

# ON-FARM FERTILIZER STORAGE

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**THE FOLLOWING GUIDELINES AND PLANS ARE BASED UPON "BEST MANAGEMENT PRACTICES" INTENDED TO REDUCE THE POTENTIAL FOR POLLUTION FROM STORING AND HANDLING COMMERCIAL FERTILIZER AT ON-FARM FACILITY LOCATIONS.**

## CURRENT REQUIREMENTS

At present in South Dakota, no fertilizer storage and handling requirements are directed toward agricultural producer operations other than reporting spills. Occurrences of pollution however, may be a violation of state and federal acts such as the Clean Water Act.

Commercial fertilizer distribution dealers are required to comply with the Bulk Commercial Fertilizer Laws [Chapter 38-19](#) and Bulk Commercial Fertilizer Storage Rules [12:44:05](#) which specify procedures for storing, handling and distribution of commercial fertilizer.

Commercial fertilizer dealers are currently required to have loading pads and stainless steel fittings in the side or bottom of storage containers unless the tank is in secondary containment. Shut off valves on the lower fittings of the sight gauge assembly are also required, unless in secondary containment.

The operator of a bulk commercial fertilizer storage facility is required to notify the Department of Agriculture or the Division of Emergency Management when spills occur outside the secondary containment area.

Any spill, leak, or accidental release which threatens waters of the state must be immediately reported to the Department of Environment and Natural Resources.

## THINGS TO CONSIDER (back to top)

- Protecting surface and ground water...
- Savings from a potentially costly clean-up of contaminated water and land...
- Being liable for potential environment damage to others...
- Loss of water use or land to contaminated areas...

## **ON-FARM FERTILIZER STORAGE AND HANDLING GUIDELINES** (back to top)

- \* Replace worn or faulty valves, plugs and threaded fittings into the storage containers.
- \* Install backflow prevention devices or use air gap separation on water supply lines used for fertilizer mixing or equipment rinsing.
- \* Lock valves and shutoff devices while storage containers and facilities are not in use.
- \* Storage facilities should not be located in areas with high probability of flooding.
- \* Follow hazard safety rules, worker protection laws and fire prevention rules while handling and storing fertilizer.
- \* Review groundwater sensitivity information before constructing any fertilizer storage facilities or handling areas.
- \* Use approved containers designed and compatible with the product being stored for the purpose of storing fertilizer.
- \* Locate dry fertilizer storage buildings or liquid fertilizer secondary containment over 500 feet away from a well, water supply or surface water run off area.
- \* Construct storage buildings so as to not allow seepage or spillage of fertilize material under normal conditions.
- \* Construct liquid fertilizer secondary containment capable of holding 125 per cent of the volume of the largest container plus the volume of the butts of all other containers inside the liquid containment area.
- \* Design loading areas to prevent spillage on to unprotected areas and provide proper cleanup area by installing curbed containment.
- \* Unless stored in a totally enclosed building, all nonliquid fertilizer materials should be covered and stored within an appropriate secondary containment storage structure.
- \* Apply appropriate sealant to seams and cracks in all storage facilities and load/wash/rinse pad areas.
- \* Construct dry storage for secondary containment which is of sufficient thickness and strength to withstand loading conditions.
- \* Construct liquid fertilizer secondary containment which is sufficient in thickness and strength to withstand loading conditions and the discharge of maximum tank capacity

considering the full pressure exerted from a discharged liquid by using one of the following examples:

1. Using poured concrete of sufficient thickness and strength for loading conditions.
2. Using synthetic liner (at least 30 mils thick) beneath 12 inches of compacted soil for loading conditions.
3. Using cross-linked polyolefin (3/8 inch thick) that meets ASTM standard D 1248-84 for loading conditions.

\* Use leak detection for detecting and monitoring possible leaks from secondary containment facilities.

\* Fertilizer rinsates and materials that accumulate in containment areas should be applied to cropland at normal fertilizer rates.

\* Washing of fertilizer equipment in the field is encouraged when performed at the site of fertilizer application on the day it is applied.

\* Avoid rinsing near a well, stream, lake or wetland.

### **FOR MORE INFORMATION CONTACT**

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