

CLIMATE CHANGE REFUGEES

for DISASTER MGMT & HOUSING AGENCIES

By Burak Basogul



Photographer: Eddie Moore/The Albuquerque Journal via AP Photo

INTRODUCTION

MOTIVATION & OBJECTIVE

- Climate change refugee numbers only to increase in the coming years from American West and South.
- What are some of the best suited counties to absorb climate change refugees in the short term?

A mobile home park destroyed by fire in Phoenix, Ore.

David Ryder / Getty Images



METHODOLOGY

DATA

- Climate Change Risk Index (CCRI): <https://www.safehome.org/climate-change-statistics/>
- County Employment, Housing and Age : American Community Survey (DP03, DP04, CP05) 2020 by Census Bureau <https://data.census.gov/cedsci/>

TOOLS

- Excel, Tableau

METRICS

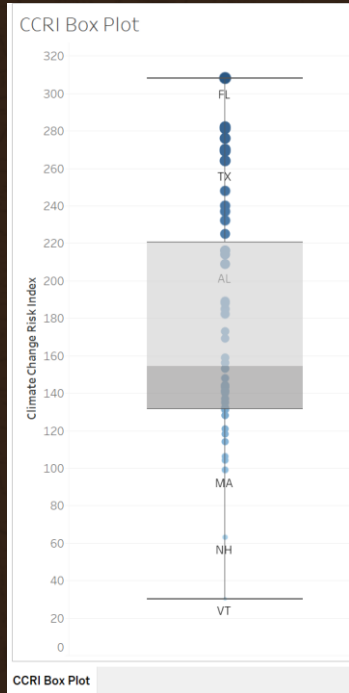
- Focus on states with CCRI values within 25 percentile
- Counties considered with a min. 6% rental vacancy rate
- Percent rank each variable across all counties and average score (desirability)

BACKGROUND

FACTS

- More than 1 Million Acres already burned across the country in 2022
- Roughly 90% of American West is in drought conditions
- NM experiencing largest wildfire in its history
- 400+ structures already destroyed in NM

ANALYSIS



CCRI BOX PLOT

RANK	STATE	CLIMATE CHANGE RISK INDEX
1	Vermont	30
2	New Hampshire	63
3	Massachusetts	99
4	Minnesota	104
5	Colorado	106
6	Wyoming	114
7	Rhode Island	118
8	Illinois	121
9	Connecticut	128
10	Montana	128
11	North Dakota	128
12	Ohio	131
13	Nebraska	132

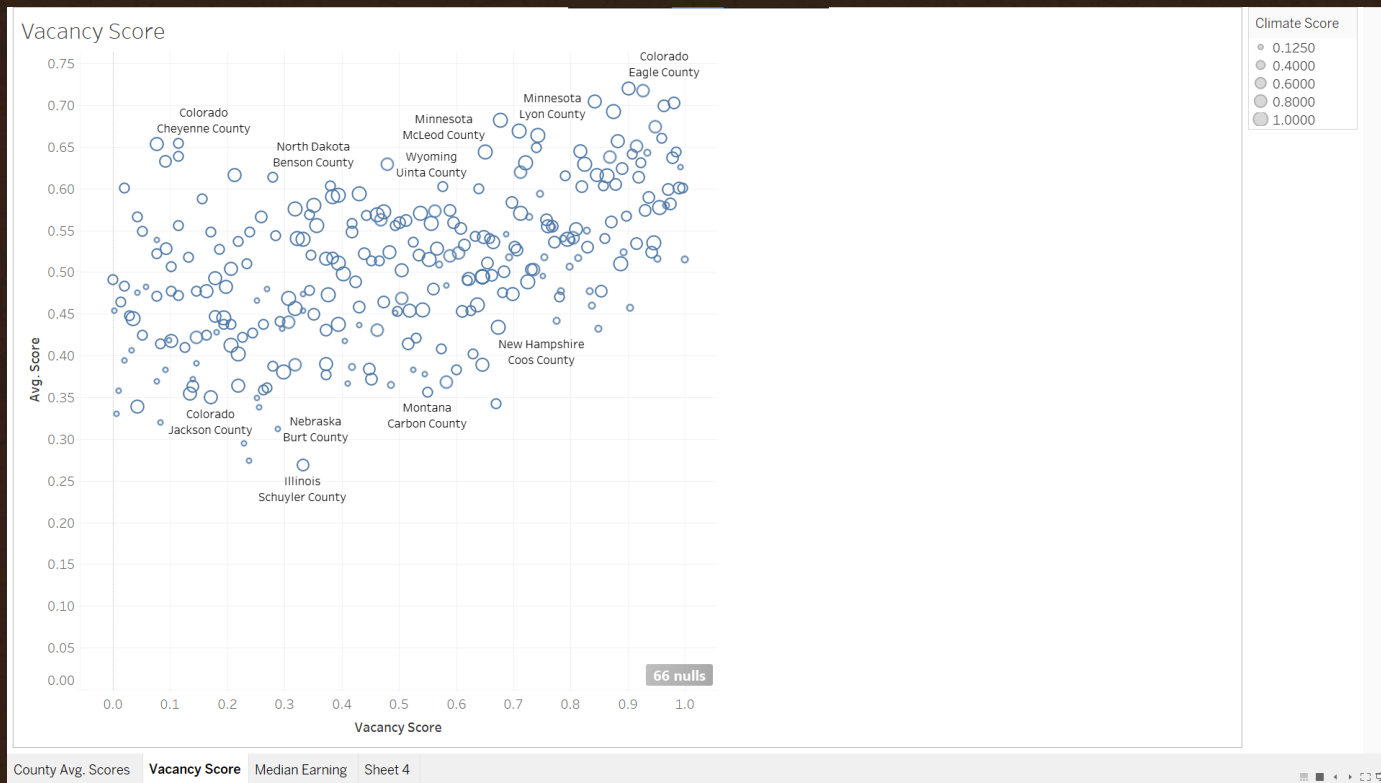
STATES CONSIDERED FOR ANALYSIS

ANALYSIS

FEATURES

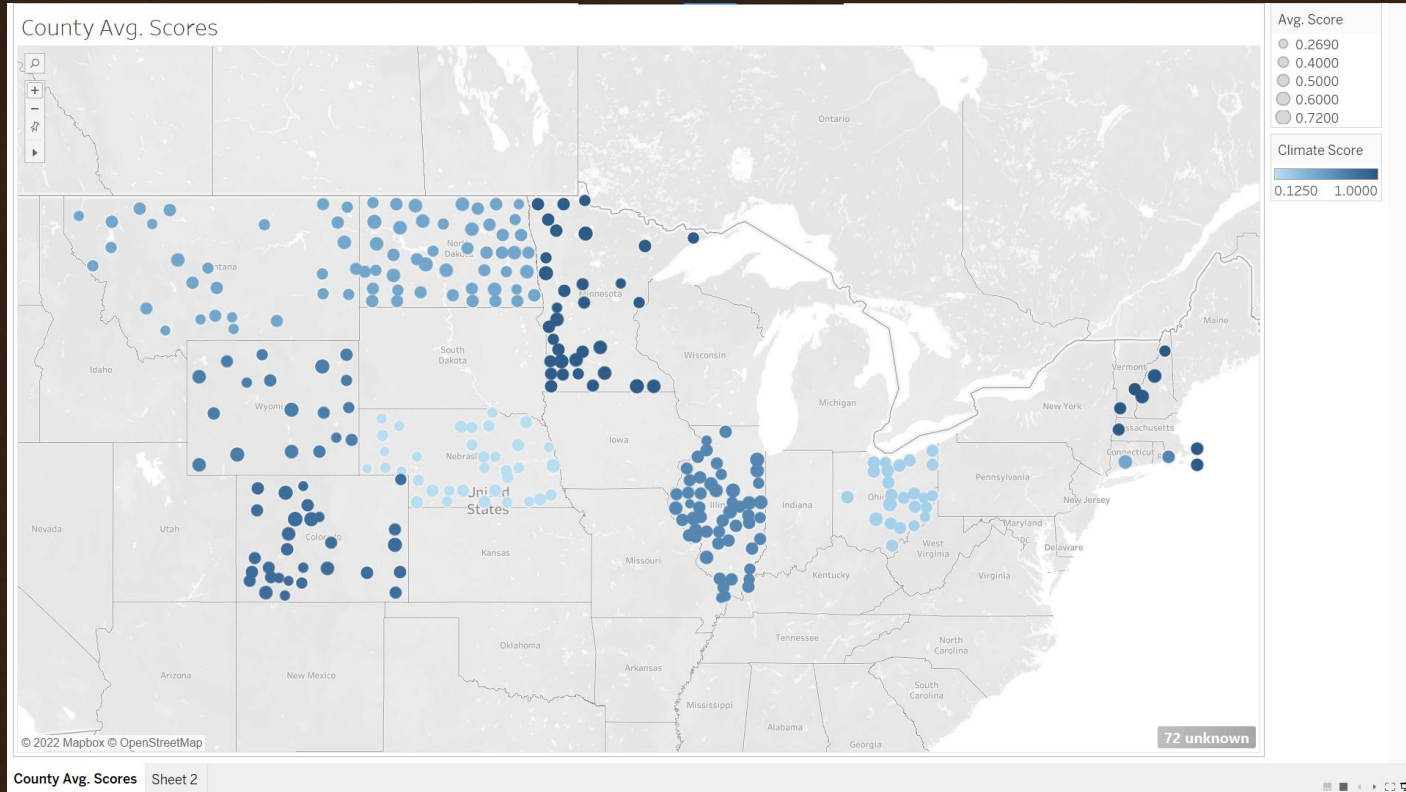
- Rental Vacancy (each)
- Median Household Size (persons)
- Median Rental Cost (\$)
- Population (total)
- Median Age (years)
- Median Earnings (\$/person)
- Unemployment (%)
- Climate Change Risk Index

ANALYSIS



VERIFICATION OF CORRELATION

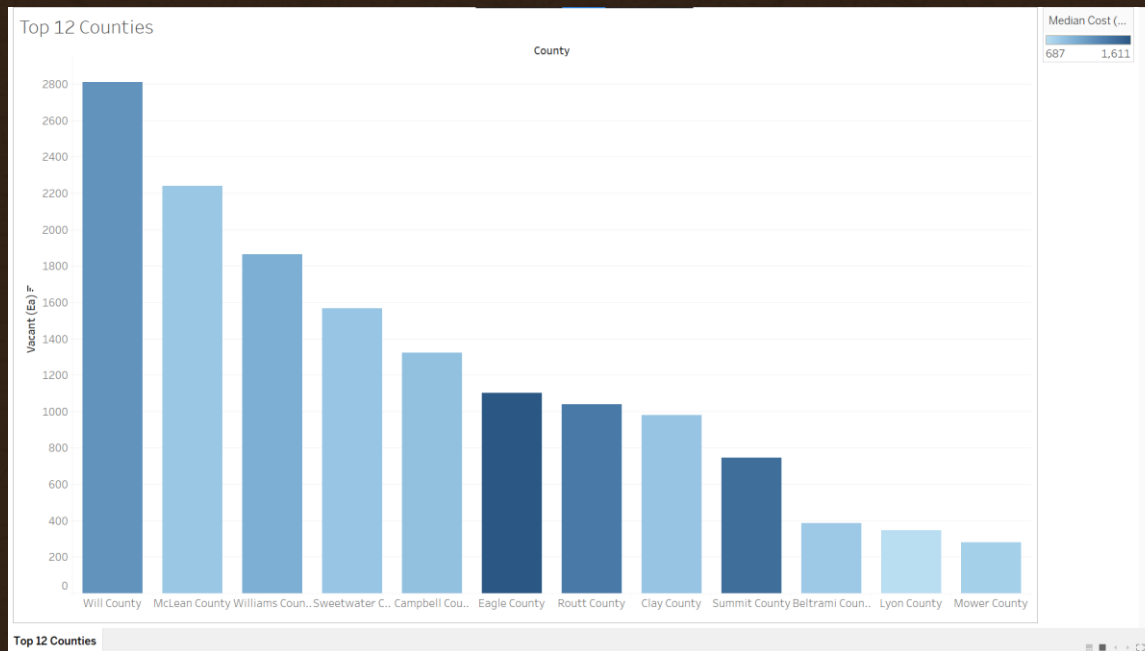
ANALYSIS



COUNTY DESIRABILITY SCORES

CONCLUSIONS

- Top 12 counties boast 15K vacant rental properties in total.
- Top 12 counties offer median rental fees ranging from \$687 to \$1,611



TOP 12 COUNTIES w/HIGHEST DESIRABILITY SCORE

FUTURE PROGRESS

PROPOSED IMPROVEMENTS

- Surprised to see CO with such a low CCRI. Take multiple CCRI studies into account in future work.
- Inclusion of new features for more precise and wider targeting such as: Metropolitan Areas, For Sale Property Numbers, Prevailing Industry, School System Ranking etc.
- Utilize Classification Modeling in lieu of Excel to develop a much more accurately ranked and grouped set of results.

THANKS

Do you have any questions?

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CREDITS: This presentation template was created by **Slidesgo**, including icons by **Flaticon**, and infographics & images by **Freepik**

APPENDIX

ADDITIONAL RESOURCES

- <https://www.thenation.com/article/environment/oregon-wildfires-homeless/>
- <https://www.wired.com/story/as-climate-fears-mount-some-are-relocating-within-the-us/>
- <https://www.theguardian.com/world/2022/may/01/us-new-mexico-drought-wildfire-southwest>
- <https://www.denverpost.com/2022/05/15/new-mexico-wildfire-low-winds/>
- <https://www.wired.com/story/fleeing-global-warming-climate-havens-arent-ready-yet/>

APPENDIX

ADDITIONAL RESOURCES

- https://buffalonews.com/news/local/hurricane-refugees-liked-what-they-found-in-buffalo-so-theyre-staying/article_c69708c3-fc0a-583f-a8ce-c8f2060c514d.html
- <https://www.census.gov/housing/hvs/index.html>
- <https://www.epa.gov/climate-indicators>
- <https://www.un.org/en/climatechange/science/key-findings>
- <https://www.ijpr.org/wildfire/2021-09-08/the-almeda-fire-one-year-later>
- https://en.wikipedia.org/wiki/List_of_wildfires#Canada_and_the_United_States

Fonts & colors used

This presentation has been made using the following fonts:

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(<https://fonts.google.com/specimen/Lexend+Deca>)

Exo

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