



2008 LMOP PROJECT EXPO

NEW HANOVER COUNTY LANDFILL

WILMINGTON, NORTH CAROLINA



LANDFILL OVERVIEW

Open Year: 1981

***Estimated Closure Year: 2016**

***Waste in Place: 1.7 million tons**

***Design Capacity: 4.2 million tons**

***Annual Acceptance:
198,600 tons (2006)**

***Landfill Area:
39 (closed) and 30 (active) acres**

Flare in Place: No

Methane Content of Gas: Estimated 50%

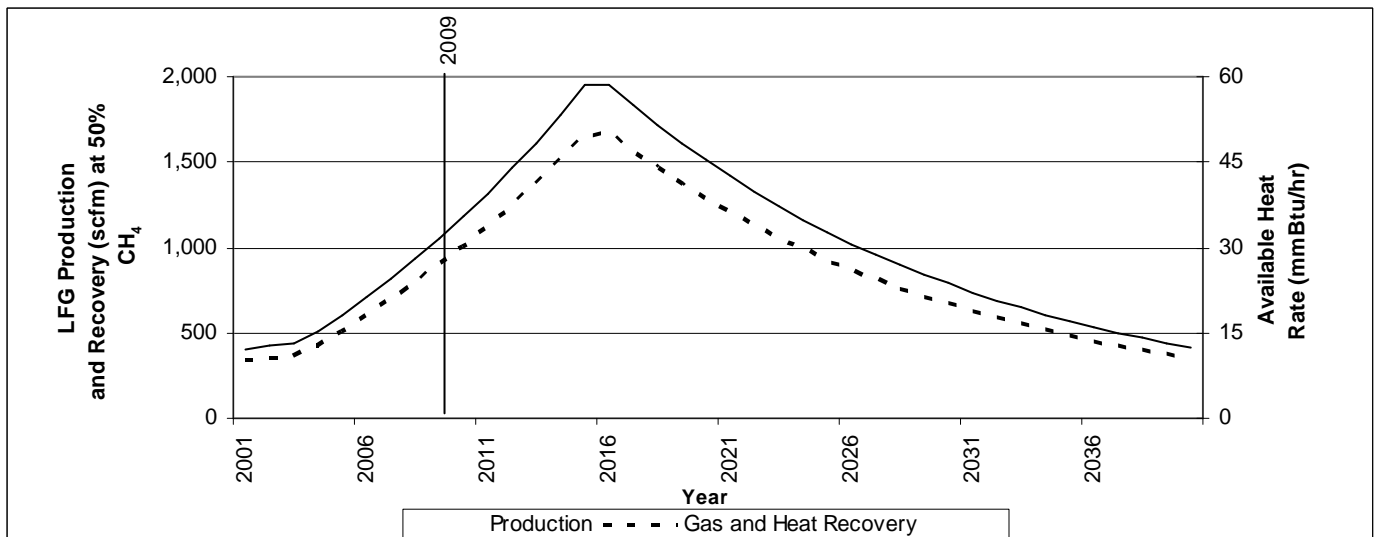
*Tonnes reflect MSW portion only. The landfill also receives ash waste from the nearby waste-to-energy incinerator. The landfill is currently permitting a new 115-acre area which will extend the lifetime and capacity of the site.

ENVIRONMENTAL BENEFITS

New Hanover County Landfill reports that it is not currently required to collect and combust landfill gas under the Landfill NSPS/EG. Collection of the landfill gas at its estimated extraction rate of 898 scfm in 2009 would result in direct emission reductions of 88,000 metric tons CO₂e and utilizing the gas to generate electricity would result in the avoidance of 15,200 metric tons of CO₂e emissions due to displaced electricity generation from conventional fossil fuel sources. These emission reductions are equivalent to any one of the following annual environmental benefits for 2009:

- **Annual greenhouse gas emissions from 18,900 passenger vehicles**
- **Carbon sequestered annually by 23,500 acres of pine or fir forests**
- **CO₂ emissions from burning 540 railcars' worth of coal**
- **CO₂ emissions from 240,700 barrels of oil consumed**

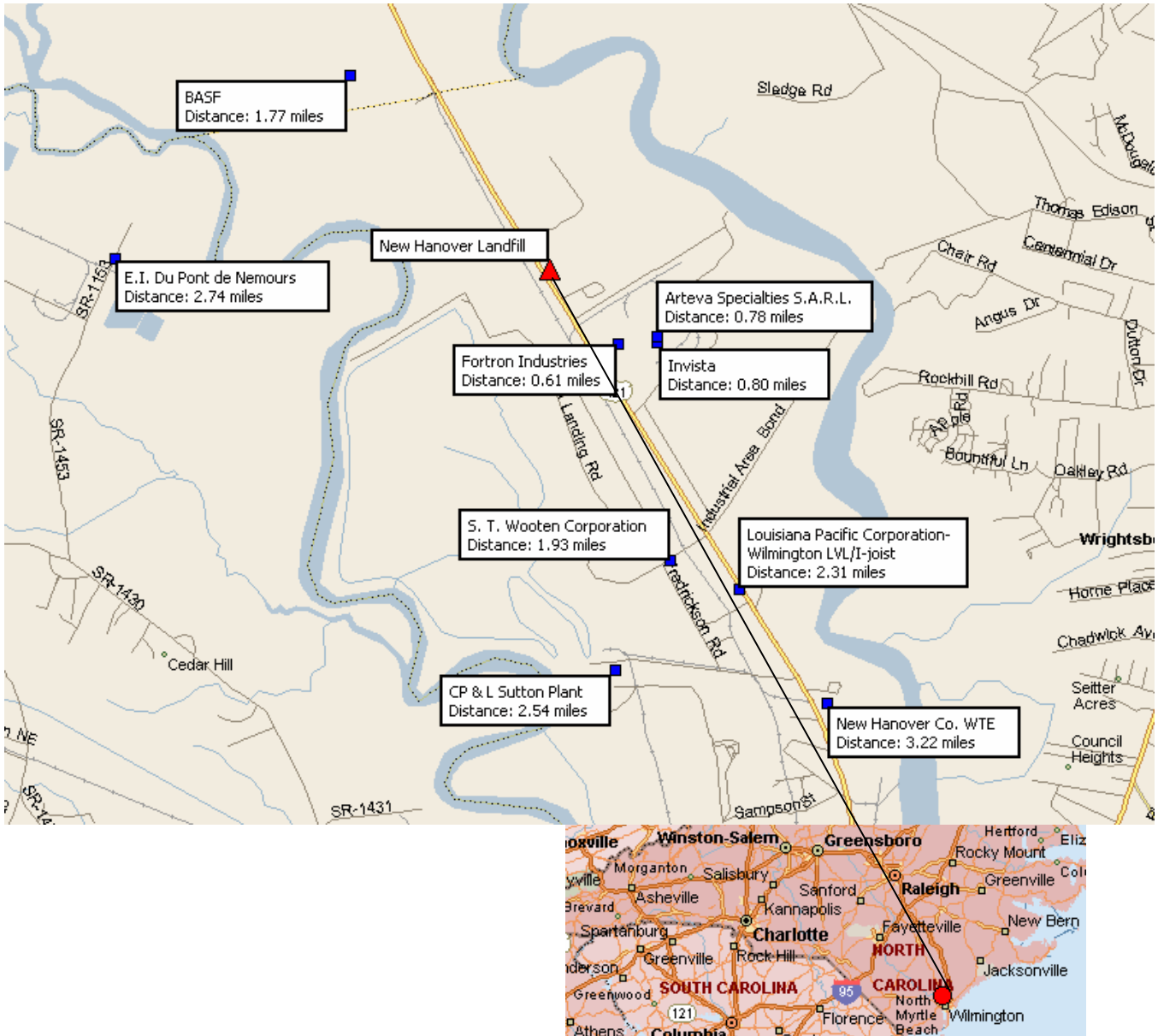
LANDFILL GAS AND ENERGY POTENTIAL



• LandGEM 2009 LFG Recovery: 898 scfm

• LandGEM Peak Recovery Estimation: 1,668 scfm (in 2016)

LANDFILL LOCATION AND POTENTIAL END USERS



ADDITIONAL INFORMATION

Currently, the state of North Carolina offers the following financial incentives for LFG energy:

- NC RPS: Several utilities are seeking renewable energy sources to meet the demand of the RPS, which will go into effect in 2012.
- Energy Improvement Loan Program provides low interest loans for renewable energy projects, up to \$500,000.
- GoldenLEAF Foundation provides grants to governmental entities and nonprofit organizations for activities that will improve social and economic conditions in economically affected or tobacco-dependent regions of the state.
- NC GreenPower Program is looking for several landfills interested in selling up to 30 million kWh per year through a continuous bidding process.
- Renewable Energy Tax Credits are available for up to 35% of project cost with a credit ceiling of \$2.5 million in state tax credits.

FOR MORE INFORMATION

New Hanover County Landfill
5210 US Highway 421 North
Wilmington, NC 28401

New Hanover County
Department of Environmental
Management (owner)
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