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Sent: Wednesday, September 14, 2016 7:10 AM
To: J W; Jan Allen (jan.a@impactbioenergy.com)
Cc: Maclean, Thomas
Subject: Kitsap Sun article

Bainbridge biodigester will eat like a HORSE



Impact BioEnergy's Jan Allen hooks the crane chains to the self-contained biodigester called HORSE before it is lifted and set into place Tuesday at the Harbour Public House on Bainbridge Island.
MEEGAN M. REID / KITSAP SUN

4:33 p.m.

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Impact BioEnergy's self-contained biodigester called HORSE is lifted by crane into place Tuesday at the Harbour Public House on Bainbridge Island.
MEEGAN M. REID / KITSAP SUN

By Nathan Pilling, nathan.pilling@kitsapsun.com

BAINBRIDGE ISLAND — Like many digestive systems that find themselves at the Harbour Public House in Winslow, one that made its way there Tuesday was about ready to eat.

This particular stomach will shamelessly eat up to 135 pounds of the restaurant's food each day for the next six months, possibly longer. It will live in a shipping container day and night next to the restaurant's parking lot, and its output will partially be gaseous.

That stomach is a HORSE — an abbreviated name for high solids organic waste recycling system with electrical output — an anaerobic digester developed by Impact Bioenergy, a Seattle-based firm. At a high level, the digesters the company champions are simple: input organic waste, output fertilizer and methane gas, which can be turned into electricity.

Once the HORSE, which was delivered Tuesday to its island home via a trailer and crane, is up and running in about two weeks, it will begin to eat the restaurant's organic waste, Harbour Public House owner Jeff Waite said.

The unit outside the restaurant is among Impact Bioenergy's first HORSE units and will run for the next six months as a pilot demonstration in a partnership among the restaurant, Puget Sound Energy and Impact Bioenergy.

For Waite, the project might mean having fewer dumpsters at the restaurant, which are now emptied twice a week. PSE hopes the renewable energy project will facilitate discussions about a larger permanent digester in the community, according to PSE spokeswoman Karen Brubeck.

Impact Bioenergy will lease out the \$80,000 unit during the demonstration, while the restaurant pays for the operating costs and PSE sponsors the rental expenses during the initial trial, Impact Bioenergy president Jan Allen said.

According to Allen, the digester has a receiving system that chops up and purées food waste "into a smoothie" that is fed into a bioreactor, where microbes digest the food into the two end products. The system, which could consume about 1,000 pounds of food waste in a week, outputs about 90 percent fertilizer and 10 percent gas, Allen said.

The gas can either be burned by a generator to make electricity or used to boil water, but the Bainbridge restaurant will use the HORSE for electricity, Allen said. The fertilizer will be used near the restaurant and also could end up going to an island farmer, Waite said.

Whether the HORSE will become a permanent fixture at the restaurant remains to be seen, according to Waite. For now, the unit will run as a demonstration, he said, as a way

for "everybody to kick the tires in the community and see what it really means."

"Bainbridge as a community imports a lot of nutrients onto the island," he said. "We take some out of it, and the rest, it's put into the waste stream, truck on, truck off. Those nutrients are beneficial. If we can capture some of them and reuse them here ... it's a way to capture those nutrients."

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