. Emergency Wetlands Resources Act of 1986 (16 U.S.C. §390J(b), JOO Stat. 3583)
4. Fish and Wildlife Act of 1956 (16 U.S.C 742f (a)(4), (b)(1))

**REFUGE PURPOSE(S):**

“...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds...” 16 U.S.C. § 7J5d (Migratory Bird Conservation Act).

“...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).

“...for 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. §390J(b), JOO Stat. 3583 (Emergency Wetlands Resources Act of 1986).

“...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)(J) (Fish and Wildlife Act of 1956).

**NATIONAL WILDLIFE REFUGE SYSTEM MISSION:**

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

**DESCRIPTION OF USE:**

**(a) What is the use? Is the use a priority public use?**

The use is public hunting of migratory birds (waterfowl, dove, woodcock, snipe, rail, gallinule), upland game (squirrel, grouse, rabbit, hare, porcupine, pheasant, quail, woodchuck, crow, fox, raccoon, opossum, skunk, weasel, coyote, bobcat) and big game (deer, bear, wild turkey) in

accordance with all relevant State, local, and refuge-specific regulations (50 CFR 32.57).

Hunting was identified as one of six priority public uses of the Refuge System by the Refuge System Administration Act of 1966, as amended by the Refuge System Improvement Act of 1997 (Public Law 105-57), when found to be compatible. Hunting has been permitted on Cherry Valley NWR since 2013 in accordance with the refuges' 2012 Hunt Plan. The demand for hunting permits and access has steadily increased since that time.

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

Hunting for white-tailed deer, black bear, turkey, upland game, and migratory birds would be permitted on the refuge. Small, isolated parcels that are not conducive to hunting due to size, proximity to developed lands, or lack equitable access may remain closed at the refuge manager's discretion. A permanent mentored hunting area would exist at the former Cherry Valley Golf Course tract (or Headquarters tract) located at 2138 Croasdale Road in Stroudsburg. This area would be reserved for refuge-managed mentored hunting programs for youth, persons who qualify for state disabled hunting permits, and novice hunters with a focus on women and adults. Godfrey's Ridge, Headwaters, and Aquashicola Hunt Areas would be opened to all hunting. Hunt area boundaries are subject to change as land is acquired.

Hunt Area Acreages (as of March 2021)

Aquashicola Hunt Area = 329.49 acres

Godfrey's Ridge Hunt Area = 175.42 acres

Headwaters Hunt Area = 4,479.60 acres

Mentored Hunt Area = 241.50 acres

Schmitt = 62.07 acres

Closed = 183.55 acres

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

Hunting would occur during the seasons specified by the Pennsylvania Game Commission (PGC). Hunters may enter the refuge 2 hours before legal shooting time (sunrise) and must leave no later than 2 hours after legal shooting time (sunset) as defined in State regulations.

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

Hunting seasons would be set annually by the PGC as stipulated within their Hunting and Trapping Digest/Guide, and be reiterated in the refuge's annual hunt brochure which may contain further restrictions. All hunting will comply with State and Federal regulations.

The refuge is broken into three hunting tracts: (1) Godfrey's Ridge tract, (2) Headwaters tract, and the (3) Aquashicola tract. Hunters must obtain a tract specific annual Cherry Valley NWR hunting permit for each tract they wish to hunt. A lottery application process will be used to manage hunter numbers for each tract.

The lottery application will be available online at: <https://cherry.recaccess.com> each year from July 1 to July 20. Hunters would be charged an application fee of \$5 to enter the refuge hunt lottery and may select their hunting tract preference. If awarded, hunters may purchase their refuge tract permit for \$30.



Permits are tract-specific and are not transferrable. Limited to one permit per person. Permits are valid for the Pennsylvania license year and include all huntable game.

With over 5,000 acres available for hunting, the refuge aims to manage for about 15 to 20 acres of land per hunter per day afield. The lottery process allows refuge management to ensure safe, quality hunts and compatibility with refuge purposes at each of the hunting tracts. Number of permits per hunt area will change with the acquisition of new land. If use is sustainably compatible, i.e. no over-crowding of access points/hunters afield or conflicts with other user groups or neighboring landowners, we may allow open permit sales at the refuge manager's discretion.

Refuge-specific hunting regulations and current hunt maps are available to download and/or print from the permit website above. Hunters are required to acknowledge that they have reviewed the refuge regulations prior to purchasing a permit.

The Service will make an effort to allow hunters access to all huntable portions of the refuge. The intention is to provide safe, quality hunting opportunities that consider the welfare of the refuge wildlife resources. Hunter parking lots and access points will be delineated on the annual refuge hunt maps.

The refuge hunt program will be reviewed annually to ensure management goals are achieved and that the program is providing a safe, high quality hunting experience for participants.

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

The Cherry Valley NWR Feasibility Study and Environmental Assessment (FSEA) identified the need to provide opportunities for priority wildlife-dependent recreation, including hunting. The FSEA also established the following goals:

- Protect and enhance habitats for Federal trust species of management concern, with special emphasis on migratory birds and species listed under the Endangered Species Act (ESA), along with protection of wetlands and the Kittatinny Ridge.
- 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.

Allowing the harvest of white-tailed deer and other game species through a regulated hunting program can assist the refuge in achieving these goals.

Specifically, the objectives of the hunting program at Cherry Valley NWR are to:

- Provide quality hunting opportunities for the public, especially youth and persons who qualify for state disabled hunting permits on refuge lands consistent with State regulations;

- Utilize hunting as a refuge management tool to enhance biological diversity and habitat quality through management of game populations, especially white-tailed deer, consistent with State regulations; and,
- Foster good neighbor relations by coordinating with adjacent landowners and other partners to protect and enhance the health and integrity of Cherry Creek and other watersheds within the refuge acquisition boundary.

The FSEA's Conceptual Management Plan stated we would open newly acquired lands for hunting if they can biologically, ecologically, and safely accommodate hunting within State guidelines. Small, isolated parcels that are not conducive to hunting due to size, proximity to developed lands, or lack equitable access may remain closed at the refuge manager's discretion. Newly acquired lands that traditionally have been hunted would remain open until we have completed our planning process. Before closing any newly acquired lands, we would complete a separate public review process, but we would generally allow hunting. Any hunting on the refuge would be based on the State of Pennsylvania's hunting seasons and consistent with the refuge's Hunting Plan.

The use would further align the refuge with the Department of the Interior's Secretarial Order 3356, which directs the Service to enhance and expand public access to lands and waters on national wildlife refuges for hunting, fishing, recreational shooting, and other forms of outdoor recreation. Increasing hunting opportunities would promote one of the priority public uses of the Refuge System, and promote the stewardship of our natural resources and increase the public's appreciation and support for the refuge.

**AVAILABILITY OF RESOURCES:**

Costs associated with administering the hunt program total approximately \$20,000 annually. This amount is based on salaries for personnel, creation and distribution of hunting information, permit system administration, signage, and other miscellaneous expenses. Cherry Valley NWR is managed as part of the Lenape National Wildlife Refuge Complex. Other refuges in the Lenape Complex include: Wallkill River NWR, Great Swamp NWR, Shawangunk Grasslands NWR, and Great Thicket NWR. The Refuge Complex headquarters is located in Sussex, New Jersey.

Table A-1. Funding and Staffing Requirements

<b>Identifier</b>	<b>Cost</b>
Staff (Admin Assistant, Refuge Specialist, Refuge Manager) Hunt Program	\$12,000
Maintain roads, parking lots, trails*	\$1,000
News releases, fact sheets, reports for Hunt Program	\$1,000
Maintain signage – hunt lot signs, boundary signs	\$1,000
Law enforcement	\$5,000
<b>Total Annual Cost</b>	<b>\$20,000</b>

*\*Refuge trails and roads are maintained for a variety of activities. Costs shown are a percentage of total costs for trail/road maintenance on the refuge and are reflective of the percentage of trail/road use for hunting. Volunteers account for some maintenance hours and help to reduce overall cost of the program.*

## **ANTICIPATED IMPACTS OF THE USE:**

We expect only minimal impacts from continuing to allow hunting on the refuge. A more detailed impact analysis is described in the 2013 Cherry Valley NWR Hunt Plan and Environmental Assessment.

### *Big and Upland Game Hunting*

Big and upland game hunting is managed on a Statewide basis in accordance with approved State management plans. Impacts from big and upland game hunting may include temporary disturbance of wildlife or visitors, changes in wildlife behavior, and changes in wildlife populations. White-tailed deer hunting may have a small, positive impact on refuge resources, as managing deer populations can prevent overbrowsing, disease, and habitat damage. Deer densities are high in the area of the refuge and reducing densities of 12 to 15 deer per-square-mile would benefit natural resources and human health and safety (Tilghman 1989, DeCalesta 1994, DeNicola and Williams 2008, Kirkpatrick and LaBonte 2007). Bear hunting can also help maintain the States' increasing population within the target density for bear populations in Wildlife Management Unit (WMU) 3D, where refuge tracts are located. Upland game, small game, and turkey hunting would be managed by the State with annual bag limits to prevent negative impacts to local, State, or regional populations.

Nationwide, there is concern about the bioavailability of spent lead ammunition (bullets) and sinkers on the environment, endangered and threatened species, birds (especially raptors), mammals, and other fish and wildlife susceptible to biomagnification. Lead shot and bullet fragments found in animal carcasses and gut piles are the most likely source of lead exposure (Kelly et al. 2011). Many hunters do not realize the carcass or gut pile they leave in the field usually contains lead bullet fragments. Research continues on the effects of lead ammunition and the fragments it can deposit in killed game. We will continue to encourage use of non-toxic ammunition and fishing tackle and will educate hunters and anglers about lead and impacts.

### *Migratory Bird Hunting*

Migratory birds are managed on a flyway basis and hunting regulations are established in each State based on flyway data. Federal and State regulations would apply in the refuge waterfowl hunt. Hunting waterfowl on the refuge would reduce the total numbers of birds in the flyway, but harvest would be within allowable limits as determined by the Service annually.

Hunting may result in disturbance to target and non-target birds, altering their regular behavior. This altered behavior may change foraging patterns (Skagen et al. 1991), increase distraction displays, or cause birds to leave or completely avoid the disturbed areas (Burger et al. 1995). Additionally, the higher level of vigilance required reduces the time available for foraging, which places increased stress on adults trying to find food and may affect their survival (Marcum 2005).

### *Habitat and Vegetation*

Hunters traverse large areas of the refuge landscape and typically walk off-trail in areas not used by other visitors. This has the potential to result in impacts to refuge habitats and vegetation. Foot traffic can affect habitats by creating new pathways, trampling vegetation, and causing

minor erosion. Past levels of use by hunters have been sustainable and adverse effects on vegetation and soil have not been observed.

### *Visitor Use and Experience*

Hunting may result in conflicts between user groups on the refuge, especially in shared spaces like trails and parking areas. For the duration of the hunt period, trails and public use areas will be surrounded by safety zones to ensure visitor safety. Signage would go up at refuge kiosks and information would be placed on the refuge website to inform the public of the hunt. If unforeseen conflicts arise, the refuge manager may either further restrict hunting or limit other public uses during the hunting season to ensure public safety and provide a climate for productive coexistence of visitor uses.

### *Other Impacts*

Deer and other game populations located on and around the refuge exist at levels that can be sustainably harvested. Hunting helps to maintain healthy deer herds consistent with refuge management objectives and will provide additional recreational opportunities for refuge visitors. The refuge will better align with the State's huntable species of hare and porcupine and the use of dogs. To eliminate barriers to the hunting program, the refuge also proposes a reduction in the variety of hunt permits as well as a reduction in the cost of refuge permits that are required to participate in the refuge hunt.

In summary, Cherry Valley NWR will align with Pennsylvania State programs on huntable refuge tracts for species, and use of dogs. To reduce barriers to participation in the hunting program, the refuge will eliminate individual hunting permits by game species and offer one annual refuge hunt permit, which will be valid for the Pennsylvania license year and include all refuge game seasons. The fee for the proposed annual refuge hunt permit will decrease from \$100 (current all game combination permit fee) to \$35 (reflects the current fee for an "a la carte" game permit).

Because of the regulatory process for harvest management in place within the Service, hunting seasons have been set largely outside of the breeding seasons of resident and migratory wildlife. Individual refuge hunt programs have the ability to adopt refuge-specific hunting regulations to changing local conditions. The refuge hunt program is designed to be sustainable, given relatively stable conditions, particularly because of close coordination with the Pennsylvania Game Commission. The proportion of the refuge's harvest of these species is negligible when compared to local, regional, and statewide populations and harvest. With these factors, we anticipate no additional impacts from hunting on resident wildlife, migratory birds and non-hunted wildlife on the refuge.

### **PUBLIC REVIEW AND COMMENT:**

This Compatibility Determination (CD) is part of the Cherry Valley NWR Hunting Plan and the accompanying NEPA compliance. The plan was coordinated with all interested and/or affected parties, including State Game Commission staff. The public was notified of the availability of the Hunting Plan and accompanying CD on April 7, 2021. We offered a 90-day review and comment period until July 6, 2021. We informed the public through local venues, the refuge website, and

social media. A total of three comment letters were submitted, and no substantive changes were made between draft and final versions. A brief summary of the comments, and our responses, can be found in Appendix B (Categorical Exclusion).

**DETERMINATION (CHECK ONE BELOW):**

Use is not compatible

Use is compatible, with the following stipulations

**STIPULATIONS NECESSARY TO ENSURE COMPATIBILITY:**

To ensure compatibility with refuge purpose(s) and the Refuge System mission, hunting can occur at Cherry Valley NWR in accordance with State and Federal regulations, and special refuge-specific restrictions to ensure that wildlife and habitat management goals are achieved, and that the program is providing a safe, quality hunting experience for participants. This hunting program will be monitored and potentially modified or eliminated if any the program's components are found not compatible.

The following stipulations are necessary to ensure compatibility:

- Hunters must obtain a refuge hunting permit (FWS Form 3-2439, Hunt Application - National Wildlife Refuge System). We require hunters to possess a signed refuge hunting permit at all times while scouting and hunting on the refuge.
- We prohibit organized deer drives. We define a "deer drive" as an organized or planned effort to pursue, drive, chase, or otherwise frighten deer into moving in the direction of any person(s) who is part of the organized or planned hunt and known to be waiting for the deer.
- Only portable tree stands may be used. Screw-in steps are not permitted. All stands must be removed by March 31.

**JUSTIFICATION:**

Hunting is a priority wildlife-dependent use for the Refuge System through which the public can develop an appreciation for fish and wildlife. Service policy is to provide expanded opportunities for wildlife-dependent uses when compatible and consistent with sound fish and wildlife management and ensure that they receive enhanced attention during planning and management.

Hunting satisfies a recreational need, but hunting on national wildlife refuges can be an important, proactive management action that can prevent overpopulation and the deterioration of habitat. Disturbance to other species would occur, but this disturbance is generally short-term. Suitable habitat exists on refuge lands to support hunting as proposed.

Additionally, hunting provides wildlife-dependent recreation to the public in a region where these opportunities are limited by private land ownership and development. The vast majority of private lands are posted as “No Trespassing” and this limits hunting opportunities for hunters without the agreement of private landowners. The refuge provides a low-cost, safe, and enjoyable option.

This activity would not conflict with any of the other priority public uses or adversely affect biological resources. Therefore, through this planning process, we have determined that hunting on Cherry Valley NWR, in accordance with the stipulations provided above, is a compatible use that will not materially interfere with, or detract from, the fulfillment of the Refuge System mission or the purpose(s) of the refuge.

**SIGNATURE:**

Refuge Manager

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Date)

**CONCURRENCE:**

Regional Chief

\_\_\_\_\_  
(Signature)

\_\_\_\_\_  
(Date)

**MANDATORY 15 YEAR RE-EVALUATION DATE:**

\_\_\_\_\_  
(Date)

## **LITERATURE CITED:**

- Burger, J., M. Gochfield, and L.J. Niles. 1995. Ecotourism and birds in coastal New Jersey: Contrasting responses of birds, tourists and managers. *Environmental Conservation* 22:56-65.
- DeCalesta, D.S. 1994. Effect of white-tailed deer on songbirds within managed forests in Pennsylvania. *J. Wildl. Manage.* 58(4):711-718.
- DeNicola, A., and S.R. Williams. 2008. Sharpshooting suburban white-tailed deer reduces deer - vehicle collisions. *J. Human-Wildlife Conflicts* 2(1):28-33
- Kirkpatrick, H.J. and A.M. LaBonte. 2007. *Managing Urban Deer in Connecticut: A guide for residents and communities*, 2nd ed. Connecticut Department of Environmental Protection, Bureau of Natural Resources - Wildlife Division. 34 pp.
- Skagen, S.K., R.L. Knight, and G.H. Orians. 1991. Human disturbance of an avian scavenging guild. *Ecological Applications* 1:215-225.
- Tilghman, N.G. 1989. Impacts of white-tailed deer on forest regeneration in northwestern Pennsylvania. *J. Wildl. Manage.* 53(3):524--532.
- Environmental Assessment of 2012 Hunt Plan for Cherry Valley NWR, Compatibility Determination, Refuge Specific Regulations, Intra-Service Section 7 Evaluation.
- U.S. Fish and Wildlife Service. 2008. *Cherry Valley National Wildlife Refuge Draft Feasibility Study and Final Environmental Assessment*. Prepared by Carl Melberg, Hadley, MA. 418 pp.

**NOTE TO FILE**

**U.S. FISH AND WILDLIFE SERVICE  
ENVIRONMENTAL ACTION STATEMENT FOR  
CATEGORICAL EXCLUSION**

The Service is expanding hunting opportunities for species already hunted on the refuge on an additional 5,195 acres of the Cherry Valley National Wildlife Refuge in accordance with the refuge's Hunting Step-Down Plan.

The Service has fully satisfied the other requirements for expanding these opportunities on the refuge, including:

determining that the opportunities are compatible with the purposes for which the refuge was established and the mission of the National Wildlife Refuge System (see attached);

ensuring the opportunities are consistent with existing State, local, and refuge-specific regulations (50 CFR 32.57);

\*Use of signs and brochures may supplement the refuge-specific regulations

complying with the National Environmental Policy Act (see attached);

complying with the Endangered Species Act section 7 evaluation (see attached);  
OR  N/A because there are no candidate, threatened or endangered species present;

complying with the National Historic Preservation Act section 106 consultation (see attached);  
OR  N/A because there are no cultural or historic resources present;

The Service is, therefore, waiving the requirement to prepare an opening package in compliance with Service policy (605 FW 2.9A).

Signature \_\_\_\_\_

Date: \_\_\_\_\_

Title \_\_\_\_\_



## CATEGORICAL EXCLUSION CHECKLIST FOR NEPA COMPLIANCE

### Proposed Action

Cherry Valley National Wildlife Refuge (NWR, refuge) proposes to open an additional 5,195 acres of hunting to migratory birds (waterfowl, dove, woodcock, snipe, rail, gallinule), upland game (squirrel, grouse, rabbit, pheasant, quail, woodchuck, crow, fox, raccoon, opossum, skunk, weasel, coyote, bobcat,) and big game (deer, bear, wild turkey) in accordance with existing State, local, and refuge-specific regulations (50 CFR 32.57). In addition, the refuge is making minor modifications to the existing refuge specific hunting regulations and adding hare and porcupine as huntable species to align more closely with Pennsylvania's huntable species and hunting regulations.

### **This proposed action is covered by the following categorical exclusion: 516 DM 8.5 B (7)**

An action by the Service that only results in “minor changes in the amounts or types of public use on Service or State managed lands, in accordance with existing regulations, management plans, and procedures” is categorically excluded from further NEPA analyses, because it has been determined to be a class of action which does not individually or cumulatively have a significant effect on the human environment (516 DM 8.5 B (7)).

The refuge is currently open to hunting all of the above species in other locations on the refuge, except for hare and porcupine, which are proposed to be added in alignment with the state. This action will only result in a minor change, because the affected environment, species hunted, cumulative impacts, and refuge specific regulations proposed were previously contemplated and approved within the final Land Protection Plan, Appendix E of the final Cherry Valley Feasibility Study and Environmental Assessment (FSEA)(approved 2008) and in the Cherry Valley NWR Hunting Opening Package (approved 2013).

The 2021 Hunting Plan and associated Compatibility Determination (CD) was coordinated with all interested and/or affected parties, including State Game Commission staff. The public was notified of the availability of the Hunting Plan and accompanying CD on April 7, 2021. We offered a 90-day review and comment period until July 6, 2021. We informed the public through local venues, the refuge website, and social media. A total of three comment letters were submitted; however, no substantive changes were made between draft and final versions.

Two of the comment letters were opposed to any hunting on a refuge, stating that “... *hunting not be allowed at the refuge. Refuges should be set aside for the safety and protection of the entire ecosystem*” and “*There should never be hunting permitted in a wildlife refuge... doesn't the name say it all? The very definition of a refuge is to provide safety and shelter from pursuit, danger or trouble.*” In response, the word “refuge” includes the idea of providing a haven of safety for wildlife, and as such, hunting might seem an inconsistent use of the Refuge System. However, the Improvement Act stipulates that hunting, if found compatible, is a legitimate and priority general public use of a refuge which should be facilitated. Furthermore, we manage refuges to support healthy wildlife populations that in many cases produce harvestable surpluses that are a renewable resource. As practiced on refuges, hunting and fishing do not pose a threat to wildlife populations. It is important to note that taking certain individuals through hunting does not necessarily reduce a population overall, as hunting can simply replace other types of mortality.

The third comment letter suggested the Godfrey’s Ridge tract “... be "bow only" for whitetail deer.... there is very little property you could safely and legally hunt with a rifle. Plus the change would definitely appease the neighbors which is always a good idea.” In response, hunting at the 175-acre Godfrey’s Ridge tract is legally allowed with a rifle in certain areas of the tract. Hunters must comply with Pennsylvania rules and regulations when rifle hunting in terms of setbacks from homes. The limited number of permits distributed at the Godfrey’s Ridge tract should ensure that the hunters utilizing a rifle are able to do so safely, and refuge aims to manage for about 15 to 20 acres of land per hunter per day afield. Refuge law enforcement conduct periodic checks of hunters on the tract throughout the hunting season to ensure they are in compliance and hunting legally and safely. Furthermore, the refuge manager reserves the right to remove the ability to hunt with a rifle on the Godfrey’s Ridge tract should safety issues arise in the future.

**Extraordinary Circumstances (43 CFR 46.215)**

**Could This Proposed Action** (check ( X ) yes or no for each item below):

Yes    No

- X**    1.    Have significant adverse effects on public health or safety?
- X**    2.    Have adverse effects on such unique geographic characteristics as historic or cultural resources, park, recreation or refuge lands, wilderness areas, wild or scenic rivers, sole or principal drinking water aquifers, prime farmlands, wetlands, floodplains, or ecologically significant or critical areas, including those listed on the Department’s National Register of Natural Landmarks?
- X**    3.    Have highly controversial environmental effects?
- X**    4.    Have highly uncertain and potentially significant environmental effects or involve unique or unknown environmental risks?
- X**    5.    Establish a precedent for future action or represent a decision in principle about future actions with potentially significant environmental effects?
- X**    6.    Have adverse effects on properties listed or eligible for listing on the National Register of Historic Places?
- X**    7.    Have adverse effects on species listed or proposed to be listed on the List of Endangered or Threatened Species, or have adverse effects on designated Critical Habitat for these species?
- X**    8.    Have material adverse effects on resources requiring compliance with Executive Order 11988 (Floodplain Management), Executive Order 11990 (Protection of Wetlands), or the Fish and Wildlife Coordination Act?
- X**    9.    Threaten to violate a Federal, State, local or tribal law or requirement imposed for the protection of the environment?
- X**    10.    Have a disproportionately high and adverse effect on low income or minority populations (EO 12898).

- X 11. Limit access to and ceremonial use of Indian sacred sites on Federal lands by Indian religious practitioners or significantly adversely affect the physical integrity of such sacred sites (EO 13007).
- X 12. Contribute to the introduction, continued existence, or spread of noxious weeds or non-native invasive species known to occur in the area or actions that may promote the introduction, growth, or expansion of the range of such species (Federal Noxious Weed Control Act and EO 13112).

*(If any of the above exceptions receive a “Yes” check (✓) , an EA/EIS must be prepared.)*

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*Within the spirit and intent of the Council of Environmental Quality's regulations for implementing the National Environmental Policy Act (NEPA) and other statutes, orders, and policies that protect fish and wildlife resources, I have established the following administrative record and have determined:*

- The proposed action is covered by a categorical exclusion as provided by 43 CFR §46.210 or 516 DM 8.5. No further NEPA documentation will therefore be made.**
- An Extraordinary Circumstance could exist for the proposed action and, so an EA/EIS must be prepared.**

**Service signature approval:**

Signature \_\_\_\_\_

Date: \_\_\_\_\_

Title \_\_\_\_\_

## INTRA-SERVICE SECTION 7 BIOLOGICAL EVALUATION FORM

Originating Person: Wilson Darbin  
300 Westgate Center Drive  
Hadley, MA 01035  
Telephone Number: (413) 253-8200  
Date received:  
Date of response:

Project Description: Cherry Valley National Wildlife Refuge Hunting Plan

- I. Region:** R5
- II. Service Activity (Program):** National Wildlife Refuge System
- III. Pertinent Species and Habitat:**
  - A. Listed species and/or their critical habitat within the action area:**

Bog turtle – federally threatened  
Indiana bat – federally endangered  
Dwarf wedgemussel – federally endangered  
*There is no designated Critical Habitat on Cherry Valley NWR.*
  - B. Proposed species and/or proposed critical habitat within the action area:**

none
  - C. Candidate species within the action area:**

none
- IV. Geographic area or station name and action:** Hunting Plan for Cherry Valley National Wildlife Refuge
- V. Location (attach map):**
  - A. Ecoregion Number and Name:** 59, Central Appalachian Forest
  - B. County and State:** Monroe and Northampton, Pennsylvania
  - C. Section, township, and range (or latitude and longitude):**

Chestnut Hill Township, Hamilton Township, Ross Township, Smithfield

Township, Stroud Township (Monroe County); Upper Mount Bethel Township, Washington Township, Plainfield Township, Bushkill Township (Northampton County)

**D. Distance (miles) and direction to nearest town:**

Pen Argyl, 3 miles to the southeast of current ownership

**E. Species/habitat occurrence:**

Bog turtles occur throughout the acquisition boundary in appropriate (open, boggy) habitats which are not typically hunted. Cherry Valley NWR uses IPAC to identify threatened and endangered species, including for purposes of this Biological Evaluation. This is done because the IPAC database is the better of the Service's databases for the refuge and may contain the best available information on species presence. Nevertheless, in order to ensure a thorough review, this Biological Evaluation considers all threatened and endangered species identified by both the IPAC and ECOS databases. Note, however, that these databases are updated regularly, approximately every 90 days, and, thus, it is possible that the specific threatened and endangered species identified as present on or near the refuge may change between the finalization of this Biological Evaluation and its publication and/or between finalization and your reading this document.

Staff present on the refuge and conducting this evaluation may have the best available information about the presence of fish and wildlife species. Thus, where species are identified by either database, but the refuge has information that the species is not actually present within the "action area," we have explained that as the basis for our determination that any hunting and fishing activities will have no effect on the species.

**VI. Description of proposed action (attach additional pages as needed):**

Cherry Valley NWR proposes to open an additional 5,195 acres of hunting to migratory birds (waterfowl, dove, woodcock, snipe, rail, gallinule), upland game (squirrel, grouse, rabbit, pheasant, quail, woodchuck, crow, fox, raccoon, opossum, skunk, weasel, coyote, bobcat,) and big game (deer, bear, wild turkey) in accordance with existing State, local, and refuge-specific regulations (50 CFR 32.57). In addition, the refuge is making minor modifications to the existing refuge specific hunting regulations and adding hare and porcupine as huntable species to align more closely with Pennsylvania's huntable species and hunting regulations.

**VII. Determination of effects:**

**A. Explanation of effects of the action on species and critical habitats in items III.A, B, and C (attach additional pages as needed):**

The proposed action will have no significant cumulative impacts on threatened or endangered species. Rather, we expect the reduction of deer resulting from a hunt to benefit most species as foraging pressure is lifted. We also expect harvesting of predators such as coyote and fox to reduce mortality of ground nesting birds and reptiles including bog turtles.

*Bog turtle* – The bog turtle can be found throughout the valley in open, wet bogs. Fall and winter represent periods of low or no activity for bog turtles, minimizing the likelihood that they would be encountered by hunters. Bog turtle nesting season runs from mid-May through mid-July, with the majority of the nesting occurring in June. No hunting is being proposed during the months of June, July, or August when bog turtle eggs would be at risk of being stepped on by hunters. Bog turtles may be impacted by any disturbances to the ground, groundwater or vegetation near their habitat, and opening more lands to hunting may result in more hunter foot traffic. Bog turtles are most often found in boggy, open habitats where there is little cover for wild game and which are difficult for people to walk through. Thus, it is likely that few hunters will venture into bog turtle habitat. The few potential disturbances of hunting, such as foot traffic of hunters or gun noise, would be a temporary inconvenience and likely not rise to the level of take. Since little to no hunting pressure in bog turtle habitats is expected, it is unlikely that spent lead ammunition would be present at a level to affect bog turtles. The small, semi-aquatic species consumes a varied diet including insects, snails, worms, seeds, and carrion. These eating behaviors likely preclude lead impacts, as the soils on the refuge do not have high concentrations of lead. Lead levels are unlikely to increase based on the amount of hunting allowed and the fact that all or most hunting is on other portions of the refuge. The greatest threats to bog turtles are the loss, degradation, and fragmentation of its habitat from wetland alteration, development, pollution, invasive species, and natural vegetational succession. The Service concludes that the hunt program may affect but is not likely to adversely affect the Indiana bat.

*Indiana bat* – The Indiana bat was last documented hibernating in Cherry Valley in 1950, but is a likely (unconfirmed) summer inhabitant. This species hibernates in caves and mines from November through April (the majority of the hunting season) and would not be impacted by hunting. They are unlikely to be disturbed by hunter activity during other times as they are a nocturnal species and would not be encountered during foraging flights. It is possible that hunters, especially spring turkey hunters, could be in the vicinity of roost trees later in the season. However, with low numbers of turkey hunters (30 to 50 hunters) spread out over 6,000 acres, the probability of a hunter discharging a firearm at or near a roost tree is low. Moreover, while this could flush the bats from the tree, it is more likely that the bats would remain in the tree or roost soon again after being flushed. The hunting programs would not result in any tree cutting or other habitat alteration. Thus, the Service concludes that the hunt program may affect but is not likely to adversely affect the Indiana bat.

*Dwarf wedgemussel* – The dwarf wedgemussel is found in the Delaware River upstream from the mouth of Cherry Creek and could potentially exist within the Cherry Creek, though in-stream surveys have not confirmed presence. Impacts that affect the mussels include water quality, habitat stability, or any kind of riparian disturbance that would affect the mussel's life cycle. Hunting activities, which typically do not involve interacting with creeks or streams, are unlikely to alter the riparian borders that the mussels live on. The hunt program may affect but is not likely to adversely affect the dwarf wedgemussel.

Lead can be used on the refuge for hunting as detailed in the Hunting Plan. The amount of lead introduced to the environment as a result of hunting activities will

be negligible, given the amount of hunter participation on the refuge and restriction on lead ammunition for all migratory game bird hunting. Lead shot and bullet fragments found in animal carcasses and gut piles are the most likely source of lead exposure. Many hunters do not realize that the carcass or gut pile they leave in the field usually contains lead bullet fragments. Research continues on the effects of lead ammunition and the fragments it can deposit in killed game. Avian predators and scavengers can be susceptible to lead poisoning when they ingest lead fragments or pellets in the tissues of animals killed or wounded by lead ammunition. Lead poison may weaken raptors and increase mortality rate by leaving them unable to hunt, or more susceptible to vehicles or power line accidents. The bioaccumulation of lead is a potential concern, but it does not present a significant issue for hunting on this refuge as the refuge strongly encourages use of non-toxic alternatives and will educate hunters, anglers and the public to the potential adverse impacts of lead. Some hunters will choose non-lead methods of take such as archery or non-lead ammunition. Moreover, the scarce amount of lead introduced on this refuge is not likely to adversely affect bog turtles, Indiana bats, or dwarf wedgemussel habitats. . Furthermore, these species are not primary, highly-mobile, scavengers that would actively pursue gut piles left after harvest, and therefore, will not be impacted by direct ingestion of lead fragments left behind.

As the foraging ecology of the bat (i.e., eating flying insects) is known, the only way the species would be exposed to lead from hunting is through bioaccumulation from herbivorous insects. Such prey (and only some of their prey are herbivorous) could eat plants that have taken up lead from the soil, but it is unlikely because plants only uptake lead when it is in soil in highly concentrated levels and the proposed hunting expansions would not introduce enough lead for that possibility. Current and proposed levels of hunting, along with non-lead alternative education, would not result in lead levels toxic to any threatened or endangered species that occur on the refuge.

## **B. Explanation of actions to be implemented to reduce adverse effects:**

Federal and State regulations specifically prohibit the harassment and/or take of listed species. The refuge will require hunters to purchase an annual refuge hunting permit in order for management to assess use and compatibility. At any point, the refuge manager may modify number of permits available, hunt areas, hunting seasons, and/or regulations if necessary to protect threatened and endangered species.

The refuge-specific regulations detailed in the Hunting Plan are measures that will reduce or avoid conflicts. Detailing refuge and State law enforcement officers enforce hunting and fishing regulations. Providing hunting and fishing information through various forums will ensure the public is aware of applicable laws and policies. To minimize conflict, refuge-specific hunt regulations and hunt unit maps (brochures) will be made available to hunters at kiosks, refuge website, and at the refuge office.

**VIII. Effect determination and response requested: [\* optional]**

**A. Listed species/critical habitat:**

Determination

Response requested

No effect  
(species: \_\_\_\_\_)

\*Concurrence

is not likely to adversely affect  
(species: \_\_Bog turtle, Indiana  
bat, dwarf wedgemussel\_\_)

X Concurrence

is likely to adversely affect (species: \_\_\_\_\_)

\_\_\_ Formal Consultation

**B. Proposed species/proposed critical habitat:**

no effect  
(species: \_\_\_\_\_)

\_\_\_ \*Concurrence

is not likely to adversely affect  
(species: \_\_\_\_\_)

\_\_\_ Concurrence

is likely to adversely affect  
(species: \_\_\_\_\_)

\_\_\_ Informal conference

is likely to jeopardize/adverse modification of critical habitat  
(species: \_\_\_\_\_)

\_\_\_ Conference

**C. Candidate species:**

no effect  
(species: \_\_\_\_\_)

\_\_\_ \*Concurrence

is likely to jeopardize  
(species: \_\_\_\_\_)

\_\_\_ Conference

*Michael Horne*

8/13/2021

Michael Horne  
Refuge Manager  
Cherry Valley National Wildlife Refuge

Date



**Reviewing ESO Evaluation:**

A. Concurrence \_\_\_\_\_ Non-concurrence \_\_\_\_\_

B. Formal consultation required No

C. Conference required No

D. Remarks (attach additional pages as needed):

Reviewed and approved by:

**ROBERT ANDERSON**

Digitally signed by ROBERT  
ANDERSON  
Date: 2021.08.13 14:56:44 -04'00'

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Date

