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Landfill Distribution Across the United States

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Introduction

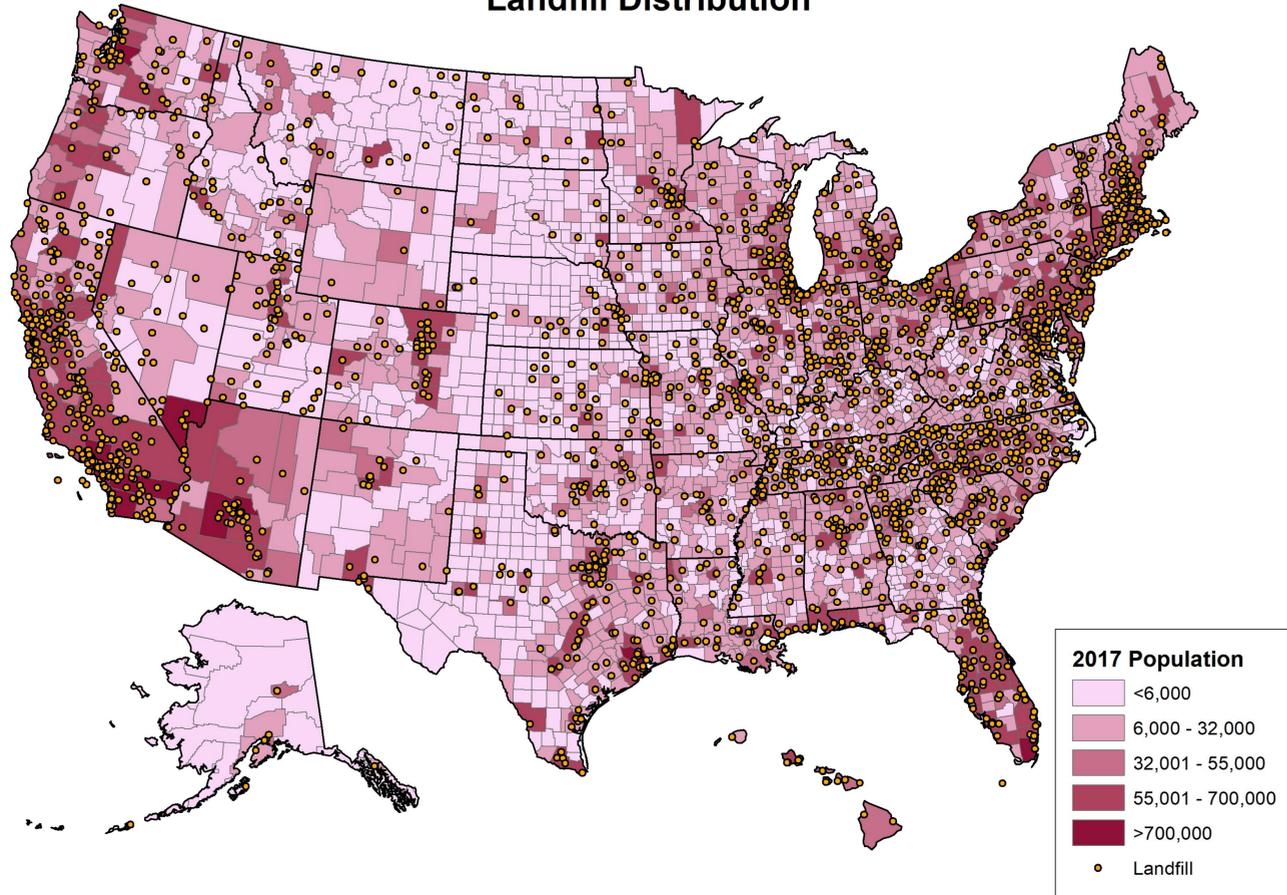
The Maps

I was once asked if the United States had any landfills by one of my peers. This question surprised me as I assumed everyone had at least some knowledge as to where their trash went after they threw it out. This prompted me to think about landfills in America, where they are and if there is any pattern to their distribution across the country. While I could find a few maps of landfill distribution, they did not give any information about their surroundings. I decided to investigate if the landfill distribution was simply a population map or if there were more landfills in low income areas in the United States.

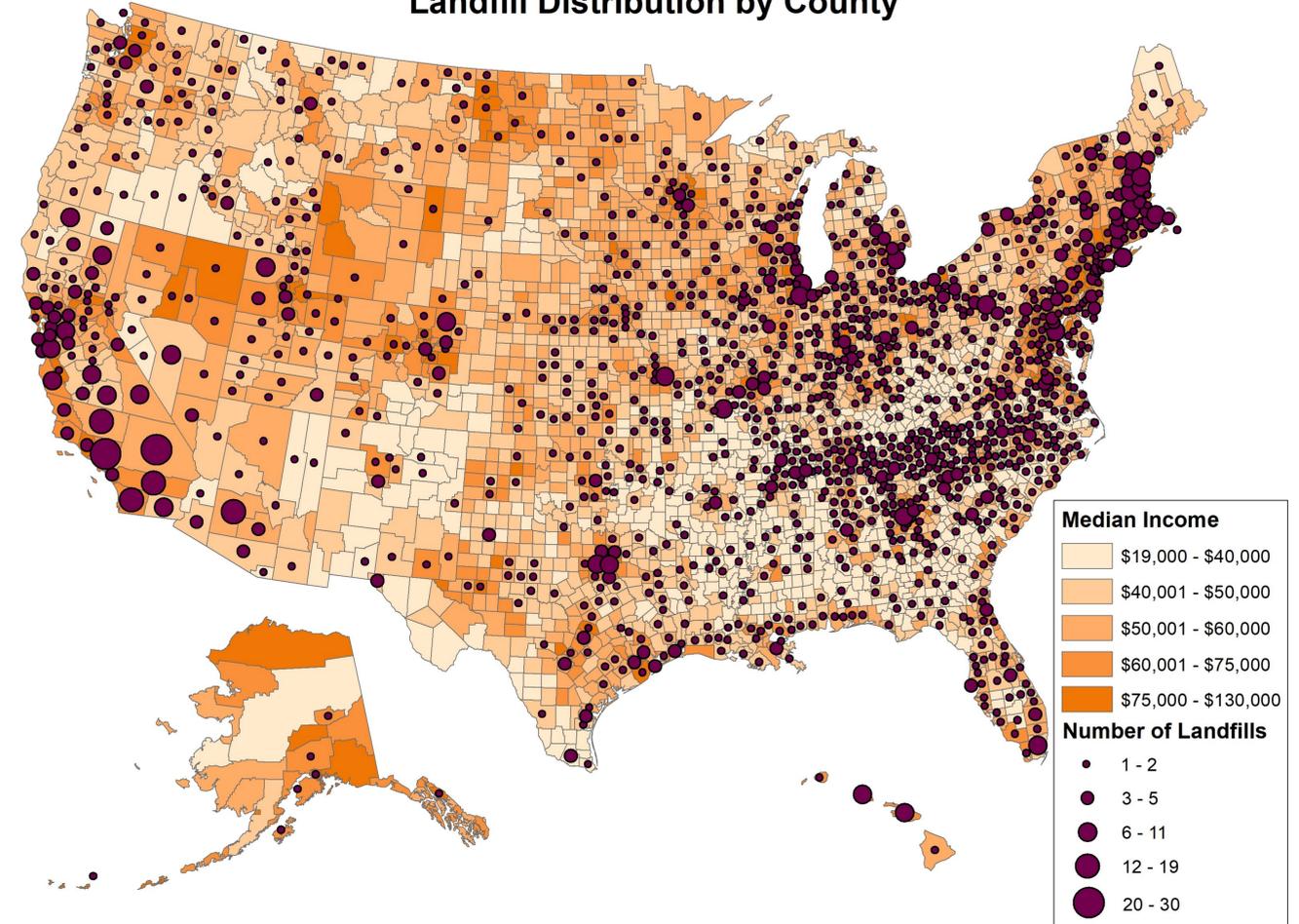
The map on the left shows individual landfills distributed across the US compared to the population density of US counties.

The map on the right shows the proportion of landfills per county compared to the median income of counties across the US

Landfill Distribution



Landfill Distribution by County



Methods

Results

Demographic data on median income and county populations was obtained from the U.S. Census Bureau (2013-2017 American Community Survey 5-Year Estimates) and a series of maps were produced using ArcGIS. Data on median household income was mapped at the county level. Landfill location data and the current status of the landfills was obtained from the EPA Landfill Methane Outreach Program (LMOP)

Landfills primarily seem to follow population density, with a greater number of landfills existing in areas with high populations. There does not appear to be any trend of landfills being more common in low income counties. However, low income areas within counties were not mapped. Landfills may be located in poorer regions within counties.

I recommend expanding this area of research and looking at landfill distribution on the state levels with more detailed income distribution within counties. From there landfills can be mapped within these more detailed regions and whether there is inequality in their distributions can be more confidently determined.