



## U.S. Fish and Wildlife Service

# **Silvio O. Conte National Fish and Wildlife Refuge**

New Hampshire and Vermont Recreational Hunting and Fishing Plan April 2023



Nulhegan River – Tom LaPointe/USFWS

Appendix A – Hunting Compatibility Determination Appendix B – Supplemental Environmental Assessment

## Silvio O. Conte National Fish and Wildlife Refuge Recreational Hunting and Fishing Plan for New Hampshire and Vermont

April 2023

U.S. Fish and Wildlife Service

#### Silvio O. Conte National Fish and Wildlife Refuge 5396 VT Route 105 Brunswick, VT 05905

| Submitted By:<br>Project Leader |      |
|---------------------------------|------|
| Signature                       |      |
|                                 |      |
| Concurrence:                    |      |
| Refuge Supervisor               |      |
| Signature                       | Date |
| Approved:                       |      |
| Acting Regional Chief,          |      |
| National Wildlife Refuge System |      |
| National whome Keruge System    |      |
| Signature                       | Date |

# **Table of Contents**

| I. INTRODUCTION   | 4      |
|---|--------|
| II. STATEMENT OF OBJECTIVES   | 6      |
| III. DESCRIPTION OF HUNTING AND FISHING PROGRAM   | 6      |
| A. Areas to be Opened to Hunting or Fishing   | 6      |
| B. Species to be Taken, Periods, and Access   |        |
| C. Permit Requirements  |        |
| D. Consultation and Coordination with the State   |        |
| E. Law Enforcement.   | 9      |
| F. Funding and Staffing Requirements  |        |
| IV. CONDUCT OF THE HUNTING AND FISHING PROGRAM  |        |
| A. Application, Selection and Registration Procedures   |        |
| B. Refuge-Specific Hunting and Fishing Regulations  |        |
| C. Other Relevant Rules and Regulations   |        |
| V. PUBLIC ENGAGEMENT  |        |
| A. Outreach for Announcing and Publicizing the Hunting and Fishing Program  |        |
| B. Anticipated Public Reaction to the Hunting and Fishing Program   |        |
| C. How Users Will Be Informed of Relevant Rules and Regulations   |        |
| VI. COMPATIBILITY DETERMINATIONS  |        |
| VII. REFERENCES   |        |
|   |        |
| List of Tables  | 7      |
| Table 1. Silvio O. Conte Divisions and Units Open to Hunting  | /<br>7 |
| Table 3. Anticipated Costs for Administration   |        |
|   |        |
| List of Figures   | 1 1.4  |
| Figure 1. Map of the Conte Refuge Divisions and Units within Vermont and New Hamps Figure 2. Map of the Blueberry Swamp |        |
| Figure 3. Map of the Fairgrounds Unit   |        |
| Figure 4. Map of the Pondicherry Division.  |        |
| Figure 5. Map of the Saddle Island Unit   |        |
| Figure 6. Map of the Mascoma Easement   |        |
| Figure 7. Map of the Nulhegan Basin Division  |        |
| Figure 8. Map of the Putney Mountain Unit   |        |
| Appendices  |        |
| Appendix A. Hunting Compatibility Determination   | A-1    |
| Appendix B. Supplemental Environmental Assessment   |        |

#### Silvio O. Conte National Fish and Wildlife Refuge Recreational Hunting and Fishing 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, FWS) policy, laws, and international treaties. Relevant guidance includes the National Wildlife Refuge System Administration Act (NWRSAA) 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.

Silvio O. Conte National Fish and Wildlife Refuge (Silvio O. Conte NFWR, Conte Refuge, refuge) was established pursuant of the Silvio O. Conte National Fish and Wildlife Refuge Act (Public Law 102-212). Additional lands were acquired under the Migratory Bird Conservation Act of 1929 (16 U.S.C. 715-715r, 45 Stat. 1222), as amended, and the Land and Water Conservation Fund Act of 1965 (Public Law 88-578).

The primary purposes of the refuge are:

- To conserve, protect, and enhance the Connecticut River populations of Atlantic salmon, American shad, river herring, shortnose sturgeon, bald eagles, peregrine falcons, osprey, black ducks, and other native species of plants, fish and wildlife;
- To conserve, protect, and enhance the natural diversity and abundance of plant, fish, and wildlife species and the ecosystem upon which these species depend within the refuge;
- To protect species listed as endangered, threatened, or identified as candidates for listing pursuant to the Endangered Species Act of 1973 (ESA), as amended (16 U.S.C. 1531 et seq.);
- To restore and maintain the chemical, physical, and biological integrity of wetland and other waters within the refuge;
- To fulfill the international treaty obligations of the United States relating to fish, wildlife, and wetlands; and
- To provide opportunities for scientific research, environmental education, and fish and wildlife-oriented recreation and access to the extent compatible with the other purposes stated in this section.

The Conte Refuge was established in 1997 when the Connecticut River Watershed Council donated Third Island in Deerfield, Massachusetts to the Service. Named in honor of Silvio O. Conte, the late Congressman who represented Massachusetts's First Congressional District from 1959 until his death in 1991, Conte Refuge was established in the 7.2 million-acre Connecticut River Watershed in Connecticut, Massachusetts, New Hampshire, and Vermont to conserve native fish, plants, and wildlife. Since its establishment, refuge-owned lands have grown to 22 units and divisions totaling more than 40,081 acres. These lands encompass a variety of unique

habitats including northern forest, valuable as nesting habitat for migrant thrushes, warblers, and other birds; rivers and streams used by mussels, shad, salmon, trout, herring and other migratory fishes; floodplains, forested swamps and peatlands which support a high diversity of rare plants and invertebrates; and an internationally important complex of high quality tidal fresh, brackish, and salt marshes.

Regulated sport hunting and fishing has been an important management tool and recreational activity at Silvio O. Conte NFWR for over a decade. Hunting and fishing pressure on the New Hampshire and Vermont divisions can be described as moderate to light with a limited number of hunters and anglers participating.

The New Hampshire portion of the refuge encompasses 10,293 acres and receives approximately 25,000 visitors each year. We estimate that hunters account for about 500 of the visits and anglers account for 400 visits annually. The Vermont portion of the refuge encompasses 26,887 acres and receives approximately 30,000 visitors each year. We estimate that hunters account for 1,000 of the visits and anglers account for 500 visits annually.

The mission of the Refuge System, as outlined by the NWRSAA, 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 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).

The act further 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-Silvio O. Conte NFWR Recreational Hunting and Fishing Plan 5

dependent recreational uses; and

• Monitor the status and trends of fish, wildlife, and plants in each refuge.

#### II. STATEMENT OF OBJECTIVES

Based on the mixture of habitat types and staff observations, the most popular hunting on the Conte NFWR is for white-tailed deer, snowshoe hare, American woodcock, and ruffed grouse. The refuge adopted State hunting regulations for the divisions/units in both states along with some additional refuge-specific regulations to minimize conflicts with other refuge objectives and visitor activities. The cold-water stream habitats provide excellent fishing opportunities for brook trout and is the most popular species for anglers. The refuge follows State fishing regulations for all areas open to anglers. The hunting and fishing programs will be reviewed annually.

The objectives of hunting and fishing programs on Silvio O. Conte NFWR are to:

- Provide the public with a high-quality recreational experience on refuge lands and increase opportunities and access for hunters and anglers;
- Design a hunting and fishing program that is administratively efficient and manageable with existing staffing levels and that aligns with State regulations when possible;
- Implement a hunting and fishing program that is safe for all refuge users;
- Provide hunting and fishing opportunities for youth and those that need assistance; and
- Design a hunting and fishing program that aligns with refuge habitat management objectives.

#### III. DESCRIPTION OF HUNTING AND FISHING PROGRAM

#### A. Areas to be Opened to Hunting or Fishing

The five refuge units and divisions in New Hampshire and the two in Vermont have a diversity of habitat types from early to late successional forests, grasslands, wetlands, streams to open water. This matrix of lands, including some lands with high densities of target species, supports a wide variety of species. The hunting and fishing program on refuge lands in each State will be in accordance with Federal, State and refuge-specific regulations.

We are proposing all refuge lands that are found to be compatible with hunting and fishing be opened. See Table 1 below for the units and divisions that are open to hunting.

Table 1. Silvio O. Conte Division and Unit Acres Open to Hunting

| Division/Unit            | Acres Open to Hunting |
|--------------------------|-----------------------|
| New Hampshire            |                       |
| Blueberry Swamp Division | 1,236                 |
| Fairgrounds Unit         | 48                    |
| Pondicherry Division     | 6,471                 |
| Saddle Island Unit       | 1                     |
| Mascoma Division         | 2,537                 |
| Total Acres (NH)         | 10,293                |
| Vermont                  |                       |
| Nulhegan Basin Division  | 26,602                |
| Putney Mountain Unit     | 285                   |
| Total Acres (VT)         | 26,887                |
| TOTAL                    | 36,804                |

Recreational fishing would be conducted on and from the banks of all water bodies open to fishing within the boundaries of the Conte Refuge in New Hampshire and Vermont. See Table 2 below for the rivers, streams and ponds located within the refuge boundary that provide fishing opportunities:

Table 2. Rivers, Streams and Ponds by Division/Unit Open to Fishing

| Division/Unit            | Areas Open to Fishing   |  |
|--------------------------|---|--|
| New Hampshire            |   |  |
| Blueberry Swamp Division | East Branch of Simms Stream   |  |
| Fairgrounds Unit         | None  |  |
| Pondicherry Division     | John's River, Stanley Slide Brook, Ayling Brook,<br>Cherry Pond, Little Cherry Pond, Hazen's Pond |  |
| Saddle Island            | Connecticut River   |  |
| Mascoma Division         | Mascoma River and Clark Pond  |  |
|                          |   |  |
| Vermont                  |   |  |
|                          | Black Branch, Logger Branch, North Branch,  |  |
|                          | Nulhegan River, Tim Carrol Brook, Yellow  |  |
|                          | Branch, Lewis Pond  |  |
| Putney Mountain Unit     | Beaver Ponds  |  |

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

New Hampshire Species and Regulations

Approximately 10,293 acres would be open to hunting on New Hampshire refuge lands for the following species:

<u>**Big Game**</u> – Moose, white-tailed deer, black bear, and turkey hunting would be permitted on the New Hampshire units of the refuge.

<u>Furbearers</u> – Coyote, fisher, fox (red and gray), opossum, porcupine, skunk, raccoon, mink, muskrat, opossum, weasel, and woodchuck hunting would be permitted on the New Hampshire units of the refuge.

<u>Small Game</u> – Eastern cottontail rabbit, snowshoe hare and gray squirrel hunting would be permitted on the New Hampshire units of the refuge.

<u>Game Bird</u> – Coot, crow, pheasant, ruffed grouse, duck, light geese, dark geese, Wilson's snipe, and woodcock hunting would be permitted on the New Hampshire units of the refuge.

Vermont Species and Regulations

<u>**Big Game**</u> – Moose, white-tailed deer, black bear, and turkey hunting would be permitted on Vermont units of the refuge.

<u>Furbearers</u> – Bobcat, coyote, red and gray fox, raccoon, skunk, muskrat, opossum, weasel, and woodchuck hunting would be permitted on the Vermont units of the refuge.

<u>Small Game</u> – Eastern cottontail, snowshoe hare and gray squirrel hunting will be permitted on the Vermont units of the refuge.

<u>Game Bird</u> – Coot, crow, pheasant, ruffed grouse, duck, light geese, dark geese, Wilson's snipe, and woodcock hunting would be permitted on the Vermont units of the refuge.

Refuge lands would be open to hunting consistent with the State of New Hampshire and State of Vermont hunting seasons with some additional restrictions to protect wildlife and habitat, and to reduce potential public use conflicts. Access to refuge hunting land would be from public roads and adjoining public lands and water.

Access to refuge hunting land would be from public roads and adjoining public lands and water.

#### Fishing

The Connecticut River Watershed supports a diversity of fishery resources. Cold, cool, and warm water species are abundant throughout the watershed. The cold-water tributaries within the New Hampshire and Vermont portion of the refuge provide important habitat for brook trout, rainbow trout, and brown trout. Refuge ponds provide habitat for the usual warm water

fish species including pumpkinseed, yellow perch, and pickerel.

Recreational fishing would be conducted under the State of New Hampshire's regulations for open water and ice fishing and State of Vermont regulations for inland fisheries with some additional restrictions to protect fish, wildlife, and habitat and to reduce potential public use conflicts. During the State fishing seasons, fishing may occur between 1 1/2-hour before sunrise to 1 1/2-hour after sunset.

#### C. Permit Requirements

No refuge-specific permit is required.

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

Silvio O. Conte NFWR will work with the New Hampshire Fish and Game (NHDFG) and Vermont Fish and Wildlife (VTDFW) staffs to ensure safe and enjoyable recreational hunting and fishing opportunities. The States were key partners and engaged throughout the Comprehensive Conservation Planning (CCP) process completed in 2016, which addressed hunting and fishing.

Refuge and Regional Office staffs have continued to meet and discuss hunting and fishing opportunities on all refuge lands with State partners, most recently in 2020. Law Enforcement Officers from both agencies work together to conduct patrols, safeguard hunters and visitors, and protect both game and nongame species.

#### E. Law Enforcement

Enforcement of refuge violations is associated with the management of a national wildlife refuge and is the responsibility of Refuge Law Enforcement Officers. Other Fish and Wildlife Officers include FWS Special Agents, NH Conservation Officers, and VT Game Wardens. Local police department officers occasionally assist Refuge Law Enforcement Officers.

#### F. Funding and Staffing Requirements

Annual hunt administration costs for Silvio O. Conte NFWR, including salary, equipment, law enforcement, maintenance of sites, and communication with the public is approximately \$45,000 annually, including an additional \$15,000 the first year for new infrastructure. Specific to the recreational fishing program, annual costs are anticipated to average \$8,000 per year (primarily for law enforcement).

**Table 3. Anticipated Costs for Hunt Administration** 

| Identifier                    | Cost     |
|-------------------------------|----------|
| Maintenance Workers           | \$10,000 |
| Refuge Managers               | \$10,000 |
| Visitor Services Manager      | \$5,000  |
| Supplies/Brochures*           | \$5,000  |
| Kiosks Signs*                 | \$10,000 |
| Trail/parking lot maintenance | \$5,000  |
| Total to implement (hunt)     | \$45,000 |
| Supplies/Brochures            | \$1,000  |
| Monitoring Resource Impacts   | \$1,000  |
| Signage (Parking, etc.)       | \$1,000  |
| Law Enforcement               | \$5,000  |
| Total to implement (fish)     | \$8,000  |
| TOTAL (hunting and fishing)   | \$53,000 |

<sup>\*</sup>Not an annual cost

#### IV. CONDUCT OF THE HUNTING AND FISHING PROGRAM

Listed below are refuge-specific regulations that pertain to Silvio O. Conte NFWR as of the date of this plan. These regulations may be modified as conditions change or if refuge expansion continues or occurs.

#### A. Application, Selection and Registration Procedures

No special application or registration is needed for hunting or fishing.

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

To ensure compatibility with refuge purposes and the mission of the Refuge System, hunting and fishing must be conducted in accordance with State and Federal regulations, as supplemented by refuge-specific regulations (50 CFR Chapter 1, Subchapter C), and information sheets/brochures. Refuge-specific stipulations are also detailed in the Hunting Compatibility Determination (CD) (Appendix A).

- Excluding the Nulhegan Basin Divisions, refuge lands are closed to night hunting. Hunters are allowed on refuge lands from 1 ½-hour before sunrise and 1 ½-hour after sunset.
- We prohibit shooting from, over, or within 25 feet of the traveled portion of any road that is accessible to motor vehicles, with the exception of a permanently disabled hunter with the proper state and refuge issued special use permit.
- Tree stands, blinds and other hunting equipment must be removed from the refuge within 72 hours after the regulated hunting season has ended.

- We allow the use of dogs consistent with State regulations, except hunters using more than two dogs must possess a Special Use Permit (FWS Form 3-1383-G) issued by the refuge manager.
- At the Putney Mountain Unit, we allow the use of dogs only for hunting ruffed grouse.
- We will allow training of dogs following State regulations, from August 1 through the last Saturday in September during daylight hours, if the trainer possesses a Special Use Permit (FWS Form 3-1383-G) issued by the refuge manager.
- Take of amphibians, reptiles and baitfish is prohibited.

#### C. Other Relevant Rules and Regulations

#### **Hunting**

Hunting has been permitted on Silvio O. Conte NFWR lands through pre-acquisition compatibility determinations for many years since most of the refuge land was known hunting grounds historically. All refuge lands will be open to hunting unless posted closed, and hunting will conform to State seasons when applicable and be in accordance with Federal, State, and refuge-specific regulations for archery, firearms, and muzzleloader. Hunt brochures and maps for all hunting opportunities will be updated regularly and made available to hunters on the refuge website.

Hunters will be able to access the refuge by public roads and by foot. Areas may be closed if there are unacceptable resource impacts such as soil erosion, repeated disturbance to susceptible wildlife, or unresolvable conflicts with other compatible priority public uses. The need for site closures will be considered by the refuge manager on a case-by-case basis. We will maintain a safe hunt by establishing safety/no hunt zones around refuge residences, buildings, and high-use public use trails as necessary.

Lead is a well-known toxin to people and wildlife and even small amounts can have adverse health effects. Hunters are encouraged to use non-lead ammunition.

#### **Fishing**

At the discretion of the refuge manager, some areas may be seasonally, temporarily, or permanently closed to fishing if wildlife impacts, habitat impacts, or user conflicts are documented. Unauthorized introductions of both non-native and native fish can disrupt aquatic ecosystems and destroy natural fisheries. No fish of any species may be introduced onto the refuge without appropriate State and refuge permits. This includes unused bait fish and viable eggs.

Anglers may access refuge lands via public roads, bicycle, or pedestrian access. Areas may be closed if there are unacceptable resource impacts such as soil erosion, repeated disturbance to susceptible wildlife, or unresolvable conflicts with other compatible priority public uses. The need for site closures will be considered by the refuge manager on a case-by-case basis.

Hunting and fishing programs will be reviewed annually or as needed to assess its effectiveness and to ensure wildlife populations and habitat quality are managed appropriately.

#### V. PUBLIC ENGAGEMENT

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

The refuge maintains a mailing list of newspapers, radio, television stations, and websites for news release purposes. Special announcements and articles may be released in conjunction with hunting seasons. In addition, information about hunting and fishing will be available at refuge office and on the refuge website.

#### B. Anticipated Public Reaction to the Hunting and Fishing Program

While there are members of the public that do not support hunting and fishing on refuges, we are supported by many people who are eager to engage in these long-standing conservation activities. Hunting and fishing are important economic and recreational uses of natural resources and can be important wildlife management tools.

On April 12, 2021, we distributed a press release to news organizations and alerted the public about the availability of the draft Recreational Hunting and Fishing Plan, with the Compatibility Determinations (CD) and Environmental Assessment (EA). The plan was sent directly to local town representatives and partners. No public meetings were held due to restrictions on public gatherings due to COVID-19. The refuge manager did answer questions about the hunt plan by phone throughout the comment period. The public comment period ended on July 6, 2021, a total of 86 days. A total of 711 individuals and organizations offered input to the refuge.

No public use conflicts are expected to occur on the refuge during the hunting seasons. The refuge has managed hunting for over a decade with little to no conflict among refuge user groups. Overall, impacts to visitor services and recreation opportunities are considered short-term, minor, and local. Conflicts and negative interactions among hunters are possible if they compete for hunting areas. The refuge reserves the right to implement new regulations, close areas to hunting, or revoke current and future access to the refuge from hunters.

A Supplemental Environmental Assessment (EA or Supplemental EA) is being prepared in response to recent litigation and is an effort to avoid further litigation over issues that can be easily remedied. Therefore, the Service is reconsidering its August 2021 decision regarding dog training and hunting on the Conte NFWR. This new Conte NFWR New Hampshire and Vermont Recreational Hunting and Fishing Plan (the plan or the rule) will provide the public with a fulsome opportunity to comment on the proposed rule and the Service will then issue a final rule that will supersede the current rule. Notably, the 2021 final Hunting and Fishing plan, prepared and approved by the Service in August 2021 is hereafter referred to as the 2021 EA. The Service issued a Finding of No Significant Impact (FONSI) for the proposed action and 2021 EA on August 17, 2021. Reference 86 Fed. Reg. 48,822, 48, 879f or the 2021 FONSI and 2021 final rule. A list of laws and executive orders evaluated through this EA is included at the end of this document.

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

Directions and maps are available on the station website at: <a href="https://www.fws.gov/Refuge/silvio">https://www.fws.gov/Refuge/silvio</a> o conte/ and at the refuge office. General information

regarding hunting and other public uses can be obtained by calling 802-962-5240 or at the Nulhegan Basin Division office at 5396 VT Route 105, Brunswick, VT 05905.

#### VI. COMPATIBILITY DETERMINATIONS

Hunting, fishing, and all associated program activities proposed in this plan are compatible with the purposes of the refuge. See Appendix A for included CD.

#### VII. REFERENCES

New Hampshire Hunting Seasons & Regulations- 2020. https://www.wildlife.state.nh.us/hunting/index.html

Vermont Hunting Seasons & Regulations- 2020. https://vtfishandwildlife.com/hunt/hunting-regulations

U.S. Fish and Wildlife Service. 2017. Waterfowl: Population Status, 2017. USFWS, Laurel, MD. 74pp.

Figure 1. Map of Silvio O. Conte NFWR Divisions and Units within New Hampshire and Vermont

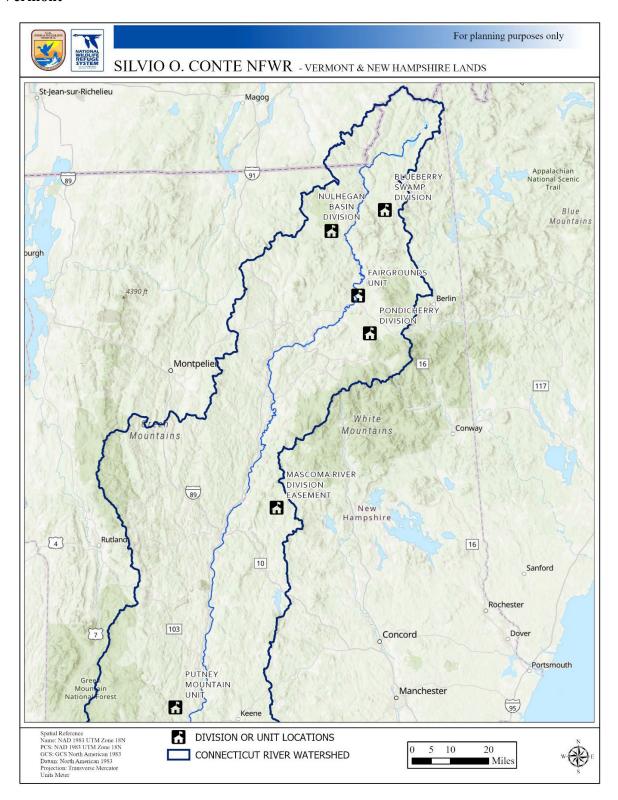


Figure 2. Map of the Blueberry Swamp Division of Silvio O. Conte NFWR

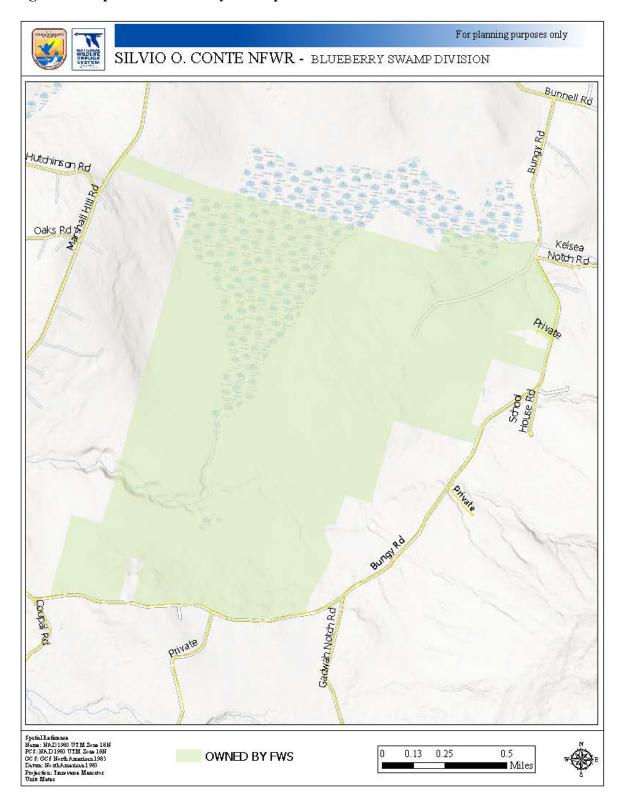


Figure 3. Map of the Fairgrounds Unit of Silvio O. Conte NFWR

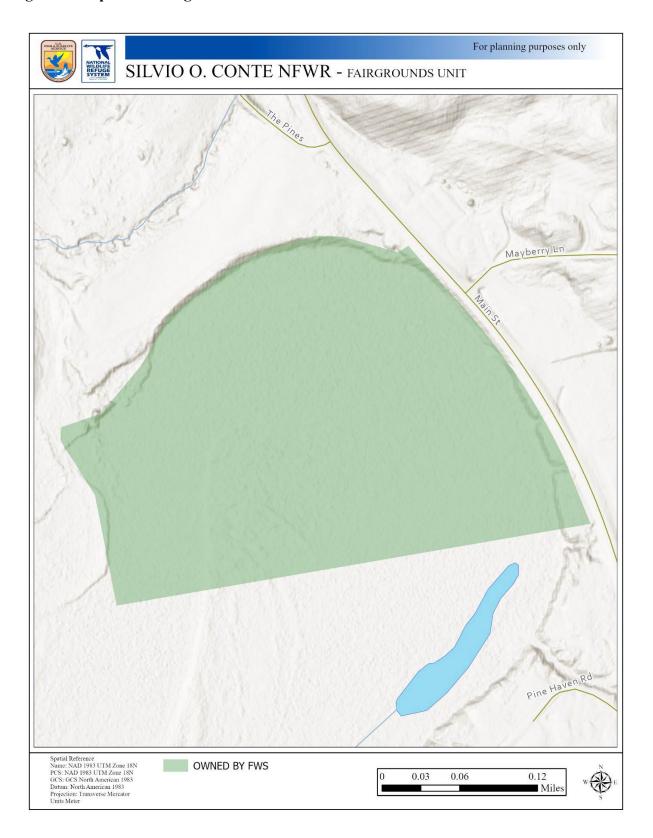


Figure 4. Map of the Pondicherry Division of Silvio O. Conte NFWR

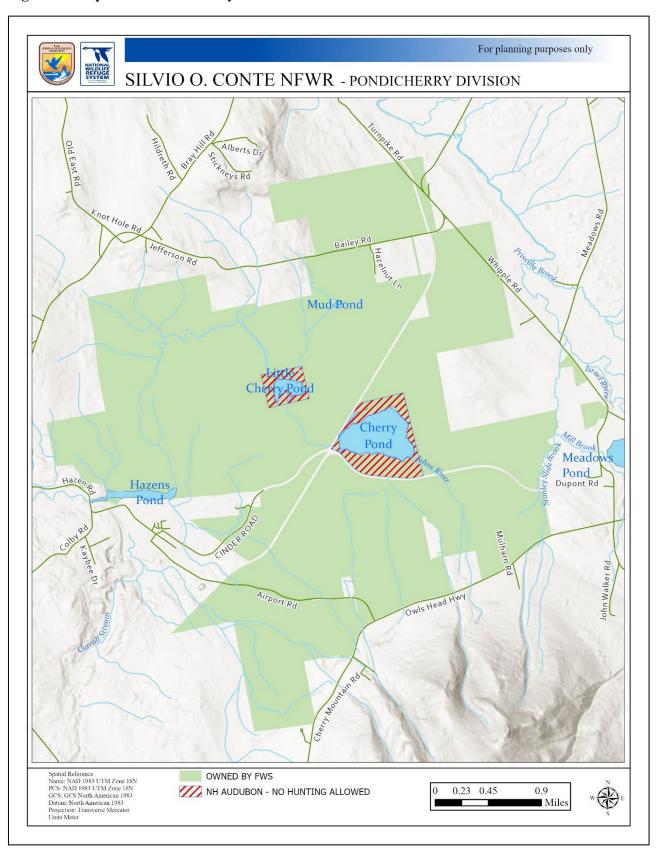


Figure 5. Map of the Saddle Island of Silvio O. Conte NFWR



Figure 6. Map of the Mascoma Division of Silvio O. Conte NFWR



Figure 7. Map of the Nulhegan Basin Division of Silvio O. Conte NFWR

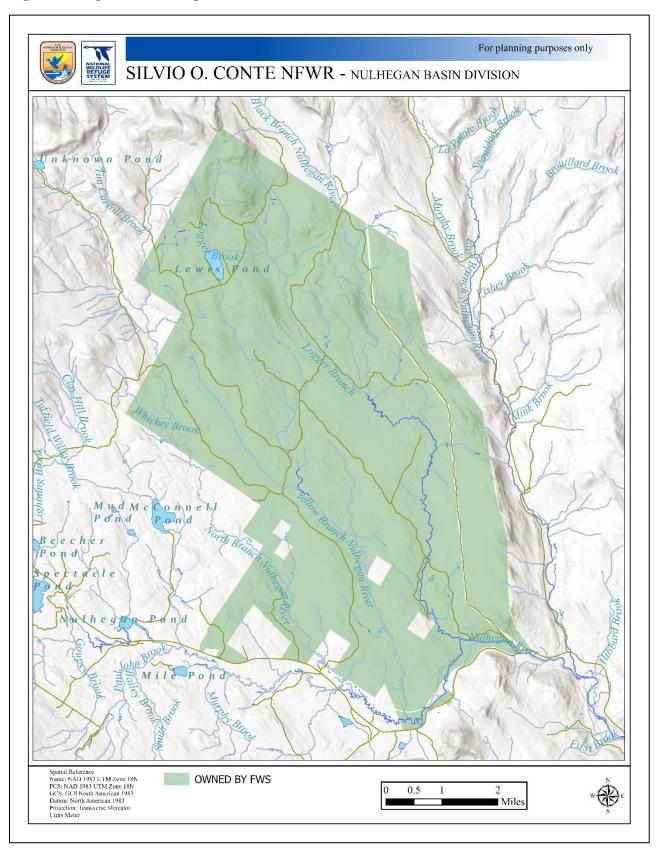
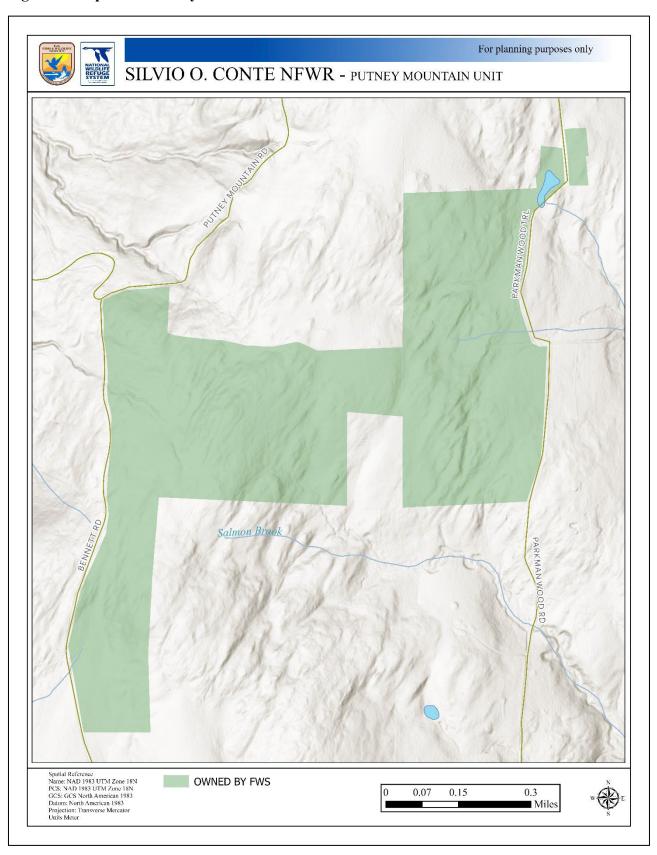


Figure 8. Map of the Putney Mountain Unit of Silvio O. Conte NFWR



#### **COMPATIBILITY DETERMINATION**

**USE:** Hunting (in New Hampshire and Vermont)

**REFUGE NAME:** Silvio O. Conte National Fish and Wildlife Refuge

**DATE ESTABLISHED:** October 3, 1997

#### **ESTABLISHING and ACQUISITION AUTHORITY(IES):**

- Silvio O. Conte National Fish and Wildlife Refuge Act (Public Law 102-212).
- Migratory Bird Conservation Act of 1929, as amended, (16 U.S.C. § 715d).
- Land and Water Conservation Fund Act of 1965 (Public Law 88-578)

#### **REFUGE PURPOSE(S):**

The purposes of the Silvio O. Conte National Fish and Wildlife Refuge (NFWR, Conte Refuge, refuge) are:

- "To conserve, protect, and enhance the Connecticut River populations of Atlantic salmon, American shad, river herring, shortnose sturgeon, bald eagles, peregrine falcons, osprey, black ducks, and other native species of plants fish and wildlife;
- To conserve, protect, and enhance the natural diversity and abundance of plant, fish, and wildlife species, and the ecosystem upon which these species depend within the refuge;
- To protect species listed as endangered or threatened, or identified as candidates for listing, pursuant to the Endangered Species Act of 1973 (ESA), as amended (16 U.S.C. 1531 et seq.);
- To restore and maintain the chemical, physical, and biological integrity of wetland and other waters within the refuge;
- To fulfill the international treaty obligations of the United States relating to fish, wildlife, and wetlands;
- To provide opportunities for scientific research, environmental education, and fish and wildlife-oriented recreation and access to the extent compatible with the other purposes stated in this section" Public Law 102-212 (Silvio O. Conte National Fish and Wildlife Refuge Act).
- "...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds" 16 U.S.C. § 715d (Migratory Bird Conservation Act);

• "...for the development, management, advancement, conservation, and protection of fish and wildlife resources by purchase or exchange of land and water or interests therein "16 U.S.C. § 460l (Land and Water Conservation Fund Act of 1965, as amended).

#### 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 big game, small game, and migratory game birds on Conte Refuge lands in New Hampshire and Vermont. Hunting was identified as one of six priority public uses of the Refuge System by the National Wildlife Refuge System Administration Act (NWRSAA of 1966, as amended by the Refuge System Improvement Act of 1997 (Public Law 105-57), when found to be compatible. While dog training is not a priority public use, it is often associated with hunting activities (i.e., hunting birds, furbearers, big game, and small game) as a component of the hunting experience.

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

Hunting would occur on five refuge units and divisions in New Hampshire and two in Vermont. Hunting with and training of dogs will be conducted on the portions of the refuge open to hunting with the exception of the Putney Mountain Unit, where dogs may only be used for ruffed grouse hunting.

In New Hampshire, the units and divisions opening to hunting would be the Blueberry Swamp Division in Columbia, the Fairgrounds Unit in Lancaster, the Pondicherry Division in Carroll, Jefferson and Whitefield, the Saddle Island Unit in Bath, and the Mascoma Division in Canaan and Lyme. (see Recreational Hunting and Fishing Plan, Figures 2 through 6).

In Vermont, the Nulhegan Basin Division in Bloomfield, Brunswick, Ferdinand and Lewis, and the Putney Mountain Unit in Putney would open to hunting. (see Recreational Hunting and Fishing Plan, Figures 7 and 8). Hunting may eventually be opened on new lands acquired and added to existing divisions if the uses are found compatible.

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

Refuge lands would be open to hunting consistent with the State of New Hampshire and State of Vermont hunting seasons with some additional restrictions to protect wildlife and habitat, and to reduce potential public use conflicts. Refuge property would be open to hunting from 1 1/2-hour before sunrise to 1 1/2-hour after sunset. Night hunting is prohibited except by special use permit at the Nulhegan Basin Division.

Hunting with dogs will be consistent with the State of New Hampshire and State of Vermont hunting seasons with the exception of the Putney Mountain Unit, where dogs may only be used

for ruffed grouse hunting. Dog training will occur from August 1 to the last Saturday in September during daylight hours.

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

All refuge lands would be open to hunting unless posted closed and hunting will conform to State seasons and be in accordance with State, Federal, and refuge-specific regulations for archery, firearms, and muzzleloader. Hunt brochures and maps for all hunting opportunities will be updated regularly and made available to hunters on the refuge website. Hunters would access refuge lands via public roads or by foot. Areas may be closed if there are unacceptable resource impacts such as soil erosion, repeated disturbance to susceptible wildlife, or unresolvable conflicts with other compatible priority public uses. The need for site closures will be considered by the refuge manager on a case-by-case basis.

The hunting program will be reviewed annually or as needed to assess its effectiveness and to ensure wildlife populations and habitat quality are managed appropriately.

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

Hunting is one of the priority public uses outlined in the Refuge System Improvement Act. The Service supports and encourages priority uses when they are appropriate and compatible on refuges. Hunting is a recreational use of renewable natural resources that is deeply rooted in America's heritage. Hunting is also an important wildlife management tool.

The hunting program will 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. Hunting will promote a priority public use of the Refuge System and support the stewardship of our natural resources and increase the public's appreciation and support for the refuge. While dog training is not a priority public use, it is closely associated with the hunting experience.

#### **AVAILABILITY OF RESOURCES:**

There are sufficient funds within the refuge's annual operating budget to administer this hunting program. All hunts will be administered in accordance with existing Federal and State regulations.

Table A-1. Estimated Costs of Hunting

| Identifier                    | Costs    |
|-------------------------------|----------|
| Maintenance Workers           | \$10,000 |
| Refuge Managers               | \$10,000 |
| Visitor Services Manager      | \$5,000  |
| Supplies/Brochures*           | \$5,000  |
| Kiosks Signs*                 | \$10,000 |
| Trail/parking lot maintenance | \$5,000  |
| Total to implement            | \$45,000 |

<sup>\*</sup>Not an annual cost

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

Hunting has occurred on some refuge lands for many years with no discernible adverse impacts to resources. Hunting provides wildlife-dependent recreational opportunities that can foster a better appreciation and more complete understanding of wildlife and habitat, which can translate into stronger support for wildlife conservation, the refuge, the Refuge System, and the Service.

#### Vegetation

The current number of hunters comprises a small fraction of the refuge's total visitation. Hunters traverse areas that are open to other refuge visitors and often travel on existing roads and game trails. Some foot travel is anticipated from hunting, but it will generally be dispersed over large areas. The physical effects on refuge vegetation from hunters is expected to be minimal.

Hunting could create a positive, indirect effect on vegetation through controlling the white-tailed deer and moose populations. The impacts of dense deer and moose populations on forest regeneration and the composition and diversity of the herbaceous understory have been well documented (Tierson et al. 1966, Behrend et al. 1970, Tilghman 1989, Cote et al. 2004, White 2012, Bergeron et al. 2011, Andreozzi et al. 2014). Opening the refuge to deer and moose hunting will help to maintain habitat in its current form, prevent habitat degradation due to over browsing, and promote successful natural regeneration and a more sustainable plant community. A well-managed hunting program can effectively control deer and moose populations and produce dramatic changes in the forest vegetation (Behrend et al. 1970, Warren R.J. 2011, Rae et al. 2014). An overabundance of deer and moose can suppress native vegetation, which may facilitate the success of invasive species in forested habitats (Knight et al. 2009, Averill et al. 2016, DiTommaso et al. 2014, and De la Cretaz et al. 2002). Lessening the impact of excessive deer and moose herbivory is a key forest management strategy (White 2012, Nuttle et al. 2013, Warren R.J. 2011, Knight et al. 2009, De la Cretaz et al. 2002, Rae et al. 2014, and Jenkins et al. 2015) and will likely become even more important as the climate warms (Galatowitsch et al. 2009). Deer and moose hunting on the refuge can create a positive effect on vegetation through better regeneration of forest canopy species and an increase in the diversity of the herbaceous understory.

Possible negative impacts of recreational hunting include the temporary trampling of vegetation and light soil erosion. Spring turkey season could cause some trampling effects to emerging 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; we do not anticipate substantial hunter-related impacts to habitats. Some hunt seasons extend into winter when plants are dormant, and the ground is either frozen and/or covered in snow. Hunters would have little impact on plants during this period. For these reasons, impacts to plant communities and soils are not likely to be significant during either the fall or spring hunting seasons.

#### **Soils**

It is anticipated that hunting on the refuge will have minor impacts to soils. Soils can be compacted or eroded due to repeated foot traffic, especially in wetland habitats. The potential for soil erosion will vary during the year based on soil moisture and temperatures. At the anticipated use levels, and because hunters tend to disperse when searching for game and training their

dogs, impacts to soils are not likely to be significant.

#### **Hydrology (Water Resources and Wetlands)**

Hydrology impacts from hunting would be minimal and only result from the use of roads and trails. Unsurfaced trails are susceptible to a variety of impacts including vegetation loss and compositional changes, soil compaction, erosion and muddiness, exposure of plant roots, trail widening, and the proliferation of visitor-created side trails (Marion and Leung 2001). However, these effects are considered minimal as hunters are generally dispersed, which reduces repeated erosive actions on soils. Hunters are not permitted to use vehicles off designated refuge roads.

#### Big Game

White-tailed Deer

The regulated hunting of deer in accordance with State regulations would not compromise the persistence of deer on the refuge or surrounding lands. Deer populations are maintained in accordance with the available habitat through regulated hunting. High deer densities have been shown to negatively affect plant and animal communities. Therefore, a hunting program would help to facilitate ecological diversity by mitigating the effects of high deer densities. Deer densities, if maintained through regulated hunting, will sustain the native vegetation and forest regeneration associated with the natural communities in those regions. Regulated deer hunting will also maintain a deer herd in good physical condition that staves off malnutrition and disease.

There are an estimated 120,000 deer in New Hampshire. A total of 14,082 deer were harvested in New Hampshire in 2022 (<a href="https://www.wildlife.state.nh.us/hunting/harvest-summary.html">https://www.wildlife.state.nh.us/hunting/harvest-summary.html</a>). There are an estimated 140,000 deer in Vermont. A total of 17,461 deer were harvested in Vermont in 2022 (<a href="https://vtfishandwildlife.com/learn-more/fish-wildlife-library/hunting-trapping-information/library-white-tailed-deer-harvest-summary-reports">https://vtfishandwildlife.com/learn-more/fish-wildlife-library/hunting-trapping-information/library-white-tailed-deer-harvest-summary-reports</a>). The New Hampshire Department of Fish and Game (NHDFG) and the Vermont Department of Fish and Wildlife (VTDFW) actively monitor their respective State's deer populations and the overall physical condition of the herd by collecting harvest numbers and biological parameters. The biological data from harvested deer, habitat data and other information are used by biologists to manage the deer herd throughout each state. Deer harvested on the refuge would likely be replaced by other deer within a relatively short time. Hunting other game species (e.g., turkey or small game) will have a transient effect on deer, as both species flush and move away from hunters. Deer will use energy and experience physiological stress when avoiding hunters and other refuge visitors.

#### Moose

The regulated hunting of moose in accordance with State regulations would not compromise the persistence of moose on the refuge or surrounding lands. Moose populations are maintained in accordance with the available habitat through regulated hunting. High moose densities have been shown to negatively affect plant and animal communities (Bergeron, et al. 2011, Andreozzi, et al. 2014). Therefore, a hunting program would help to facilitate ecological diversity by mitigating the effects of high moose densities. Moose densities, if maintained through regulated hunting, will sustain the native vegetation and forest regeneration associated with the natural communities in those regions (Behrend, et al. 1970, Warren, R.J. 2011, Rae, et al. 2014). Regulated moose hunting will also maintain a physically healthy moose herd that staves off malnutrition and disease.

There are an estimated 3,500 moose in New Hampshire. A total of 25 moose were harvested in New

Hampshire in 2022 (<a href="https://www.wildlife.state.nh.us/hunting/harvest-summary.html">https://www.wildlife.state.nh.us/hunting/harvest-summary.html</a>). There are an estimated 2,200 moose in Vermont. A total of 51 moose were harvested in Vermont in 2022. The NHDFG and VTDFW actively monitor their respective State's moose population and the overall physical condition of the herds by collecting harvest numbers and biological parameters. The biological data from harvested moose, habitat data and other information are used by biologists to manage the moose herd throughout each State. Moose harvested on the refuge would likely be replaced by other moose within a relatively short time. Hunting other game species (e.g., turkey or small game) will have a transient effect on moose, as the species flush and move away from hunters. Moose will use energy and experience physiological stress when avoiding hunters and other refuge visitors.

#### Black Bear

The black bear is cherished by hunters in New Hampshire and Vermont as a valuable game species for both its meat and pelt. Black bears are the largest predator in New England and have few natural enemies. In the two states, the annual bear harvest serves as the primary tool to regulate bear population growth while monitoring the population to ensure that the legal harvest is sustainable. Desired harvest levels typically result in bear densities that are consistent with or moving towards bear population objectives in each of the States' management regions. Regulated hunting of these species in accordance with State regulations will not compromise the persistence of them on the refuge or surrounding lands.

There are an estimated 6,000 black bears in New Hampshire. A total of 892 bears were harvested in New Hampshire in 2021 (<a href="https://www.wildlife.state.nh.us/hunting/harvest-summary.html">https://www.wildlife.state.nh.us/hunting/harvest-summary.html</a>). Vermont's bear population is currently estimated to be within the population objective of 3,500 to 5,500 bears called for in the Big Game Management Plan, 2020-2030. A total of 841 black bears were harvested in Vermont in 2021. Hunting is a critical tool in maintaining this population objective. Although considered a valuable game species, black bears annually cause extensive agricultural and property damage and are capable of inflicting injuries to humans. Most bear-related human injuries have involved bears that were not afraid of humans. Hunting is used not only as a tool to manage population size and health, but also as a means of keeping bears wary of humans.

#### Wild Turkey

Wild turkeys are native to New Hampshire and Vermont but disappeared from these states over 150 years ago due to overharvesting and habitat loss. In 1969 and 1970, NHDFG re-introduced wild turkey to the State. This attempt failed but was tried again in 1975. Twenty-five wild turkeys were relocated from New York. With this successful reintroduction and 15 additional reintroduction efforts over the course of 20 years, an estimated 40,000 turkeys now range throughout the State (Silverberg, J. 2012). In 2019, over 5,092 wild turkeys were harvested, and turkeys have become a valuable game species in the State.

In Vermont, from the 1950s through the late 1960s, attempts at turkey restoration through artificial propagation were largely unsuccessful, largely due to the release of farm-raised birds unable to survive Vermont's harsh winters. A breakthrough in restoration efforts occurred in 1969 and 1970, when the VTDFW in coordination with the New York Department of Environmental Conservation live-captured and translocated a total of 31 free-roaming wild turkeys from New York to Vermont's Rutland County. This introduction was successful, and by the mid-1980s, VTDFW captured and transferred Vermont birds to other parts of the State.

These releases and subsequent population expansion have resulted in the successful restoration of wild turkeys across the entire state (VTDFW 2009). Around 5,800 wild turkeys are harvested each year in Vermont and turkey has become a valuable game species in the State. Regulated hunting of these species in accordance with State regulations will not compromise the persistence of them on the refuge or surrounding lands.

Populations of turkeys that exceed the biological carrying capacity of their habitat can be decimated by diseases (including avian pox that can spread to other bird species) and are capable of degrading their habitat. Populations that are allowed to exceed the cultural carrying capacity can cause extensive agricultural damage. The U.S. Department of Agriculture Wildlife Services reports that many farms within the Connecticut River Valley already sustain damage to their stored silage and corn crops from turkeys. Regulated hunting plays an important role in limiting the damage to agriculture from turkeys.

#### **Small Game**

Based on State regulations, small game species to be hunted within each state may vary. Small game in New Hampshire and Vermont includes gray squirrel, snowshoe hare and Eastern cottontail.

Many small game species present on the refuge are strategist species, demonstrating high productivity and mortality rates, with population densities often tied to the quality of available habitat. Most of the small game species' populations are positively influenced by increasing percentages of younger forest age classes that provide the mix of cover and foods for these animals. When appropriate, some refuge lands are managed to promote early successional habitat. This provides a high-quality habitat foundation to support higher densities of these species. Even so, population fluctuations can be driven by weather, changes in predator populations, or annual fluctuations in food supplies. Hunting mortality is compensatory and generally not considered to be a factor affecting population size (Edwards et al. 2003). The number of hunters pursuing small game is predicted to be low and is not expected to have negative impacts on populations.

#### **Furbearing Species**

Because the furbearer hunting seasons are set at a time of year when pelts are prime and of highest value, the harvest of furbearers during the regulated hunting seasons provides citizens an opportunity to utilize these sustainable, renewable fur resources. Several of these furbearing species are commonly viewed as nuisance animals due to their feeding behaviors.

#### **Migratory Game Birds**

Migratory game 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. Hunting migratory game birds 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 waterfowl on the refuge would make the birds more skittish and prone to disturbance, reduce the amount of time they spend foraging and resting, and alter their habitat usage patterns (Raveling 1979, Owen 1973, White-Robinson 1982, Madsen 1985, Bartelt 1987). Overall, the effects on migratory game birds are expected to be minimal due to the low number of hunters on refuge lands.

#### **Federally Listed Species**

Northern long-eared bat, Jessup's milk vetch, Canada lynx and Northeastern bulrush have been documented on or in the vicinity of the Conte NFWR divisions and units in New Hampshire and Vermont. Due to the species' specific habitat requirements, the status of species and the time of year that hunting and dog training would take place, hunting and the training of dogs, may affect, but is not likely to adversely affect these species. A recent endangered species consultation determined that the refuge's current dog training season, which occurs from August to September, reduces the potential impacts to Canada lynx. Dog training that occurs between May and August may have indirect and direct impacts to lynx kittens when they are vulnerable in den sites. Dwarf wedge mussel occupies sites within the vicinity of the refuge. This species has not been documented on refuge lands in New Hampshire and Vermont, therefore, there will be no effect on this species due to hunting and fishing activities. Refuge staff will continue to monitor for the presence of threatened or endangered species on the refuge. If they are found on the refuge, the effects of hunting on these species will be evaluated.

#### Other Wildlife and Non-Target Species

Hunting and dog training can have direct and indirect impacts on both target and non-target species. These impacts include direct mortality of individuals, changes in wildlife behavior, changes in wildlife population structure, dynamics, and distribution patterns, and disturbance from noise and hunters walking on- and off-trail (Cole and Knight 1990, Cole 1990, Bell and Austin 1985). In general, refuge visitors engaged in hunting would be walking off-trail. General disturbance from recreational activities, including hunting, vary with the wildlife species involved and the activity's type, level, frequency, duration, and the time of year it occurs. The responses of wildlife to human activities like hunting, include avoidance or departure from the site (Owen 1973, Burger 1981, Kaiser and Fritzell 1984, Korschen et al. 1985, Kahl 1991, Klein 1993, Whittaker and Knight 1998), the use of suboptimal habitat (Erwin 1980, Williams and Forbes 1980), altered behavior or habituation to human disturbance (Burger 1981, Korschen et al. 1985, Morton et al. 1989, Ward and Stehn 1989, Havera et al. 1992, Klein 1993, Whittaker and Knight 1998), attraction (Whittaker and Knight 1998), and an increase in energy expenditure (Morton et al. 1989, Belanger and Bedard 1990). Burger (1986) found the level of disturbance in birds tends to increase when the distance is decreased between visitors and birds.

#### **Migratory Bird Treaty Act**

The Service is the principal Federal agency responsible for upholding the Migratory Bird Treaty Act. Migratory birds are a trust resource that are protected on the refuge by the Migratory Bird Treaty Act, as a legislated purpose of the refuge is 'to fulfill the international treaty obligations of the United Stated relating to fish and wildlife and wetlands.' National wildlife refuges are legislatively mandated to target the conservation of native species, which includes the protection of migratory birds during the breeding season (May, June, and July). It is widely recognized in the scientific literature that domestic dogs can negatively impact the distribution, abundance, ability to provision young and overall productivity of nesting birds. The associated impacts from domestic dogs are based on the type of species, time of year, location, type of use, frequency, and duration (Hennings 2016, Weston et al. 2014, Hughes 2013, Steven et al. 2011, Young et al. 2011, Showler et al. 2010). Based on the available literature pertaining to recreation disturbances on wildlife (Doherty et al. 2017; Lepe et al. 2017; Hennings 2016; Weston et al. 2014: Macdonald 2013; Showler et al. 2010; and Sime 1999), the training of dogs will occur outside of the migratory bird breeding season to limit disturbance to ground/shrub nesting migratory birds during the breeding season.

Further, the loss of avian species is well documented. Rosenberg et al estimates a net loss of almost 3 billion birds across North America since 1970, with an estimated loss of 1 billion birds within forested ecosystems. Eastern forests have seen a decline of 23 million neotropical bird species with 9 species lost (Rosenberg et al 2019). The most recent Birds of Conservation Concern report was released in 2021 by the Service's Migratory Bird Program. This report is developed by the FWS and its partners to identify species, subspecies, and populations of all migratory birds that without additional conservation action are likely to become candidates for listing under the Endangered Species Act. The Birds of Conservation Concern 2021 represents the highest migratory bird conservation priorities for the FWS. In 2008, 8 species of forest nesting birds on the Conte Refuge that breed in the northern part of the Connecticut River watershed were listed in the Birds of Conservation Concern report. In 2021, 11 species of forest nesting birds on the Conte Refuge that breed in the northern part of the Connecticut River watershed were in the Birds of Conservation Concern report. The increase in the number of species of forest nesting birds that are of conservation concern on the refuge indicates populations of additional species are declining within the region. Of particular interest to the Conte Refuge are Canada warbler, rusty blackbird and veery, as these three ground/shrub nesting birds are likely to be impacted from disturbances associated with frequent pursuit dog training on the refuge. These three species of conservation concern are known to breed and nest on the refuge in areas that are regularly used for dog training.

#### **Nulhegan Basin**

Furthermore, as part of the development of the Conte Refuge's 2018 Habitat Management Plan for the Nulhegan Basin Division, the refuge identified focal conservation species (American woodcock, blackburnian warbler, black-throated blue warbler, Canada warbler and rusty blackbird). All but the blackburnian warbler are ground/shrub nesting species that are protected by the FWS as trust resources that will likely be impacted during the breeding season due to repeated disturbances associated with dog training. Recognizing that the Nulhegan Basin is one of the largest remaining intact lowland softwood habitats in New England (outside of Maine), the refuge provides critical habitat to forest nesting migratory birds. Based on the observations of the FWS, lowland softwood sections of the refuge have received daily visitation throughout the breeding season from individuals that train their dogs in the same areas where listed Birds of Conservation Concern and focal conservation species are known to nest. To avoid disturbances to ground/shrub nesting birds, dog training will be prohibited during the migratory bird breeding season.

Spruce grouse are listed as endangered in the state of Vermont and are protected by the Vermont Endangered Species Act. The Conte Refuge's legislated purpose 'to conserve, protect, and enhance the natural diversity and abundance of plant, fish, and wildlife species, and the ecosystem upon which these species depend within the refuge' requires that the State listed spruce grouse be afforded protections to limit the species from being negatively impacted by hunting and dog training on the refuge. Though spruce grouse are known to nest on the Wenlock Wildlife Management Area and Victory Basin Wildlife Management Area, the Vermont Department of Fish and Wildlife's 2012 Spruce Grouse Recovery Plan identifies the Nulhegan Basin of the Conte Refuge as providing three quarters of Vermont's current spruce grouse habitat. The VDFW advises hunters not to hunt ruffed grouse in areas where spruce grouse are known to occur. Dog training is prohibited on the refuge during the breeding season to protect nesting spruce grouse.

#### Other Visitors and Users

The refuge is open to all six of the Refuge System's priority public uses (hunting, fishing, wildlife observation, wildlife photography, environmental education and environmental interpretation) where found compatible. Conflicts between hunters and other refuge visitors can occur, particularly where there is concentrated use by both groups. The Pondicherry Division in Jefferson, New Hampshire is a location that attracts both hunters and an increasing number of non-hunting refuge visitors.

Cherry and Little Cherry Ponds were acquired in 1963 by NH Fish and Game and NH Audubon and are designated as a waterfowl refuge. Hunting is prohibited on the two bodies of water. The trail network at the Pondicherry Division provides accessible recreation opportunities that are very popular with refuge visitors. The refuge staff will monitor the use of the recreational trails and if circumstances warrant, modify public access such that conflicts are avoided (e.g., restricted hunting zones, enhanced outreach). Because hunting is generally a long-standing use in the area and is dispersed across a large landscape, it is anticipated that there would be negligible impacts to those individuals participating in fishing, wildlife observation and photography, environmental education, and wildlife interpretation.

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

This Compatibility Determination will be released with a supplemental Environmental Assessment and revised Hunt Plan for a 30-day comment period. Comments will be reviewed and analyzed at the end of the comment period.

# **DETERMINATION (CHECK ONE BELOW):**

|   | Use is not compatible                              |
|---|--|
| X | 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 Silvio O. Conte NFWR in accordance with State and Federal regulations, and 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. We will evaluate this program annually and if monitoring indicates that this use or any of its components are not compatible (materially interferes with or detracts from fulfillment of the Refuge System mission or the purposes of the refuge), we would curtail, modify, or eliminate the use or component.

Lead is a well-known toxin to people and wildlife and even small amounts can have adverse health effects. Hunters are encouraged to voluntarily use non-lead ammunition.

The following stipulations are necessary to ensure compatibility:

• Excluding the Nulhegan Basin Divisions, refuge lands are closed to night hunting. Hunters are allowed on refuge lands from 1½-hour before sunrise to 1½-hour after sunset. Appendix A – Hunting Compatibility Determination A-10

- We prohibit shooting from, over, or within 25 feet of the traveled portion of any road that is accessible to motor vehicles, with the exception of a permanently disabled hunter with the proper state and refuge issued special use permit.
- Tree stands, blinds and other hunting equipment must be removed from the refuge within 72 hours after the regulated hunting season has ended.
- We allow the use of dogs consistent with State regulations, except hunters using more than two dogs must possess a Special Use Permit (FWS Form 3-1383-G) issued by the refuge manager.
- We will allow training of dogs following state regulations from August 1 through the last Saturday in September during daylight hours, if the trainer possesses a Special Use Permit (FWS Form 3-1383-G) issued by the refuge manager.
- At the Putney Mountain Unit, we allow the use of dogs only for hunting ruffed grouse.

#### **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 consideration during planning and management. Dog training is not a priority public use but is closely associated with hunting experience. To ensure compatibility with refuge purposes, the dog training season will not coincide with the breeding season of migratory birds and when lynx kittens are vulnerable in den sites.

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

We do not expect this activity to conflict with any of the other priority public uses or adversely impact biological resources. The use will not cause an undue administrative burden. We will manage the use in accordance with Federal and State regulations, as well as refuge-specific regulations to ensure that wildlife and habitat management goals are achieved, and that the use is providing a safe, high-quality experience for participants. Annual adjustments can be made to the use or any of its components to ensure its continued compatibility. Therefore, through this compatibility determination process, we have determined that hunting on Silvio O. Conte NFWR, 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 purposes of the refuge.

| SIGNATURE: Refuge Manager   | (Signature)               | (Date)             |
|-----------------------------|---------------------------|--------------------|
| CONCURRENCE: Regional Chief | (Signature)               | (Date)             |
| MANDATORY 15 YE             | EAR RE-EVALUATION DATE: — | 6/1/2038<br>(Date) |

#### **LITERATURE CITED:**

- Andreozzi, H.A., Pekins, P.J., and Langlais, M.L. 2014. Impact of Moose Browsing on Forest Regeneration in Northeast Vermont. Alces. 50: 67-79.
- Augustine, D.J. and Jordan, P.A. 1998. Predictors of white-tailed deer grazing intensity in fragmented deciduous forests. Journal of Wildlife Management 62:1076-1085.
- Averill, K.M., Mortensen, D.A., Smithwick, E.A.H., and Post, E. 2016. Deer feeding selectivity for invasive plants. Biological Invasions. 18:1247-1263
- Bartmann, R.M., White, G.C., and Carpenter, L.H. 1992. Compensatory mortality in a Colorado mule deer population. Wildlife Monographs, 121, 1-39.
- Bartelt, G.A. 1987. Effects of disturbance and hunting on the behavior of Canada geese family groups in East Central Wisconsin. Journal of Wildlife Management, 51, 517-522.
- Behrend, D.F., Mattfield, G.F., Tierson, W.C., and Wiley, J.E. 1970. Deer density control for comprehensive forest management. Journal of Forestry, 68, 695-700.
- Belanger, L. and Bedard, J. 1990. Energetic cost of man-induced disturbance to staging snow geese. Journal of Wildlife Management, 54, 36-41.
- Bergeron, D.H., Pekins, P.J., Jones, H. F., and Leak, W.B. 2011. Moose Browsing and Forest Regeneration: A Case Study in Northern New Hampshire. Alces 47:39-51.
- Bell, D.V. and Austin, L.W. 1985. The game-fishing season and its effects on overwintering wildfowl. Biological Conservation, 33, 65-80.
- Burger, J. 1986. The effect of human activity on shorebirds in two coastal bays in northeastern United States. Biological Conservation, 13, 123-130.Burger, J. 1981. Effect of human activity on birds at a coastal bay. Biological Conservation 21, 231-241.
- Cole, D.N. and Knight, R.L. 1990. Impacts of recreation on biodiversity in wilderness. Natural Resources and Environmental Issues, 0, 33-40.
- Cole, D.N. 1990. Ecological impacts of wilderness recreation and their management. In J.C. Hendee, G.H. Stankey, and R.C. Lucas (Eds.), Wilderness Management (pp. 425-466). Golden, CO: North American Press.
- Cote, S.D., Rooney, T.P., Tremblay, J.P., Dussault, C., and Waller, D.M. 2004. Ecological Impacts of Deer Overabundance. Annual Review of Ecology and Systematics 35:113-147.
- De la Cretaz, A.L. and Kelty, M.J. 2002. Development of Tree Regeneration in Fern-dominated Forest Understories after Reduction of Deer Browsing. Restoration Ecology. 10:416-426.

- DiTommaso, A., Morris, S.H., Parker, J.D., Cone, C.L., and Agrawal, A.A. 2014. Deer Browsing Delays Succession by Altering Aboveground Vegetation and Belowground Seed Banks. PLoS ONE 9(3): e91155. doi:10.1371/journal.pone.0091155.
- Doherty, T.S., Dickman, C R., Glen, A.S., Newsome, T.M., Nimmo, D.G., Ritchie, E.G., Vanak A.T., and Wirsing, A.J. 2017. The global impacts of domestic dogs on threatened vertebrates. Biological conservation, 210, 56-59.
- Edwards, J., Ford, M., and Guynn, D. 2003. Fox and gray squirrels in Wild Mammals of North America. Pgs 248-267. Johns Hopkins University Press.
- Erwin, R.M. 1980. Breeding habitat by colonially nesting water birds in two Mid-Atlantic U.S. regions under different regimes of human disturbance. Biological Conservation, 18, 39-51.
- Galatowitsch, S., Frelich, L., and Phillips-Mao, L. 2009. Regional climate change adaptation strategies for biodiversity conservation in a mid-continental region of North America. Biological Conservation 142:2012-2022.
- Havera, S.P., Boens, L.R., Georgi, M.M., and Shealy, R.T. 1992. Human disturbance of waterfowl on Keokuk Pool, Mississippi River. Wildlife Society Bulletin, 20, 290-298.
- Hennings, L. 2016. The impacts of dogs on wildlife and water quality: a literature review. Metro Parks and Nature, Portland, OR, USA
- Hughes, J. and Macdonald, D.W. 2013. A review of the interactions between free-roaming domestic dogs and wildlife. Biological Conservation, 157, 341-351.
- Jenkins, L.H., Murray, B.D., Jenkins, M.A., and Webster, C.R. 2015. Woody regeneration response to over a decade of deer population reductions in Indiana state parks. The Journal of the Torrey Botanical Society. 142:205-219.
- Kahl, R. 1991. Boating disturbance of canvasbacks during migration at Lake Poygan, Wisconsin. Wildlife Society Bulletin, 19, 242-248.
- Kaiser, M.S. and Fritzell, E.K. 1984. Effects of river recreationists on green-backed heron behavior. Journal of Wildlife Management, 48, 561-567.
- Klein, M.L. 1993. Waterbird behavioral responses to human disturbance. Wildlife Society Bulletin, 21, 31-39.
- Knight, R.L. and Cole D.N. 1991. Effects of recreational activity on wildlife in wildlands.

  Transactions of the 56th North American Wildlife and Natural Resources Conference, 238-247.

- Knight, T.M., Dunn, J.L., Smith, L.A., Davis, J., and Kalisz, S. 2009. Deer facilitate invasive plant success in a Pennsylvania forest understory. Natural Areas Journal 29(2):110-116.
- Korschen, C.E., George, L.S., and Green, W.L. 1985. Disturbance of diving ducks by boaters on a migrational staging area. Wildlife Society Bulletin, 13, 290-296.
- Lepe, A., Kaplan, V., Arreaza, A., Szpanderfer, R., Bristol, D., and Sinclair, M.S. 2017. Environmental Impact and Relative Invasiveness of Free-Roaming Domestic Carnivores—a North American Survey of Governmental Agencies. Animals, 7(10), 78.
- Hughes J., Macdonald, D.W. 2013. A review of the interactions between free-roaming domestic dogs and wildlife. Biological Conservation 157:341-351.
- Madsen, J. 1985. Impact of disturbance on field utilization of pink-footed geese in West Jutland, Denmark. Biological Conservation, 33, 53-63.
- Marion, J.L. and Leung, Y.-F. 2001 Indicators and Protocols for Monitoring Impacts of Formal and Informal Trails in Protected Areas.217.
- Miller S.G., Knight, R.L, and Miller, C.K. 1998. Influence of Recreational Trails on breeding bird communities. Ecological Society of America, 8(1), 162-169.
- Morton, J.M., Fowler, A.C., and Kirkpatrick, R.L. 1989. Time and energy budgets of American black ducks in winter. Journal of Wildlife Management, 53, 401-410 (also see corrigendum in Journal of Wildlife Management, 54, 683.
- Nuttle, T., Royo, A.A., Adams, M.B., and Carson, W.P. 2013. Historic disturbance regimes promote tree diversity only under low browsing regimes in eastern deciduous forest. Ecological Monographs 83(1):3-17.
- Owen, M. 1973. The management of grassland areas for wintering geese. Wildfowl, 24,123-130.
- Rae, L.F., Whitaker, D.M., and Warkentin, I.G. 2014. Multiscale impacts of forest degradation through browsing by hyperabundant moose (Alces alces) on songbird assemblages. Diversity and Distributions. 20:382-395.
- Raveling, D.G. 1979. Traditional use of migration and winter roost sites by Canada geese. Journal of Wildlife Management, 43, 229-235.
- Rosenberg, Kenneth V., Adriaan M. Dokter, Peter J. Blancher, John R. Sauer, Adam C. Smith, Paul A. Smith, Jessica C. Stanton, Arvind Panjabi, Laura Helft, Michael Parr and Peter P. Marra. 2019. Decline of the North American Avifauna. Science AAAS.
- Showler, D.A., Stewart, G.B., Sutherland, W.J., and Pullin, A.S. 2010. What is the impact of public access on the breeding success of ground-nesting and cliff-nesting birds. Systematic Review, 16.

- Silverberg, J. 2012. Naturalist's Notebook: Eastern Wild Turkey. New Hampshire Wildlife Journal. Pages 23-24. https://www.wildlife.state.nh.us/pubs/documents/samples/wj-wild-turkey.pdf.
- Sime, C.A. 1999. Domestic Dogs in Wildlife Habitats. Pp. 8.1-8.17 in G. Joslin and H. Youmans, coordinators. Effects Recreation on Rocky Mountain Wildlife: A Review for Montana Committee on Effects of Recreation on Wildlife, Montana Chapter of The Wildlife Society. 307 pp.
- Steven, R., Pickering, C., and Castley, J.G. 2011. A review of the impacts of nature-based recreation on birds. Journal of Environmental Management 92:2287-2294.
- Tierson, W.C., Patric, E.F., and Behrend, D.F. (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.
- U.S. Fish and Wildlife Service. 1995. Final action plan and environmental impact statement Silvio O. Conte National Fish and Wildlife Refuge. Hadley, New Hampshire.
- Vermont Fish and Wildlife Department. 2009. Vermont's Big Game Management Plan 2010 2020. Pages 65-74.
- Ward, D.H. and Stehn, R.A. 1989. Response of brant and other geese to aircraft disturbance at Izembek Lagoon, Alaska. Anchorage, AK: U.S. Fish and Wildlife Service, Alaska Fish and Wildlife Research Center. Final report to the Minerals Management Service.
- Warren, R.J. 2011. Deer overabundance in the USA: recent advances in population control. Animal Production Science. 51:259-266.
- Weston, M.A., Fitzsimons, J.A., Wescott, G., Miller, K.K., Ekanayake, K.B., and Schneider, T. 2014. Bark in the park: a review of domestic dogs in parks. Environmental management, 54(3), 373-382.
- 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.
- White-Robinson, R. 1982. Inland and saltmarsh feeding of wintering brent geese in Essex. Wildfowl, 33, 113-118.
- Whittaker, D. and Knight, R. 1998. Understanding wildlife responses to humans. Wildlife Society Bulletin, 26(3), 312-317.
- Williams, G.J. and Forbes, E. 1980. The habitat and dietary preferences of dark-bellied brant

geese and widgeon in relation to agricultural management. Wildfowl, 31, 151-157.

Young, J.K., Olson, K.A., Reading, R.P., Amgalanbaatar, S., and Berger, J. 2011. Is Wildlife Going to the Dogs? Impacts of Feral and Free-Roaming Dogs on Wildlife Populations. BioScience 61:125-132.

# Supplemental Environmental Assessment for Recreational Hunting and Fishing on Silvio O. Conte National Fish and Wildlife Refuge

### **Executive Summary**

This Supplemental Environmental Assessment (EA or Supplemental EA) is being prepared in response to recent litigation and is an effort to avoid further litigation over issues that can be easily remedied. Accordingly, the Service is reconsidering its August 2021 decision regarding dog training and hunting on the Silvio O. Conte National Fish and Wildlife Refuges (NFWR, Conte NFWR, refuge). Notable, the 2021 final Hunting and Fishing plan, prepared and approved by the Service in August 2021 is hereafter referred to as the 2021 EA. The Service issued a Finding of No Significant Impact (FONSI) for the proposed action and 2021 EA on August 17, 2021. Reference 86 Fed. Reg. 48,822, 48,879 for the 2021 FONSI and 2021 final rule. This new Conte NFWR New Hampshire and Vermont Recreational Hunting and Fishing Plan (the plan or rule¹) will provide the public with a fulsome opportunity to comment on the proposed rule. The Service will then issue a new decision that will supersede the 2021 EA, FONSI and previous rule. A list of laws and executive orders evaluated through this EA is included at the end of this document.

This Supplemental EA includes additional information, primarily associated with the potential impacts of training dogs, and utilizes the latest research and best available science where applicable. The majority of the written text was transferred from the 2021 EA and remains unchanged. The Service's preferred alternative allows dog training on the refuge from August 1 to the last Saturday in September because domestic dogs can negatively impact the distribution, abundance, ability to provision young and overall productivity of nesting birds. Additionally, the use of dogs is limited to only ruffed grouse hunting on the Putney Mountain Unit to mitigate issues with the Unit's limited acreage (285 acres) such as trespass onto private lands while training or in pursuit of game.

### **Purpose and Need**

The purpose and need for the proposed action have not been significantly modified from the 2021 EA. The purpose of the proposed action is to provide expanded recreational hunting and fishing opportunities on the refuge. Hunting and fishing are recreational uses of renewable natural resources deeply rooted in America's heritage, and they can be important wildlife management tools. The National Wildlife Refuge System Administration Act (NWRSAA) of 1966, the National Wildlife Refuge System

<sup>&</sup>lt;sup>1</sup> The APA defines rule" as "the whole or a part of an agency statement of general or particular applicability and future effect designed to implement, interpret, or prescribe law or policy or describing the organization, procedure, or practice requirements of an agency and includes the approval or prescription for the future of rates, wages, corporate or financial structures or reorganizations thereof, prices, facilities, appliances, services or allowances therefor or of valuations, costs, or accounting, or practices bearing on any of the foregoing..." See 5 U.S.C. § 551(4). The Conte Hunt Plan falls within this definition of a rule.

Improvement Act of 1997, other laws, and the Service's policies permit fishing and hunting on a national wildlife refuge when it is compatible with the purposes for which the refuge was established and acquired.

The Conte NFWR's Comprehensive Conservation Plan (CCP) addressed hunting and fishing with broad objectives.

Objective 3.1 - Hunting: Support quality public hunting opportunities in the Connecticut River Watershed in cooperation with willing landowners to promote a unique understanding and appreciation of natural resources and their management including the role of the Service and other public lands in resource conservation while also protecting a traditional outdoor pastime deeply rooted in America's natural and cultural heritage and conservation history.

Objective 3.2 - Fishing: Support quality public fishing opportunities in the Connecticut River Watershed in cooperation with willing landowners to promote an understanding and appreciation of natural resources and their management, including the role of the Service and other public lands in resource conservation, while also protecting a traditional outdoor pastime deeply rooted in America's natural heritage and conservation history.

The Recreational Hunting and Fishing Plan further defined and enhanced these objectives. The objectives of a big game, small game, and migratory game bird hunting program, and a fishing program, on Silvio O. Conte NFWR are to:

- 1. Provide the public with a high-quality recreational experience on refuge lands and increase opportunities and access for hunters and anglers;
- 2. Design a hunting and fishing program that are administratively efficient and manageable with existing staffing levels and that better aligns with State regulations;
- 3. Implement a hunting and fishing program that are safe for all refuge users;
- 4. Provide hunting and fishing opportunities for youth and those that need assistance; and
- 5. Design a hunting and fishing program that are in alignment with refuge habitat management objectives.

The need for the proposed action is evidenced by the requirement to meet the Service's priorities and mandates as outlined by the NWRSAA of 1966, as amended by the National Wildlife Refuge System Improvement Act of 1997, 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 two of the priority public uses of the National Wildlife Refuge System (Refuge System). By providing opportunities for visitors to hunt and fish, we can promote stewardship of our natural resources and increase public appreciation and support for the Refuge System. However, the Service must balance its statutorily mandated conservation responsibilities with compatible recreational use of the refuge.

#### **Alternatives**

For this Supplemental EA, two alternatives are considered. Both alternatives continue the refuge's hunting and fishing program established in the 2021 New Hampshire and Vermont Recreational Hunting and Fishing Plan that expanded hunting and fishing opportunities across the refuge lands in New Hampshire and Vermont. The two alternatives include: The No Action (Service's Preferred) Alternative A, and Alternative B.

The No Action Alternative (Alternative A) would continue the refuge's hunting and fishing program as identified in the 2021 Hunt Plan. Under Alternative A, the dog training season is adjusted to limit negative impacts to migratory birds and Threatened or Endangered species; and dogs may only be used for ruffed grouse hunting on the Putney Mountain Unit.

Alternative B expands the dog training season to include when migratory birds are breeding. Alternative B also allows hunting and training of dogs consistent with State regulations on the Putney Mountain Unit.

The refuge has prepared a Recreational Hunting and Fishing Plan, which is summarized in this document as the No Action Alternative (Alternative A). This alternative includes additions and changes made in the 2021 Final rule discussed previously.

### **Environmental Consequences**

The only potential environmental stressor added to sections of this Supplemental EA, that may not have been addressed as fully in the 2021 EA, are the potential effects from training dogs on the refuge. All other stressors associated with hunting and fishing activities remain the same as in the 2021 EA, and the analysis and effects remain fundamentally the same. Due to the associated impacts from domestic dogs on wildlife based on the type of species, time of year, location, type of use, frequency, and duration, the FWS is reviewing impacts associated with dog training on the refuge.

The FWS is the principal federal agency responsible for complying with the Migratory Bird Treaty Act and the Endangered Species Act. Migratory birds are a trust resource that are protected on the refuge, as a legislated purpose of the refuge is 'to fulfill the international treaty obligations of the United Stated relating to fish and wildlife and wetlands.' The refuge is legislatively mandated to target the conservation of native species, which includes the protection of migratory birds during the breeding season (May, June, and July). It is widely recognized in the scientific literature that domestic dogs can negatively impact the distribution, abundance, ability to provision young and overall productivity of nesting birds.

The training of dogs occurs when Canada lynx kittens are within den sites and vulnerable to encounters with dogs. Since females establish dens where hares are abundant, dogs being

trained to hunt snowshoe hare may encounter den sites. These encounters may result in indirect mortality from disturbance or direct mortality through predation. Therefore, the dog training season is restricted to August 1 to the last Saturday in September, at which point lynx kittens are believed to be weaned and likely able to avoid encounters with dogs.

Under Section 7 of the Endangered Species Act, an evaluation of impacts to threatened and endangered species at the Silvio O. Conte NFWR was completed with the 2021 EA. A determination of "May affect, but not likely to adversely affect" or "No effect" was made for each species at that time, as the proposed action was expected to cause insignificant or discountable effects to individuals given the minimal chance of overlap with potential hunting and fishing activities. We understand that re-initiation of consultation is required where discretionary Federal agency involvement or control over the action has been retained (or is authorized by law), and if: (1) the amount or extent of incidental take is exceeded; (2) new information reveals effects of the agency action that may affect listed species or critical habitat in a manner or to an extent not considered in this opinion; (3) the agency action is subsequently modified in a manner that causes an effect to the listed species or critical habitat not considered in this opinion; or (4) a new species is listed or critical habitat designated that may be affected by the action.

### **Public Review**

With the 2021 EA, the public had the opportunity to review and comment on the draft from May 3 through August 8, 2022, a total of 97 days. We distributed a press release to news organizations and alerted visitors to the plan's availability on the refuge website. Over 700 comment letters were submitted from the public that offered input to the refuge for the 2021 EA.

This Supplemental EA has been thoroughly coordinated with all interested and/or affected parties. The public will be notified of the availability of the Supplemental EA and associated documents for review and will include no less than a 30-day comment period. We will inform the public through local venues and the refuge website. Comments received from the public will be considered, and modifications may be incorporated into the final plan and decision documents. This proposed action is often iterative and evolves over time during the process as the agency refines its proposal and learns more from the public, Tribes, and other agencies. Therefore, the final proposed action may be different from the original. The final decision on the proposed action will be made at the conclusion of the public comment period for the EA.

## Silvio O. Conte National Fish and Wildlife Refuge Hunting and Recreational Fishing Supplemental Environmental Assessment

This Supplemental Environmental Assessment (SEA) is being prepared to evaluate the effects associated with the proposed action and complies with the National Environmental Policy Act (NEPA) in accordance with Council on Environmental Quality regulations (40 CFR 1500-1509) and Department of the Interior (43 CFR 46; 516 DM 8) and U.S. Fish and Wildlife Service (Service) (550 FW 3) regulations and policies. This document is a supplement to, and updates, the EA for the Silvio O. Conte National Fish and Wildlife Refuge (NFWR, Conte NFWR, refuge) Recreational Hunting and Fishing Plan, prepared and approved by the Service in August 2021 (hereafter referred to as the 2021 EA). The Service issued a Finding of No Significant Impact (FONSI) for the proposed action and 2021 EA on August 16, 2021. NEPA requires examination of the effects of proposed actions on the natural and human environment. A list of laws and executive orders evaluated through this EA is included at the end of this document.

### **Proposed Action**

The Conte Refuge was established in 1997 in the 7.2 million-acre Connecticut River Watershed in Connecticut, Massachusetts, New Hampshire, and Vermont to conserve native fish, plants, and wildlife. Since its establishment, refuge-owned lands have grown to 22 units and divisions totaling more than 40,081 acres. These lands encompass a variety of unique habitats including Northern forest valuable as nesting habitat for migrant thrushes, warblers, and other birds; rivers and streams used by mussels, shad, salmon, trout, herring, and other migratory fishes; floodplains, forested swamps and peatlands which support a high diversity of rare plants and invertebrates; and an internationally important complex of high quality tidal fresh, brackish, and salt marshes.

Regulated sport hunting and fishing has been an important management tool and recreational activity at Silvio O. Conte NFWR for over a decade. The Service is proposing that refuge owned lands remain open to fishing and hunting opportunities for big game, small game, furbearers and migratory game birds in New Hampshire and Vermont on the Silvio O. Conte National Fish and Wildlife Refuge in accordance with the refuge's Recreational Hunting and Fishing Plan. The Conte Refuge is proposing all refuge-owned land in the two States remain open for hunting and fishing when found to be compatible, and consistent with Federal, State, and refuge-specific hunting and fishing regulations. The dog training season would be shortened to reduce impacts to Threatened or Endangered species and migratory birds.

This proposed action is often iterative and evolves over time during the process as the agency refines its proposal and learns more from the public, Tribes, and other agencies. Therefore, the final proposed action may be different from the original. The final decision on the proposed action will be made 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 (Refuge System), the purposes of an individual refuge, Service policy,

laws and international treaties. Relevant guidance includes the Refuge System Administration Act (NWRSAA) of 1966, as amended by the Refuge System Improvement Act of 1997, Refuge Recreation Act of 1962, and portions of the Code of Federal Regulations and Service Manual.

The refuge was established pursuant to The Silvio O. Conte National Fish and Wildlife Act (Public Law 102-212 H.R.794). The purpose of the refuge is to:

- To conserve, protect, and enhance the Connecticut River populations of Atlantic salmon, American shad, river herring, shortnose sturgeon, bald eagles, peregrine falcons, osprey, black ducks, and other native species of plants fish and wildlife.
- To conserve, protect, and enhance the natural diversity and abundance of plant, fish, and wildlife species, and the ecosystem upon which these species depend within the refuge.
- To protect species listed as endangered or threatened, or identified as candidates for listing, pursuant to the Endangered Species Act of 1973 (ESA), as amended (16 U.S.C. 1531 et seq.).
- To restore and maintain the chemical, physical, and biological integrity of wetland and other waters within the refuge.
- To fulfill the international treaty obligations of the United States relating to fish, wildlife, and wetlands; and
- To provide opportunities for scientific research, environmental education, and fish and wildlife-oriented recreation and access to the extent compatible with the other purposes stated in this section.

The mission of the Refuge System, as outlined by the NWRSAA, 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."

The act 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 as 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.

The refuge has managed hunting and fishing on some refuge lands for over a decade through pre-acquisition Compatibility Determinations (CDs) that were completed when lands were acquired. The New Hampshire portion of the refuge receives approximately 25,000 visitors each year, with estimates of 500 hunting and 400 fishing visits per year. The Vermont portion receives approximately 30,000 visitors, with estimates of about 1,000 hunting and 500 fishing visits.

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

Hunting and fishing are healthy and recreational uses of renewable natural resources deeply rooted in America's heritage and can be important wildlife management tools. NWRs, including the Silvio O. Conte NFWR, conduct hunting and fishing programs within the framework of Federal, State, and refuge regulations. The NWRSAA of 1966, the Refuge System Improvement Act of 1997, and Service policy permit hunting and fishing 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 and anglers 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 hunting and fishing opportunities on Conte NFWR. The stated objectives of a hunting and fishing program on Conte NFWR are to:

- 1. Provide the public with a high-quality recreational experience on refuge lands and increase opportunities and access for hunters and anglers;
- 2. Design a hunting and fishing program that are administratively efficient and manageable with existing staffing levels and that better aligns with State regulations;

- 3. Implement a hunting and fishing program that are safe for all refuge users;
- 4. Provide hunting and fishing opportunities for youth and those that need assistance; and
- 6. Design a hunting and fishing program that are in alignment with refuge habitat management objectives.

The need for the proposed action is evidenced by the requirement to meet the Service's priorities and mandates as outlined by the NWRSAA of 1966, as amended by the Refuge System Improvement Act of 1997, 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 two of the priority public uses of the Refuge System. By providing opportunities for visitors to hunt and fish, we can promote stewardship of our natural resources and increase public appreciation and support for the Refuge System. The purpose of the proposed action is to provide compatible wildlife-dependent recreational opportunities on the Silvio O. Conte NFWR.

The need of the proposed action is to meet the Service's priorities and mandates as outlined by the NWRSAA 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 two of the priority public uses of the Refuge System and providing opportunities for visitors to hunt and fish can promote stewardship of our natural resources and increase public appreciation and support for the refuge.

The EA serves as the NEPA document which analyzes the impacts on environmental, cultural, and historical resources of providing additional hunting and fishing opportunities on the refuge.

### **Alternatives**

For this Supplemental EA, two alternatives are analyzed: the No Action (Service's Preferred) Alternative and Alternative B (Expansion of the Dog Training Season).

### **Alternative A: No Action (Service's Preferred Alternative)**

The refuge has prepared a Recreational Hunting and Fishing Plan, which is presented in this Supplemental EA as the No Action Alternative. There would be no change to the current public use and wildlife management programs on the refuge. This alternative is the Service's proposed action because it offers the best opportunity for public hunting and fishing that would result in a minimal impact on physical and biological resources, while

meeting the Service's mandates under the NWRSAA and Secretarial Order 3356. The Service believes that hunting and fishing on the refuge will not have a significant impact on local or regional wildlife populations because the percentage likely to be harvested on the refuge, though possibly additive to existing hunting takes, would be a tiny fraction of the estimated populations.

Hunting

### **New Hampshire Species and Regulations**

Hunting on refuge lands will follow the New Hampshire Department of Fish and Game's (NHDFG) hunting regulations with some additional restrictions to protect wildlife and habitat, and to reduce potential public use conflicts. The Saddle Island Unit and Mascoma Division will open to hunting for the first time. Hunters can access refuge lands by public roads and adjoining public lands and water.

Approximately, 10,293 acres will be open to hunting on New Hampshire refuge lands for the following species:

<u>**Big Game**</u> – Moose, white-tailed deer, black bear, and turkey hunting would be permitted on New Hampshire units of the refuge.

<u>Furbearers</u> – Red and gray fox, raccoon, coyote, skunk, muskrat, opossum, weasel, fisher, and mink hunting would be permitted on New Hampshire units of the refuge.

<u>Small Game</u> – Eastern cottontail, snowshoe hare and gray squirrel hunting would be permitted on New Hampshire units of the refuge.

<u>Game Bird</u> – Wilson's snipe, coot, crow, pheasant, ruffed grouse, duck, light geese, dark geese, and woodcock hunting would be permitted on New Hampshire units of the refuge.

### **Vermont Species and Regulations**

Hunting on refuge lands will follow Vermont Department of Fish and Wildlife's (VTDFW) hunting regulations with some additional restrictions to protect wildlife and habitat, and to reduce potential public use conflicts. Hunters can access refuge lands by public roads and adjoining public lands and water.

Approximately, 26,887 acres would be open to hunting on Vermont refuge lands for the following species:

<u>Big Game</u> – Moose, white-tailed deer, black bear, and turkey hunting would be permitted on Vermont units of the refuge.

<u>Furbearers</u> – Bobcat, red and gray fox, raccoon, coyote, skunk, muskrat, opossum, weasel, and woodchuck hunting would be permitted on Vermont units of

the refuge.

<u>Small Game</u> – Eastern cottontail, snowshoe hare and gray squirrel hunting will be permitted on Vermont units of the refuge.

<u>Game Bird</u> – Wilson's snipe, coot, crow, pheasant, ruffed grouse, duck, light geese, dark geese, and woodcock hunting would be permitted on Vermont units of the refuge.

### Fishing

The Connecticut River watershed supports a diversity of fishery resources. Cold, cool, and warm water species are in general abundance throughout the watershed. The cold-water tributaries within the New Hampshire and Vermont portion of the refuge provides important habitat for brook trout, rainbow trout, and brown trout. Refuge ponds provide habitat for the usual warm water fish species including pumpkinseed, yellow perch, and pickerel.

Recreational fishing would be conducted under the State of New Hampshire's regulations for open water and ice fishing, and the State of Vermont's regulations for inland fisheries with some additional restrictions to protect fish, wildlife, and habitat and to reduce potential public use conflicts. During the seasons specified in the fishing regulations established annually by the States, fishing could occur between one-half-hour before sunrise to one-half-hour after sunset. Anglers can access refuge waters from refuge roads, refuge lands, public roads and adjoining public lands.

### Special Refuge Specific Regulations

- Excluding the Nulhegan Basin Divisions, refuge lands are closed to night hunting. Hunters are allowed on refuge lands from one and a-half-hour before sunrise to one and a-half-hour after sunset.
- A person shall not take or attempt to take any wild animal by shooting a firearm, muzzleloader, bow and arrow or crossbow within 25 feet of a traveled portion of a public road, with the exception of a permanently disabled hunter with the proper state and refuge issued special use permit.
- Tree stands, blinds, or other hunting equipment must be removed from the refuge within 72 hours after the regulated hunting season has ended.
- Take of amphibians, reptiles and baitfish is prohibited.
- We allow the training of dogs following State regulations from August 1 through the last Saturday in September during daylight hours, if the trainer possesses a special use permit.
- We allow the use of dogs consistent with State regulations, except hunters using more

than two dogs must possess a special permit.

• At the Putney Mountain Unit, we allow the use of dogs only for hunting ruffed grouse. This regulation mitigates issues with the Unit's small size (285 acres) such as potential trespass of hunting dogs onto private property while training or in pursuit of game

This proposed alternative offers opportunities for public hunting and fishing and fulfills the Service's mandate under the Refuge System Improvement Act of 1997. The Service has determined that the hunting and fishing plan is compatible with the purposes of the Conte Refuge and the mission of the Refuge System.

### Alternative B; Expansion of the Dog Training Season

Alternative B would expand the dog training season to follow the Vermont State dog training season which occurs in the months of June, July, August, and September. Additionally, dog use would be consistent with State regulations for hunting and training on the Putney Mountain Unit.

### Alternative(s) Considered, But Dismissed From Further Consideration

The closure of the dog training season on refuge lands during the entirety of Vermont and New Hampshire State seasons was considered but dismissed from further review. However, the Service will continue to monitor population trends of endangered and threatened species, and migratory birds. If there is evidence that trust resource populations decline, then the Service may revisit impacts associated with the dog training season.

In developing hunting plans for national wildlife refuges, we regularly receive comments and requests from some members of the public to eliminate hunting. An alternative that would close the refuge to all hunting was therefore considered but dismissed from detailed analysis. A "No Hunting Alternative" would not accomplish the purposes we seek to accomplish by the adoption of this hunting and fishing plan, as described in the "purpose and need" section of this Supplemental EA.

Closing the refuge to hunting would conflict with the Refuge System Improvement Act, which provides that hunting is an appropriate and priority use of the Refuge System, shall receive priority consideration in refuge planning and management, mandates that hunting opportunities should be facilitated when feasible, and directs the Service to administer the Refuge System so as to "provide increased opportunities for families to experience compatible wildlife-dependent recreation, particularly opportunities for parents and their children to safely engage in traditional outdoor activities, such as fishing and hunting." Furthermore, Department of the Interior Secretarial Order 3356, signed in 2017, 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. An alternative that failed to provide any opportunity to participate in hunting activities, where such activities are compatible with the purposes of the Refuge System, would also fail to meet the goals of the Refuge System.

### **Mitigation Measures to Avoid Conflicts**

- Safety zones will be posted in areas of high visitation such as around buildings to reduce the interaction between hunters and other user groups.
- Current hunting and fishing information will be available at the refuge's headquarters and posted on the refuge's website and at onsite kiosks.
- Hunting and fishing will take place during daylight hours only to avoid nighttime disturbance to wildlife except on the Nulhegan Basin Division where night hunting is allowed with a special permit.

### **Affected Environment and Environmental Consequences**

The only potential environmental stressor added to sections of this Supplemental EA that may not have been addressed as fully in the 2021 EA would be the potential effects of dogs on wildlife. All other stressors associated with hunting and fishing activities remain the same as in the 2021 EA, and the analysis and effects remain fundamentally the same. 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 reasonably foreseeable and have a reasonably close causal relationship to the proposed action or alternatives. This Supplemental EA focuses on 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 may be dismissed from further analyses. We determine significance by considering the degree of effects to that environment, and connected actions are used to assist in determining significance.

As stated above, this section predicts the foreseeable impacts of implementing the hunting and fishing program in each of the alternatives. When detailed information may be deficient or unavailable, we base our comparisons on professional judgment and experience. We usually identify potential impacts within a long-range timeframe (i.e., 15 years); beyond that timeframe they become more speculative.

Please keep in mind the relatively small total land mass of the hunting and fishing areas of the refuge in comparison with the entire Atlantic Flyway or the breeding ranges of the many birds and wildlife that use it. We recognize that the refuge is not isolated ecologically from the land around it; however, we may have overstated positive or negative impacts in that larger geographic context. Nevertheless, the actions we propose conform with the CCP and other regional landscape plans, and provide positive, incremental contributions to those larger landscape goals.

The New Hampshire portion of the Conte Refuge consists of five units and divisions,

located within the Connecticut River Watershed in Northern New Hampshire (see Figure 1 within the Recreational Hunting and Fishing Plan). The Vermont portion of the Conte Refuge consists of one division and one unit within in the Connecticut River Watershed in Vermont. The refuge is made up of a wide range of habitat types (see Table C-1) depending on the unit or division.

Table B-1. Silvio O. Conte NFWR Habitat Types

| Habitat Type      | Description  |
|-------------------|--|
| Hardwood Forest   | Hardwood forest communities represent a large matrix community throughout the watershed. They include deciduous-dominated forests, such as Northeast interior dry-mesic oak, Central Appalachian dry oakpine, North Atlantic coastal plain dry hardwood forest, and Laurentian-Acadian Northern hardwood forests, as well as mixed wood communities, such as Laurentian-Acadian pine-hemlock-hardwood, and Appalachian hemlock-Northern hardwood. Tree species common to this habitat are sugar and red maple, American beech, yellow and white birch, and to a lesser extent basswood, white ash, and black cherry. Mixed-wood forests are often along transitional zones between deciduous and coniferous dominated habitats, and thus are characterized by plant species and soil properties that stem from both. Most often these are found on either gently sloping benches or plateaus or at higher elevations (2,000 to 2,500 feet), where soils are typically shallow above a restricting pan layer. These forests are important for several priority species including wood thrush, American woodcock, and black-throated blue warbler. |
| Hardwood<br>Swamp | Forested swamps can be found in large and small patches within and around the larger upland formations. They grow on terrain with little to no slope, in topographic depressions and sumps, and often in watershed headwater basins. Hardwood forested swamps vary in their hydrological regimes from wetlands having standing water for only a small part of the year to very wet wetlands that seasonally flood and/or saturate surfaces for a substantial part of the year. Forested swamps provide important wildlife habitat; for example, forested wetlands tend to have more total birds as well as more bird species nesting in a given area than upland forested sites (Newton 1988). Red maple swamps can be found in a wide range of settings and provide habitat for a large variety of wetland-dependent species including wood ducks, marbled salamanders, and beaver.   |

| Habitat Type                      | Description  |
|-----------------------------------|--|
| Pasture/Grassland                 | In the Connecticut River Watershed, pasture, hay, and grasslands are primarily the result of agricultural production activities. Although historically there were natural grasslands in the region most likely in major river valleys and along the coast, very little natural grassland remains today (Dettmers and Rosenberg 2000). Although agricultural lands are not native wildlife habitat, they can serve the needs of many species. Forage lands or pasture, hay fields, open vegetable patches and sod fields can be valuable to many species of birds, mammals, reptiles, and amphibians. These grassland ecosystems have since been impacted by development and fragmentation. |
| Shrub Swamp/<br>Floodplain Forest | Shrub swamps are wetlands dominated by woody shrubs. They can be found throughout the watershed and are highly variable depending on climate, past disturbance, hydrology, and mineral enrichment. They are often found in transitional zones between marshes and forested wetlands along pond margins, lake margins, and along rivers and streams (Gawler 2008, Thompson and Sorenson 2000).  |
| Floodplain Forest                 | Annual spring high water flows in the Connecticut River Watershed have created a substantial number of floodplains. In areas without constant scouring, floodplains host rich forest habitats. Connecticut River floodplain forests are usually dominated by silver maple, Eastern cottonwood, and black willow with an understory of ostrich fern, wood nettle, and false nettle. These riverside forests provide critical nursery habitats (e.g., shade, cover) for some fish and important migratory stopover habitat.  |
| Freshwater<br>Marsh               | Freshwater marshes are open wetlands found throughout the watershed. They are dominated by herbaceous vegetation such as sedges, grasses, and cattails with little or no woody vegetation present. Freshwater marshes are rich and very productive biological communities. They are identified as having high ecological and functional importance within the State Wildlife Action Plan. Marshes support a variety of emergent plants such as cattails, grasses, and sedges.  |
| Open Water                        | Open water habitats include rivers, streams, ponds, lakes and associated transitional habitats influenced by fluctuating water levels. Diadromous and indigenous fish, freshwater mussels, mayflies, dragonflies, and amphibians each rely on these communities for some stage of their life cycle. These habitats also provide foraging opportunities for other species including waterfowl, herons, egrets, mink, and otter.   |

For more information regarding descriptions of all refuge resources, please see the refuge's CCP, Volume 2, State of New Hampshire Lands at:

https://www.fws.gov/Refuge/Silvio O Conte/what we do/finalccp.html.

### **Affected Resources and Anticipated Impacts**

### **Big Game**

Description of Affected Resource

Big game includes White-tailed Deer, Black Bear, Moose, and Wild Turkey. Populations of these species have generally remained steady to slight increases in New Hampshire and Vermont. Both States will adjust seasons and limits to maintain healthy populations.

Impacts on Affected Resource

#### No Action Alternative

White-tailed deer, black bear, moose, and wild turkey are currently hunted on refuge lands. State wildlife agencies manage populations at or below carrying capacity to maintain healthy wildlife populations and ecologically sound habitats. These species would continue to be hunted following State regulations. No additional impacts are expected.

### Alternative B

Impacts from hunting White-tailed deer, black bear, moose, and wild turkey would be similar to the No Action Alternative.

### **Small Game**

Description of Affected Resource

Small game includes Coyote, Red and Gray Fox, Raccoon, Skunk, Muskrat, Opossum, Weasel, Woodchuck, Fisher, Porcupine, Bobcat, Mink, Eastern Cottontail, Snowshoe Hare, and Gray Squirrel.

Impacts on Affected Resource

### No Action Alternative

All small game species would be open to hunting under this alternative. The number of hunters pursuing skunk, muskrat, opossum, weasel, woodchuck (sometimes referred to as groundhog), fisher, porcupine and mink is predicted to be low and is not expected to have negative impacts on populations. These species are mainly considered nuisance species in populated areas causing human-wildlife conflicts. Hunting of these species is more likely to occur off refuge lands surrounding more populated areas.

### Alternative B

All small game species would be open to hunting following State regulations. Impacts to coyote, red and gray fox, raccoon, bobcat, Eastern cottontail, snowshoe hare and gray squirrel would be similar to the No Action Alternative.

### **Game Birds**

Description of Game Birds

Game bird species include Wilson's Snipe, Coot, Crow, Pheasant, Ruffed Grouse, Duck, Light Geese, Dark Geese, and Woodcock.

Impacts on Affected Resource

### No Action Alternative

All of these species would be open to hunting under this alternative. Woodcock and ruffed grouse are the most pursued game bird on refuge lands. Ruffed grouse populations are monitored, and hunting regulations are enforced by the State wildlife agencies. Waterfowl and woodcock seasons and bag limits are set by States within a framework set by the Service and based on surveys, harvest data, and habitat data. Populations of these species have remained relatively stable. The number of hunters pursuing geese and crow are relatively low. Pheasant are not native to the area and are typically released on private or State lands for hunting purposes. The release of pheasant on refuge lands is not allowed because it is not a native species. Hunting of pheasant would only occur if a bird found its way to refuge lands from adjoining properties. At this time, birds are not released on lands adjacent to refuge lands. Wilson's snipe is often an incidental species taken while hunting woodcock. It is not a highly pursued game species. Refuge lands do not support large numbers of these species and they are not popular hunted game birds on the refuge.

#### Alternative B

Wilson's snipe, coot, pheasant, ruffed grouse, duck, light geese, dark geese, and woodcock are all ground nesting birds that may be affected by training dogs on the refuge during the breeding season.

### Other Wildlife and Aquatic Species

### Description of Affected Resource

The refuge supports a diversity of wildlife species in New Hampshire and Vermont, including reptiles, amphibians, and invertebrates, which are important contributors to the overall biodiversity on the refuge. Some songbirds and raptors breed at the refuge, whereas others utilize the refuge for wintering and during migration.

Impacts on Affected Resource

### No Action Alternative

The current level of hunting and fishing taking place on refuge lands may cause a short-term disturbance to wildlife. The number of overall hunters is relatively low with peak numbers during the first week of deer rifle season. This season occurs in November when the breeding season of most wildlife species has ended and migratory species have moved further South. We feel that the disturbance to other wildlife is minimal due to the short time period of disturbance. The overall number of hunters during all hunting seasons is low and dispersed across large acreage, leaving *Appendix B – Environmental Assessment* 

many parts of the refuge undisturbed. The refuge works closely with each State wildlife agency to minimize impacts to game species that look similar to other protected species such as spruce grouse and Canada lynx. Spruce grouse is a species of concern in New Hampshire and endangered in Vermont. Female spruce grouse look very similar to female ruffed grouse. VTDFW posts signs in the Nulhegan Basin Division to educate hunters about key identification characteristics and habitat preferences of spruce grouse. Canada lynx, a federally listed species, can be misidentified as bobcat. We work closely with VTDFW to educate hunters about lynx (see Section 7 for details). We follow State hunting and fishing regulations and distribute each State wildlife agency hunting and fishing guides. These guides provide each State's hunting and fishing regulations and educational tools to minimize impacts on other species. State regulations and seasons also take into account impacts on other wildlife species.

### Alternative B

Domestic dogs can negatively impact the distribution, abundance, ability to provision young and overall productivity of nesting birds. The associated impacts from domestic dogs are based on the type of species, time of year, location, type of use, frequency, and duration. Based on the available scientific peer reviewed literature pertaining to recreation disturbances on wildlife, the training of dogs during the migratory bird breeding season is likely to adversely affect ground/shrub nesting birds. (Doherty et al. 2017, Lepe et al. 2017, Hennings 2016, Weston et al. 2014, Hughes et al. 2013, Steven et al. 2011, Young et al. 2011, Showler et al. 2010, and Sime 1999).

### Threatened and Endangered Species (T&E) and Other Special Status Species

Description of Affected Resources

These species include Northern long-eared bat, Northeastern bulrush, Canada lynx, Dwarf Wedgemussel, and Jessup's milk-vetch.

### Impacts on Affected Resources

An Intra-Service Section 7 analysis under the Endangered Species Act (ESA) of 1973, as amended was conducted in cooperation with the Service's New England Field Office.

Northern long-eared bats – No new mitigation measures would be necessary to protect Northern long-eared bats even though there is the possibility that they live on refuge lands. Impacts to Northern long-eared bats will be minimal as there is very little overlap with hunting activities and the bats' maternity and volant periods.

Northeastern bulrush – Refuge staff would monitor recreational use and the population status of Northeastern bulrush on the refuge. Impacts to Northeastern bulrush populations will likely be minimal; hunters and anglers would not use the area the species occupies frequently because the wetland type provides limited habitat for fish and waterfowl.

Canada lynx – Canada lynx may or may not be present on the refuge, but refuge staff would monitor their presence. Hunters frequently mistake Canada lynx for bobcat, which look very similar and are allowed to be hunted in Vermont. The refuge would work with VTDFW to educate hunters on key identifiable differences between Canada lynx and bobcat. Due to the species' specific habitat requirements, the status of the species and the time of year that hunting and dog training would take place, hunting and the training of dogs, may affect, but is not likely to adversely affect Canada lynx. A recent endangered species consultation determined that the refuge's current dog training season,

which occurs from August to September, reduces potential impacts to Canada lynx. Dog training that occurs between May and August may have indirect and direct impacts to lynx kittens when they are vulnerable in den sites.

Jessup's milk-vetch – Refuge staff would monitor recreational use and population status of the Jessup's milk-vetch growing on the refuge. Impacts to Jessup's milk-vetch would be minimal based on the current use patterns of the island by anglers and other user groups.

*Dwarf wedgemussel* – No mitigation measures would be taken for protecting dwarf wedgemussels. Although there is no dwarf wedgemussel population on the refuge, there are populations within the vicinity of the refuge. Because there are none living in the refuge, there would be no impacts to dwarf wedgemussel populations.

Refuge staff will continue to monitor for the presence of threatened or endangered species on the refuge. If they are found on the refuge, the effects of hunting on these species will be evaluated. See Intra-Service Section 7 for additional details.

### Vegetation

Description of Affected Resources

This section includes vegetation of special management concern. Vegetation varies widely throughout refuge lands, encompassing shrubby and herbaceous communities, as well as forested communities with a wide array of canopy types.

Impacts on Affected Resources

### No Action Alternative

Overbrowsing of vegetation is one consequence of populations that are beyond their carrying capacity (Behrend et al. 1970, White 2012, Bergeron et al. 2011). VTDFW increased hunting pressures on moose populations in Northeast Vermont due to an unexpected spike in their population. Impacts of moose overbrowsing is evident throughout the forests of the Nulhegan Basin Division. Hunting is used as a tool to maintain game populations at or below carrying capacity, which will minimize impacts on vegetation. Hunters and anglers could negatively affect vegetation by trampling and creating footpaths. Current levels of use for hunting and fishing have had negligible impacts to vegetation (i.e., factors include low number of users, low frequency of use, and dispersed use patterns).

### Alternative B

Training groups of dogs repeatedly in the same habitat may affect, but not likely to adversely affect vegetation by trampling and creating footpaths.

#### **Water Resources**

Description of Affected Resources

Recreational fishing would be open for the season and species as regulated by the States.

Impacts on Affected Resources

#### No Action Alternative

Recreational fishing would continue to occur on refuge lands following State regulations and seasons. The States strive to ensure maintenance of healthy and diverse fish species populations. Anglers must abide by the State's seasons, catch limits, and regulations which were designed to protect the State's fish populations. The refuge's fishing pressure has been light and sustainable. We do not anticipate an increase in recreational fishing activities.

### Alternative B

Impacts would be similar to those mentioned under the No Action Alternative

#### Wetlands

Impacts on Affected Resources

### No Action Alternative

Hunters are permitted to walk on lands throughout designated hunting areas without restriction. Migratory bird hunters are permitted to place blinds on the refuge but must remove them daily, minimizing impacts to vegetation. As bird hunting occurs in the fall and early winter, impacts to vegetation are negligible and short-term. No impacts to any wetland habitats have been observed by refuge staff.

### Alternative B

Impacts to wetlands will be similar to the No Action Alternative as the number of people training dogs in wetland areas is minimal.

### Visitor Use and Experience

### Description of Use

The refuge is open to all priority public uses (hunting, fishing, wildlife observation, wildlife photography, environmental education and environmental interpretation) on lands where found compatible.

Impacts on Use

### No Action Alternative

Currently, the refuge is open to all six priority wildlife-dependent uses. The lands that are open to hunting and fishing follow State seasons and regulations. There have been very few conflicts among user groups that have involved hunting or fishing. Public health and safety are addressed through clearly delineated safety zones and increased outreach to all users.

#### Alternative B

It is expected that the number of people training their dogs to pursue wildlife in the early summer will not cause conflicts among the user groups. We do not expect to see an increase in the number of conflicts among user groups.

### **Cultural Resources**

The Service, as the lead Federal agency, has chosen to use the NEPA substitution process to fulfill obligations under the National Historic Preservation Act of 1966, as amended (NHPA). While obligations under NHPA and NEPA are independent, the regulations implementing NHPA allow for the use of NEPA review to substitute for various aspects of the NHPA section 106 (16 U.S.C. 470f) review to improve efficiency, promote transparency and accountability, and support a broadened discussion of potential effects that a project may have on the human environment (36 CFR 800.3 through 800.6).

Section 106 of the NHPA\_requires the Service to evaluate the effects of any of its actions on cultural resources (historic, architectural, and archeological properties) that are listed or eligible for listing in the National Register of Historic Places (NRHP).

Under each alternative, hunting, regardless of the method or species targeted, will not pose a threat to cultural resources. There are no historic buildings or other obvious cultural resources on the refuge that would be readily susceptible to impacts from hunting.

### Refuge Management and Operations – Land Use

### Description

The refuge currently owns and maintains a Visitor Center in Brunswick, Vermont, various parking lots, hiking trails, informational kiosks, and gravel roads.

Impacts on Use

### No Action Alternative

It is expected that the number of hunters and anglers pursuing these species will be low. These users would use existing infrastructure to access the refuge. The frequency and extent of maintenance and improvement of current facilities is not expected to differ from that required to support other public uses. We do not expect any conflicts among user groups, crowding, or overuse of the refuge's infrastructure.

### Alternative B

The use of the refuge's infrastructure will be similar to the existing use occurring on the refuge.

### Refuge Management and Operations - Administration

### Description

There are currently three full time positions that oversee this portion of the refuge. Management and biological staff work together to ensure hunting and fishing programs are safe, successful, and biologically sound.

*Impacts* 

### No Action Alternative

Annual operating costs to administer the Vermont and New Hampshire portion of the refuge's current program including infrastructure, signs and staff time is approximately \$53,000.

### Alternative B

The costs to implement the fishing and hunting programs under this alternative are expected to be similar to the No Action Alternative.

#### Socioeconomics and Environmental Justice

### Description

The refuge lands in Vermont and New Hampshire are situated in mostly rural communities. The more populated areas are in the southern portion of the States. People come to the region throughout the year to participate in activities such as hunting, fishing, camping, hiking, canoeing, kayaking, snowmobiling, skiing, and driving the scenic roads. Hotels, restaurants, and the associated service industry all benefit from the infusion of tourism dollars.

**Impacts** 

### No Action Alternative

The current program has a minor, long-term and beneficial impact to the local economy. Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations, involves Federal agencies to incorporate environmental justice into their missions by identifying and addressing disproportionately high or adverse human health or environmental effects of their programs and policies on minorities and low-income populations and communities. No additional impacts are expected.

### Alternative B

It is expected that the number of hunters pursuing these species will be low. Impacts will be similar to the No Action Alternative.

### **Other Impacts**

This section includes those effects with a reasonably close causal relationship to the proposed action or alternatives but may be later in time or farther removed in distance from the proposed action or alternatives. For more information on the national cumulative impacts of the Service's hunting and fishing program on the Refuge System, see "U.S. Fish and Wildlife Service, Cumulative Impacts Report 2021-2022 National Wildlife Refuge and National Fish Hatchery Proposed Hunting and Sport Fishing Openings (2021)."

### **Table B-2. Potential Impacts Associated with Environmental Trends**

### **Hunting/Fishing**

Hunting and fishing occur on public and private lands that are found adjacent to several units and divisions of the refuge.

Hunting and fishing is part if the culture in the Connecticut River watershed. The refuge currently runs fishing events to try to connect people with nature and the outdoors.

Big Game – The Service considers hunting to be an important tool for wildlife management. Hunting gives resource managers an effective means to control populations of some species that might otherwise exceed the carrying capacity of their habitat and threaten the well-being of habitats (composition, structure, and function) and other wildlife species, and in some instances, threaten human health and safety. A lack of hunting on the refuge lands diminishes the refuge's ability to manage wildlife populations, and by extension, NHDFG and VTDFW ability to manage populations. Likewise, an increase in deer and moose densities may negatively affect forest regeneration and plant diversity, resulting in degradation of habitat for woodcock, nesting songbirds, and the wide array of other migratory birds that use early successional forests.

Overabundant deer and moose populations on refuge lands may have detrimental impacts to forest conditions on adjacent lands as well. Heavy browsing by refuge deer and moose could influence forest regeneration and plant diversity on neighboring properties.

Migratory Birds – Waterfowl populations throughout the United States are managed on a flyway basis. The Conte Refuge is located in the Atlantic Flyway. In North America, the process for establishing waterfowl hunting regulations is conducted annually. In addition, public hearings are held, and the proposed regulations are published in the Federal Register to allow public comment.

Annual waterfowl assessments are based upon the distribution, abundance, and flight corridors of migratory birds. An Annual Waterfowl Population Status Report is produced each year and includes the most current breeding population and production information available for waterfowl in North America (USFWS 2017a). An Annual Adaptive Harvest Management Report (AHM) provides the most current data, analyses, and decision-making protocols (USFWS 2017b). These reports are intended to aid the development of waterfowl harvest regulations in the United States for each hunting season.

Hunting on the refuge will not add significantly to accumulative impacts of migratory waterfowl management on local, regional, or Atlantic Flyway waterfowl populations, as the percentage taken on the refuge, though additive to existing hunting takes, would be a tiny fraction of the estimated populations. In addition, overall populations will continue to be monitored and future harvests will be adjusted as needed under the existing processes.

The proportion of the national waterfowl harvest that occurs on refuges is only 6 percent (US DOI 2009) and there are no waterfowl populations that exist wholly and exclusively on refuges. Annual hunting regulations within the United States are established at levels consistent with the current population status and refuges cannot permit more liberal seasons than provided for in Federal frameworks. Refuges purchased with funds derived from the Federal Duck Stamp must limit hunting to 40 percent of the available area.

Resident Wildlife – Refuges, including Silvio O. Conte NFWR, conduct hunting programs within the framework of State regulations. Hunting frameworks and take limits are set by the State. The proposed refuge hunting program rules will follow hunting regulations set by the State of New Hampshire or the State of Vermont with some changes. The refuge coordinates with the States about the hunting and fishing programs.

### Use of Lead

Ammunition/Tackle Lead ammunition is permitted in New Hampshire and Vermont, and on the refuge for all hunts except for migratory birds.

New Hampshire prohibits the sale and use of lead fishing sinkers and lead jigs weighing less than 1 ounce in all inland freshwater. Vermont prohibits the sale of any lead fishing sinkers and lead jigs weighing less than 1 ounce. The refuge receives approximately 3,500 hunting and fishing visits each year. Use of the refuge is not expected to increase significantly. The refuge will encourage voluntary use of non-lead ammunition and tackle when hunting or fishing on the refuge.

### **Monitoring**

The refuge will be adaptive with harvest management under the hunt program. Refuge-specific hunting regulations may be altered to achieve species-specific harvest objectives in the future. Many game species populations are monitored by NHDFG and VTDFW through field surveys and game harvest reports which will provide an additional means for monitoring populations. Each State has determined that populations of game species are at levels acceptable to support hunting and these assessments are reviewed and adjusted periodically.

### **Summary of Analysis**

This Supplemental EA provides sufficient evidence and analysis for determining whether to prepare an Environmental Impact Statement (EIS) or a Finding of No Significant Impact (FONSI).

### Alternative A: No Action (Service's Preferred Alternative):

There would be no change to the current public use and wildlife management programs on the refuge. This alternative is the Service's proposed action because it offers the best opportunity for public hunting and fishing that would result in a minimal impact on physical and biological resources, while meeting the Service's mandates under the NWRSAA and Secretarial Order 3356. The Service believes that hunting and fishing on the refuge will not have a significant impact on local or regional wildlife populations because the percentage likely to be harvested on the refuge, though possibly additive to existing hunting takes, would be a tiny fraction of the estimated populations.

### Alternative B; Expansion of the Dog Training Season

The dog training season under this alternative would be expanded to follow the Vermont State season during the months of June, July, August, and September. Expanding the dog training

season on the refuge into the months of June and July may affect, but is not likely to adversely affect Canada lynx, which is federally listed as threatened and protected by the Endangered Species Act. Expanding the dog training season into the months of June and July may adversely affect ground/shrub nesting migratory birds, which are protected by Migratory Bird Treaty Act. Expanding the dog training season on the refuge into the months of June and July may adversely affect spruce grouse, which are protected by the Vermont Endangered Species Rule.

### **List of Preparers**

### U.S. Fish and Wildlife Service, Silvio O. Conte National Fish and Wildlife Staff

Andrew French – Project Leader Steve Agius – Refuge Manager Rachel Cliche – Wildlife Biologist Jeremy Goetz – Forester

### U.S. Fish and Wildlife Service, Northeast Regional Office Staff

Thomas Bonetti – Senior Planner Graham Taylor – Refuge Supervisor, North Zone Meta Miner – Assistant Refuge Supervisor

### **State CCP Coordination**

Extensive coordination and consultation occurred in advance of the development of the hunting and fishing programs as a part of the CCP process which was signed in January of 2017. Prior to completion of the CCP, hunting and fishing were allowed where they had previously occurred before coming under the stewardship by the Service as a part of a national wildlife refuge. During this public process, there was considerable interest and support for these public use opportunities, especially by the States of New Hampshire and Vermont. Each State was a member of the CCP Core Planning team.

### **Tribal Consultation**

Tribal consultation to expand hunting and fishing occurred during the development of the CCP that was completed in 2017. No additional consultation was completed for this plan as there are no federally recognized tribes in Vermont or New Hampshire.

### **Public Outreach**

The public will be notified of the availability of the Silvio O. Conte NFWR Recreational Hunting and Fishing Plan, EA, and CD for review and will include a 30-day comment period. We will inform the public through local venues and the refuge website. Comments received from the public will be considered, and modifications may be incorporated into the final plan and decision documents.

# **Determination**

| This section will be filled out upon completion of any public comment period and at the time of finalization of the Environmental Assessment.                |
|--|
| ☐ The Service's action will not result in a significant impact on the quality of the human environment. See the attached "Finding of No Significant Impact". |
| ☐ The Service's action <b>may significantly affect</b> the quality of the human environment and the Service will prepare an Environmental Impact Statement.  |
| Preparer Signature:Date: 4/24/2023   |
| Name/Title/Organization: Andrew French, Project Leader   |
|  |

### References

- Behrend, D.F., Mattfield, G.F., Tierson, W.C., and Wiley, J.E. 1970. Deer density control for comprehensive forest management. Journal of Forestry, 68, 695–700.
- Bergeron, D.H., P.J. Pekins, H.F. Jones, and W.B. Leak. 2011. Moose Browsing and Forest Regeneration: A Case Study in Northern New Hampshire. Alces 47:39–51.
- Dettmers, R. and K. Rosenberg. 2000. DRAFT Partners in Flight Landbird Conservation Plan Physiographic Area 9 Southern New England. Unpublished report.
- Division of Fisheries and Wildlife (MassWildlife). 2018. https://www.mass.gov/orgs/division-of-fisheries-and-wildlife. Accessed November 2018.
- Doherty, T.S., Dickman, C. R., Glen, A.S., Newsome, T.M., Nimmo, D.G., Ritchie, E.G., Vanak, A.T. and Wirsing, A.J. 2017. The global impacts of domestic dogs on threatened vertebrates. Biological conservation, 210, 56-59.
- Edwards, J., M. Ford, and D. Guynn. 2003. Fox and gray squirrels in Wild Mammals of North America. Pgs 248–267. Johns Hopkins University Press.
- Gawler, S.C. 2008. Northeastern Terrestrial Wildlife Habitat Classification. Report to the Virginia Department of Game and Inland Fisheries on behalf of the Northeast Association of Fish and Wildlife Agencies and the National Fish and Wildlife Foundation. NatureServe, Boston, Massachusetts. 102 pp.
- Golet, F., A. Calhoun, W. DeRagon, D. Lowry, and A. Gold. 1993. Ecology of Red Maple Swamps in the Glaciated Northeast: A Community Profile. Biological Report 12, United States Department of the Interior, Fish and Wildlife Service, Washington, DC.
- Gregonis, Michael A. 2017 Vermont Wild Turkey Program Report 12 Feb. 2019.
- LaBonte, Andrew. 2017 Vermont Deer Program Summary. 12 Feb. 2019.
- Hennings, L. 2016. The impacts of dogs on wildlife and water quality: a literature review. Metro Parks and Nature, Portland, OR, USA
- Hughes J. and Macdonald, D.W. 2013. A review of the interactions between free-roaming domestic dogs and wildlife. Biological Conservation 157:341-351.
- Lepe, A., Kaplan, V., Arreaza, A., Szpanderfer, R., Bristol, D., and Sinclair, M. S. 2017. Environmental Impact and Relative Invasiveness of Free-Roaming Domestic Carnivores—a North American Survey of Governmental Agencies. Animals, 7(10), 78.
  - Lewin, W.C., R. Arlinghaus, and T. Mehner, Documented and Potential Biological Impacts of Recreational Fishing. Fisheries Science. 14:305–367, 2006.

- Newton, R. 1988. Forested Wetlands of the Northwest, Environmental Institute Publication No 88–1. University of New Hampshire, Amherst, MA.
- Sime, C.A. 1999. Domestic Dogs in Wildlife Habitats. Pp. 8.1 8.17 in G. Joslin and H. Youmans, coordinators. Effects Recreation on Rocky Mountain Wildlife: A Review for Montana Committee on Effects of Recreation on Wildlife, Montana Chapter of The Wildlife Society. 307 pp.
- Steven, R., Pickering, C., and Castley, J.G. 2011. A review of the impacts of nature-based recreation on birds. Journal of Environmental Management 92:2287-2294.
- Showler, D.A., Stewart, G.B., Sutherland, W.J., and Pullin, A. S. 2010. What is the impact of public access on the breeding success of ground-nesting and cliff-nesting birds. Systematic Review, 16.
- Thompson, E. and E. Sorenson. 2000. Wetland, Woodland, Wildland: A Guide to the Natural Communities of Vermont. Nature Conservancy and Vermont Department of Fish and Wildlife, Waterbury, VT.
- U.S. Fish and Wildlife Service. 2017a. Waterfowl: Population Status, 2017. USFWS, Laurel, MD. 74pp.
- U.S. Fish and Wildlife Service. 2017b. Adaptive Harvest Management: 2018 Hunting Season. U.S. Department of Interior, Washington, DC. 69 pp.
- Weston, M.A., Fitzsimons, J.A., Wescott, G., Miller, K.K., Ekanayake, K.B., and Schneider, T. 2014. Bark in the park: a review of domestic dogs in parks. Environmental management, 54(3), 373-382.
- 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:
- Young, J.K., Olson, K.A., Reading, R.P., Amgalanbaatar, S., and Berger, J. 2011. Is Wildlife Going to the Dogs? Impacts of Feral and Free-Roaming Dogs on Wildlife Populations. BioScience 61:125-132.

### OTHER APPLICABLE STATUTES, EXECUTIVE ORDERS AND REGULATIONS

### **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 seg.
- 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, 933
- 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)