

4.0 Landfill Water Impacts

In order to understand how landfills can impact the water, it is important to first understand the different types of water associated with landfills.

- Groundwater: water below the landfill surface in the zone of saturation.
- Surface water: water that is open to the atmosphere and subject to surface run-off, or water from springs, wells, or other collectors directly influenced by surface water. Examples of surface water include rivers, streams, wetlands, tundra ponds, the ocean, etc.
- Run-off: rainwater, leachate, or other liquid that drains over land from any part of the landfill.
- Storm water: water that originates from precipitation including rain, snow, and ice melt.

4.1 Leachate

Prevention is the best strategy when it comes to leachate. Leachate must be prevented, and leachate seeps must be contained and controlled. Waste may not be placed in surface water. (18 AAC 60.225)

What is leachate?

Leachate is contaminated water created when water and garbage mix. The water pulls contaminants out of the garbage with which it comes into contact. Leachate can also be caused by the water content of the waste itself, which is released when the trash decomposes.

Why is controlling leachate important?

Leachate can be harmful to human health if it enters the community's water supply and may be harmful to subsistence resources.



Leachate is created when water and garbage mix. Waste should not be in contact with water.

Helpful Tips:

- Storm water and snow management are key in preventing leachate. In the winter, it is important to manage snow in the landfill. Water from snowmelt can easily pond in the landfill. The more snow that is in the landfill during breakup the higher the potential for

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leachate production. The more snow that is removed from the landfill, the better.

- Look for any signs of leachate such as orange staining, orange/reddish-brown water, or dead vegetation. If signs of leachate are visible, identify the source and call your ADEC Rural Landfill Specialist for assistance.
- Do not dispose of liquids, such as paint, cooking oil, antifreeze, and used oil, in the landfill. Disposing of liquids in the landfill can create leachate.
- Do not place waste into puddles, ponds, or other water sources as this will create leachate.
- The best way to prevent leachate is to keep water out of the landfill with good compaction and regular compacted cover.

Examples of what leachate looks like:



Leachate, as indicated by red and orange staining, where the waste and water are in contact.

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Orange staining and dead vegetation characteristic of a leachate seep.



Orange staining near the waste caused by leachate. The waste should be covered to prevent the formation of leachate.