



# Mitigation Practice Series:

## Deicing and Traction Control

To minimize soil disturbance and compaction, construction projects that cross farmland may create travel lanes using temporary road matting. During winter months, or when it rains, this road matting may become slippery or icy. To maintain safe working conditions, construction crews may apply various deicing or traction control products to improve vehicle traction on the road matting. Sodium chloride is a well-known chloride based deicing agent and it's applied to road matting as either rock salt or as one component of a deicing product. Chloride based deicing agents also come in a variety of forms such as calcium or magnesium chloride.



*Vehicle travel across snow covered wooden matting, where lime chips have been applied.*

### Chloride's Impact to Soil Health and Vegetation

Chloride based deicing products have a range of potential impacts to soil health, vegetation, and agricultural productivity. For example, the accumulation of chloride can destroy soil structure, reduce soil infiltration, and damage or kill plants. To learn more about the impacts of chloride, visit [wisaltwise.com](http://wisaltwise.com) or review UW-Madison Division of Extension publication [A3877](#).



*Application of a beet juice-chloride blended deicing solution to snow covered wooden*

### Chloride Alternative Deicing Products

Some of Wisconsin's largest utilities have found success using alternative products including calcium magnesium acetate or agricultural by-products such as beet juice (when used with chloride). These products are biodegradable, non-toxic, and can add beneficial minerals to the soil. To learn more about the various alternative deicing products available, review the UW-Madison Division of Extension publication [A3877](#). DATCP recommends the following mitigation practices to lessen the impacts of deicing products to agricultural lands.





## Deicing Mitigation Practices

- Use alternatives to chloride based deicing products, when safety conditions allow, for deicing on temporary road matting when crossing agricultural soils.
- When the application of chloride is necessary to resolve a matter of safety an alternative method cannot, limit the chloride application rate to the lowest level required to maintain a safe working environment.
- Consider mixing solid chlorides with a gritty material, such as lime chips.
- Prepare a spill response plan in the event chloride or an alternative product is over-applied or spilled onto agricultural soils.

## Traction Control Products

In rainy or snowy conditions, temporary road matting may become slippery. In these situations, applying a gritty abrasive substance like gravel to the surface of road matting can help vehicles maintain traction. However, materials like gravel or sand can increase the rock content of soil or degrade soil health. The application of lime chips is an alternative to gravel or sand that provides comparable traction benefits. Lime chips will also slowly dissolve over time and provide a beneficial source of calcium and magnesium to the soil as well as raise the soil pH. Powdered lime should be avoided.



*1/8 – 3/16 inch diameter lime chips*

## Traction Control Mitigation Practices

- Apply 1/8 to 3/16 inch diameter lime chips (shown above) to improve traction on matting during slippery non-frozen or frozen conditions.
- If gravel or sand is used, sweep up the material after each use when conditions have improved.

### For More Information

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