

Proposed Regional Organics Program Cost to Benefit Analysis

Proposed Scope: The proposed regional organics program would provide curbside collection of organics (yard, garden and food waste) to 16,000 households in Benner, College, Ferguson, Harris and Patton Townships. The program would be modeled after the State College Borough Organics Program. All residents in the COG service area would pay a base collection rate that would include organics curbside recycling.

To evaluate whether to implement the program 3 areas have been analyzed.

1. Cost
2. Tonnage reduction in the landfill
3. Carbon Footprint

The current cost for refuse and recycling service is \$16.12/month/household (HH).

(1) Cost for Curbside Organics Recycling: \$8/month/household (HH)

Annual Program Cost = \$1.5 million
Cost includes 5 collection vehicles (\$385,000 each and 5 employees)

(2) Tonnage Goal: Reduce tonnage going to the landfill by 25-30%. A 28% reduction would result in 3,200 tons per year less material going to the landfill. (Based on State College Borough data.)

COG Program: Data from 2013 - 2017

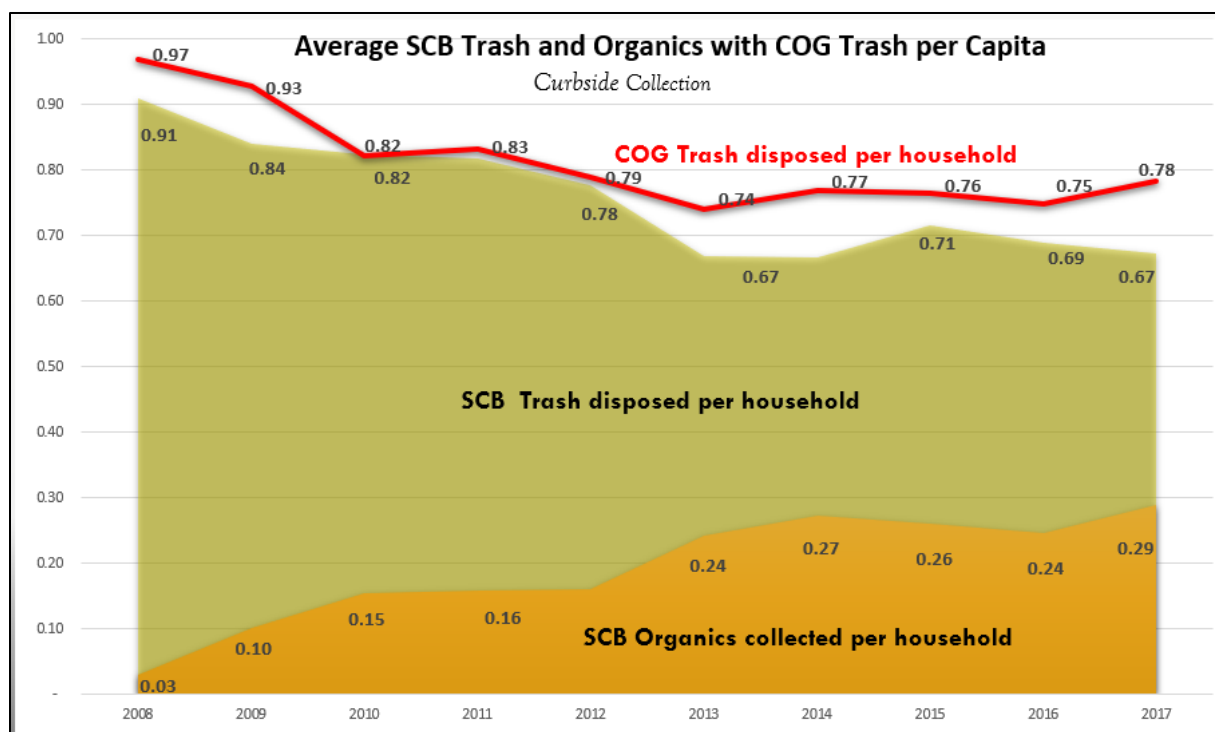
- COG's residential program disposes in the landfill on average 11,410 tons per year for 16,000 households.
- The average resident disposes of .76 ton/year (1,520 lbs/year) of refuse.

State College Borough Program: Data from 2013 – 2017

- SCB residential program disposes in the landfill on average 2,500 tons per year for 3,670 households.
- The average SCB resident disposes of .68 ton/year (1,360 lbs/year) of refuse.
- An average of 0.26 tons/yr/HH of organics is collected for composting - 28% of total waste
- There was an 18% reduction in waste sent to the landfill since curbside organics collection began in 2013, which equates to 0.15 tons/yr/HH.

Some reasons the amount composted (28%) is greater than the reduced amount sent to the landfill (18%) could be:

- grass clippings now collected curbside by SCB
- residents who used to backyard compost now use the curbside collection system instead



Tonnage Analysis: The actual difference between COG's average resident's tonnage disposed in the landfill and SCB's resident's tonnage is only 10%. (1,520 lbs/yr vs 1,360 lbs/yr)

SCB data indicates that a smaller portion of residents than previously thought have changed their behavior and reduced their waste being sent to the landfill.

Carbon Footprint: Composting is important in keeping organic waste out of the landfill, reducing methane emissions and working to capture carbon in the soil where it cannot be released into the atmosphere as CO₂. While greenhouse gas emissions will be reduced from composting there are increases from driving a heavy-duty truck 2,300 miles/week to collect the organics recycling curbside from the COG service area. (Note: SCB has 96 route miles/week.)

+	807 metric tons	Trucks to collect organics curbside
-	196 metric tons	Removal of organics from landfill
-	22 metric tons	Reduction in trucks going to the landfill
-	4 metric tons	College & Ferguson Township's removal of grass clipping drop-off
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+	585 metric tons	INCREASE of GHG emissions (equivalent of 28 tanker trucks' worth of gasoline)

Conclusion: The participating townships of Benner, College, Harris, Ferguson, and Patton must consider the residents' service needs, costs associated with an organics recycling program, and customer service issues to determine the best long-term solution to the solid waste piece of sustainability in the region. Based on a significant cost increase, lower than expected landfill reduction and an increase in the carbon footprint, the Public Services & Environmental Committee is not ready to proceed with a curbside organics collection program. In 2019 the Committee will evaluate other options to reduce organics from the landfill and provide options for residents interested in organics recycling. Curbside collection of organics may happen in the future, but more research of other options is needed.