

SALT STORAGE AND LOADING BMP FACTSHEET 4

Rev. 04/2023



Targeted Pollutants

Sediment	X
Nutrients	
Trash	
Metals	
Bacteria	
Oil & Grease	
Chemicals	
Salt	X

DESCRIPTION

"Salt" means salt, salt solutions, salt mixtures or salt substitutes in solid or liquid form (brine). It includes: Sodium chloride (NaCl), Potassium chloride (KCl), Calcium chloride (CaCl₂), Magnesium chloride (MgCl₂), and mixtures of the same substances with abrasives such as sand, cinder, slag, etc. It is important to follow proper procedures so that pollutants do not migrate by stormwater into our natural waterways. Salt is toxic to many forms of aquatic life and can kill fish and other aquatic organisms. This is a large concern during the winter months when salt is spread on roads, walkways, and parking lots to aid in ice and snow melt. Following procedures will provide compliance with the Industrial Stormwater permit and chloride pollution limits.

Objectives

Cover	X
Contain	X
Educate	X
Reduce/Minimize	X
Product Substitution	

Application of any deicing agents containing urea or ethylene glycol or other forms of nitrogen or phosphorous to parking lots, roadways, runways, sidewalks or other paved surfaces is **PROHIBITED** per the stormwater permits issued to Fort Belvoir by Virginia Department of Environmental Quality. See Fort Belvoir Policy Memo #71 for more details.

GUIDELINES

- All salt should be stored "high and dry", in an enclosed structure and in a manner that it does not come in contact with stormwater.
- Covered containers used for salt storage must be corrosive resistant as salt is extremely corrosive.
- There should be no storm drains in the immediate vicinity of salt storage structures or containers.
- All salt must be completely contained within a structure or container. If the structure is three-sided, the salt should be kept pushed back from the open side to prevent exposure. Stormwater must not be allowed to pond inside structure or drain to storm drains.
- Salt storage facilities should be maintained in a manner that will assure physical integrity consistent with original design criteria. Keeping structures in good repair will prevent releases.
- Make sure equipment operators fully understand how to operate and maintain spreaders, sprayers, loaders and other equipment being used.
- Loading/mixing salt should be done on a properly constructed pad as close to the storage area as possible.
- During loading and unloading of materials it is important to anticipate any possible accidents. Make sure your loading/unloading areas are able to contain possible spills or overflows.
- Salt and sand/salt mixtures spilled during the loading process should be collected and returned to storage immediately after loading is completed.
- Sand and salt mixing and loading of spreaders should be indoors. If it is necessary to mix outdoors, it should be done during dry weather and the mixture should be immediately loaded to a spreader or to storage.
- Deliveries should be arranged such that salt is placed under cover as soon as possible upon arrival.

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MAINTENANCE/GOOD HOUSEKEEPING

- Keep covers in place at all times when work is not occurring to reduce exposure of materials to rain.
- Clean loading/unloading areas regularly to remove potential sources of pollutants.
- Inspect the outside of the container and/or facility for signs of deterioration, discharges, or accumulation of salt inside diked areas. This visual inspection is intended to be a routine walk-around and include the container's supports and foundations and the facility's roof and walls.
- If the stockpiles are too large and cannot feasibly be covered and contained, implement erosion control practices at the perimeter of your site and at any storm drains to prevent erosion of the stockpiled material from moving off-site.

SPILL PREVENTION

Common causes of spills at facilities include:

- **Operator error**
 - ⇒ Container overfilled
 - ⇒ Containers left open
 - ⇒ Poor transfer procedures
 - ⇒ Lack of product monitoring
 - ⇒ Potential problems not recognized
 - ⇒ Poor maintenance/housekeeping practices
- **Storage Tank Problems**
 - ⇒ Tank design and construction
 - ⇒ Inadequate foundation or tanks setting directly on the ground
 - ⇒ Tank bottom and seams rusted, shell pitted, weeping or leaking
 - ⇒ Improper venting

SPILL RESPONSE CONSIDERATIONS

In the event of a salt spill for when salt has not reached storm drain:

- Survey the incident to identify the source of release
- Stop the source
- Sweep or vacuum salt and dispose of properly
- **DO NOT WASH SALT DOWN STORM DRAINS OR DISCHARGE STORMWATER CONTAMINATED SALT INTO STORM DRAIN**

SPILL RESPONSE PROCEDURES

In the event of a spill or leak, follow the appropriate Spill Response Procedures posted at your facility or refer to the BMP Factsheet Overview.

- **Survey the incident** from a safe distance. Identify the source of release and the material being released.
- Call the Ft. Belvoir Fire Department if spills are *greater than 5 gallons OR greater than 5 square feet*. If ANY amount of leaked material has entered a storm drain or waterway call the Ft. Belvoir Fire Department at 703-781-1800 and DPW Environmental Division (Env. Div.) at 703-806-3694.
- Provide the Safety Data Sheet of the spilled material to the spill response personnel.
- Fill out Spill Incident Report in your SWPPP.
- **REPORT ALL SPILLS REGARDLESS OF SIZE TO DPW/ENV. DIV.**

REPORT SPILLS TO DPW/ENV. DIV. BY:

- E-mailing your Spill Incident Report to zachary.d.witman.civ@army.mil
- Calling 703-806-3694