Gentrification by Fire: Identifying the Difference Between Census Tract Recovery from California Wildfires

Lesly Contreras

POL 195

Professor Pellaton

December 9, 2024

California experiences 7,500 wildfires every year (Our Impact | CAL FIRE 2024), and since 2010 California has seen an average of 4,500 structures destroyed (Lang 2024). As climate change increases the destruction and intensity of California wildfires, more people are losing their homes and are facing displacement. Rebuilding housing with fire prevention measures increases overall costs by thousands of dollars (Barrett 2024), and residents seeking wildfire insurance coverage face coverage limits and policy exclusions (California Department of Insurance 2024). These factors contribute to climate gentrification. Climate gentrification is when climate change causes the displacement of low-income residents because of an increase in the cost of living. Climate gentrification may increase California's housing crisis as wildfires exacerbate housing inequality. My project seeks to answer if recent California wildfires produce climate gentrification. Specifically, I ask how do low-income census tracts, in comparison to high-income census tracts, recover from destructive fires? This project looked at 63 different census tracts that experienced destruction from the Camp, North Complex, Carr, LNU Lightning, Dixie, Caldor, Creek, Beckwourth, Fawn, Tamarack, Antelope, and McFarland fires one year before, the year of, and one year after to understand the change in housing units, insurance policy coverage, and housing costs. My research discovers a weak positive correlation between the percent change in housing units and household median income, meaning recent climate gentrification is predicted, but it doesn't strongly align with housing unit recovery.

Context and Significance

Wildfires impact California's housing crisis. California suffers a housing shortage and attempts to build affordable housing have seen barriers like high construction costs and expensive land (Christopher 2024). Wildfires clash with the housing crisis as damaged property and fire risk

areas increase. Insurance coverage for wildfire protection affects homeowners in high-risk areas. Fire Hazard Severity Zones are areas CAL FIRE has designated as prone to wildfires. Areas of significant fire hazard are measured based on fuel, terrain, and weather to classify these zones as moderate, high, and very high (CAL FIRE TV, 2024). Fire Hazard Severity Zones are mapped to visualize land burning probability and fire behavior (CAL FIRE TV, 2024). Insurance companies determine coverage limits, policy exclusions, and the cost of fire insurance by fire severity zones (California Department of Insurance 2024). Prices for coverage are either expensive or hard to find in high fire severity zones, as some insurance companies can refuse to write renewals and drop policies in these zones (California Department of Insurance 2024). Proposition 103, from 1988, gives insurance companies authority over where they write policies, allowing them to write less in greater risk areas as they attempt to avoid incurring rising rebuilding costs. California Fair Plan has become the only option for many property owners (Hobbs 2024). The California FAIR Plan, established in 1968, provides accessible property insurance coverage; however, it is more expensive and was intended as a temporary last resort insurance coverage when property owners can't find traditional insurance (ABOUT FAIR PLAN, 2024). SB 824, by Insurance Commissioner Ricardo Lara, issued a mandatory requirement to insurance companies to give a discount to policyholders under the Safer from Wildfires framework and establishes a moratorium to insurance companies from canceling or non-renewing insurance policies (California Department of Insurance 2018). This mandatory one-year moratorium on non-renewals aims to help commit protection to those vulnerable or impoverished. AB-430 Housing Development: Camp Fire Housing Assistance Act of 2019 is another state attempt to mitigate a climate-caused housing crisis. This bill speeds up construction approval of housing projects if there is an investment in affordable housing (Bill Text, 2019). These policies change the duration and availability of

insurance and affect the development of housing. These policies are reactions to the destructive wildfires.

This research paper attempts to connect climate gentrification to California wildfires, as climate gentrification is another issue that may attempt to deter the state's handle on the existing housing crisis. It is important to learn about which homeowners are more vulnerable, why, and what policies California can enact to support them. This project will aim to discover if lower-income neighborhoods are more vulnerable to displacement. In this project, displacement vulnerability will be defined by changes in median household income, housing units, and housing costs. Gentrification transforms neighborhoods. It's important to learn if wildfires are a unique profit-driven opportunity that pushes gentrification to happen. Gentrification by fire happens when fires destroy housing, causing rebuilt housing to be more expensive as they are constructed with fire prevention methods and because supply declines (Wilson 2023). This transformation dictates who can afford to stay and survive in the new housing market (Wilson 2023). It's also important to discover what areas are more affected and less likely to recover from wildfires to provide more support to those groups. This knowledge will benefit insurance companies, California residents, and CAL FIRE.

Literature Review

The theme of this research question has been explored. McConnell and Braneon, in their article "Post-Wildfire Neighborhood Change: Evidence from the 2018 Camp Fire," explain how wildfires cause gentrification by examining building destruction and resident building reconstruction 20 months after the Camp Fire. They test whether "building type, building value, and building tenure" determine heightened or reduced destruction and rebuilding (2023, p. 2). The

costs of adapting in place of the building environment are higher after the Camp Fire and mean that less wealthy residents cannot afford to stay. They discovered lower-vulnerable residents were more likely to experience high loss of structure because of greater structure density and being located closer to roads, allowing the wildfire to spread. They uncover a slower rate of building reconstruction among lower-value and renter-occupied residences, suggesting cost-burdened gentrification. My research question will follow the strategies of McConnell and Braneon; however, I will apply their questions to uncover climate gentrification and understand the destruction of census tracts from twelve wildfires over a longer period. I've referenced their measurement process for building type, building value, and identifying destroyed and rebuilt buildings.

While existing research has examined neighborhood change, it's important to define this phenomenon. Thompson et al.'s term climate gentrification would define it as "captures links between physical climate hazards, perceptions of risk and resilience, and capital flows in property markets" (2022). In the article, "Climate Gentrification: Valuing Perceived Climate Risks in Property Prices," they argue climate gentrification is unique because it represents the changes in housing demand according to perceptions of climate risk. They use wildfire case studies to determine the existence and issues of climate gentrification. They determine how wildfires change property prices, homeowners' financial status, insurance and mortgage industries, bank portfolios, and other financial systems. This supports McConnell and Braneon's results showing slower reconstruction happened with lower-value residences. Thompson et al. comment on wildfire risks, saying it is a "coupled social-ecological problem" (2023). The most important finding from this article for my project is that property value reduces when exposed to or experiencing "the value of properties exposed to or experiencing the impacts of physical hazards reduces" (2023). These two

findings provoke the introduction of gentrification but represent climate issues. Defining gentrification is difficult, which is why using Thompson et al.'s article is important to present a climate lens to changing neighborhoods and give a name to what happened to McConnell and Braneon's post-Camp fire neighborhood study.

Gentrification is not only determined by housing availability but also includes housing costs. A 2024 article by Ma et al. titled "Risk Disclosure and Home Prices: Evidence from California Wildfire Hazard Zones" determines greater awareness of wildfire risks can affect property prices. The risk information availability determines the demand for homes in high-fire severity locations. Homeowners understanding that climate gentrification is a potential risk can affect the existing neighborhoods. They argue that disclosure requirements sharing the severity of the property reduce risk exposure. They conclude that requirements to disclosures "sell [properties] for 4.3% less, on average," or approximately a "$21,500 reduction in willingness to pay" (2024). Prices were higher in disclosure-required areas. However, regulation of wildfire risk to buyers is only adopted in extreme fire risk areas. Wildfire risk disclosure is a factor that defines housing inequality, climate injustice, and neighborhood change, as being aware of the liabilities of an area determines the housing costs and buyers' decisions. This project is helpful for policy recommendations where advocating the importance of increasing fire risk awareness can help reduce climate gentrification. Ma et al.'s research helps provide evidence for the increase of housing prices by wildfires. Since disclosure requirements vary by severity definition and increase due to risk, this supports my project's theory that income is the reason for climate gentrification. This project says housing is more costly in wildfire zones; this can push many out of these areas as wildfire severity areas increase. Ma et al.'s analysis of property prices relates to McConnell and

Braneon's conclusion that lower-vulnerable residents experience higher loss of structure since their risk exposure is greater.

Understanding the demographics and traits of California census tracts will connect potential climate gentrification to those areas and individuals more likely at risk. Masri et al.'s article “Disproportionate Impacts of Wildfires among Elderly and Low-Income Communities in California from 2000-2020” answers if burned area and fire frequency differ across census tracts (2021, p. 18). This information answers not just where but who can present potential climate gentrification. They identify rural census tracts as three times more prone to wildfires (2021, p. 18). They find these census tracts are more likely to be occupied by elderly residents and have higher rates of poverty, unemployment, and vacant housing. Rural census tracts have larger proportions of low-income residents and residents with lower education. They also have lower median household incomes and home values. This research paper is useful because it answers who is categorized as vulnerable. This will be useful to support my argument with socioeconomic evidence. While my project only looks at income and housing units’ destruction, Masri et al.’s work explains the resident’s characteristics. These projects help me analyze census tracts. I reference how they created the census tract data tables and maps in my own measurements. Masri et al. support Thompson et al.’s article because it presents census tract differences and patterns to neighborhood change from wildfires and gives direct evidence to Thompson et al.’s argument of a coupled social-ecological problem.

Methods to measure gentrification are complex. Roy et al.’s research article shares models recommending how climate adaptation and housing policy are measured to account for gentrification and affordability. They create methodologies to accurately answer climate change

and gentrification dynamics in California counties from wildfire risk, sea level rise, inland flooding, and extreme heat health impacts. They look at travel analysis zones and climate risk evacuation patterns to determine population relocation and where unaffordable housing is aggregated. Roy et al.'s models provide estimates for the future. One model focuses on migration while the other model looks at the displacement. They discover "climate risk evacuees increase demands on lower-risk areas, increasing the purchase and rental market (2022)." They also find that too expensive and overcrowded zones are highly desirable areas and contribute to possible secondary and tertiary waves of relocation (2022). This research is helpful to my project because it provides an overview of how to engage in climate gentrification research by telling me what to measure and how. Roy et al.'s article examines an important factor that Masri et al.'s work, Ma et al.'s research, Thompson et al.'s term, and McConnell and Braneon case study omit resident's movement. Displacement is the output of gentrification, and Roy et al. provide the details in climate change's influence on residents' movement and removal. My project adds to Roy et al.'s research because it specifies their climate gentrification research to one prevalent climate issue in California, wildfires. Roy et al. encourage "looking for and applying before and after patterns from recent wildfire events" (2022), which is what my research project strives to achieve. Measuring gentrification is difficult, which is why referencing Roy et al.'s article is important to determine which variables matter in answering climate gentrification questions.

Using these resources as support, I add additional research to explain the relevance of climate gentrification in California. My project will build on the McConnell and Braneon Camp Fire case study to ask the same questions across various destructive wildfires within a longer time frame. It will apply Thompson et al.'s definition of climate gentrification, Ma et al.'s research on the increase of housing prices by wildfires, and Masri et al.'s article on the characteristics of census

tracts. Roy et al.'s article will give me the tools to measure climate gentrification and create a conclusion. My project will address a further research direction by upscaling and specifying the effects of socioeconomic characteristics from the most destructive wildfires. Wildfires in California are becoming a common issue. More research is needed to prove climate gentrification applicability in California, and my research will do just that.

Theory and Hypothesis

I hypothesize wealth determines a census tract's recovery of housing units after a destructive fire. Conceptually, I hypothesize low-income census tracts will be less likely to recover housing units after destructive fires in a year. Recovery means that the number of housing units lost to the fire was not rebuilt within a year time frame, leaving the census tract with fewer housing units than before the wildfire. Operationally, I hypothesize high-income census tracts are more likely to see an increased recovery of housing units in comparison to low-income census tracts, because they likely have greater wildfire insurance investment. The greater wealth of a homeowner and its greater investment in insurance can increase the ability at which houses are rebuilt. This hypothesis concludes that wildfires increase housing inequality, transforming the neighborhood's characteristics. The causal mechanism will be the household median income of neighborhoods. A destructive fire destroys housing units without bias; however, I hypothesize household median income determines reconstruction. I will measure the difference in the household median income between census tracts before and after a wildfire to understand who recovers the most within a year. If household median income determines reconstruction, then high-income residents can afford to stay or even move into the lower-income areas affected by wildfire, driving up housing

costs. Support towards my hypothesis would determine that climate gentrification is predicted in the measured census tracts.

Research Design

For my project, I conducted a large-n comparative cross-sectional analysis of 63 census tracts across 12 different wildfires from 2018-2021 that experienced a loss in housing units. For my research, I look at the loss of housing units from the Camp, North Complex, Carr, LNU Lightning, Dixie, Caldor, Creek, Beckwourth, Fawn, Tamarack, Antelope, and McFarland. I chose these fires because they happened after the Camp Fire, which is when CAL FIRE started creating and sharing structure status maps. These are the only fires that currently have a structure status map and happened between a time frame that has up-to-date US Census Bureau data. CAL FIRE's structure status map is an ArcGIS map that shares where the fire happened, the types of buildings, infrastructure, and miscellaneous structures affected, and the degree of damage. I've used CAL FIRE's structure status map of each of the twelve wildfires to access the raw number of housing units lost in the wildfire and the fire perimeter data. A building lost to the wildfire is classified as destroyed 50% or greater. To determine which census tracts were affected, I opened each fire structure status map with the ArcGIS Online map viewer and added a census tract map layer, called "2020 US Census Tract Boundaries of the United States in the 50 States and the District of Colombia" by Esri Data and Maps, to count the raw number of single-family residences, mobile homes, and multi-family residences that experienced damage of 50% or greater. Now that I collect how many housing units were affected, I look for changes to the census tracts.

The independent variable for my study is household median income. I measure this variable using the U.S. Census Bureau's American Community Survey 5-year estimate B19013 Median

Household Income in the Past 12 months (adjusted for inflation). The household median income is collected for each census tract one year before the fire, the year of the fire, and one year after the fire. To categorize the household median income data, the California Energy Commission's Low-Income or Disadvantaged Communities Designated by California ArcGIS map layer is also used. This data map layer highlights which census tracts have a median household income at or below 80% of the statewide median income. This data is consistent with the U.S. Census Bureau's American Community Survey 5-year estimate B19013. Household median income is measured to understand the overall wealth of the census tract's residents.

The dependent variable for my study is housing unit percent change. Housing unit percent change is calculated by dividing the difference between the number of housing units before the fire and the number of housing units the year of and the difference between the number of housing units after the fire and the number of housing units' year of the fire. I collect the raw number of housing units using the U.S. Census Bureau's American Community Survey 5-year estimate B25001 Housing Units for each census tract and for each year. Housing units are defined as any residential units, including homes, mobile homes, and apartments. Percent change is measured to see a difference in housing units over time and determine whether a census tract recovered from wildfire.

Control variables are applied to predict climate gentrification in the affected census tracts. One control variable is wildfire risk. Wildfire risk is measured by CAL FIRE's ArcGIS fire hazard severity zones map. I identify each census tract's fire severity by its zip code. I use an ArcGIS Online map zip code tract layer, called "Census ZIP Code Tabulation Areas" by Esri Federal Data, to determine what zip codes are aligned with each census tract. These collected zip codes are

submitted to CAL FIRE's ArcGIS fire hazard severity zones map. Here each census tract is determined to be either moderate, high, or very high in fire severity. Wildfire hazard is important to know as its rank defines what the conditions of wildfire likeliness are. Another control variable for the study is insurance coverage. I also used each census tracts zip code to obtain this variable. This variable is collected from the California Department of Insurance's ZIP Code-level breakdowns of new, renewed, and non-renewal data from 2015 to 2022. Insurance that is new, renewed, or non-renewed is measured to see a change in the census tract's insurance coverage before and after the wildfire. The last variable is housing costs. This data is from the U.S. Census Bureau's American Community Survey 5-year estimate B25105 Median Monthly Housing Costs (Dollars). Median monthly housing costs include mortgage, rent, and property taxes. Costs affected by wildfire are necessary to determine climate gentrification.

Results

From the data analyzed, there exists a weak positive correlation between housing unit percent change and household median income (Fig. 1). Only 8.5% of variance in housing units can be accounted for by household median income (Fig. 1). This means any difference in housing units is not statistically significant to household median income. This was discovered by running a linear regression. Running a correlation between these variables also shows a weak positive correlation of 0.10. This means change in housing unit and income show little relationship, even if they increase together slightly. Other factors influence the outcome of housing unit change.

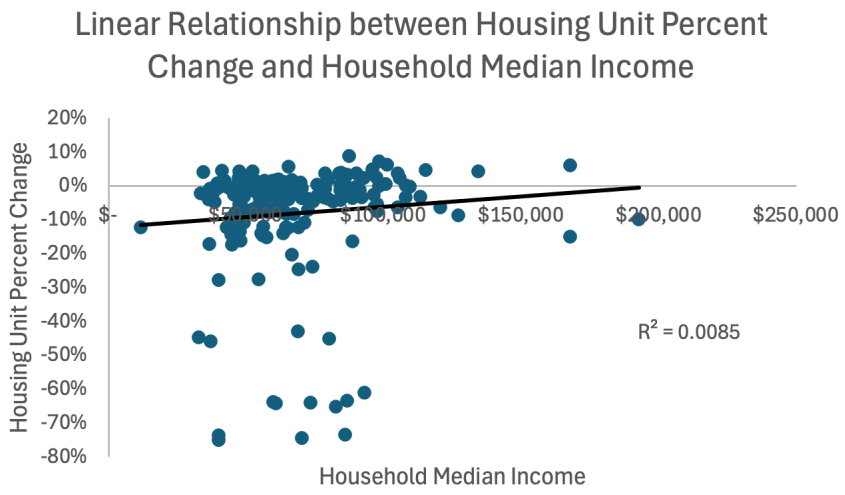

Figure 1. Correlation between income and housing unit percent change shows weak positive relationship

Data Sourced: US Census Bureau, American Community Survey

Since the relationship between income and housing units is minimal, changes between housing units between low-income and high-income census tracts must be taken with a grain of salt. The total housing unit percent change of low-income census tracts shows an aggregated average decrease in housing units of -12.16%, while high-income census tracts show an aggregated average decrease in housing units of -11.95%. Low-income census tracts lost more housing units and have a lower percent change in housing units, meaning in comparison to high-income census tracts, they did not see a recovery of homes from wildfire. Since -11.95% is greater than -12.16%, this average change based on income supports my hypothesis. However, if we round both percentages to the nearest whole number, both variables equal -12%. This supports the weak positive correlation between both variables, as this percent difference is statistically insignificant.

To determine if climate gentrification is applicable to my study, housing costs, insurance coverage, and fire severity were measured.

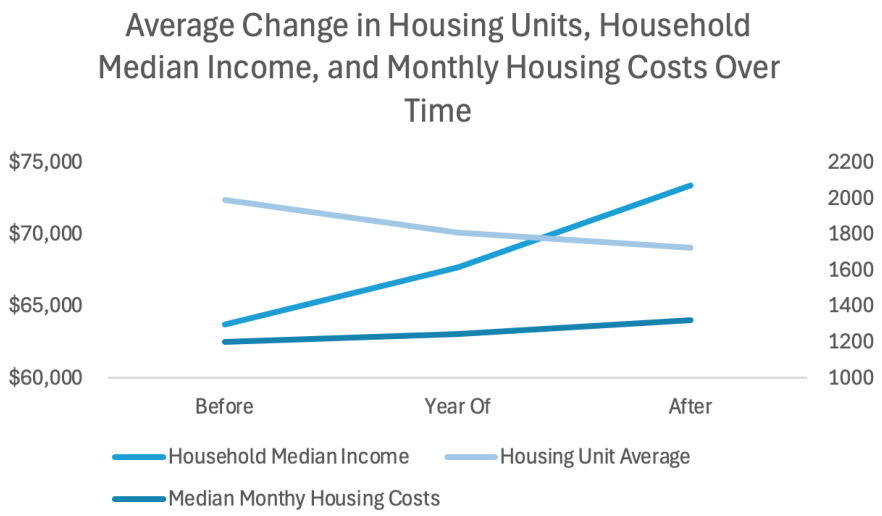

Figure 2. Change in household median income, housing units, and housing prices over the years across all census tracts

Data Sourced: US Census Bureau, American Community Survey

Median monthly housing costs and household median income increase, and housing unit averages for all census tracts decrease over time (Fig. 2). Household median income sees a 15% increase while median monthly housing costs also increase by 15% (Fig. 2). This means wildfires increase the cost of living and see an increase in higher-income residents over time. Housing units decrease by 10%, meaning housing units are reduced after a wildfire and do not recover to the original numbers within one year (Fig. 2). This means there are fewer poorer people in all census tracts over time, pointing to low-income resident displacement.

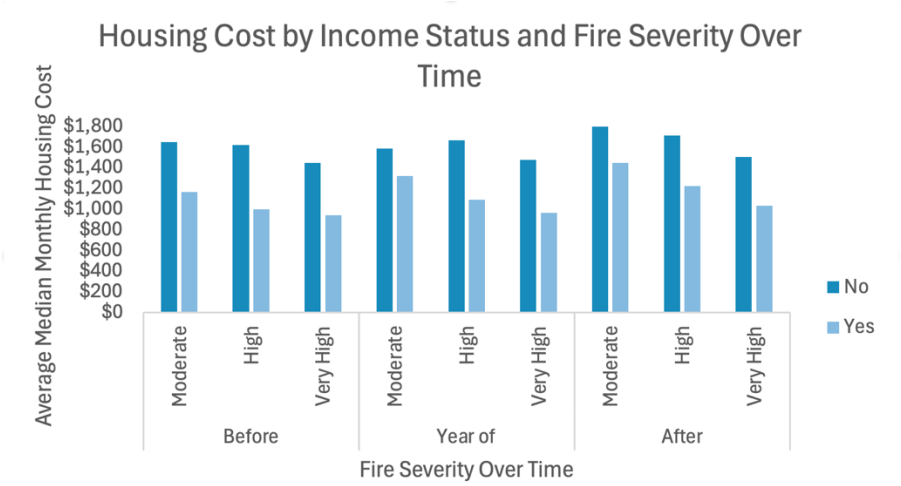

Figure 3. Median monthly housing cost change over time between fire different severity levels and asks whether the census tract is of low-income status (yes/no)

Data Sourced: California Department of Forestry and Fire Protection, US Census Bureau, American Community Survey, and California Energy Commission

Median monthly housing costs do not show a significant difference in high-income census tracts regardless of fire severity (Fig. 3). For all census tracts, one can see a slight increase in costs after the year of the wildfire, which supports the change in figure 2, but the difference isn't very prominent. However, median monthly housing costs do show a slightly more significant increase in low-income census tracts, especially in areas with moderate fire severity (Fig. 3). This figure shows that after the year of fire, low-income census tracts with a moderate fire severity grow more expensive. It also shows that it's cheaper to live in high- to very-high-severity areas.

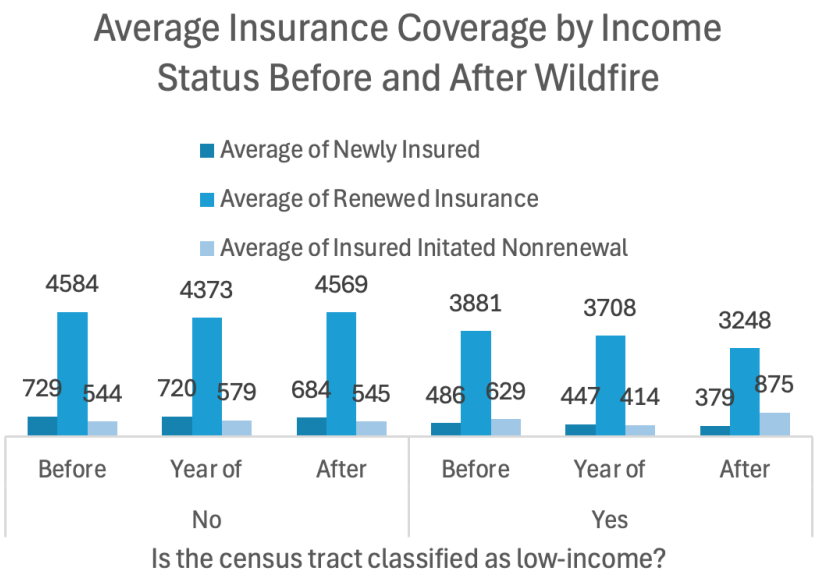

Figure 4. Insurance coverage type overtime between whether the census tract is of low-income status category (yes/no)

Data Sourced: California Department of Insurance and California Energy Commission

After the year of wildfire, low-income census tracts see a continued decrease in newly and renewed insurance coverage and an increase in nonrenewal (Fig. 4). High-income census tracts also experience this decrease, but they see a return in the insurance recovery, especially in renewed insurance after the wildfire (Fig. 4). Low-income census tracts do not recover their insurance coverage over time.

Discussion and Implications

My research question asked whether income determines a census tract's recovery of housing units. Overall, this study supported my hypothesis but only by a small margin. Low-income census tracts recover fewer housing units one year after a wildfire in comparison to high-income census tracts, but only by a -0.21 difference. My results show very little significant change over the time frame for all variables. However, the small changes in housing units, housing costs,

insurance, and fire severity do predict climate gentrification. My study shows a very limited relationship to support my hypothesis, but it does demonstrate how low-income census tracts change from wildfire.

The results provide a teaser to perceived changes to census tracts affected by wildfire. A one-year time frame begins to demonstrate climate gentrification. The relationship between variables points to evidence supporting my hypothesis but requires a longer time frame to see a stronger and more solid change. I was surprised that the relationship between census tracts housing and income was insignificant one year after. I suspected my research questions would point to an obvious answer that wealth determines housing numbers. However, I didn't anticipate that it wouldn't apply in the short term. Due to this assumption, results weaken my hypothesis.

My results raise questions about how policy implications can react to short-term effects on census tracts affected by wildfire. While very little distinction between low- and high-income census tracts is observed, there is still a slightly stronger effect on low-income census tracts. Short-term changes in housing units, costs, insurance, and income can lead to long-term trends, so prioritizing policy to reduce climate gentrification would be ideal.

Policy that expands cheaper and more accessible insurance resources and assigns affordable housing with wildfire prevention measures to low-income census tracts will benefit census tract recovery. Focusing support on low-income census tracts will ensure reducing inequality projected in the long run. Policy should aim at providing equitable solutions to disproportional problems. Low-income census tracts need to be better equipped to handle wildfires. My research shows that in one year, change and recovery to census tracts aren't biased, which allows time for long-term policy implementation to be put in place.

Research Limitations and Extensions

My research faced limitations that may have transformed the strength and significance of my variables. Time frame and data availability are the 2 factors that affected my results. The time frame one year before, the year of, and one year after does not assign a strong correlation between any of my chosen variables. However, I could only use this time frame due to data restrictions. CAL FIRE started creating and sharing structure status maps only after the Camp Fire. This means wildfires that burned after 2018 have data sharing destruction and housing loss. This reduced the wildfires I could observe. Since I wanted my study to be an over-time analysis, I had to reduce my time frame according to available census tract data. Census tracts are updated every ten years. This means new census tracts are added every ten years, so US Census Bureau American Community Survey data is collected for the newer census tracts. This also conflicted with the time frame, as I could only utilize recent data up until the year 2022. Data restrictions reduced the time frame, which impacted the significance of my results.

Research extensions to my study should attempt to expand the over-time analysis. An extension to my research could be to follow its strategies and use them to examine older California wildfires, as a greater temporal scope is necessary. Future research could expand and add additional variables like census tract demographics, resident movement, and structure type, as they would be beneficial in providing better insight into the wildfire impact on census tracts. Uncovering the causation effect between housing unit percent change and income is another research extension that can be pursued. My research focused on uncovering the correlation between these variables; it would be important to provide hard evidence pointing out a cause and effect between census tract housing availability and income to advocate the existence of climate gentrification in

California. Climate gentrification by wildfire needs to be a stronger topic of study considering climate change is an important issue in California.

Conclusion

California is affected by climate gentrification. Wildfires destroy housing availability, increase costs, decrease insurance coverage, and increase household median income. My research conducted on wildfire-affected census tracts shows how wildfires transform neighborhoods and their residents. While my results only present an insignificant difference, it presents the short-term effects of wildfires. This research determines that even under a small margin of difference, low-income census tracts are projected to experience a greater loss and impact from wildfires. My research promotes the growing reality of climate gentrification in California, an issue that can worsen the state's housing crisis and high cost of living. While it only offers an introduction to census tract change by wildfire, I hope this research can be the catalyst to expose the disproportionate impact of climate change on impoverished areas in California and inspire policy support for low-income communities.

References

About FAIR PLAN (2024). The California FAIR Plan. https://www.cfpnet.com/about-fair-plan/

Barrett, Kimiko. "Wildfires Destroy Thousands of Structures Each Year - Headwaters Economics." *Headwaters Economics*, 16 Nov. 2020, headwaterseconomics.org/natural-hazards/structures-destroyed-by-wildfire/#methods.

Barrett, K., PhD. (2024, January 30). *Construction costs for a wildfire-resistant home: California edition*. Headwaters Economics. https://headwaterseconomics.org/natural-hazards/wildfire-resistant-costs-california/

Bill Text - AB-430 Housing development: Camp Fire Housing Assistance Act of 2019. (n.d.). https://leginfo.legislature.ca.gov/faces/billTextClient.xhtml?bill_id=201920200AB430

Christopher, B. (2024, October 15). *Californians: Here's why your housing costs are so high in 2024*. CalMatters. https://calmatters.org/explainers/california-housing-costs-explainer/

CAL FIRE TV. (2024, May 9). *What Are Fire Hazard Severity Zones?* [Video]. YouTube. https://www.youtube.com/watch?v=WEBx_9Or88c

California Department of Insurance. (2024, June 12). *Commissioner Lara unveils next steps in his strategy to expand coverage options for Californians in areas of high wildfire risk*. https://www.insurance.ca.gov/0400-news/0100-press-releases/2024/release023-2024.cfm

California Department of Insurance. *Zip Codes Covered by Mandatory One Year Moratorium on Non-Renewals*. (2018). Ca.gov. https://www.insurance.ca.gov/01-consumers/140-catastrophes/wildfirenonrenewalinfo.cfm

Davies, I. P., Haugo, R. D., Robertson, J. C., & Levin, P. S. (2018). The Unequal Vulnerability of Communities of Color to Wildfire. *PLOS ONE*, *13*(11), e0205825. https://doi.org/10.1371/journal.pone.0205825

Field, C. B. and Hino M. (2023). Fire frequency and vulnerability in California. *Plos.figshare.com*. https://doi.org/10.1371/journal.pclm.0000087

Hobbs, S. (2024, June 12). *California home insurance in high-risk wildfire areas could be easier to get under new plan*. Sacramento Bee. https://www.sacbee.com/news/politics-government/capitol-alert/article289203064.html

Kramer, H. A., Butsic, V., Mockrin, M. H., Ramirez-Reyes, C., Alexandre, P. M., & Radeloff, V. C. (2021). Post-wildfire rebuilding and new development in California indicates minimal adaptation to fire risk. *Land Use Policy*, *107*, 105502. https://doi.org/10.1016/j.landusepol.2021.105502

Lang, R., & Lang, R. (2024, August 30). *Wildfires and real estate values in California - San Francisco Fed*. SF Fed. https://www.frbsf.org/research-and-insights/publications/economic-letter/2024/08/wildfires-and-real-estate-values-in-california/

McConnell, Kathryn, and Christian V. Braneon. “Post-Wildfire Neighborhood Change: Evidence from the 2018 Camp Fire.” *Landscape and Urban Planning*, vol. 247, 2024, pp. 104997-, https://doi.org/10.1016/j.landurbplan.2023.104997.

Ma, Lala, et al. “Risk Disclosure and Home Prices: Evidence from California Wildfire Hazard Zones.” *Land Economics*, vol. 100, no. 1, 2024, pp. 6–21, https://doi.org/10.3368/le.100.1.102122-0087R.

Masri, Shahir, et al. “Disproportionate Impacts of Wildfires among Elderly and Low-Income Communities in California from 2000-2020.” *International Journal of Environmental Research and Public Health*, vol. 18, no. 8, 2021, pp. 3921-, https://doi.org/10.3390/ijerph18083921.

Our Impact | CAL FIRE. (n.d.). Www.fire.ca.gov. https://www.fire.ca.gov/our-impact

Roy, Sneha, et al. “Modeling Demographic Relocation in Response to Climate Risk Factors and Gentrification Displacement Pressures.” *Transportation Research Record*, vol. 2676, no. 1, 2022, pp. 688–703, https://doi.org/10.1177/03611981211036367.

Thompson, Joshua J., et al. “Climate Gentrification: Valuing Perceived Climate Risks in Property Prices.” *Annals of the American Association of Geographers*, vol. 113, no. 5, 2023, pp. 1092–111, https://doi.org/10.1080/24694452.2022.2156318.

Wilson, Scott. “California Wildfires Are Driving up Home Prices, Gentrifying the State.” *Washington Post*, 10 Feb. 2023, www.washingtonpost.com/nation/interactive/2023/california-fires-home-prices/.

Data Sources

CAL FIRE Acers Burned vs Structures Destroyed (2024). Azureedge.net. https://34c031f8-c9fd-4018-8c5a-4159cdff6b0d-cdn-endpoint.azureedge.net/-/media/calfire-website/images/acres-burned-vs-structures-destroyed.jpg?rev=a99c4e1b8a6c42e6b754ff754b02f0f8&hash=D62B714581F96A3F797A02E3A0627FEE

"B25105Median Monthly Housing Costs (Dollars)." *Census.gov*, 2024, data.census.gov/table/ACSDT1Y2021.B25105?q=b25105+state.

"B25001 Housing Units." *Census.gov*, 2024, data.census.gov/table/ACSDT5Y2020.B25001?t=Housing%20Units&g=160XX00US0655282&tid=ACSDT5Y2020.B25001.

"B19013 Median Household Income in the Past 12 Months." *Census.gov*, 2024, data.census.gov/table/ACSDT5Y2022.B19013?g=010XX00US.

"Fire Hazard Severity Zones in State Responsibility Area." *Calfire-Forestry.maps.arcgis.com*, calfire-forestry.maps.arcgis.com/apps/webappviewer/index.html?id=988d431a42b242b29d89597ab693d008.

"Low-Income or Disadvantaged Communities Designated by California." *Data.gov*, 2024, catalog.data.gov/dataset/low-income-or-disadvantaged-communities-designated-by-california-b8da6.

"ZIP Code-level breakdowns of new, renewed, and non-renewal data." *Www.insurance.ca.gov*, www.insurance.ca.gov/01-consumers/200-wrr/DataAnalysisOnWildfiresAndInsurance.cfm.

"2020 U.S. Census Tract boundaries of the United States in the 50 states and the District of Columbia." *Arcgis.com*, 2024, www.arcgis.com/home/item.html?id=20f5d275113e4066bf311236d9dcc3d4&sublayer=0