



## City of Cambridge Department of Public Works

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To: Louis DePasquale, City Manager

From: Owen O' Riordan, Commissioner, DPW

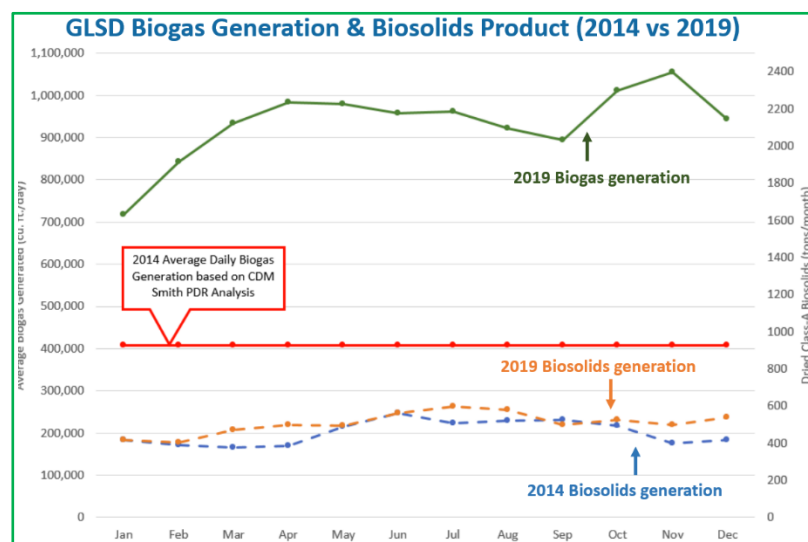
DATE: **March 23, 2021**

Re: **March 15<sup>th</sup> Council Order: Commercial Composting Pilot Program**

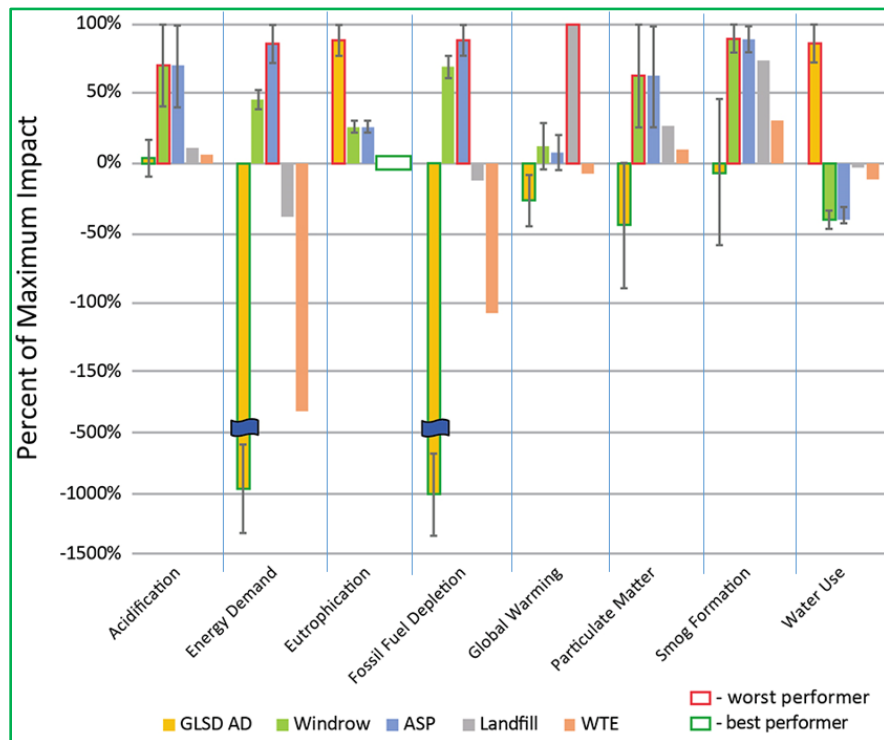
The Department of Public Works and the City Manager's Office have been working over the last year to develop a Small Business Compost Pilot (SBCP) Program with a goal of recommending funding to support the program as part of the FY22 budget. Having met that goal, we are happy to report that \$200,000 will be included in the FY22 budget and it is anticipated that the program will start in the fall of 2021. The proposal includes a capital request for \$50,000 associated with the procurement and distribution of receptacles and outreach materials and operating budget cost of \$150,000 associated primarily with processing fees. The initial proposal provides for 100 small businesses with twice a week pickup of up to two 65-gallon receptacles. It is anticipated that the cost of the program will gradually grow in subsequent years as more businesses opt-in and our capacity to collect this material grows.

The commercial organics material will be collected by Department of Public Works solid waste crews working both early morning shifts as well as overnight shifts and will then be transported with residential organic waste to the Centralized Organics Recycling (CORE) facility, run by Waste Management, in the Save That Stuff yard in Charlestown. The organic material will be transferred from Charlestown to the Greater Lawrence Sanitary District (GLSD) facility in North Andover, MA where it will be processed through their anaerobic digestion (AD) system.

In AD, organics are converted into renewable biogas (i.e. primarily CH<sub>4</sub> and CO<sub>2</sub>) and biosolids. GLSD has provided data on production of each from before and after they began processing food waste in their digestors. Adding food waste increased the production of clean biogas by 200-250%, while biosolids production increased by 5-10%. GLSD has been producing, Class A biosolids, for 10+ years that meet both the EPA's & MassDEP's requirements to ensure the material is safe for beneficial use as a soil amendment.



In 2019, EPA published research conducted by Eastern Research Group (ERG), based in Lexington MA. [ERG's scientific study examined the environmental life cycle assessment of four different food waste management options](#)<sup>1</sup>. The study examined various environmental attributes associated with disposing of food waste be the process associated with; landfilling, waste to energy (incineration), compost (both windrow and aerated static pile) and co-digestion like that which occurs at GLSD.



The Eastern Research Group's analysis suggested that AD was the most advantageous option for most environmental attributes. This conclusion supports the [EPA's food recovery hierarchy](#) which suggests that anaerobic digestion is preferential to composting. It should be noted that historically, the City has sent approximately 1800 tons of food waste to the GLSD annually, but has sent more than 2000 tons of yard waste to a compost site annually.

In the last 5-10 years, cities across the US are tackling food waste more aggressively to mitigate the environmental impact of landfilling food waste. As a result, AD has been a growing trend due to its ability to use less time and space to process the food waste than composting. Examples of areas where food waste is co-digested with wastewater organic materials can be found in Oakland, Los Angeles, New York City, and upstate NY.

The Department of Public Works expects to restart residential curbside organics collection on May 17. Once our new plug-in hybrid packers have been delivered, we will be able to offer a reliable day-to-day service moving forward. To further encourage residents to participate in the curbside organics program we expect to conduct additional outreach over the next couple of months. On April 20, the City published a press release with information on the date the service will return and dates for residents to pick-up free compost bags. Also, a postcard to announce the return of the program will be arriving in the mailboxes of 25,000 eligible households. The present expectation is that the residential program will generate between 40 and 50 tons of organics material on a weekly basis to the facility in Charlestown. While outreach to small business food establishments is presently in its infancy, we anticipate that the SBCP will generate an additional 30 to 40 tons of organics weekly. From both a logistics perspective and from a MassDEP permitting perspective, the CORE facility in Charlestown is the only facility that meets the City's requirements.

- 1 [https://cfpub.epa.gov/si/si\\_public\\_record\\_report.cfm?Lab=NRMRL&dirEntryId=346479](https://cfpub.epa.gov/si/si_public_record_report.cfm?Lab=NRMRL&dirEntryId=346479)