

New system reduces carbon footprint at County Home Road Landfill & Recycling Center

As you pass the landfill and recycling center on Highway 13, you may notice a tall pipe structure with a 15-foot flame! This is part of a new landfill gas collection system, installed by the Cedar Rapids Linn County Solid Waste Agency to help protect the environment.

Carbon reduction. The landfill gas collection system will dramatically reduce the carbon footprint of the landfill. The system captures and eliminates more than 16,000 tons of carbon dioxide annually, approximately 98% of the gases being emitted by buried waste. In terms of reducing greenhouse gas emissions, this has the same environmental benefit as removing 24,296 automobiles, 295,509 barrels of oil, and 14,293,466 gallons of gasoline for one year.

Air quality. The system also serves to eliminate odors associated with landfill gas emissions as well as accelerates waste decomposition and stabilization of the fill—the area of the site where the waste is buried.

System infrastructure. The system, which operates 24-7, consists of 22 vertical wells and 12 horizontal wells. At regular intervals, four-foot pipes—called well heads—rise out of the fill, providing information to landfill personnel about gas production.

Gas production. Currently estimated at 800-1200 cubic feet per minute, the amount of gas will increase as the landfill ages. A blower creates a vacuum across the wells, pushing the gas to the candlestick flare where it is eliminated. In the future, the gas will be used to create energy and the flare will serve as a back-up structure.

Future uses of gas. The Cedar Rapids/Linn County Solid Waste Agency is investigating uses for landfill gas including electrical production, heat recovery, and alternative fuel. Landfill gas is a valuable source of alternative energy.

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