

**COMPATIBILITY DETERMINATION**

**USE:** Wildlife Observation, Wildlife Photography, Environmental Education, and Interpretation

**REFUGE NAME:** Nulhegan Basin Division, Silvio O. Conte National Fish and Wildlife Refuge

**DATE ESTABLISHED:** July 21, 1999

**ESTABLISHING AND ACQUISITION AUTHORITY:**

Silvio O. Conte National Fish and Wildlife Refuge Act  
(Public Law 102-212)  
Migratory Bird Conservation Act of 1929  
Land and Water Conservation Fund Act of 1965

**REFUGE PURPOSE(S):**

(1) 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;

(2) 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;

(3) to protect species listed as endangered or threatened, or identified as candidates for listing, pursuant to the Endangered Species Act of 1973 as amended (16 U.S. 1531 et seq.);

(4) to restore and maintain the chemical, physical and biological integrity of wetland and other waters within the refuge;

(5) to fulfill the international treaty obligations of the United States relating to fish and wildlife and wetlands; and

(6) 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.

**NATIONAL WILDLIFE REFUGE SYSTEM MISSION:**

“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.”

**DESCRIPTION OF USE:**

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

Wildlife Observation, Wildlife Photography, Environmental Education, and Interpretation on the Nulhegan Basin Division of the Silvio O. Conte National Fish and Wildlife Refuge (Refuge), which are Priority Public Uses.

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

There currently are no areas on the Refuge closed to wildlife observation, wildlife photography, environmental education, and interpretation.

Refuge visitors engaging in these Priority Public Uses will encounter the spruce-fir, northern hardwood, and mixed conifer/hardwood habitats that are typical on the Refuge. The Nulhegan River and its tributaries, and forested wetlands and bogs also are prominent features of the Refuge landscape. Wildlife species that may be observed, photographed, or studied include various migratory birds, ruffed grouse, snowshoe hare, moose, various furbearers, white-tailed deer, black bear, reptiles and amphibians, brook trout, and other fishes. In the winter, the latter four groups of wildlife mentioned above are under the ice or in hibernacula so the potential for contact with these types of wildlife during the winter is low. Also, many of the birds present during the summer and fall have migrated to southern wintering grounds. The Refuge contains the majority of the largest deer wintering area in the state. No federally-listed plant or wildlife species are known to occur on the Refuge. A state-endangered orchid, the auricled twayblade (*Listera auriculata*) occurs in certain sites on the Refuge. The state-endangered spruce grouse (*Dendragapus canadensis*) occurs in certain lowland spruce-fir habitats on the Refuge and state-endangered common loons (*Gavia immer*) forage in Lewis Pond.

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

Viewing and photographing of wildlife and their habitats, and opportunities for environmental education and interpretation are available year-round. The distinct character of each season provides a good diversity of wildlife, habitat conditions, and scenery to explore, observe, photograph, study, and interpret. There currently are no time of day restrictions; however, these activities are conducted primarily during the day.

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

The public's ability to access the Refuge to facilitate wildlife observation, wildlife photography, environmental education, and interpretation is enhanced by the approximately 40 miles of existing gravel roads on the Refuge that provide vehicular and pedestrian access, 17 miles of existing woods roads and grassed tracks that serve pedestrians, and 35 miles of existing trails (94% of which are gravel roads used for vehicular access in the non-snow months) that provide snowmobile access as part of the Statewide Snowmobile Trail System (SSTS). These corridors provide connective links that enable public access to the Refuge and surrounding public and private lands. Visitors can access the Refuge to conduct these uses year-round by foot travel (including snowshoeing and cross-country skiing), motor vehicles (cars and trucks), and snowmobiles; however, for safety reasons, pedestrians are not permitted to use the SSTS on the Refuge while snowmobile access is ongoing (December 15 until the closure of Refuge roads for mud season - usually around late March, but no later than April 30). Pedestrians also can access various Refuge habitats via cross-country travel. Roads are closed to vehicular access during the mud season, typically mid-March through May; however, they are still open during this time to

pedestrians in pursuit of wildlife-dependent activities. Snowmobile access to facilitate these Priority Public Uses is allowed, conditions permitting, from December 15 to the mud season closure or April 30, whichever is earlier. Some wildlife observation and wildlife photography are based out of the privately-owned camps that were inherited with the purchase of the Refuge lands. More extensive descriptions of occupancy and use of privately-owned camps on the Refuge, and pedestrian, vehicular, and snowmobile access to the Refuge to conduct priority public uses, and discussions of associated impacts are presented in the Compatibility Determinations concurrently developed for these uses.

Excellent opportunities exist throughout the Refuge for wildlife observation and wildlife photography. Opportunities to observe/photograph boreal bird species, migrating warblers, state-endangered spruce grouse and common loons, and moose are of particular interest to the public. In addition, ample opportunities exist for viewing and photographing ruffed grouse, snowshoe hare, white-tailed deer, black bear, various furbearers, several species of small mammals, and reptiles and amphibians. An abundance of wildlife and interesting habitats and the relatively good access on the Refuge make it a well-established destination point of many visitors to the Northeast Kingdom. There are ample opportunities to engage in these priority public uses along the Nulhegan River on the south side of the Refuge and its tributaries, the North, Yellow, Logger, and Black Branches, which flow generally north-south into the Nulhegan, which in turn, drains into the Connecticut River. Visitors can access these areas in a canoe or kayak, depending on water levels. In some stretches, fallen trees or low water will require portages through thick vegetation. The 68-acre Lewis Pond found in the northern portion of the Refuge can also be accessed from a boat landing with a canoe or kayak or from a small boat. Trolling motors are allowed, but recreational use of gasoline/diesel-powered inboard or outboard motors in Refuge waters is prohibited.

Opportunities for environmental education/interpretation exist throughout the Refuge, although no developed programs currently exist, due to inadequate staffing and facilities. When the proposed Headquarters/Visitor Contact Station is constructed, numerous opportunities will be available there. A small number of organizations help provide environmental education programs in about 20 schools in northern Vermont and New Hampshire. Environmental education takes place when schools, colleges and universities, or environmental education organizations visit the Refuge as part of a course of instruction. Currently no organized, curriculum-based programs are provided at the Refuge; however, several college classes have conducted field trips to the Refuge to study the habitats and wildlife as part of natural resource courses. Currently these uses are subject to a Special Use Permit (SUP) that stipulates the area in which the use can be conducted and any applicable conditions, including limitation to group size (maximum group size is limited to 15 people unless specifically stated otherwise within the SUP).

A few private and public organizations (mainly schools and universities) throughout Vermont, provide interpretation to the public through workshops, field trips, and outdoor programs which incorporate visits to the Refuge into their studies of natural communities and the Northern Forest. All organizations currently are required to obtain a Special Use Permit approving the particular activity, and specifying group size and other conditions necessary to ensure compatibility. The

Refuge does not currently receive a large amount of these requests, but does expect the demand for this use to increase with time and with further development of programs by Refuge public use staff and construction of suitable facilities for visitor contact and public outreach.

Prior to the acquisition of the 26,000 acres for the Refuge, Champion protected a 76-acre bog and installed an interpretive boardwalk as part of their "Special Places in the Forest" program. This site, now a part of the Refuge, includes a parking area and a self-guided, 200-foot long, accessible boardwalk trail with signs describing bog formation, rare plants and animals that inhabit the black spruce bog area, and the legacy of Mollie Beattie, a former administrator of the Vermont Agency of Natural Resources, and the first female director of the U.S. Fish and Wildlife Service (Service). This site is named the "Mollie Beattie Bog" and is located on Four Mile Road approximately 1.4 miles northwest of the junction with Lewis Pond Road; a total distance from Vermont Route 105 of about 5 miles. The trail is a destination point of many groups that visit the Refuge for environmental education and interpretation and currently is the only established interpretive trail on the Refuge. Visitors to the Mollie Beattie Bog interpretive site are requested to remain on the boardwalk to avoid disturbance to the sensitive wetland habitat.

Currently, commercial guiding that would facilitate wildlife observation/photography and any commercial wildlife photography must be approved by the Refuge Manager, will require a SUP with specific conditions designed to ensure compatibility, and will be charged a fee.

Visitor numbers specific to each of these uses currently are not documented, but we do have estimates of overall visitation based on data collected by traffic counters and by direct counts. A survey is being conducted by Southern Vermont College that will provide an indication of the public use levels associated with these Priority Public Uses. Analyses of traffic counter data, indicated that the average monthly number of daily vehicular visits from June-December 2000 ranged from 25 to 165 (Davis, J. B. *Estimates of Visitor Traffic at the Nulhegan Basin Division, SOCNFWR*, Southern Vermont College, February 2001). Preliminary analysis of counter data from Mid-May to August 2001 by Refuge staff suggests that daily average vehicular visitation ranged from 29-68. Weekend visitation generally was higher than weekdays, although such a trend was more evident in the fall than in the summer.

Direct observation by Refuge staff during 2000 and 2001 of 811 occupants in 453 vehicles provides an index of 1.8 occupants per vehicle. Based on this figure, extrapolation of the vehicle counts provided by traffic counters indicates estimates of average daily number of visitors during June to mid-December that range from 45 to 297. Participation in wildlife observation, wildlife photography, environmental education, and interpretation often overlap, i.e., visitors may engage in one or more of activity in the same visit. These counts of occupants per vehicle also included visitors engaged in hunting and fishing.

A Headquarters/Visitor Contact Station, Refuge Quarters, and a Maintenance/Equipment Facility are proposed for construction to support these four Priority Public Uses (along with Hunting and Fishing, management, administration, and other activities). An Environmental Assessment and Compatibility Determination are being prepared concurrently for this construction. The proposed site is a 19-acre tract in Brunswick, Vermont along Vermont Route 105, that the Service is in the

process of purchasing from The Nature Conservancy. Funding has not yet been secured for any of this construction except for the replacement of an existing building with a modular building that will serve as an interim office/visitor contact station pending completion of the permanent headquarters/Visitor Contact Station.

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

Wildlife observation, wildlife photography, environmental education, and interpretation are Priority Public Uses as defined by The National Wildlife Refuge System Administration Act of 1966, as amended by the National Wildlife Refuge System Improvement Act of 1997 (Public Law 105-57), and if compatible, are to receive enhanced consideration over other general public uses. These uses were allowed on the Champion International Paper Corporation lands at the time of their sale. Local citizens, adjoining land owners, and the state government were very concerned that these uses should be allowed to continue. Prior to supporting Service ownership of lands in the Nulhegan Basin, citizens and partners wanted assurances of what access and uses likely would be allowed.

The Service signaled its intention to continue certain uses, including wildlife observation, wildlife photography, environmental education, and interpretation, in the document "A Conservation Partnership for the Nulhegan Basin and Paul Stream Area - Public Ownership by the Vermont Agency of Natural Resources and the United States Fish and Wildlife Service - January 28, 1999" (Conservation Partnership) (in Appendix 3 of the "Final Environmental Assessment - U.S. Fish and Wildlife Service Participation in a Partnership to Protect 'the Champion Lands' in Essex County, Vermont," May 1999). Language in the Conservation Partnership document also explicitly stated the Service's commitment "... to provide access to wildlife-dependent and other compatible recreation purposes." The Service's position in this Conservation Partnership was predicated on these uses on the Refuge passing the test of a compatibility determination (603 FW 3). The Nulhegan EA analyzed the impacts of the uses outlined in the Conservation Partnership document as anticipated being allowed and included an Interim Compatibility Determination for wildlife observation, wildlife photography, environmental education, and interpretation on the Refuge. A "Finding of No Significant Impact" was issued.

These uses also are available on surrounding lands of Wenlock, West Mountain, and Bill Sladyk Wildlife Management Areas, Essex Timber Company, The Conservation Fund, Vermont Electric Transmission Company, and other private lands and are subject to the respective policies and regulations of the various landowners. However, developed facilities such as interpretive displays, boardwalks, and nature trails exist only in the nearby Brighton State Park. Canoe "trails" for wildlife viewing exist on the Big Brook and Moose River areas of the Victory Basin Wildlife Management Area.

**AVAILABILITY OF RESOURCES:**

The resources necessary to provide and administer this use are available within current and anticipated Refuge budgets. Staff time associated with administration of these uses is primarily related to answering general questions from the public and partners about opportunities available on the Refuge and conditions for the conduct of these uses, providing tours/presentations when

requested by local schools or other interest groups, law enforcement, general oversight of road maintenance and equipment to enable access to conduct these uses, monitoring use patterns and potential conflicts among visitors engaged in various uses, and monitoring impacts of these uses on Refuge resources. Visitor use programs will be administered by a Deputy Refuge Manager and an Outdoor Recreation Planner, who also will assess interactions among user groups and any related public use impacts. A Maintenance Worker/Equipment Operator will support priority public uses by ensuring proper maintenance of Refuge infrastructure, support facilities, and equipment. These positions are included in the approved staffing pattern for the Refuge, but currently are not funded. Resource impacts will be monitored by the Wildlife Biologist, and a seasonal Park Ranger, under the supervision of the Refuge Manager, will help provide for visitor safety and resource protection, monitor compliance with laws and regulations, perform visitor outreach on the Refuge, and provide law enforcement services. Both of these positions are already assigned to the Refuge. The use of refuge staff and equipment (e.g., pickup trucks and snowmobiles) to monitor the impacts of public uses on resources and visitors and providing law enforcement is required for administering priority public uses; therefore, these operations and equipment are already being accounted for in budget and staffing plans.

Annualized costs associated with the administration of wildlife observation, wildlife photography, environmental education, and interpretation on the Refuge are estimated below:

Law enforcement - patrol/visitor-resource protection/public use monitoring/enforcement/outreach -- GS-7 Park Ranger = \$4,896

Resource impacts/monitoring -- GS-11 Wildlife Biologist = \$4,166

Visitor impacts/provide information to public -- GS-9 Outdoor Recreation Planner = \$3,443

Vehicle/Snowmobile gas/maintenance = \$500

Miscellaneous supplies = \$200

Total = \$13,205

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

Direct negative impacts of these uses include wildlife disturbance, habitat degradation, and potential conflicts between user groups. Indirect negative impacts include habitat loss associated with maintenance of roads and trails for vehicular, snowmobile, pedestrian access to conduct priority public uses, which total approximately 100 acres, and is discussed in Compatibility Determinations developed concurrently for these modes of access. About five to eight acres of previously disturbed habitat along Vermont Route 105 in Brunswick, Vermont will be used for construction of the Refuge Headquarters/Visitor Contact Station, maintenance facility, and quarters that will support public uses on the refuge; the associated impacts, which are minimal,

are discussed in the Draft Environmental Assessment “*Headquarters/Visitor Contact Station at the Nulhegan Basin Division, Silvio O. Conte National Fish and Wildlife Refuge*,” and the draft Compatibility Determination “*Construction of Headquarters/Visitor Contact Station, Quarters, and Maintenance Facility*”; both documents are being developed concurrently for that activity. Kiosks and other informational devices, including any necessary traffic safety signs, will be appropriately placed as needed to provide visitors with adequate on-site information necessary to safely and properly use the Refuge. The negative impact of these devices and signs to Refuge wildlife and habitats will be insignificant, and actually will provide a benefit in terms of minimizing and avoiding problems with visitor safety, conflicts between user groups, and disturbance or damage to wildlife and wildlife habitats.

Visitor use associated with wildlife observation/photography and environmental education/interpretation can potentially damage habitats and disturb wildlife. The particularly sensitive nature of the wetland communities and rare plants will be considered when managing visitor access and use. If, through monitoring and study of visitor uses, it is determined that habitat degradation is occurring, uses will be appropriately modified or curtailed. Uses also may be directed away from sensitive sites and toward more resilient areas, such as the headquarters/visitor contact area or the boardwalk at Mollie Beattie Bog. As visitor use increases, streambanks and vegetation could be damaged from repeat canoe or kayak haul-outs at portage sites or popular stream access points. Invasive plants currently are not well established on the refuge yet nonetheless are a potential threat to refuge resources. Efforts will be made to educate visitors about the impacts of exotic and invasive plant introductions and strategies to reduce potential for introduction and establishment of such plants (e.g., cleaning boats, trailers, and trolling motors prior to traveling onto the Refuge). No federally-listed plants are known to occur on the Refuge; the state-endangered auricled twayblade occurs in certain streamside sites, but is unlikely to be affected by these uses.

Undesirable impacts to wildlife can result from wildlife observation/photography, particularly in the case of breeding and nesting birds, resting/roosting waterfowl, and wintering deer. Should monitoring and assessment of these uses indicate that significant disturbance is or is likely to occur, appropriate corrective measures must be implemented to ensure compatibility. Refuge staff will actively work with partners to facilitate research designed to document the impacts of visitor use on Refuge habitats and wildlife and to formulate management solutions for problem uses. No federally-listed wildlife species currently are known to exist on the Refuge, but the state-endangered spruce grouse does occur in certain lowland conifer habitats. A need exists to monitor the demand and impacts of individuals or groups attempting to observe and photograph spruce grouse so that disturbance to this species is minimized. State-endangered common loons and ospreys (*Pandion haliaetus*) occasionally forage in Lewis Pond, but are not known to nest there. These uses likely will have minimal impacts on foraging loons or ospreys, but if nesting does occur, proper measures will need to be implemented to protect nesting birds and their sites from disturbance.

At this time the anticipated use of the Refuge for wildlife/observation and environmental education/interpretation should be well within available capacity; however, there may be specific cases in the future where controlling numbers of users or use patterns will be warranted to protect

wildlife or habitats. Issues to be considered include, but are not limited to: assuring visitor safety, adequate enforcement of regulations, maximizing the quality of visitor opportunities, minimizing impacts on biological and cultural resources, reducing conflicts between different types of recreational uses, and maintaining the rugged and undeveloped character of the area. Refuge staff will monitor and assess levels and patterns of uses and associated impacts to natural resources and visitors. Currently, no conflicts between various Refuge user groups are evident. Group sizes of classes and field trips will be limited when necessary. Baseline inventories of plant, aquatic, and animal communities, and cultural resources were performed in 2000 and 2001 that can serve as a benchmark for changes that may occur over time. Based on our current levels of knowledge, and at current and anticipated levels and patterns of use, these uses are not considered separately or cumulatively to constitute a significant short-term or long-term impact.

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

Press releases were sent to six newspapers with wide local distribution in northeastern Vermont and northern New Hampshire notifying the public that the Service was requesting comment on the draft Visitor Services Plan/EA (VSP/EA) and associated draft Compatibility Determinations for the Refuge. Additionally, correspondence from the Silvio O. Conte National Fish and Wildlife Refuge (Conte NFWR) to approximately 1,600 people on their refuge mailing list and from VANR to approximately 1,000 on the Champion Lands planning mailing list provided written notice that public review and comment was being requested for the draft VSP/EA and associated documents in conjunction with receipt of comments for draft planning documents for the West Mountain Wildlife Management Area (WMA) and Essex Timber Company. The draft VSP/EA and associated draft Compatibility Determinations were made available for review and comment via the Internet through the Conte NFWR website and were available at Refuge offices in Island Pond, Vermont and Turners Falls, Massachusetts. The West Mountain WMA website of VANR also provided a link to the Conte NFWR website. These public notices conformed to the "Final Compatibility Regulations Pursuant to the National Wildlife Refuge System Improvement Act of 1997" published in the *Federal Register* Volume 65, Number 202, pages 62458-62483. The public was given the opportunity to provide comment via traditional mail service, fax, or email, and oral and written comment could be delivered during six public meetings held in Island Pond, Lyndonville, Springfield, Rutland, Waterbury, and Essex Junction. The period for comment (October 9 to November 19) exceeded the required 14-day minimum. The draft Compatibility Determination indicated that we had determined the proposed use to be compatible.

We received response specific to the draft Compatibility Determination from one commentor. The commentor had two suggestions regarding the "Stipulations to Ensure Compatibility." (1) Rather than specify that dogs not being used in hunting activities must be leashed to be controlled, that we use the term "under control" and apply it to all dogs. In response, we modified the stipulation in question to read "All dogs must be accompanied and under control, and not pose a threat or nuisance to Refuge wildlife or visitors." (2) Clarify that non-hunting visitors should be encouraged to wear blaze orange while hunting seasons are in progress *if they enter the woods*. In response, we modified the wording in question accordingly.

**DETERMINATION:**            THIS USE IS COMPATIBLE                              X    
   THIS USE IS NOT COMPATIBLE                            \_\_\_\_\_ (Check one)

**JUSTIFICATION:**

These uses have been determined to be compatible given that they are managed at a level and in a manner that do not result in hazards to visitors, unresolvable conflicts between user groups, nor significant habitat degradation or wildlife disturbance, and provided that the stipulations referenced below are implemented. The short-term and cumulative, long-term impacts of these uses are not expected to materially interfere with or detract from the mission of the National Wildlife Refuge System or the purposes for which the Refuge was established, and in fact, will promote the accomplishment of Refuge Purpose #6. The use will not pose significant adverse effects on trust species or other Refuge resources, will not interfere with other uses being conducted on the Refuge, nor cause an undue administrative burden.

**STIPULATIONS NECESSARY TO ENSURE COMPATIBILITY:**

During the Visitor Services planning process for the Refuge, many recommendations were developed to help assure visitor safety and to protect biological resources from potential negative impacts of public use. Implementations of these recommendations are necessary to ensure compatibility.

Minimize or avoid negative impacts to wildlife and habitat:

- Harassment, baiting, playback tapes, or electronic calls are not allowable methods to attract wildlife for observation or photography (this does not necessarily apply to management activities, e.g., approved research or surveys).
- Recreational use of gasoline-powered outboard/inboard motors are prohibited in Refuge waters
- All dogs must be accompanied and under control, and not pose a threat or nuisance to Refuge wildlife or visitors.
- Plant collection is prohibited except for collection of fruits and mushrooms for personal consumption (this does not necessarily apply to management activities, e.g., approved research or surveys).
- Develop and implement monitoring and research programs designed to study and allow assessment of visitor uses and associated impacts of wildlife and their habitats.
- Use information gained from monitoring and research to appropriately modify programs and uses to ensure compatibility through an adaptive management system.

Provide for visitor safety:

- Install adequate traffic safety signs.
- Establish speed limits for vehicles and snowmobiles and enforce them.
- Do not allow pedestrian activities on snowmobile trails while they are open to snowmobile access.
- Make visitors aware of hunting season dates and recommend that they wear blaze orange

- if entering the woods.
- Hire a Law Enforcement Officer (Park Ranger) to aid in providing for visitor safety, monitor compliance with laws and regulations, perform outreach to visitors, and provide feedback to management staff about visitor use and associated impacts that will help enable adaptive management.

Minimize or avoid conflicts between different types of uses:

- Make visitors aware of the priority status of wildlife observation, wildlife photography, environmental education, interpretation, hunting, and fishing on National Wildlife Refuges.
- Use education and interpretation to explain the value of hunting, trapping, and timber management to wildlife management.
- Visitors are asked to respect the privacy of camp owners that are using privately-owned camps occurring on Refuge lands that are administered under SUPs and for which annual fees are charged for the occupancy and use of approximately one-acre lots.
- No commercial tour busses or will be allowed on the Refuge; they will be permitted to use the educational/interpretive facilities at the future Headquarters/Visitor Contact Station.
- Commercial guiding and other commercial uses are allowed by SUP only, and only to facilitate priority public uses; maximum group size will be limited to 15 but may be smaller depending on activity; fees will be charged.
- Develop and implement monitoring programs to assess visitor use and use resultant information to appropriately modify programs through an adaptive management system to prevent or minimize conflicts between user groups.

Signature: Refuge Manager:

Karl M. Warren 2/14/02  
(Signature and Date)

Concurrence: Regional Chief:

Anthony J. Leggs 5/2/2002  
(Signature and Date)

Mandatory 15-year re-evaluation date: February 2, 2017