Examining Housing Instability Trends and the Moderating Impacts of the Covid-19 Eviction Moratorium in San Diego County

Kaye Prosser, Andrew Lona

June 14, 2023

Research Question

What factors influenced housing instability before, during, and after Covid-19 eviction moratorium in San Diego county? If any, which trends could best explain these differences across the county? In order to answer these questions we are using two approaches for estimating housing instability.

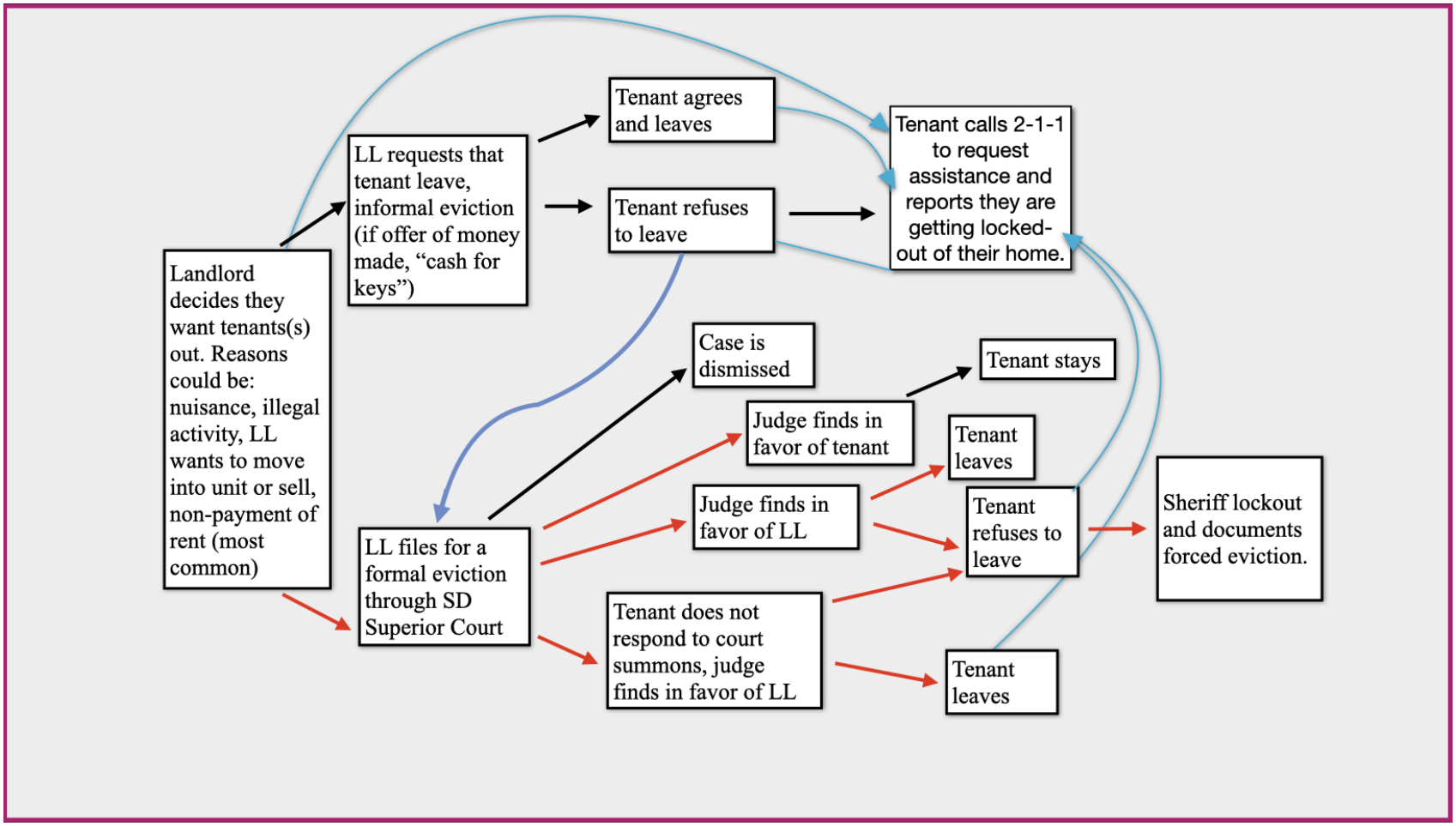
Data

Two data sets:

- Forced Eviction-lockout data
  - Created by joining data from ZCTA renter household occupancy and Forced Eviction lockout reports from the court.
- Community Information Exchange (CIE) data
  - Demographic data of need-determined 2-1-1 callers by network members.

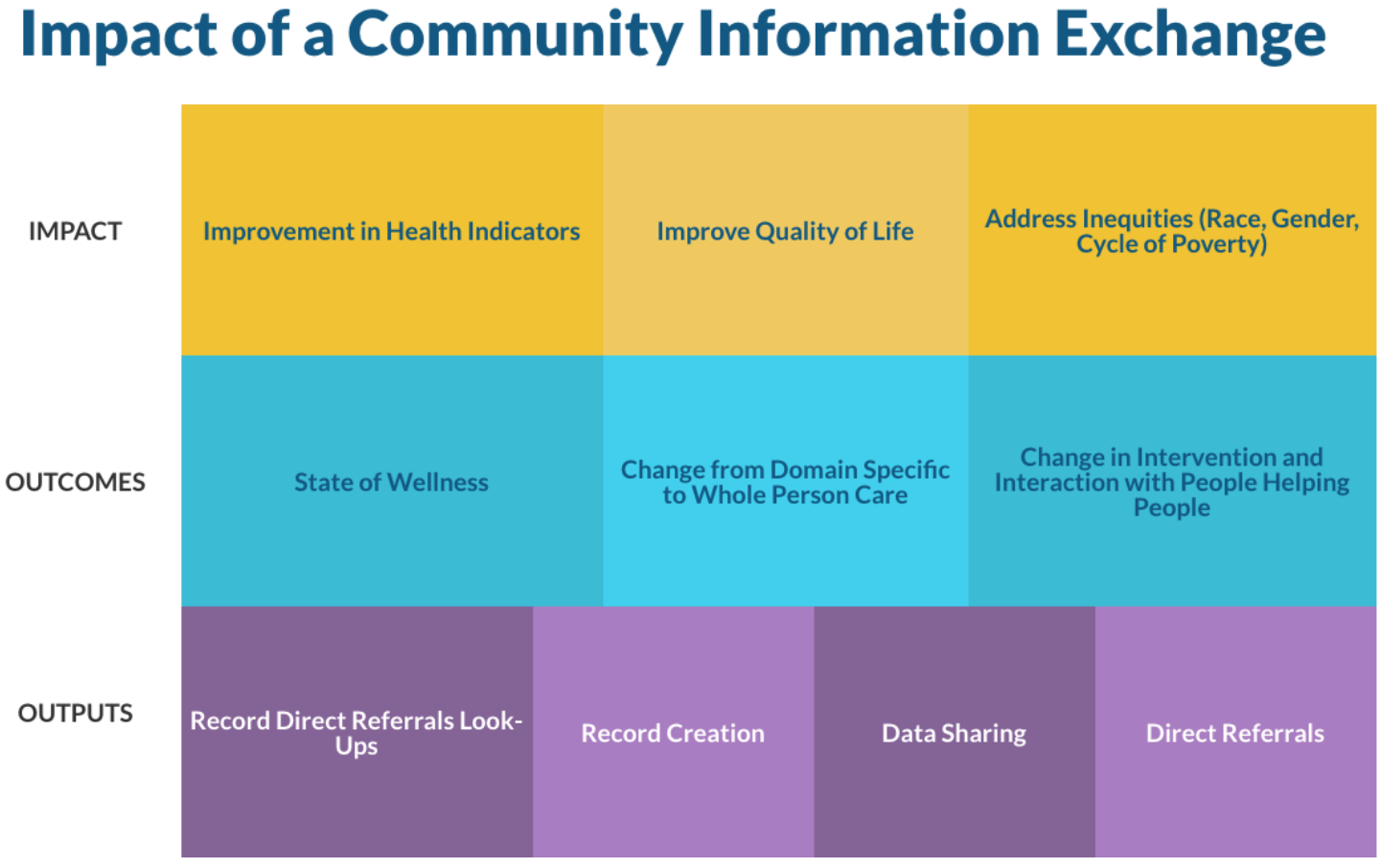
Data

Evictions



Data

CIE Needs



1. Caller dials 2-1-1 and speaks to representative.
2. Caller is recorded in CIE network, directed to partner.
3. Partner evaluates and determines need, can redirect to another partner.

Methods

Evictions

- Spatial Patterns in Residential Lockout Eviction Orders by ZIP code for San Diego County

For each period (p) for each Zip/ZCTA (z):

$$evictionsrate = \frac{(evictionscounts_{zp} / rentalhouseholdoccupancy_{zp} * 1000)}{month_p}$$

Forced Eviction-Lockout Descriptive Statistics

	Min	Mean	Max
Total Eviction Count	1	140	1005
Period 1 Forced Eviction (Pre-Moratorium)	1	99.78	671
Period 2 Forced Eviction (Moratorium in place)	1	30.25	231
Period 3 Forced Eviction (Post-Moratorium)	1	140.1	103
2018 Rental Household Occupancy	0	5465	17666
2019 Rental Household Occupancy	0	5465	18176
2020 Rental Household Occupancy	0	5425	18355
2021 Rental Household Occupancy	0	5444	19133
Period 1 Rate by Rental Households	0	24.79	300
Period 2 Rate by Rental Households	0	6.4	41.67
Period 3 Rate by Rental Households	0	3.57	51.95
Period 1 Rate by Rental Households Per Month	0	0.95	11.54
Period 2 Rate by Rental Households Per Month	0	0.26	1.67
Period 3 Rate by Rental Households Per Month	0	0.39	5.78
Forced Eviction Difference between Periods 2 and 3	-0.59	0.14	5.27

Methods

CIE Needs

$$\text{Poverty Rate} = \frac{\text{Poverty}_{ZCTA,Year}}{\text{Population}_{ZCTA,Year}} * 100$$

$$\text{For each need } (n_i),$$
$$n_i = \beta_0 + \beta_1 \cdot Accounts^1 + \beta_2 \cdot PovertyRate + \beta_3 \cdot MoratoriumPeriod + \epsilon$$

[1] Gender, Age, Race/Ethnicity

Results

Evictions

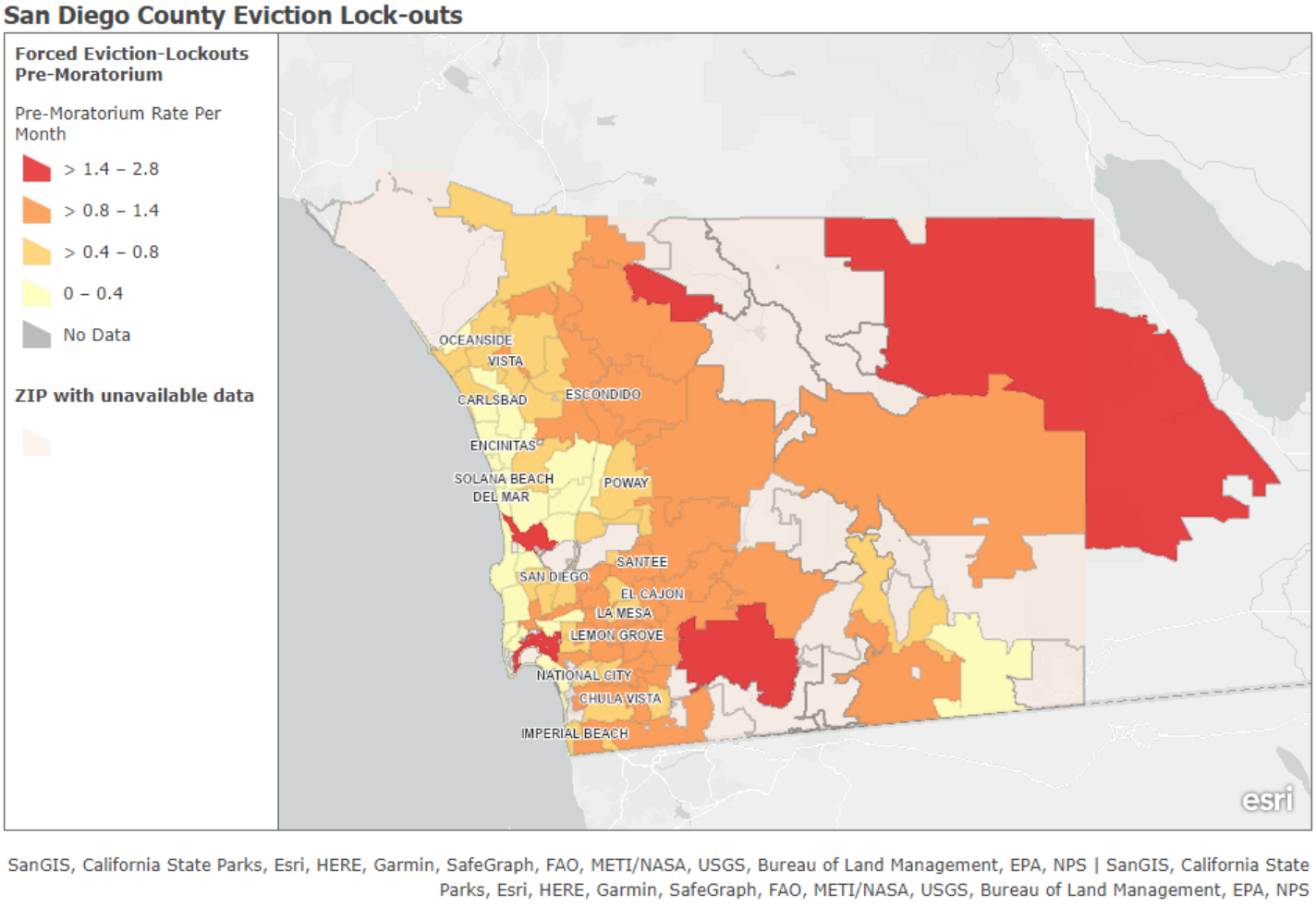


Figure: GIS Map of Forced Eviction-lockouts prior to the COVID-19 moratorium

Results

Evictions

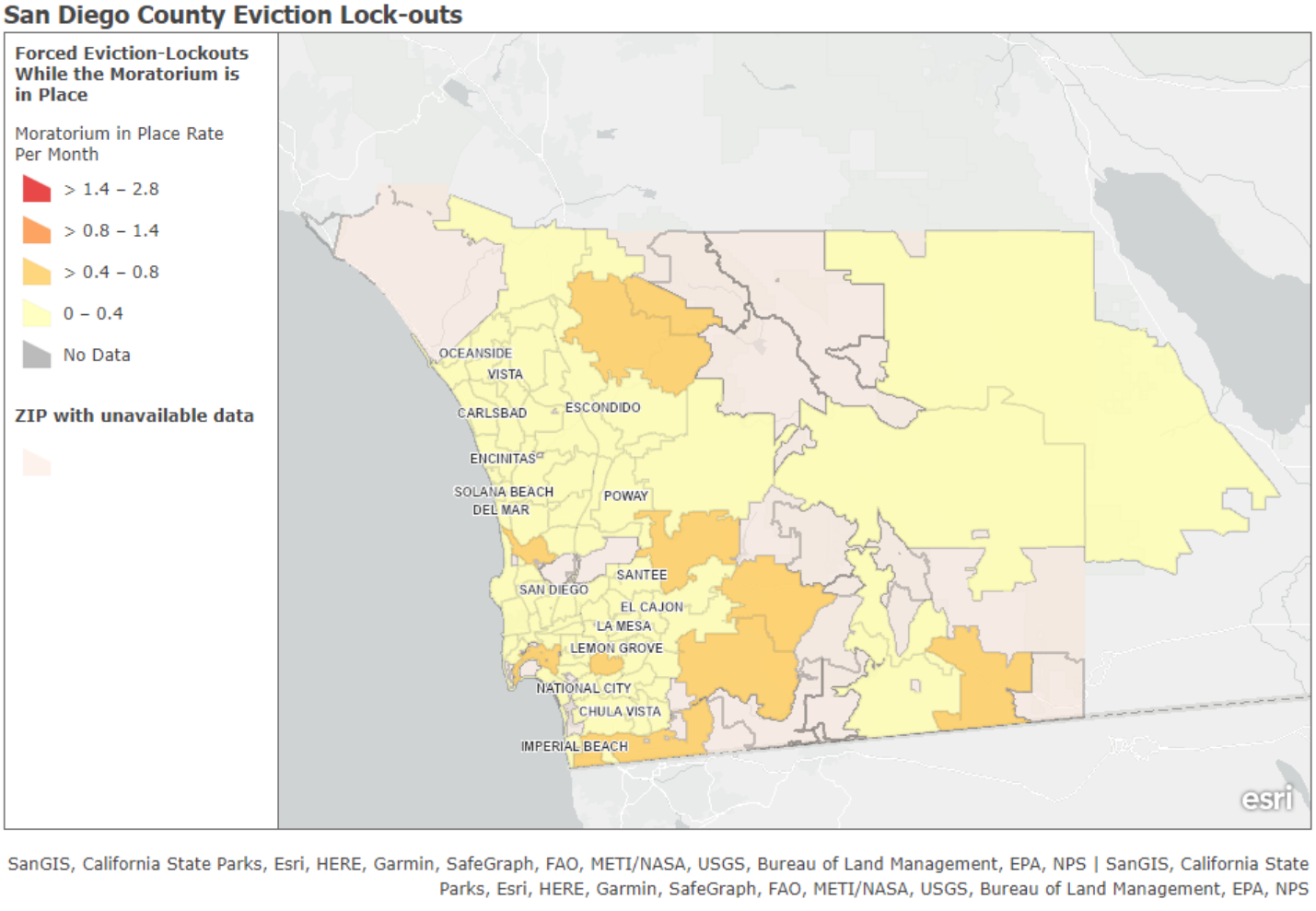


Figure: GIS Map of Forced Eviction-lockouts with the COVID-19 moratorium in place

Results

Evictions

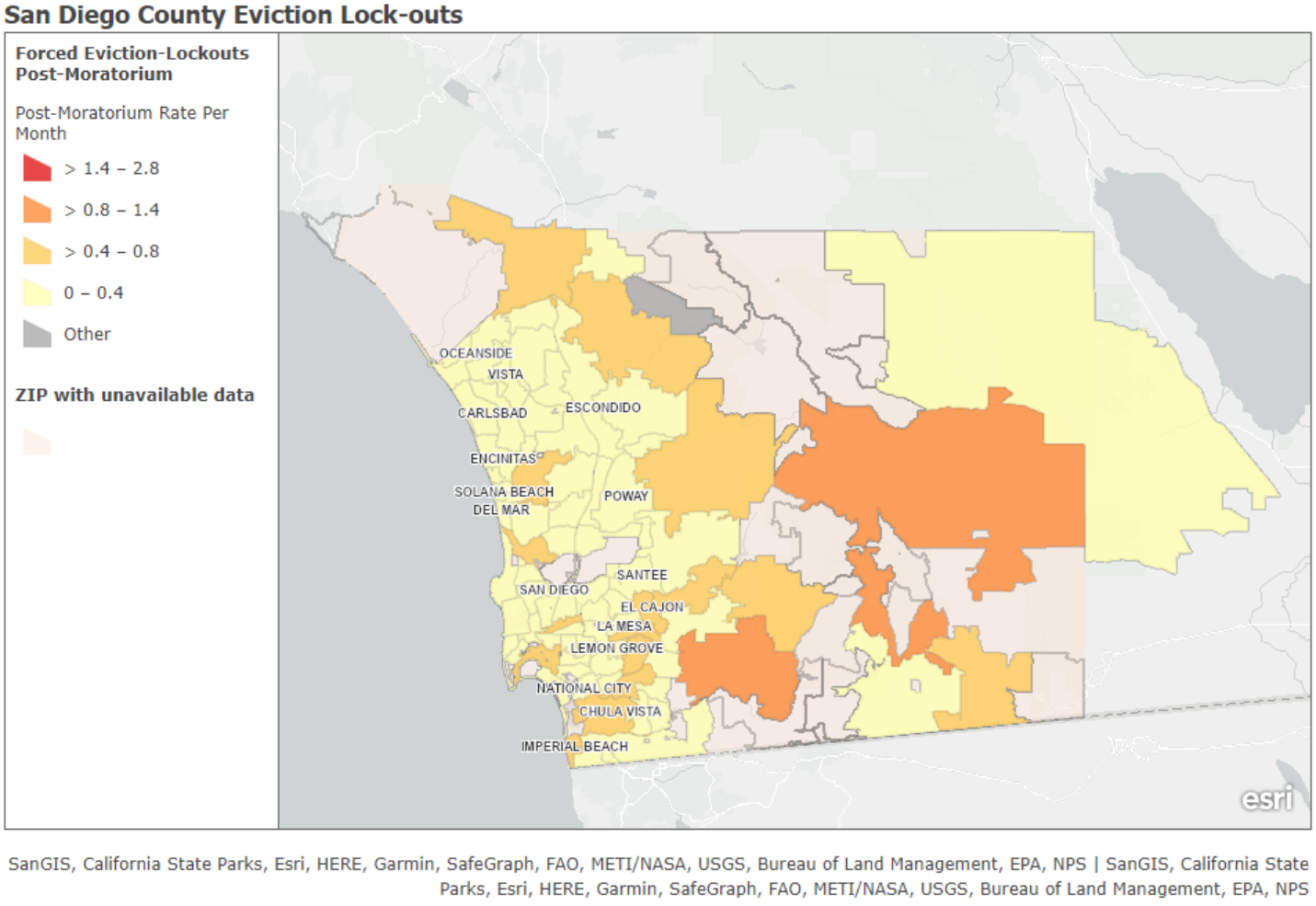


Figure: GIS Map of Forced Eviction-lockouts POST COVID-19 moratorium

Results

CIE Needs

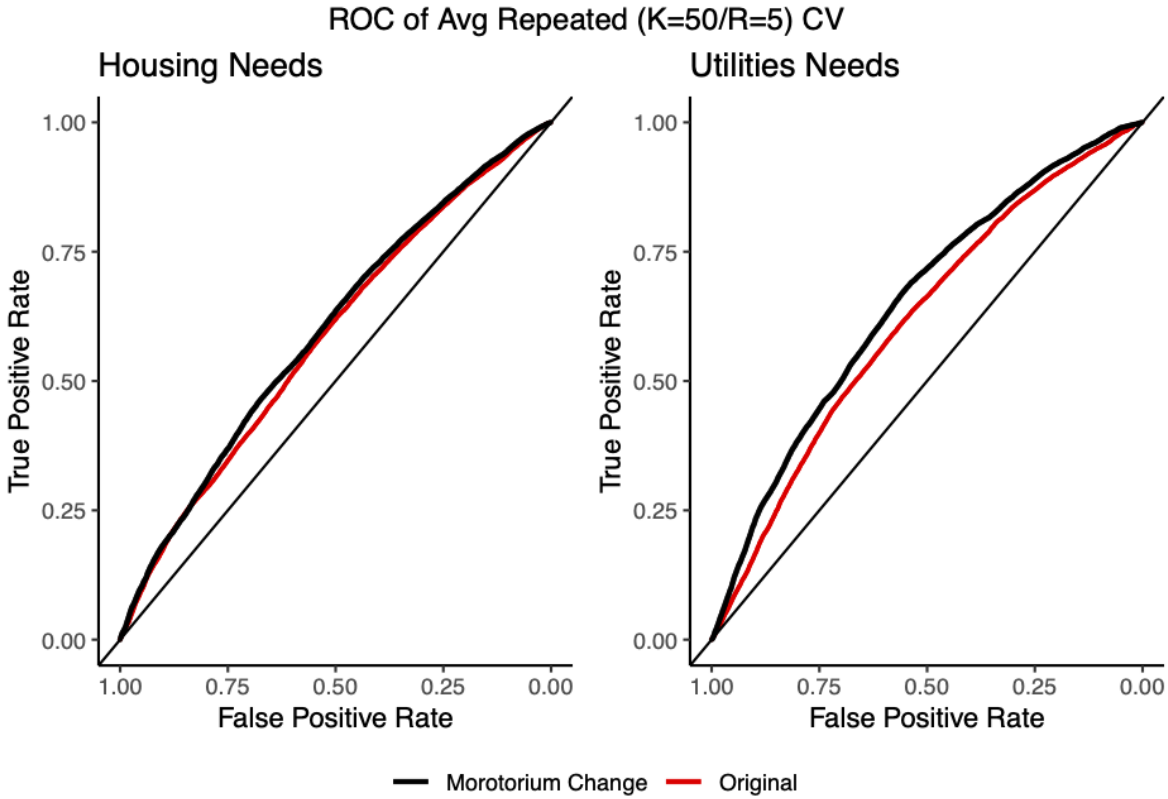
Table: In-Sample Model Performance: AIC/BIC lower is better — LogLik higher is better

	AIC	BIC	LogLik
Original Model H_0 (Housing Needs)	27,328.6900	27,415.7800	-13,653.3400
Moratorium Added H_1 (Housing)	42,199.7200	42,286.8100	-21,088.8600
Original Model H_0 (Utilities Needs)	26,011.0100	26,098.1000	-12,994.5100
Moratorium Added H_1 (Utilities)	39,060.9000	39,147.9900	-19,519.4500

Results

CIE Needs

ROC/AUC Out-Of-Sample Model Performance — R = 5, K = 50.



	H_0	Moratorium Change Added
Housing Needs	0.5839	0.5984
Utilities Needs	0.6138	0.6496

Conclusion

Evictions

- From this project we established clear differences in forced eviction rates before, during, and after the Covid-19 Moratorium for San Diego County.
- Forced evictions seem to be reverting to their prior state before moratorium protections

Conclusion

CIE Needs

- Data is not easily modeled.
- “Slight increase” in test scores unsatisfactory.
- Increase in observations, change in model type, recommended.

Conclusion

Only the starting point of future research to further investigate the relationship between the COVID-19 pandemic and housing instability.

Thank You!

[1] github.com/AndyLAndrew/Homelessness_Hub_MS_CSS_Capstone