

*CASE STUDY:****Western Lake Superior Sanitary District***

Another facility that has put its waste to work is the Western Lake Superior Sanitary District wastewater treatment plant in Duluth. In 1999, the Western Lake Superior Sanitary District began a major



Western Lake Superior District wastewater treatment plant in Duluth, MN

renovation to install a \$32.6 million biosolids anaerobic digestion facility. In July 2001, Western Lake Superior Sanitary District permanently shut down its incinerator and started treating waste in four digesters, each with a million-gallon capacity. The new digesters use a high temperature process (120 to 140° F) to reduce the organic portion of the wastewater to a biosolids product rich in

organic matter and nutrients. This biosolids product is used in agricultural and mine land applications. The plant uses a special biogas boiler to provide the heat needed for the digestion process as well as heating for the Biosolids Processing Facility. By using the waste gas without compression or treatment in a dedicated boiler, the District has reduced its costs. Ultimately, the biogas may also provide heat to additional buildings within the treatment plant and power a combustion engine that will generate a portion of electricity used by the Sanitary District.



Digester controls at a wastewater treatment plant

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