Side Effects to Vegetation

Ice melters can affect plants in three ways: salt spray, salty soils, and sodic soils. Plants vary widely in their response to salts in their environments, with some being very tolerant and some showing no tolerance.

Salt spray damages plants by placing salt on leaves, buds, and bark from the use of snowplows and snow throwers. This resulting mixture is toxic through extreme desiccation of plant tissues. Buds that are damaged can prevent the tree or shrub from leafing and flowering the following spring. Salt can also injure the crowns of non-tolerant and newly seeded turf areas by preventing new shoot and leaf generation the next spring.

Soluble salts in the soil also have a severe impact on plant life. Even in minute quantities, chlorides are detrimental to the soil microbes that are essential to soil organic matter formation and nutrient availability. As the concentration of salts increase, they can kill vegetation in much the same way salt spray does...by killing the plant and preventing new growth from occurring.

All soils contain certain amounts of clay particles. Clay has a negatively charged electrical site that holds onto calcium, magnesium, potassium, and other positively charged elements. When the amount of sodium on these sites reaches a high level, the clay particles disperse and form a water impermeable layer in the soil structure.

Ice melters containing potassium chloride and urea tend to have less affect on vegetation as both these materials are also fertilizers. However, over-application of either can cause salt damage.

HOT TIP

Both sodium chloride and calcium chloride are detrimental to plant growth and should be very limited in their contact to plants.

Use ice melters that will provide satisfactory melting performance with minimal potential damage to surrounding vegetation. Remember that salts will accumulate with repeated use and over application of any de-icer can damage greenery.

Check with your local nursery or County Extension Horticultural Agent for salt tolerant species for your area.