ORDER NO. 839

OCCUPANCY AND USE
And
NATIONAL FOREST SYSTEM ROADS AND TRAILS

OKANOGAN-WENATCHEE NATIONAL FOREST

Pursuant to 36 CFR 261.50 (b), the following acts are prohibited on the following National Forest System (NFS) Roads as shown on the attached map and described below within the Cle Elum Ranger District on the Okanogan-Wenatchee National Forest.

1. Operating a vehicle in violation of the speed, load, weight, height, length, width, or other limitations specified by the order.
   For the purpose of this order, this restriction prohibits speeds in excess of 20 miles per hour on the following National Forest System roads when posted during the winter months. Limits apply to snowmobiles or any other motorized vehicle. (36 CFR 261.54(d)).
   Forest Service Road (FSR) #5400 from the junction with the entrance to Crystal Springs Sno-park to the junction with FSR #5400-420; FSR # 5480 from its junction with FSR #5400 to its crossing with FS system trail Dogsled DP100.

   This restriction is in effect during the winter whenever the road is posted closed to wheeled vehicles.

Pursuant to 36 CFR 261.50(e), the following persons are exempt from this order:

1. Persons with a permit specifically authorizing the prohibited act or omission.

2. Any Federal, State, or local officer, or member of an organized rescue or fire fighting force in the performance of an official duty.

   This prohibition is in addition to the general prohibitions in 36 CFR Part 261, Subpart A.

Done at Wenatchee, Washington, the 10th day of December, 2013.

MICHAEL L. BALBONI
Forest Supervisor
Okanogan-Wenatchee National Forest

 Violations of this prohibition are punishable by a fine of not more than $5,000 for an individual or $10,000 an organization, or imprisonment for not more than six months, or both. (Title 16 U.S.C. 551 and 18 U.S.C. 3559 and 3571).
Assessment of Need
And Enforcement Plan

Background: A closure order is necessary for public safety due to recreational visitor's congestion in the area near Crystal Springs Sno-park. Motorized and non-motorized users are sharing the groomed route in the winter for the area requiring a speed limit. Managers and winter recreationists themselves have asked that a speed limit be implemented. This closure is based on the recommendations, (due to public safety concerns), to the District Ranger based on a speed zone study from a qualified Engineer, and information from winter recreation managers and law enforcement personnel.

2. **Intent of Closure Order:** To provide for public safety during the winter months when groomed snowmobile, cross-country ski, and dog sled trails are highly congested with mixed use in the area surrounding Crystal Springs Sno-park.

3. **Enforcement Plan.** The following activities need to occur to implement this special order in a manner that results in public acceptance and safety:

<table>
<thead>
<tr>
<th>Action</th>
<th>Responsible Official</th>
<th>Date</th>
</tr>
</thead>
<tbody>
<tr>
<td>Prepare proposed order</td>
<td>Pam Novitzky, Resource Assistant</td>
<td>11/26/13</td>
</tr>
<tr>
<td>District review of proposed order</td>
<td>District Ranger Judy Hallisey, Scott Goninan/Katrina Helleson, LEO</td>
<td>12/2/13</td>
</tr>
<tr>
<td>LEI Review proposed order</td>
<td>Robert Moelder, LEI Patrol Captain</td>
<td>12/5/13</td>
</tr>
<tr>
<td>Approve proposed order</td>
<td>Michael Balboni, Forest Supervisor</td>
<td>12/9/13</td>
</tr>
<tr>
<td>Post order in accordance with 36 CFR 261.51</td>
<td>Pam Novitzky, Resource Assistant</td>
<td>12/11/13</td>
</tr>
<tr>
<td>Prepare news release for local media describing the order and management objectives</td>
<td>Nancy Jones, PAO, after review by Cle Elum District Ranger</td>
<td>12/10/13</td>
</tr>
<tr>
<td>Describe implementation/action taken for order, such as planned patrols, enforcement strategies, tolerance, contacts to local public agencies. Implement plan.</td>
<td>Post signs on groomed routes indicating the 20 mph zones. Mail a press release describing the closure to adjacent neighbors, winter clubs and agencies that have jurisdiction near the site. Area patrolled by FPOs. LEO's to enforce prohibitions.</td>
<td>12/10/13</td>
</tr>
</tbody>
</table>

Enforcement Plan approved for implementation:

*Michael L. Balboni*

MICHAEL L. BALBONI  
Forest Supervisor  
Okanogan-Wenatchee NF

**DATE**

1-10-14
Sign 1

SPEED LIMIT 20
12"x18"
R2-1
12"x12"
RS-070

Sign 2

SPEED ZONE AHEAD
12"x18"
R2-5c
Install 500’ before Sign 1

Sign 3

END SPEED ZONE
12"x18"
Place across from sign 1 facing opposite direction

Sign 4

TRAIL CROSSING
18"x18"
12"x12"
RS-040
12"x12"
Use FS-RS-110 for Dog Sled rather than snowshoe

Sign 4 is recommended but not required

All signs shall be installed on wood or steel posts according to “Sign Installation Guide” (Mar 2010 7100-ENG) or MUTCD and covered or removed during summer road use.

Sign 5

Keep existing signs to designate route location along 54 Rd. – exact design and location may vary
File Code: 7730

Date: May 29, 2013

Subject: Snowmobile Speed Limit Study

To: Judy Hallisey, Cle Elum District Ranger

I was asked to provide an engineering analysis of the proposal to post a set speed limit on FSR 5400 and FSR 5480 as a qualified engineer to perform Mixed Use Analysis in Region 6 of the Forest Service.

The proposal is to set a speed limit on FSR 54 from the Crystal Springs Sno-park to the junction with FSR 5400420, approximately 0.75 miles, and on FSR 5480 from the junction with FSR 54 to the junction with the Crystal Dog Trail, approximately 0.3 miles.

EXISTING CONDITIONS:
On Friday February 15, 2013, Tim Foss (Cle Elum Ranger District Winter Rec Manager) and I walked the section of FSR 5400 under consideration from the sno-park to the junction with the John Wayne Trail (JWT). We also walked the entire section of the 5480 under consideration. FSR 54 is a two lane paved road averaging 24' in width with cuts and fills generally under 5' in height. The clear zone area averages about 40' in width. The horizontal alignment is fairly straight with good sight distance except for one curve. At approximately mile post 0.7 the road has a cut slope of approximately 10' and limits sight distance at that location. In addition, there is one vertical curve at mile post 0.64 that limits sight distance. FSR 5480 is a single lane gravel road with average widths of about 20' with basically a straight alignment and good sight distance. The cuts and fills are minimal the length of the section.

FSR 54 is currently groomed with a small berm dividing the snowmobile section from the non-motorized section and signed for user information, see photos 1 and 2. FSR 54 crosses the John Wayne Trail approximately 0.5 miles from the sno-park creating a congestion point as users turn onto or off the two routes. FSR 5480 is groomed as one trail with the non-motorized user traveling on the John Wayne Trail. However, just east of the junction with the Crystal Dog Trail that exits from the sno-park, some users parallel the snowmobile trail before accessing the JWT, see photo 3. Otherwise the non-motorized users cross the snowmobile route to access the JWT, see photo 4.

Both segments of road have some warning signage. There is a caution sign with either a cross-country ski plaque or a snowmobile speed sign at the junction with the dog sled route and a caution sign approximately 200 feet before the junction in each direction of travel. The letter size is approximately 2.5” on the caution signs, see photos 3, 5, and 6.

Over fifty miles of groomed snowmobile trail and 22 miles of groomed ski/snowshoe trail, including the John Wayne Pioneer Trail, exist from the Crystal Springs Sno-park. The Crystal Springs Sno-Park currently accommodates large vehicles with trailers, buses, and vehicle combinations with dog-teams. Depending on the size of vehicles and how orderly recreation is park, the lot regularly accommodates 250 vehicles. In addition, the sno-park is the winter parking and access point for several recreation lodges, and serves as the winter parking for nearby private landowners including the Sawmill Flats Homeowner’s Association and Roaring Creek Homeowner’s Association. Most residents of the area use
snowmobiles or snowcats to access their properties. It is estimated that each of the motorized recreation user's vehicles in the sno-park carry an average of 3-4 snowmobiles and the non-motorized users average 2 skiers per vehicle. An estimate of 40-50 vehicles of the 250 are non-motorized and the rest are snowmobile users. This equates to an estimate of approximately 700 to 900 snowmobiles, 80-100 skiers and snowshoes, and 10-15 dog sledgers on a typical weekend plus the resident users. Finally, Crystal Springs also hosts the Ski For Light Program which provides guided ski opportunities for disabled skiers. This use is estimated at up to 80+ additional users during each of the 6 to 8 events a winter. Crystal Springs Sno-Park is widely considered the busiest winter recreation facility in Washington State.

SPEED LIMIT ANALYSIS:
Several factors need to be taken into account to determine the appropriate speed limit for a section of trail. Factors to consider include the users and their abilities, volume and congestion, road conditions, and the ability to enforce the speed limit.

This proposal is similar to posting a reduced speed limit at a school zone where additional congestion occurs or a "no wake zone" at a boat launch. Relaying on a typical spot speed study and posting the 85th percentile speed would not provide the desired conditions. The typical spot speed study would produce a speed limit that is higher than then congested conditions warrant.

Operator Factors:
There are many users of these routes. As mentioned above there are snowmobiles, cross-country skiers, some with disabilities, snowshoers, and dog sledgers of all abilities. Some of the disabled users are blind. Another consideration is operator age. Some of the snowmobile operators will be under licensing age and are not considered "prudent" drivers. For example, they may not know to stay right going around blind corners or who has right of way at an intersection.

The speeds the snowmobiles travel, determines reactions times and distances. The estimated average operator travels about 30 mph. Some operators in the past have been observed traveling in excess of 50 mph on the roads under consideration.

Depending on skier abilities, snow conditions and tempatures, the cross country skiers and snowshoers may not be able to maneuver quickly and easily. A beginning skier may slip and fall at anytime while traversing the route, especially if there is any grade or a sense of urgency to get out of the way of oncoming traffic. In addition, if the conditions are icy, many skiers many have difficulty and may not be able to stop or turn quickly.

Volume and Congestion:
Congestion is one of the main factors in determining the set speed. The greater the congestion, the slower the recommended speed. At this location there is a high level of congestion due to the variety of users and abilities and the basic volume of users. Operator/user abilities and snow conditions can also add to the congestion factor.

On FSR 54, 700-900 snowmobiles will be leaving the sno-park headed towards the John Wayne Trail or FSR 5480. Eighty plus skiers will also be leaving the sno-park headed to the same trails. At the junction
of FSR 5480 and the Crystal Dog Trail 10-15 dog sleds and 20-30 skier and snowshoers will be crossing FSR 5480 to access the John Wayne Trail on a typical weekend.

Road & Snow Factors:
The main concerns with the road is how the road will be plowed to provide enough room for all users. Ideally, 2-way passing space is needed for the non-motorized users and the snow mobiles. That would require a minimum of 12 feet for the snowmobiles and 5-6 feet for the skiers for a total of 17-18 feet.

It appears at this time that adequate space is available to groom a path for both users on FSR 54. On FSR 5480, the snowmobiles are using the actual route on FSR 5480 and the non-motorized users are travelling on the John Wayne Trail except to cross so adequate space is available in the FSR 5480.

The alignments and clear zones provide good sight distance on both routes.

Enforcement:
The ranger district has two law enforcement officers and a local county sheriff who will be available to enforce the speed limit. They will randomly patrol the area and use state certified radar guns to verify speeds.

RECOMMENDATION:
Based on the above factors and my engineering experience, I recommend a set speed limit of 20 MPH. The volume of users, various ability levels, the relatively short distance of the congested zone and the variety of user types all factored into the speed. Due to school zones and “wake zones” having an area with a lower set speed would be an expected condition by the users.

It is also required to follow signage guidance from the Manual on Uniform Traffic Control Devices (MUTCD) and The Sign and Poster Guide for the Forest Service (EM 7100-15). Regulation black on white signs shall be used. “Speed Zone Ahead” (R2-5c) shall be installed on FSR 54 and FSR 5480 approximately 500 feet before the start of the speed zone. Then a black on white “Speed Limit 20” (R2-1) be installed at the beginning of the speed zone, and at the junction FSR 54 and FSR 5480. All signs should be installed appropriately on posts, not attached to trees or snow poles. These signs will need to be covered or removed during summer vehicle use of the roads since the 20 MPH would not apply during that condition. All the current signing should be removed so it does not conflict with the proposed regulatory signing.

/s/ Marjorie Hutchinson

Marjorie Hutchinson P.E.
Qualified Mixed Use Engineer.

Cc:
Gretchen Barkmann
Mike Tippie
Photo 1 - Snow mobile on left side of berm between motorized and non-motorized users.

Photo 2 - Signage informing users of travel pattern. Speed limit sign shown is not currently enforced because not backed by forest order.
Photo 3 -- Route non-motorized users travel to reach dog sled route to sno-park.

Photo 4 -- User crossing snow mobile route to access John Wayne Trail.

Caring for the Land and Serving People
Photo 5 – Signage prior to crossing points

Photo 6 – Size of signing approx. 2.5”