HOW DE-ICING MATERIALS TRICKLE DOWN

Types of Commonly Used De-Icers

SALTS

Sodium chloride, aka "road salt", works by lowering the freezing point of water it comes into contact with, disrupting it's

ABRASIVES

Substances like sand, gravel and other crushed rocks help improve traction in icy conditions for both vehicles and pedestrians.

BRINES

Salt brine, a liquid mixture of salt and water, helps to prevent snow and ice from bonding with pavement.

How De-Icer Enters the Environment

1. Leaching

Dissolved salts and additives can soak into the ground through pavement joints, cracks, and drainage layers, reaching the

2. Runoff

Rain, snowmelt, and street wash water carry de-icer off roads into storm drains, streams, and nearby soils.

3. Scattered

Plows and traffic push or spray de-icer off roadways onto shoulders, sidewalks and roadside vegetation.

IMPACT ON:

Environment

- Raises salinity in streams and groundwater
- Damages roadside vegetation through salt burn and altered soil structure
- Reduces biodiversity as salt-tolerant organisms outcompete others

Infrastructure

- Accellerates corrosion on vehicles, bridges, guardrails and rebar in concrete
- Deteriorates concrete as chlorides penetrate and weaken reinforced structures
- Increases maitenance costs for fleets, plows and municipal equipment