

Your food waste is clogging up California's landfills. Here's how recycling could fix it



In order to reduce waste to landfills, more agencies are recycling food waste. Workers transfer bio waste to the Sanitation Districts of Los Angeles County wastewater treatment plant in Carson Thursday. The plant digests the food waste from Waste Management trash facilities, makes bio fuel and makes electricity.
Leo Jazombi/Staff Photographer

By [Steve Scauzillo](#), *San Gabriel Valley Tribune* | POSTED: 07/30/16, 4:47 PM PDT

Each year, Americans throw out 66 billion pounds of food — organic material wasting away at the bottom of a landfill.

While successful programs recycle tons of aluminum cans, glass, plastic, cardboard, and newspaper and help account for 63 percent of waste diverted from landfills in California, you can't say the same about table scraps. With no widespread re-use and few programs, food waste has emerged as one of the biggest categories of refuse filling up the nation's landfills, making up 18 percent of the trash buried in California landfills, according to state records.

Aside from the social issues of Americans wasting billions of pounds of food every year, there's an environmental problem. Organic material decomposing in landfills creates methane, which can leak into the atmosphere. [Methane is 87 times more potent](#) in terms of warming the Earth than carbon dioxide, the main greenhouse gas, scientists point out.

The double-whammy effect on landfill space and climate change has made food waste a prime target for recycling by environmental groups, the legislature, city, county and state agencies and private garbage companies, spurring a new kind of recycling.

"Food waste is really a big problem," said Heather Jones, spokesperson for CalRecycle, the state agency overseeing recycling. "If we get programs in place, they can make a big difference and quickly, as to how much goes to landfills."



In order to reduce waste to landfills, more agencies are recycling food waste. Workers transfer bio waste to the Sanitation Districts of Los Angeles County wastewater treatment plant in Carson Thursday. The plant digests the food waste from Waste Management trash facilities, makes bio fuel and makes electricity. Leo Jazombi/Staff Photographer

COUNTY 'DIGESTING' FOOD WASTE

About two years ago, the Los Angeles County Sanitation Districts began sprinkling food waste into the 24 giant sewage digester tanks that encircle its Joint Water Pollution Control Plant in Carson on South Figueroa Avenue.

Robert Ferrante and Mark McDannel, both engineers with the Sanitation Districts with decades of experience in solid waste and wastewater treatment, had a hunch that the same kind of recycling they do with sewage solids can work for food scraps.

The theory turned out to be true.

The Sanitation Districts is the first public agency in Los Angeles County to take food waste and turn it into methane or biogas using existing systems. The fuel from decomposing sewage — and now food waste — helps run the Carson wastewater plant and generates excess electricity sold to Southern California Edison. Solids from both sources are converted into fertilizers for hay farms and backyard gardens.

“We have the existing infrastructure that we now are using to solve a different problem,” said McDannel, energy recovery section head at the Sanitation Districts.

After running for about two-and-a-half years, the demonstration project won the grand prize in the operations/management category last month from the American Academy of Environmental Engineers and Scientists Academy.

New York, Boston and Philadelphia are now doing food recycling, and Los Angeles is looking into doing the same, McDannel said. San Bernardino had a pilot project in 1998, taking food waste from 21 restaurants, according to CalRecycle. In nearby Compton, Kroger, parent of Ralphs and Food4Less grocery stores, started a program in 2013 based on the Boston system, converting 150 tons of food waste per day into energy — mostly methane — used to power their 650,000-square-foot warehouse, according to Feed Resource Recovery, a private company contracted by Kroger.

The Sanitation Districts plans to expand. Its waste digesters have the capacity to take 500 tons per day of food waste, about 10 times more than what they are recycling now.

In addition, they are considering adding food waste processing to the Puente Hills Materials Recovery Facility located at the [closed Puente Hills Landfill](#) near Hacienda Heights and North Whittier. The bio-slurry then could be trucked to the plant in Carson for digestion and production of biogas and fertilizer products, instead of a landfill.

“We are looking at doing the food processing at Puente Hills MRF,” McDannel said.

That expansion is still three to eight years away, he said, and finding markets for the end product is a challenge.

FROM FOOD TABLE TO ENERGY

The food waste starts in restaurants, institutions, schools and colleges. UC Irvine is contracted to provide Waste Management, the trash hauling and processing giant, all of its food waste, including every scrap tossed into trash bins by students and faculty eating at 26 on-campus restaurants.

UCI produces about 660 tons of food waste every year. But that's a small fraction of the state's haul. For example, L.A. County produces 4,000 to 6,000 tons per day of food waste. Today, most of that ends up in landfills, including some in Orange County contracted by the L.A. County Sanitation Districts for disposal.

State laws dictates a 50 percent recycling rate, exceeded every day. But new goals set by the state call for 75 percent recycling by 2020, something that can only be accomplished by recycling food waste, as well as other “organics” such as grass clippings and wood waste, Jones explained.

The move toward food waste recycling is important since the state's landfill diversion is still growing — California sent an additional 2 million tons of materials to landfills in 2015 compared with 2014, CalRecycle reported. About 40 percent of that increase was organics.

LOOKS LIKE OATMEAL

Through a patented blend, Waste Management mixes and grinds food waste at its facility in Orange into a beige, soupy mixture called bio-slurry.

“It is the consistency of oatmeal,” said McDannel.

White tanker trucks travel 32 miles to Carson, delivering between 50 tons and 60 tons per day. On Wednesday, men in blue jumpsuits parked the truck and hooked up giant red hoses into pale green tanks, the same tanks that digest sewage from 5.5 million L.A. County residents, McDannel said.

Bacteria without oxygen break down the food waste, just as they do sewage waste. Digestion takes about 15 to 20 days.

“That is like a 4 million-gallon cow’s stomach,” he said.

With food waste in the digesters, the amount of methane produced rose by 112 percent, according to the Sanitation Districts’ early results. McDannel stressed methane is in a closed system and does not escape.

The methane from the food waste helps the sewage treatment plant run on its own power, unaffected by brownouts or flex alerts, he said. But it’s also cutting down on tonnage entering its two landfills, in Calabajas and Scholl Canyon near Glendale, saving precious space.

“I’ve been an environmental engineer for 37 years. It’s always fun to find something new to help fix,” McDannel said.
