



Advanced Deicing Product Testing

Project Number 2010-10

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Problem Highway departments are constantly reviewing ways to reduce costs and minimize impacts to the environment caused by maintenance activities. A specific area often considered is the type of deicing material used in winter road maintenance.

Solution The McLeod County Highway Department tested the use of IceSlicer™ granular deicing material. The study aimed to determine if the material could reduce the point of melting, the amount of material needed, and the alkalinity of runoff.

Procedure IceSlicer™ was used on one county truck during several winter storms so its performance could be compared to that of traditional road salt. The department also planned to apply the material according to the manufacturer's recommendations for colder weather events that would benefit from the reduced melting temperature—up to 17 degrees lower, according to the product's claims. However, a lack of extreme cold weather prevented the county from completing that procedure.

Results The department found that the IceSlicer™ material allowed for reduced material usage—about half as much material was needed compared to traditional white salt. The department also found the cost to be comparable to salt when the reduced usage of material was factored in. The reduction in material use also allowed plow operators to remain on the road longer during snow events. The department estimated it could double the number of lane miles plowed before having to resupply trucks with material.

One challenge was the lack of a separate storage site, which the department found inconvenient. However, with the upcoming construction of a new maintenance shop, the department will have the opportunity to construct a separate bunker for storage. An additional issue was that the department had to haul the material itself rather than having it delivered. If there were a more efficient delivery system, the material would become more cost beneficial.

Approximate Cost \$5,000 plus hauling costs

OPERA Funding \$5,000

Implementation Once the construction of an additional storage facility is completed, the department plans to keep material on hand for colder temperature events. Because of the cost of hauling the material and other commitments, the department does not plan to completely replace white salt with the IceSlicer™ material.

Status Complete



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