

Business Fundamentals Project Proposal

Problem:

According to the [website](#) of New York City's Department of Sanitation (DSNY), one third of what New Yorkers throw away is food scraps and yard waste. In order to divert food scraps, food-soiled paper and yard waste from ending up in landfills and instead be turned into compost or renewable energy, DSNY offers a variety of composting options, including [curbside composting](#). Through this program, residents can sign up to receive a free brown bin in which they discard their organic materials to be collected on a weekly basis.

During the pandemic, DSNY suspended its curbside composting program for approximately 16 months. In October 2021, it started gradually resuming the program, but only in community districts where it operated pre-pandemic (it's currently operating in 7 of the total 59 community districts). Going forward, DSNY wants to be more intentional about how it selects which community districts are eligible for the program. Currently, its only selection criteria are the number of online requests from residents in a given community district and whether residents in that community district were eligible for the program pre-pandemic.

Impact Hypothesis:

By better understanding the population density, volume of trash collected, and alternative options for composting (such as drop-off sites) in each of the remaining 52 community districts where the curbside composting program is not currently operating, DSNY can make more informed decisions about how it prioritizes where it expands next.

Data:

- [DSNY Monthly Tonnage Data](#)
 - Columns to use: MONTH (it's actually year and month), COMMUNITYDISTRICT, REFUSETONSCOLLECTED (tons of trash or refuse collected from NYC residences and institutions serviced by DSNY), BOROUGH_ID (1=Manhattan, 2=Bronx, 3=Brooklyn, 4=Queens, 5=Staten Island)
- [Food scrap drop-off locations](#)
 - Columns to use: Food_scrap_drop_off_site_name, boroCD (Borough and Community District, which is represented by a single-digit borough number followed by two-digit borough community district number)
- [Community District Indicators Data](#)
 - It's a downloadable csv available under the 'Resources' section of every community district's page and it's the same csv on every page, so it only needs to be downloaded once; each row corresponds to a community district
 - Columns to use: area_sqmi and pop_2010 (to calculate persons per sq mi for population density metric)

Tools:

- Google Sheets for data cleaning and EDA
- Tableau for data visualizations
- Python for create a scoring model (time permitting)

MVP:

A minimum viable product for this project will likely be a map in Tableau that shows the 52 community districts not currently receiving curbside composting service color coded according to the amount of average monthly tonnage of trash/refuse collected during the months that the curbside composting program was suspended (June 2020 - January 2022).