

**Southern Maryland Woodlands National Wildlife Refuge  
Draft Hunt Plan**

**May 2025**

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

**Southern Maryland Woodlands National Wildlife Refuge  
Nanjemoy, MD 20662**

Submitted By:

Project Leader

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

Concurrence:

Refuge Supervisor

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

Approved:

Regional Chief,  
National Wildlife Refuge System

\_\_\_\_\_  
Signature

\_\_\_\_\_  
Date

# Table of Contents

<b>I. Introduction .....</b>	<b>1</b>
<b>II. Statement of Objectives .....</b>	<b>3</b>
<b>III. Description of Hunting Program .....</b>	<b>4</b>
A. Areas to be Opened to Hunting .....	4
B. Species to be Taken, Hunting Periods and Access .....	4
C. Hunter Permit Requirements .....	4
D. Consultation and Coordination with the State .....	4
E. Law Enforcement.....	5
F. Funding and Staffing Requirements .....	5
<b>IV. Conduct of the Hunting Program .....</b>	<b>5</b>
A. Hunter Permit Application, Selection, and/or Registration Procedures .....	5
B. Refuge-Specific Hunting Regulations .....	5
C. Relevant State Regulations .....	6
D. Other Refuge Rules and Regulations for Hunting.....	7
<b>V. Public Engagement .....</b>	<b>7</b>
A. Outreach for Announcing and Publicizing the Hunting Program .....	7
B. Anticipated Public Reaction to the Hunting Program .....	7
C. How Hunters Will Be Informed of Relevant Rules and Regulations .....	7
<b>VI. Compatibility Determination .....</b>	<b>7</b>
<b>VII. Literature Cited.....</b>	<b>7</b>
 <b>Appendices</b>	
Appendix A - Compatibility Determination .....	A-1
Appendix B - Environmental Assessment.....	B-1
Appendix C – Hunt Plan Map.....	C-1
Appendix D - Refuge Acquisition Units.....	D-1

# **SOUTHERN MARYLAND WOODLANDS NATIONAL WILDLIFE REFUGE**

## **HUNT 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 (CFR) and Fish and Wildlife Service Manual.

Southern Maryland Woodlands National Wildlife Refuge was established by the Secretary of the Interior on December 6, 2024, when the first parcel of land was donated to the Service by The Nature Conservancy. It currently consists of 31 acres with plans to expand to over 40,000 within the approved acquisition boundary. The refuge consists of forested habitat that is vulnerable to conversion from expansion of development within the Washington DC metropolitan region. Along with several watersheds the Refuge will continue to conserve waterfowl and other migratory bird habitat, aid in the recovery of listed threatened and endangered species and provide needed outdoor recreational opportunities for the 10 million people who live and work in the Washington-Baltimore metropolitan region.

To meet specific refuge and other broader Service directives, the following purposes were established for Southern Maryland Woodlands NWR:

- “for use as an inviolate sanctuary, or for any other management purpose, for migratory birds....” 16 U.S.C. § 7J5d (Migratory Bird Conservation Act of 1929).
- “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 incidental fish and wildlife-oriented recreation; the protection of natural resources; and the conservation of endangered species or threatened species...” 16 U.S.C. § 460K-1 (Refuge Recreation Act of 1962).

The NWRSA 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 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.

Southern Maryland Woodlands NWR is in southwestern Charles County in Maryland and is a newly established refuge that is not open for public access yet. The refuge will eventually consist of four watershed-based units: the Lower Patuxent-Calvert Unit, Nanjemoy-Mattawoman Unit, Zekiah-Wicomico Unit, and McIntosh Run-St. Mary's Unit (Map 1). The total area encompassed by the proposed Refuge acquisition boundary is approximately 577,420 acres. Of these, 169,151 acres are contained in undeveloped parcels of 20 acres or greater, and all of these are located within areas designated by the State of Maryland as Targeted Ecological Areas and/or Green Infrastructure Hubs and Corridors. The Service proposes to open archery big game hunting opportunities in alignment with State regulations on the 31-acre parcel currently owned by the Service on the Nanjemoy-Mattawoman Unit, while still meeting refuge wildlife and habitat objectives. In summary, we

propose the following openings to establish a hunting program:

- 1) Species
  - a) Open to white tailed deer and turkey
- 2) Huntable Acreage Added
  - a) 31 acres total
- 3) Method of Take
  - a) Open to archery equipment only
- 4) Season Dates
  - a) align with State deer and turkey (fall and spring) archery seasons
- 5) Bag Limits
  - a) Align with State deer bag limits

## **II. Statement of Objectives**

The objectives of the hunting program at Southern Maryland Woodlands NWR are to:

1. Provide the public with a quality recreational experience on refuge lands and increase opportunities and access for consumptive and non-consumptive users of the refuge. The Refuge System Improvement Act of 1997 identified hunting and fishing, where compatible, as two of the six priority public uses on refuges;
2. Design a hunting program that is administratively efficient and manageable with existing staffing levels and in alignment with Maryland Department of Natural Resources (MDDNR) regulations when possible;
3. Implement a hunting program that is safe and enjoyable for all refuge users.

Meeting the above objectives will also benefit wildlife resources and habitat. High deer densities have been shown to alter the understory of forests (Côté et al. 2004; White 2012) and negatively affect breeding songbirds (Chollet and Martin 2013; Tymkiw et al. 2013).

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

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

The Service is proposing to open the 31-acres of Southern Maryland Woodlands NWR (Figure 1) for the first time. As new parcels are acquired within the approved acquisition boundary, they will be evaluated for compatibility and subsequently open where resources and compatibility allow for the use.

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

The refuge will administer archery hunts for white-tailed deer (fall) and wild turkey (winter and spring). Hunting seasons and dates will align with state of Maryland hunting seasons. Access will occur through refuge trail entrance (Figure 1).

Hours of access to the refuge for hunts can be found on the refuge website, which may vary based on hunt type and State regulations. Legal shooting hours are in accordance with State regulations for respective species.

## **C. Hunter Permit Requirements**

*Deer and Turkey Hunting:* Hunters are required to obtain the necessary State licenses. Refuge specific permits are not required currently.

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

Refuge staff meets at least annually with MDDNR representatives to discuss current issues, status of hunts, and any proposed changes to regulations. Hunting opportunities on the refuge are generally designed to comply with State regulations. In some instances, the refuge hunt may deviate from State seasons to meet refuge wildlife population, public use, and public safety goals, or to increase harvest and reduce white-tailed deer herd size. Any deviations from State regulations are developed in coordination with State partners and are available in the Code of Federal Regulations. Consultations with the MDDNR regarding hunt plans, opportunities, and management will be conducted during the development of this plan.

## **E. Law Enforcement**

1. Enforcement of refuge regulations normally associated with management of a NWR is the responsibility of commissioned Service law enforcement officers. Other refuge officers, special agents, and State game wardens may assist Federal wildlife officers (FWOs) in investigations of both Federal and State law occurring within the refuge.
2. The following methods are used to control and enforce hunting regulations:
  - Boundaries will be clearly posted;

- The Service will provide hunting rules and regulations on the website as well as a map depicting areas open to the lawful take of game;
- FWOs will check hunters to ensure compliance with Federal and State laws, as well as refuge-specific hunting regulations, including compatibility stipulations;
- FWOs will coordinate with Maryland Natural Resources Police (MNRP) and other law enforcement agencies; and
- Procedures for obtaining law enforcement assistance are based on legal jurisdiction, pending where the incident occurred. FWOs have developed good working relationships with other State, local and Federal law enforcement agencies to develop enforcement strategies and coordinate investigations and operations as appropriate.

#### **F. Funding and Staffing Requirements**

Annual hunt administration costs including salaries are unknown at this time, however we anticipate not to exceed \$25,000 annually. Funding for the hunt programs is not specifically allocated but will be taken from station base funds. Funding is expected to be sufficient to initiate and continue the hunting program in the future.

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

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

No permit or application required at this time for deer or turkey hunting.

#### **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, Federal, and refuge-specific regulations. The refuge-specific regulations that pertain to hunting on Southern Maryland Woodlands NWR as of the date of this plan are summarized here. These regulations may be modified as conditions change or if refuge expansion continues or occurs.

##### *Hunting:*

- Hunters must possess on their person at all times while on refuge property: a valid Maryland hunting license and all required State and Federal stamps, and a valid form of government-issued photo identification.

- We only allow portable or temporary tree stands and blinds while hunting. All stands and blinds must be removed at the end of the hunt day. We require hunters to mark the stand or blind in plain site with the hunter's DNR ID. We prohibit hunting from a permanently constructed tree stand or blind. We do not allow screw-in steps, spikes, or other objects that may damage trees. All marking devices such as flagging or bright eyes must be removed by the last day of their hunt. Stands, blinds, or any other personal property may not be left unattended or overnight and any left in a hunt area will be seized and impounded (50 CFR 27.93).
- We prohibit organized deer drives.
- We prohibit shooting a projectile from a bow, or crossbow from, down, or across any refuge road or trail. A refuge road or trail is any road or trail that is traveled by vehicular traffic or by other refuge users.
- Hunters must make a reasonable effort to retrieve all wounded or killed game and include it in their daily bag limit. We prohibit leaving deer or turkey entrails or other waste within 50 feet (15.2 meters) of any road, parking area, trail, or structure on the refuge.
- Hunters must adhere to the State bag limits set forth annually and must be recorded and checked with the State.
- We only allow the use of archery equipment for hunting deer and turkey.

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

The refuge will conduct its hunting program within the framework of State and Federal regulations. Hunting at the refuge is at least as restrictive as the State of Maryland 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. Relevant refuge-specific regulations are annually listed in 50 CFR 32.39, and summarized above.

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

- Commercial guiding is not authorized as part of this plan.
- We allow the use of marking devices, including flagging or tape, but it must be removed by legal sunset of the date established annually by the refuge manager. We prohibit paint or any other permanent marker to mark trails.

- We prohibit the use of bicycles, airboats, boats, ATVs, motorized off-road vehicles, and amphibious vehicles or Argos to access the refuge.

## **V. Public Engagement**

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

The refuge maintains a mailing list of local newspapers, social media, podcasts, radio, and websites for news release purposes. Special announcements and articles may be released in conjunction with hunting seasons. Additionally, information about the hunt will be available on the refuge's website.

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

Hunting is one of the six priority public uses required by the Refuge Improvement Act to receive enhanced consideration on refuges. This is a popular and traditional activity in the area. Hunting provides a means to increase public participation on the refuge and hunting serves as a management tool to help maintain healthy, sustainable wildlife populations. Hunting on public lands has become more popular as private lands have become less available for hunting. The refuge anticipates positive public reaction to opening the refuge to hunting for the first time.

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

General information regarding hunting information will also be available at the refuge websites: website is currently under development.

## **VI. Compatibility Determination**

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

## **VII. Literature Cited**

- Côté, S.D., T.P. Rooney, J-P Tremblay, C. Dussault, and D.M. Waller. 2004. Ecological Impacts of Deer Overabundance. *Annual Review of Ecology and Systematics* 35:113-147.
- Chollet, S. and J. Martin. 2013. Declining woodland birds in North America: should we blame Bambi? *Diversity and Distributions* 19:481-483.

Tymkiw, E.L., J.L. Bowman, and W.G. Shriver. 2013. The effect of white-tailed deer density on breeding songbirds in Delaware. *Wildlife Society Bulletin* 37:714-724.

U.S. Fish and Wildlife Service. 2024. Establishment of a new Southern Maryland Woodlands National Wildlife Refuge. White, M.A. 2012. Long-term effects of deer browsing: composition, structure and productivity in a northeastern Minnesota old-growth forest. *Forest Ecology and Management* 269:222-228.

## Draft Compatibility Determination

### Title

Draft Compatibility Determination for Big Game Hunting, Southern Maryland Woodlands National Wildlife Refuge.

### Refuge Use Category

Hunting

### Refuge Use Type(s)

Hunting (big game)

### Refuge

Southern Maryland Woodlands National Wildlife Refuge

### Refuge Purpose(s) and Establishing and Acquisition Authority(ies)

- “for use as an inviolate sanctuary, or for any other management purpose, for migratory birds....” 16 U.S.C. § 7J5d (Migratory Bird Conservation Act of 1929).
- “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 incidental fish and wildlife-oriented recreation; the protection of natural resources; and the conservation of endangered species or threatened species...” 16 U.S.C. § 460K-1 (Refuge Recreation Act of 1962).

### National Wildlife Refuge System Mission

The mission of the National Wildlife Refuge System (NWRS), otherwise known as 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 (Pub. L. 105-57; 111 Stat. 1252).

## Description of Use

Is this an existing use?

No

This compatibility determination analyzes and establishes compatibility of big game hunting on the refuge.

What is the use?

The use is public hunting of white-tailed deer and wild turkey on Southern Maryland Woodlands NWR. Hunting was identified as one of six priority public uses of the Refuge System by the National Wildlife Refuge System Administration Act (NWRSA) of 1966, as amended by the Refuge System Improvement Act of 1997 (Public Law 105-57), when found to be compatible.

Is the use a priority public use?

Yes

Where would the use be conducted?

Hunting would occur on the current extent of the refuge (31-acres) on the Nanjemoy-Mattawoman Unit. Additional areas will be evaluated for compatibility as units are acquired as part of the refuge in the future.

When would the use be conducted?

Big game hunting on the refuge will generally take place within the season dates established by the State of Maryland. White-tailed deer hunting is normally between September and late January. Hunters can access the refuge up to 2 hours before legal sunrise and must exit within 1 hours after legal sunset. Shooting hours follow the State regulations of one-half hour before sunrise and one half hour after sunset. Hunting for wild turkeys will be during the State Spring season, April through May, and brief winter season in January on designated hunt days and will follow the State shooting hours. Specific regulations for each hunt will be published by the refuge in advance of the hunt seasons on the website.

## How would the use be conducted?

Hunters may access the refuge by walking in from the one existing main access point (Figure 1). Hunters must follow state regulations and maintain appropriate distance from structures and houses while hunting. The hunting program will be reviewed annually or as needed in consultation with Maryland DNR to assess its effectiveness and ensure wildlife populations and habitat quality are managed appropriately. In addition, refuge-specific regulations listed under “Stipulations Necessary to Ensure Compatibility” will apply.

## Why is this use being proposed or reevaluated?

Hunting is a healthy, traditional recreational use of renewable natural resources deeply rooted in America’s heritage and can be an important wildlife management tool. At Southern Maryland Woodlands NWR, hunting will serve as a useful habitat management tool.

Furthermore, Department of the Interior Secretarial Order 3356 directs the Service to enhance and expand public access to lands and waters on NWRs for hunting, fishing, recreational shooting, and other forms of outdoor recreation. The proposed action promotes one of the priority public uses of the Refuge System and provides opportunities to promote stewardship of our natural resources and increase public appreciation and support for the refuge.

## Availability of Resources

The resources necessary to provide and administer this use are available within current and anticipated regional refuge resources and budgets. Staff time associated with administration of these uses will include a combination of support from regional staff and nearby refuge staff. Funds are needed for staff time for planning and annual program preparation, outreach and public relations, enforcement, and boundary and sign posting.

## Anticipated Impacts of the Use

Potential impacts of a proposed use on the refuge's purpose(s) and the Refuge System mission

The effects and impacts of the proposed use to refuge resources, whether adverse or beneficial, are those that are reasonably foreseeable and have a reasonably close causal relationship to the proposed use of Environmental Education and Interpretation. This

CD includes the written analyses of the environmental consequences on a resource only when the impacts on that resource could be more than negligible and therefore considered an “affected resource.” Resources that will not be more than negligibly impacted by the action, including geology, hydrology, air and water quality, threatened and endangered species, cultural resources, and socioeconomics, have been dismissed from further analyses. The overall impacts of this use are fully reviewed and discussed in the Southern Maryland Woodlands NWR Hunting Environmental Assessment.

### Short-term impacts

White-tailed deer are common and widespread in Region B (Central, Southern and Eastern Maryland) of the State, where habitat quality is considered good, the population was estimated at about 205,000 deer in 1998. The population increased slightly, to approximately 238,000 deer in 2002. Since 2013, the Region B deer population has remained stable up to 2018 (MDDNR 2020).

Maryland annually monitors deer abundance using harvest estimates and age structure of the deer herd to inform management decisions.

The MDDNR conducts an annual observation survey for wild turkey during the months of July and August of wild turkey reproductive success since 1993. The primary purpose of this long-term survey is to estimate reproductive success. The Southern Region (Prince George, Calvert, Charles, and St. Mary’s Counties) had the highest poult per hen ratio in the state at 3.0 poults per hen (MDDNR, 2024).

Short-term impacts resulting from anthropogenic disturbance from visitors engaging in hunting activities may include changes in wildlife behavior, distribution or abundance (Leblond et al. 2013). For example, Gutzwiller et al. (1994) found that the singing behavior of some species of songbirds were altered by low levels of human intrusion.

Competition between target species and other wildlife is primarily associated with crop depredation by white-tailed deer in moist soil impoundments and agricultural fields, both on the refuge, as well as adjacent private land. This depredation can drastically reduce the energetic carrying capacity provided by these habitat management actions for waterfowl. In addition, over-browsing of forest understory can have a negative effect on nesting passerines (Chollet and Martin 2013; Tymkiw et al. 2013).

In general, the presence of humans will disturb most animals, which typically results in short-term adverse impacts without long-term effects on individuals and populations. Because of the low-density, dispersed nature of people hunting on the refuges, chronic adverse impacts on wildlife populations from hunting-related disturbances would be

negligible in most instances. Areas of known communal eagle roosts, waterfowl concentrations, or other sensitive areas are typically closed to most hunting activity.

The physical effects on vegetation from hunting are expected to be minimal, as hunters tend to travel on existing roads and game trails. Some off-trail hiking is anticipated, but it will generally be dispersed over large areas. Possible negative cumulative impacts of recreational hunting include temporary trampling of vegetation and light soil erosion. Spring turkey season could cause some trampling effects to growing plants, especially in wet areas; however, we do not expect these impacts to be substantial, because turkey hunter density is expected to be low and dispersed. Most hunting occurs during the fall, but hunters tend to disperse when in the woods; as a result, we do not anticipate substantial impacts to habitats. Some hunt seasons extend into winter when the ground is either frozen, covered in snow, and/or when plants are dormant. Hunters will have little impact on plants during this period. For these reasons, cumulative impacts to plant communities and soils are not likely to be significant during the fall, winter, or spring hunting seasons.

The impacts of the existing deer herd on vegetation on the refuge, particularly agricultural crops, are striking. Excessive white-tailed deer herbivory has negative impacts on the refuge farm program. The herd's impacts to forest resources are more subtle.

Positive effects on vegetation may result from maintaining white-tailed deer populations at levels commensurate with the carrying capacity of available habitat. The impacts of dense deer populations on forest regeneration and the composition and diversity of the herbaceous understory have been well-documented (Behrend et al. 1970; Côté et al. 2004; Tierson et al. 1966; Tilghman 1989; White 2012). Disturbances that typically promote forest diversity, such as fire and small canopy gaps, may not have the desired benefits if browsers are overabundant (Nuttall et al. 2013). An overabundance of deer can suppress native vegetation, facilitating the success of invasive species in forested habitats (Knight et al. 2009). Lessening the impact of excessive deer herbivory is a key forest management strategy (Nuttall et al. 2013; White 2012) and will likely become even more important as the climate warms (Galatowitsch et al. 2009).

Well-managed hunting has the potential to effectively control deer populations (Brown et al. 2000; Oyer and Porter 2004). The net impact of deer hunting on vegetation should be positive, and result in better regeneration of forest canopy species and an increase in the diversity of the herbaceous understory.

## Long-term impacts

In general, the presence of humans will disturb most animals, which typically results in only brief, short-term impacts without long-term effects on individuals and populations. Because of the low-density, dispersed nature of hunters on the refuge, chronic adverse impacts on wildlife populations from hunting-related disturbances would be negligible in most instances. Areas of known communal eagle roosts, waterfowl concentrations, or other sensitive areas are typically closed to most hunting activity.

We anticipate positive long-term impacts from visitors having the opportunity to gain an appreciation for the refuge while hunting. Hunters have a long-standing tradition in wildlife conservation and allowing this use will encourage new hunters to learn about the tradition of hunting and the value of our national wildlife refuges.

## Public Review and Comment

The draft compatibility determination will be available for public review and comment for 14 days. The public will be made aware of this comment opportunity through posting on the Patuxent Research Refuge website. State and Tribes have been asked to review and comment on the draft compatibility determination. A hard copy of this document will be posted at the Patuxent Refuge Headquarters or Visitor Center located at Laurel, MD. It will be made available electronically on the refuge website: [www.fws.gov/southern-maryland-woodlands-national-wildlife-refuge](http://www.fws.gov/southern-maryland-woodlands-national-wildlife-refuge). Please contact the Refuge Manager if you need the documents made available in an alternative format. Concerns expressed during the public comment period will be addressed in the final document.

## Determination

Is the use compatible?

Yes

## Stipulations Necessary to Ensure Compatibility

To ensure compatibility with refuge purpose(s) and Refuge System mission, hunting can occur on the Southern Maryland Woodlands 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, high quality hunting experience for participants. This hunting program will be monitored and

potentially modified or eliminated if any of the program's components are found not compatible. The following stipulations are necessary to ensure compatibility:

1. We only authorize the use of archery equipment for hunting at this time.

## Justification

The stipulations outlined above would help ensure that the use is compatible at Southern Maryland Woodlands NWR. 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. Most 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 Southern Maryland Woodlands 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. These priority public uses identified by Executive Order 12996 (March 25, 1996) and legislatively mandated by the Refuge System Administration Act of 1966 (16 U.S.C. sections 668dd-668ee), as amended by the Refuge System Improvement Act of 1997 (Public Law 105-57), have been found appropriate and compatible, and will provide opportunities through which the American public can develop an appreciation for fish and wildlife and contribute to achieving the mission of the NWRS.

## Signature of Determination

Refuge Manager Signature and Date

## Signature of Concurrence

Assistant Regional Director Signature and Date

## Mandatory Reevaluation Date

2040

## Literature Cited/References

Behrend, D.F., G.F. Mattfield, W.C. Tierson, and J.E. Wiley. 1970. Deer density control for comprehensive forest management. *Journal of Forestry* 68:695-700.

Brown, T.L., D.J. Decker, S.J. Riley, J.W. Enck, T.B. Lauber, P.D. Curtis, and G.F. Mattfeld. 2000. The future of hunting as a mechanism to control white-tailed deer populations. *The Wildlife Society Bulletin* 28(4):797-807.

Chollet and Martin 2013. Declining woodland birds in North America: should we blame Bambi? *Diversity and Distributions* 19:481-483.

Côté, S.D., T.P. Rooney, J-P Tremblay, C. Dussault, and D.M. Waller. 2004. Ecological Impacts of Deer Overabundance. *Annual Review of Ecology and Systematics* 35:113-147.  
Galatowitsch, S., L. Frelich, and L. Phillips-Mao. 2009. Regional climate change adaptation strategies for biodiversity conservation in a mid-continental region of North America. *Biological Conservation* 142:2012-2022.

Gutzwiller, K. J., R.T. Wiedenmann, K. L. Clements, and S. H. Anderson. 1994. Effects of Human Intrusion on Song Occurrence and Singing Consistency in Subalpine Birds. *The Auk*, 111(1), 28-37.

- Leblond, M., C. Dussault, J-P. Ouellet. 2013. Impacts of human disturbance on large prey species: do behavioral reactions translate to fitness consequences? Plos One, 8(9): e73695 doi: 10.1371/journal.pone.0073695.
- Knight, T.M., J.L. Dunn, L.A. Smith, J. Davis, and S. Kalisz. 2009. Deer facilitate invasive plant success in a Pennsylvania forest understory. *Natural Areas Journal* 29(2):110-116.
- Nuttle, T., A.A. Royo, M.B. Adams, and W.P. Carson. 2013. Historic disturbance regimes promote tree diversity only under low browsing regimes in eastern deciduous forest.
- Oyer, A.M. and W.F. Porter. 2004. Localized management of white-tailed deer in the central Adirondack Mountains, New York. *Journal of Wildlife Management* 68(2):257-265.
- Tierson, W.C., E.F. Patric, and D.F. Behrend. 1966. Influence of white-tailed deer on the logged northern hardwood forest. *Journal of Forestry* 64:804-805.
- Tilghman, N.G. 1989. Impacts of white-tailed deer on forest regeneration in northwestern Pennsylvania. *Journal of Wildlife Management* 53:524-532.
- Tymkiw, E.L., J.L. Bowman, and W.G. Shriver. 2013. The effect of white-tailed deer density on breeding songbirds in Delaware. *Wildlife Society Bulletin* 37:714-724.
- White, M.A. 2012. Long-term effects of deer browsing: composition, structure and productivity in a northeastern Minnesota old-growth forest. *Forest Ecology and Management* 269:222-228.

Figure(s)

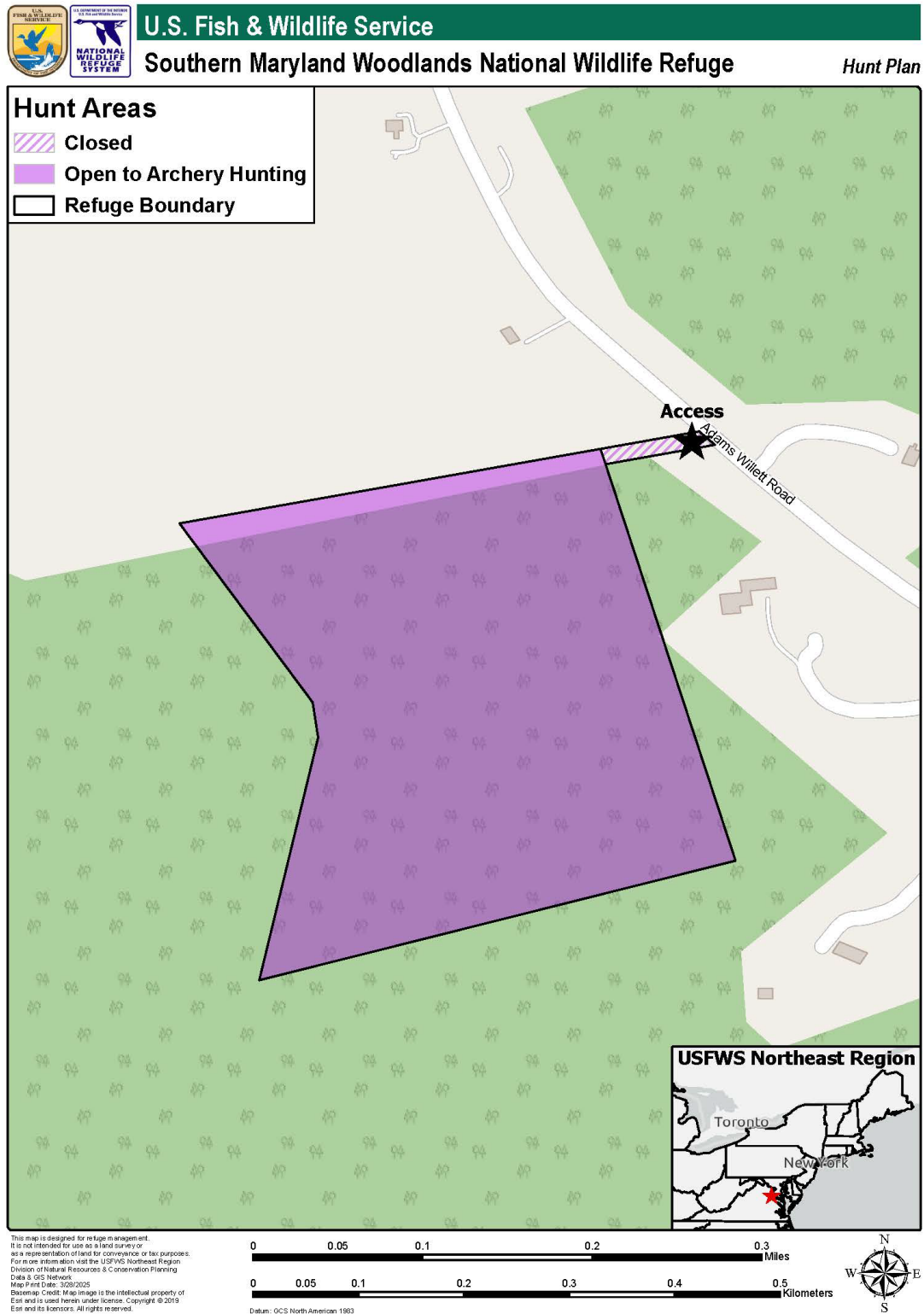


Figure 1. Map of Southern Maryland Woodlands National Wildlife Refuge.

# **Environmental Assessment**

## *Southern Maryland Woodlands National Wildlife Refuge Big Game Hunting Plan*

March 2025

Prepared by

Southern Maryland Woodlands National Wildlife Refuge  
Nanjemoy, MD

*NEPA Tracking Number: 2025-0093223-NEPA-001*

## **EA Table of Contents**

<b><u>PROPOSED ACTION</u></b>	<b><u>B-3</u></b>
<b><u>BACKGROUND</u></b>	<b><u>B-4</u></b>
<b><u>PURPOSE AND NEED FOR THE ACTION</u></b>	<b><u>B-5</u></b>
<b><u>ALTERNATIVES</u></b>	<b><u>B-6</u></b>
ALTERNATIVE A – REMAIN CLOSED TO HUNTING – NO ACTION ALTERNATIVE	B-6
ALTERNATIVE B – OPEN BIG GAME HUNTING – PROPOSED ACTION ALTERNATIVE	B-6
ALTERNATIVE(S) CONSIDERED, BUT DISMISSED FROM FURTHER CONSIDERATION	B-7
<b><u>AFFECTED ENVIRONMENT AND ENVIRONMENTAL CONSEQUENCES</u></b>	<b><u>B-7</u></b>
NATURAL RESOURCES	B-8
VISITOR USE AND EXPERIENCE	B-11
CULTURAL RESOURCES AND SUBSISTENCE	B-12
REFUGE MANAGEMENT AND OPERATIONS	B-13
SOCIOECONOMICS	B-15
<b><u>MONITORING</u></b>	<b><u>B-15</u></b>
<b><u>SUMMARY OF ANALYSIS</u></b>	<b><u>B-16</u></b>
ALTERNATIVE A – REMAIN CLOSED TO HUNTING – NO ACTION ALTERNATIVE	B-16
ALTERNATIVE B – OPEN BIG GAME HUNTING – PROPOSED ACTION ALTERNATIVE	B-16
<b><u>LIST OF SOURCES, AGENCIES AND PERSONS CONSULTED</u></b>	<b><u>B-16</u></b>
<b><u>LIST OF PREPARERS</u></b>	<b><u>B-16</u></b>
<b><u>STATE COORDINATION</u></b>	<b><u>B-17</u></b>
<b><u>TRIBAL CONSULTATION</u></b>	<b><u>B-17</u></b>
<b><u>PUBLIC OUTREACH</u></b>	<b><u>B-17</u></b>
<b><u>DETERMINATION</u></b>	<b><u>B-17</u></b>
<b><u>SIGNATURES</u></b>	<b><u>B-17</u></b>
<b><u>REFERENCES</u></b>	<b><u>B-19</u></b>
<b><u>REGULATIONS – ALL APPLICABLE STATUES, REGULATIONS, AND EXECUTIVE ORDERS</u></b>	<b><u>B-19</u></b>

# Environmental Assessment for Big Game Hunting on Southern Maryland Woodlands NWR

**Date: March 27, 2025**

This Draft Environmental Assessment is being prepared to evaluate the effects associated with the proposed action and complies with the National Environmental Policy Act. The National Environmental Policy Act (NEPA) requires examination of the effects of proposed actions on the natural and human environment. Executive Order 14154, *Unleashing American Energy* (Jan. 20, 2025), and a Presidential Memorandum, *Ending Illegal Discrimination and Restoring Merit-Based Opportunity* (Jan. 21, 2025), require the Department to strictly adhere to the National Environmental Policy Act (NEPA), 42 U.S.C. §§ 4321 et seq. Further, such Order and Memorandum repeal Executive Orders 12898 (Feb. 11, 1994) and 14096 (Apr. 21, 2023). Because Executive Orders 12898 and 14096 have been repealed, complying with such Orders is a legal impossibility. The [bureau] verifies that it has complied with the requirements of NEPA, including the Department's regulations and procedures implementing NEPA at 43 C.F.R. Part 46 and Part 516 of the Departmental Manual, consistent with the President's January 2025 Order and Memorandum. The Service has also voluntarily considered the Council on Environmental Quality's rescinded regulations implementing NEPA, previously found at 40 C.F.R. Parts 1500–1508, as guidance to the extent appropriate and consistent with the requirements of NEPA and Executive Order 14154. Appendix A outlines all law and executive orders evaluated through this Environmental Assessment.

## Proposed Action

The U.S. Fish and Wildlife Service (Service) is proposing to open big game hunting opportunities on the recently established Southern Maryland Woodlands National Wildlife Refuge in accordance with the refuge's Land Protection Plan (July 2024). Hunting is one of the six wildlife-dependent public uses that are automatically considered to be appropriate uses of the Refuge System, (The Refuge System Improvement Act of 1997 Public Law 105-57; 111 Stat. 1235). This would apply to the entire 31.4 acres of Southern Maryland Woodlands National Wildlife Refuge (Refuge). Big game hunting will be allowed with archery equipment and in accordance with State of Maryland hunting regulations and season dates.

A proposed action may evolve during the NEPA process as the agency refines its proposal and gathers feedback from the public, tribes, and other agencies. Therefore, the final proposed action may be different from the original. The proposed action will be finalized at the conclusion of the public comment period for the EA.

## Background

National wildlife refuges are guided by the mission and goals of the National Wildlife Refuge System (NWRS), the purposes of an individual refuge, Service policy, and laws and international treaties. Relevant guidance includes the National Wildlife Refuge System Administration Act of 1966, as amended by the National Wildlife 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. The refuge was established as the Southern Maryland Woodlands National Wildlife Refuge (NWR) pursuant to Director of USFWS approving the land protection plan (USFWS, 2024) on Sept 24, 2024, with primary purposes of:

- “for use as an inviolate sanctuary, or for any other management purpose, for migratory birds....” 16 U.S.C. § 7J5d (Migratory Bird Conservation Act of 1929).
- “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 incidental fish and wildlife-oriented recreation; the protection of natural resources; and the conservation of endangered species or threatened species...” 16 U.S.C. § 460K-1 (Refuge Recreation Act of 1962)....”

The mission of the NWRS, as outlined by the National Wildlife Refuge System Administration Act (NWRSA), as amended by the National Wildlife 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”*

Additionally, the NWRSA mandates the Secretary of the Interior in administering the NWRS (16 U.S.C. 668dd(a)(4)) to

- Provide for the conservation of fish, wildlife, and plants, and their habitats within the NWRS;
- Ensure that the biological integrity, diversity, and environmental health of the NWRS are maintained for the benefit of present and future generations of Americans;
- Ensure that the mission of the NWRS 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 NWRS are located;
- Assist in the maintenance of adequate water quantity and water quality to fulfill the mission of the NWRS and the purposes of each refuge;

- Recognize compatible wildlife-dependent recreational uses as the priority general public uses of the NWRS through which the American public can develop an appreciation for fish and wildlife;
- Ensure that opportunities are provided within the NWRS for compatible wildlife-dependent recreational uses; and Monitor the status and trends of fish, wildlife, and plants in each refuge.

Southern Maryland Woodlands NWR protects forested habitats that are vulnerable to conversion from expansion of development within the Washington DC metropolitan region. Along with several watersheds the Refuge will continue to conserve waterfowl and other migratory bird habitat, aid in the recovery of listed threatened and endangered species and provide needed outdoor recreational opportunities for the 10 million people who live and work in the Washington-Baltimore metropolitan region.

## **Purpose and Need for the Action**

The USFWS is an agency of the Department of the Interior and is responsible for management of the Refuge System. The mission of the Refuge System is to administer a national network of lands and waters for the conservation, management and, where appropriate, restoration of the fish, wildlife and plant resources and their habitats within the United States for the benefit of present and future generations of Americans. The Refuge System administers lands and waters across the U.S. and territories, including:

- 573 National Wildlife Refuges
- 38 Wetland Management Districts
- 5 Marine National Monuments
- 63 Refuges with Wilderness Areas

Each refuge is established to serve a statutory purpose that targets the conservation of native species dependent on its land and waters. Where consistent with their primary purpose, refuges also offer activities for people, such as:

- Hunting and fishing
- Bird watching and other wildlife observation
- Nature interpretation
- Photography

- Environmental education

Hunting and fishing are healthy and traditional recreational uses of renewable natural resources deeply rooted in America's heritage and can be important wildlife management tools. National Wildlife Refuges conduct hunting programs within the framework of Federal, State, and refuge regulations. The NWRSA of 1966, the Refuge System Improvement Act of 1997, and Service policy permit hunting on a refuge as a priority wildlife-dependent recreational opportunity when it is compatible with the purposes for which the refuge was established and acquired. Hunters on the refuge are expected to be ethical and respectful of other users, wildlife species, and the environment while on refuge lands.

The purpose of the proposed action is to provide compatible wildlife-dependent recreational opportunities on the Southern Maryland Woodlands NWR. The need of the proposed action is to meet the Service's priorities and mandates as outlined by the NWRSA to "recognize compatible wildlife-dependent recreational uses as the priority general uses of the Refuge System" and "ensure that opportunities are provided within the Refuge System for compatible wildlife-dependent recreational uses" (16 U.S.C. 668dd(a)(4)). Department of the Interior Secretarial Order 3356 directs the Service to enhance and expand public access to lands and waters on refuges for hunting, fishing, recreational shooting, and other forms of outdoor recreation. The proposed action would also promote one of the priority public uses of the Refuge System and providing opportunities for visitors to hunt can promote stewardship of our natural resources and increase public appreciation and support for the refuge. The purpose of this proposed action is to provide big game hunting opportunities on the Southern Maryland Woodlands NWR.

## **Alternatives**

### **Alternative A – Remain Closed to Hunting – No Action Alternative**

Under the No Action alternative, the Refuge would not implement opening opportunities for big game hunting on the Southern Maryland Woodlands NWR. There would be no hunting allowed for the public on the refuge.

### **Alternative B – Open Big Game Hunting – Proposed Action Alternative**

Under the Proposed Action Alternative as presented in the draft big game hunt plan this alternative would open opportunities for big game hunting for deer and turkey with archery equipment on the Southern Maryland Woodlands NWR. Currently the refuge only exists on one 31-acre parcel and hunting will occur on this parcel in accordance with state regulations and season dates until the refuge is expanded.

This alternative fulfills the Service's mandate under the NWRSA. The Service has determined that the Herbicide Treatment (Alternative B) is compatible with the purposes of Southern Maryland Woodlands NWR and the mission of the NWR.

## **Alternative(s) Considered, But Dismissed from Further Consideration**

We considered opening hunting to additional species and methods of take; however, the refuge is currently only 31 acres, and it was not feasible to consider these options further at this time.

## **Affected Environment and Environmental Consequences**

This section is organized by affected resource categories and for each affected resource discusses both (1) the existing environmental and socioeconomic baseline in the action area for each resource and (2) the effects and impacts of the proposed action and any alternatives on each resource. The effects and impacts of the proposed action considered here are changes to the human environment, whether adverse or beneficial, that are direct, indirect, or cumulative. This EA includes the written analyses of the environmental consequences on a resource only when the impacts on that resource could be more than negligible and therefore considered an “affected resource.” Any resources that will not be more than negligibly impacted by the action have been dismissed from further analysis.

The following resources either (1) do not exist within the project area or (2) would either not be affected or only negligibly affected by the proposed action:

- Geology and soils – no ground disturbance is planned.
- Cultural resources and subsistence – no known cultural resources have been found on this parcel.
- Administration – there are no staff stationed at this refuge.
- Socioeconomics – volume of use is expected to be less than 10 archery hunters.

## **Natural Resources**

### **Terrestrial Wildlife and Aquatic Species**

#### **Affected Environment**

##### ***Description of Affected Environment for the Affected Resource***

Maryland’s rich diversity in plant and animal life, landforms, vegetation communities, and aquatic resources is owed to the spanning of four geophysical provinces, the State’s position in the Mid-Atlantic Coastal Plain, and climate. This vast vegetation community type, as classified and described by Braun (1950), is dominant among Maryland’s forest types. It extends from southern New Jersey (including the Pine Barrens) south through the coastal plain to north of the James River before angling southwest toward Mississippi and east Texas.

The refuge consists of 31.4 acres in Charles County, Maryland (Appendix C), is primarily upland forested habitat and is part of the coastal plain area of the state.

For more information regarding and the general characteristics of the refuge’s environment aside from what is provided below, please see the Affected Environment and Environmental

Consequences section of the Land Protection Plan (USFWS, 2024) developed to help guide the establishment of the refuge.

## White-Tailed Deer

### ***Description of Cumulative Impacts, Environmental Trends, and Planned Actions***

In Region B (Central, Southern and Eastern Maryland) of the State, where habitat quality is considered good, the population was estimated at about 205,000 deer in 1998. The population increased slightly, to approximately 238,000 deer in 2002. Since 2013, the Region B deer population has remained stable up to 2018 (MDDNR 2020).

For the 2024-2025 hunting season, 3,368 deer were harvest in Charles County, MD through the archery, muzzleloader, and firearm seasons. In Maryland, archery hunters account for about 35% of all deer harvested (MDDNR, 2021).

*Table 1. Maryland Reported Antlered and Antlerless Deer Harvest numbers for the 2023-2024 and 2024-2025 Hunting Seasons for archery, muzzleloader, and firearm in Charles County, Maryland.*

Antlered Harvest	Antlered Harvest	Antlerless Harvest	Antlerless Harvest	Total Harvest	Total Harvest
2023-2024	2024-2025	2023-2024	2024-2025	2023-2024	2024-2025
1,050	1,356	1,383	2,013	2,433	3,368

## Impacts on Affected Resource

### **Alternative A – NO ACTION ALTERNATIVE**

Given the size of this parcel, any change in deer harvest here would be minimal to the overall population.

### **Alternative B – PROPOSED ACTION ALTERNATIVE**

Given the size of this parcel, any change in deer harvest here would be minimal to the overall population.

## Wild Turkey

### ***Description of Cumulative Impacts, Environmental Trends, and Planned Actions***

Charles County, MD had the highest turkey harvest by county for Maryland in 2024 (MDDNR, June 3, 2024).

The Maryland Department of Natural Resources (DNR) has conducted an annual summer wild turkey observation survey since 1993. The primary purpose of this long-term survey is to estimate reproductive success. This survey is conducted during the months of July and August by DNR personnel, previous participants, and the public. The Southern Region (Prince George, Calvert, Charles, and St. Mary's Counties) had the highest poult per hen ratio in the state at 3.0 poults per hen (MDDNR, 2024). Turkey numbers in this region grew in the mid 2000's but then had lower than average productivity from 2014 – 2023.

Table 2. Turkey harvest numbers reported from 2020 through 2024 in Charles County, MD.

Year	2020	2021	2022	2023	2024
Turkey Harvest Numbers	369	353	334	445	472

### Impacts on Affected Resource

#### Alternative A – NO ACTION ALTERNATIVE

Given the size of this parcel, and number of turkeys harvested in the county any change in turkey harvest would be minimal to the overall population.

#### Alternative B – PROPOSED ACTION ALTERNATIVE

Given the size of this parcel, and number of turkeys harvested in the county any change in turkey harvest would be minimal to the overall population.

## Threatened and Endangered Species, and Other Special Status Species

### Affected Environment

#### Description of Affected Environment for the Affected Resource

The refuge provides habitat for forest-dependent species such as northern long-eared bat (*Myotis septentrionalis*, federally endangered), tricolored bat (*Perimyotis subflavus*, proposed federally endangered), monarch butterfly (*Danaus plexippus*, proposed federally threatened), bald eagle (*Haliaeetus leucocephalus*), and migratory birds.

Laws related to these species include:

- Bald and Golden Eagle Protection Act, as amended, 16 U.S.C. 668-668c, 50 CFR 22
- Endangered Species Act of 1973, as amended, 16 U.S.C. 1531-1544; 36 CFR Part 13; 50 CFR Parts 10, 17, 23, 81, 217, 222, 225, 402, and 450
- Fish and Wildlife Act of 1956, 16 U.S.C. 742 a-m
- Lacey Act, as amended, 16 U.S.C. 3371 et seq.; 15 CFR Parts 10, 11, 12, 14, 300, and 904
- Migratory Bird Treaty Act, as amended, 16 U.S.C. 703-712; 50 CFR Parts 10, 12, 20, and 21
- Executive Order 13186 – Responsibilities of Federal Agencies to Protect Migratory Birds, 66 Fed. Reg. 3853 (2001). (Mention if there are T&E/SCGN species in the state and how the action may impact those species).

#### Description of Cumulative Impacts, Environmental Trends, and Planned Actions

Northern long-eared bats use mines and caves in the winter to hibernate and use forests to forage and roost throughout the rest of the year. Northern long-eared bats may occur in some areas in the hunting zones. The species is most sensitive to disturbance during hibernation and when raising

young, activities that are not known to occur on the refuge. Any incidental disturbance to non-breeding individuals would likely have a negligible impact on the species (USFWS, 2025c).

Northern long-eared bats have summering colonies in the Washington, DC area and are believed by researchers at Virginia Tech to move to southeast Virginia in the summer months where they roost singly or in colonies underneath bark, in cavities or in crevices of both live trees and dead trees (USFWS 2015).

The tricolored bat (*Perimyotis subflavus*) is one of the smallest bats native to North America. As its name suggests, the tricolored bat is distinguished by its unique tricolored fur that appears dark at the base, lighter in the middle and dark at the tip. The once common species is wide ranging across the eastern and central United States and portions of southern Canada, Mexico and Central America. During the winter, tricolored bats are found in caves and mines, although in the southern United States, where caves are sparse, tricolored bats are often found roosting in road-associated culverts. During the spring, summer and fall, tricolored bats are found in forested habitats where they roost in trees, primarily among leaves. They may in some areas during the spring turkey hunting season (USFWS, 2022b).

Monarch butterflies are pollinators that are well known for their impressive long-distance migration. Originally native to North America, the monarch butterfly has dispersed to other parts of the world and non-migratory populations are found from islands in the Pacific Ocean to the western edge of Europe. Despite this expansion, most monarchs continue to live and migrate in North America. North American migratory monarchs are divided into eastern and western populations. The Rocky Mountains generally divide these two populations, limiting their contact. However, the two populations are not completely isolated from each other and still occasionally interbreed. There are also non-migratory monarchs that remain year-round at the southern end of their breeding range in North America, including in parts of Florida, the Gulf Coast and California (USFWS, 2025b)

The eastern North American migratory monarch population is the largest population of monarchs, in both individuals and range. The eastern population encompasses upwards of 70% of the total North American monarch range. In the fall, they may fly more than 2,000 miles (3,000 km) to reach overwintering sites in Mexico.

Bald eagle populations in the lower 48 states continue to rise with an estimated population of 316,700 individuals, including 71,467 breeding pairs in 2019. The recovery of the bald eagle is one of the most well-known conservation success stories of all time. Even though bald eagles were delisted from the Endangered Species Act in August 2007, because their populations recovered sufficiently, bald eagles are still protected under the Migratory Bird Treaty Act and the Bald and Golden Eagle Protection Act. Both laws prohibit killing, selling, or otherwise harming eagles, their nests or eggs (USFWS, 2025a).

### **Impacts on Affected Resource**

Since Northern long-eared bats are most active during times and seasons when hunting is not occurring and in locations that do not overlap with archery hunting activities, adverse effects are not anticipated; therefore, no additional measures to reduce effects are needed.

Since tricolored bats are most active during times and seasons when hunting is not occurring and in locations of the forest which do not overlap with archery hunting activities, adverse effects are not anticipated; therefore, no additional measures to reduce effects are needed.

As temperatures warm at the overwintering sites in the spring, monarchs begin to breed and lay eggs on milkweed throughout their spring journey. The following generations breed and lay eggs throughout the spring and summer. Presence of this butterfly may overlap with the end of the spring turkey hunting season.

Bald eagles have been observed in the Nanjemoy watershed and may be present on the refuge during the hunting season (Audubon Maryland-DC 2016). Bald eagle nesting season starts around December 15 and continues throughout the times of most winter and spring hunts.

### **Alternative A – NO ACTION ALTERNATIVE**

Under this alternative we do not expect there will be any changes to impacts of federally threatened or endangered species.

### **Alternative B – PROPOSED ACTION ALTERNATIVE**

Hunting season may overlap with when bald eagles are present on the refuge. The spring archery hunting season for turkey briefly overlaps with when bats may be present in the forest. Given the size of the refuge, limited access, and abundant hunting opportunities elsewhere throughout the area, we expect no more than 10 hunters to use this refuge. Archery hunting has minimal noise impacts and is likely to have no significant impact to threatened, endangered or otherwise protected species.

## **Habitat and Vegetation (including vegetation of special management concern)**

### **Affected Environment**

#### ***Description of Affected Environment for the Affected Resource***

The refuge consists of 31.4 acres in Charles County, Maryland (Appendix C), is primarily upland forested habitat and is part of the coastal plain area of the state. The landscape of Maryland's Coastal Plain region is characterized by a broad plain with gently sloping watersheds, except where stream erosion has created steep slopes. Upland forests are dominated by beech, several species of oak, tulip poplar, hickory, and red maple (TNC 2002).

Southern Maryland Woodlands NWR is upland and west of a creek which feeds into Nanjemoy Creek. Approximately 80 percent of the Nanjemoy Creek watershed is forested. Most of the forests in the watershed consist of mature trees with small pockets of young pine and oak-pine woodlands. Much of the mature forest is comprised of deciduous trees including oak and hickory. Within this

assemblage are scattered mixed deciduous - coniferous forests and pure stands of loblolly and Virginia pine (Audubon Maryland-DC 2016).

***Description of Cumulative Impacts, Environmental Trends, and Planned Actions***

Previous landowners allowed hunting to take place on the parcel of land that is now Southern Maryland Woodlands with no noted previous effects to the habitat and vegetation.

**Impacts on Affected Resource**

**Alternative A – NO ACTION ALTERNATIVE**

No change would occur due to limited access to the refuge and its size.

**Alternative B – PROPOSED ACTION ALTERNATIVE**

Minimal impacts to the presence of archery hunters due to the size of the refuge, limited access, and small number of potential hunters.

**Visitor Use and Experience**

**Affected Environment**

***Description of Affected Environment for the Affected Resource***

Southern Maryland Woodlands NWR is a recently established refuge and is not currently open to any public uses. Hunting is a traditional and popular outdoor activity that we plan to offer on the existing refuge lands in accordance with the State and Federal seasons and regulations. We anticipate minimal participation initially as the refuge is small with limited access. However, as the refuge grows and we can offer more opportunities, we anticipate increased participation in the future.

***Description of Cumulative Impacts, Environmental Trends, and Planned Actions***

We do not anticipate impacts to other visitors currently since the refuge is closed to all other uses.

**Impacts on Affected Resource**

Currently there are limited direct and indirect impacts to wildlife-dependent recreation and visitor use on the refuge since the refuge is not yet open to other priority public uses. Opening the refuge for hunting will allow users unique opportunities to develop a deeper appreciation for the refuge and the wildlife resources present on the landscape.

**Alternative A-NO ACTION ALTERNATIVE**

Under the no action alternative, there would be no impact since the refuge would not be opened to hunting for the public.

**Alternative B-PROPOSED ACTION ALTERNATIVE**

This alternative would not change any of the impacts to the non-hunting public. The opportunities for recreational hunting would open to hunters for the first time, and therefore meet the local

demand for additional opportunities. Hunting on the refuge contributes to the State's wildlife management objectives, the management objectives of the refuges, and allows a traditional use to continue. As the refuge grows, opens to other priority public uses, and number of hunters increase, we will evaluate timing, duration, number of hunters, and other restrictions if necessary to reduce conflicts among different user groups.

## **Refuge Management and Operations**

### **Land Use on the Refuge**

#### **Affected Environment**

##### ***Description of Affected Environment for the Affected Resource***

The Southern Maryland Woodlands NWR currently has no permanent staff nor facilities. It is currently managed from the Northeast regional office in Hadley, MA with assistance from refuge management staff located at nearby refuges in Maryland and Virginia. Southern Maryland Woodlands NWR is forested land with a narrow easement used for access. The refuge is planned to grow within the 40,000-acre approved acquisition boundary and will eventually consist of multiple parcels that may offer additional opportunities for hunting access throughout the refuge.

##### ***Description of Environmental Trends and Planned Actions***

The land which currently comprises Southern Maryland Woodlands NWR is the first of what is planned for many parcels in which the refuge is expected to grow within the approved acquisition boundary.

#### **Impacts on Affected Resource**

##### **Alternative A: No Action Alternative**

No impact to the refuge lands or management capacity if this plan is not implemented.

##### **Alternative B: Proposed Action Alternative**

Annual operating costs for managing this new archery hunting program is estimated to be \$5,000 / year. This includes costs related to equipment, law enforcement, public outreach materials, collection and analysis of hunt data and biological information, and maintenance of access and signage. The refuge manager coordinates the budget each year to ensure funds are available. Hunters currently use refuge infrastructure, such as parking areas and refuge trails, to gain access to refuge lands. There would be no adverse impacts to refuge facilities observed under this alternative.

## **Monitoring**

Game species populations are monitored by MDDNR through field surveys and harvest reports generated by mandatory check-in of harvests. MDDNR has determined that populations of game species are at acceptable levels to support hunting, and these assessments are reviewed and adjusted periodically. The refuge will be adaptive towards harvest management under the hunt

program to ensure species and habitat health. Refuge-specific hunting regulations may be altered to achieve harvest objectives in the future.

## **Summary of Analysis**

### **Alternative A – Remain Closed to Hunting – No Action Alternative**

As described above, there would be no costs to the refuge under this alternative. There would be no opening of hunting for public use on the refuges. The refuge would not increase their impact to the economy and would not provide new hunting and access opportunities. In addition, this alternative would not meet mandates under the NWRSA and Secretarial Order 3356. There would be no effect to cultural resources and impacts to the socioeconomics of the area are negligible.

This alternative would not meet the purpose and needs of the Service as described above, because it would not provide wildlife-dependent recreation opportunities on the refuge meeting the Service's priorities and mandates.

### **Alternative B – Open Big Game Hunting – Proposed Action Alternative**

As described above, this alternative is the Service's preferred action because it offers the best opportunity for public hunting that would reduce the potential impacts on physical and biological resources, while meeting the Service's mandates under NWRSA and Secretarial Order 3356. This action is not likely to adversely affect endangered or threatened species or their critical habitat. Effects on other wildlife and habitat would be negligible and could be slightly positive.

## **List of Sources, Agencies and Persons Consulted**

Maryland Department of Natural Resources

### **List of Preparers**

Stacey Lowe, Refuge Supervisor

Rick Nye, Assistant Refuge Supervisor

### **State Coordination**

Coordination will occur with state partners throughout development of the plan, and annually to make adjustments as needed. National wildlife refuges, conduct hunting and fishing programs within the framework of State and Federal regulations.

### **Tribal Consultation**

Interested tribes will be engaged in the development of the hunt plan and the process.

## Public Outreach

Public will be notified of availability of the draft hunt plan, the compatibility determination, and this environmental assessment for an opportunity to comment on the draft documents and engage in the process.

## References

- Audubon MD-DC. 2016. Important Bird Areas. Nanjemoy Creek IBA.  
[https://md.audubon.org/sites/default/files/nanjemoy\\_iba\\_updated\\_jan2019.pdf](https://md.audubon.org/sites/default/files/nanjemoy_iba_updated_jan2019.pdf).
- Braun, E.L. 1950. Deciduous Forests of Eastern North America. Hafner Publishing Co., Inc., NY.
- Maryland Department of Natural Resources. 2020. White-tailed deer management plan 2020-2034.  
<https://dnr.maryland.gov/wildlife/Documents/2020-2034MarylandWTDeerPlan.pdf> Accessed May 9, 2021.
- Maryland Department of Natural Resources. 2021. Maryland Annual Deer Report 2020-2021.
- Maryland Department of Natural Resources. June 3, 2024. Maryland Spring Turkey Hunters Harvest, 4,959 Birds. [news.maryland.gov/dnr/2024/06/03/maryland-spring-turkey-hunters-harvest-4959-birds/](https://news.maryland.gov/dnr/2024/06/03/maryland-spring-turkey-hunters-harvest-4959-birds/).
- Maryland Department of Natural Resources. 2024. Wild Turkey Observation Survey Summary 2024.
- Maryland Department of Planning. 2010. A Summary of Land Use Trends in Maryland. The Maryland Department of Planning. 2010 Land Use/Land Cover product.
- Minnemeyer, S., J. Forrest, E. Wiggans, P. McCabe, K. Walker, E. Mills, R. Soobitsky, J. O'Neil-Dunne, M. Bouffard, E. Estabrook, K. Everts, J. Bollinger, A. Dubey, H. Huntley, and M. Kessler. 2022. Technical Study on Changes in Forest Cover and Tree Canopy in Maryland November 2022. Harry Hughes Center for Agro-Ecology, University of Maryland College of Agriculture and Natural Resources. 108 pp.
- The Nature Conservancy. 2002. Chesapeake Bay Lowlands Ecoregional Plan (1st draft, June, 27, 2002). Thorsnes, P. 2002. The value of a suburban forest preserve: Estimates from sales of vacant residential building lots. *Land Economics* 78(3):426-41.
- U.S. Fish & Wildlife Service. 2022a. Small whorled pogonia 5 year review.  
[ecos.fws.gov/docs/tess/species\\_nonpublish/3929.pdf](https://ecos.fws.gov/docs/tess/species_nonpublish/3929.pdf)
- U.S. Fish & Wildlife Service. 2022b. Tricolored Bat (*Perimyotis subflavus*).  
[www.fws.gov/species/tricolored-bat-perimyotis-subflavus](https://www.fws.gov/species/tricolored-bat-perimyotis-subflavus)
- U.S. Fish & Wildlife Service. 2024. Establishment of a new Southern Maryland Woodlands National Wildlife Refuge. Land Protection Plan 2024.

U.S. Fish & Wildlife Service, 2025a. Bald Eagle (*Haliaeetus leucocephalus*).  
www.fws.gov/species/bald-eagle-haliaeetus-  
leucocephalus<https://www.fws.gov/species/bald-eagle-haliaeetus-leucocephalus>

U.S. Fish & Wildlife Service. 2025b. Monarch (*Danaus plexippus*). www.fws.gov/species/monarch-  
danaus-plexippus<https://www.fws.gov/species/monarch-danaus-plexippus>

U.S. Fish & Wildlife Service. 2025c. Northern Long-eared Bat (*Myotis septentrionalis*).  
[www.fws.gov/species/northern-long-eared-bat-myotis-septentrionalis](https://www.fws.gov/species/northern-long-eared-bat-myotis-septentrionalis)

## **Regulations**

This section lists all applicable statutes, regulations, and executive orders not otherwise addressed in this EA, as well as how the proposed action and EA analysis comply with each, and any additional compliance steps taken by FWS.

### **Cultural Resources**

American Indian Religious Freedom Act, as amended, 42 U.S.C. 1996 – 1996a; 43 CFR Part 7.

Antiquities Act of 1906, 16 U.S.C. 431-433; 43 CFR Part 3.

Archaeological Resources Protection Act of 1979, 16 U.S.C. 470aa – 470mm; 18 CFR Part 1312; 32 CFR Part 229; 36 CFR Part 296; 43 CFR Part 7.

National Historic Preservation Act of 1966, as amended, 16 U.S.C. 470-470x-6; 36 CFR Parts 60, 63, 78, 79, 800, 801, and 810.

Paleontological Resources Protection Act, 16 U.S.C. 470aaa – 470aaa-11.

Native American Graves Protection and Repatriation Act, 25 U.S.C. 3001-3013; 43 CFR Part 10.

Executive Order 11593 – Protection and Enhancement of the Cultural Environment, 36 Fed. Reg. 8921 (1971).

### **Fish and Wildlife**

Bald and Golden Eagle Protection Act, as amended, 16 U.S.C. 668-668c, 50 CFR 22.

Endangered Species Act of 1973, as amended, 16 U.S.C. 1531-1544; 36 CFR Part 13; 50 CFR Parts 10, 17, 23, 81, 217, 222, 225, 402, and 450.

Fish and Wildlife Act of 1956, 16 U.S.C. 742 a-m.

Lacey Act, as amended, 16 U.S.C. 3371 et seq.; 15 CFR Parts 10, 11, 12, 14, 300, and 904.

Migratory Bird Treaty Act, as amended, 16 U.S.C. 703-712; 50 CFR Parts 10, 12, 20, and 21.

Executive Order 13186 – Responsibilities of Federal Agencies to Protect Migratory Birds, 66 Fed. Reg. 3853 (2001).

### **Natural Resources**

Clean Air Act, as amended, 42 U.S.C. 7401-7671q; 40 CFR Parts 23, 50, 51, 52, 58, 60, 61, 82, and 93; 48 CFR Part 23.

Wilderness Act, 16 U.S.C. 1131 et seq.

Wild and Scenic Rivers Act, 16 U.S.C. 1271 et seq.

Executive Order 13112 – Invasive Species, 64 Fed. Reg. 6183 (1999).

## **Water Resources**

Coastal Zone Management Act of 1972, 16 U.S.C.1451 et seq.; 15 CFR Parts 923, 930, 93.

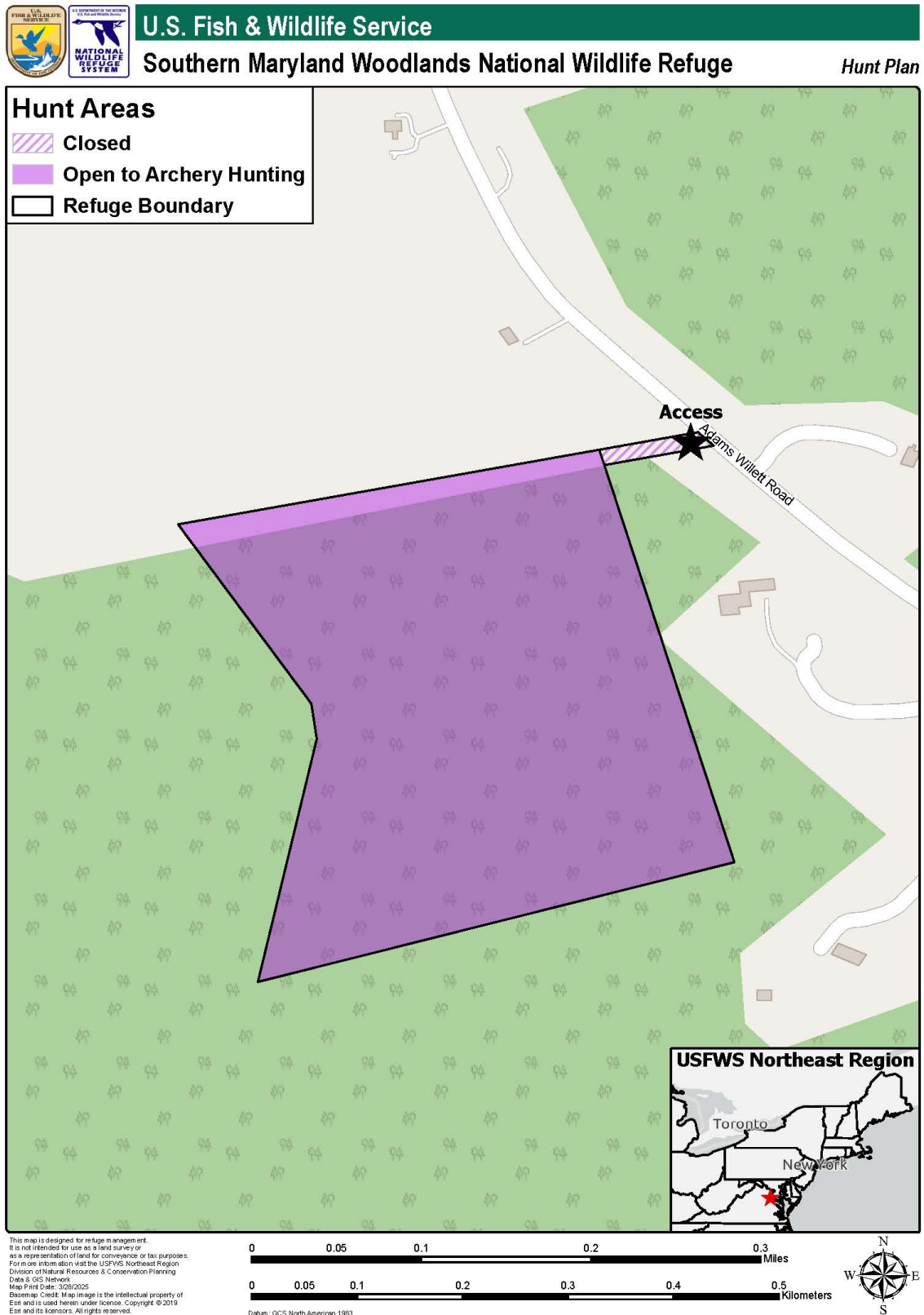
Federal Water Pollution Control Act of 1972 (commonly referred to as Clean Water Act), 33 U.S.C. 1251 et seq.; 33 CFR Parts 320-330; 40 CFR Parts 110, 112, 116, 117, 230-232, 323, and 328.

Rivers and Harbors Act of 1899, as amended, 33 U.S.C. 401 et seq.; 33 CFR Parts 114, 115, 116, 321, 322, and 333. Safe Drinking Water Act of 1974, 42 U.S.C. 300f et seq.; 40 CFR Parts 141-148.

Executive Order 11988 – Floodplain Management, 42 Fed. Reg. 26951 (1977).

Executive Order 11990 – Protection of Wetlands, 42 Fed. Reg. 26961 (1977).

## Appendix C Hunt Plan Map



**Land Protection Plan Boundary (Draft)**

**Patuxent Research Refuge**

**County Boundary**

**Patuxent River National Wildlife Refuge**

**Units:**

- Nanjemoy - Mattawoman Unit
- Zekiah Swamp - Wicomico Unit
- Lower Patuxent - Calvert Unit
- McIntosh Run - St. Mary's Unit

**Geographic Features:**

- Chesapeake Bay
- Potomac River
- Patuxent River

**Counties:**

- Prince George's
- Anne Arundel
- Calvert
- St. Mary's
- Charles
- Montgomery
- Prince Georges
- St. Marys

**Scale:** 0 5 10 Miles

**North Arrow:** N