Where Does Our Garbage Go?

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IST 719 - Information Visualization

Motivation

Globally, humans are producing an annual 2.1 billion tons of MSW or Municipal Solid Waste, and Americans alone are accountable for ~ 290 million tons of that annual number. Although we're finding innovative ways to handle our increasing waste production such as composting and combustion, do we really know the final destination and evolution of our garbage after we "bring the trash out"? This exploration will dive into the facility locations, byproducts and regulations at work in landfills across the US.

Audience

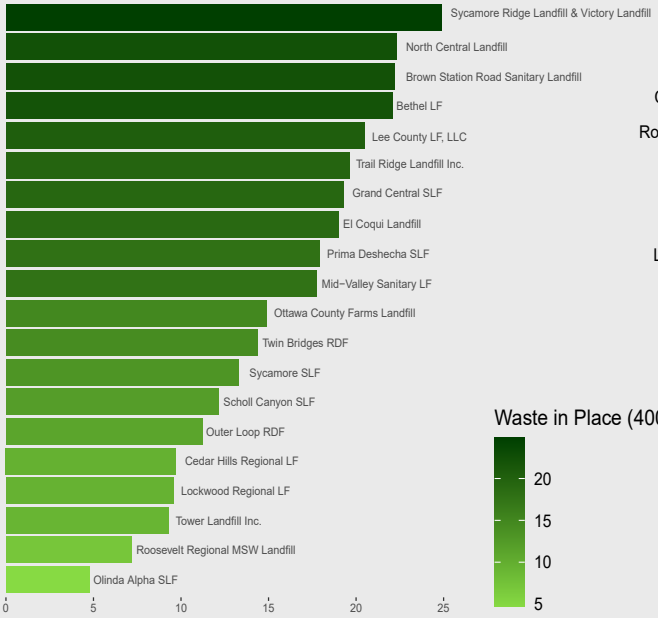
This study is meant to target those who are managing, maintaining, and working at landfill companies accross the United States (or just anyone who's interested). This study aims to show the largest waste operations, and track how management and regulations are impacting negative byproducts.

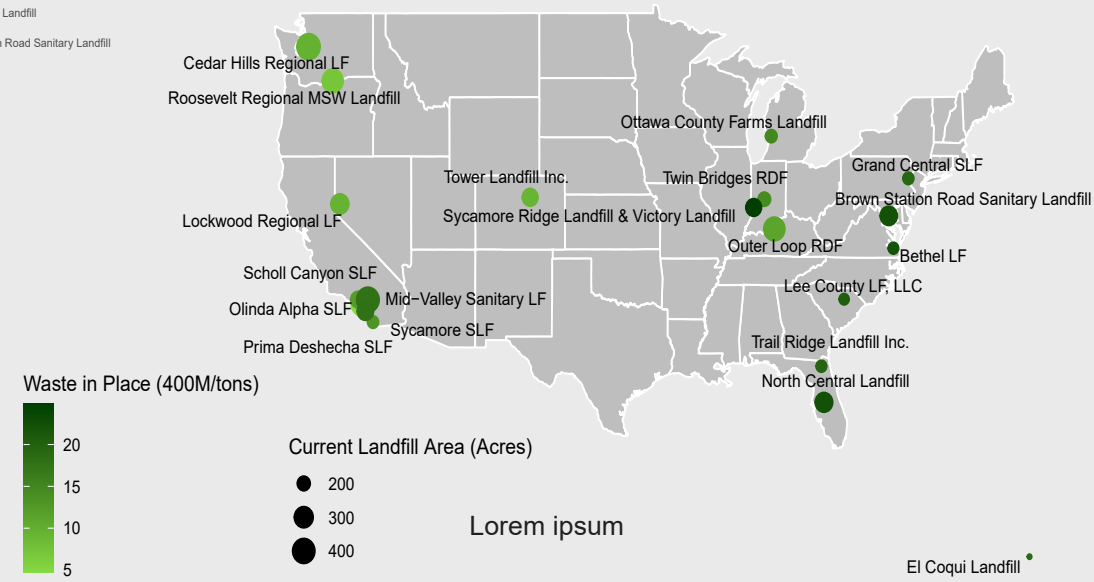
Dataset

The "Landfill Technical Data" dataset originates from the LMOP Database at epa.gov/lmop. The dataset gives all relevant information about US landfills, their emissions, and facilities. The raw dataset was 40 columns x 1289 observations, and 31 columns x 86 observations when cleaned.

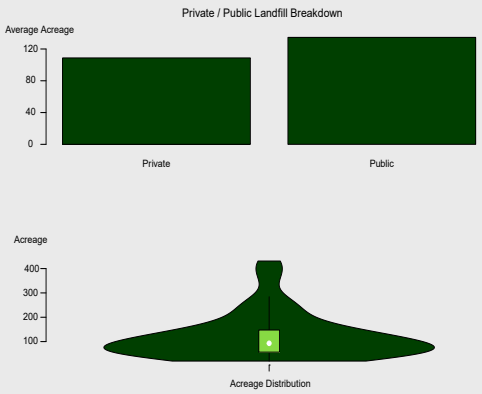
Questions

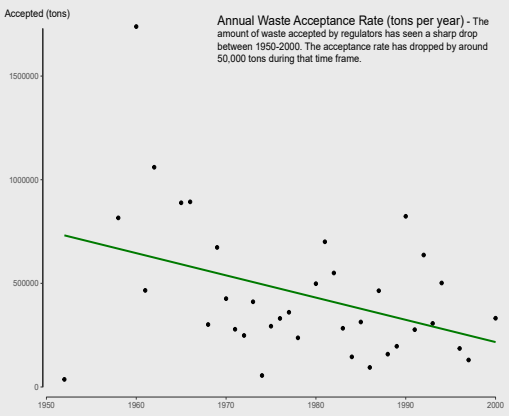
1) Where does our garbage actually go and how much area do these landfills utilize?



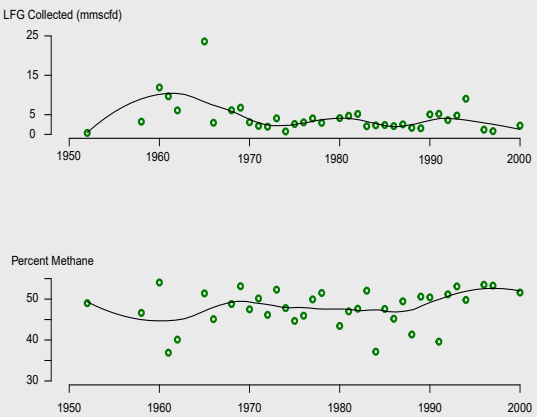


2) Who runs these landfills and how effective have regulations on decreasing negative landfull byproducts over the years?





Annual Waste Acceptance Rate (tons per year) - The amount of waste accepted by regulators has seen a sharp drop between 1950-2000. The acceptance rate has dropped by around 50,000 tons during that time frame.



Conclusion

In conlusion we see that a majority of the largest landfills reside by the coastal metropolitan locations, and controlled by public entities. We can see that the annual allowed tonnage has decreased over the last 50 years due to the decrease of waste production since a spike in the 60's. With the public sector holding a majority of the land, it could make it easier to enforce these rules, further decreaseing the Landfill Gas (LFG) produced.