

# Success

A STATE AND PRIVATE FORESTRY Accomplishment

October 2006

*Bismarck Landfill Biomass Project provides solutions for urban hazardous fuels projects, landfill capacity issues, air quality concerns and need for cost-efficient heat at municipal facility.*

An existing 9,000 square foot public works facility in Bismarck, North Dakota will double in size and be heated by a biomass boiler system, thanks in part to State & Private Forestry technical assistance and grant dollars.



With help from a State & Private Forestry grant, landfill managers purchased their own grinder, and began making and selling compost and mulch. Although the program was successful, excess material continued to pile up.

Once the need for a new Public Works Facility was also factored in, plans came together to incorporate a wood chip heating system in the new facility. The 18,000 square foot building will house hazardous waste collection and storage, vehicles, offices, and restrooms. The new heating system will consume approximately 300 tons of the 4,000 tons available at the landfill. It is projected that over the course of 30 years the facility will:

- > Save \$600,000 to \$900,000 in heating costs.
- > Utilize waste wood from municipal forestry & hazardous fuels projects.
- > Prevent waste wood from entering and prematurely exceeding landfill capacity.

Assistant City Manager Keith Hunke is hoping other Bismarck facilities will realize the economic viability of a biomass boiler system and will choose to implement a similar project. With the amount of wood waste available at the landfill, he could supply several biomass boilers in the area.

In June 2001, managers at the Bismarck landfill were troubled by the large influx of wood waste resulting from municipal hazardous fuels and forest health projects, construction waste and the occasional devastating hailstorm that can roll through that country. Something needed to be done or they would run out of landfill space in short order.

At first they contracted with a local company to grind the wood waste, generating an average of 4,000 tons per year. After a few years, managers recognized they were spending \$50,000 to \$60,000 per year for the company's services but were not addressing the primary problem. They called upon the North Dakota Forest Service and US Forest Service's R1/R4 State & Private Forestry group to help explore utilization options for the wood waste material.

Economic  
Action  
Biomass  
Utilization  
Program

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