

Draft Compatibility Determination

Title

Draft Compatibility Determination for Environmental Education and Interpretation, Pierce National Wildlife Refuge

Refuge Use Category

Environmental Education and Interpretation

Refuge Use Type(s)

Environmental education

Interpretation

Refuge

Pierce National Wildlife Refuge

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

“...for use as an inviolate sanctuary, or for any other management purpose, for migratory birds...” (Migratory Bird Conservation Act, as amended [16 U.S.C. 715-715d, 715e, 715f-715r]).

“...for the development, advancement, management, conservation and protection of fish and wildlife resources...” (Fish and Wildlife Act of 1956, as amended [16 U.S.C. 742a-742j, not including 742d-1])

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. This compatibility determination reviews and replaces the 2005 compatibility determination of environmental education and interpretation which was prepared concurrently with the Comprehensive Conservation Plan (CCP) for Steigerwald Lake National Wildlife Refuge (NWR or Refuge), Franz Lake NWR, and Pierce NWR (USFWS

2005)

What is the use?

We propose to allow environmental education and interpretation on the Refuge to enhance and inform visitors experiences. Education and interpretation can be led by U.S. Fish and Wildlife Service (FWS) staff, volunteers, and partners. The Refuge is not open to the public outside of organized events and staff led tours.

Is the use a priority public use?

Yes

Where would the use be conducted?

Environmental education and interpretation would occur on the maintained service roads on the Refuge during organized events.

When would the use be conducted?

Group tours and interpretive programs on the Refuge are encouraged from March through June and are coordinated by staff. Special events open to the public may also be scheduled on the Refuge during National Wildlife Refuge Week and National Migratory Bird Week.

How would the use be conducted?

The refuge would provide opportunities for these activities primarily through partner-led events within the provisions of a Special Use Permit. Public outreach and interpretation would be offered through up to five (total) annual tours with interested partners. Group tours of Pierce Refuge would be encouraged from March through June; attendance would be limited to 65 people per tour, one tour per day, and no more than two tours per week. A parking area and portable toilet would be maintained to accommodate this use and participants would use maintained services roads, not taking activities off these maintained surfaces.

In addition, the Service would offer, as able, interpretive programming focused on wildlife viewing and photography during special events such as National Wildlife Refuge Week or National Migratory Bird Day. Outside of these organized events, the public would be encouraged to view wildlife from an existing paved trail located on property belonging to the town of North Bonneville along the east boundary of Pierce Refuge.

Educational organizations would be allowed to use Pierce Refuge for appropriate environmental education programs within the provisions of a Special Use Permit. Environmental Education visits would be concentrated to specific controlled locations, thereby reducing resource impacts, while maintaining a quality educational

opportunity. Proposed educational activities on Pierce Refuge would be limited to 65 people (estimated number of students and accompanying teachers and chaperones in two classrooms) per tour, one tour per day, and no more than two tours per week. Educational visits would be subject to staff availability.

Why is this use being proposed or reevaluated?

Non-consumptive wildlife dependent recreation including environmental education and interpretation are defined as priority public uses under the Refuge Improvement Act and can enhance the users' appreciation of the Refuge, the National Wildlife Refuge System, wildlife, their habitats, and the human environment.

Environmental education and interpretation at Pierce NWR was previously determined to be compatible (USFWS 2005). Environmental education and interpretation are being reevaluated due to the 15-year renewal period ending (603 FW 2.11 H.).

Availability of Resources

The analysis of cost for administering and managing each use will only include the incremental increase above general operational costs that we can show as being directly caused by the proposed use. The Refuge has two employees dedicated to the Visitor Service program. Additional Refuge staff also assist in trail and parking area maintenance, facility and road maintenance, sign posting, construction projects, talking to and answering questions from the public, developing, and implementing Refuge management programs. Trained refuge volunteers and partnering organizations like the Gorge Refuge Stewards play an integral role in the interpretation program. They lead or co-lead interpretive programs, engage visitors using informal interpretive techniques and assist with the development of a variety of interpretive products. Costs are incurred in the form of staff salaries and time, support for the volunteer program, interpretive signage, brochures and other supplies and equipment, fuel and wear and tear on vehicles.

Anticipated Impacts of the Use

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. This Compatibility Determination 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." Soils, air, water, wilderness, cultural resources, and socioeconomic resources will not be more than negligibly impacted by the action and have been dismissed from further analyses.

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

Migratory birds and waterfowl may be impacted by the presence of humans. This temporary disturbance may impact migratory birds, waterfowl, and their habitat by causing behavioral changes or habitat alteration. However, these effects would be temporary and short-term. Monitoring will prevent unacceptable or irreversible impacts to fish, wildlife, plants, and their habitats. The stipulations identified and monitoring will ensure the impact of environmental education and interpretation remains minimal on migratory birds, waterfowl, and their habitat.

Short-term impacts

We expect these impacts to include the presence of humans disturbing wildlife, which typically results in a temporary displacement of individual animals. Some species such as sandhill cranes will avoid the areas people frequent, such as the developed trails and roadways during periods of moderate to heavy traffic, while others such as raccoons seem unaffected by or even drawn to the presence of humans.

Negative impacts to wildlife have been documented when migratory birds and humans are present in the same areas (Boyle and Samson 1985). Responses of wildlife to human activities include: departure from site, use of suboptimal habitat, altered behavior (Burger 1981, Morton et al. 1989, Klein 1993), and increase in energy expenditure (Morton et al. 1989, Belanger and Bedard 1990).

McNeil et al. (1992) found that many waterfowl species avoid disturbance by feeding at night instead of during the day. The location of recreational activities impacts species in different ways. Miller et al. (1998) found that nesting success was lower near recreational trails, where human activity was common, than at greater distances from the trails. A number of species have shown greater reactions when pedestrian use occurred off trail (Miller, 1998). In addition, Burger (1981) found that wading birds were extremely sensitive to disturbance in the northeastern US. Klein (1989) found migratory dabbling ducks to be the most sensitive to disturbance and migrant ducks to be more sensitive when they first arrived, in the late fall, than later in winter. They also found gulls and sandpipers to be apparently insensitive to human disturbance, with Burger (1981) finding the same to be true for various gull species.

Gutzwiller et al. (1997) found that singing behavior of some songbirds was altered by low levels of human intrusion. Pedestrian travel can impact normal behavioral activities, including feeding, reproductive, and social behavior. Studies have shown that ducks and shorebirds are sensitive to pedestrian activity (Burger 1981, 1986). Resident waterbirds that are regularly exposed to human disturbance tend to be less sensitive than migrants, especially when migrants first arrive at a site (Klein 1993). In areas where human activity is common, birds tolerated closer approaches than in areas receiving less activity.

The disturbance to wildlife is relatively limited because the Refuge is only open to the public for specific events and staff or volunteer-led educational groups. The impact of these events is also mitigated by limiting group size to 40-65 people per tour, one tour per day, and no more than two tours per week.

All other wildlife on the Refuge may be similarly impacted by the presence of people as described above. Public use activities may affect, but are unlikely to adversely affect, Federally-listed species that occur on the refuge, specifically juvenile Columbia River populations of chinook salmon (*Oncorhynchus tshawytscha*), coho salmon (*O. kisutch*), chum salmon (*O. keta*) and steelhead (*O. mykiss*). Public use location and timing will be regulated by Special Use Permit to exclude areas used by juvenile salmonids. The Refuge has completed an intra-service consultation pursuant to the Section 7 of the Endangered Species Act (87 Stat. 884, as amended; 16 U.S.C. 1531 et seq.) regarding the proposed use and these species.

People can be vectors for invasive plants by moving seeds or other propagules from one area to another. Once established, invasive plants can out-compete native plants, thereby altering habitats and indirectly impacting wildlife. The threat of invasive plant establishment will always be an issue requiring annual monitoring and treatment when necessary. To mitigate these impacts boot brushes will be available at all visitation points of entry. Volunteers will be trained to educate visitors, and interpretive materials about invasive species will be available as part of regular programming on and off site. Refuge staff will work at eradicating invasive plants with the help of a robust volunteer program.

Other indirect impacts may include the deposition of litter and erosion caused by the damage to vegetation from trampling. These have not been a significant problem at the current level of use.

Long-term impacts

Providing and maintaining access points indirectly impacts wildlife by creating barriers to movement through vegetation removal and management, and abrupt edge creation which may lead to increased predation (Ratti and Reese 1988). Trail and road edges may concentrate prey species and may be used by predators as travel corridors.

Effective visitor education is crucial to build support of public use restrictions and the necessity of such restrictions for wildlife and habitat. Visitors who interacted with refuge volunteers would be less likely to disturb wildlife (Klein 1993). Environmental education at Pierce Refuge would be concentrated at existing developed facilities and trails and at designated environmental education learning sites. These sites, identified in the Comprehensive Conservation Plan, would be selected for their teaching value and ability to withstand human disturbance.

Remote viewing is proposed from an existing public trail in the town of North Bonneville along the Refuge's east boundary. This trail is a segment of a larger trail

network through North Bonneville. Disturbance occurring along the trail and in the yards of adjoining houses have been largely present since Refuge acquisition. Promotion of wildlife observation and Refuge interpretation along the trail would have minimal impact above the current baseline disturbance associated with the neighboring community.

Implementation of environmental education and interpretation programs and the creation of interpretive materials would take staff time and resources. Staff time and additional resources would also be used to maintain facilities such as trails, roads, signs, and structures.

Public Review and Comment

The draft compatibility determination will be available for public review and comment for 14 days. The public will be made aware of this comment opportunity through our social media outlets and letters to potentially interested people such as neighbors and partner agencies. A hard copy of this document will be posted at the Refuge Headquarters (28908 NW Main Avenue, Ridgefield WA 98642). It will be made available electronically on the refuge website: <https://www.fws.gov/refuge/Pierce/>. Please let us know if you need the documents in an alternative format. Concerns expressed during the public comment period will be addressed in the final Compatibility Determination.

Determination

Is the use compatible?

Yes

Stipulations Necessary to Ensure Compatibility

1. Wildlife-dependent public uses would be restricted to Refuge-specific designated trails, public use facilities, or approved guided events. Unguided recreational activities occurring in closed areas would not be allowed unless operating under provisions of a Special Use Permit and stipulations set by the Refuge Manager.
2. Adherence to seasonal use restrictions to reduce disturbance to wintering waterfowl and other wildlife.
3. Camping, overnight use, and fires are prohibited unless operating under provisions of a Special Use Permit and stipulations set by the Refuge Manager.
4. Littering is prohibited.
5. Collection of plants and animals is prohibited unless a Special Use Permit is obtained from the Refuge (except fish captured while engaged in recreational fishing).
6. The Refuge will provide signs, pamphlets, and verbal instructions from Refuge staff and volunteers will promote appropriate use of trails, and roads to minimize wildlife and habitat disturbance. These materials will clearly state pertinent Refuge-specific regulations.
7. The Refuge will periodically monitor and evaluate sites and programs to determine if objectives are being met and the resource is not being degraded.
8. Monitoring protocol would be developed to examine the impacts associated with differing levels and types of public use. Monitoring data would be analyzed and used by the Refuge Manager to develop future modifications, if necessary, to ensure compatibility of interpretation, and environmental education programs.

Justification

The stipulations outlined above would help ensure that the use is compatible at Pierce National Wildlife Refuge. Environmental education and interpretation, as outlined in this compatibility determination, would not conflict with the national policy to maintain the biological diversity, integrity, and environmental health of the refuge. Based on available science and best professional judgement, the Service has

determined that the environmental education and interpretation at Pierce National Wildlife Refuge, in accordance with the stipulations provided here, would not materially interfere with or detract from the fulfillment of the National Wildlife Refuge System mission or the purpose of the Pierce National Wildlife Refuge. Rather, appropriate and compatible environmental education and interpretation would allow the public to develop an appreciation for wildlife and wild lands.

Signature of Determination

Refuge Manager Signature and Date

Signature of Concurrence

Assistant Regional Director Signature and Date

Mandatory Reevaluation Date

2038

Literature Cited/References

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