

Snowmobile Use and Maintenance Policy

H.J. Andrews Experimental Forest

Background:

The H.J. Andrews Experimental Forest has had snowmobiles for over 20 years. In the past these machines have been used infrequently, without any attempt at comprehensive training or regular maintenance. As of 2011, The Andrews has one OSU-owned snowmobile and two owned by the USFS PNW Research Station. As of this update, certification procedures are different for USFS- and OSU-owned snowmobiles. Use of USFS machines is restricted to those with USFS snowmobile operator certification. Training and certification for the OSU snowmobile is covered below. This policy has been drafted in order to improve the training of users, encourage safe, appropriate use, and promote more responsible maintenance. Snowmobiles should complement the use of the HJA snow-cats, by providing a reliable, efficient, light-duty transport option.

Snowmobiles have several advantages over the snow-cats. They are much less expensive (\$7000 vs. ~\$130,000). They are easier to maintain, service, and repair. The operating cost is a fraction of that of the snow-cats. Operators can be adequately trained to operate them in several hours. They are quick, agile, and easier to haul, load, and unload. Their disadvantages include a lack of maneuverability in powder snow, small gear capacity, 2-person crew maximum, lack of sheltering crew cabin, frightening acceleration, and limited survival gear stowage.

This policy has six parts: Operator Training, Operator Responsibilities, Use and Operation, Maintenance and Repair, Use and Maintenance Log, and Field Training Outline.

Operator Training:

Only certified operators are allowed to drive the HJA snowmobiles. The HJA Forest Director must approve any request for snowmobile operator training. To become certified a person must become familiar with this policy document, must attend the HJA Snowmobile Training Presentation, must view the Snowmobile Video, and must operate the snowmobile under supervision of a certified training operator for no less than two hours of actual running time. This field instruction must additionally include instruction in attaching, hauling, maneuvering the snowmobile trailer and at least one cycle of loading and unloading the snowmobile from the trailer, including proper tie-down.

The HJA Forest Director may approve operators certified by other agencies.

Only personnel with significant connection to the H.J. Andrews will be trained on the machines. Training on these machines is, in itself, risky, and we do not wish to risk either the people or the machines in training individuals that only need the machines for a single use. In situations such as a class or workshop either staff will be paid to provide operators, or graduate students or employees will be trained in the expectation that they could use these skills in multiple years. This will reduce the risk by reducing the numbers of people being trained.

Operator Responsibilities:

Only certified operators are allowed to drive the HJA snowmobiles with the exception of an operator in training under the supervision of a certified training operator, or an emergency case when personnel health or safety is at risk.

Operators assume the following responsibilities:

1. Pre- and post-use checks
 - a. Gas and Injection Oil levels.
 - b. Transmission oil level.
 - c. Track and Ski condition.
 - d. Lights working on snowmobile and trailer.
 - e. Tool kit, spare drive belt, emergency supplies present and complete.

- f. Note date, use, operator, and any comments in Operation Log.
 - g. Email Jay.Sexton@oregonstate.edu regarding any repair needs.
2. Trip preparation.
 - a. Schedule use at Jay.Sexton@oregonstate.edu.
 - b. Proper clothing for operator and passenger.
 - c. Helmets with face-shields or goggles.
 - d. Maps or very familiar with intended route.
 - e. Must know location of HJA emergency cabins.
 - f. Radio with spare battery, to be kept ON for emergency contact.
 - g. Snowshoes, water, food, first aid in addition to emergency supplies.
 - h. Arrange Check Out/In procedures with Supervisor or specific HJA personnel and abide by them. File a trip plan.**
3. Safe operation
 - a. Know your abilities and do not take needless chances.
 - b. Use prudent speed. Check braking efficacy often.
 - c. Train any passenger in safe riding practices.
 - d. Minimize exposure of snowmobile and passengers to hazards.
 - e. Minimize travel over gravel.
 - f. Do not travel alone in hazardous weather conditions.
4. Cost Sharing
 - a. Training cost is \$25 per person.
 - b. Use cost is \$50 per day for the use of both machines.
 - c. Initially the snowmobiles will be fully fueled – additional fuel should be purchased by the research project at a gas station.
 - d. Snowmobiles do not need to be returned with fuel full.

Use and Operation:

1. Schedule use at Jay.Sexton@oregonstate.edu
 - a. Certification of Operators will not be “rushed”, plan adequate time.
 - b. Emergency use supersedes all scheduled uses.
 - c. Snowmobile use which reduces Snow-cat use is encouraged.
2. If operating in hard crusted snow or gravel, lubricate hi-fax with unpacked snow.
3. The older Yamaha snowmobile should be used if significant bare ground is likely to be encountered. Use of four-wheelers should also be considered.
4. The newer Polaris snowmobile should be used in powder snow.
5. Travel over gravel should be avoided by trailering to continuous snow, if possible, and by steering to the thickest snow when it is discontinuous.

Maintenance and Repairs:

1. General Maintenance will be the responsibility of the HJA staff and Jay Sexton.
2. Operators are responsible for reporting any repair needs, maintenance concerns, or unusual operation to Jay Sexton.
3. Repairs necessary due to operator caused damage may be charged to research project.

Use and Maintenance Logs:

1. Operators will enter the following information for every trip in a logbook kept in the Emergency Pack of each machine: date, name of operator, start and end mileage, and destination(s).
2. Maintenance histories for each snowmobile will be recorded henceforth, in the separate maintenance logbook kept in the shop.

Field Training Outline:

Field Training normally is located at Ray Benson Snow Park at the crest of the Cascades, with two trainees and one instructor for 2 1/4 hours.

A) Preliminaries (in Ray Benson Snow Park parking lot)

- a) Attachment of Trailer to Truck
- b) Securing of Snowmobiles to Trailer
- c) Unloading
- d) Checking of systems, Fluid Levels
- e) Proper starting

B) Basic Operation (along wide trail to Big Lake Meadow, with near-lake and within-trees forbidden)

- a) Starting and Braking.
- b) Hand Signals
- c) Emergency Stop
- d) Trail travel, basic steering
- e) Open flat field – basic operation – both machines
- f) Handling, Performance, and the Reality of Turning

C) Intermediate Skills (slow through-trees in campground, small slope training area)

- a) Slow travel among trees
- b) Up, Down, and Cross Slopes
- c) Braking, Accelerating, and Control on Slopes
- d) Leaning and Weight, When and How to “Abandon Ship”
- e) Getting Stuck and Un-Stuck
- f) Within Road Turn-Around

D) Long Trail Ride (along narrow trail to Sand Mountain Meadow)

- a) Beware Oncoming Machines, Tree Wells, Excess Speed, and correct following distance
- b) Riding with a passenger
- c) Safe Travel

E) Open Meadow with gentle Slope (Sand Mountain Meadow, steep slopes and within trees forbidden)

- a) Additional machine time – both machines
- b) Trail Ride back to Parking lot

F) Trailer Loading and Securing (in Ray Benson Snow Park parking lot)

- a) Preparation and Safety
- b) Instructor demonstration
- c) Loading Practice for trainees with sufficient ability
- d) Cable loading
- e) Securing the snowmobiles