Los Angeles County Urban Tree Canopy (UTC) Prioritization

April 12, 2019

Prioritization approach

1. Trees provide benefits

2. Seek to plant trees where the benefits of trees are lacking
   - Using available data

3. TreePeople decided to focus on
   - Heat Island mitigation
   - Public health
   - Socioeconomic status
   - Unit of analysis = CalEnviroScreen 3.0 boundaries (US Census Tract)

Locke, D. H. et al. Cities Environ. 3, 1–18 (2010).
Locke, D. H. et al. Cities Environ. 6, 1-26 (2013).

Prioritization approach
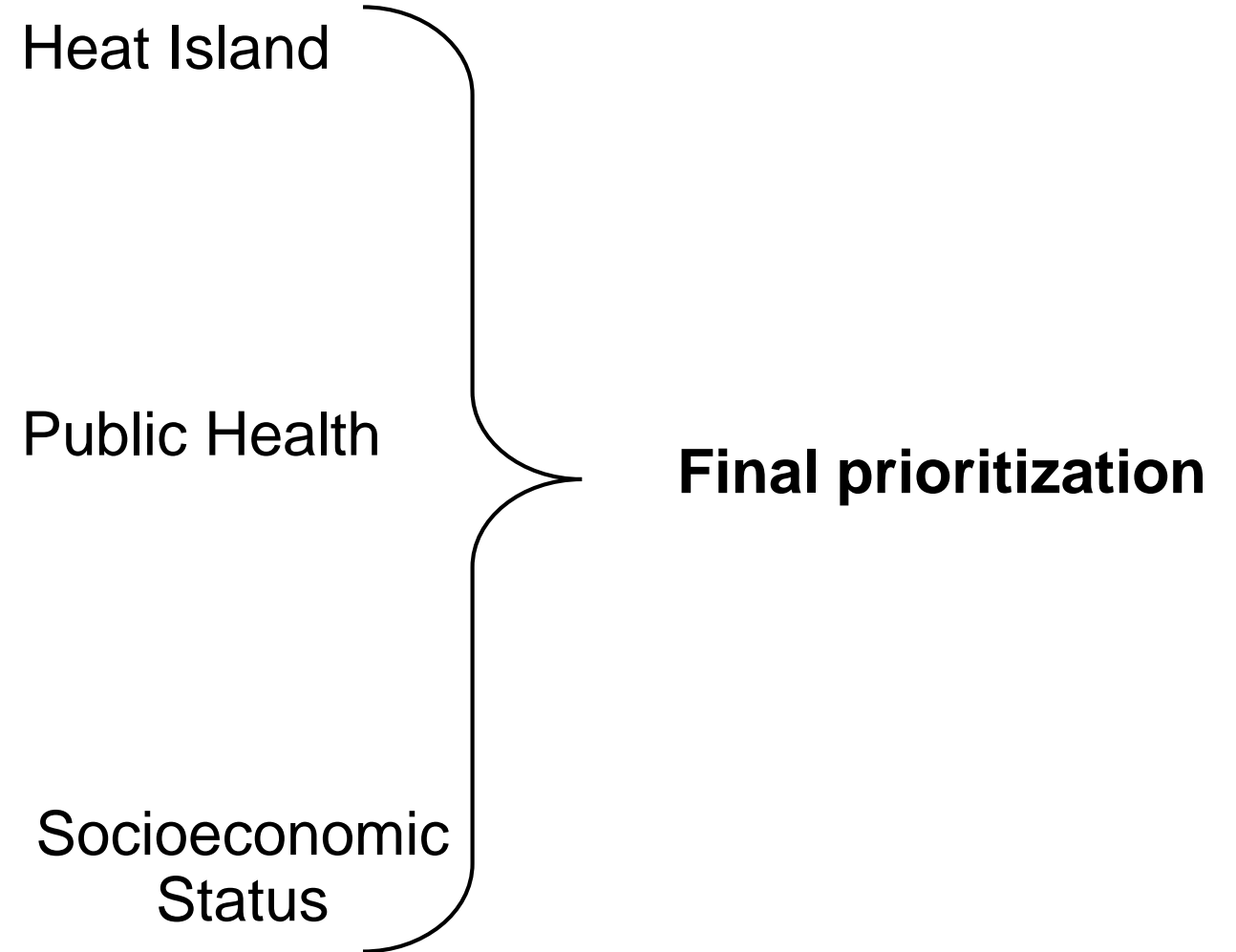
Heat Island

Public Health

Socioeconomic
Status

Final prioritization

I. Maximum Surface Temperature

II. Mean Surface Temperature
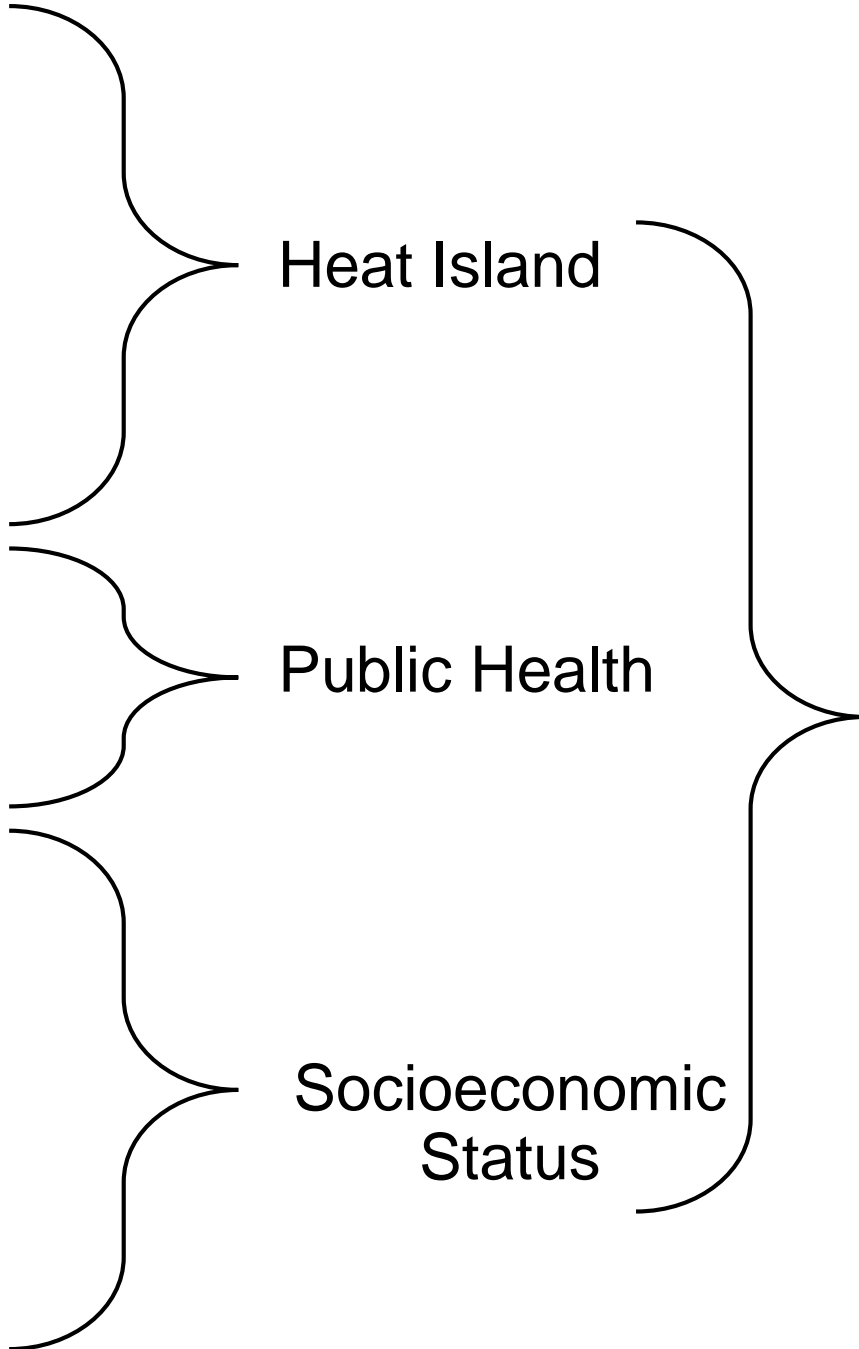
III. Dependency Ratio (2X)

IV. Non-White Population
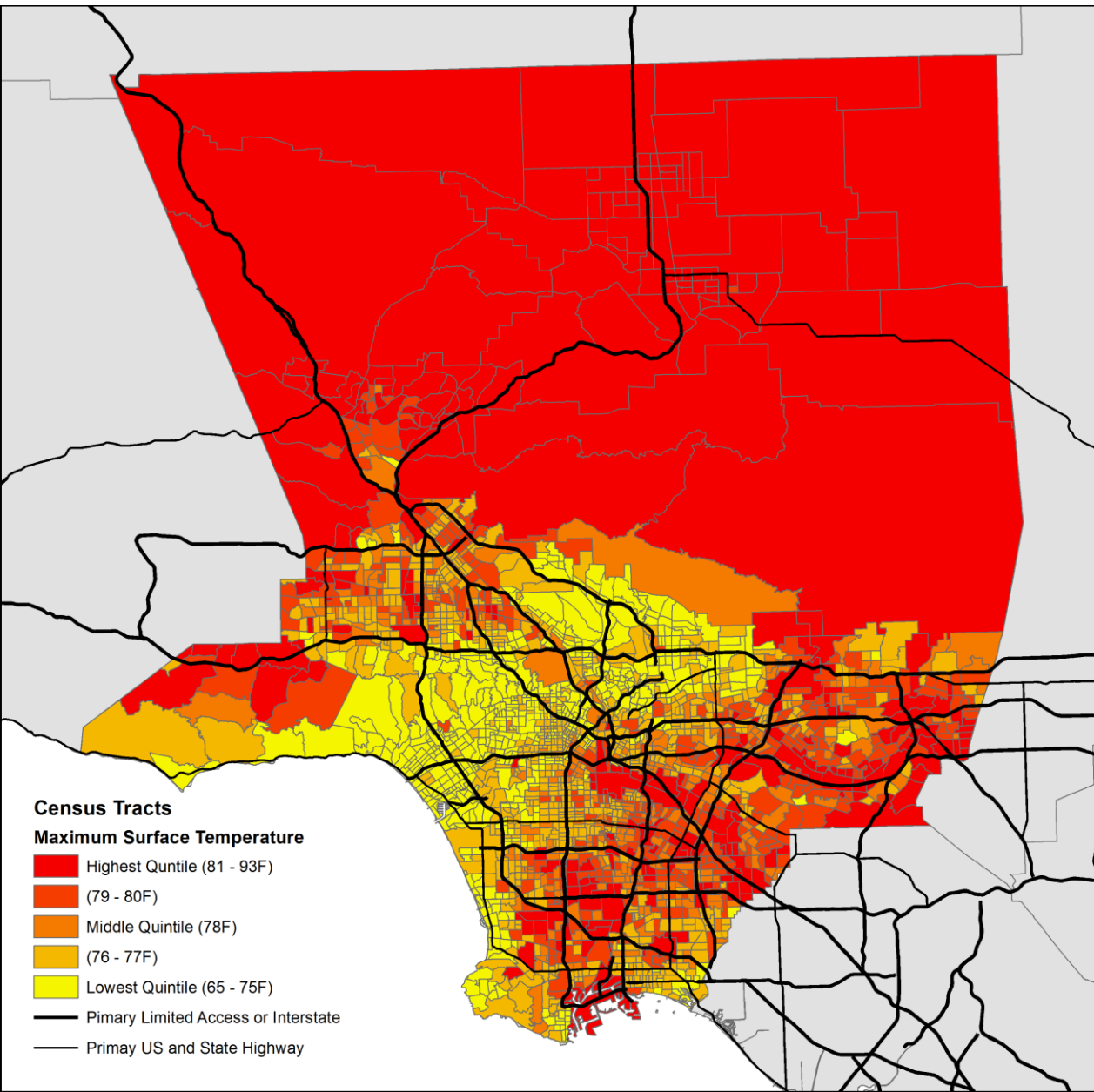
V. Median Household Income (-1)
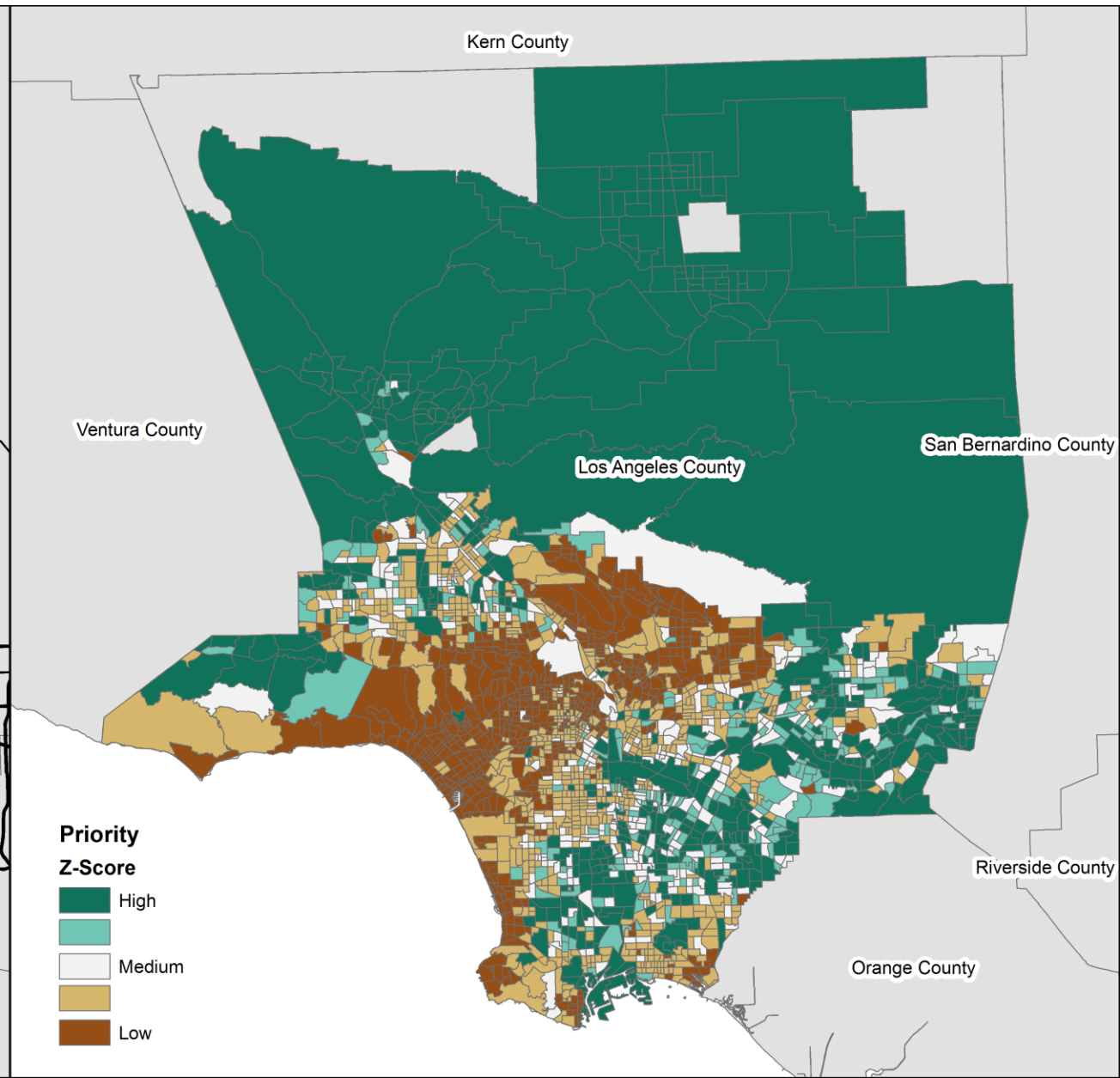
Heat Island

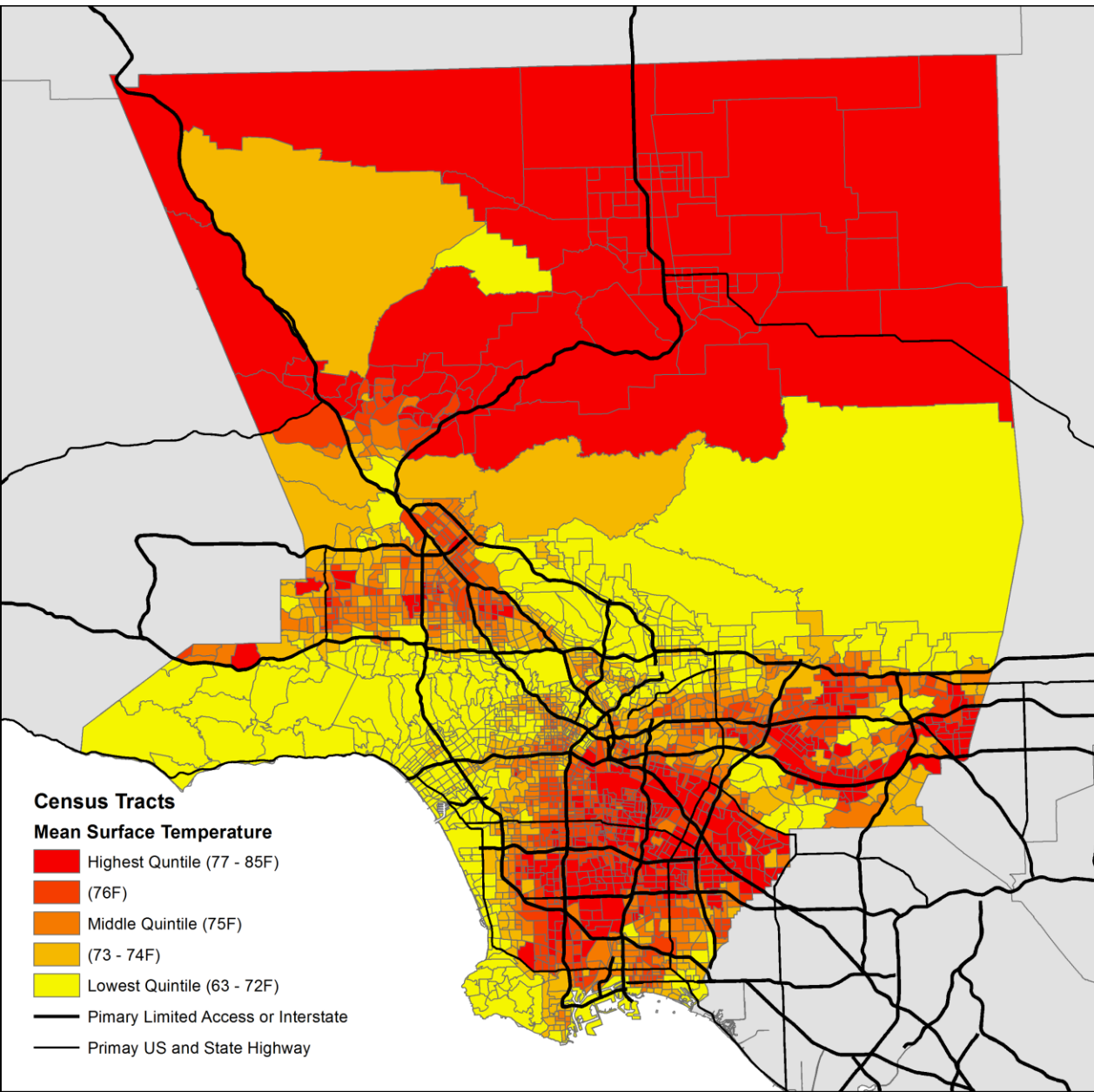Public Health

Socioeconomic Status

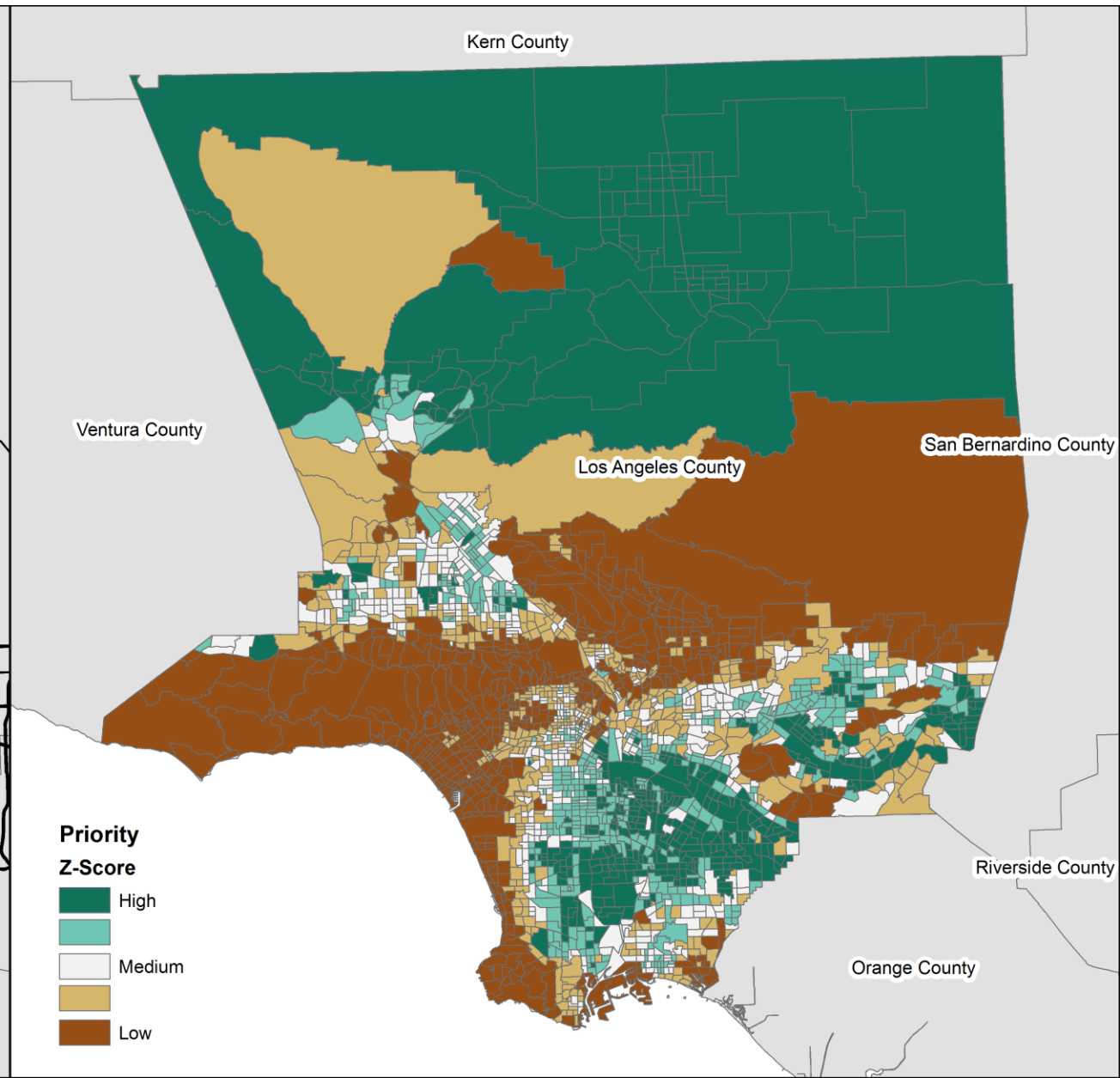**Final prioritization**

I. Maximum Surface Temperature (degrees F)

Maximum Surface Temperature (standardized)

Census Tracts
Maximum Surface Temperature
- Highest Quintile (81 - 93F)
- (79 - 80F)
- Middle Quintile (78F)
- (76 - 77F)
- Lowest Quintile (65 - 75F)
- Pimary Limited Access or Interstate
- Primay US and State Highway

Priority
Z-Score
- High
- Medium
- Low

Kern County
Ventura County
Los Angeles County
San Bernardino County
Riverside County
Orange County

II. Mean Surface Temperature (degrees F)

Census Tracts

Mean Surface Temperature

- Highest Quntile (77 - 85F)
- (76F)
- Middle Quintile (75F)
- (73 - 74F)
- Lowest Quintile (63 - 72F)
- —— Pimary Limited Access or Interstate
- —— Primay US and State Highway

Mean Surface Temperature (standardized)

Kern County

Ventura County

Los Angeles County

San Bernardino County

Riverside County
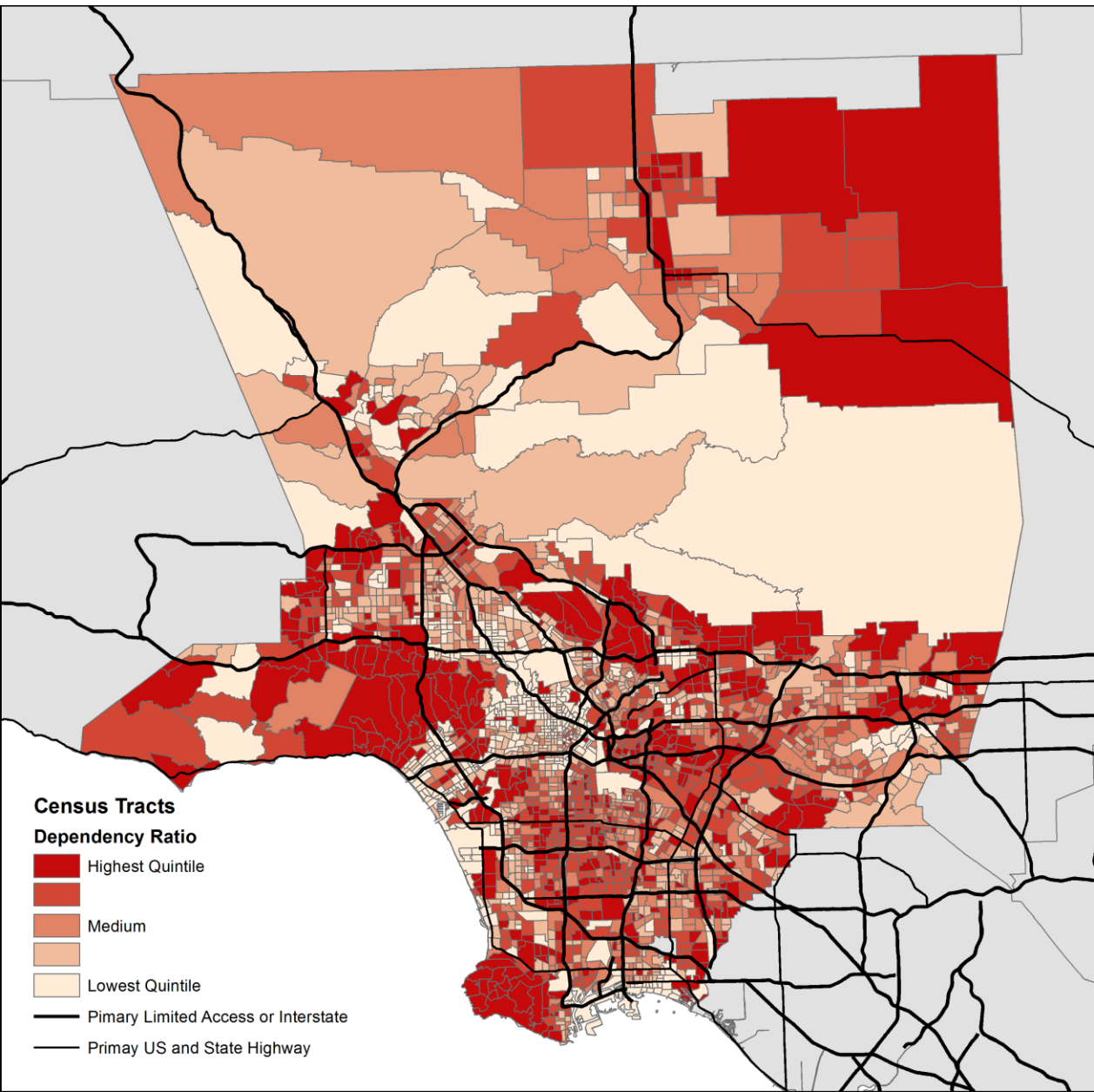
Orange County

Priority

Z-Score

- High
-
- Medium
-
- Low

Dependency Ratio (DR)
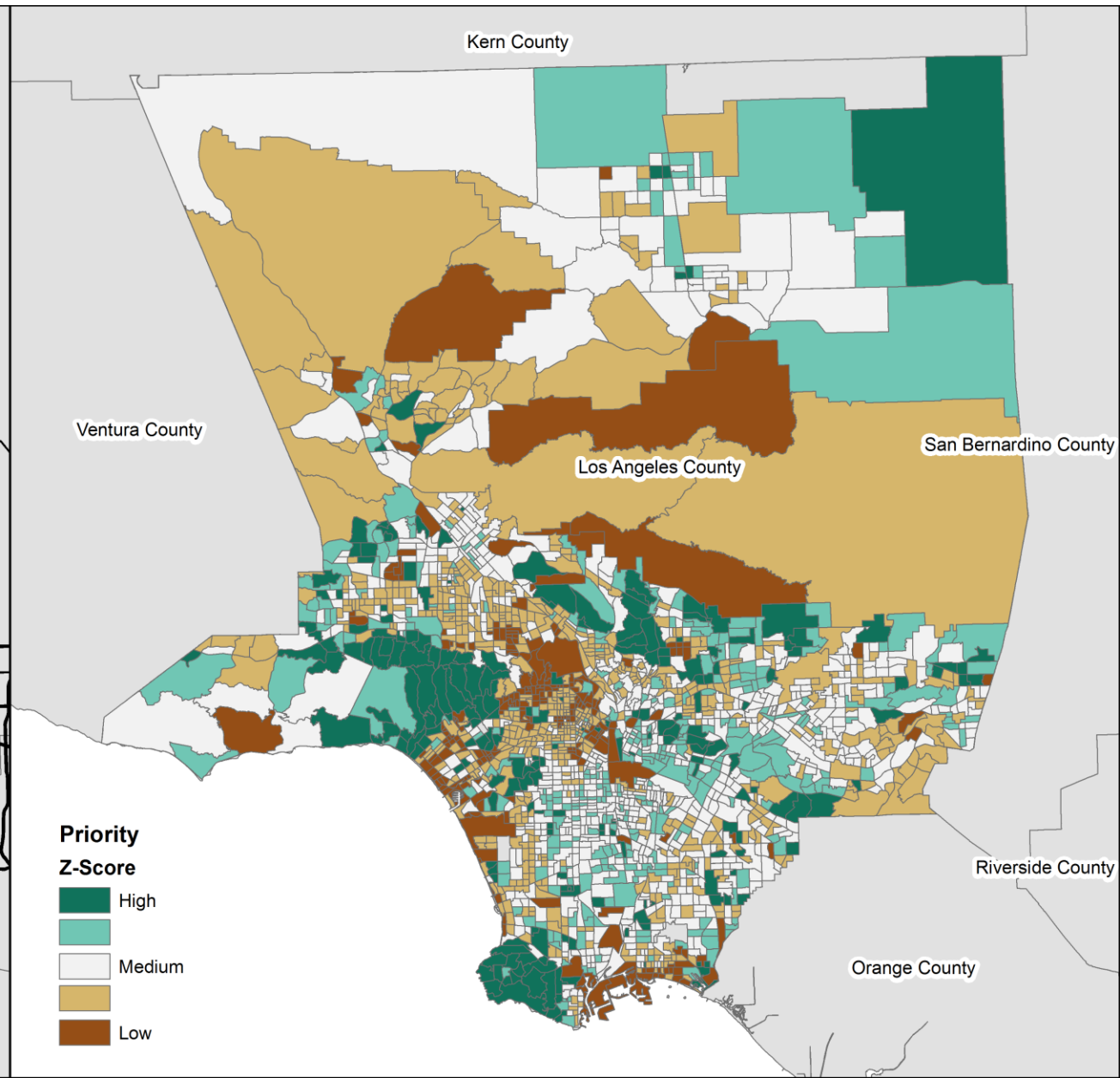
$$DR = \frac{(people\ aged\ 0\ to\ 15) + (people\ aged\ 65\ and\ older)}{people\ aged\ 16\ to\ 64} \times 100$$
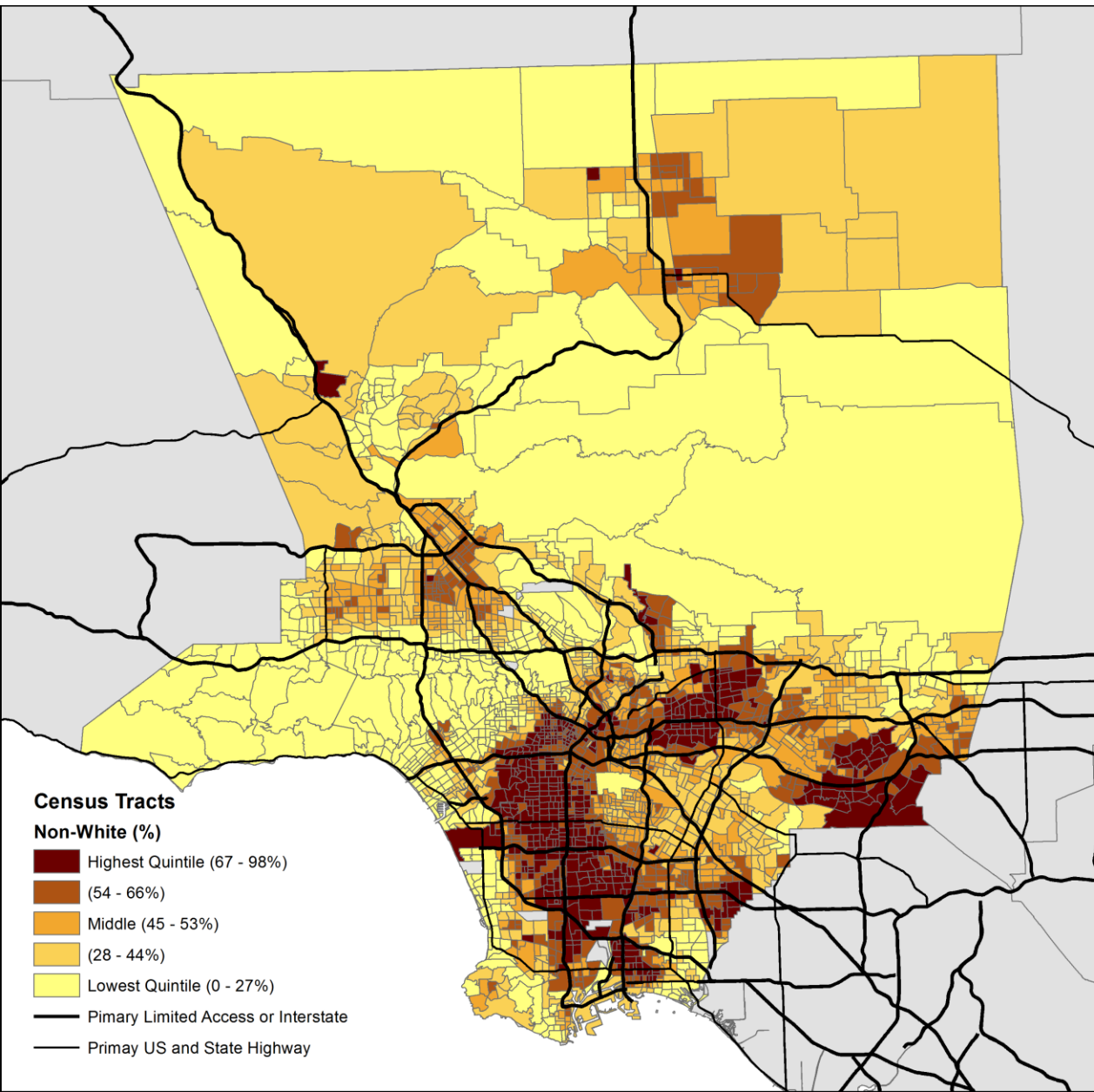
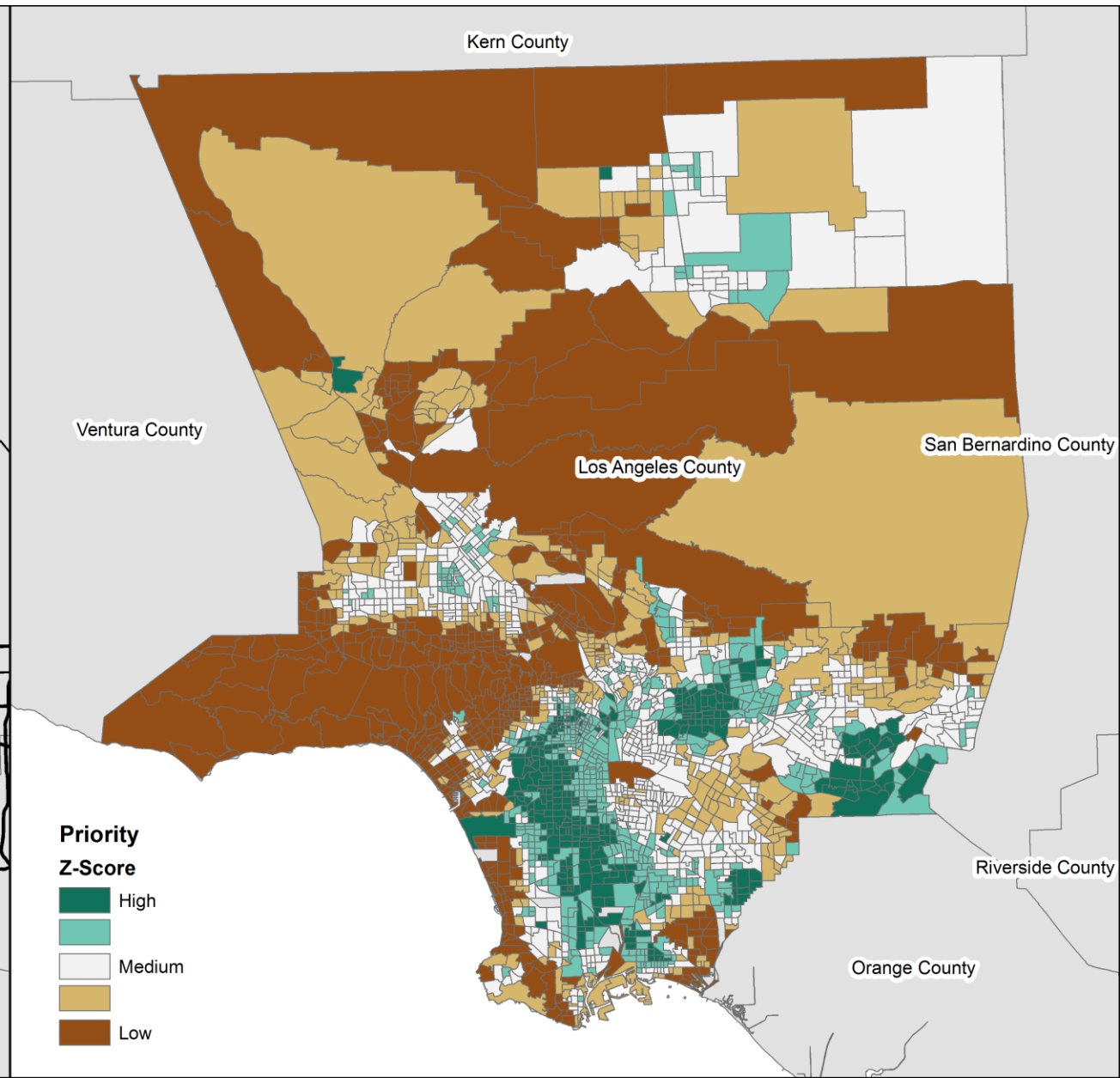Used in public health to assess vulnerability

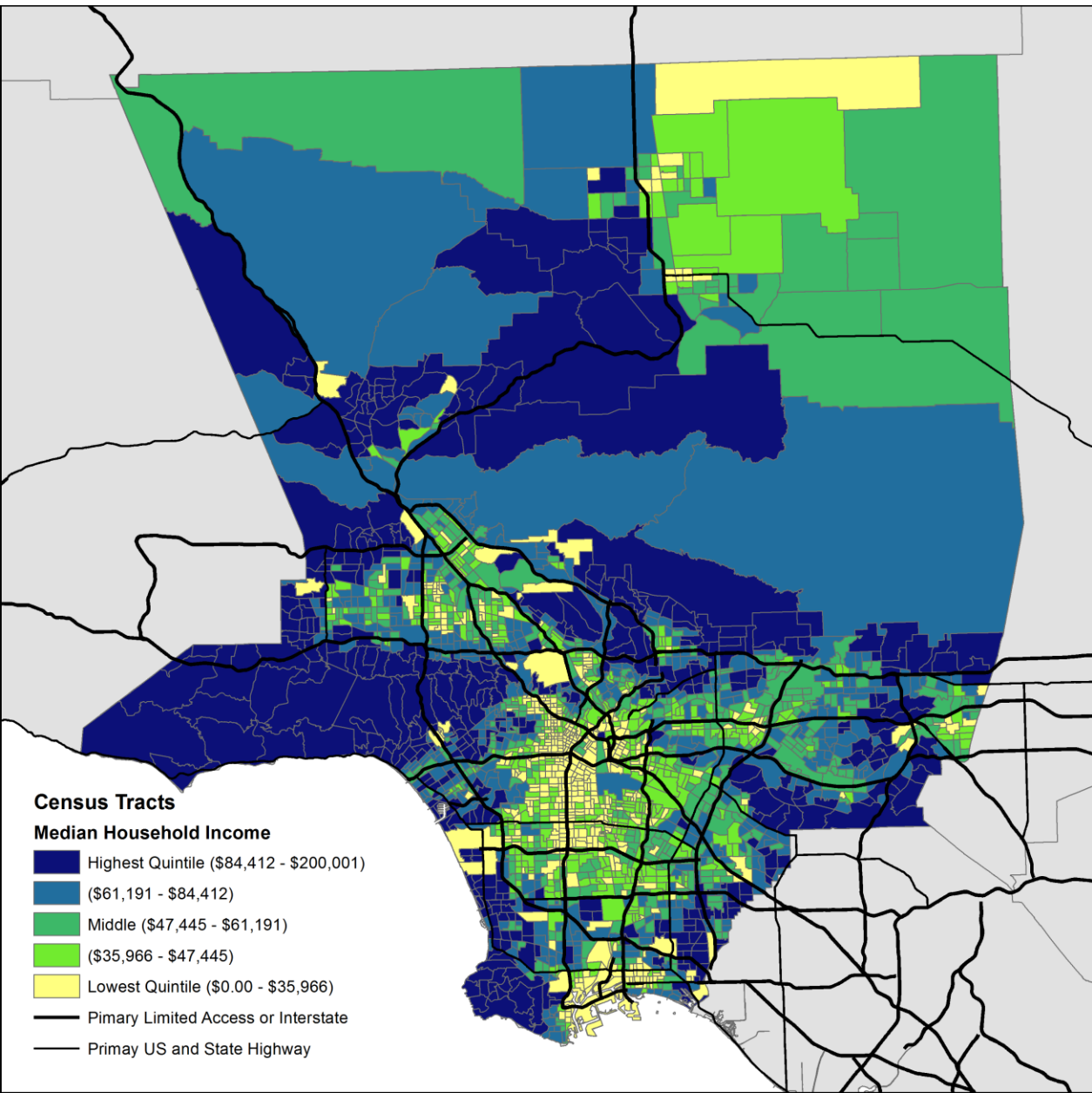III. Dependency Ratio (raw)

Dependency Ratio (standardized)

Census Tracts
Dependency Ratio
- Highest Quintile
- (second quintile)
- Medium
- (fourth quintile)
- Lowest Quintile
- — Pimary Limited Access or Interstate
- — Primay US and State Highway

Priority
Z-Score
- High
- (medium-high)
- Medium
- Low
- Low

Kern County
Ventura County
Los Angeles County
San Bernardino County
Riverside County
Orange County

IV. Non-White Population (%)

Non-White Population (standardized)

Census Tracts

Non-White (%)

- Highest Quintile (67 - 98%)
- (54 - 66%)
- Middle (45 - 53%)
- (28 - 44%)
- Lowest Quintile (0 - 27%)
- Pimary Limited Access or Interstate
- Primay US and State Highway

Priority

Z-Score

- High
- Medium
- Low

Kern County

Ventura County

Los Angeles County

San Bernardino County

Riverside County

Orange County

V. Median Household Income ($)

Median Household Income (standardized)
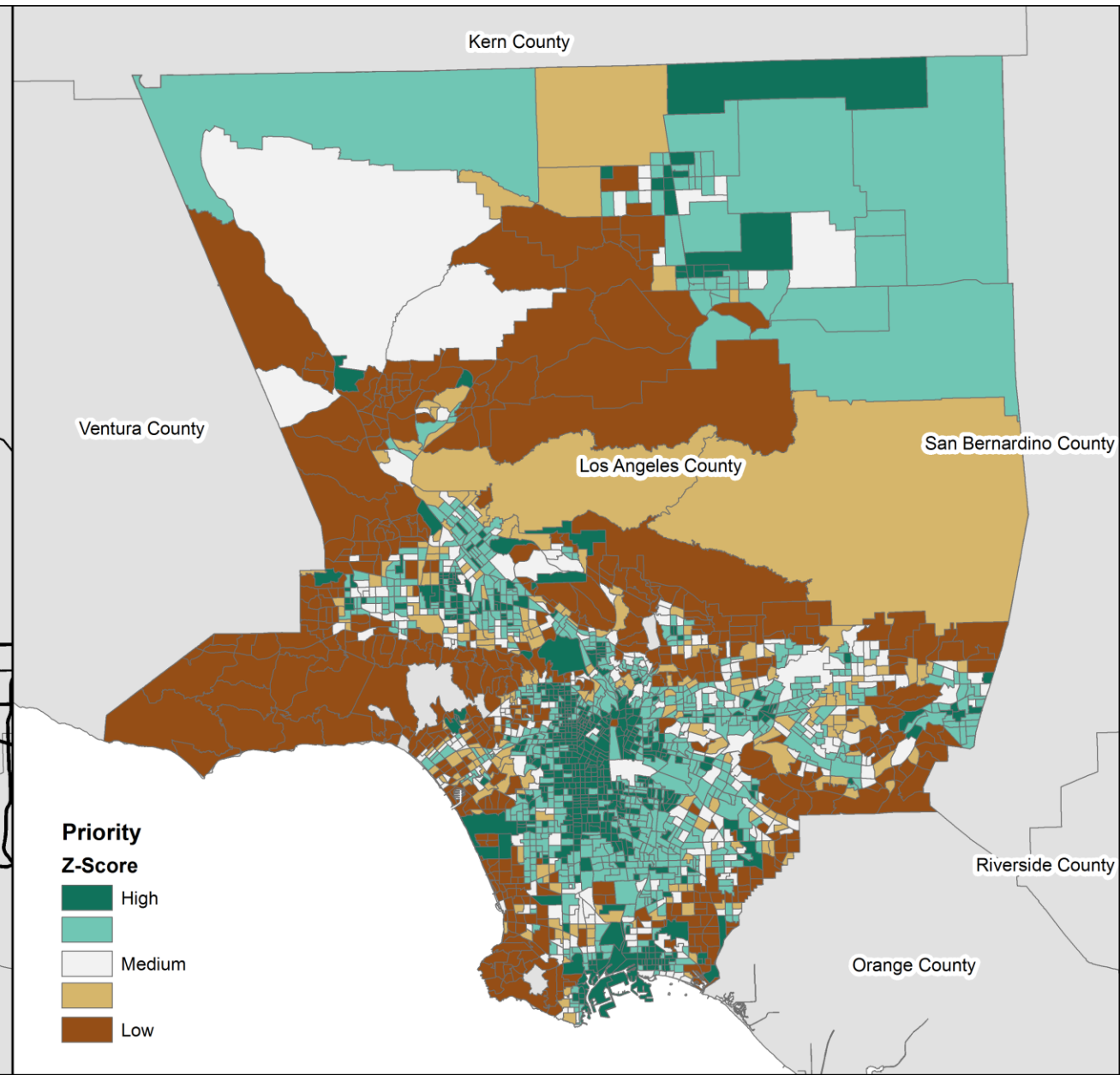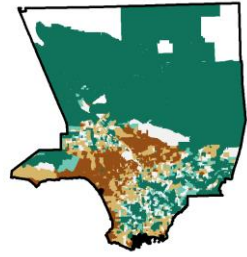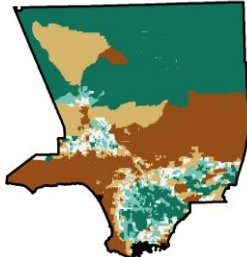
Census Tracts
Median Household Income
- Highest Quintile ($84,412 - $200,001)
- ($61,191 - $84,412)
- Middle ($47,445 - $61,191)
- ($35,966 - $47,445)
- Lowest Quintile ($0.00 - $35,966)
- Pimary Limited Access or Interstate
- Primay US and State Highway

Priority
Z-Score
- High
- Medium
- Low

Kern County
Ventura County
Los Angeles County
San Bernardino County
Riverside County
Orange County

I. Maximum Surface
Temperature

II. Mean Surface
Temperature

III. Dependency
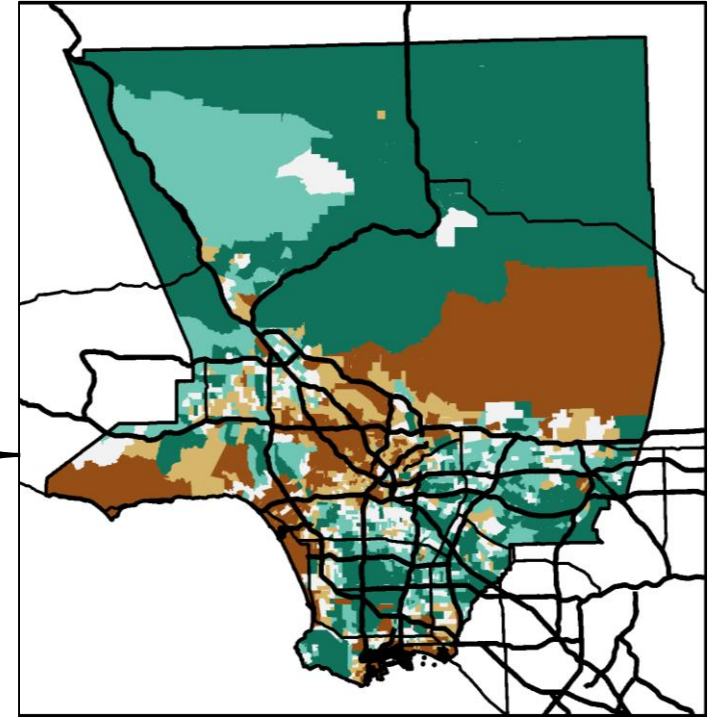Ratio (2X)
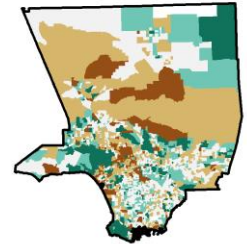
IV. Non-White
Population
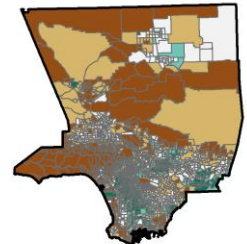
V. Median Household
Income (-1)
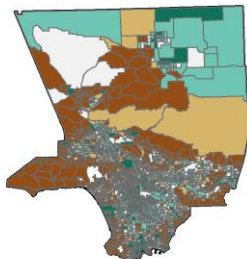
Heat Island

Public Health

Socioeconomic
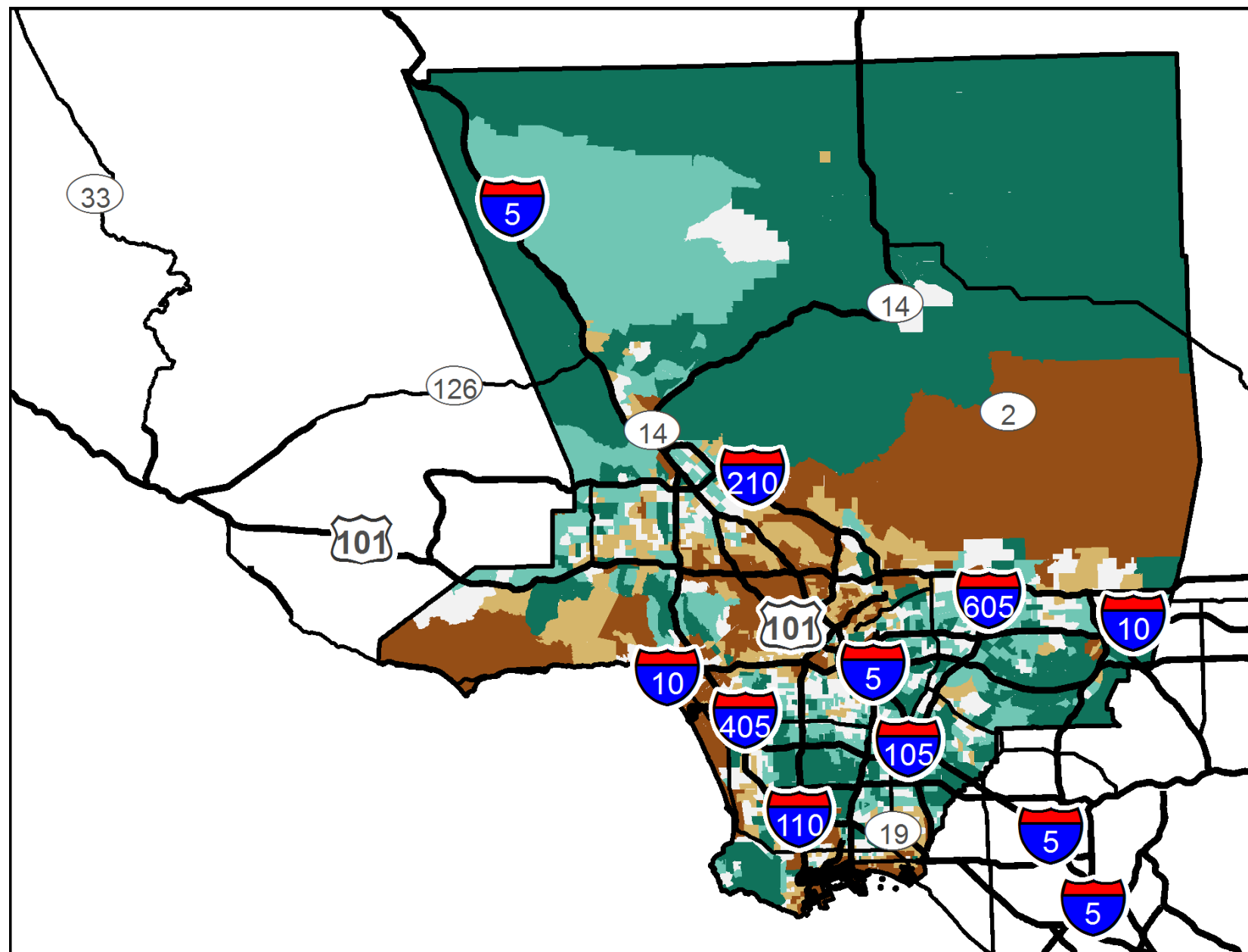Status

Study area outline:

Los Angeles County

Census Tracts

Tree Canopy Prioritization

- Highest Priority
- Medium
- Lowest Priority

Study area outline:

Los Angeles County

Census Tracts

Tree Canopy Prioritization

Highest Priority

Medium

Lowest Priority
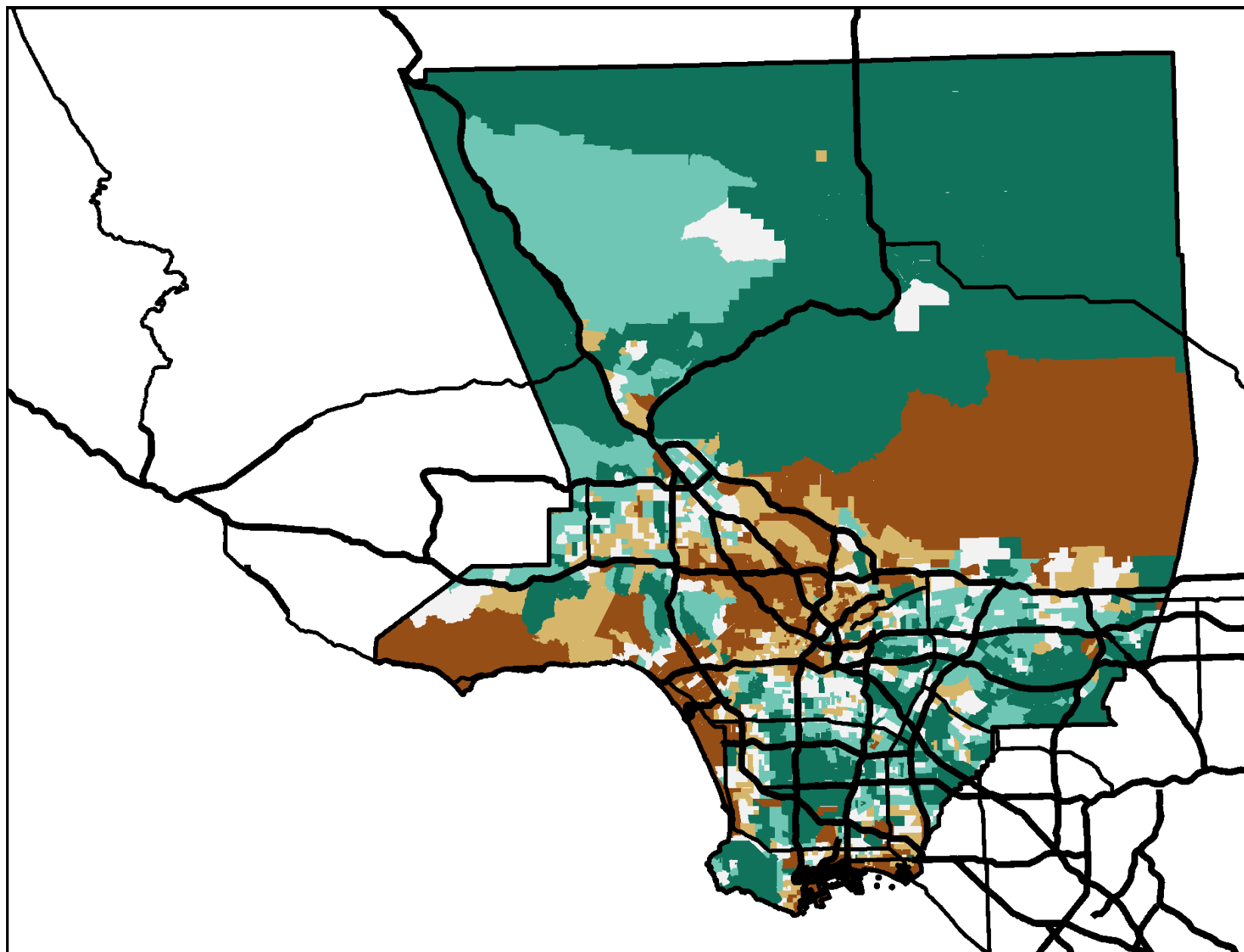
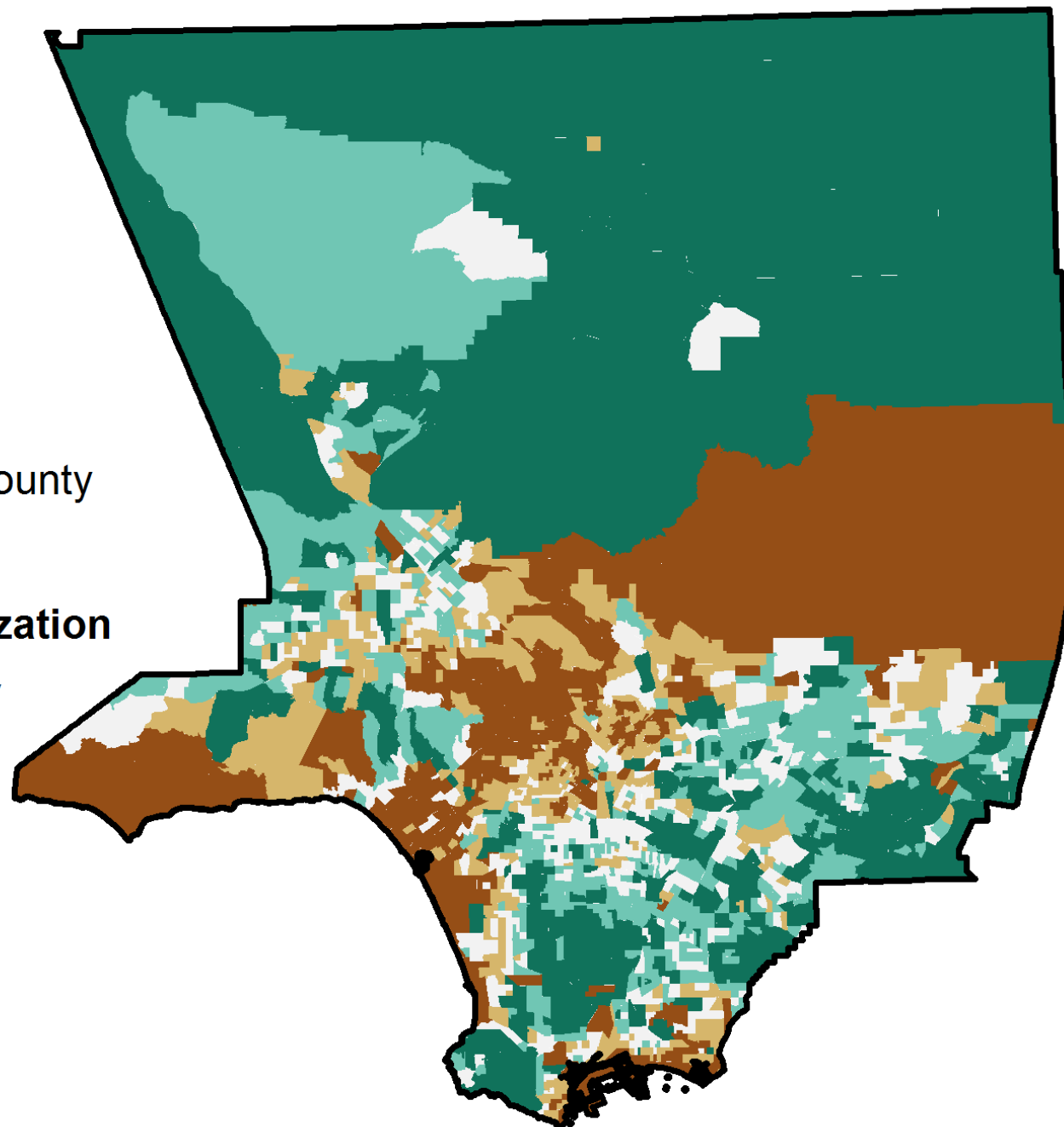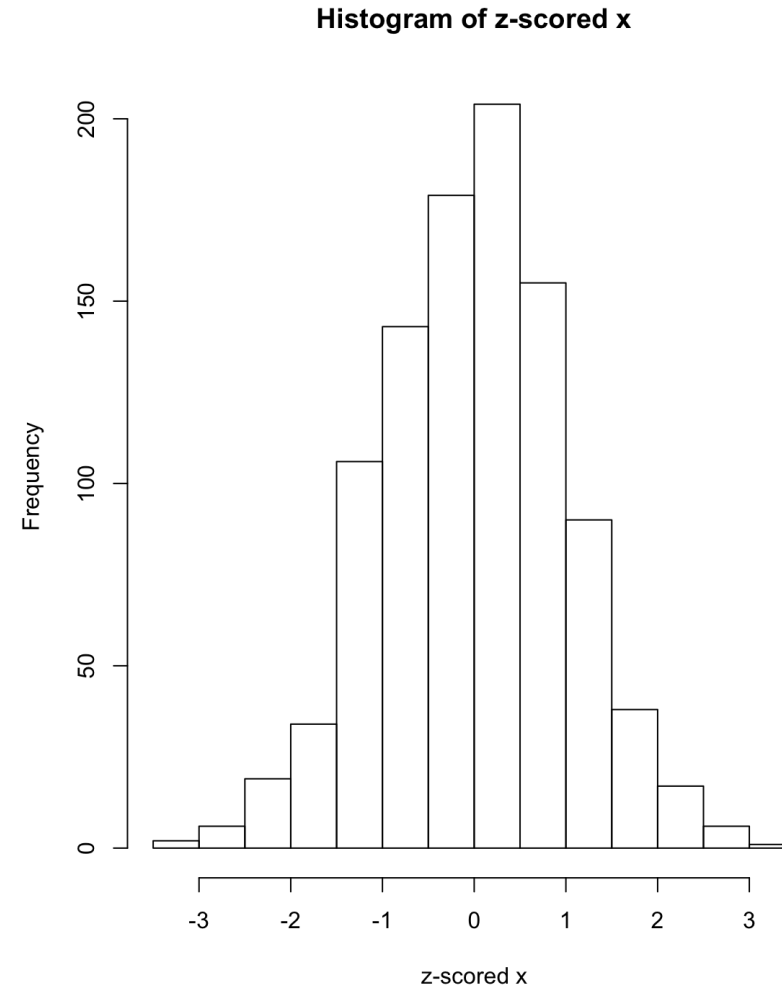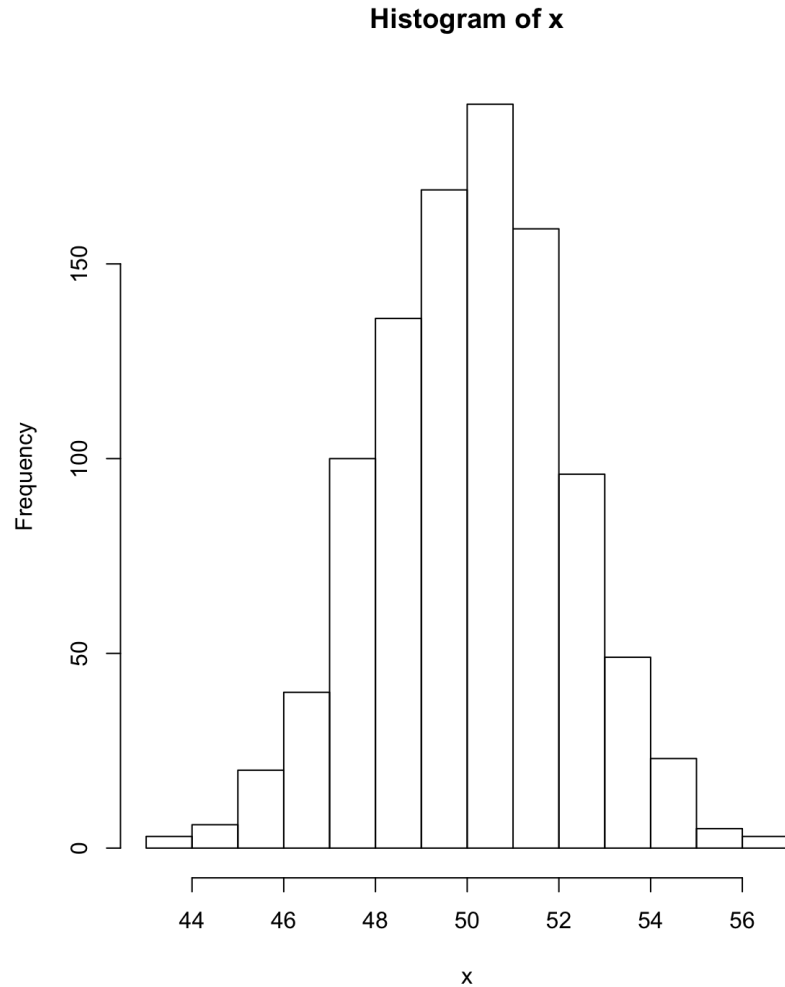**Study area outline:**

☐ Los Angeles County

Census Tracts

Tree Canopy Prioritization

- Highest Priority
- (light teal)
- Medium
- (tan)
- Lowest Priority

Z-scores explained
Z = (x – mean(x)) / stdev(x)

Histogram of x

Histogram of z-scored x

CalEnviroScreen 3.0

https://oehha.ca.gov/media/downloads/calenviroscreen/report/ces3report.pdf