

Increasing Single-Family Residential Recycling in Gainesville Briefing Paper

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Executive Summary

When measured in 2009 by UF's College of Engineering, residential waste was 41% of all municipal solid waste in Alachua County.¹ Without increasing residential recycling rates, Gainesville will be unable to achieve its goal of zero waste by 2040. The following are changes Gainesville can make to its waste collection system to achieve this:

- Mandatory Residential Recycling
- Optional Biweekly Pick-Up
- Transition to Recycling Rolls Carts
- Explore Decreased Costs of Pick-Up for Low-Income Residents

With all of these measures, a crucial component will be to educate residents on the changes to the system, the importance of recycling, and proper recycling practices.

¹ <https://studylib.net/doc/18842079/alachua-county-waste-composition-study>

History/Background Information

While Gainesville does not have mandatory residential recycling laws, the city did pass a mandatory commercial recycling ordinance in 1997, in which all businesses have to recycle certain items if they exceed 15% or more of their waste stream. The city also took steps to increase residential recycling by introducing a pay-as-you-throw program in 1994, which increased the cost of throwing away large amounts of garbage.

Increasing Gainesville's recycling rate is not only important to meet Gainesville's environmental goals, but also Florida's. In 2010, the Florida Legislature passed a statewide recycling goal of 75% by 2020.²

Preliminary Research and Findings

Mandatory Residential Recycling

Studies comparing voluntary to mandatory residential recycling show significantly greater rates of recycling when its mandatory, with a study from the University of Toronto finding as much as “50% more newspaper, 100% more glass and 12% more aluminum is collected with a mandatory program than with a voluntary program.”³ A study from a Duke University professor also found that mandatory residential recycling programs can be successful even if there is no fine in place for those who violate the law; the extra publicity and increased government commitment to recycling indicated by such a law have an impact on their own.⁴

² <https://floridadep.gov/waste/waste-reduction/content/florida-75-recycling-goal>

³ <https://journals.sagepub.com/doi/pdf/10.1177/0734242X9701500408>

⁴ <https://reader.elsevier.com/reader/sd/pii/S0734242X83710062?token=C4507458E41C8C70E2D7E25FAC87D92FF336829B2E1E571DEA1BE88766D1068B7E0D4BC659AB6E9D7DB81DCD32224E76>

The following are examples of cities that have implemented mandatory residential recycling:

Seattle, Washington (population 620,778)

- Since 2005, putting recyclables in trash has been illegal. This law was expanded to include compostables in 2015.
- Residents of Seattle are in violation if there are recyclables or compostables “in plain view” in their trash bins.
- The law originally had a \$1 fee in place for those who violated it, but the city no longer enforces this.
- Seattle single-family residences recycle or compost an average of 74% of their waste.

San Francisco, California (population 812,826)

- Passed in 2009, this legislation outlawed placing recyclables and compostables in trash bins for all residents.
- Noncompliance is determined by an inspection by the Director of the Department of Public Health, or their designee.
- The penalty for non-complying residents cannot exceed \$100.
- San Francisco diverts 80% of its waste, the highest of any city in the US.⁵

⁵ <https://www.cnn.com/2018/07/13/how-san-francisco-became-a-global-leader-in-waste-management.html>

Pittsburgh, Pennsylvania (population 302,407)

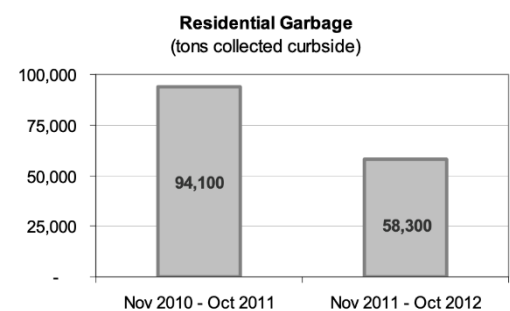
- As of July, 2019, Pittsburgh residents are required to recycle certain materials and yard waste.
- The legislation states that the department “may exercise its right to inspect Municipal Waste and/or Recycling at the collection site in order to verify compliance.”⁶
- Fines for residents who are not in compliance start at \$50 for first-time offenders and cap at \$500.

Recommendations for a Potential Gainesville Mandatory Recycling Program:

- Residents should only be in violation if their recyclables are “in plain view” in their garbage bin.
- The program should not specify a fee to begin with, but rather leave it to the Solid Waste Department to decide; this will allow the department to decide whether or not a fee is necessary.

Optional Biweekly Pick-Up

A study from the University of British Columbia found that, when coupled with community education and composting, reducing the frequency of trash pickup from once a week to once every two weeks increased diversion rates by about 30%.⁷ When Portland introduced mandatory



Source:
<https://www.portlandoregon.gov/bps/article/423510>

⁶ https://apps.pittsburghpa.gov/redtail/images/5111_Chapter_619_Legislation.pdf

⁷ <https://open.library.ubc.ca/cIRcle/collections/undergraduateresearch/52966/items/1.0103533>

biweekly pick-up with a curbside composting program, they saw a reduction in residential garbage by 38% in the first twelve months (as seen in the above graph).⁸

By coupling biweekly pick-up with a composting program, Gainesville could recreate Portland's success. However, this program may initially be met with resistance by the general public. For this reason, Gainesville should introduce biweekly pick-up as an opt-in program, possibly coupled with a reduction in waste collection costs. This would allow for both the city and residents to gain a better understanding of the feasibility of the program.

Transition to Recycling Roll Carts

Cities such as Portland are phasing out recycling bins in favor of recycling roll carts. Roll carts are beneficial for multiple reasons: having wheels increases the convenience of taking a recycling container to the curb; wheeled carts could be more easily moved by the elderly or those with back pain; water collection in bins without a lid can become a mosquito breeding ground; roll carts equipped with lids would prevent contamination of cardboard by rain, which is especially important as the popularity of Amazon and other online stores make cardboard shipping boxes even more common. Furthermore, a study in Washington State found that residents have a 58% preference of wheeled carts to bins.⁹ These roll carts should be larger than current bins, in addition to having lids and wheels, so that residents have ample room to fit all of their recyclable.

⁸ <https://www.portlandoregon.gov/bps/article/423510>

⁹ <https://www.sciencedirect.com/science/article/pii/S092134491300061X>

Explore Decreased Costs of Pick-Up for Low-Income Residents

To alleviate financial costs for low-income residents, the city should explore lowering costs of waste collection for low-income residents. This should be done in conjunction with the Solid Waste department, to calculate whether or how much rates could be decreased without being prohibitively expensive for the city.

Pros and Cons of Potential Changes

Pros of Mandatory Recycling

- No foreseeable extra cost to the city
- Demonstrates the city's commitment to the goal of zero waste by 2040
- Shown to be more effective in increasing diversion rates than voluntary recycling programs

Cons of Mandatory Recycling

- Might be seen as government overreach or invasion of privacy
- Does not address the issue of "reducing" or "reusing" waste
- Any potential fine for noncompliance is likely to be unpopular

Pros of Optional Biweekly Pick-Up

- Encourages residents to not only recycle more, but also reduce overall waste
- If lower collection rates for biweekly pick-up are offered, then residents would be able to save money by participating
- Presenting it as optional at first would allow for the city to evaluate whether this is a program that would be worth expanding

Cons of Optional Biweekly Pick-Up

- There may not be many participants, so the program may not be very effective
- This type of program is only effective when done in conjunction with residential composting
- It might require greater organizational costs for waste haulers to track who is and is not participating in the program

Pros of a Transition to Recycling Roll Carts

- Residents generally prefer roll carts
- Make recycling more convenient
- Reduce back pain from lifting up recycling bins
- Lid would protect against recycling contamination and pooling of water

Cons of a Transition to Recycling Roll Carts

- Increased costs as current recycling bins would have to be replaced

Pros of Exploring Decreased Costs of Pick-Up for Low-Income Residents

- If implemented, it would help remove some financial stress from low-income residents

Cons of Exploring Decreased Costs of Pick-Up for Low-Income Residents

- No foreseeable cons, since the recommendation is to just explore the option

Costs of Potential Changes

Mandatory Residential Recycling

- Could be a source of revenue should the Solid Waste Department decide to add fines for noncompliance

Optional Biweekly Pick-Up

- Potential reduction in costs as waste haulers could be able to decrease the frequency of collection
- Potential increase in costs if residents who opt for biweekly pick-up are given a lower waste collection rate

Transition to Recycling Roll Carts

- Initial investment costs of the price of roll carts, as recycling bins are gradually phased out

Exploring Decreased Costs of Pick-Up for Low-Income Residents

- Cost of staff time spent exploring this option

Gainesville Proposals

- Implement a mandatory residential recycling ordinance as described
 - Residents should only be in violation if their recyclables are “in plain view” in their garbage bin.
 - The program should not specify a fee to begin with, but rather leave it to the Solid Waste Department to decide, allowing the department to decide whether or not a fee is necessary.

- Offer optional biweekly (once every two weeks) trash pick-up at a discounted rate to residents
 - Introduce this program as an opt-in program, possibly coupled with a decrease in collection rates to incentivize participation.
- Transition to recycling roll carts as proposed
 - Any new recycling receptacles provided should be roll carts, rather than the current bins.
 - These roll carts should have lids and wheels, and be larger than current bins