

Landfill

Fact Sheet



Landfills today are not simply areas where trash is buried and forgotten. In fact, landfills are now scientifically engineered containment structures.

The ACUA's landfill is located in Egg Harbor Township at its 360-acre Howard "Fritz" Haneman Environmental Park. "Fritz" Haneman was the president of the ACUA from 1978 to 1990. The landfill's first section, or cell, was constructed in 1991. Today the landfill covers more than 100 acres and is 145 feet high. Based on current operating procedures and regulations the landfill is expected to be accepting waste through 2016.

Since Atlantic County is located in a coastal area, the landfill is built above ground with a double liner system to prevent the possibility of contamination of the environment and groundwater from waste.



The ACUA landfill is located at the Howard "Fritz" Haneman Environmental Park in Egg Harbor Township.

When the ACUA began operating its landfill, construction and demolition debris, along with bulky waste were the dominant types of waste disposed of in the landfill. Household trash, or municipal solid waste, was transported to another facility because of ACUA's proximity to the Atlantic City International Airport. Landfills can attract large birds like seagulls, which can present a hazard to aircraft.

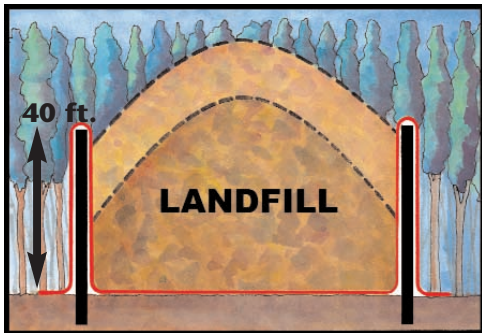
In July of 2000, the ACUA successfully completed a pilot project with the guidance of avian experts in which municipal solid waste was landfilled at night when seagulls return to the coast to roost. Trash is covered at the end of the nighttime work shift and a wildlife biologist works to monitor and deter the activity of birds that could present a danger. Since the ACUA received approval to landfill municipal solid waste at night, the composition and chemistry of the landfill has changed.

The organic matter in municipal solid waste breaks down as it reacts with water and oxygen that pass through the material. As the waste decomposes, methane, a powerful greenhouse gas is created. Gas extraction wells collect methane and other gases from the landfill. Gas can then be destroyed by incineration or converted to electricity to prevent methane from entering the atmosphere.



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Gas from the ACUA's landfill is converted to electricity by AC Landfill Energy, LLC (ACLE). Three generators produce more than enough electricity for the ACUA's Solid Waste Operations, with the majority of the electricity produced flowing into the PJM grid, providing electric for thousands of homes and businesses.



A 40-foot retaining wall was built around cells 3 through to cell 9.

The ACUA is committed to preserving landfill capacity by implementing and researching many new programs, such as leachate recirculation, Mechanically Stabilized Earth walls (MSE), and mechanical mining of the landfill. Leachate is the rainwater that flows through the landfill. The ACUA's landfill is lined and has a leachate collection system where leachate is captured by a series of collector pipes and pumped to the ACUA Wastewater Treatment Facility for treatment. Some of the leachate can be re-circulated through the landfill's waste to enhance the natural process of decomposition. By using this process, known as the bioreactor process, the waste decomposes faster, freeing up valuable space. More gas is also created that can be captured to create more energy.



ACUA's landfill footprint. ■ closed cells ■ active cells ■ future cells

The ACUA has expanded the landfill to include cells 10 and 11, of which cell 10 is active along with MSE walls. Constructing a wall around the landfill will allow for additional waste to be disposed of without an increase in landfill spread. The ACUA plans to add a 40-foot retaining wall from cell 3 around to cell 9. The addition of the MSE wall will increase the landfill's capacity without increasing the landfill's footprint. In 2010 the ACUA capped and closed landfill cells 1 and 2, and portions of cells 4, 5, and 6. The ACUA and Community Energy are developing a solar photovoltaic system on the capped and closed portions of the landfill, expected to be operational in 2011. The ACUA will enter into a 15-year power purchase agreement and receive electricity at \$0.06 per kWh from the landfill solar project.