

Fort Lee goes green with organic compost units

The U.S. Army hopes to have a net zero waste by 2030

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Daniel Maki, of Integrated Veterans Services, LLC, shows off the Ecovim food-waste composting machine, which is capable of converting 650 lbs. of food waste into reusable compost in 18-21 hours.

Scott P. Yates/
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Photo

FORT LEE — New organic compost units will be installed throughout Fort Lee's dining facilities by this summer thanks to the U.S. Army's nationwide green movement.

The decomposition systems will be provided by Ecovim, part of Integrated Veteran Services LLC and certified through the Veterans Administration. Fort Lee is one of five military bases that will have Ecovim units installed by the end of this year. The Environmental Management Division at Fort Lee partnered with the Defense Commissary Agency and the Joint Culinary Center of Excellence to purchase the Ecovim composters.

"Our product is the Ecovim unit, which takes food waste and reduces it by volume and weight," said Danny Maki, Ecovim senior sales associate. "It's an on-site organic waste reducer which eliminates garbage pickups and reduces costs for the facility."

The stainless steel Food Waste Decomposition System can process 650 pounds in a 12-hour cycle, although Maki said it could take up to 18 hours depending on the wetness of the load.

Ecovim units reduce organic waste up to 93 percent, Maki said. Food makes up 22 percent of all solid waste at Fort Lee, according to Stephen Baker, director of public affairs at Fort Lee's U.S. Army Garrison.

"Food waste is comprised of consumer food waste, leftover waste and food preparation waste," Baker said. "In 2014, a total of 163 tons of food waste was diverted from the landfill through use of these dehydrators."

Located at various locations around the base, the dining staff loads up the compost unit after breakfast, lunch and dinner and the waste is then decomposed overnight.

"We can take all kinds of organic waste from dairy to meats, vegetables, fruits and up to 15 percent paper, and baked goods," Maki said. "It works by loading it in a 12 hour cycle, so you usually just load all the waste, press the start button, and in the morning you come back and it dejects itself. It's self cleaning and it's pretty durable."

The Defense Commissary Agency, according to Maki, did a pilot test and found that they reduced the amount of garbage by 2.3 million pounds annually.

"DECA ... by using the Ecovim units (went) from three eight cubic yard dumpsters down to one eight cubic yard dumpster with a pick up once every other week instead of three times a week," Maki said.

Baker stated that a dining facility that participated in the pilot project saw a 50 percent decrease in organic waste delivered to the landfill, which he indicated was equal to 3,500 pounds of waste a week.

Ecovim units can come in different sizes ranging from 66 pounds to 3,300 pounds.

The compost units operate by using heat and mechanical agitation. The unit is able to control odors as well.

The units at Fort Lee will cost \$66,000 each, which "is a payoff of about three years," Maki said. The new eco-friendly compost machines are a part of the U.S. Army's greater green initiative. "This will help improve our solid waste diversion by as much as an additional estimated 17 percent, which will help us meet Army solid waste goals and put us closer toward Net Zero solid waste by 2030," Baker stated. "The intent of the Net Zero approach is for Army installations to consume only as much as they produce in the course of a year."

Maki said food waste accounts for 40 percent of the total waste on military bases. Once the waste has been decomposed, the compost will be used as soil in the community. "What comes out is an organic, nutrient-rich output, which will be used on the grounds right now," Maki said. "Virginia State University is picking up the output and using it in the fields for the Agriculture Department."

William Crutchfield, director of the small farms outreach program at VSU's Agriculture Department, part of the Virginia Cooperative Extension, said the university is testing the compost from Fort Lee to see if it is suitable for small farmers to use.

"What we're doing with Fort Lee is that the compost that they're providing ... is used to see if it can produce a vegetable crop, if so it would be a source of fertilizer for small farmers," Crutchfield said.

The program provides assistance to small farms and veteran farmers to "enhance farm income and quality of life to farmers in the community," according to Crutchfield.

Crutchfield said the program receives approximately 800 gallons, or 400 sq. ft., of compost from Fort Lee. The compost is taken to Randolph Farm, the university's research farm, off River Road, about a mile from the VSU campus. The compost is tested in the plot to see if it can fertilize crops. Crutchfield said they have onions planted out right now and are planning to plant lettuce and cabbage.

The partnership with VSU and Fort Lee started in May of last year. If a vegetable crop can be produced from the compost, Crutchfield said it could have a significant impact on small farmers in the state.

"If this proves successful this will be a force that small farmers can use to produce their crop, which would mean there would be no waste. Everything would be recycled and reused into our system," he said.

The Ecovim units can be found at four spots around Fort Lee, but more units are on the way. "There are currently four locations on Fort Lee using the dehydrator technology: a dining facility, the Commissary, and the Joint Culinary Center of Excellence field site and one of its school building," according to Baker. "The Army plans to bring 12 more dehydrators online at Fort Lee's remaining dining facilities by 2016."

Ecovim units go beyond the military, with units at universities, public schools, restaurants and hotels. Marriott, Hyatt, Omni Resorts and The Cosmopolitan of Las Vegas are among the hotels that use Ecovim technology. Santa Fe Public Schools and Southern New Hampshire University have already installed Ecovim units onto their campuses and besides the Army, other federal agencies using Ecovim include the U.S. Marine Corp, the U.S. Air Force, DECA and the U.S. Department of Interior.