Compatibility Determination

Refuge Use Category

Outdoor Recreation (General)

Refuge Use Type(s)

Horseback Riding

Refuge

Fort Niobrara NWR

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

"… a preserve and breeding ground for native birds." (EOs 1461, 1642, 3256)

"…to effectuate further the purposes of the of the Migratory Bird Conservation Act…" (EO 7301)

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 (Pub. L. 105-57; 111 Stat. 1252).

Description of Use

Is this an existing use?

Yes

What is the use?

Thisactivity involves riders on horses or mules traveling within the Fort Niobrara Wilderness Area.

Is the use a priority public use?

No

How would the use be conducted?

Horses would be unloaded at either the north wilderness access or at the bison corrals. No special access facilities are provided at either site.

A special use permit is not required.

Why is this use being proposed or reevaluated?

The use is being reevaluated because it is a current public use at the Refuge that has not been reviewed since the 1999 Comprehensive Conservation Plan.

Where would the use be conducted?

The use would take place in the Wilderness Area.

When would the use be conducted?

The use may occur year-round from sunrise to sunset. When horseback riders are hunting, the use may occur from 2-hours before sunset until 2-hours after sunset.

Availability of Resources

Administration of the use requires minimal Refuge resources. No trails or special access points are maintained for horseback riding. Staff resources are sufficient to administer the use.

Anticipated Impacts of the Use

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

The effects and impacts of the proposed use to Refuge resources, whether adverse or beneficial, are those that are reasonably foreseeable and have a reasonably close causal relationship to the proposed use of horseback riding. This CD includes the written analyses of the environmental consequences on a resource only when the impacts on that resource could be more than negligible and therefore considered an “affected resource.” Resources that will not be more than negligibly impacted by the action have been dismissed from further analyses.

Horseback riding does not directly contribute to the public’s understanding and appreciation of the Refuge System’s natural or cultural resources: however, the use does provide a means for the public to partake in other priority public uses such as wildlife observation, photography and hunting. There is a risk of horses being injured or killed by wildlife while on the Refuge. However, with improvements to educational and interpretation signage, risks to horses and their riders, and other visitors can be mitigated. This opportunity may be considered compatible where it improves the

visitor's experience without any significant disruption to wildlife resources or conflicting with the priority wildlife-dependent activities. Outdoor recreation, including nature-based tourism, has long been recognized as an agent of ecological change in natural systems, with the potential to affect soil, vegetation, wildlife, and water quality. (Monz et al. 2010). Like all uses, the Refuge will need to monitor this use and weigh management decisions to limit adverse impacts on habitat and wildlife.

Horseback riding is an infrequent use on the Refuge. Terrain in the 4,600-acre Wilderness Area is steep and rugged deterring novice riders from accessing the area. The presence of approximately 350 bison in the Wilderness Area during the fall and winter season further deters horseback riders. In 2021 and 2022, no horseback riders were documented on the Refuge.

Short-term impacts

Horse travel can impact plants by directly crushing them. Indirectly, horses can impact vegetation by compacting soils, which diminishes soil porosity, aeration, and nutrient availability (Kuss 1986); and limits the ability of plants to re-vegetate affected areas (Hammitt and Cole (1998). Additionally, if use increases, there is an increased possibility that invasive and exotic plants could be introduced to natural communities via seeds deposited in manure. The use will be monitored in the future to account for the possibility of vegetative disturbance, soil erosion, and the introduction of invasive and exotic plants to the Refuge if use levels increase. At current use levels, habitat impacts are anticipated to be non-existent or negligible.

No conflicts with other public use programs are anticipated. Access sites are shared with other users (primarily wildlife observers and hunters); however ample space exists at both access sites.

Long-term impacts

Long-term impacts of horse travel may include certain wildlife species avoiding areas as a result of this use over time. Additionally, Weaver and Dale (1978) found use of horses for travel caused a greater loss of vegetation cover, wider and deeper trails, and greater soil compaction when compared to hiker use on meadow and forest trail conditions. At current and anticipated use levels, no long-term impacts are expected.

Public Review and Comment

Determination

Is the use compatible?

Yes

Stipulations Necessary to Ensure Compatibility

1. Horseback riding remains at or near current use levels (1-5 users/year).
2. Access points will be limited to the Wilderness Overlook and Bison Corrals.
3. Commercial use requests will require a special use permit.

Justification

Horseback riding is not a priority wildlife-dependent use; however, horseback riding does facilitate other wildlife-dependent uses including wildlife observation and hunting. At current levels, horseback riding is an acceptable mode of transportation for visitors participating in wildlife observation and hunting within the Wilderness Area. At existing use levels, horseback riding does not conflict with other approved uses and is not anticipated to materially detract from meeting Refuge purposes or the Refuge System mission.

Literature Cited/References

Hammitt, William E. and Cole, David N. 1998. Wildland Recreation. John Wiley & Sons, New York, 361pp.

Kuss, Fred, R. 1986. A review of major factors influencing plant responses to recreation impacts. Environmental Management, 10:638-650.

Monz, C.A., D.N. Cole, Y.F. Leung and J.L. Marion. 2010. Sustaining visitor use in protected areas: future opportunities in recreation ecology research based on the USA experience. Environmental Management [online first: January 21, 2010].

Weaver, T. and Dale, D. 1978. Trampling effects of hikers, motorcycles and horses in meadows and forests. Journal of Applied Ecology, 15:451-457.