

# Snowmobiling- Reduce the Impact

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With winter soon approaching, recreational opportunities in Muskoka turn from the water to the snow. With this transition in progress, I thought it would be an ideal time to highlight a few ways to reduce the impacts of snowmobiling on Muskoka's watersheds.

## *Pollution Problems*

Most of the studies pertaining to pollution from two-stroke engines have been conducted on marine engines and not on snowmobile engines. However, there is ample evidence to indicate that emissions from these engines are equally, if not more, harmful for the environment.

Because snowmobiles are generally used in sub-zero temperatures, they are usually tuned "rich," which means that there is a high ratio of fuel to oxygen. This improves cold starts and throttle response, but contributes to more emission problems. Winter air tends to be more stagnant, especially in valley areas, limiting the dispersion of snowmobile emissions and leading to poor air quality.

Not only do snowmobiles cause air pollution, but unburned fuel, lubrication oil and other compounds are deposited on the top layer of snow and, when spring snow melt occurs, are released into Muskoka's waterways, affecting aquatic organisms and increasing water acidity.

## *Cleaner Technology*

Fortunately, each season brings with it new technology aimed at reducing the negative impacts of snowmobiles. This cleaner technology includes four-stroke engines, fuel-injected two-stroke engines, oxygenated fuels, and cleaner lubricants.

Four stroke engines are cleaner, quieter, and get twice the fuel economy that conventional two-stroke engines do. While they are more expensive to buy, you end up saving money in the long run by reducing the amount of fuel and lubricant needed to run your snowmobile.

New fuel injection and semi-direct injection technology for two-stroke engines is being developed and improved upon, which will produce lower emissions levels. More precise carburetors are being developed that are aimed at reducing emissions by improving air and fuel metering. Improved mufflers, muffler wrapping, and hood foam are aimed at reducing the sound pollution commonly associated with snowmobiles.

Another way to reduce emissions in all types of engines, including two-stroke engines, is the use of oxygenated fuels and cleaner lubricants. Studies have shown that using ethanol blend fuel (10% ethanol, 90% unleaded gasoline) reduced carbon monoxide emissions by up to 38%, unburned hydrocarbons by 16%, and particulate matter by 25% when compared to using plain unleaded gasoline.

Bio-based lubrication oils have been shown to improved fuel economy, reduce pollution, reduce the persistence of emissions in the environment, and reduce the risk of cancer from emissions by 30% to 60%!



Operators who use both ethanol blend fuels and low-emissions lube oil have reported a reduction in machine maintenance by at least 60%, as well as higher resale values on their machines because the engines are cleaner and have less wear. Using these products in your snowmobile will increase engine life, reduce fuel consumption, and increase power by at least five percent.

Traditional snowmobiles produce 10 to 70 times more carbon monoxide and 45 to 250 times more unburned hydrocarbons than the average automobile. With the number of snowmobiles attracted to Muskoka during the winter, we all should be concerned about the impact this pollution has on Muskoka's watersheds.

As the demand for new clean technologies increases, they will be more readily available and the prices will decrease. But the demand needs to be there, and that is where we can all do our part to promote environmentally responsible snowmobiling practices.

### **Responsible Snowmobiling**

- **Leave tracks, not trash-** if you had space to bring it in, then respect nature and carry it out too.
- **Maintain your sled-** a well-tuned snowmobile is more environmentally friendly and reliable.
- **Protect wildlife-** animals are more vulnerable in winter, so keep your distance and leave them alone.
- **Leave it stock-** refrain from using after-market pipes that increase noise and annoy others.
- **Stay on the trail-** wherever possible, reduce your environmental impact by riding on organized trails.
- **Respect sensitive areas-** there are lots of other places to ride, so avoid environmentally sensitive or protected areas.
- **Embrace new technologies-** Mother Nature appreciates snowmobiles that run more efficiently and effectively.

*From the Canadian Council of Snowmobile Organizations*

