

# Draft Compatibility Determination

## Title

Draft Compatibility Determination for Snowmobiles, Little Pend Oreille National Wildlife Refuge.

## Refuge Use Category

Other Uses

## Refuge Use Type(s)

Snowmobiles

## Refuge

Little Pend Oreille National Wildlife Refuge

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

"... as a Refuge and breeding ground for migratory birds and other wildlife..."  
(Executive Order 8401, dated May 2, 1939)

" ... for use as an inviolate sanctuary, or for any other management purpose, for migratory birds." (16 U.S.C. 715d [Migratory Bird Conservation Act])

"... suitable for (1) incidental fish and wildlife-oriented recreational development, (2) the protection of natural resources, (3) the conservation of endangered species or threatened species ..." (16 U.S.C. 460k-1) ... the Secretary ... may accept and use ... real ... property. Such acceptance may be accomplished under the terms and conditions of restrictive covenants imposed by donors ... 16 U.S.C. 460k-2 (Refuge Recreation Act (16 U.S.C. 460k-460k-4), as amended).

"... for the development, advancement, management, conservation, and protection of fish and wildlife resources ..." (16 U.S.C. 742f(a)(4) ... for the benefit of the United States Fish and Wildlife Service, in performing its activities and services. Such acceptance may be subject to the terms of any restrictive or affirmative covenant, or condition of servitude ... 16 U.S.C. 99 742f(b)(1) (Fish and Wildlife Act of 1956).]

. . for conservation purposes. Consolidated Farm and Rural Development Act (7 U.S.C. 2002).

## National Wildlife Refuge System Mission

The mission of the National Wildlife Refuge System (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 (CD) reviews and replaces the 2000 CD for the use on Little Pend Oreille National Wildlife Refuge, with one minor change. The snow park currently located on the Refuge at Hwy 20 was moved to State-owned property adjacent to the Refuge in 2022.

What is the use?

We propose to allow snowmobiles on a portion of Olson Creek Road within Little Pend Oreille National Wildlife Refuge.

Is the use a priority public use?

No

Where would the use be conducted?

Snowmobiles will only be allowed on a four-mile stretch of Olson Creek Road within Little Pend Oreille National Wildlife Refuge. Olson Creek Road is a graveled road approximately 20 feet wide. The Refuge shares jurisdiction along Olson Creek Road with the Stimson Lumber Company and the Washington State Department of Natural Resources. The 2000 CCP analyzed snowmobiling on the Refuge. It was determined that snowmobiling would be eliminated on all Refuge roads except Olson Creek Road, allowing access to Calispell Peak.

Entry on to all or portions of the Refuge may be temporarily suspended and posted closed due to unusual or critical conditions affecting public safety or any of the resources managed by the Refuge.

When would the use be conducted?

Olson Creek Road is open to two-way vehicle traffic year-round. Snowmobiling occurs on a four-mile section of Olson Creek Road only during winter and early spring (November through March) when sufficient snow cover is present. Snowmobile access and trail grooming will be allowed along the four-mile section of road during daytime and nighttime hours.

How would the use be conducted?

Snowmobiling on the Refuge will be conducted in accordance with the stipulations necessary to ensure compatibility.

Organized groups and/or competitive events may be considered for a Special Use Permit (SUP) by the Refuge Manager on a case-by-case basis.

Each request for a SUP (if warranted) will be evaluated for impacts wildlife, habitats Refuge resources, priority public uses, and as appropriate, wilderness character. Conditions may be added to the SUP on a case-by-case basis to minimize the anticipated impacts to resources, and to ensure that any impacts which cannot be avoided, minimized, or mitigated remain temporary and negligible. Some requests may require further analysis of the impacts of the proposed activity on special status species or cultural resources, which may require additional compliance with the National Environmental Policy Act (NEPA), and consultation under any other relevant laws.

If the use conflicts with Refuge resources, Refuge management programs, or priority wildlife-dependent uses, the participant(s) must identify in advance the methods/strategies required to minimize or eliminate the potential impact(s) and conflict(s). If unacceptable impacts cannot be avoided, then a SUP would not be issued.

**Why is this use being proposed or reevaluated?**

This use is being reevaluated in accordance with Service policy, 603 FW 2.11H(2).

### **Availability of Resources**

The present Refuge non-priority public use program is designed to be administered with minimal Refuge resources (less than \$1,000 annually) at the current level of use (approximately 200 visits annually for all non-priority uses combined) and can be managed with existing staff resources. Maintenance of Refuge roads and other trails incur costs, but costs are not directly related to snowmobiling since facilities are shared with other priority public uses. No improvements are needed or planned. The Refuge is not responsible for grooming of the road during winter months.

### **Anticipated Impacts of the Use**

This CD includes written analyses of the environmental consequences on a resource when the impacts on that resource could be more than negligible and therefore considered an “affected resource.” Based on best professional judgement and nearly 25 years of managing this use at the Refuge, air quality, water quality, flood plains, cultural resources, socioeconomics, and geology and soils 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**

Snowmobiling is not a priority public use on Service lands per the Refuge System

Improvement Act of 1997, and is generally conducted for sport or recreation. However, snowmobiling can provide access to compatible recreational opportunities for visitors to enjoy the Refuge's resources, to gain or increase their understanding of and appreciation for fish, wildlife, wildlands ecology, the relationships of plant and animal populations within the ecosystem, and wildlife management. This use will provide opportunities for visitors to directly observe and learn about wildlife and habitats at their own pace in an unstructured environment. This use will enhance the public's understanding of natural resource management programs and ecological concepts to enable them to better understand the problems facing natural resources and to realize what impact the public has on wildlife resources. Additionally, the public can learn about the Service's role in conservation and better understand the biological basis upon which Service management programs are based, consequently fostering an appreciation for the importance of wildlife and habitats.

By allowing this use with the stipulations described below, we will provide opportunities and facilitate programs in a manner and at locations on the Refuge that offer high quality, wildlife-dependent recreation while maintaining the current levels or increased levels of natural resource values.

Therefore, use of Little Pend Oreille National Wildlife Refuge for snowmobiles is expected to benefit and promulgate the Refuge's purposes and the Refuge System's mission.

### Short-term impacts

All trail users can cause structural damage to plants and increase soil compaction and erosion. Snowmobile use is limited to the four-mile stretch of Olson Creek Road within the refuge boundary, and only occurs during winter and early spring, when sufficient snow cover is present. The limited location and the timing of use minimizes soil disturbance since snow cover is a prerequisite for this use. This activity will be monitored and would be modified or discontinued if unacceptable resource impacts are documented.

Snowmobiles can cause wildlife disturbance. The severity of disturbance varies with the wildlife species involved and the type, level, frequency, duration, and the time of year the activity occurs. Disturbances associated with snowmobile use have been shown to cause direct mortality or injuries from motorized vehicle strikes, noise interference that affects hearing and communication, and disturbance effects on physiology and behavior (NPS 2011). The vast number of roads on Little Pend Oreille NWR provide a good opportunity for visitors to observe wildlife at a distance resulting in negligible behavioral effects on wildlife and habitat from human disturbance. Since wild animals show greater flight response to humans moving unpredictably than to humans following a distinct path (Gabrielsen and Smith 1995), the effects of human disturbance can be reduced by restricting bicycling and other human activity to an established trail and having disturbance free nesting and foraging areas for wildlife (Korschgen and Dahlgren 1992, Fox and Madsen 1997).

Restricting snowmobiles to well-defined paths such as public roadways and established trails would reduce the potential impact of snowmobiles. Limiting group size would also decrease disturbance from this use since group size has been found to increase wildlife response to disturbance (Geist et al. 2005, Yosef 2000).

Overall, the short-term impacts from this use are expected to be minor, due to the relatively low level of use, the relatively large size of the Refuge, and stipulations imposed on the use. This use generally has negligible animal mortality or disturbance, or habitat destruction; no introduction of contaminants; and no introduction of non-native species.

### Long-term impacts

The structural damage to plants, soil compaction and erosion caused by trail use have the potential to cause cumulative long-term effects to Refuge resources. However, long-term effects to vegetation and soils would be minor, given the low level of the use; and the fact that snowmobiles are confined to paved roads. Furthermore, the terrain along the road is steep and heavily treed, making it extremely difficult for users to travel off the existing roadbed. Long-term effects to vegetation and soils from snowmobiling would be negligible since it occurs when vegetation is dormant and soils are frozen and/or snow-covered.

Several years of observation from track surveys and camera trapping indicate the most common terrestrial wildlife observed in the winter on Olson Creek Road and vicinity are: snowshoe hare, coyote, bobcat, red squirrel, ermine, long-tailed weasel and moose. Elk, white-tailed and mule deer, wolves and cougars are almost totally absent. Elk, white-tailed and mule deer have moved to lower elevation winter range; cougars and wolves have followed those ungulates since they are its major prey source.

There are studies showing snowmobile disturbance increases the home range sizes of wintering ungulates and increases deer metabolism. White-tailed deer in Minnesota showed significant displacement and increased movement in response to low-intensity snowmobile activity (Dorrance, et al. 1975), and the response of deer increased with the duration of the disturbance. Huff and Savage (1972) found that snowmobile activity appeared to force deer into less-preferred habitats where nighttime radiant heat loss was increased. This study also found that home range sizes were reduced when deer were exposed to snowmobile traffic. Eckstein et. al (1979) found negligible changes in deer activities and home range resulting from snowmobile activity. Richens and Lavigne (1978) found that deer did benefit by following snowmobile trails where the snow was firmer.

The varying results of these studies reinforce Gutzwiller's caution (1991) that habituation may occur only at specific levels of disturbance and disturbance intensities above or below these levels may be detrimental. Effects of snowmobiling on ungulates may be influenced by the ungulate species, intensity of use, and season

(Freddy et al. 1986). Various studies have demonstrated snowmobile impacts to different species of wildlife (see Olliff et al. 1999 for an extensive review). A few examples are cited here. Anderson and Sherzinger (1975) reported winter elk counts falling by 50% when recreational snowmobile activity increased in the Bridge Creek Game Management Area. Aune (1981) demonstrated elk flights averaging 34 meters in response to approaching snowmobiles. Creel et al. (2002) measured stress hormones in wolves in Isle Royal National Park, where no snowmobile activity existed and Voyageurs National Park where snowmobiling use did occur. They found that wolves in areas of heavy snowmobile use had higher levels of stress hormones. However, the researchers found no direct evidence that higher levels of stress hormones affected the overall population dynamics in those locations.

Snowmobiles can reduce the insulation properties of snow for small mammals (Hammit and Cole 1987). Snowmobile trails provide access to high elevation habitats for species such as wolves, coyotes and bobcats that otherwise would not use these habitats during winter. Increased competition from these predators during late winter may be detrimental to lynx and other forest carnivores dependent on high elevation habitats when food availability is low and lynx are nutritionally stressed (Kohler and Aubrey 1994). The authors of the Lynx Science Report (Ruggiero et al. 1999) believe that the coyote is a potentially formidable competitor with lynx, citing their wide habitat niche, heavy predation on snowshoe hares, high reproductive rate, great behavioral plasticity, and high tolerance of humans (Ch. 4, p. 9 of Lynx Science Report). Coyote population numbers have increased dramatically in many places over the last few decades, (including a 44X multiplication in Washington State between 1960-1984), using coyote harvests as an indicator.

Ruggiero et al. (1999) also cite several studies showing that coyotes prey heavily on snowshoe hares, especially during snowshoe population highs, and even cycle with snowshoe populations like the lynx (data from both Montana and Alberta; Ch. 4, p. 11 of Lynx Science Report). The authors also cited a study by O'Donoghue (1997) which compared densities of lynx, hares and coyotes in Alberta and the Yukon, and showed that in both places, lynx were more abundant where coyotes were less dense, rather than where hares were more dense.

The Lynx Science Report substantiates the claim of coyotes accessing high elevation areas by moving along paths, roads, and even snowshoe hare trails, with several citations. In one Colorado study involving track counts along approximately 725 miles of snow transects within snowshoe hare habitat (7500 - 11,800 feet elevation), coyotes were the second most common carnivore taxon encountered (after weasels). The authors also cite a study by Murray et al. (1994) finding that coyotes were more selective of hard or shallow snow conditions than were lynx, and another study showing that between November and March, coyote use of open habitats increased. This shift was attributed to the greater compactness and load-bearing strength of snow in openings.

Overall, the long-term effects of wildlife disturbance from snowmobiles are difficult

to assess but may include altered behavior, decreased vigor or productivity, or death of individuals; altered population abundance, distribution, or demographics; and altered community species composition and interactions. Assessment of effects of snowmobile use at Yellowstone National Park found that “the available literature on bison and elk indicate that lower OSV [over-snow vehicle] events reduce wildlife displacement, behavior or physiology-related energy costs, and the potential for adverse demographic impacts...” (NPS 2012). Disturbances can compound seasonal stressors in wildlife. Examples include regularly flushing birds during nesting, exposing juvenile animals to greater predation levels, causing mammals to flee during winter months, or causing large amounts of stored fat reserves to be consumed. Over time, these disturbances could lead to long-term changes in wildlife use patterns through either avoidance or habituation. When combined with other visitor activities in the public use, there is potential for snowmobiling to lower individual fitness or reproductive success, thereby affecting wildlife populations in a localized area.

However, while impacts of the use can be serious for individual plants and animals and perhaps localized rare populations, they are generally of little significance to populations or species, landscape integrity, or regional biological diversity. Moreover, unless a localized, rare population is impacted by a single impacted site, the intensity, size, and distribution of impacts are not relevant to the significance of impacts assessed at large spatial scales (Cole 1989). The effects on wildlife from disturbance, displacement, and habituation have been well documented and studied in other areas (e.g., Cole, 2004; Cole & Knight, 1990) and impacts are generally short-term and minor. Due to the size of the Refuge and the low numbers of users participating in this activity, long-term effects on wildlife populations or distribution are therefore expected to be minimal.

#### Mitigation of Potential Impacts:

To prevent or minimize these potential long-term impacts, Refuge staff would work to ensure that visitors follow stipulations through law enforcement, Refuge and volunteer presence, and various forms of outreach. Refuge staff and law enforcement would regularly assess roads, trails, and support facilities for safety and quality of visitor experience, wildlife disturbance, cultural resources, and impacts to soil and vegetation. The Refuge would also monitor these areas for non-native invasive species and implement appropriate control measures. If use levels are resulting in unacceptable impacts to Refuge resources, visitor experience, or public safety, the use may be modified or relocated to prevent additional impacts and restore habitat.

## **Public Review and Comment**

The draft compatibility determination will be available for public review and comment for 14 calendar days to provide comments following the day the notice is published. The public will be made aware of this comment opportunity through our social media outlets and letters to potentially interested parties. A hard copy of this document will be posted at the Refuge Headquarters at 1310 Bear Creek Road, Colville, WA 99114. It

will be made available electronically on the refuge website at [https://www.fws.gov/refuge/little\\_pend\\_oreille/](https://www.fws.gov/refuge/little_pend_oreille/) . 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. Snowmobiles are only allowed on the four-mile section of Olson Creek Road during winter and early spring (November through March) when sufficient snow cover is present.
2. Organized groups and/or competitive events may be considered for a Special Use Permit by the refuge manager on a case-by-case basis.
3. The permittee and all associated personnel agree to conduct activities in a safe manner, in compliance with all Refuge regulations and policies, and with precaution to avoid damage to resources, property, or personnel. Refuge staff will not be held responsible for loss of, or damage to, equipment.
4. A copy of the Special Use Permit must be in the permittee or associate's possession at all times while exercising the privileges of the Permit. A copy of the Permit must be shown to any USFWS employee or Federal law enforcement officer upon request.
5. Failure to abide by any part of the Special Use Permit; violation of any Refuge-related provision or Code of Federal Regulations; or violation of any pertinent state regulation (e.g., fish or game violation) will, with due process, be considered grounds for revocation of the permit and could result in denial of future permit requests for lands administered by the USFWS. This provision applies to all persons working under the authority of the permit.
6. Visitors are prohibited from collecting and removing any archaeological or historic artifacts, samples, or mementos from the Refuge. If cultural resources, or archaeological or historic artifacts are encountered, leave the item(s) in place and contact the Refuge Manager or nearest USFWS employee.
7. Regulations will be available at information kiosks on site, through a Refuge brochure, and will be posted on the Refuge website. Regulations are also available by contacting Refuge staff for information.
8. To ensure safety, use is restricted to daylight hours only. Activities requiring access between sunset and sunrise would require a Special Use Permit or be



managed by Refuge staff.

9. Refuge staff and volunteers will monitor uses to ensure compatibility, refine user estimates, and evaluate compliance. If evidence of unacceptable impacts begins to appear, it may be necessary to change the activity, move the activity, or eliminate the activity.

### **Justification**

Snowmobiles, as outlined in this compatibility determination, would not conflict with national policy to maintain the biological diversity, integrity, and environmental health of Little Pend Oreille NWR. Based on the stipulations outlined above, it is anticipated that wildlife populations will find sufficient food resources and resting places such that their abundance and use of the Refuge will not be measurably lessened as a result of allowing snowmobiles on Little Pend Oreille NWR. The relatively limited number of individual wildlife expected to be adversely affected as a result of snowmobiling will not cause wildlife populations to materially decline, the physiological condition and production of species present will not be impaired, their behavior and normal activity patterns will not be altered dramatically, and their overall welfare will not be negatively impacted. Based on available science and best professional judgement, the Service has determined that snowmobiling at Little Pend Oreille NWR, in accordance with the stipulations provided here, would not materially interfere with or detract from the National Wildlife Refuge System mission or the purposes of the Refuge. Rather, appropriate and compatible snowmobiling would be a use of the Refuge through which the public can increase their understanding and appreciation of wildlife and their habitats, as well as the role of the National Wildlife Refuge System in resource conservation.

## **Signature of Determination**

Refuge Manager Signature and Date

## **Signature of Concurrence**

Assistant Regional Director, NWRS, Pacific Region 1 Signature and Date

## **Mandatory Reevaluation Date**

2034

## **Literature Cited/References**

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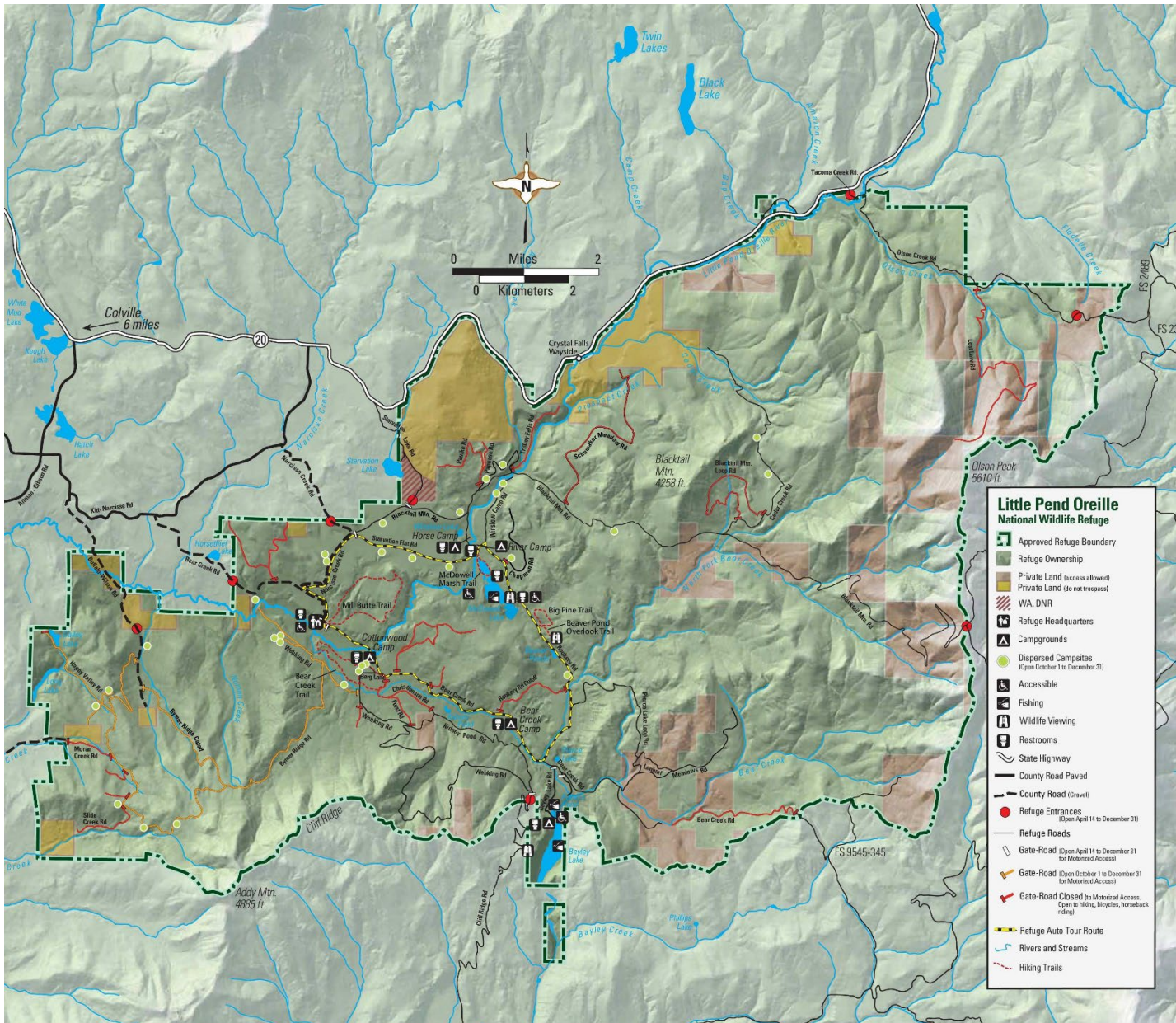


Figure 1. Snowmobile access, Little Pend Oreille National Wildlife Refuge