

Taking the “Waste” Out of Wastewater

NSD collects fats, oils and grease to energize the treatment plant

Wastewater is a misleading word. At Napa Sanitation District’s Soscol Water Recycling Facility, wastewater is recycled during the dry season and used to irrigate golf courses, parks, landscaping and vineyards. The solids pulled out of the wastewater are treated and used as a soil conditioner. No waste there! And now the District has added another resource recovery success to the its list: boosting the gas created in the wastewater treatment process in order to generate additional energy to use to run the treatment plant.



NSD staff and pump truck drivers pump a load of FOG into the District’s fats, oil and grease receiving station.

Methane gas is a natural bi-product of wastewater treatment. Solids that are separated from the wastewater are treated in a large tank called a digester, where specialized bacteria break down the solids. Gas production is part of this digestion process. The District captures the gas generated in the digester and uses it to run generators. Those generators typically produced about 25% of the electricity used at the plant.

That was great news, which made District engineers wonder: how can we produce even more? It turns out that the answer is grease. Each month, thousands of gallons of fat, oils and grease (FOG) are hauled away from local food service

facilities. Beginning in August 2012, that waste could be hauled to the Soscol Water Recycling Facility, where it is pumped directly into the digester from a grease receiving station. The FOG provides high-energy food for the digester bacteria, bumping up gas production that allows the District to produce more electricity.

This increased energy production cuts the district’s \$750,000 annual energy bill by \$100,000 to \$200,000. Besides that cost savings, the District generates income by charging a tipping fee to FOG haulers. The grease receiving station can accept over 200,000 gallons each month. Revenue generated by this service can be used to offset other costs and help keep rates down for District sewer customers.

The benefits of this program ripple out beyond the Napa Sanitation District and its customers. Before the District opened its grease receiving station, haulers had to take FOG loads all the way to Oakland for disposal. A more convenient disposal location in Napa means fewer trucks on the road and reduced carbon dioxide emissions.