

Compatibility Determination

Use: Non-motorized recreational trail use by walking, hiking, jogging, walking a leashed animal, bicycling, cross-country skiing, snowshoeing, and horseback riding.

Refuge Name: Minnesota Valley National Wildlife Refuge

Establishing and Acquisition Authorities:

Minnesota Valley National Wildlife Refuge (Refuge) was established by Public Law No. 94-466, 94th Congress on October 8, 1976. The Minnesota Valley National Wildlife Refuge Act authorized acquisition of lands for Refuge purposes.

Waterfowl Production Areas - Migratory Bird Hunting Stamp Act of March 16, 1934 as amended by section 3 of the Act of August 1, 1958 (72 Stat. 486, 16 U.S.C. sec. 716 d(c)), authorized the Secretary of Interior to acquire small wetland or pothole areas suitable as Waterfowl Production Areas.

Fish and Wildlife Act of 1956 (16 U.S.C. § 742(a)(4)) and (16 U.S.C. § 742(b)(1))

Emergency Wetlands Resources Act of 1986 (16 U.S.C. § 3901(b), 100 Stat. 3583).

National Wildlife Refuge System Administration Act of 1966 as amended by the National Wildlife Refuge System Improvement Act of 1997, 16 U.S.C. 668dd-668ee (Refuge Administration Act).

Refuge Recreation Act of 1962, 16 U.S.C. 460k-460k-4 (Refuge Recreation Act).

Refuge Purposes:

The Secretary shall develop and administer ... the Refuge, in accordance with the National Wildlife Refuge System Act ... The Secretary may also exercise any other authority available to him for the conservation and management of wildlife and natural resources, the development of wildlife-dependent recreational opportunities, wildlife interpretation, and environmental education, to the extent deemed by him to be appropriate ... The Secretary shall construct, administer and maintain, ... a wildlife interpretation and education center ... to promote environmental education and to provide an opportunity for the study and enjoyment of wildlife in its natural habitat.

National Wildlife Refuge System Mission:

The mission of the National Wildlife 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.

Description of Use:

What is the use?

Non-motorized recreational trail use for such activities as: walking, hiking, jogging, walking a leashed animal, bicycling, cross-country skiing, snowshoeing, and horseback riding, to facilitate participation in priority outdoor recreational uses such as wildlife observation, photography, environmental education, interpretation, fishing and hunting.

Non-motorized recreational trail use by foot, bicycle, skis, snowshoes, and horse for such activities as: walking, hiking, jogging, walking a leashed animal, bicycling, cross-country skiing, snowshoeing, and horseback riding was found to be appropriate and compatible uses within the Refuge's 2004 Comprehensive Conservation Plan.

Allowed on designated Refuge trails.

The non-motorized recreational trail uses would be compatible on Refuge trails that are designated for multi-purpose use and are managed in accordance with standard operating procedures.

Walking, hiking, jogging, and walking a leashed animal

1. Allowed on designated Refuge trails where it does not conflict with other priority public uses or management actions.
2. Walkers of leashed animals are responsible for removal of their animal waste from the Refuge and proper disposal of such waste off Refuge.

Biking

1. Allowed on designated Refuge trails where it does not conflict with other priority public use or management actions
2. Bluff Trail and Hill Side Trail are closed to bicycle use for safety concerns and visitor experience. Both trails are designed for pedestrian traffic only with limited sight lines, narrow twisting courses, steep topography, and structures such as boardwalks and stairs that preclude bicycles.
3. No off-trail or off-road biking is permitted on the Refuge.

Cross country skiing and skijoring

1. Allowed on designated Refuge trails where it does not conflict with other priority public uses or management actions.

Snowshoeing

1. Allowed on designated Refuge trails where it does not conflict with other priority public uses or management actions.

Horseback riding

1. Allowed only on the Minnesota River Valley State Trail within the Louisville Swamp Unit.
2. No off-trail or off-road horseback riding is permitted on the Refuge.

When and how would the use be conducted?

Non-motorized recreational trail use for such activities as: walking, hiking, jogging, walking a leashed animal, bicycling, cross-country skiing, snowshoeing, and horseback riding will occur on the Refuge's road and trail system as designated during daylight hours throughout the year. Portions of the road and trail system may be temporarily closed to support priority public uses, wildlife management, Refuge operational needs, and/or during Refuge-specific hunting seasons.

The trail system is designed to support the six priority public uses and provide access to a variety of habitat types. Persons engaged in hiking, jogging, biking, walking, snowshoeing, horseback riding and skiing will use existing access points, parking lots, signage, and Refuge roads to access the trail system. Designated trails are subject to monitoring by staff and volunteers to educate and inform visitors about trail ethics and public regulations, to report safety issues and emergencies, to assist with closing of trails/grounds, and to remove trash and assist with gate closures.

Why is this use being proposed?

Visitor engagement and value for natural and cultural resources occur on a continuum. The uses will provide wholesome, safe outdoor recreation in a unique and nature-based setting. The potential exists that those who come to the Refuge for recreational enjoyment will find value in this place and be inspired to learn more about it. Through this process of value and awareness-raising, visitors have the opportunity to become informed advocates for the Refuge and for natural resources conservation. In addition, these uses promote Let's Go Outside, Connecting People with Nature, the Urban Wildlife Conservation Program, and other health-related initiatives.

Is the use a priority public use?

Hiking, jogging, bicycling, walking, snowshoeing, horseback riding and cross country skiing are not priority public uses. They can, however, be viewed as "stepping-stones" of engagement for urban audiences to increase exposure to nature in familiar, non-threatening ways. By allowing these uses, persons engaged will be exposed to the natural world and the concept of a Refuge. They will have the opportunity to foster a better understanding of the mission of their Refuge and the National Wildlife Refuge System.

Availability of Resources:

What resources are needed to properly and safely administer use?

In recent years, the Refuge has been open to hunting, fishing, wildlife observation, interpretation, environmental education, and photography. Portions of the trail and roadway system were in existence when the land was transferred to the U.S. Fish and Wildlife Service (Service). Since then, the Refuge has expanded the trails and roads in support of priority public uses. It is expected that the use of the trail and roadway systems by hikers, joggers, bikers, and skiers will slightly increase the general operating cost for personnel and maintenance of these facilities

Are existing Refuge resources adequate to properly and safely administer the use?

There is already existing Refuge infrastructure such as parking lots, signage, and other facilities which will serve to accommodate these activities. It is expected that the use of the trail and

roadway systems by hikers, joggers, bikers, walkers, snowshoers, horseback riders and skiers will slightly increase the general operating cost for personnel and maintenance of these facilities.

Anticipated Impacts of the Use:

How does this activity affect Refuge purposes and the NWRS mission?

The Service and the Refuge System maintain goals of providing opportunities for wildlife viewing and photography. Although hiking, jogging, bicycling, and skiing may not always be associated with wildlife observation and photography, allowing the use of the trail system by persons engaging in these activities will create opportunities to view wildlife and their habitats. Experiences of wonder and appreciation for nature in general and value for this specific place where it is accessed may follow. These users may take the time to learn more about the Refuge while they pursue their activity and become more avid supporters of the Refuge System.

How does the activity affect fish, wildlife, plants, and their habitats; and the biological integrity, diversity, and environmental health of the NWRS?

Effects on Wildlife

Disturbances vary with the wildlife species involved and the type, level, frequency, duration, and the time of year such activities occur. The presence of people hiking, jogging, biking, snowshoeing, horseback riding, and skiing on Refuge trails and roads can lead to displacement of animals from and around trails, although disturbance usually is a negligible influence on large mammal distributions and movements (Purdy et al 1987, Boyle and Samson 1985). Mammals may become habituated to humans, making them easier targets for hunters. Disturbance can have other effects including shifts in habitat use, abandonment of habitat, and increased energy demands on affected wildlife (Knight and Cole 1991). The effects of roads and trails on plants and animals are complex, and not limited to trail width. Trail use can disturb areas outside the immediate trail corridor (Trails and Wildlife Task Force 1998, Miller et al. 2001). Bird communities in this study were apparently affected by the presence of recreational roads and trails, where common species (e.g., American robins) were found near trails and rare species (e.g., grasshopper sparrows) were found farther from trails. Songbird nest failure was also greater near trails.

The effects on other wildlife appear to be short-term with the exception of breeding bird communities. A study by Miller, Knight, and Miller (1998) indicates that species composition and nest predation was altered adjacent to trails in both forested and grassland habitats. It appears that species composition changes are due to the presence of humans and not the trail or roadway itself. On the other hand, nest predation does appear to be a function of the trail which allows access to mammalian nest predators. Use of some roads and trails may cause direct mortality to amphibians crossing trails during migration. There may also be nest abandonment of bird species nesting on, or next to, trails should these uses become too frequent during breeding season. Overall, the existing research clearly demonstrates that disturbances from recreation activities have at least temporary effects on the behavior and movement of birds within a habitat or localized area. Anticipated impacts of hiking, jogging, biking, and skiing on wildlife include temporary disturbances to species using habitat on the trail or directly adjacent to the trail. These disturbances are likely to be short-term. Long-term impacts may include certain wildlife species

avoiding trail corridors as a result of this use over time. However, trails open to hiking, biking, jogging, and skiing are located primarily in continuous tracts of floodplain forest, with occasional oak savanna and prairie.

Non-motorized recreational trail use will occur on existing Refuge trails already being used for wildlife observation and photography. No new trails are anticipated. Therefore, allowing additional non-motorized recreational uses of these existing trails should not increase wildlife disturbance on the Refuge. The Refuge will continue management strategies of educating trail and roadway users on how their activities affect wildlife and how to modify their use to minimize impacts on wildlife. Potential conflict with priority public uses will be minimized by using trail head signs and other media to inform the various users about current public uses. Some trail and roadway use will be restricted during the Refuge-specific hunting seasons. The Refuge will take all reasonable measures to prevent or minimize any potential negative effects, and will evaluate trails periodically to assess whether they meet established suitability criteria and to prevent degradation. If evidence of unacceptable adverse impacts appears, the Refuge will reroute, curtail, or close trails to one or more uses as deemed appropriate. The Refuge will also post and enforce Refuge regulations, and establish, post, and enforce closed areas.

Effects on Vegetation

The Refuge anticipates that there will be minimal adverse impacts to plant communities on designated trails. Most trails designated for hiking, biking, jogging, and skiing use have hardened surfaces where plant communities are sparse. Users leaving designated trails could have impacts to adjacent vegetation. Where impacts to vegetation are observed, the Refuge will take necessary measures, such as remediation and trail closures, to restore plant communities on or adjacent to the affected trail. The Refuge will also post and enforce Refuge regulations, and establish, post, and enforce closed areas.

Public Review and Comment:

This document will be widely released to the news media and posted for 14 days at all Refuge offices (Bloomington and Rapids Lake), as well as on the Refuge website. Any comments received will be addressed in the final compatibility determination.

Determination:

Walking, Hiking, Jogging, Walking a Leashed Animal, Bicycling, Snowshoeing and Cross-country Skiing

Use is Not Compatible

Use is Compatible with the Following Stipulations

Stipulations Necessary to Ensure Compatibility:

1. Refuge staff and volunteers will continue to protect and manage wildlife and their habitat, especially breeding and wintering bird communities found on the Refuge, through the use of education, signage, and trail or roadway closures.

2. Refuge staff and volunteers will continue to monitor trail and road conditions to determine their effect on adjacent plant communities and will take all necessary steps to protect habitat. This could include, but is not limited to; protecting soil from compaction, seasonal closure of trails, and relocating trails.
3. All hikers, joggers, bikers, and skiers will be restricted to the designated trail and roadway systems. The Refuge will work to improve existing trails for visitor use.
4. Refuge staff and volunteers will continue to close trails as needed during hunting seasons and for other management or safety concerns to prevent user conflicts and to provide for public safety.
5. Entry on all or portions of individual areas may be temporarily suspended by posting upon occasions of unusual or critical conditions affecting land, water, vegetation, wildlife populations, or public safety.

The Service and the Refuge System maintain goals of providing opportunities for wildlife viewing and photography. Allowing the use of the trail system by persons engaging in hiking, jogging, bicycling, and skiing for the sake of those activities will create opportunities to view wildlife and their habitats. These users may take the time to learn more about the Refuge while they pursue their activity and become more avid supporters of the Refuge System.

References:

- Boyle, S. A. and F. B. Samson. 1985. Effects of non-consumptive recreation on wildlife: A review. *Wildlife Society Bulletin* 13:110-116.
- Knight, R. L. and D. N. Cole. 1991. Effects of recreational activity on wildlife in wildlands. *Transactions of the 56th North American Wildlife & Natural Resources Conference*. pp. 238-247.
- Miller, S.G., R.L. Knight, and C.K. Miller. 2001. Wildlife responses to pedestrians and dogs. *Wildlife Society Bulletin*, 29(1): 124-132.
- Miller, S.G., R.L. Knight, and C.K. Miller. 1998. Influence of recreational trails on breeding bird communities. *Ecological Applications* 8:162-169.
- Purdy, K. G., G. R. Goff, D. J. Decker, G. A. Pomerantz, and N. A. Connelly. 1987. A guide to managing human activity on national wildlife refuges. Ft. Collins, Colorado: Office of Information Transfer, U.S. Fish and Wildlife Service.
- Trails and Wildlife Task Force. 1998. Planning trails with wildlife in mind: A handbook for trail planners. Colorado State Parks, Denver Co. 51pp.

Signature:

Project Leader:

(Signature and Date)

Concurrence:

Regional Chief:

(Signature and Date)

Mandatory 10-year Re-evaluation Date: January 2026

DRAFT