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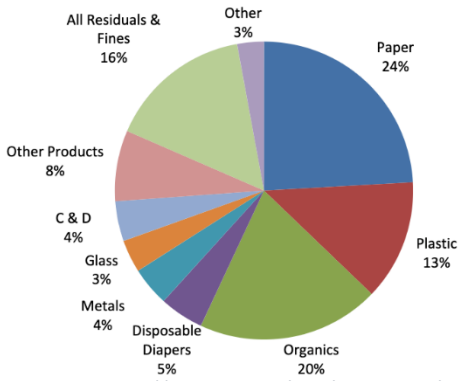
Residential Curbside Composting in Gainesville Briefing Paper

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Executive Summary

Implementing curbside compost collection is a logical and effective next step in Gainesville's waste reduction and climate change initiatives. Researchers from St. Thomas University found that inconvenience was a commonly cited reason for not composting among households,[1] an issue that could be remedied by convenient curbside compost collection. Furthermore, according to a study from the UF College of Engineering, organics account for about 20% of all municipal solid waste in Alachua County single-family residences.[2] When left to decompose in a landfill, organics release methane, a greenhouse gas that is 25 times more powerful than carbon dioxide and a major contributor to global warming.[3]



Source: https://studylib.net/doc/18842079/alachua-county-waste-composition-study

For these reasons, in order to meet the city's strategic waste and greenhouse gas reduction goals, Gainesville should introduce a curbside residential composting pilot program, with the intention of expanding the program to the entirety of Gainesville within two years.

[1] https://www.academia.edu/18642687/Determinants_of_Responsible_Environmental_Behavior
[2] https://studylib.net/doc/18842079/alachua-county-waste-composition-study
[3] https://www.epa.gov/ghgemissions/overview-greenhouse-gases

Background Information

Both yard waste and food waste fall under the "organics" category. Although Gainesville already provides yard waste collection, expanding this service to include food waste as well is necessary to meet Gainesville's goal of zero waste by 2040; yard waste only accounts for 1.6% of overall residential waste, while food waste accounts for 14.1%.[4]

Yard Waste	1.6%
Food Waste	14.1%
Animal By-products	3.6%
Composite/other organic	0.03%

Source: https://studylib.net/doc/18842079/alachua-county-waste-composition-study

While many jurisdictions in Florida offer curbside yard waste collection, Gainesville would be the first within the state to expand this to include food and other organic waste. However, the University of Florida began a composting program in partnership with the Waste Corporation of America (WCA) in 2013 (WCA is also the primary waste hauler for Gainesville). The program started in Ben Hill Griffin Stadium and was so successful it expanded to campus dining halls and the Reitz Union.[5] Additionally, in UF bathrooms there are containers for paper towels specifically, so that these too can be composted. Many cities around the US offer curbside composting programs, including Iowa City, Portland, San Francisco, and Ann Arbor, among many others.

Beyond just reducing landfill waste, composting also helps the environment by reducing methane (a highly potent greenhouse gas) emissions, and by creating natural fertilizer from material that otherwise would have been wasted.[6]

Preliminary Research and Findings

According to an MIT study, successful composting programs often have at least a few of the following favorable conditions: an existing yard waste collection program; an existing pay-as-you-throw program; a nearby processing facility; and a city-provided collection service or single hauler.[7] The study also states that implementing a pilot program is an essential step to ensure long-term success of the program, and that the city should work to educate residents

[4] https://studylib.net/doc/18842079/alachua-county-waste-composition-study

[5] http://sustainable.ufl.edu/sustainability-at-uf/campus-initiatives/waste/composting/

[6] https://www.agric.wa.gov.au/climate-change/composting-avoid-methane-production

[7] https://dusp.mit.edu/sites/dusp.mit.edu/files/attachments/project/Municipal%20Curbside%20Compostables%20Collection%20%20What%20Works%20and%20Why.pdf

thoroughly on the benefits of composting and what can be composted.[8] Given the fact that Gainesville fits most of the favorable conditions, with an effective pilot and education program Gainesville should be able to have a successful long-term curbside composting program.

The following are examples of cities similar in size to Gainesville with successful curbside composting programs:

Berkeley, California (population 113,905)

- Implementation
    - In 2007, Berkeley expanded its yard waste program to include food waste, adding "now you can include food" stickers to yard waste collection bins.
    - Berkeley increased the frequency of their existing program from twice a month to weekly.
    - Berkeley distributed food waste collection pails to single-family residences to increase convenience.
    - The program was financed by the city's pay-as-you-throw system.
- Results
    - Although Berkeley did not originally have a nearby compost processing facility, the success of their residential and commercial compost program attracted private companies to build five new ones.
    - Berkeley's annual residential waste tonnage has been reduced by 18%, with a 70% residential participation rate.
    - In 2012, Berkeley collected 14,000 tons of organics to be composted.

Boulder, Colorado (population 98,889)

- Implementation
    - In 2006, the city implemented a curbside compost pilot program with 400 single-family residences; a few months later, they expanded it to 2,400. The pilots were both a success, with diversion rates between 55% and 69%, far above the city's average.

[8]https://dusp.mit.edu/sites/dusp.mit.edu/files/attachments/project/Municipal%20Curbside%20Compostables%20Collection%20%20What%20Works%20and%20Why.pdf

    - Boulder implemented a citywide curbside compost program in 2008, after passing a series of laws requiring haulers to provide organic hauling at no extra cost.
    - During the pilot program, Boulder's main waste hauler build a nearby facility to process food waste.
- Results
    - In 2010, Boulder collected 3,540 tons of compostables from about 19,000 single-family households.
    - This averages out to about 370 pounds of compostables collected per participating household in 2010.

Like these two cities, Gainesville already has a pay-as-you-throw system and a yard waste collection program in place. Additionally, the fact that these are two comparably sized college towns lends confidence that their success can be replicated in Gainesville.

Pros and Cons of a Residential Composting Program

Pros:

- It has been shown to be an effective way to increase waste diversion.
- Composting prevents methane from being released in landfills, thus removing an extremely potent greenhouse gas and lessening Gainesville's contribution to global warming.
- Compost can be used to create a natural fertilizer for parks, gardens, and farms.

Cons:

- Residents often report unpleasant odors and flies coming from their composting bins.
- There will be an initial cost of curbside composting containers for pilot program households, and later every Gainesville single-family residence.

Potential Financial Costs

- Cost of curbside composting containers for the pilot program
- Cost of educational outreach programs

- Potential cost of picking up composting (this should not be significant, since there are already trucks equipped to handle organics being used to collect yard-waste)

Recommendations for Gainesville

- Implement a pilot residential curbside composting program, with the intent of making the program city-wide within three years.
    - When the program is made city-wide, it should be an expansion of the current yard-waste collection program.
    - The city should provide containers to pilot program houses, to remove the cost of purchasing a container from participants.
- Educate residents on composting procedures and benefits.
    - This can be done by adding a section on the city's website, through a social media campaign, and by providing fliers or pamphlets at city hall.
    - Procedures should include what materials can be composted, methods to reduce odors from compost, discouraging residents from disposing of organics down garbage disposals, etc.
    - Benefits should include the benefit to the climate, the convenience of composting, etc.
- Collaborate with WCA and the Solid Waste Department to establish an appropriate neighborhood for the pilot program
    - This neighborhood should be chosen to include houses that are representative of the Gainesville population as a whole.