



## Going Green in Snow and Ice Management

*Adapted from an article by Ellen Kobach and Brian Birch,  
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Managing snow and ice during harsh winter conditions is challenging work. From unpredictable weather patterns to dangerous conditions, snow and ice professionals face many difficulties while maintaining safety for the public during the worst winter weather. In addition to these existing challenges, a whole new set of issues is arising regarding environmental stewardship



and conservation. The increased pressure and paradigm shift that is taking place in the United States (and is occurring at a faster pace in many countries across the globe) related to environmental concerns will continue to affect how we operate. The “green movement” is a hot topic in today’s society, and the call for conservation of resources and reducing practices harmful to the environment is both widespread and enduring. Snow and ice management professionals are no strangers to these demands, as

the use of heavy equipment and deicing/anti-icing materials is paramount to keeping streets and parking lots clear of snow and ice. It is a balancing act of managing the impact snow and ice professionals have on the environment with the need for pedestrian and motorist safety during winter. Fortunately, there are a number of best practices and new technologies that can help reduce harm to the environment while still providing top-notch safety to the public during winter weather.

### What can you do to make your operation green?

There are many steps snow and ice professionals can take to help lessen harmful impacts on the environment. The following are ideas specifically for the snow and ice industry suggested by the International Council for Local Environmental Initiatives (ICLEI) and the American Association of State Highway and Transportation Officials (AASHTO):

- **Evaluate your equipment.** Conducting a fleet inventory can help to set goals for reducing energy use and air pollutants. Consider the number of vehicles and amount of fuel they use. Make sure the most efficient vehicle is being used for each job, and eliminate any unnecessary equipment. When purchasing new vehicles; consider fuel efficient and/or alternatively fueled vehicles.

- **Perform regular vehicle maintenance.** A simple way to reduce emissions, regular maintenance is important to ensure that each piece of equipment is running as efficiently as possible. This includes changing oil and filters regularly, consistently checking tire pressure, and making sure engines are operating in correct temperatures.
- **Consider alternative fuels.** As governmental standards become stricter regarding air emissions, fuel technology continues to improve. There are several options to replace or supplement current fuel usage, including diesel, biodiesel, and ultra-low sulfur fuel.
- **Train drivers to operate vehicles efficiently and correctly.** Ensure that drivers know the proper way operate vehicles. Route planning using GPS or other software can help to maximize efficiency when operating vehicles. Instituting a strict no idling plan will also help to decrease fuel use and unnecessary emissions.
- **Create a plan for reducing salt use.** Calibrating spreaders can help monitor usage and ensure salt isn't being wasted, and prewetting salt can also decrease the amount needed. Training on correct salt usage and application rates is also an important step towards using the minimum amount of salt to achieve maximum results.
- **Consider alternatives to salt.** While not necessarily meant to replace salt, there are many alternatives that can supplement the use of road salt. Certain alternative deicers can have less of an impact on the environment. Review the available materials out there in order to make an informed decision about using alternative deicers. Anti-icing using liquid materials is also a good option to consider.
- **Winter operations facility management.** Salt, sand, and other chemicals should be stored correctly to minimize contamination—covered storage for dry chemicals is recommended. General tips for keeping winter facilities environmentally friendly include litter control, monitoring water usage, and consistent and accurate recordkeeping for materials and site management. These steps towards improving snow and ice management operations can have a beneficial impact on the environment, whether it be reducing emissions or lessening the spread of chemicals. Many small things, such as optimizing routes, eliminating idling, and regulating salt usage are easy ways to reduce impact on the environment.

