

Town of Binghamton Highway Department

Best Management Practice

Salt and Sand Loading

The Town of Binghamton Highway Department is located at 865 Hawleyton Rd Binghamton, NY 13903. The land that the town of Binghamton Highway garage is located on was purchased in 1957 by our town's four fathers. The building was built in 1958 at its present location. Improvements to the building and the land have been on an ongoing objective to the administration of the town of Binghamton.

On-Going Objectives:

- Proper loading of road salt and sand
 - General practices
 - Alternating materials
 - Employee training
-

Description:

The Application and storage of deicing materials, most commonly salts such as sodium chloride, can lead to water quality problems for surrounding areas. Salts, gravel, sand, and other materials are applied to highways and roads to reduce the amount of ice during winter storm events. Salts lower the melting point of ice, allowing roadways to stay free of ice buildup during cold winters. Sand and gravel increase traction on the road, making travel safer.

Both salt and sand materials must be loaded properly into distributing trucks to reduce impact on the surrounding area. The Town of Binghamton uses

Pollution Prevention:

- Contain storm water runoff from areas where salt is stored by using buffers to diffuse runoff before entering water bodies.
 - Use diversion beams to minimize run-on to storage areas.
 - Cleanup "track out" after storm events.
-

Suggested Protocols:

- Use loading areas on impervious pads.
- When able, load salt in covered area to reduce material loss from rain and wind.
- When loading, do not over load the loader bucket.
- Before leaving the storage area, rock your loader bucket back and forth in order to remove excess salt and prevent spillage outside the storage area.

- After loading, immediately sweep loading area and return material to a covered vehicle, storage bin, or covered pile.
 - Avoid spills during loading. If a spill occurs, sweep all spilled material into the covered pile.
-

Impacts of Materials:

- Salt (NaCl)
 - Deplete the oxygen supply needed by aquatic animals and plants
 - Leach into the ground and change the soil composition, making it hard for plants to survive
 - Leach into the groundwater, which sometimes flows to surface water; both are sources of drinking water
 - Deteriorate paved surfaces, buildings, infrastructures, and the environment
 - Sand
 - Bury the aquatic floor life, fill in habitats, and cloud the water
 - Erode the stream banks and other landscapes as it is carried to the surface waters by storm water runoff
 - Cause premature deterioration of floor surfaces as it is tracked into buildings
 - Lose its effectiveness after becoming embedded in snow and ice
 - Enter catch basins, storm drains, and surface waters if it is not swept up each spring
 - Contribute to plugged storm drains, which can cause flooding
-

Training:

- Train drivers to improve loading of materials, application techniques and reduce losses.
 - Train drivers to report areas of “over salting” to allow possible cleanup and to reduce salt runoff.
-

Further Detail of the BMP:

Training of employees, calibrating equipment, and use of brine solutions or other materials for certain situations need to be continuously evaluated to increase effectiveness and reduce potential environmental impacts. Use of temperature sensor technology in pavements and on vehicles is continuing to improve. As the technology improves, the costs will continue to decrease and become a more viable option.