

EPA's Tier 1 standards require that emissions from vehicles be extremely clean. In comparison with four-stroke snowmobiles, snowcoaches operating within EPA's Tier 1 standards are cleaner, especially given their ability to carry up to seven times more passengers (Lela and White 2002). In addition, in 2004 EPA will begin phasing-in Tier 2 emissions standards for multi-passenger vans, and will be fully phased-in by 2009. Tier 2 standards will require that vehicles be even cleaner than Tier 1. Tier 2 standards would also significantly reduce the open loop mode of operation. If Tier 2 vehicles are converted to snowcoaches, then the emissions attributable to them would be further reduced in the parks.

If any of the vehicle's pollution control equipment, including the catalytic converter, associated piping, and other related parts that may release CO, HC or PM emissions in the event of mechanical failure or deterioration, had exceeded its useful life as published by the EPA, then the owner would be required to replace it. Generally, useful life for new vehicles (since 1996) is 120,000 miles or 11 years, whichever comes first. NPS is proposing that if a snowcoach owner was required to replace any pollution control equipment under this requirement, the new pollution control equipment would be required to be original equipment, if available from the vehicle's manufacturer, versus after-market equipment. If original equipment is no longer available snowcoach owners could then install after-market equipment. We are proposing that snowcoach owners install original equipment if available because it generally has a longer useful life and may be more efficient in reducing pollutants, although both are certified to the same level of emissions reduction. We are requesting comments on whether original equipment or other, including after market, equipment is more appropriate when replacing the pollution control equipment with respect to emission reduction and cost.

These air emissions requirements would be implemented during the 2005–2006 winter season.

NPS would continue to work with snowcoach owners, researchers, and other experts during the winters of 2003–2004 and 2004–2005 to better understand snowcoach emissions and to determine the most effective field testing methods. We ultimately intend to require that snowcoaches achieve numerical performance-based limits for emissions before being allowed entry into the park. We may propose a special regulation in the future to establish

specific numerical performance based air and sound emission requirements for snowcoaches.

For sound emissions, snowcoaches would be required to operate at or below 75 dB by the winter of 2008–2009, as measured at 25 mph on the A-weighted scale at 50 feet. This test would be similar to Society of Automotive Engineers J1161 procedures except that snowcoaches would maintain a speed of 25 mph which is a typical snowcoach operating speed and 10 mph faster than the J1161 procedures prescribe. NPS intends to test and certify individual snowcoaches in a field setting because of the number of different makes, models, and years of manufacture being used in the parks and the fact that sound emissions vary from vehicle to vehicle. We are proposing to allow additional time to phase-in air and sound requirements for snowcoaches because of the substantial investment required to upgrade snowcoach technology and to encourage additional investment in mass transit snowcoaches.

Historic snowcoaches (defined as a Bombardier snowcoach manufactured in 1983 or earlier) would initially be exempt from air and sound requirements; however NPS will work with snowcoach owners to retrofit historic snowcoaches to meet the air and sound requirements. We are initially exempting historic snowcoaches from air and sound requirements to maintain the character of winter motorized oversnow travel. We also believe it is reasonable and prudent to work with outfitters and concessioners to determine how best to upgrade their equipment.

Beginning with the winter season of 2003–2004, all commercially guided snowmobiles operating within YNP would be required to be BAT. Beginning with the winter season of 2004–2005, all snowmobiles would be required to be BAT.

In GTNP and the Parkway, all snowmobiles operating on the Continental Divide Snowmobile Trail (CDST) and Jackson Lake must be BAT starting in 2004–2005. BAT requirements would also apply to all snowmobiles originating at Flagg Ranch and traveling west on the Grassy Lake Road. Snowmobiles originating in the Targhee National Forest and traveling eastbound on the Grassy Lake Road would not be required to utilize BAT; however, these snowmobiles could not travel further than Flagg Ranch. We are allowing this exception because the Grassy Lake Road in the Parkway is approximately 6 miles long, snowmobiles are not required to be BAT

on U.S. Forest Service lands, and the NPS wishes to honor the request of the USFS that these visitors be able to access food, fuel, and other amenities available at Flagg Ranch. Any commercially guided snowmobiles authorized to operate in the Parkway or Grand Teton will be required to be BAT beginning with the winter season of 2003–2004.

NPS will annually publish a list of snowmobile makes, models, and year of manufacture that meet BAT requirements. The NPS intends to rely on certified air and sound emissions data from the private sector rather than establish its own independent testing program, which would be cost prohibitive. NPS intends to work cooperatively with the private sector—guides and outfitters as well as manufacturers—in the preparation of such lists. Each snowmobile model would be approved for entry into the parks for six winter seasons after it was first listed. Based on NPS experience, six years represents the typical useful life of a snowmobile, and thus six years provides purchasers with a reasonable length of time where operation is allowed once a particular model is listed as being compliant. Individual snowmobiles modified in such a way as to increase sound and air emissions of HC and CO beyond the proposed emission requirements would be denied entry to the parks. Currently, the NPS has sufficient test data on the 2002 Arctic Cat 4-Stroke and the 2002 Polaris Frontier to determine that they meet the BAT requirements. No other snowmobiles would be allowed entry into the parks unless they were subjected to the testing described above and met the BAT requirements herein proposed.

For both snowcoaches and snowmobiles, it would be the responsibility of the end users, guides and outfitters (or private snowcoach owners to the extent they are permitted for entry into the parks) to ensure that their oversnow vehicles comply with all applicable requirements.

Under the adaptive management framework, BAT requirements could be adjusted annually to protect park resources and values, including air quality, natural soundscapes, wildlife, visitor experience, and employee health and visitor safety. The process for changing air and sound requirements is described previously in "Monitoring and Adaptive Management." When adjusting the BAT requirements, one of the facts the NPS will consider is the best available technology in the snowmobile market. If there is a substantial improvement in the