



Wastewater Treatment Byproduct Reuse

The primary mission of the Sunnyvale Water Pollution Control Plant is to conduct a cost-effective wastewater management program that is environmentally sound and regulated to protect public health, safety, property, and the quality of the Bay. While consistently meeting this goal, the Plant reuses many byproducts of the treatment process. These include producing electricity and mechanical power from waste gases, recovering heat from engines, producing an alternative to soil for daily landfill cover or a soil amendment for agricultural and pasture land, and supplementing the city water supply by producing recycled water distributed through a separate system for non-potable uses.

Power Generation

Electrical power production offsets the purchase of utility power and produces enough excess power to sell electricity to the California power grid. The fuel to run the engines and generators that produce this power comes from the decomposition of solid waste and liquid waste. Methane gas is produced both in the closed Sunnyvale landfill and in the anaerobic digesters at the plant. These gases are collected and used as fuel in various engines that drive both electrical generators and mechanical pumps.

Biosolids Production

Solids removed in the first stage of the wastewater treatment process are sent to an anaerobic digester. There they decompose and stabilize. Then they are removed and dried in a specially designed drying facility. When 45% to 65% of the water is removed, the solids are ready for beneficial reuse as an alternative to soil for daily cover materials on landfills or used as a soil amendment for agricultural and pasture land.

Water Recycling

Recycled water is produced by diverting a portion of the flow and providing additional treatment. This additionally treated water meets all non-potable Title 22 standards established by the State. It is distributed through a separate underground piping system to provide irrigation for industrial parks, the Sunnyvale Municipal Golf Course, Baylands Park, and sports complexes.