

4.2 Storm Water Controls

A landfill must be constructed and operated so that seasonal flooding is temporary in duration. The landfill must minimize contact between storm water and waste. Ponded water must be removed within 30 days. (18 AAC 60.225)



Methods for storm water controls:

Water diversion:

- Outside the landfill, divert surface water or storm water around the landfill through the use of ditches, trenches, culverts, or berms (“diversion structures”).
 - Within the landfill, prevent leachate by channeling water away from the waste and out of the landfill.
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- The photograph shows a gravel-lined drainage ditch or berm at a landfill site. Two large yellow arrows are overlaid on the image, pointing from left to right, indicating the direction of water flow away from the waste area. In the background, a piece of heavy machinery is visible on a dirt road.
- Engineered drainage system to prevent storm water from coming into contact with the waste.*
- Ensure that storm water diversion structures are sized to handle seasonal flows of water, such as during spring breakup and the rainy season.
 - Storm water diversion structures require routine maintenance to ensure they work properly. This means keeping them free of litter, brush, and overgrowth.
 - Ensure that ditches, culverts, and trenches are free of debris in the fall before the snow falls so that they are more functional in the spring when they are needed most.

Landfill construction:

- Build the landfill with a slight grade so storm water will naturally run out of the landfill.
- Place waste in the landfill from the highest point to the lowest point so that water in the landfill flows away from the waste.

Snow Management:

- Identify an area away from waste and downslope of the landfill to use for a snow dump.
- Remove snow from disposal areas as it accumulates.
- Erect snow fences to keep blowing snow out of the landfill and minimize snow drift.
- If there is a prevailing wind direction, construct the trenches so that they don't fill with snow or build a tall berm on the upwind side to create a snow break.

How to deal with seasonal ponding:

The best way to handle seasonal ponding is through prevention. To prevent ponding, it is important to have the landfill appropriately graded for water drainage. The installation of culverts, ditches, and berms will also prevent water from entering the landfill. If during operations the operator notices a low spot in the landfill near the waste, then the operator should fill it in with soil material to prevent ponding.

Regular compaction and cover can also reduce the risk of ponding that can occur as the result of the uneven settling of waste in the landfill. If the waste is properly compacted and covered it shouldn't settle as much, creating low spots that collect water.

If ponding is identified in the landfill it is important to NOT pump the water off the landfill site, property boundary, or into another water body. The water should be managed on site, either by filling in the low spot with soil material or by directing the water so it will naturally drain or evaporate.

Examples:



Snow cleared from the road within the landfill and away from the working face.