



# EMWD

## Biodiesel Production from Grease Waste

Eastern Municipal Water District (EMWD) successfully completed a biodiesel pilot project and is designing and, if additional funding becomes available, will construct and operate a full-scale oil and grease purification project, which will annually produce approximately 200,000 to 400,000 gallons of feedstock for biodiesel production.

Within EMWD's service area alone, grease waste totals 5,000,000 to 10,000,000 gallons per year and is primarily disposed of in landfills. This waste material has the potential to produce 200,000 gallons of fuel grade feedstock to be further processed into B-100 biodiesel for subsequent use in EMWD's fleet of diesel-powered vehicles and stationary engines.

Grease waste, which is basically restaurant wastewater, is otherwise disposed of in landfills at considerable expense and cost to the environment. Considerable preliminary treatment is required to separate water and contaminants from the grease using technologies already in use at EMWD's regional water reclamation facilities—screening, decanting and dewatering. The waste streams of water and contaminants are then processed normally at water reclamation facilities and removed. In addition to removing a putrid waste product from the environment, producing biodiesel from grease waste results in a relatively environmentally friendly fuel that can be used as an alternative petroleum diesel fuel.

Local and regional support for this project can be found among the grease trap pumpers and haulers as this project would reduce their transportation costs. EMWD's biodiesel program would decrease the number of miles these trucks travel to dispose of the grease waste, reduce the amount of diesel necessary to transport the waste and reduce the greenhouse gas emissions as a result of reducing miles travelled.

EMWD received \$250,000 in FY 2010 Energy and Water Development, Department of Energy, Energy Efficiency and Renewable Energy funding for the project which will be used for facility design. Additional \$400,000 matching funds approved by EMWD will be used for procurement of equipment, material, and services. However, with a construction cost estimate of \$4,000,000 and considering additional matching funds from EMWD and other sources, an additional \$2,000,000—\$3,000,000 in grants will be needed to complete construction of the project.

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