

# Compatibility Determination

## Title

Compatibility Determination for Wildlife Observation, Photography, Interpretation, and Environmental Education for Valentine National Wildlife Refuge

## Refuge Use Category

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Environmental Education and Interpretation  
Wildlife Observation and Photography

## Refuge Use Type(s)

Wildlife Observation, Photography, Interpretation, and Environmental Education

## Refuge

Valentine National Wildlife Refuge

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

National Wildlife Refuge System lands are managed consistent with a number of federal statutes, regulations, policies, and other guidance. The National Wildlife Refuge System Administration Act of 1966, as amended (16 United States Code [U.S.C.] 668dd–668ee) (Administration Act) is the core statute guiding management of the System.

The National Wildlife Refuge System Improvement Act of 1997 (Public Law [P.L.] 105-57) made important amendments to the Administration Act, one of which was the mandate that a comprehensive conservation plan be completed for every unit of the System. Among other things, comprehensive conservation planning has required field stations to assess their current farming program and establish objectives for the future.

The 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.

Additional Authorities include the following: Consolidated Farm and Rural Development Act, Migratory Bird Conservation Act, North American Wetlands Conservation Act, and the Emergency Wetlands Resources Act.

## National Wildlife Refuge System Mission

The mission of the National Wildlife Refuge System, otherwise known as Refuge System, is to administer a national network of lands and waters for the conservation, management, and where appropriate, restoration of the fish, wildlife, and plant resources and their habitats within the United States for the benefit of present and future generations of Americans (Pub. L. 105-57; 111 Stat. 1252).

## Description of Use

Is this an existing use?

Yes

What is the use?

Wildlife Observation, Photography, Interpretation, and Environmental Education

Is the use a priority public use?

Yes

Where would the use be conducted?

There are approximately 61,861 grassland acres and 11,181 wetland acres within the Refuge where visitors may be interested in viewing, photographing and learning about wildlife and habitats.

When would the use be conducted?

Year-round

How would the use be conducted?

People come to the Refuge to bird-watch and enjoy the prairie. It is estimated that about 5000 people visit the Refuge annually for these purposes. Blinds for observing prairie grouse are set up in the spring and are well used. The number of people coming to the Refuge for bird-watching and wildlife observation appears to be increasing. News releases concerning Refuge activities and events are written and provided to area television, radio, and newspaper outlets. The Valentine NWR also hosts special events and educational programs as staff and volunteer resources allow. Some requests for tours and educational programs are denied due to insufficient staffing. Four informational kiosks are located at major entry points to the Refuge. The kiosks have general information, a map of the Refuge, information on managing grasslands for wildlife, and leaflet dispensers.

## Why is this use being proposed or reevaluated?

The National Wildlife Refuge System Improvement Act of 1997 identifies wildlife observation, photography, interpretation, and environmental education as wildlife dependent public uses for NWR's. These are ongoing uses at the Refuge and were previously evaluated in association with the Refuge's 1999 Comprehensive Conservation Plan. Reevaluation is due per policy 603 FW 2.11 H(2), which states: "We will reevaluate compatibility determinations for existing wildlife-dependent recreational uses when conditions under which the use is permitted change significantly, or if there is significant new information regarding the effects of the use, or concurrently with the preparation or revision of a comprehensive conservation plan, or at least every 15 years, whichever is earlier. In addition, a refuge manager always may reevaluate the compatibility of a use at any time."

## Availability of Resources

Currently, existing staff resources are adequate to manage this use at anticipated levels. Staff time primarily involves phone conversations, written correspondence, and interpretation and environmental education programs. Total staff time required is less than 20 days per year. Additional facilities (e.g., boat ramps, storage areas) or additional maintenance activities are necessary to support the use. Access points, vehicles, miscellaneous equipment, and limited logistical support may be made available at the discretion of the refuge manager.

## Anticipated Impacts of the Use

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

Some disturbance to wildlife, birds and mammals, will occur in areas of the Refuge frequented by visitors. In the past, visitation for these uses has been light with an estimated 500 visits per year. It is anticipated that use will increase, particularly if better access and interpretation are offered. Increased use will result in more disturbance; however, the Refuge is remote and most of it will seldom, if ever, be visited by people interested in wildlife observation.

## Short-term impacts

Among activities considered as disturbing to wildlife, Korschen (1992) determined that bird-watching was among the least disturbing, but Klein (1993) noted that

approaching birds on foot was the most disruptive of usual refuge activities. Some photographers are more likely to cause disturbance by lingering in a sensitive area, using recorded calls, and even altering the vegetation at a site to gain a better view (Glinski 1976). However, photography can be useful as a tool to engage others and develop support for wildlife with images that appeal to people's emotions (Hanisch 2017). There are many recommendations for reducing impacts to wildlife: provide visitor education, require staying on trails, closing areas during sensitive periods such as nesting, require minimum set back distances for approach to areas such as rookeries, etc. (Boyle et al. 1985, Erwin 1989, Haverra 1992, Klein 1993, Miller 2001, Morton 1989, Rodgers 1995, Taylor 2003).

Human disturbance to avifauna has been thoroughly documented around the world. Several studies have examined the effects of trail-based recreation on birds inhabiting wildlife refuges and coastal habitats in the eastern United States. McNeil et al. (1992) found that many waterfowl species avoid disturbance by feeding at night instead of during the day. Similarly, Martín et al. (2015) found that human presence caused resident shorebird species to spend less time feeding and more time displaying avoidance behavior, and that the number of shorebirds and gulls within their study site dramatically decreased in response to increased recreation of the area. Disturbance can increase the risk of predation when individuals are forced to forage in more dangerous habitats and can increase intraspecific competition when avoiding humans necessitates movement into suboptimal habitats (Frid and Dill 2002). Some uses, such as bird observation, are directly focused on viewing certain wildlife species and can cause more significant impacts during the breeding season and winter months. Research has shown that as the intensity of human disturbance increased, avoidance response by birds increased, and that out-of-vehicle activity was more disruptive than vehicular traffic (Klein 1993, Freddy et al. 1986, Vaske et al. 1983). Miller et al. (1998) found bird abundance and nesting activities (including nest success) increased as distance from a recreational trail increased, in both grassland and forested habitats. Some studies have found that some songbird species habituate to repeated intrusion. Frequently disturbed individuals of some species vocalize more aggressively, have higher body masses, or tend to remain in place longer (Cairns and McLaren 1980). Disturbance may affect the reproductive fitness of males by hampering territory defense, mate attraction, and other reproductive functions of song (Arcese 1987, Ewald and Carpenter 1978).

Overall, the existing research clearly demonstrates that disturbance from recreation activities always have at least temporary effects on the behavior and movement of birds within a habitat or localized area (Burger 1981, Burger 1986, Klein 1993, Burger et al. 1995, Klein et al. 1995, Rodgers and Smith 1997, Burger and Gochfeld 1998). The location of recreational activities and the size of participating groups are also important factors affecting the magnitude of disturbance. A number of species have shown greater reactions when pedestrian use occurred off-trail (Miller et al. 2001,

Samia et al. 2015), and when pedestrians traveled in large groups (Beale and Monaghan 2004). Some maintenance actions necessary to providing public use may have direct negative impacts on amphibians and reptiles. Mowing grassy access roads and public use trails during warmer months will occasionally result in the mortality of turtles, snakes, or frogs. Conflict among users tends to arise only when visitors disregard the established refuge rules and regulations.

## Long-term impacts

Engaging in activity associated with wildlife observation and photography can be done with very little impact to wildlife (Burger et al. 1995). However, if measures are not taken to reduce disturbance, wildlife can suffer from being displaced to less desirable habitat, forced to use important energy reserves, cause the animal to change behaviors from, for example, breeding to seeking cover, and much more (Arcese 1987, Belanger et al. 1990, Burger et al. 1995, Burger 1996, Burger and Gochfeld 1998, Henson et al. 1991, Kaiser et al. 1984, Korschen 1992, Taylor et al. 2003, Yalden et al. 1990).

Construction of interpretive facilities and improved roads will result in the loss of a small amount of habitat for wildlife. Small amounts of wetlands may be lost as a result of road construction. Improved roads may increase both traffic and speeds and result in increased wildlife mortality. Road mortality of the Blanding's turtle is of special concern. This turtle is a slow reproducing species presently found near existing Refuge road systems.

The maintenance of trails, roads, and parking lots will have impacts on soils and vegetation around the trails. These impacts will reduce available habitat and fragment remaining habitat resulting in decreased available habitat and possibly increasing predation.

## Public Review and Comment

### Determination

Is the use compatible?

Yes

### Stipulations Necessary to Ensure Compatibility

1. Regulations and wildlife friendly behavior (e.g., requirements to stay on designated trails, dogs must be kept on a leash, etc.) will be described in brochures/websites.

2. Regulatory and directional signs will clearly mark closed areas.
3. Visitors engaging in wildlife dependent public uses will be directed to public use facilities which are not in or near sensitive areas.

### **Justification**

These wildlife-dependent uses are priority public uses of the National Wildlife Refuge System. Providing for these uses contributes toward fulfilling provisions of the National Wildlife Refuge System Administration Act, as amended in 1997.

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