

Data Documentation Appendix

The data in this document was intended to replicate and update the Affirmatively Furthering Fair Housing Data and Mapping Tool (AFFH-T) Data for the Twin Cities Region.¹ This appendix is heavily adapted from the AFFH-T Data Documentation. Where possible, formulas from this document were left intact and the years for the data sources were updated instead. Exceptions to this are also noted below.

Demographic Summary

All data in the Demographic Summary section is sourced from American Community Survey, 2013-2017 Estimates. Trends data is sourced from the HUD tool, which is taken from the 1990, 2000, and 2010 Decennial Censuses.

Data Source: American Community Survey (ACS) 2013-2017; Decennial Census, 1990, 2000, and 2010.

Segregation/Integration

Data in this section is sourced from American Community Survey and the Brown Longitudinal Tract Database (LTDB) (originally from Decennial Census, 1990, 2000, and 2010). All current race/ethnicity, national origin and housing tenure data have been updated to 2013-2017 ACS Estimates. Index values measuring segregation are based on formulas from the Census's Measures of Residential Segregation.² Past index values are from LTDB, while current index values are based on ACS data.

Data Source: American Community Survey (ACS) 2013-2017; Decennial Census, 2010; Brown Longitudinal Tract Database (LTDB) based on Decennial Census data, 1990, 2000, and 2010.

¹ [https://files.hudexchange.info/resources/documents/AFFH-T-Data-Documentation-\(AFFHT0004a\)-March-2018.pdf](https://files.hudexchange.info/resources/documents/AFFH-T-Data-Documentation-(AFFHT0004a)-March-2018.pdf)

² https://www.census.gov/hhes/www/housing/resseg/pdf/app_b.pdf

Dissimilarity Index³

1. Dissimilarity Index

Summary

The dissimilarity index (or the index of dissimilarity) is a commonly used measure of community-level segregation. The dissimilarity index represents the extent to which the distribution of any two groups (frequently racial or ethnic groups) differs across census tracts or block groups. It is calculated as:

$$D_j^{WB} = 100 * \frac{1}{2} \sum_{i=1}^N \left| \frac{W_i}{W_j} - \frac{B_i}{B_j} \right|$$

Where i indexes census block groups or tracts, j is the j th jurisdiction, W is group one and B is group two, and N is the number of block groups or tracts i in jurisdiction j .

Interpretation

The values of the dissimilarity index range from 0 to 100, with a value of zero representing perfect integration between the racial groups in question, and a value of 100 representing perfect segregation between the racial groups. The following is one way to understand these values:

Measure	Values	Description
Dissimilarity Index	<40	Low Segregation
[range 0-100]	40-54	Moderate Segregation
	>55	High Segregation

Isolation Index

Summary

The Isolation Index measures “measures the extent to which minority members are exposed only to one another and is computed as the minority-weighted average of the minority proportion in each area.”⁴ In the formula below, n = the number of tracts in the jurisdiction, x_i = the group population in tract i , X = the total population of the group in the jurisdiction, and t_i = the total population of a tract.

$$\sum_{i=1}^n \left[\left(\frac{x_i}{X} \right) \left(\frac{x_i}{t_i} \right) \right]$$

Interpretation

The higher the isolation value, the more isolated the group is to other groups. A higher isolation value indicates higher levels of segregation.

Exposure Index

³ This screenshot was taken from the AFFH-T documentation (footnote 1). Screenshots for the Isolation and Exposure Indices were taken from the Measures of Residential Segregation document (footnote 2).

⁴ https://www.census.gov/hhes/www/housing/resseg/pdf/app_b.pdf

Summary

The Exposure (also known as Interaction) Index measures “the probability[y] that a minority person shares a unit area with a majority person or with another minority person.”⁵ In the formula below, n = the number of tracts in the jurisdiction, x_i = the group population in tract i, X = the total population of the group in the jurisdiction, y_i = the population of another group in tract i, and t_i = the total population of a tract.

$$\sum_{i=1}^n \left[\left(\frac{x_i}{X} \right) \left(\frac{y_i}{t_i} \right) \right]$$

Interpretation

The higher the exposure value, the more exposure one group has to another. Higher exposure values indicate lower levels of segregation.

Racially or Ethnically Concentrated Areas of Poverty

Racially or Ethnically Concentrated Areas of Poverty (hereafter referred to as R/ECAPs) indicate areas in a jurisdiction which have both higher concentrations of minority groups and higher poverty levels. The formula below indicates the threshold used for the Twin Cities Region to determine if a census tract qualifies as a R/ECAP: a tract must have a non-White population of 50% or higher, and a poverty rate of above 40%.

$$\frac{R}{ECAP}_i = \text{yes...if...} \left\{ \begin{array}{l} PovRate_i \geq 0.4 \\ \cap \left[\frac{(Pop_i - NHW_i)}{Pop_i} \right] \geq 0.50 \end{array} \right.$$

Current maps have been updated to reflect R/ECAPs and current compositions of tracts based on ACS 2013-2017 Estimates, but trends maps are taken directly from the AFFH-T tool.

Data Source: American Community Survey (ACS) 2013-2017; Decennial Census, 2010; Brown Longitudinal Tract Database (LTDB) based on Decennial Census data, 1990, 2000, and 2010.

⁵ https://www.census.gov/hhes/www/housing/resseg/pdf/app_b.pdf

Disproportionate Housing Needs

All data in the Disproportionate Housing Needs section is taken directly from HUD's Comprehensive Housing Affordability Strategy (CHAS) figures, unless otherwise indicated. This data is based on custom tabulations of American Community Survey data. The latest data available, which is used in this document, is CHAS 2012-2016 5-year average data.

The maps in this section indicate the percentage of households in a tract experiencing housing problems. Race/ethnicity and national origin overlays based on ACS 2013-2017 Estimates are also used.

Data Source: Comprehensive Housing Affordability Strategy (CHAS), 2013-2017; American Community Survey (ACS) 2013-2017.

Disparities in Access to Opportunity

The data in this section is the biggest departure from the data used in the HUD AFFH-T documentation. The reasons for this vary – some data sources were unable to be updated, were no longer available, or would need to be calculated for the entire nation to be scaled in the same way. As a result, some values were scaled to the Region. The Low Poverty Index was intentionally omitted from this analysis due to redundancies with the R/ECAPs section.

School Proficiency

This index uses data from the Minnesota Report Card and Minnesota Geospatial Commons. School Proficiency Index values average the percentages of fourth-grade students proficient in math and reading, respectively. In the formula below, m_i = the percentage of students proficient in math in a school district, and r_i = the percentage of students proficient in reading in a school district.

$$s_i = \frac{1}{2}m_i + \frac{1}{2}r_i$$

Data limitations meant that the smallest unit possible for which to determine an index value was the school district, rather than the census tracts used in other indices.

Data Sources: 2019 Minnesota Report Card; Minnesota Geospatial Commons; 2013-2017 ACS Estimates.

Environmental Health Index

The Environmental Health Index averages respiratory and neurological and for a given tract, which are then scaled to the entire Region. In the formula below, r_i = respiratory risk, scaled 0-100 for the Region and n_i = neurological risk, scaled 0-100 for the Region.

$$envirohealth_i = 100 - \frac{1}{2}r_i + \frac{1}{2}n_i$$

A higher index value indicates higher levels of environmental health for a tract, based on these factors.

Data Sources: National Air Toxics Assessment (NATA) data, 2014; 2013-2017 ACS Estimates.

Labor Market Engagement

The Labor Market Engagement Index measures the relative strength of labor market engagement, based on the unemployment rate and labor-force participation rate. In the formula below, u_i = the unemployment rate and l_i = the labor-force participation rate. This formula intentionally omits the percent of population with a bachelor's degree or higher, which was included in the original HUD AFFH-T data, because, although a meaningful indicator of social capital, the inclusion of educational attainment in the Labor Market Engagement Index is not intuitive and has the potential to confuse readers. This index was not scaled for the Region.

$$labormarketengagement_i = (-1 * u_i) + l_i$$

A higher index value indicates stronger labor market engagement.

Data Sources: 2013-2017 ACS Estimates.

Low Transportation Cost

This index scales transportation costs for a 3-person, single-parent family at 50% AMI. A higher index value indicates lower transportation costs.

Data Source: Location Affordability Index (LAI) data, Version 3.0 (based on 2012-2016 ACS Estimates); 2013-2017 ACS Estimates.

Transit Trips

This index scales the number of transit trips taken by a 3-person, single-parent family at 50% AMI. A higher index value indicates a higher number of transit trips.

Data Source: Location Affordability Index (LAI) data, Version 3.0 (based on 2012-2016 ACS Estimates); 2013-2017 ACS Estimates.

Computing Indices by Protected Class⁶

The AFFH-T provides index values documenting the extent to which members of different racial or ethnic groups have access or exposure to particular opportunity indicators. The AFFH-T provides a weighted average for a given protected characteristic. The generic access for subgroup M to asset dimension R in jurisdiction j is calculated as:

$$Index_M^R = \sum_i^N \frac{M_i}{M_j} * R_i$$

Where i indicates Census tracts in jurisdiction j for subgroup M to dimension R . N is the total number of Census tracts in jurisdiction j .

It is useful to provide an example of this in practice (Table 2). Consider Jurisdiction X with a total of three neighborhoods (A, B, and C). Each neighborhood has an index score representing the prevalence of poverty within that neighborhood (Column 1), with higher values representing lower levels of poverty. To compute the index value for a particular protected class, such as White or Black individuals, the values are weighted based on the distribution of that subpopulation across the three neighborhoods. For example, 40% of the jurisdiction's White population lives in neighborhood A, so the index value for neighborhood A represents 40% of the composite index value for the White population in the jurisdiction. The values for neighborhoods B and C are weighted at 40% and 20% respectively, based on the share of White individuals living in those neighborhoods, leading to a final weighted low poverty index for the White population in the jurisdiction of 56.

Neighborhood	Dimension	White			Black		
	Low Poverty Index	white pop	%white of total pop	Index for whites [(1)*(3)]	black pop	%black of total pop	Index for blacks [(1)*(6)]
A	80	400	40%	32	100	20%	16
B	50	400	40%	20	150	30%	15
C	20	200	20%	4	250	50%	10
Total		1000	100%	56	500	100%	41

Disability

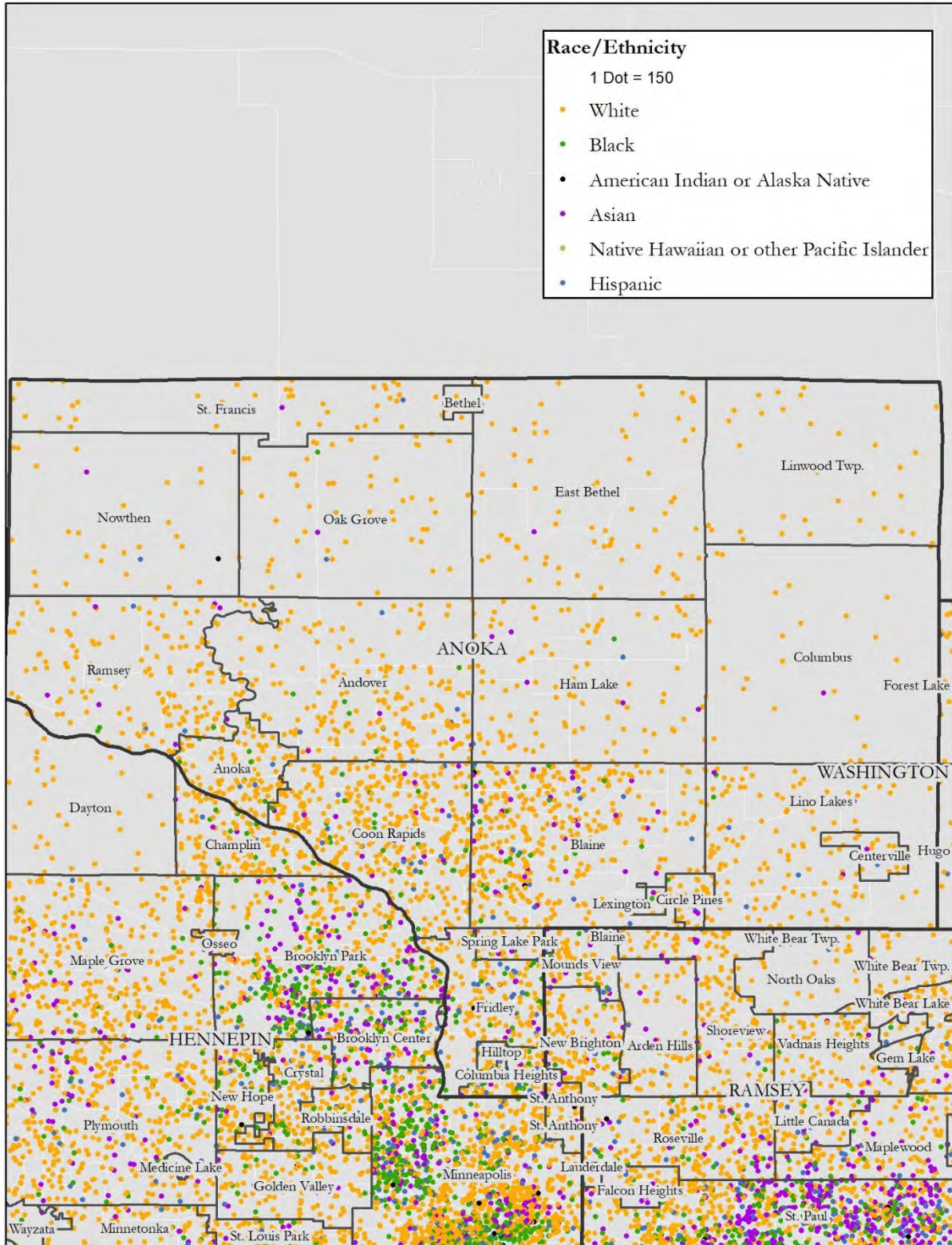
All data in the Disability section is sourced from American Community Survey, 2013-2017 Estimates, unless otherwise indicated.

Data Source: American Community Survey (ACS) 2013-2017.

⁶ This screenshot was taken from the AFFH-T documentation (footnote 1).

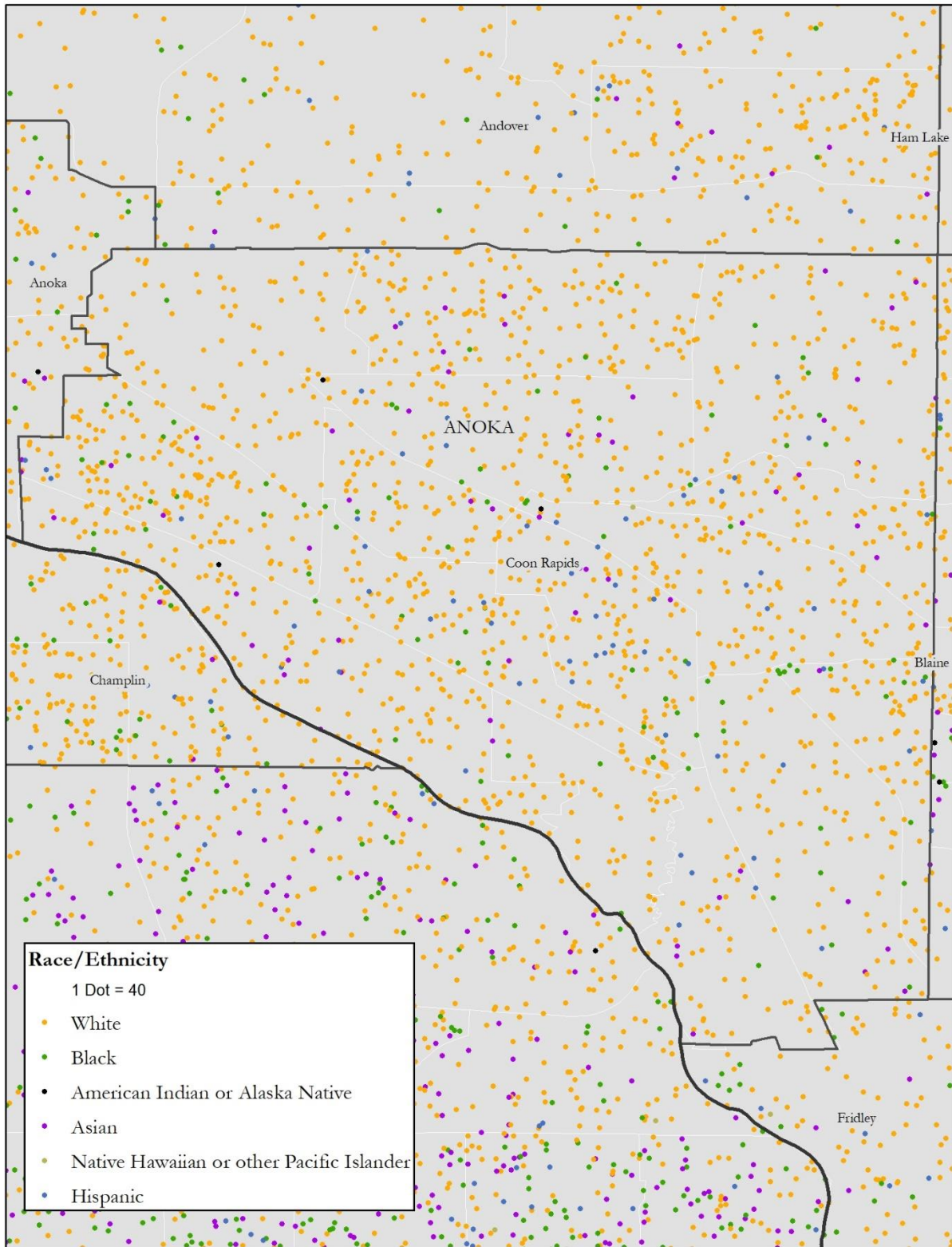
A. Segregation/Integration Appendix

Map 1: Race/Ethnicity, Anoka County⁷



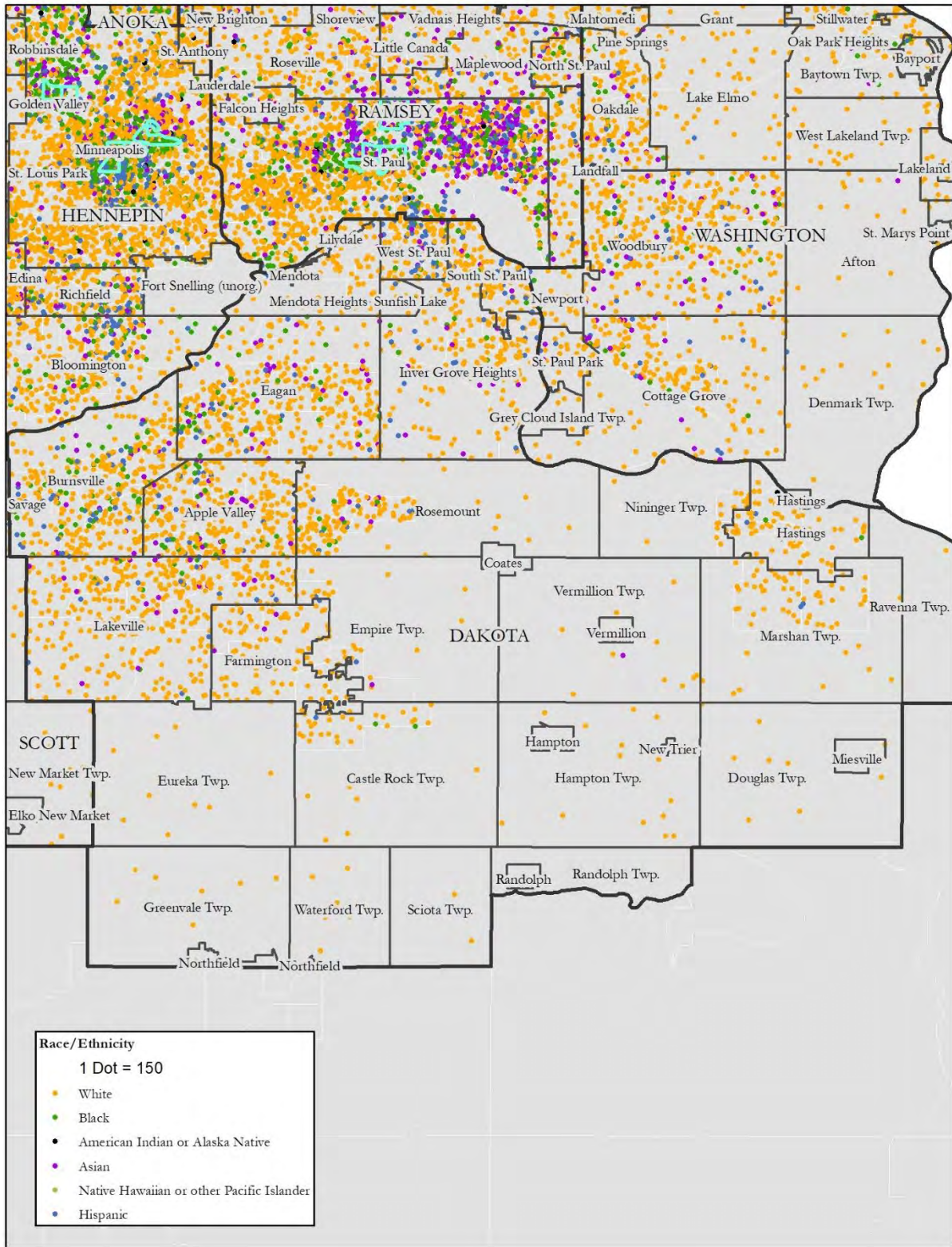
⁷ American Community Survey Estimates, 2013-2017.

Map 2: Race/Ethnicity, Coon Rapids⁸



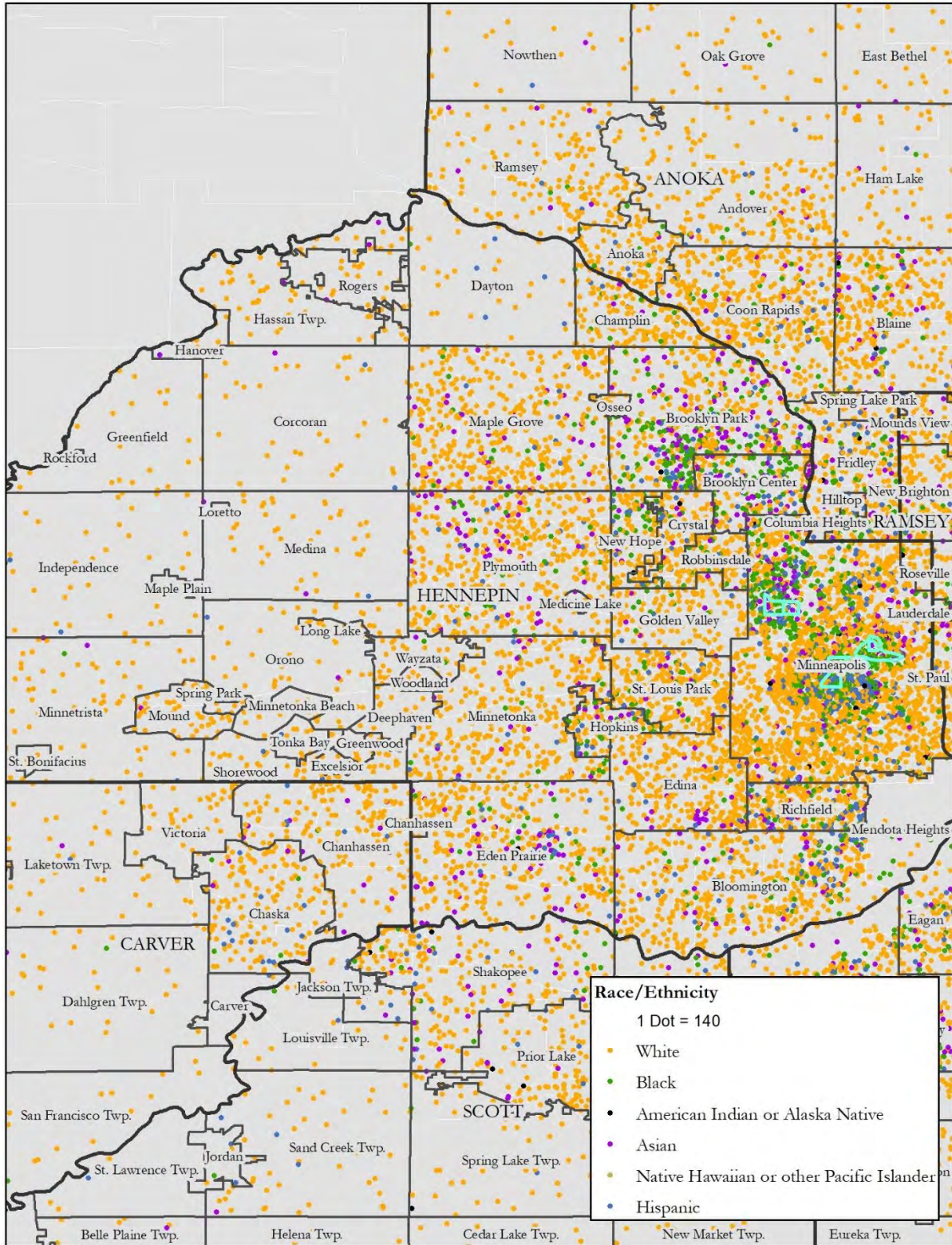
⁸ American Community Survey Estimates, 2013-2017.

Map 3: Race/Ethnicity, Dakota County⁹



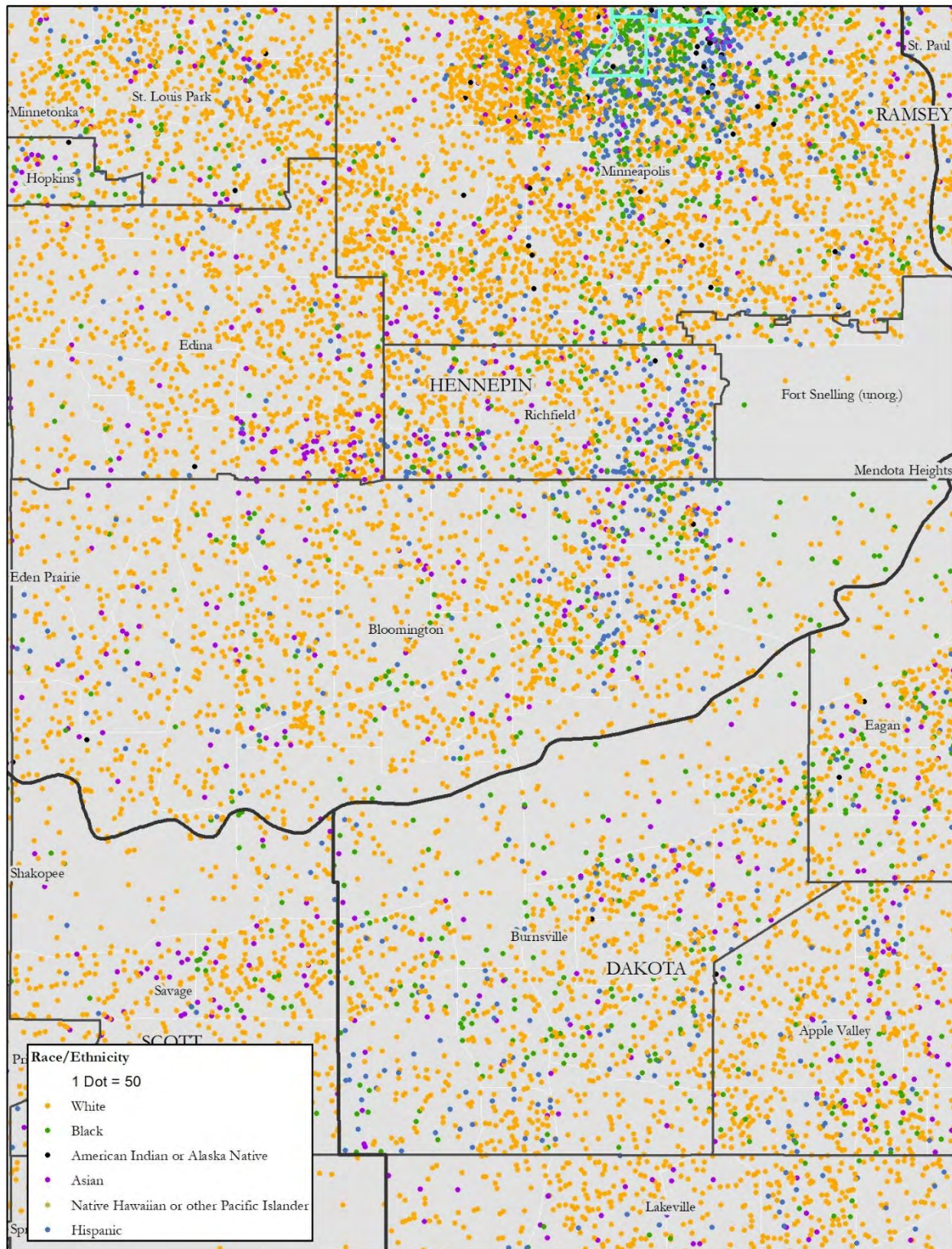
⁹ American Community Survey Estimates, 2013-2017.

Map 4: Race/Ethnicity, Hennepin County¹⁰



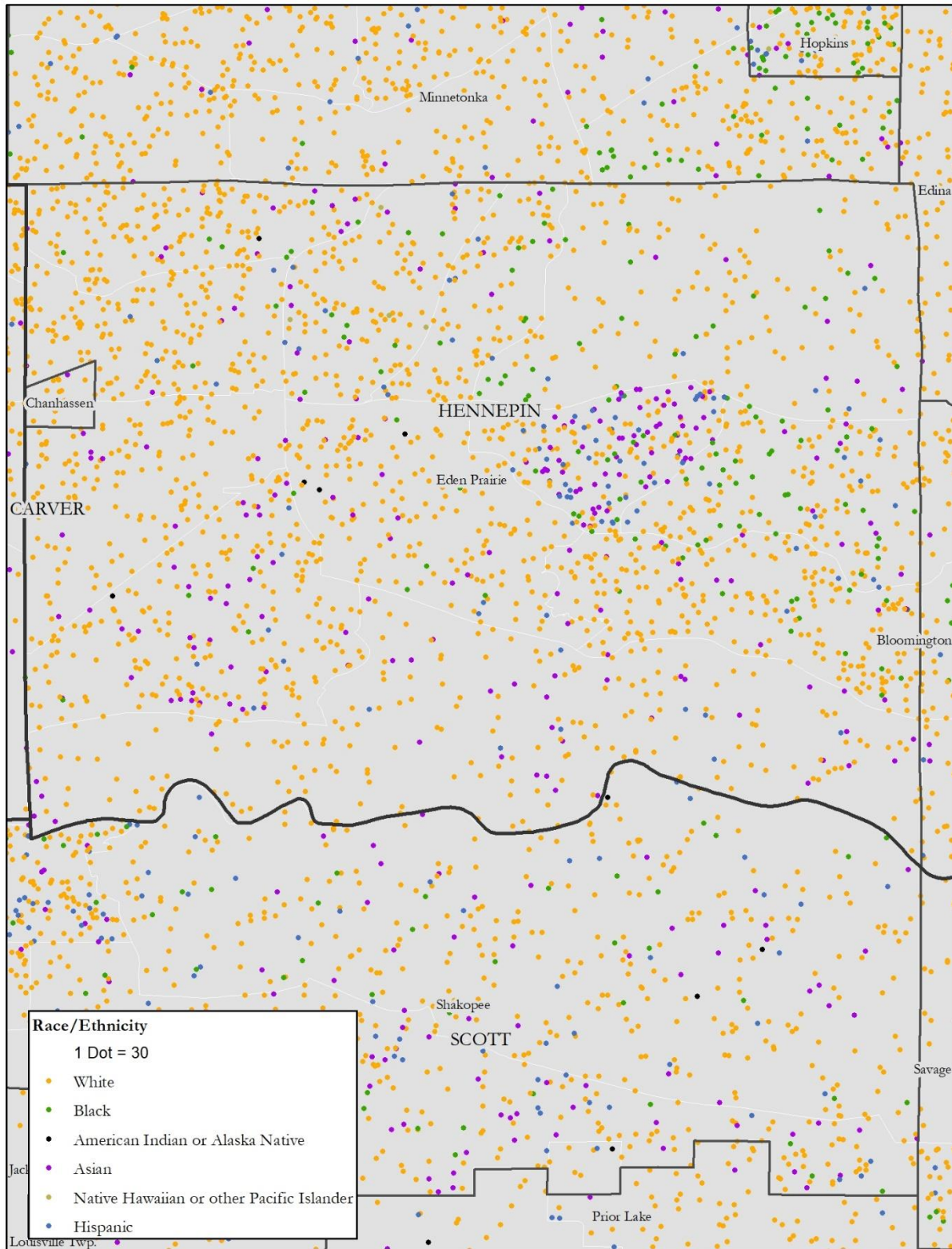
¹⁰ American Community Survey Estimates, 2013-2017.

Map 5: Race/Ethnicity, Bloomington¹¹



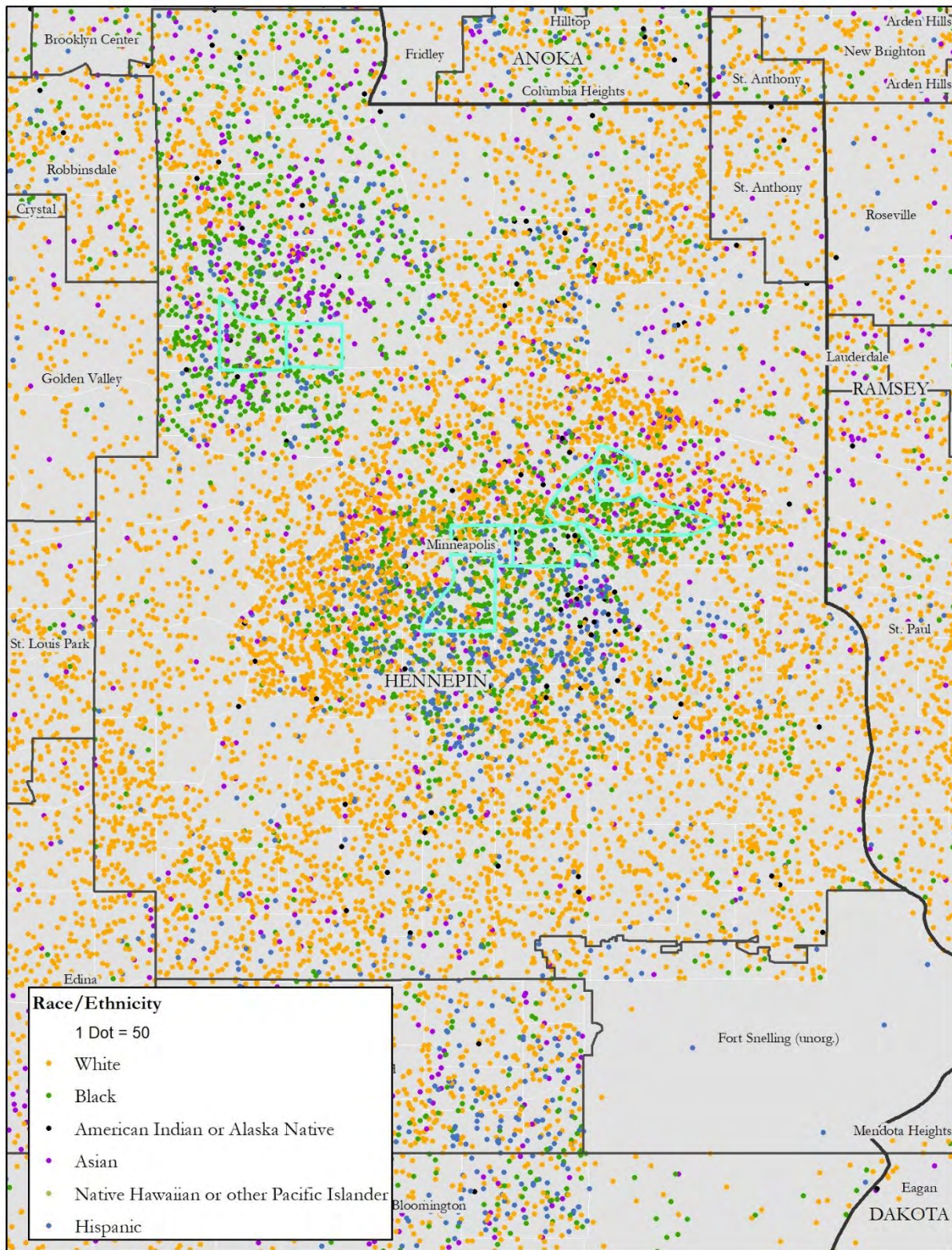
¹¹ American Community Survey Estimates, 2013-2017.

Map 6: Race/Ethnicity, Eden Prairie¹²



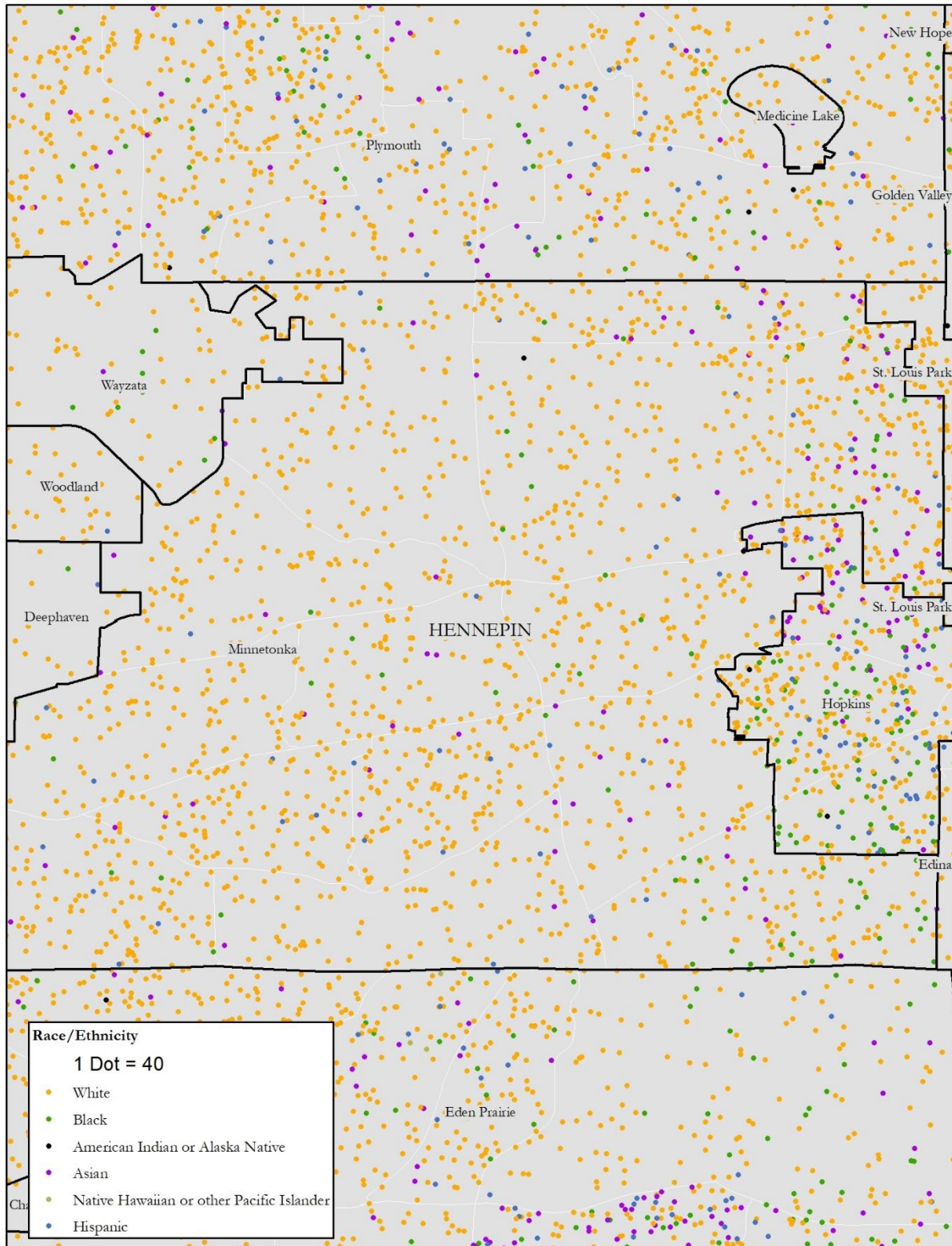
¹² American Community Survey Estimates, 2013-2017.

Map 7: Race/Ethnicity, Minneapolis¹³



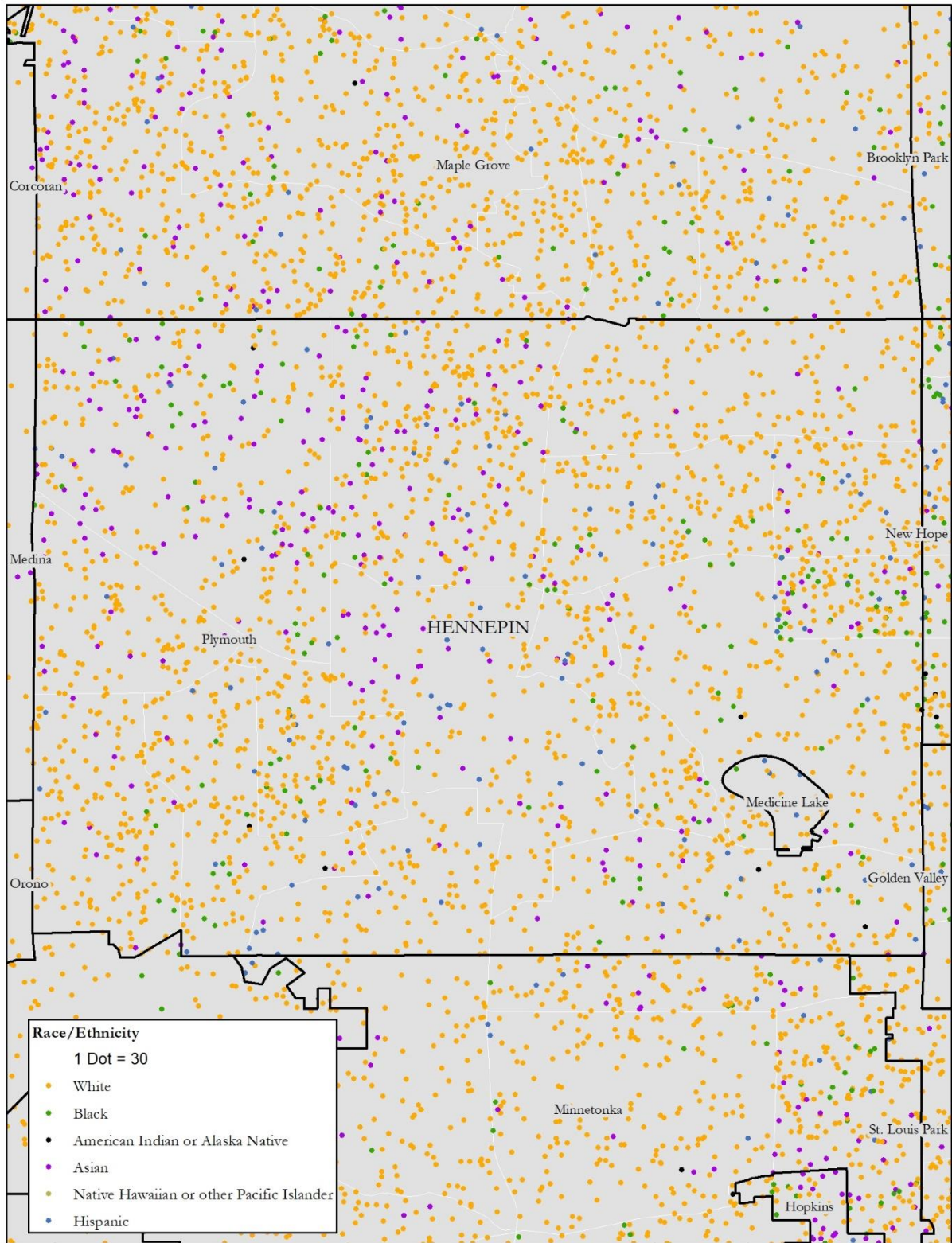
¹³ American Community Survey Estimates, 2013-2017.

Map 8: Race/Ethnicity, Minnetonka¹⁴



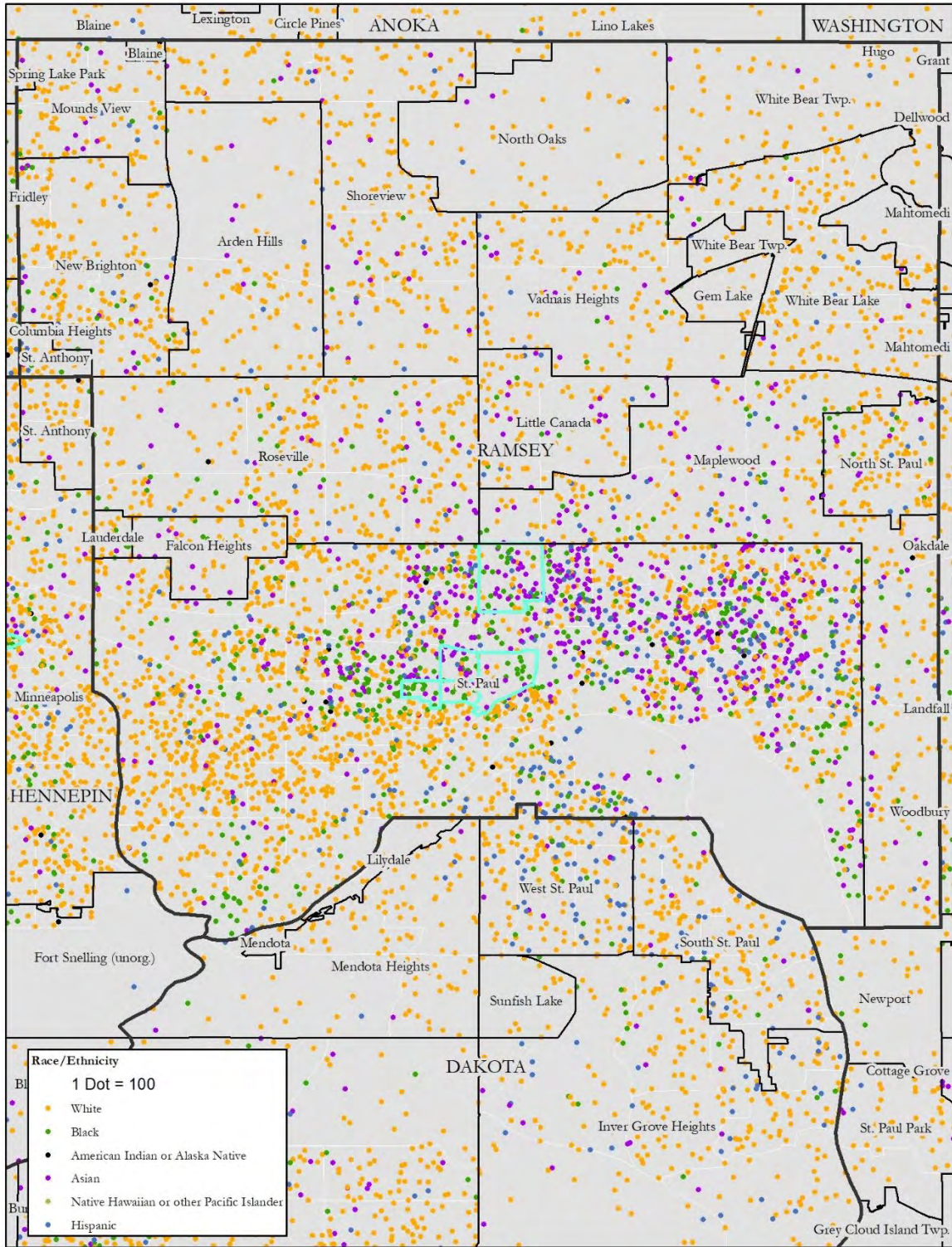
¹⁴ American Community Survey Estimates, 2013-2017.

Map 9: Race/Ethnicity, Plymouth¹⁵



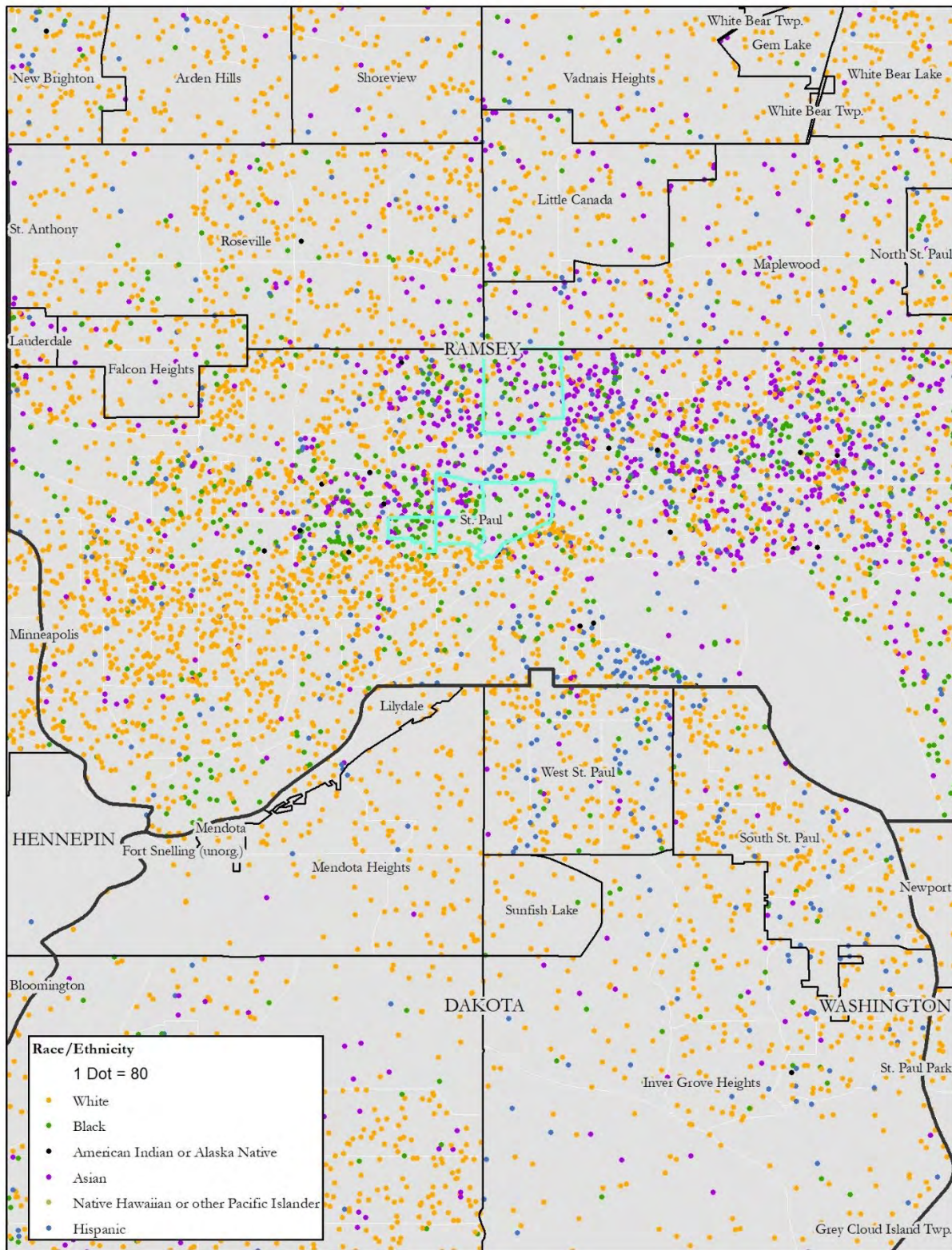
¹⁵ American Community Survey Estimates, 2013-2017.

Map 10: Race/Ethnicity, Ramsey County 16



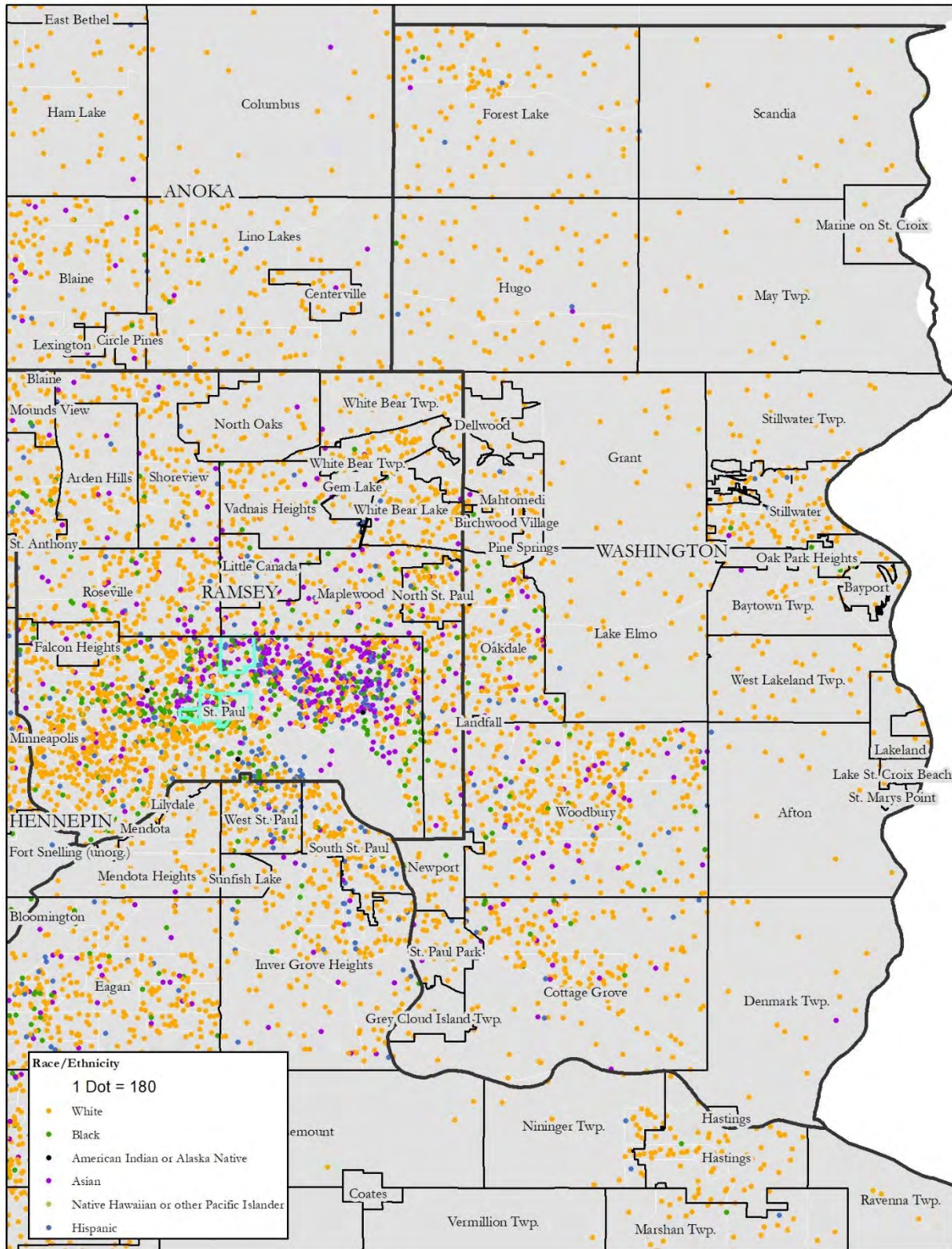
¹⁶ American Community Survey Estimates, 2013-2017.

Map 11: Race/Ethnicity, St. Paul¹⁷



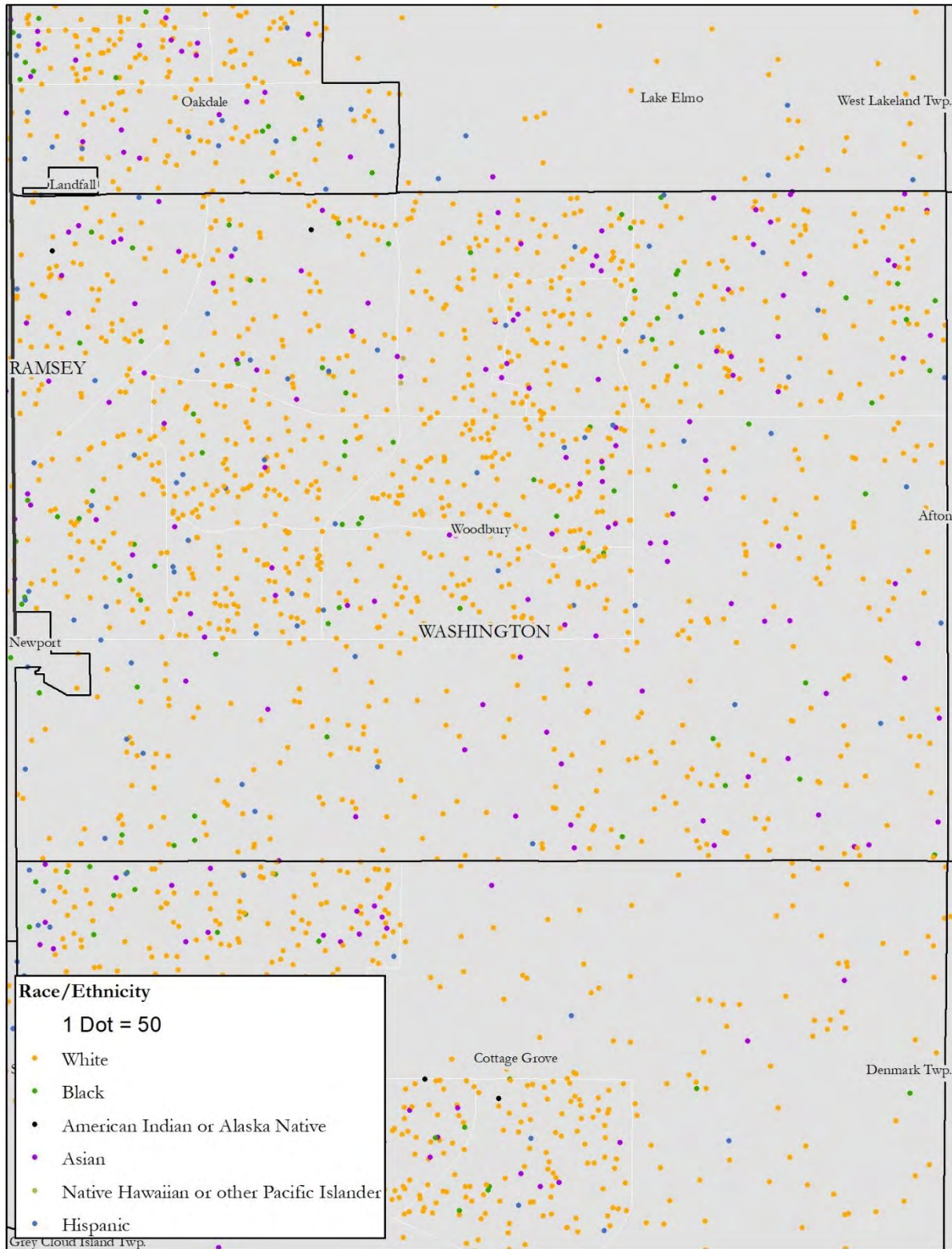
¹⁷ American Community Survey Estimates, 2013-2017.

Map 12: Race/Ethnicity, Washington County¹⁸



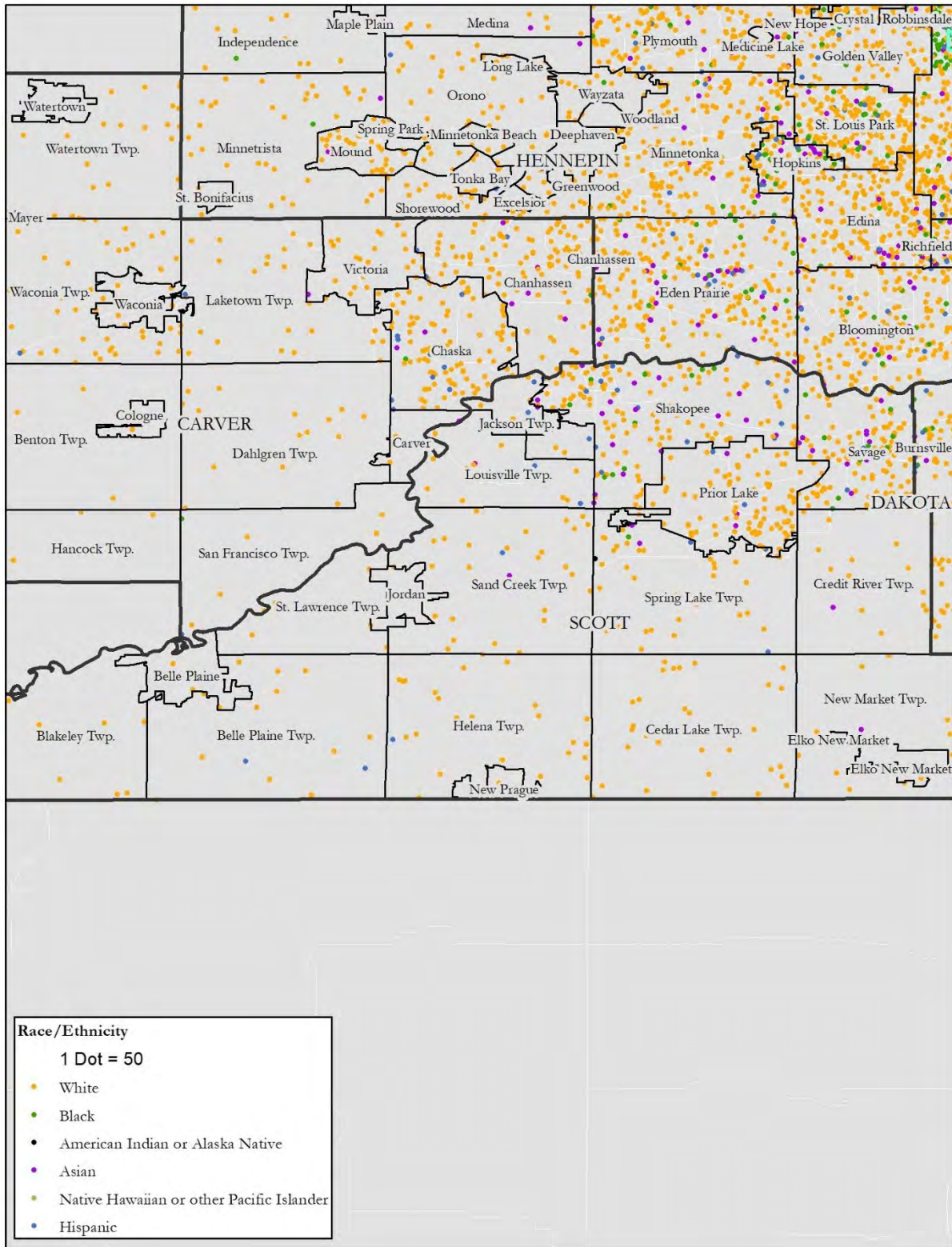
¹⁸ American Community Survey Estimates, 2013-2017.

Map 13: Race/Ethnicity, Woodbury¹⁹



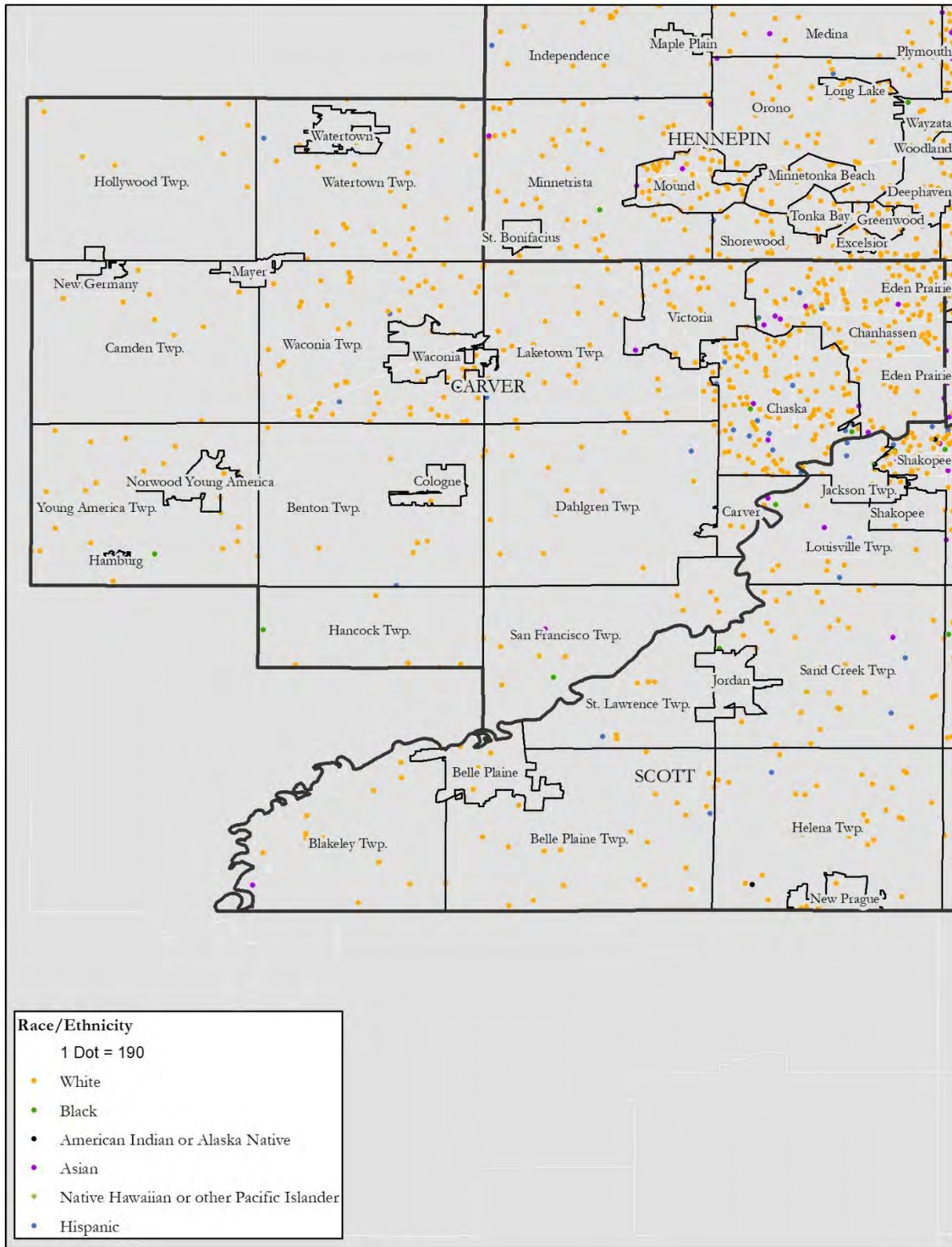
¹⁹ American Community Survey Estimates, 2013-2017.

Map 14: Race/Ethnicity, Scott County²⁰



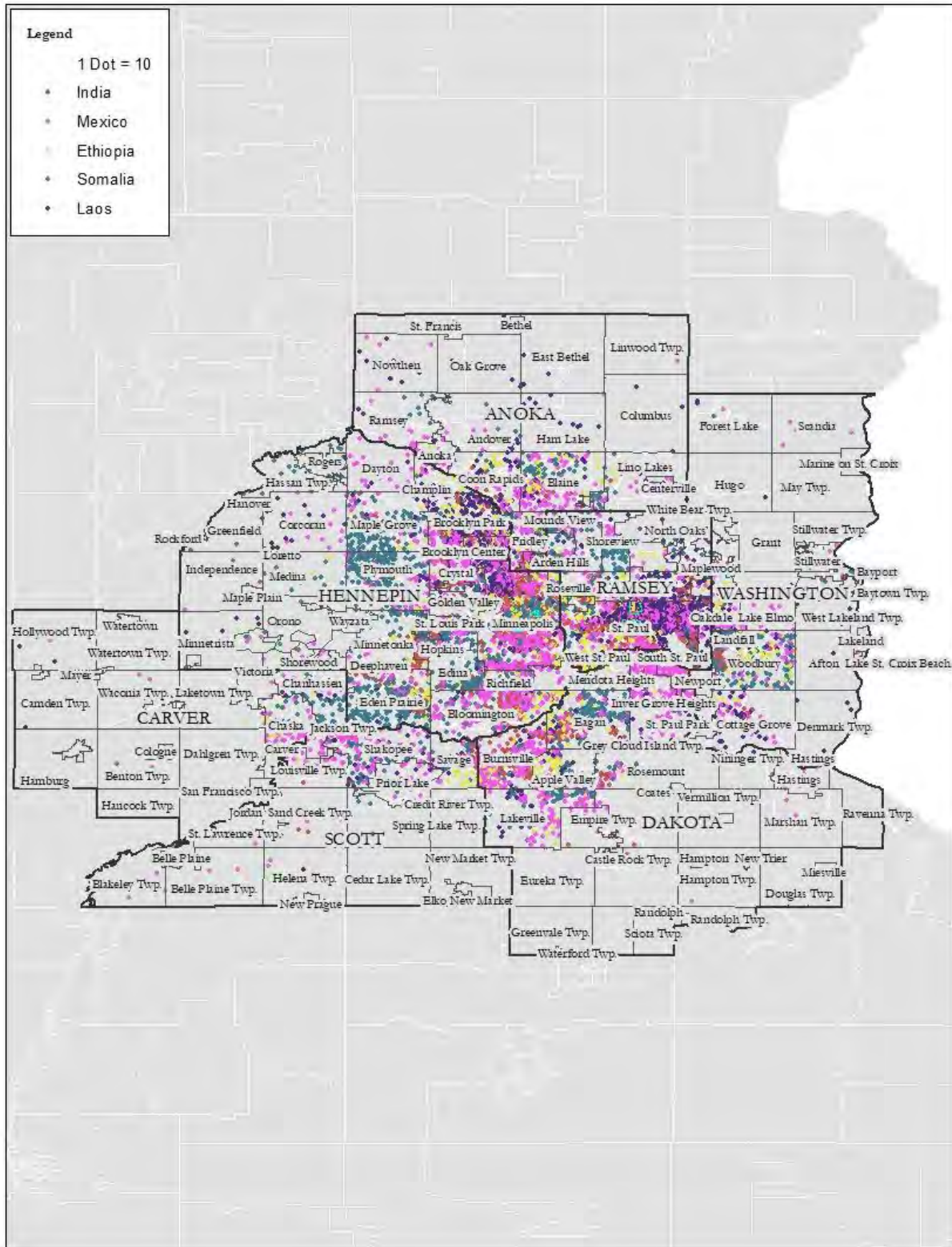
²⁰ American Community Survey Estimates, 2013-2017.

Map 15: Race/Ethnicity, Carver County²¹



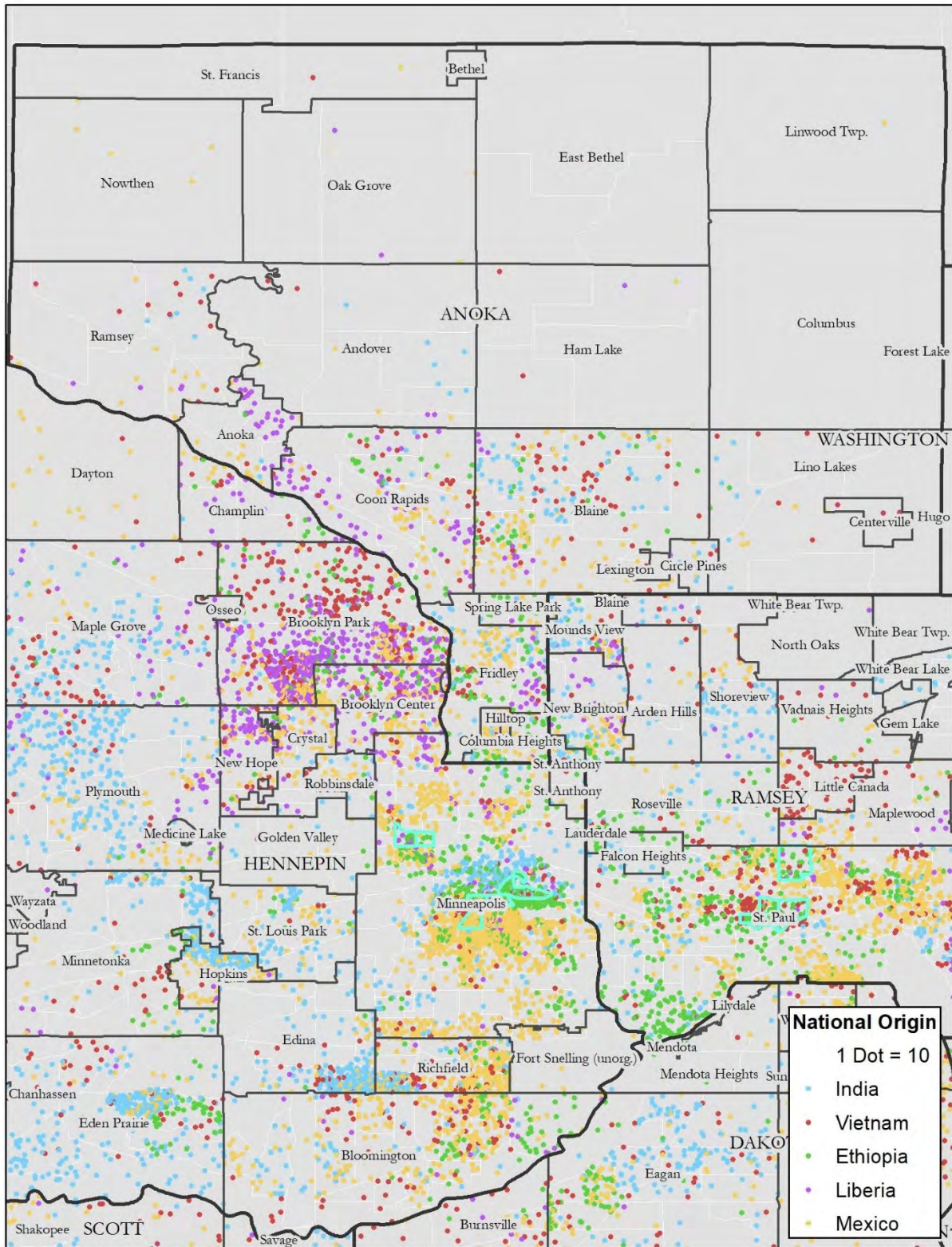
²¹ American Community Survey Estimates, 2013-2017.

Map 16: National Origin, Region²²



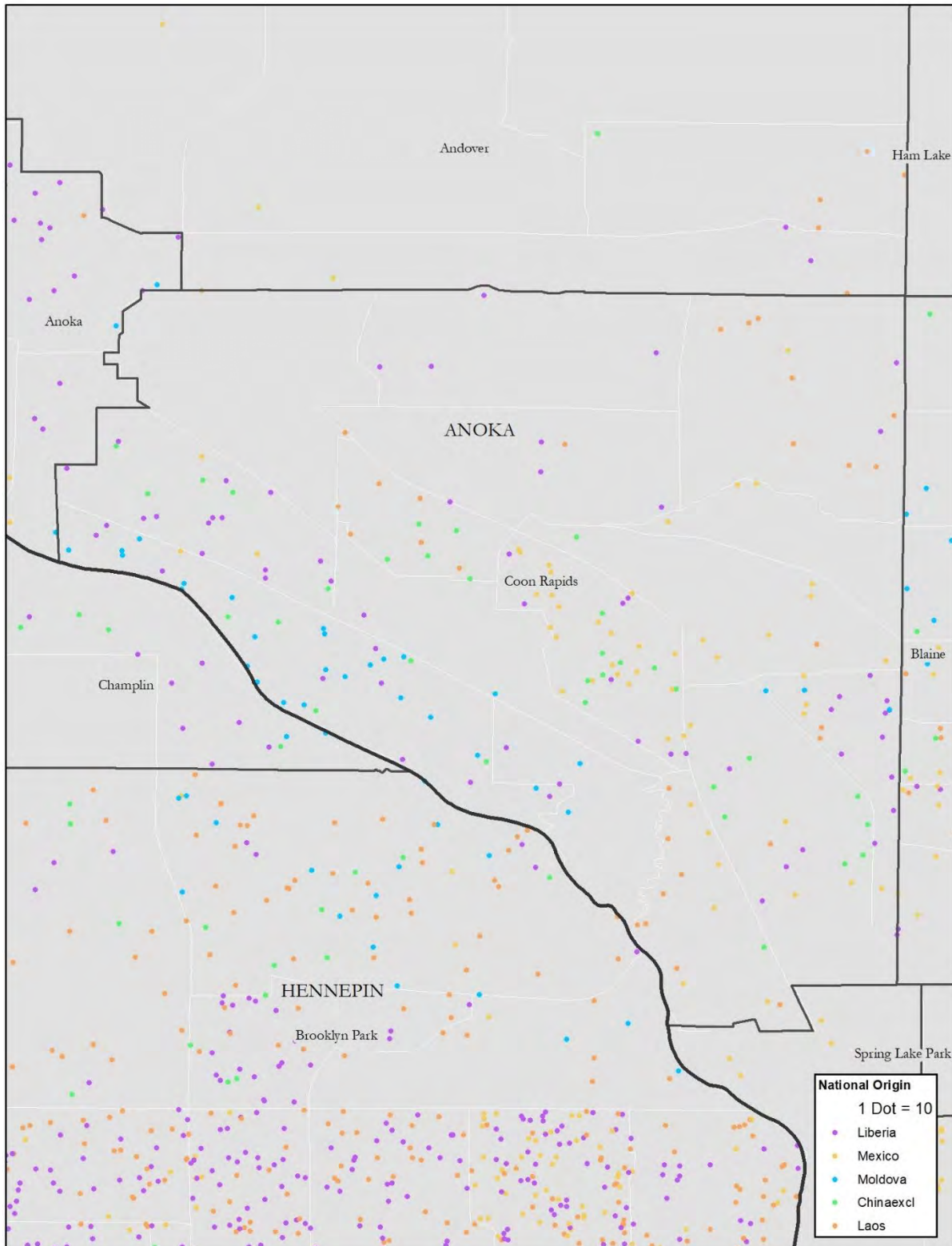
²² American Community Survey Estimates, 2013-2017.

Map 17: National Origin, Anoka County²³



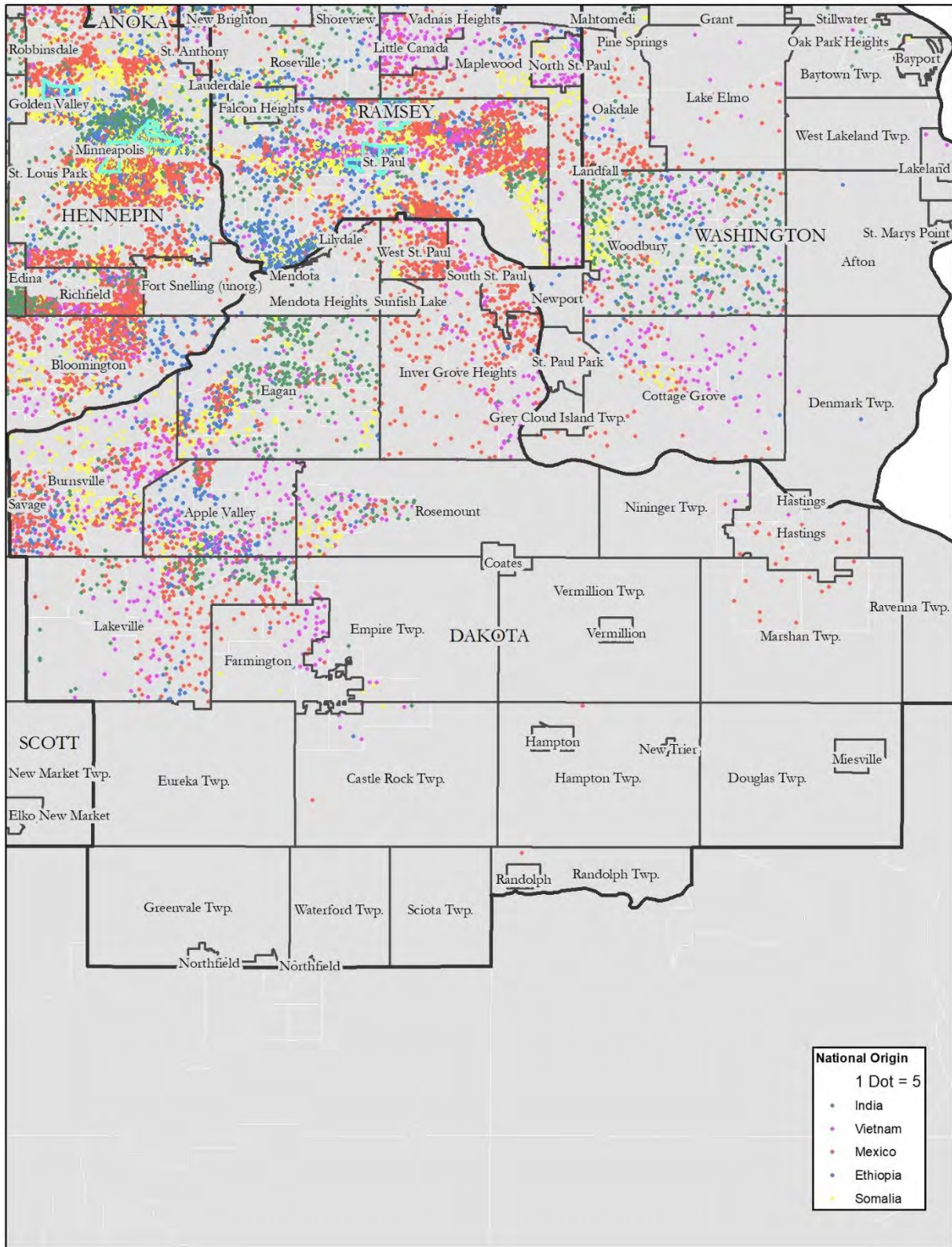
²³ American Community Survey Estimates, 2013-2017.

Map 18: National Origin, Coon Rapids²⁴



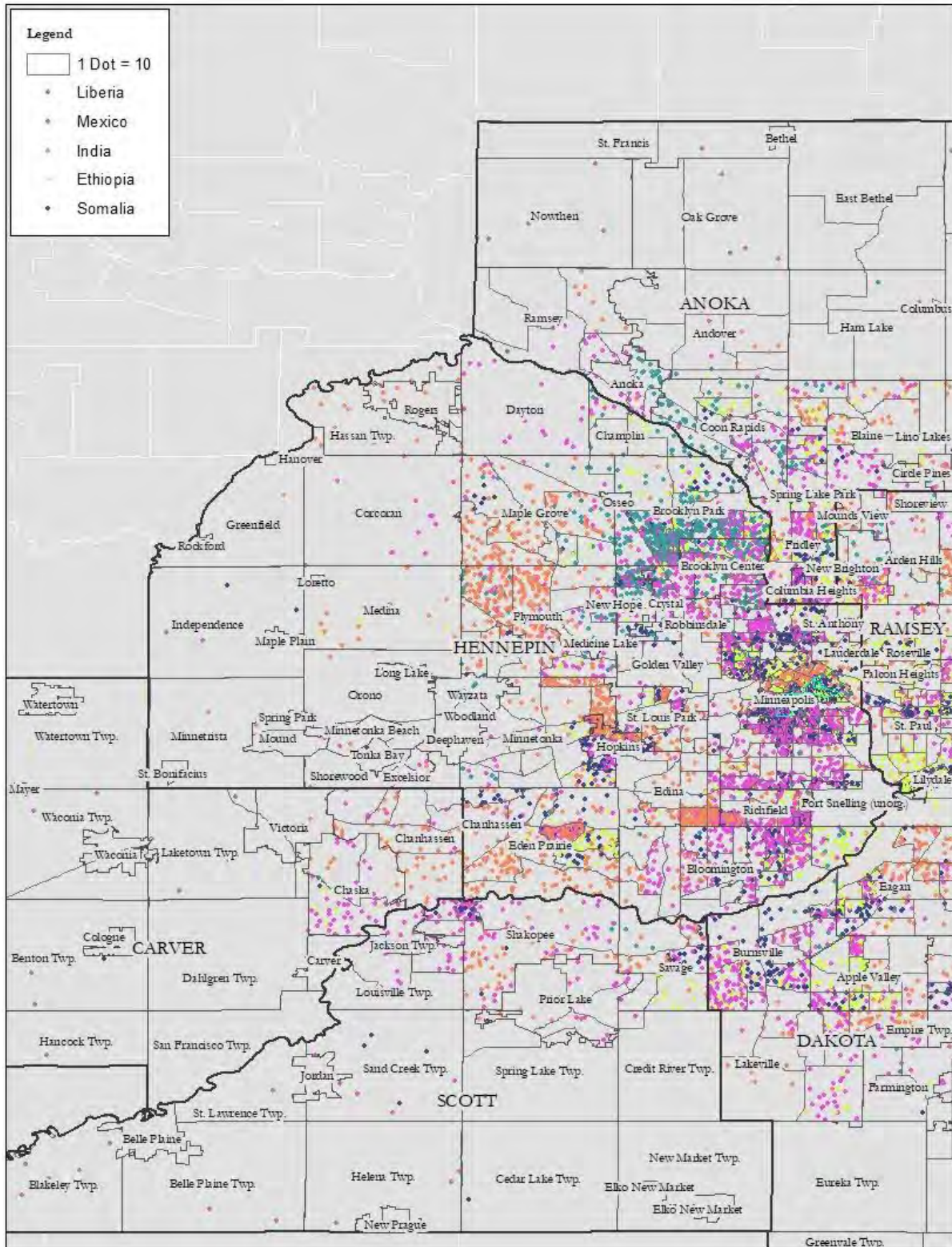
²⁴ American Community Survey Estimates, 2013-2017.

Map 19: National Origin, Dakota County²⁵



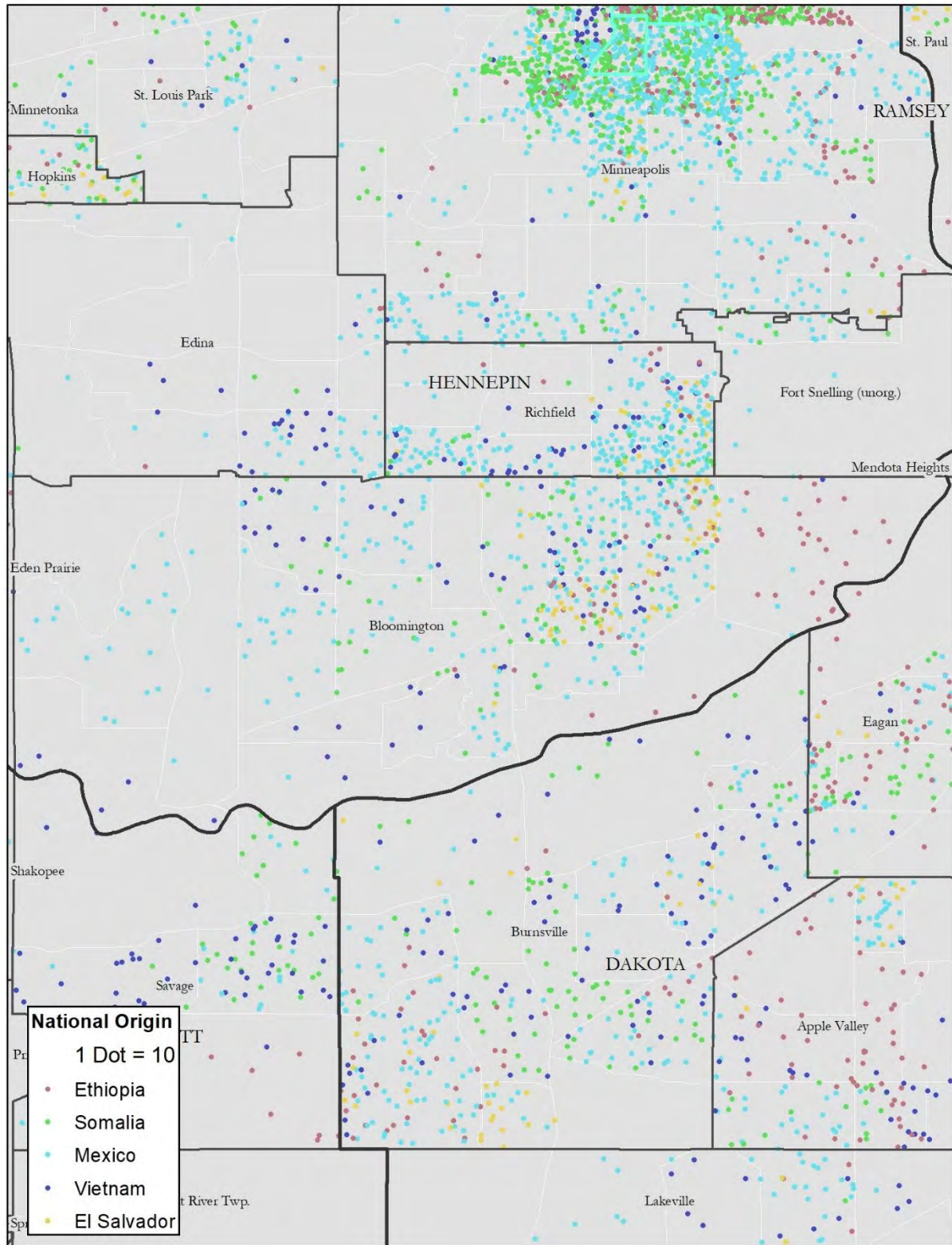
²⁵ American Community Survey Estimates, 2013-2017.

Map 20: National Origin, Hennepin County²⁶



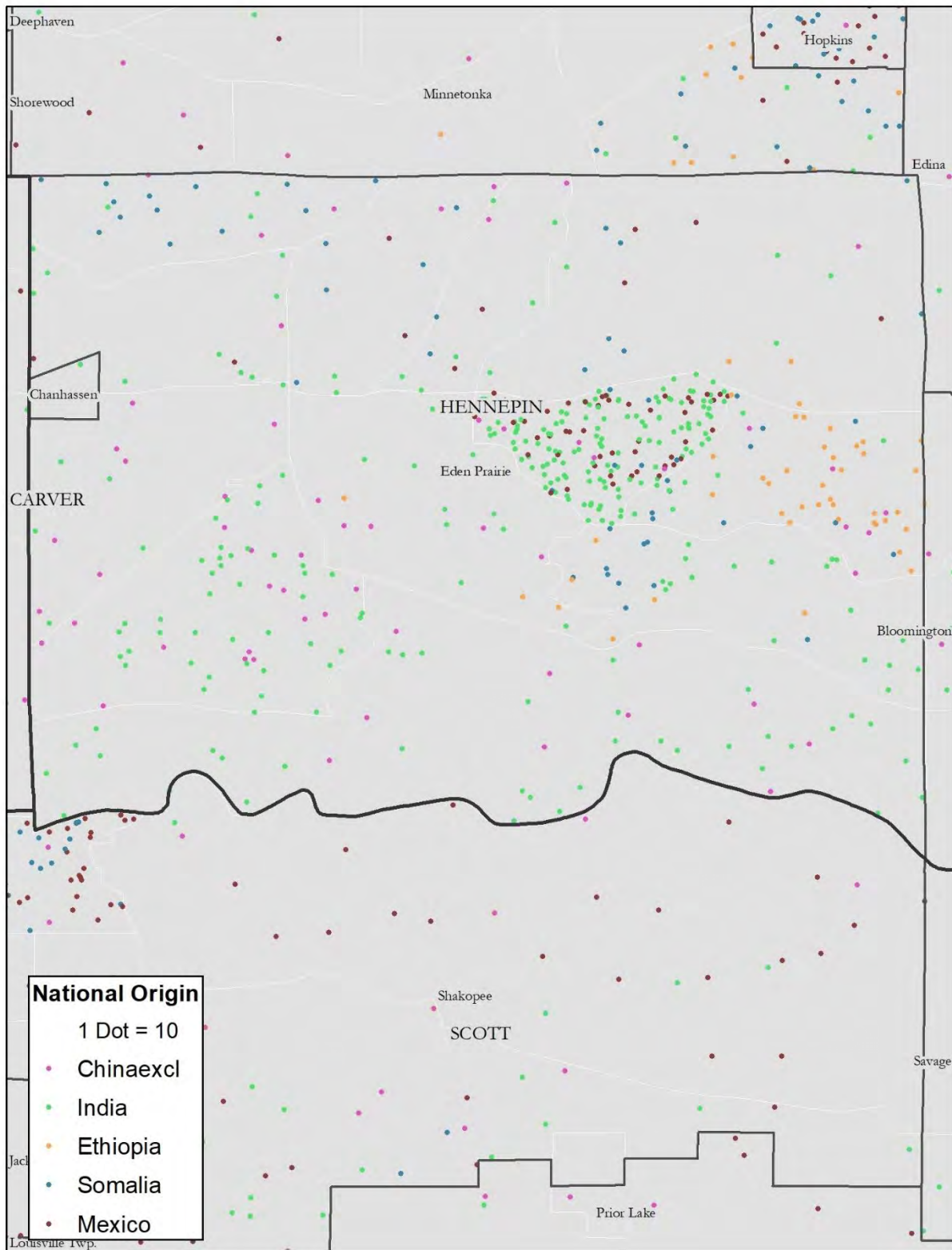
²⁶ American Community Survey Estimates, 2013-2017.

Map 21: National Origin, Bloomington²⁷



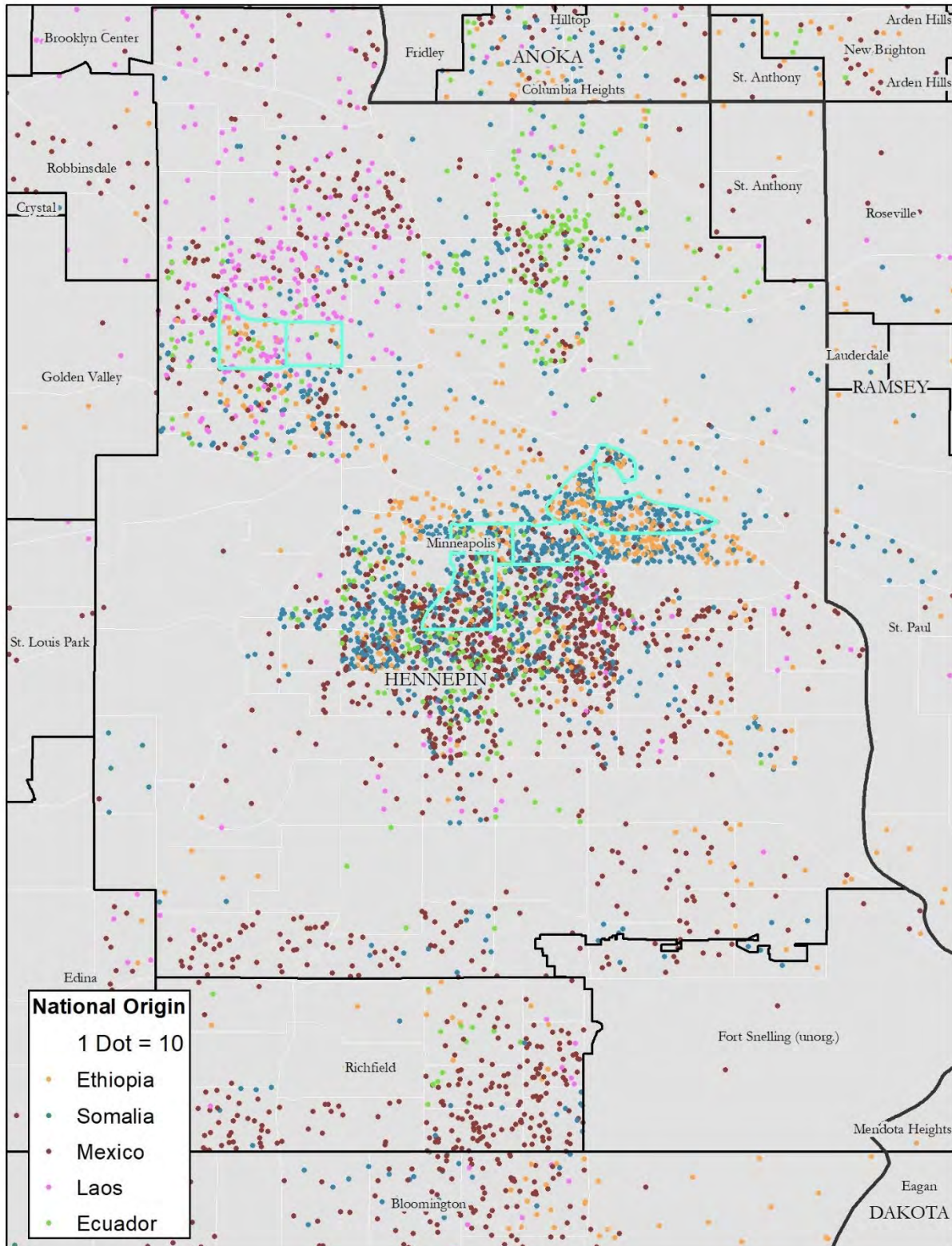
²⁷ American Community Survey Estimates, 2013-2017.

Map 22: National Origin, Eden Prairie²⁸



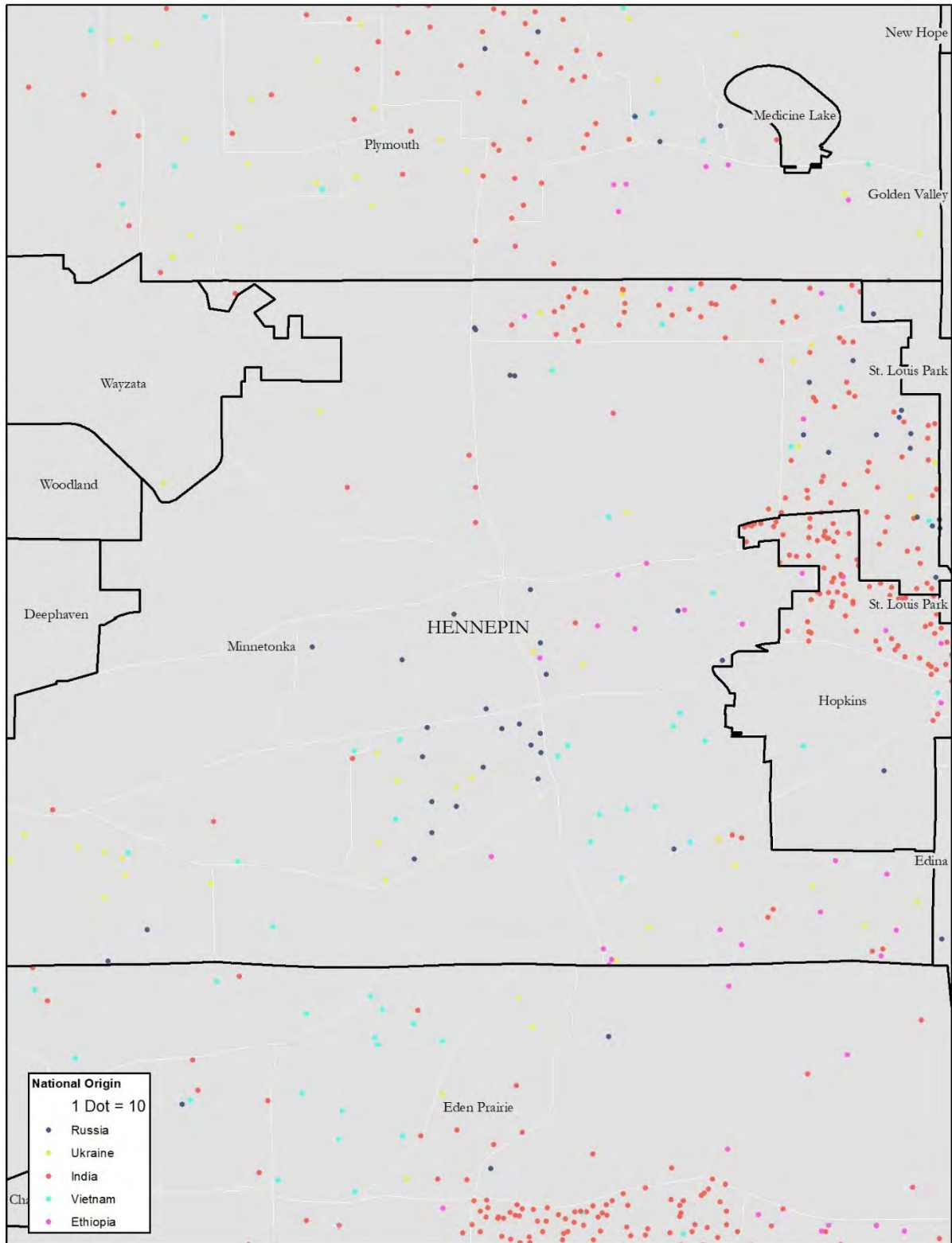
²⁸ American Community Survey Estimates, 2013-2017.

Map 23: National Origin, Minneapolis²⁹



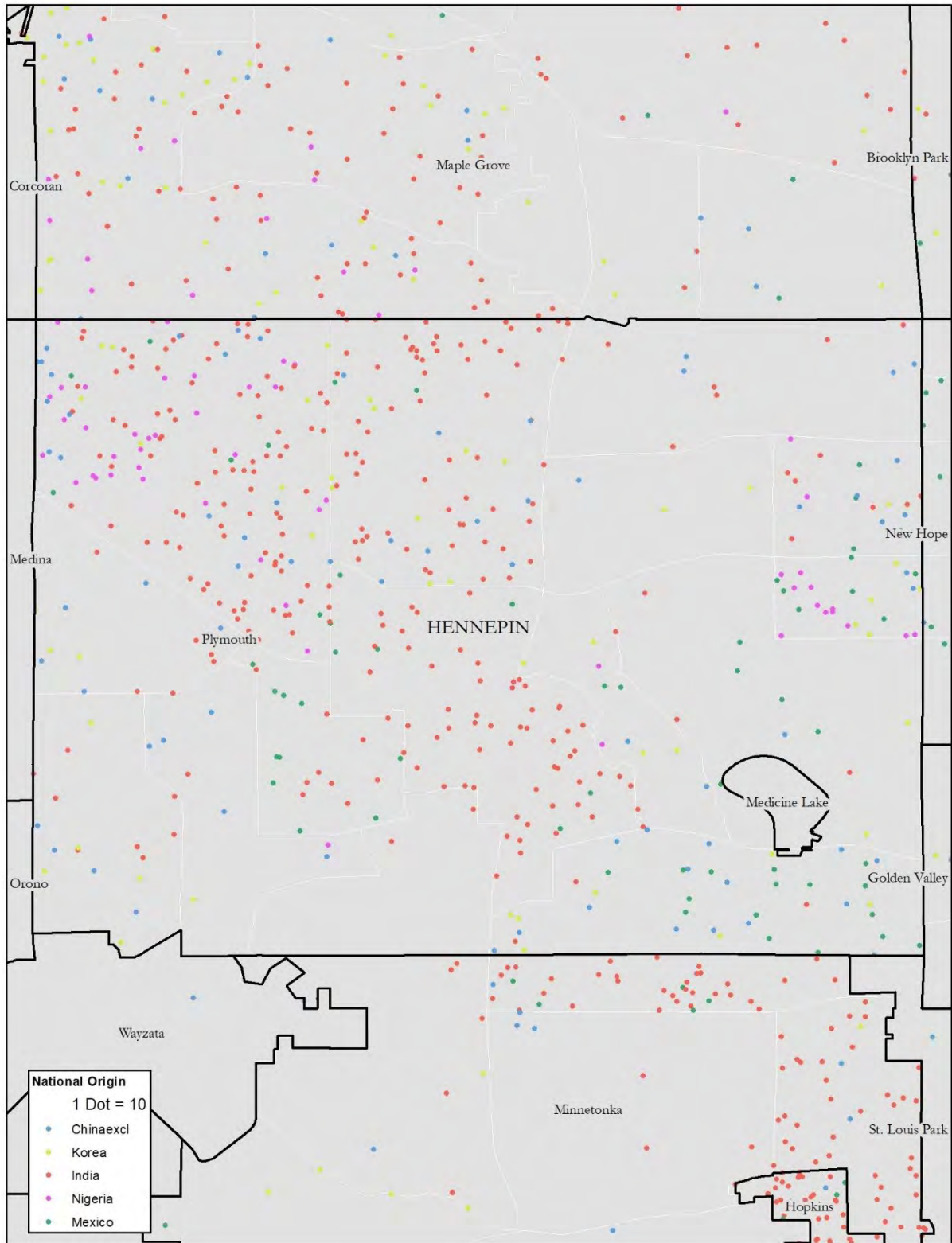
²⁹ American Community Survey Estimates, 2013-2017.

Map 24: National Origin, Minnetonka³⁰



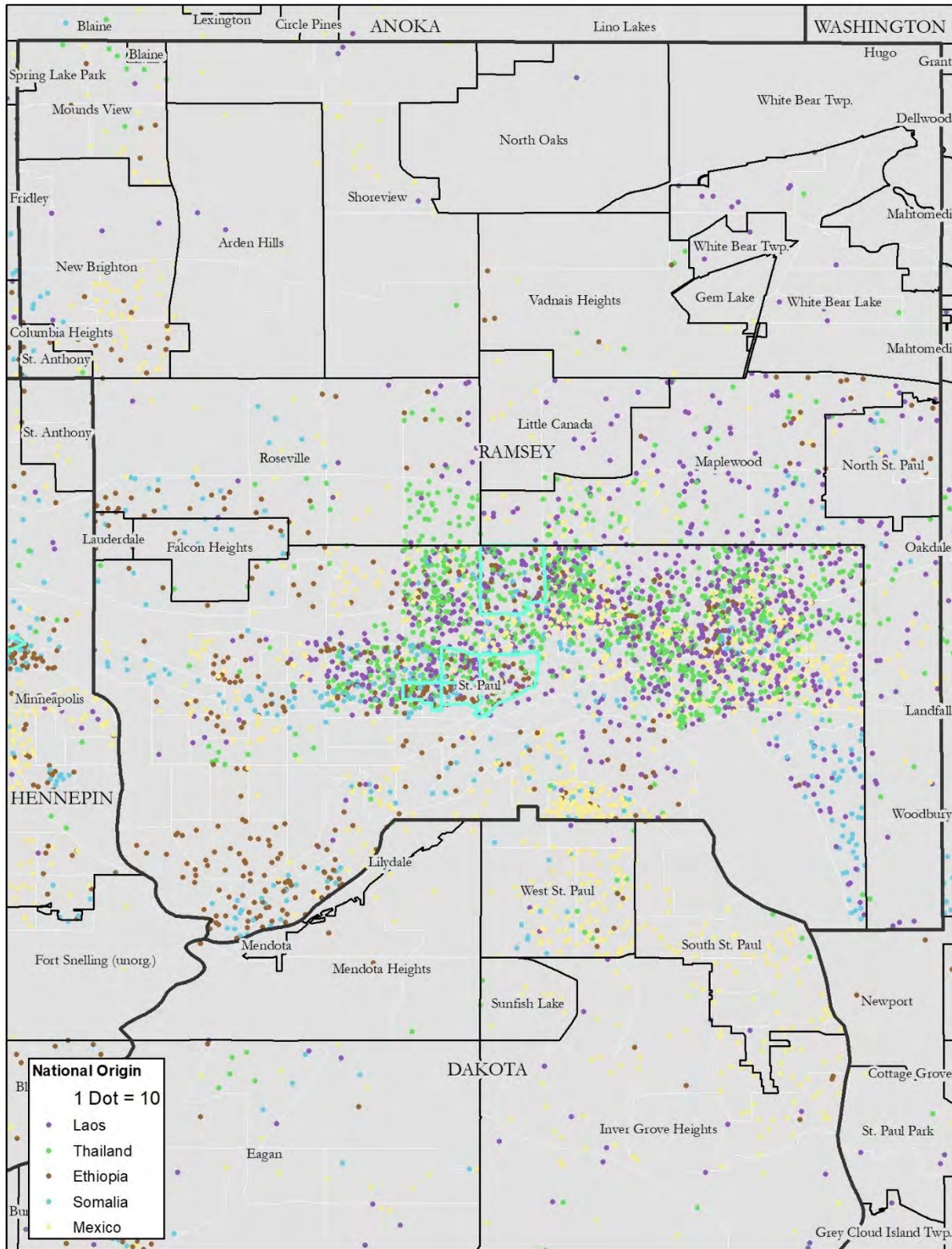
³⁰ American Community Survey Estimates, 2013-2017.

Map 25: National Origin, Plymouth³¹



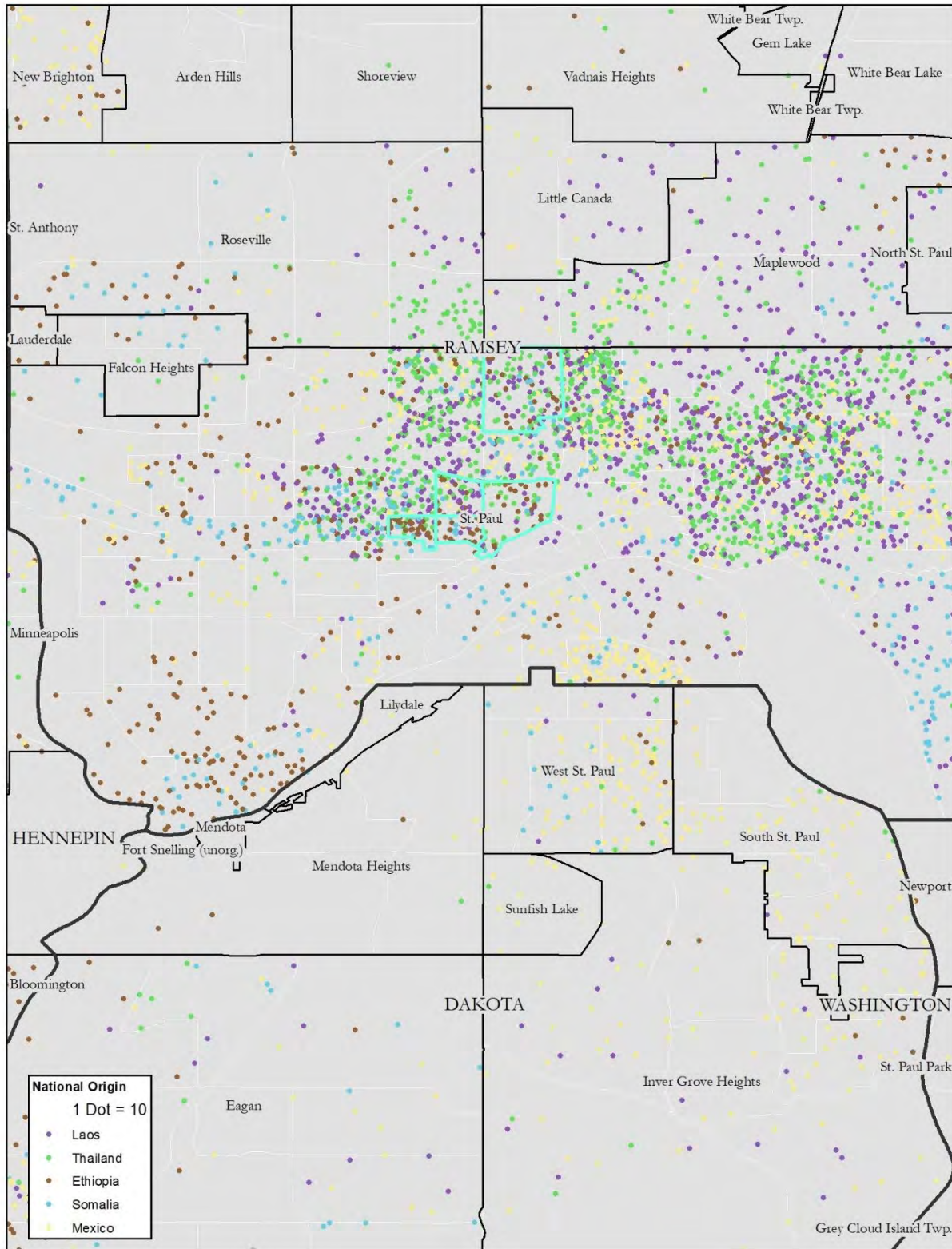
³¹ American Community Survey Estimates, 2013-2017.

Map 26: National Origin, Ramsey County³²



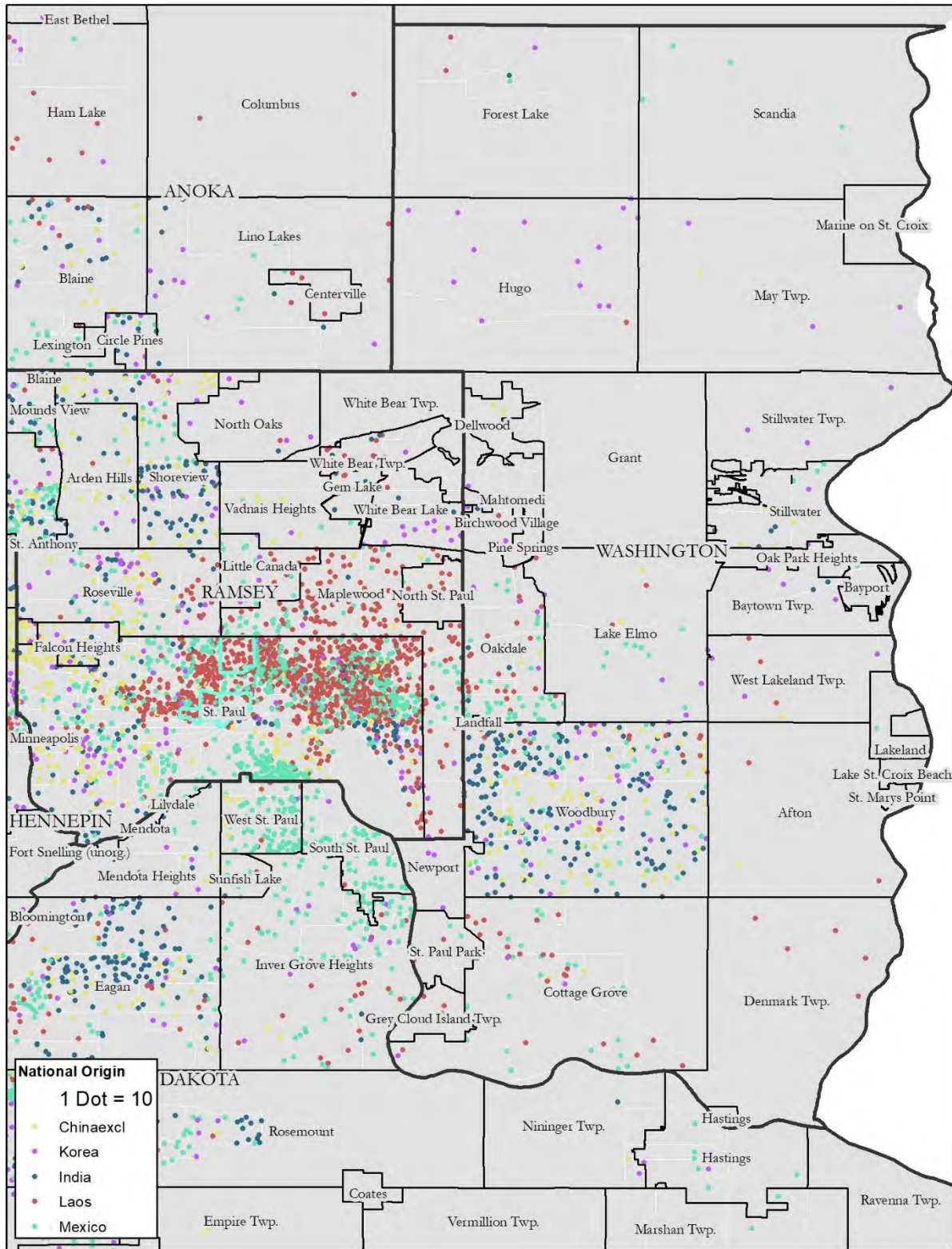
³² American Community Survey Estimates, 2013-2017.

Map 27: National Origin, St. Paul³³



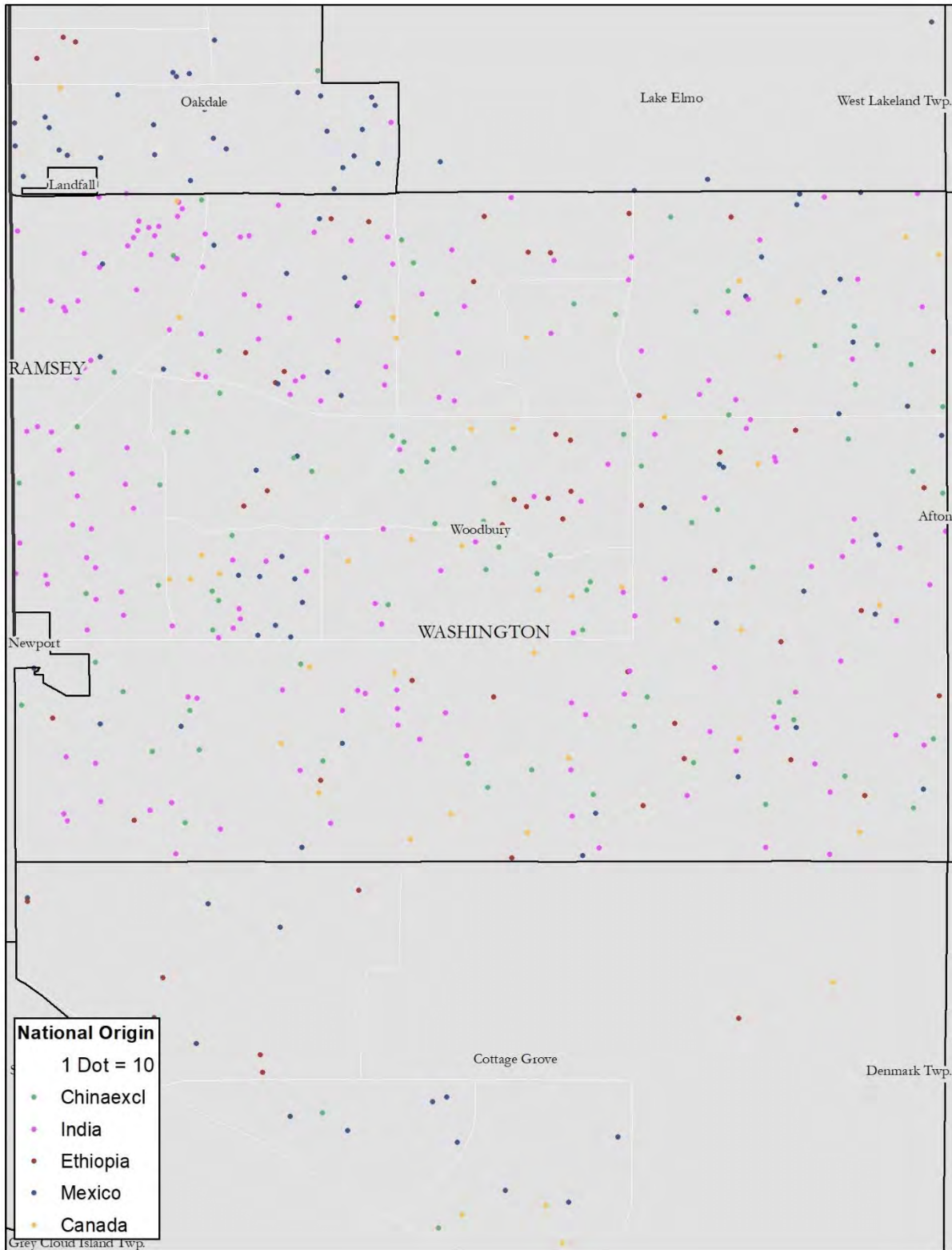
³³ American Community Survey Estimates, 2013-2017.

Map 28: National Origin, Washington County³⁴



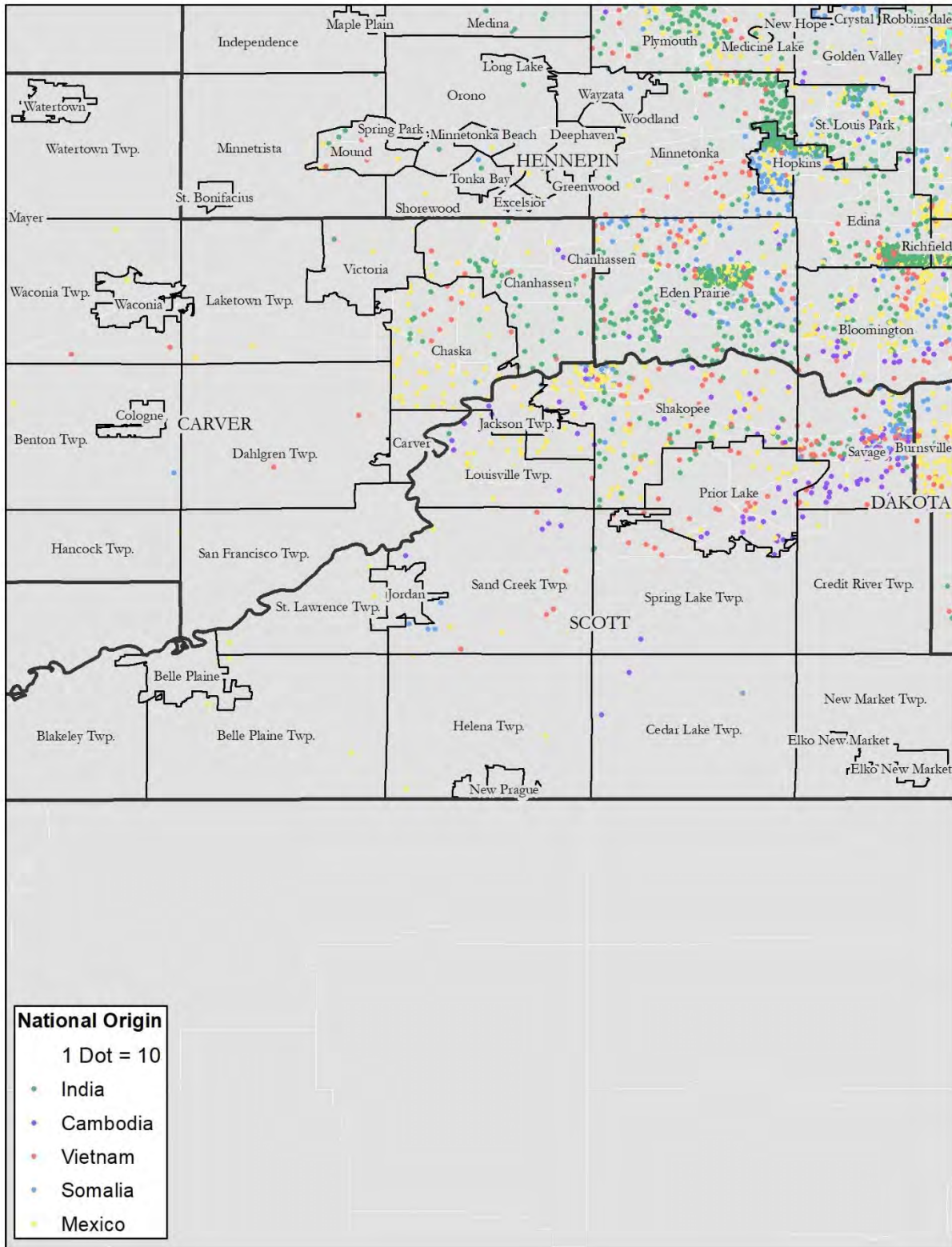
³⁴ American Community Survey Estimates, 2013-2017.

Map 29: National Origin, Woodbury³⁵



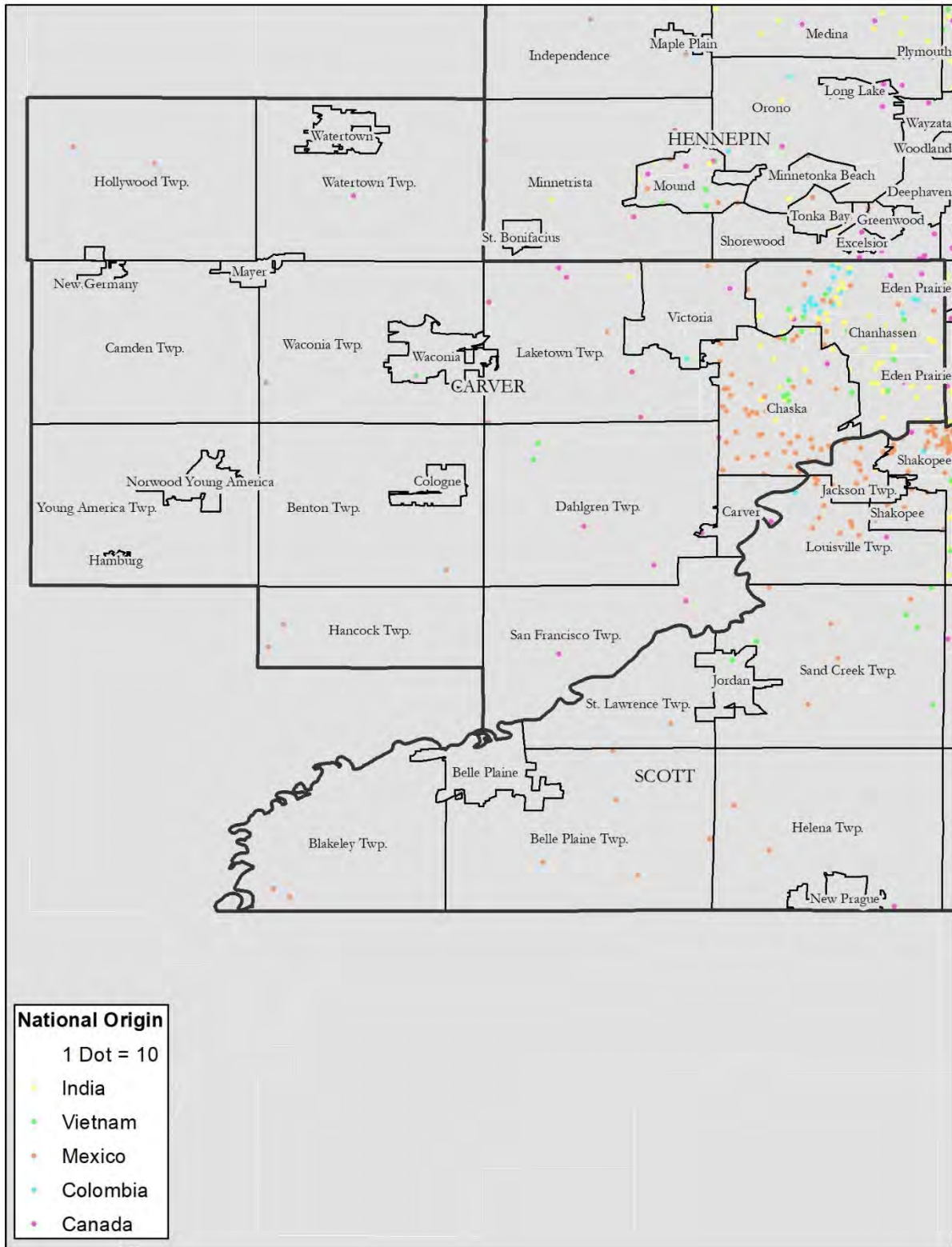
³⁵ American Community Survey Estimates, 2013-2017.

Map 30: National Origin, Scott County³⁶



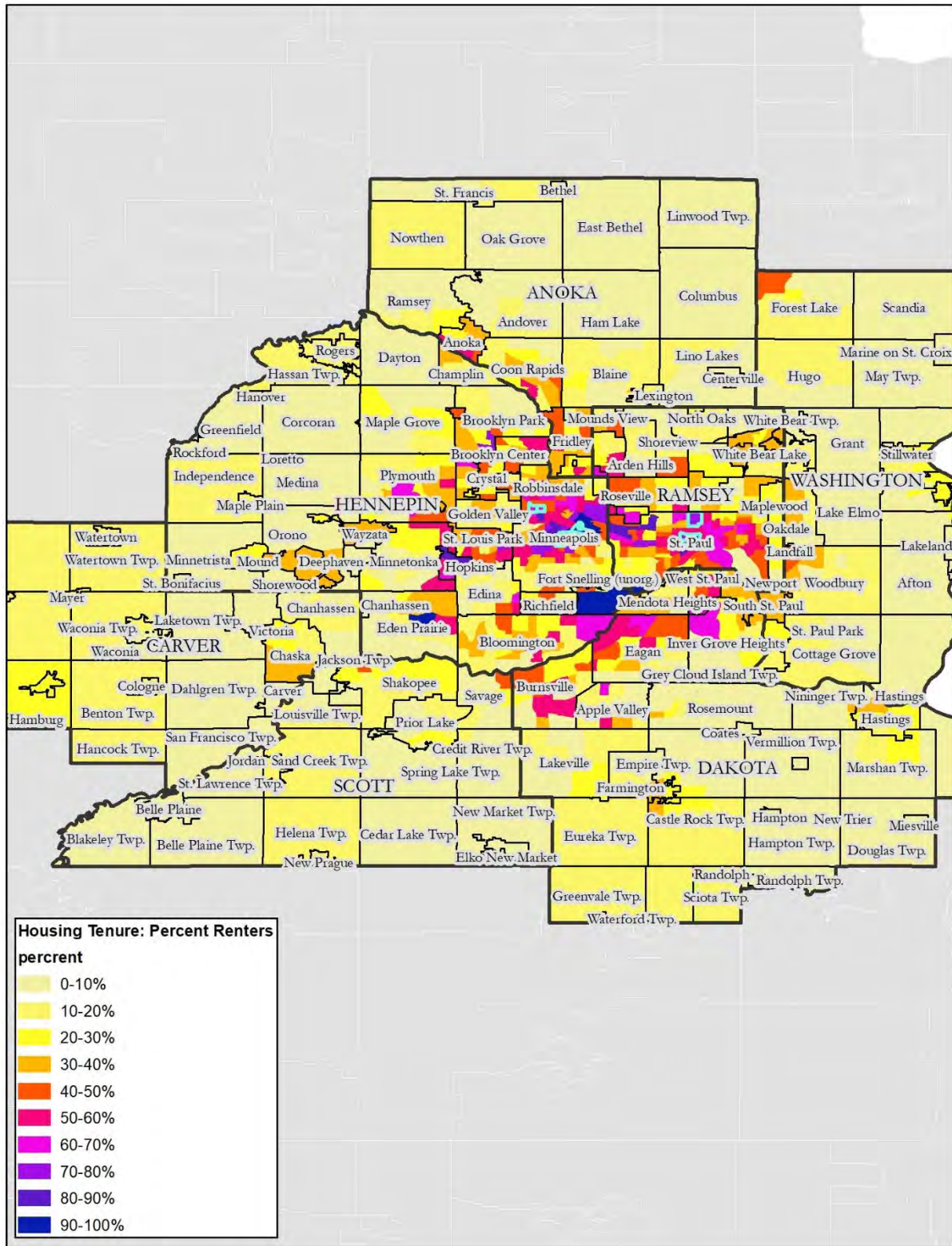
³⁶ American Community Survey Estimates, 2013-2017.

Map 31: National Origin, Carver County³⁷



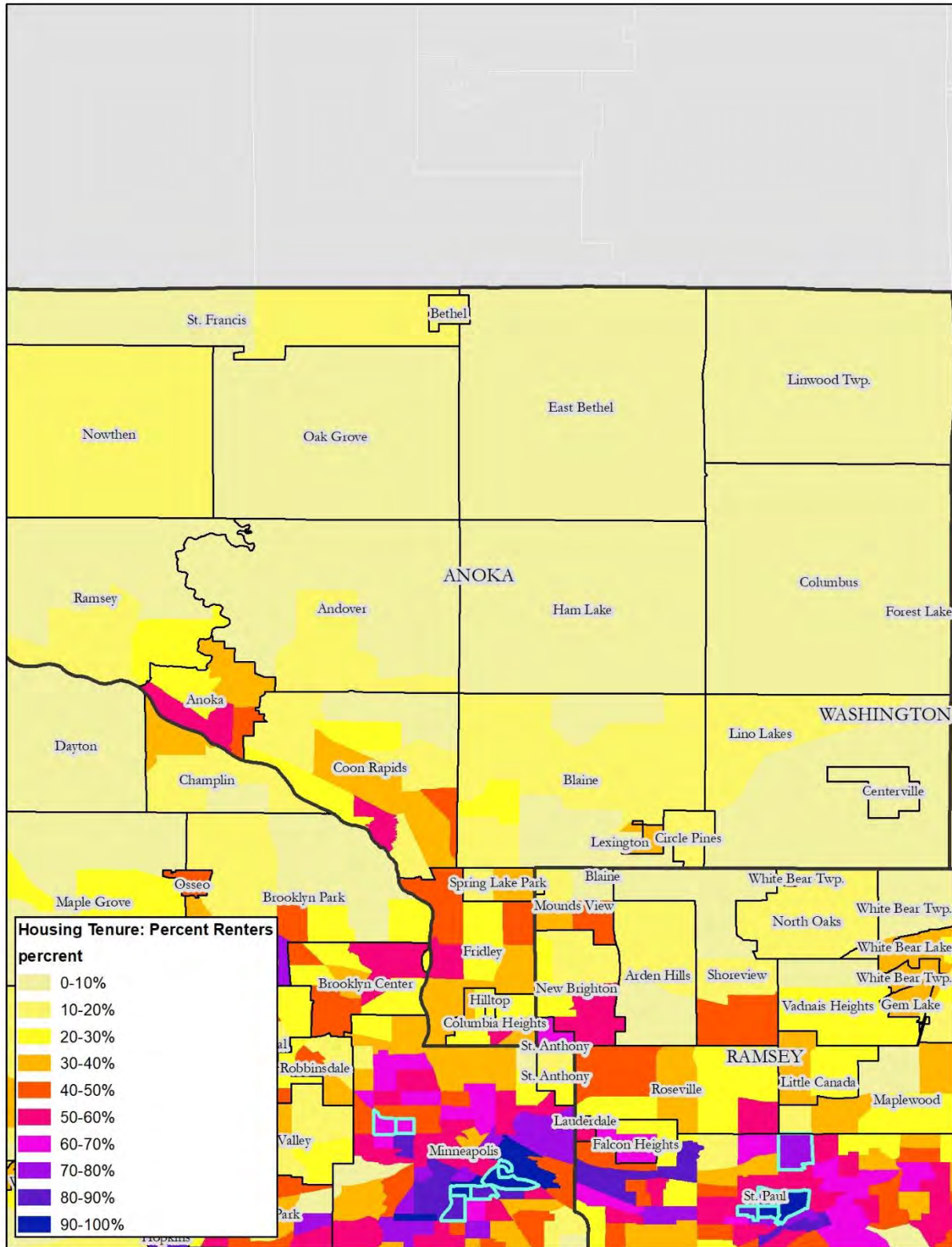
³⁷ American Community Survey Estimates, 2013-2017.

Map 32: Housing Tenure, Region³⁸



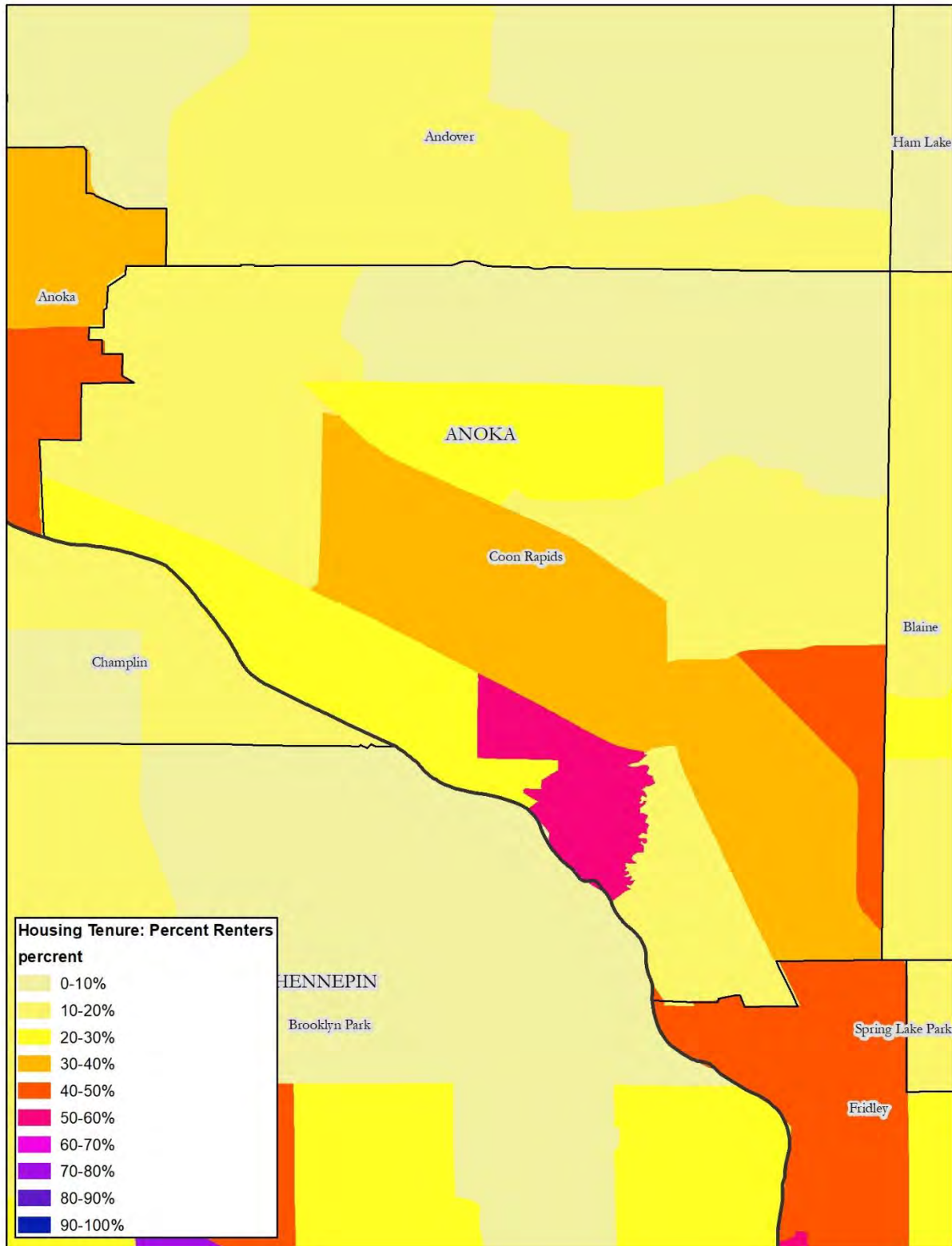
³⁸ American Community Survey Estimates, 2013-2017.

Map 33: Housing Tenure, Anoka County³⁹



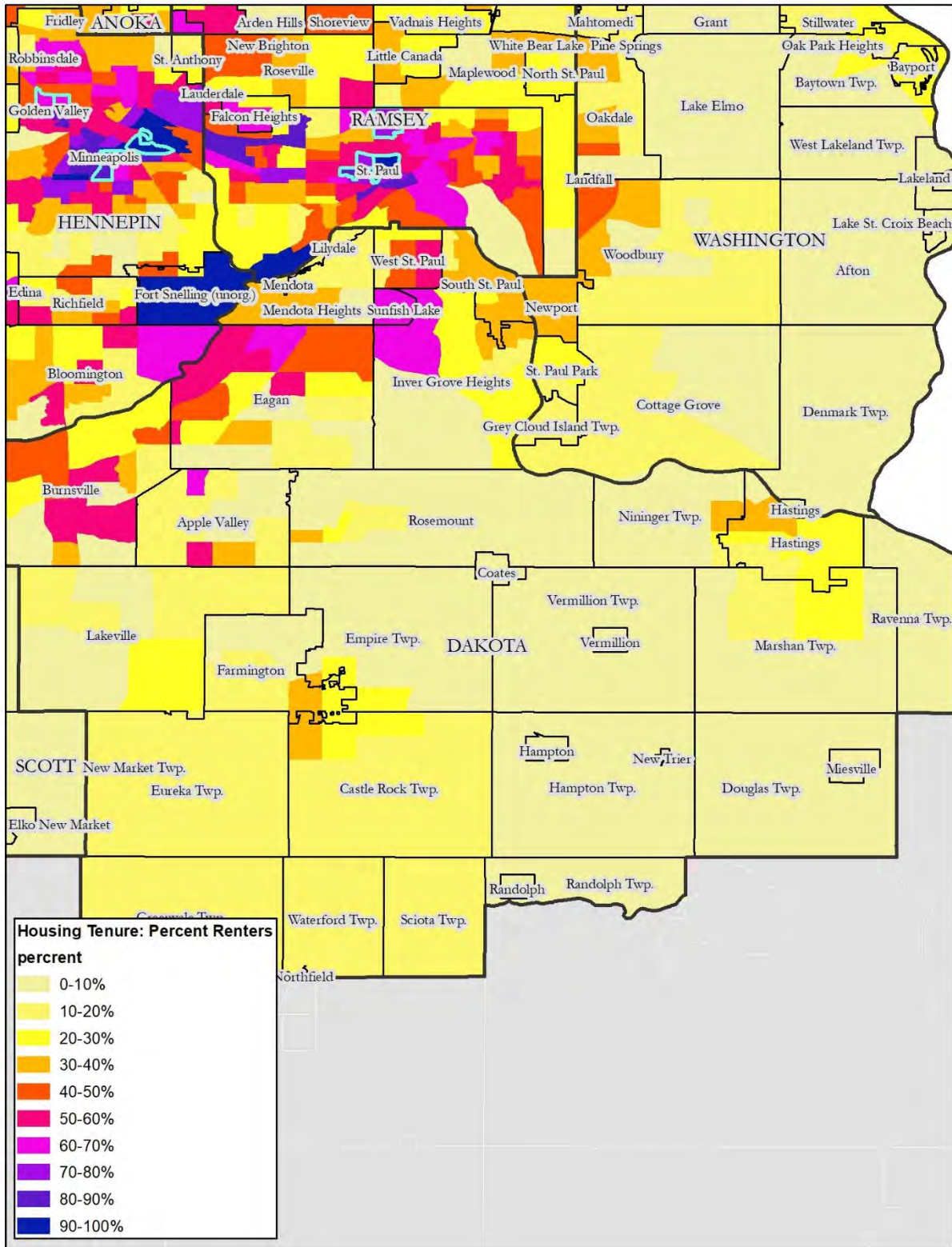
³⁹ American Community Survey Estimates, 2013-2017.

Map 34: Housing Tenure, Coon Rapids⁴⁰



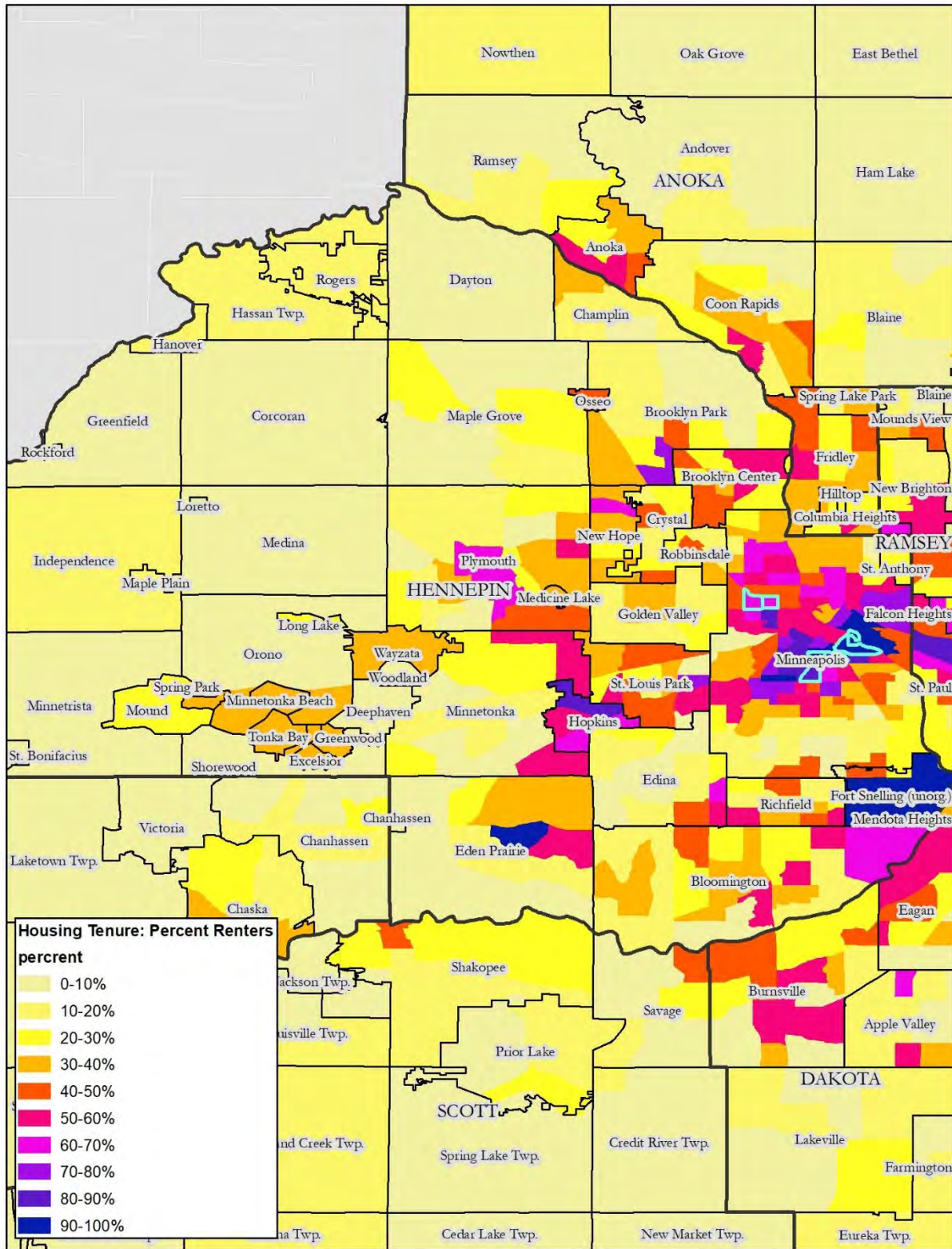
⁴⁰ American Community Survey Estimates, 2013-2017.

Map 35: Housing Tenure, Dakota County⁴¹



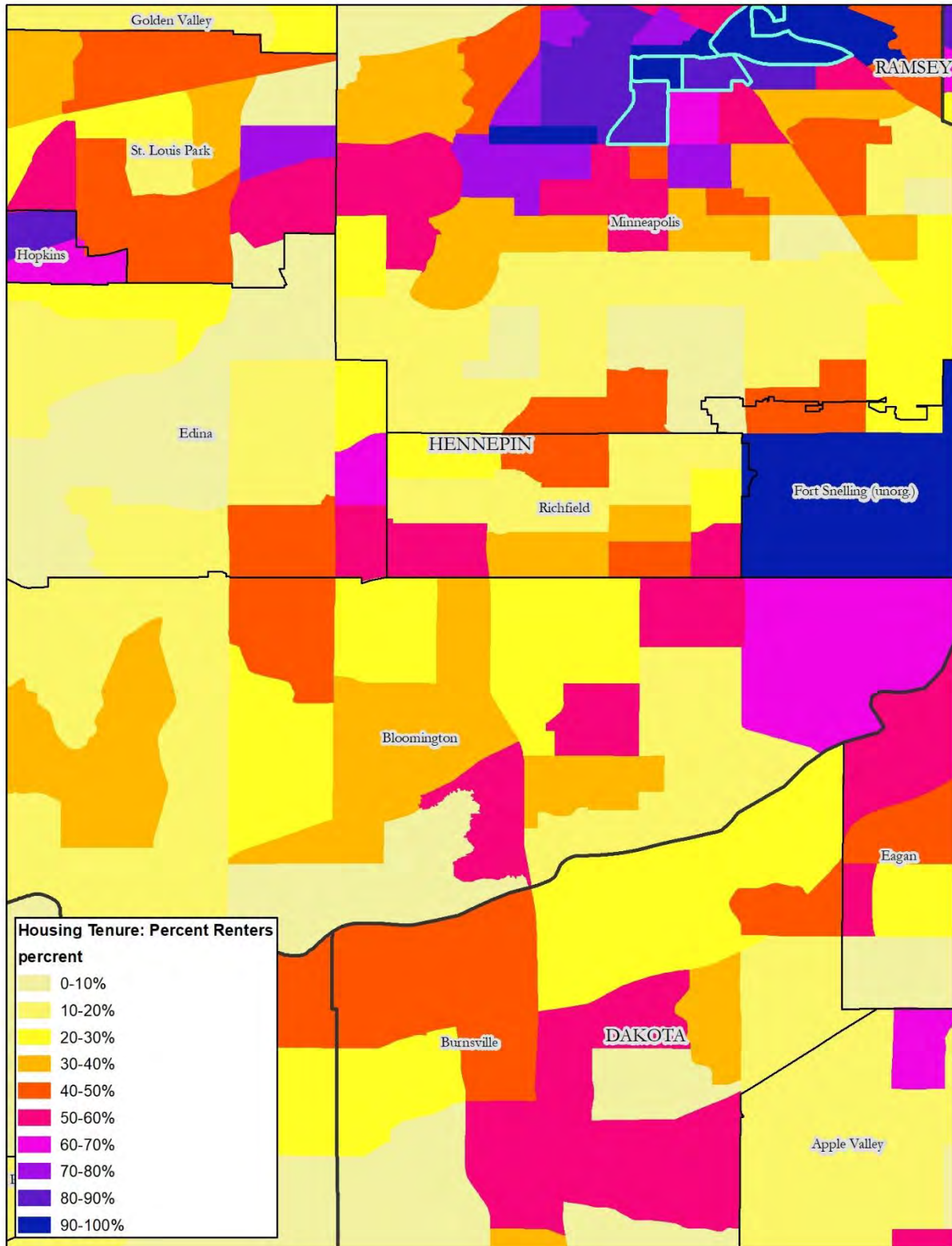
⁴¹ American Community Survey Estimates, 2013-2017.

Map 36: Housing Tenure, Hennepin County⁴²



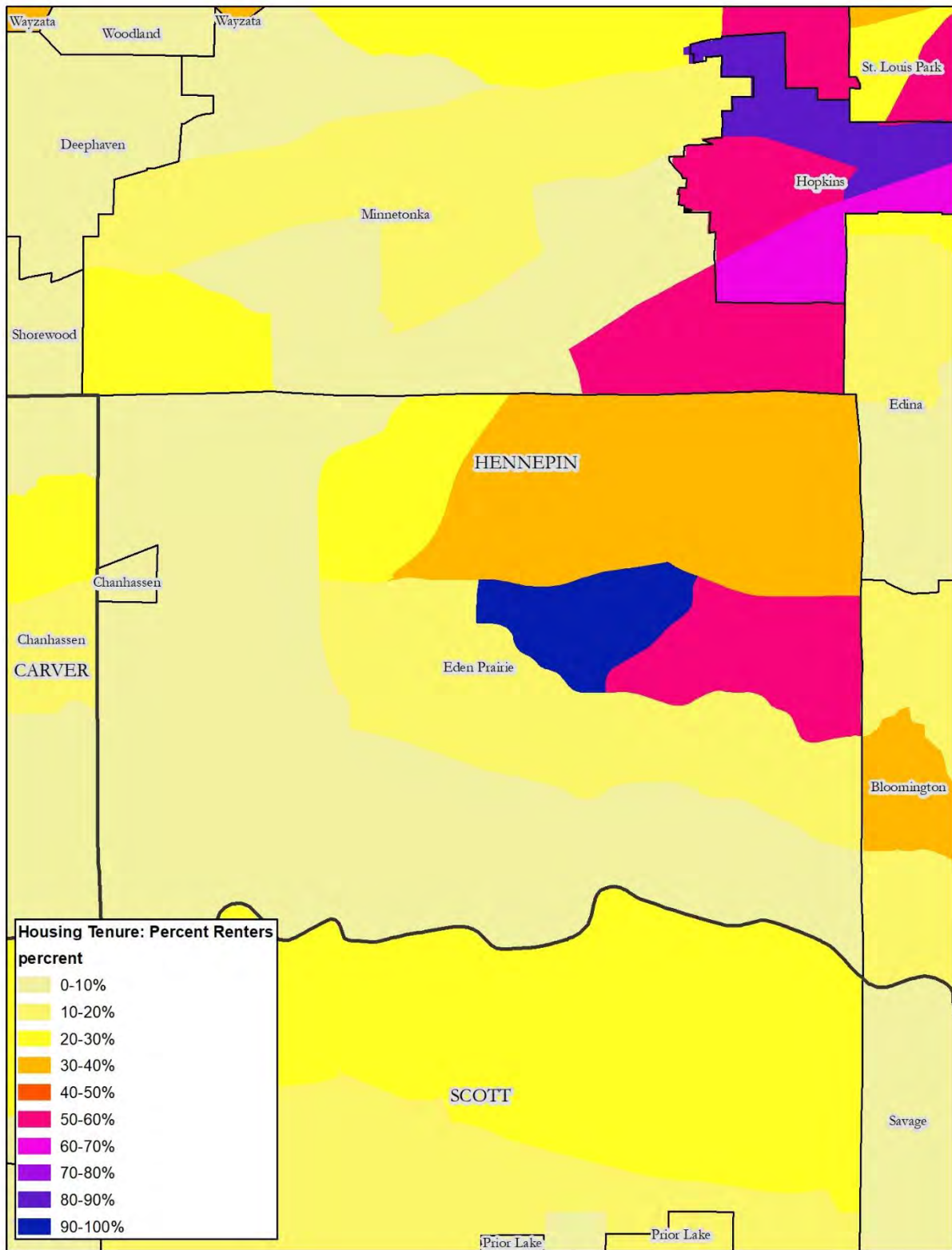
⁴² American Community Survey Estimates, 2013-2017.

Map 37: Housing Tenure, Bloomington⁴³



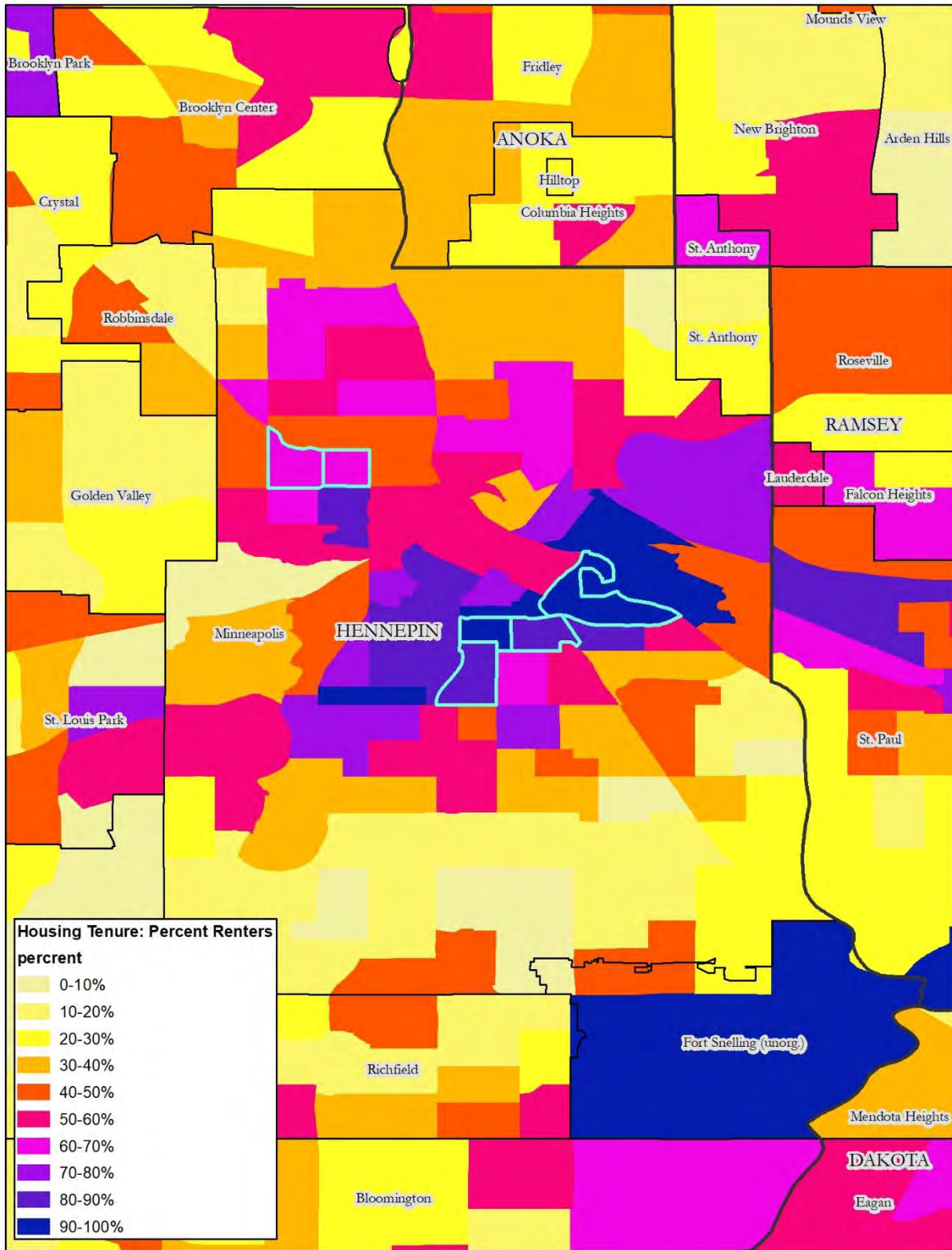
⁴³ American Community Survey Estimates, 2013-2017.

Map 38: Housing Tenure, Eden Prairie⁴⁴



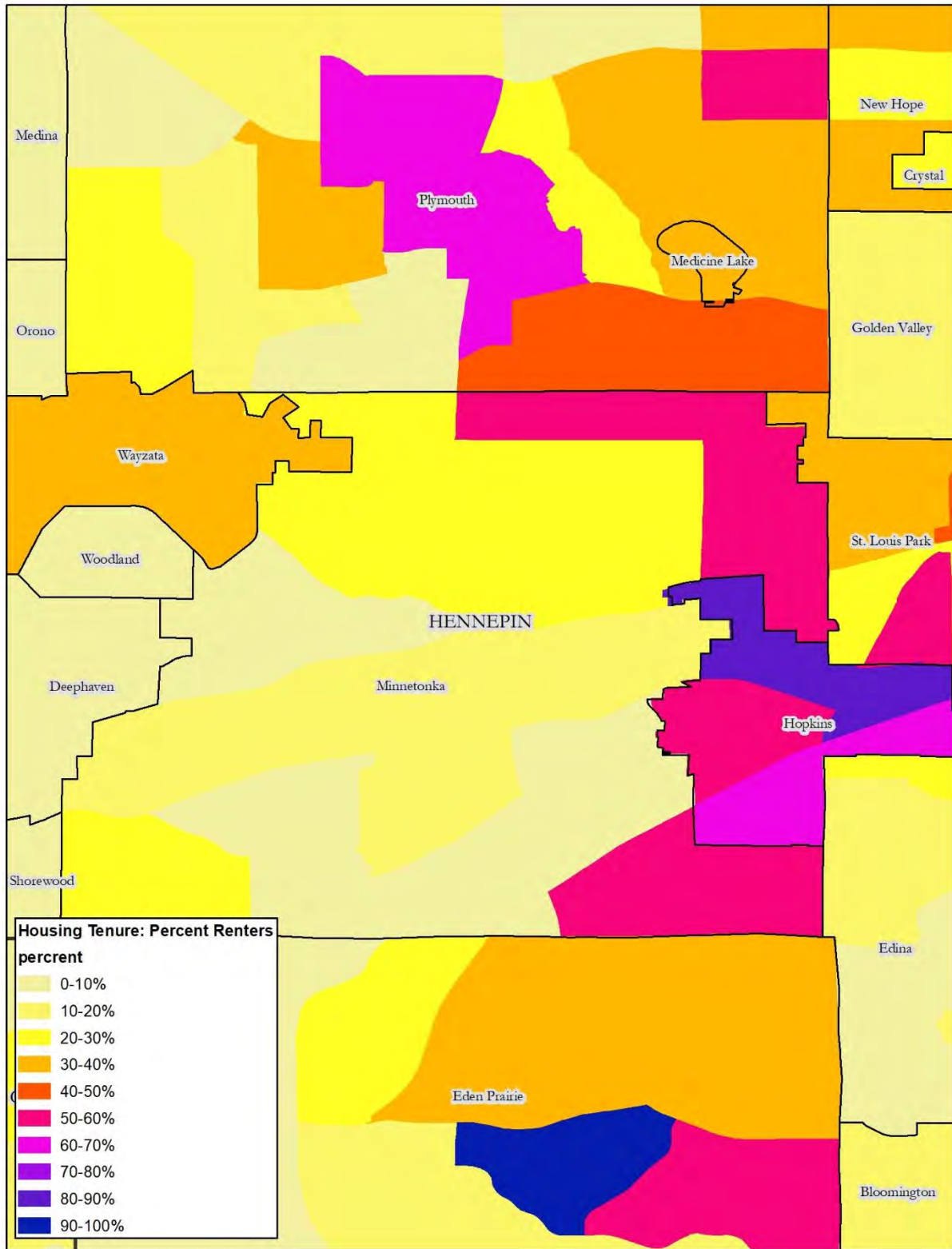
⁴⁴ American Community Survey Estimates, 2013-2017.

Map 39: Housing Tenure, Minneapolis⁴⁵



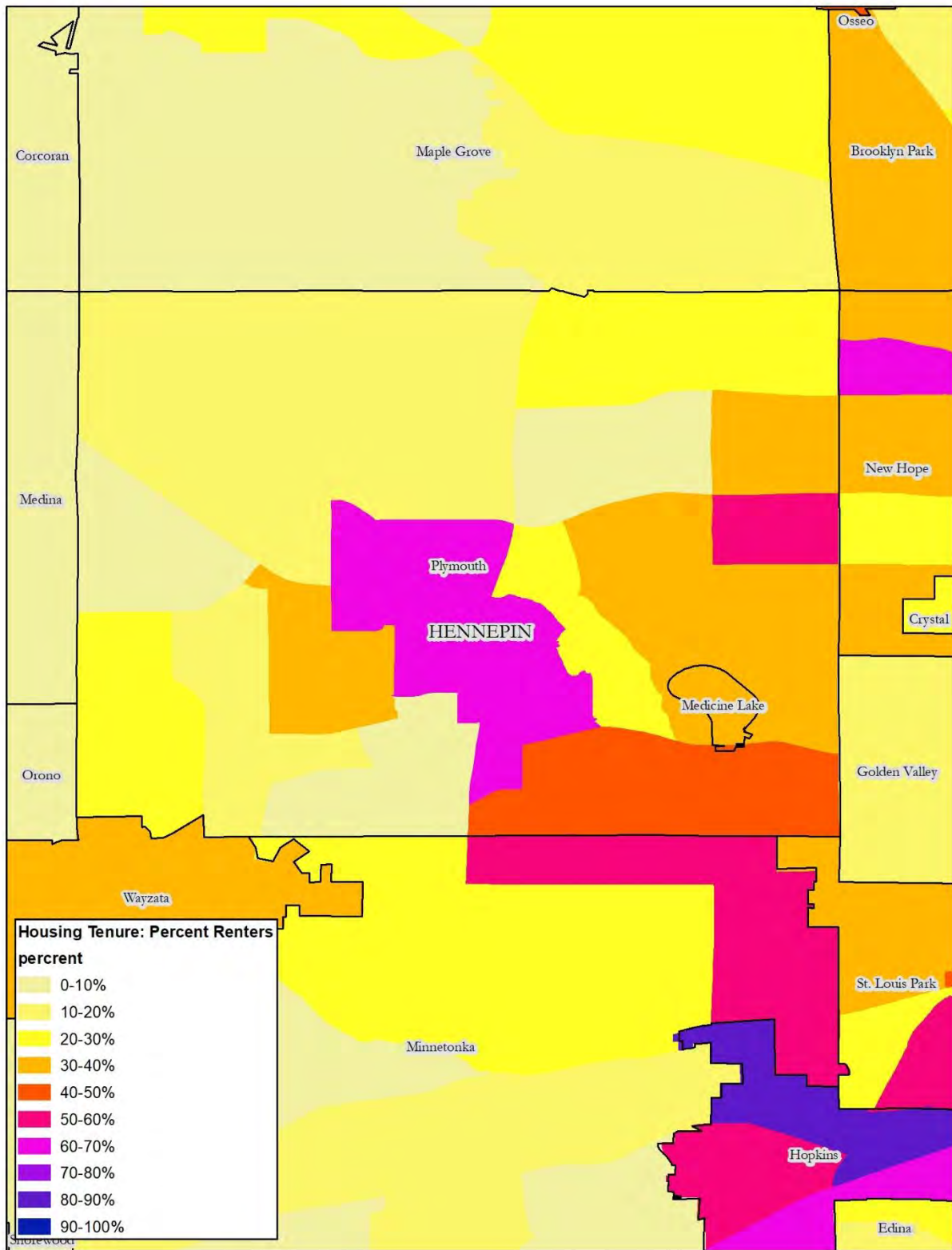
⁴⁵ American Community Survey Estimates, 2013-2017.

Map 40: Housing Tenure, Minnetonka⁴⁶



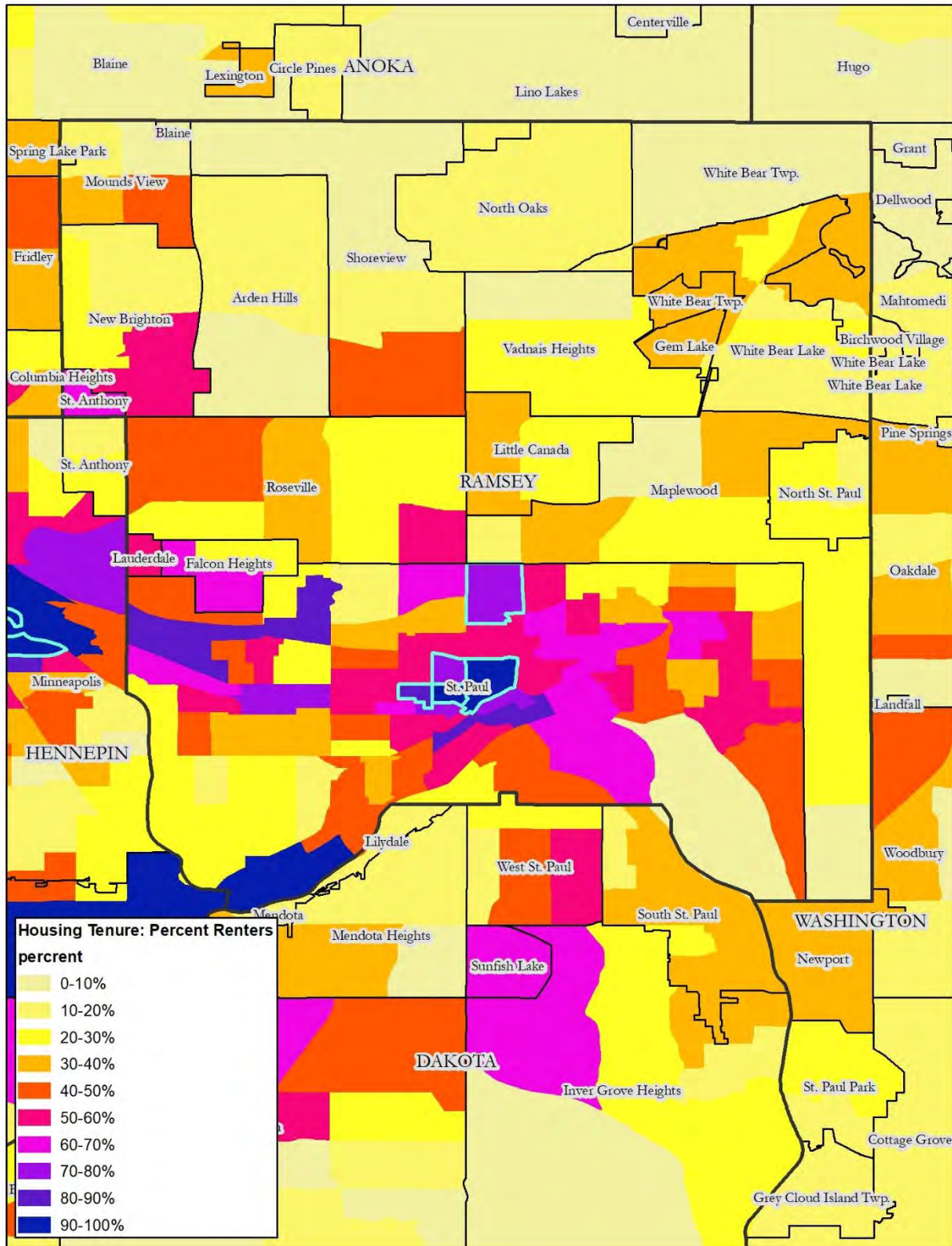
⁴⁶ American Community Survey Estimates, 2013-2017.

Map 41: Housing Tenure, Plymouth⁴⁷



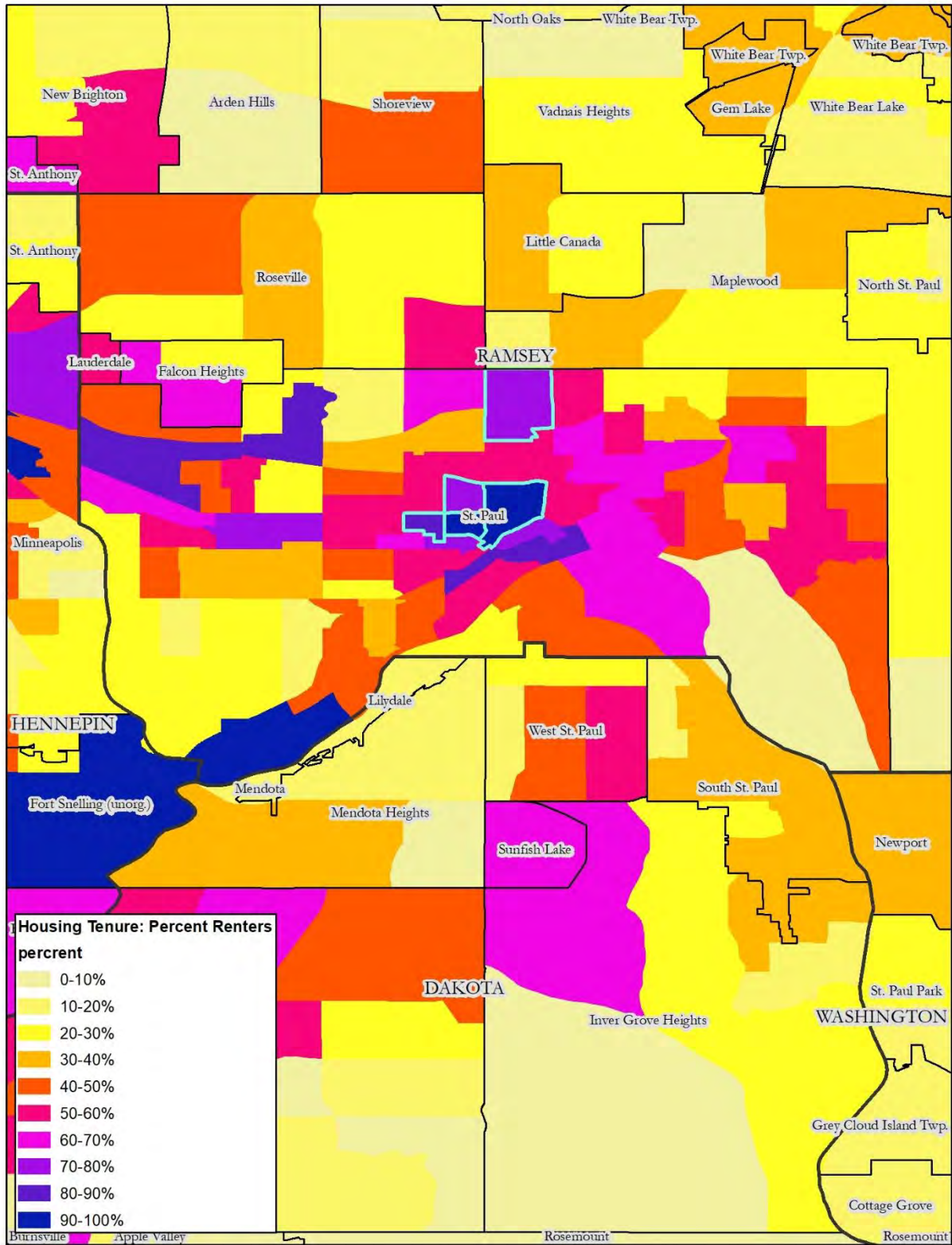
⁴⁷ American Community Survey Estimates, 2013-2017.

Map 42: Housing Tenure, Ramsey County⁴⁸



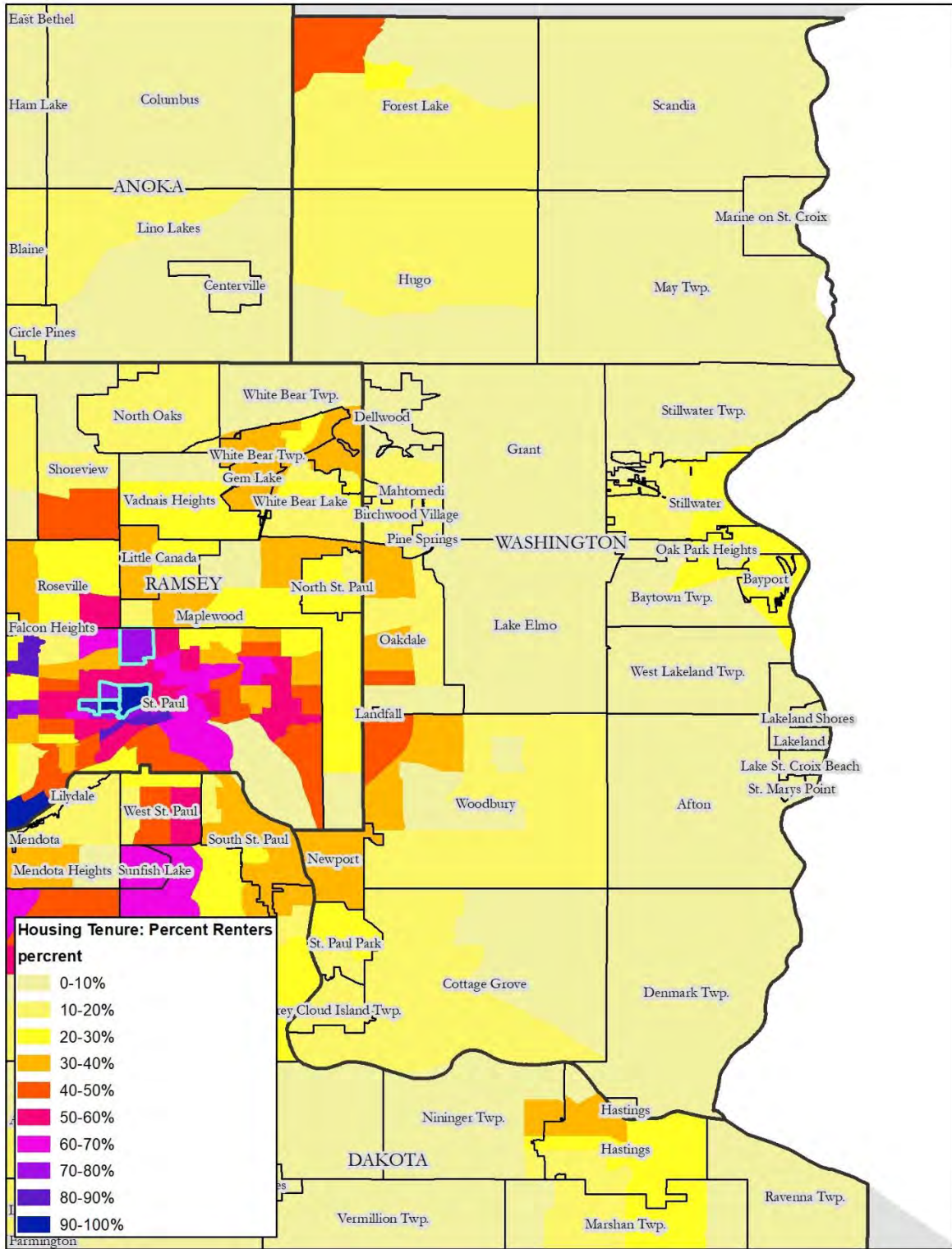
⁴⁸ American Community Survey Estimates, 2013-2017.

Map 43: Housing Tenure, St. Paul⁴⁹



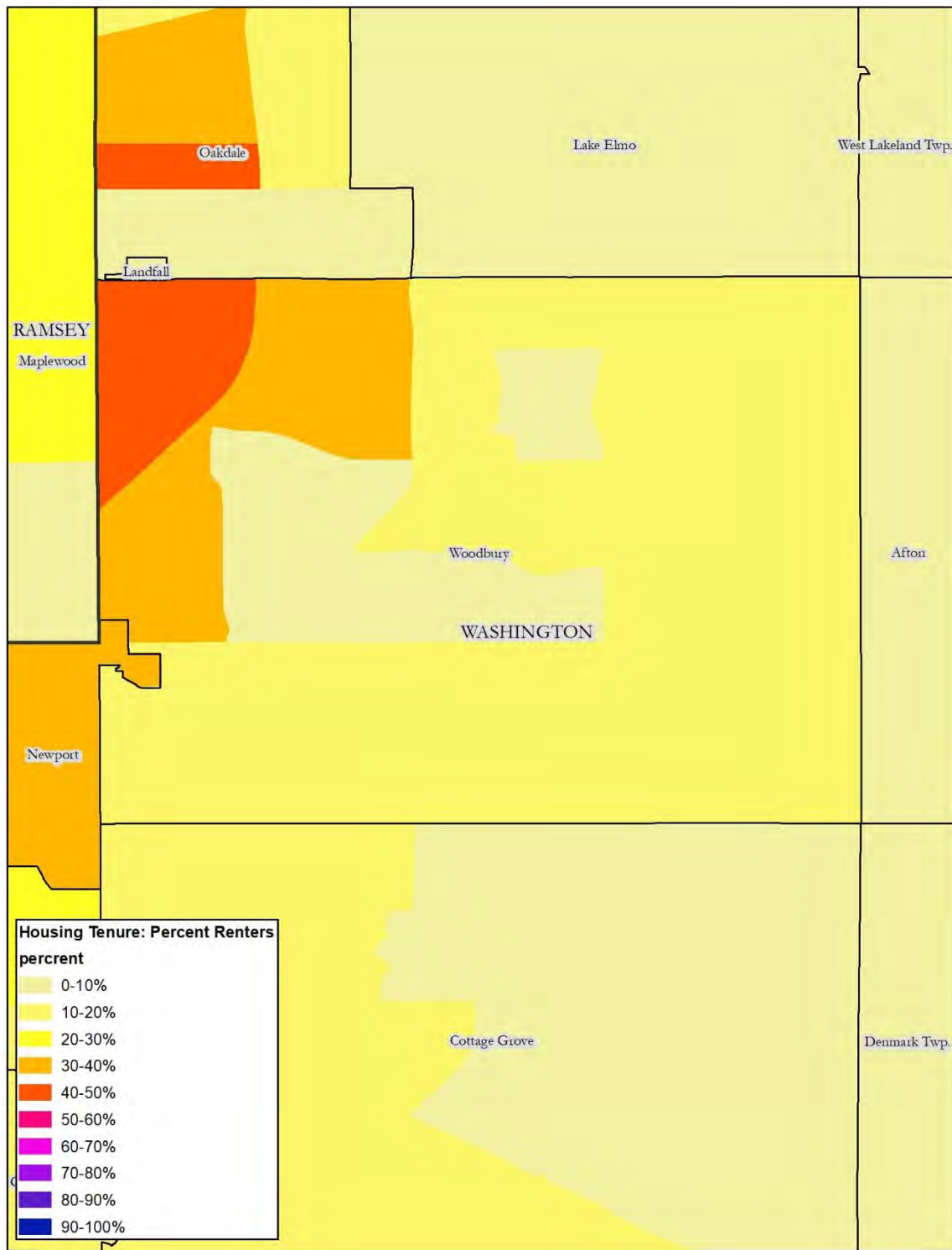
⁴⁹ American Community Survey Estimates, 2013-2017.

Map 44: Housing Tenure, Washington County⁵⁰



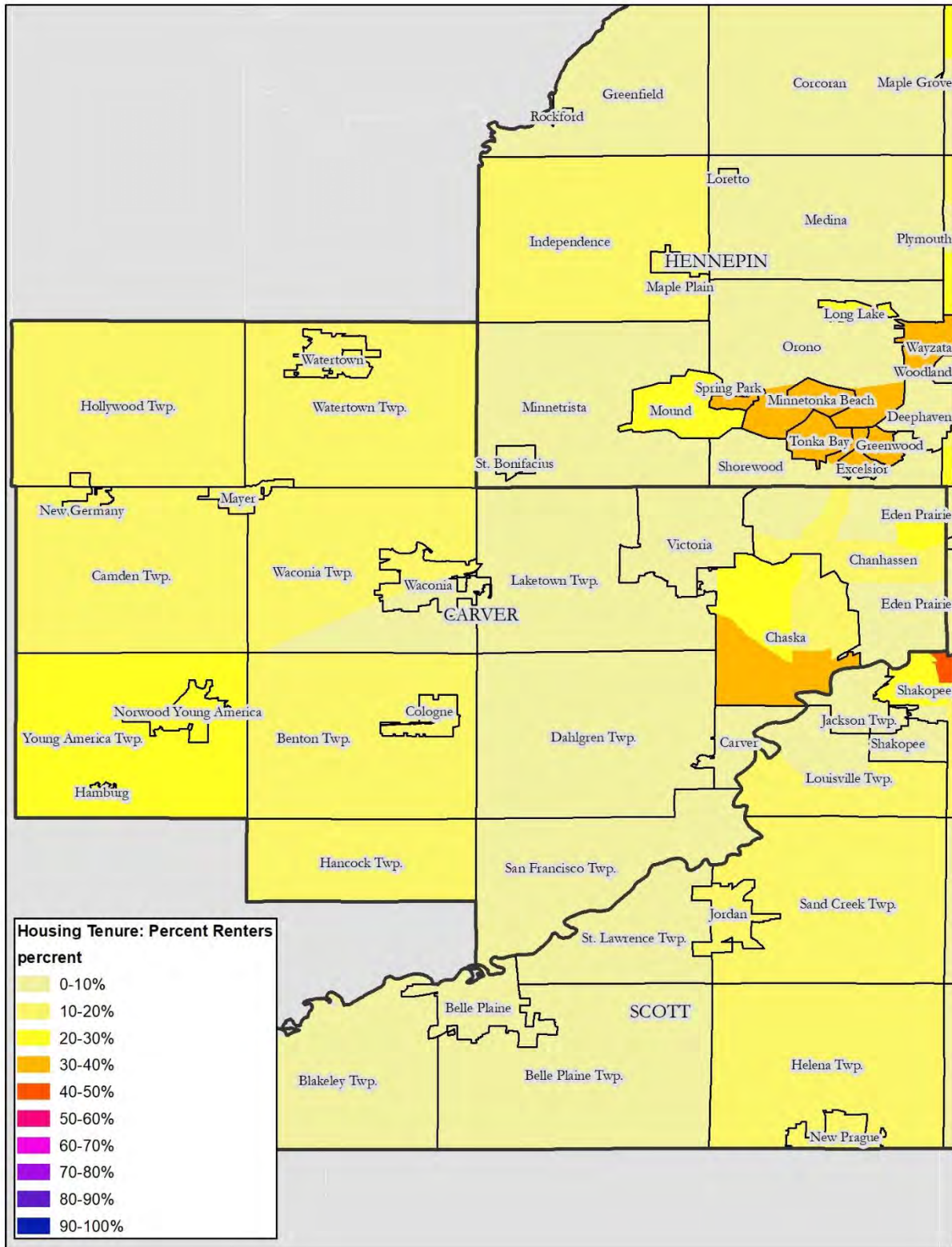
⁵⁰ American Community Survey Estimates, 2013-2017.

Map 45: Housing Tenure, Woodbury⁵¹



⁵¹ American Community Survey Estimates, 2013-2017.

Map 47: Housing Tenure, Carver County⁵³

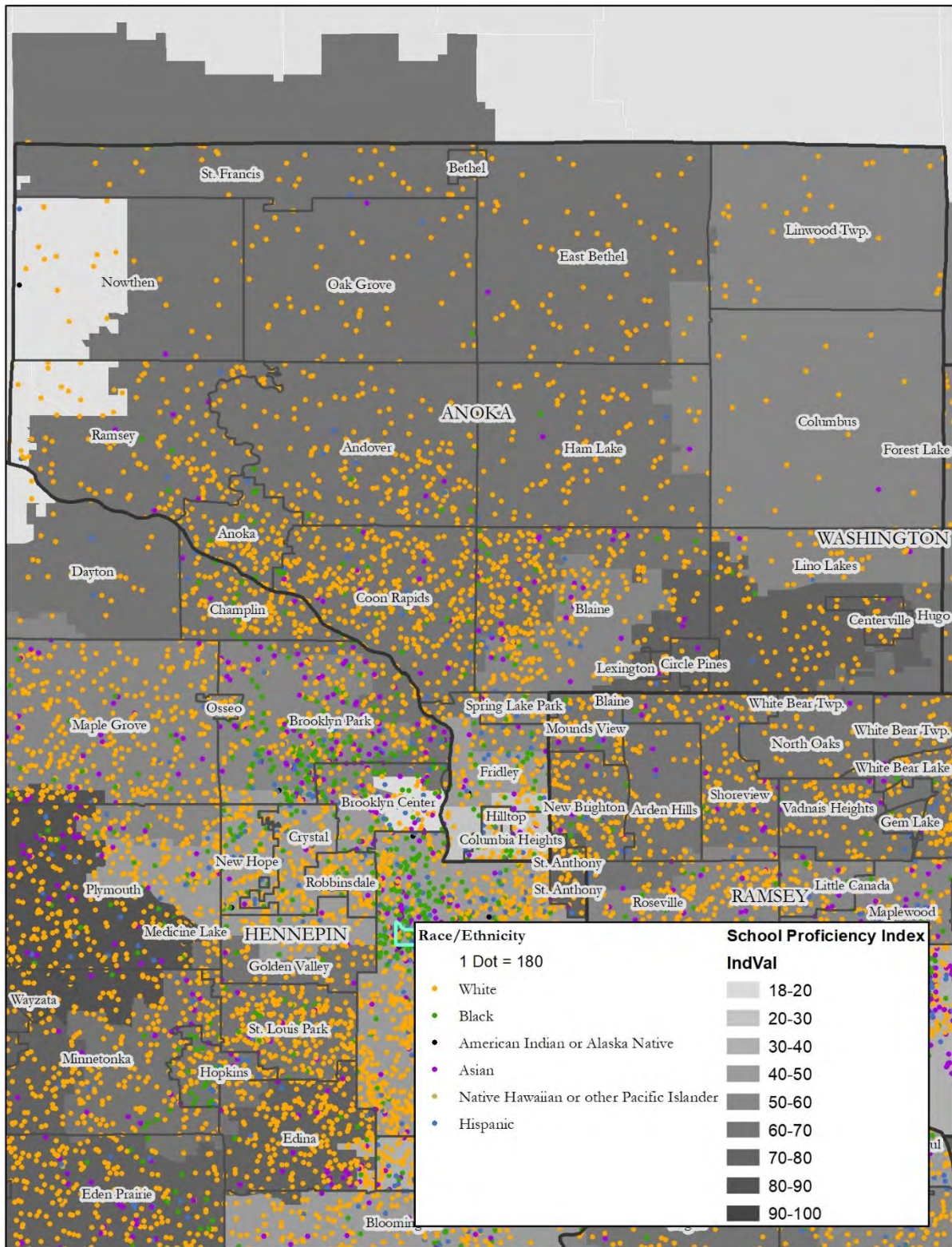


⁵³ American Community Survey Estimates, 2013-2017.

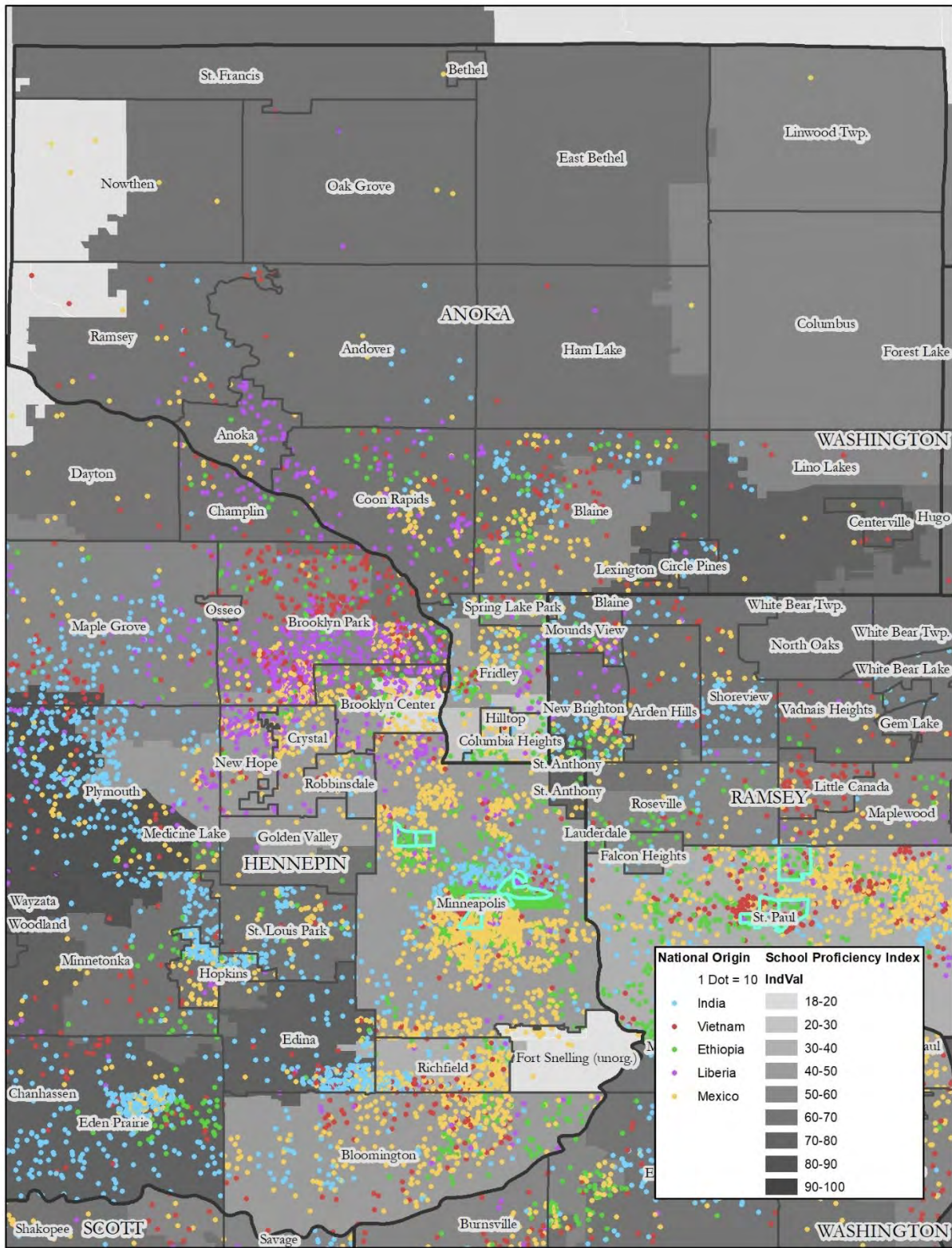
B. Disparities in Access to Opportunity Appendix

Please see the Data Documentation for in-depth explanations and sources of each map.

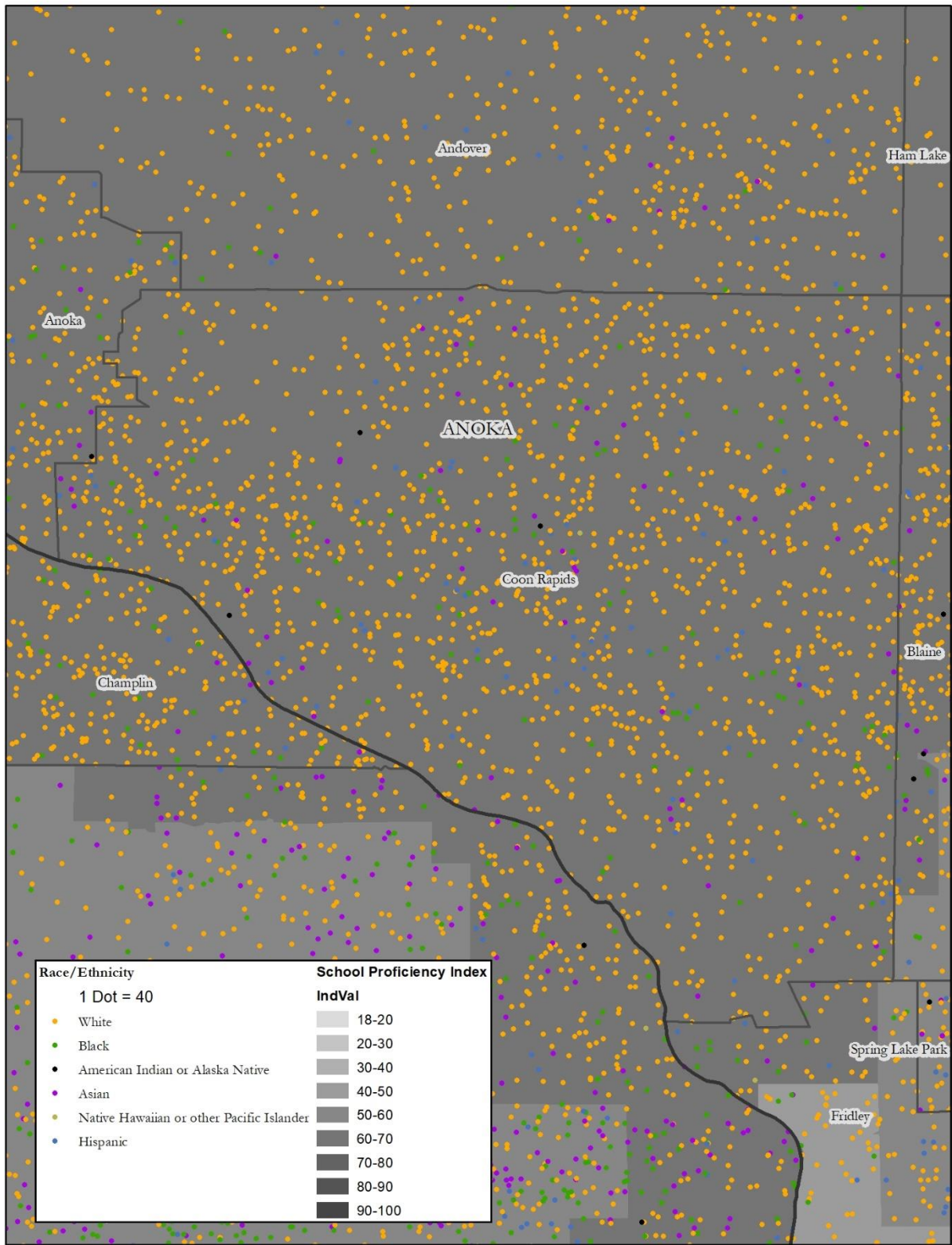
Map 1: Anoka County, Race, School Proficiency



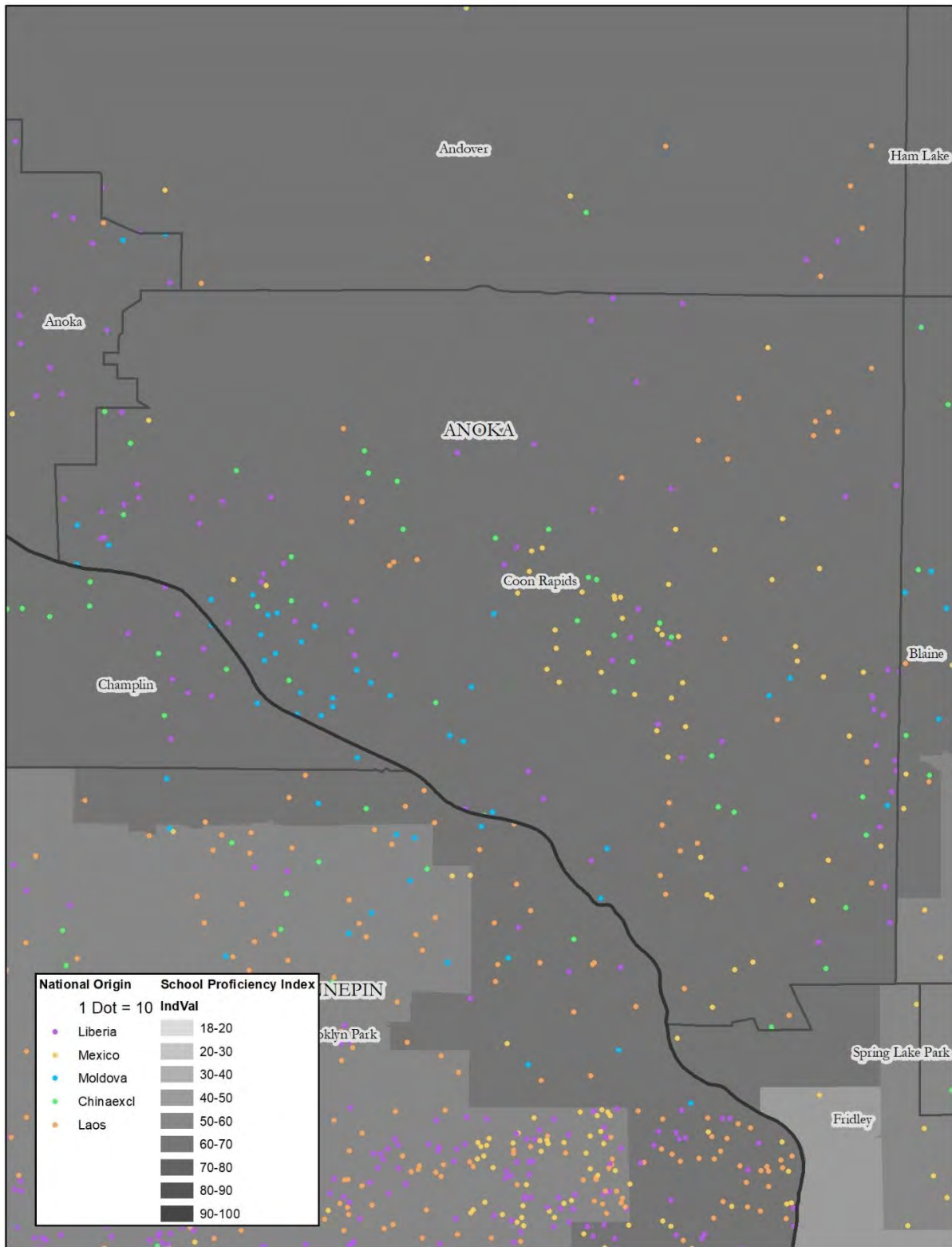
Map 2: Anoka County, National Origin, School Proficiency



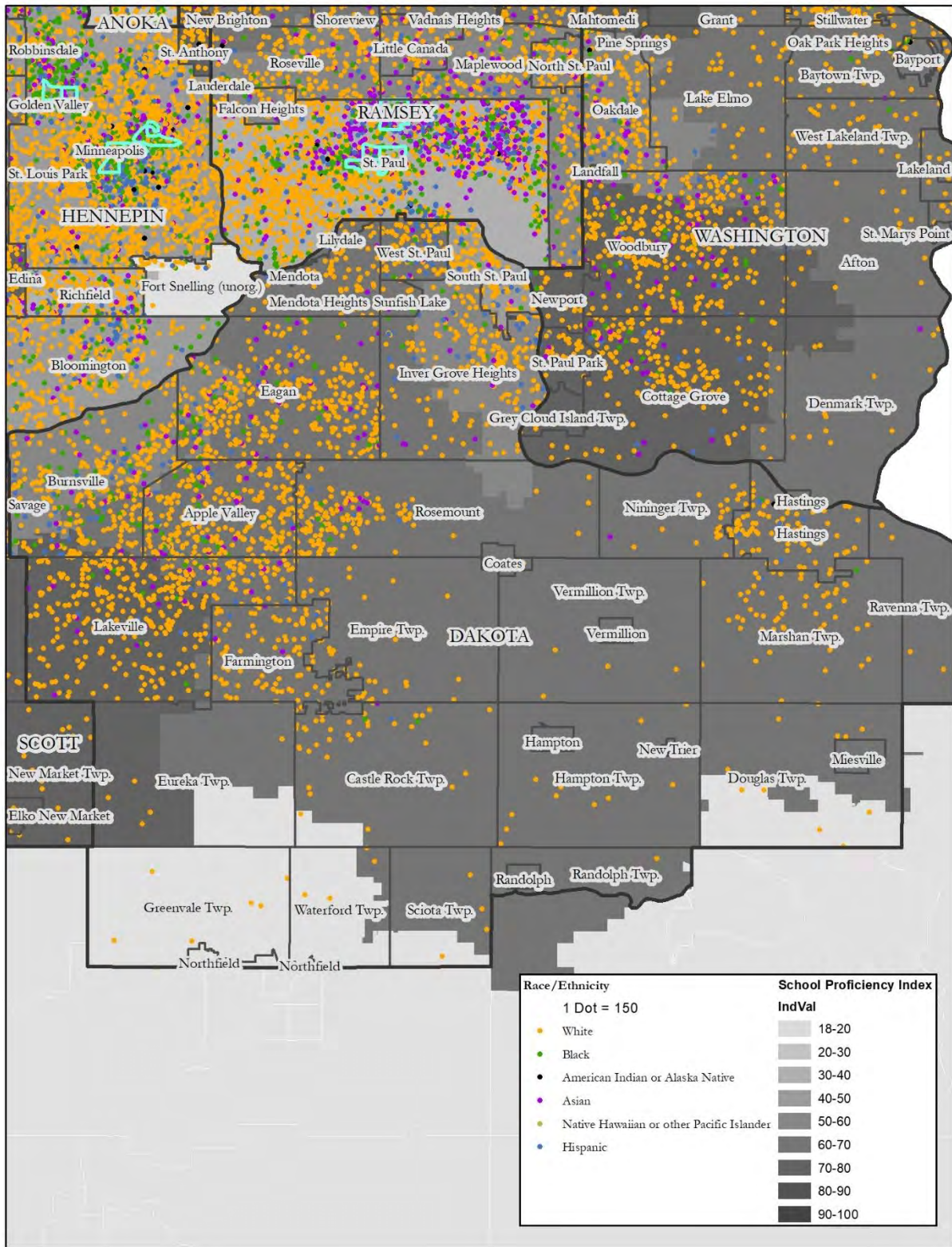
Map 3: Coon Rapids, Race, School Proficiency



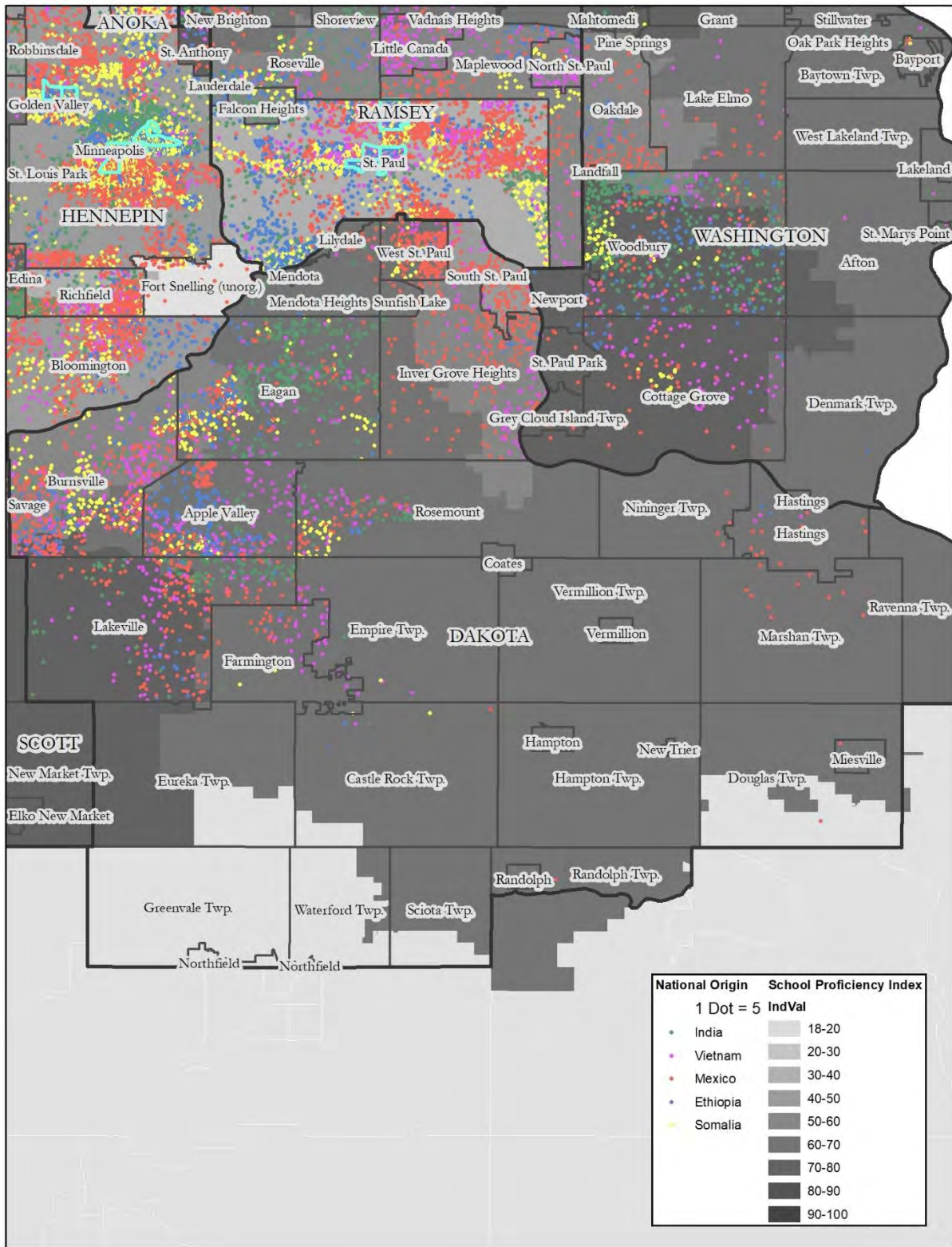
Map 4: Coon Rapids, National Origin, School Proficiency



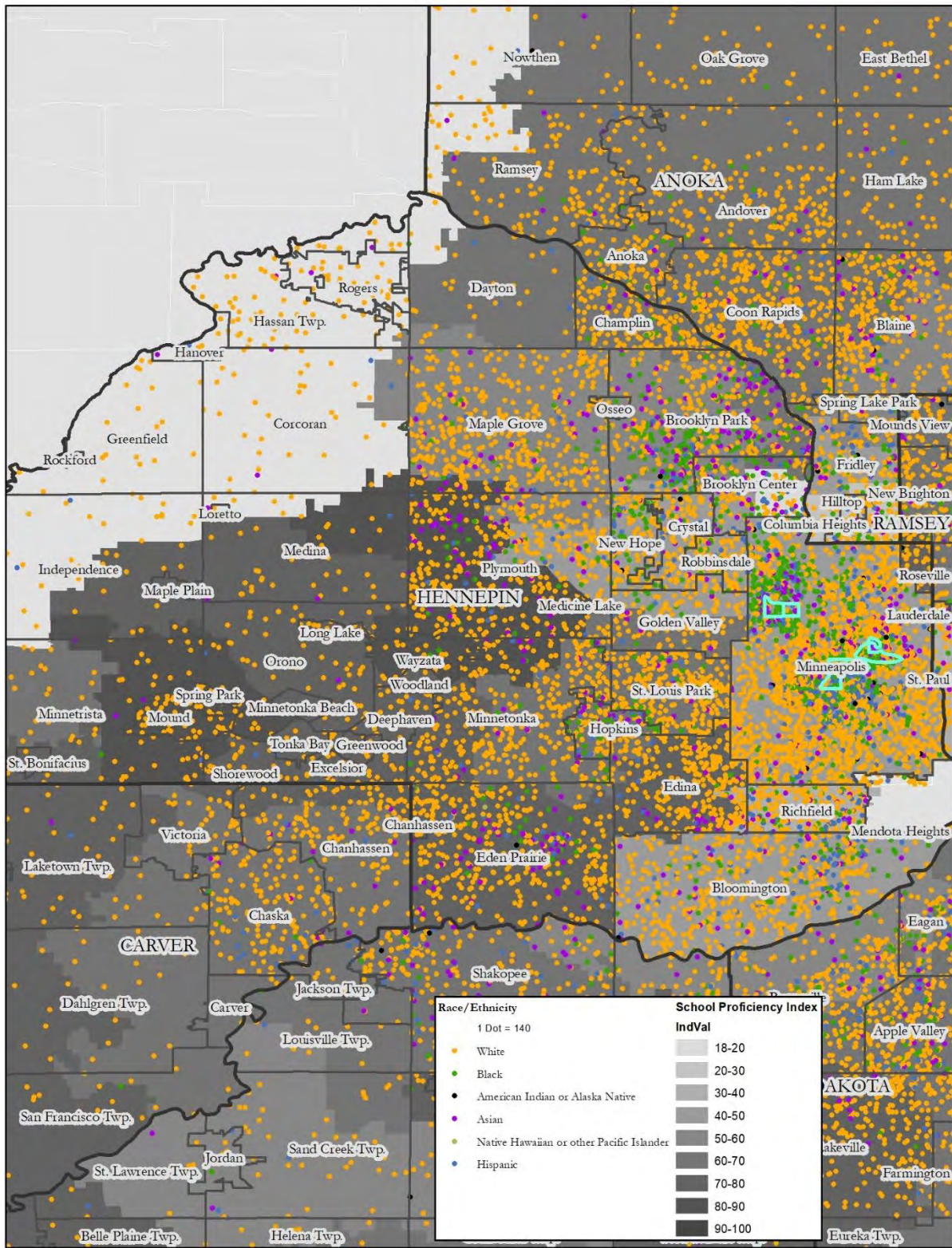
Map 5: Dakota County, Race, School Proficiency



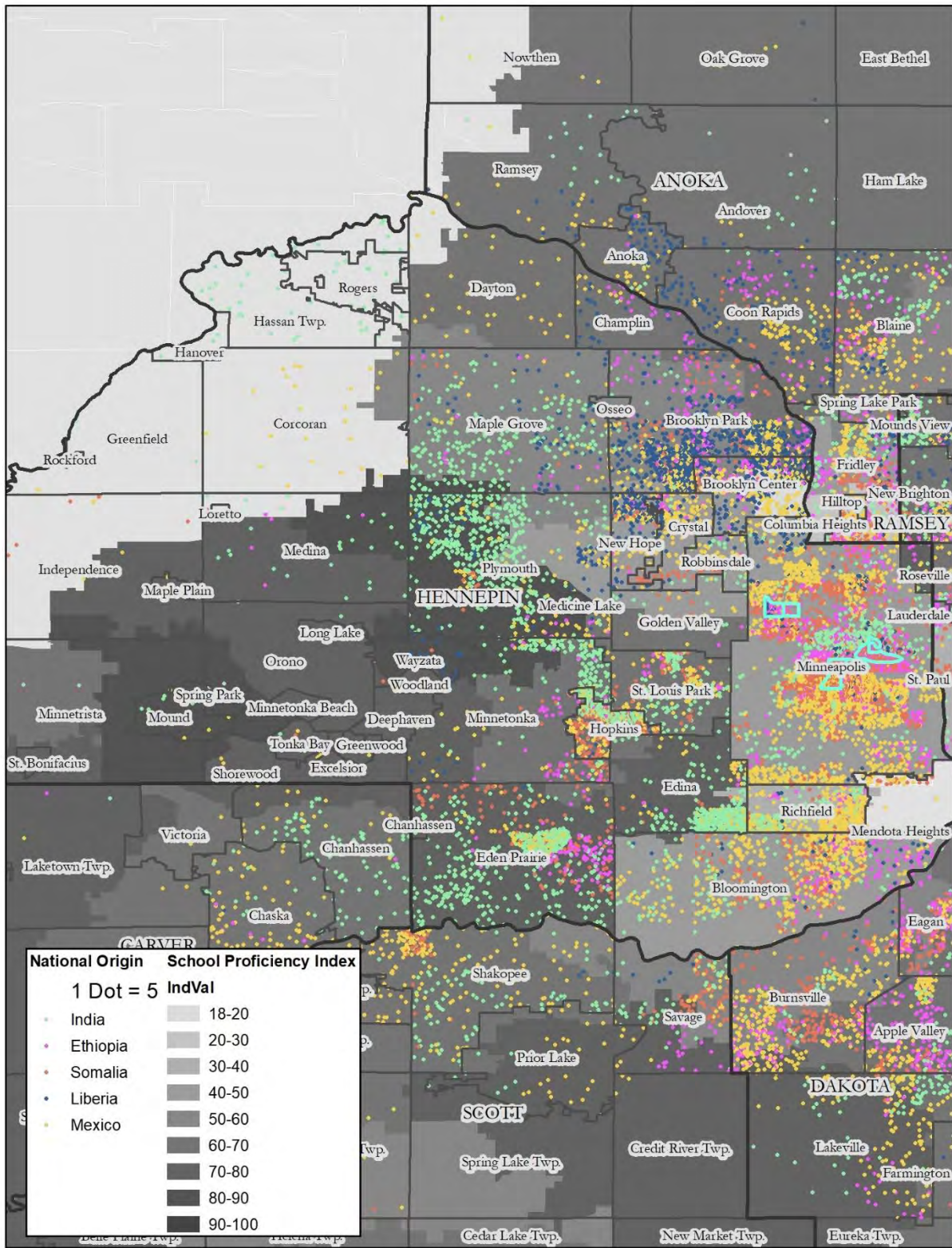
Map 6: Dakota County, National Origin, School Proficiency



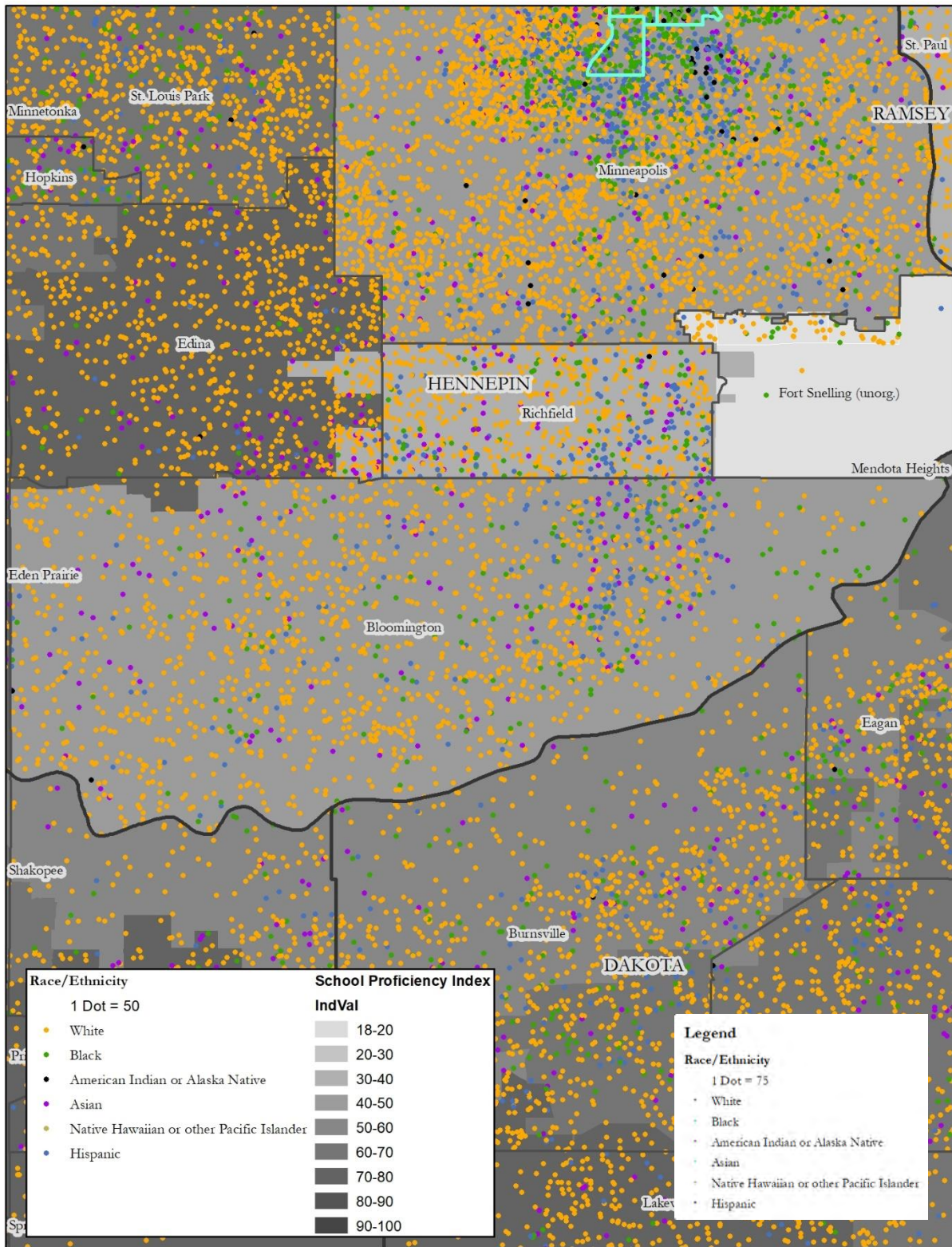
Map 7: Hennepin County, Race, School Proficiency



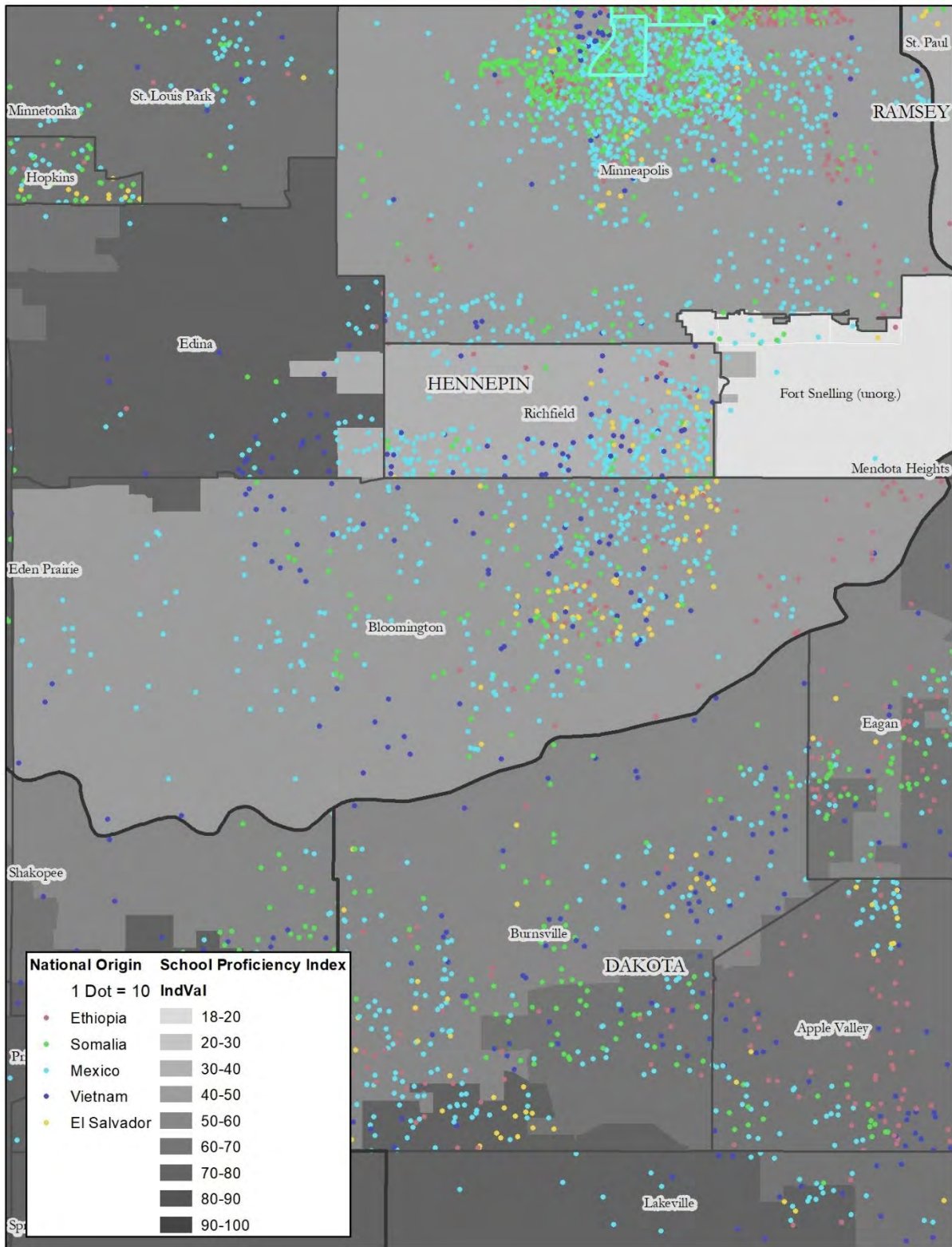
Map 8: Hennepin County, National Origin, School Proficiency



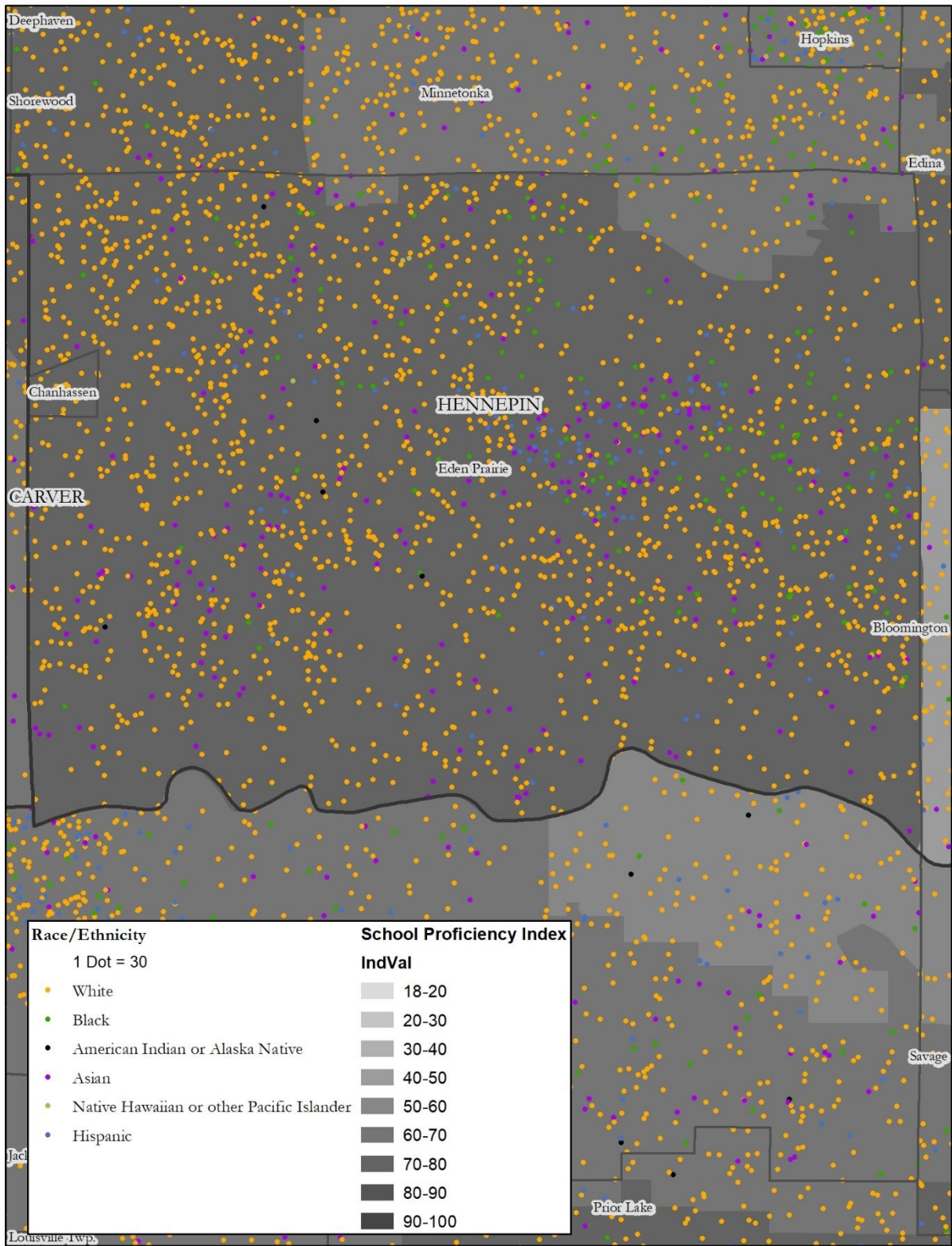
Map 9: Bloomington, Race, School Proficiency



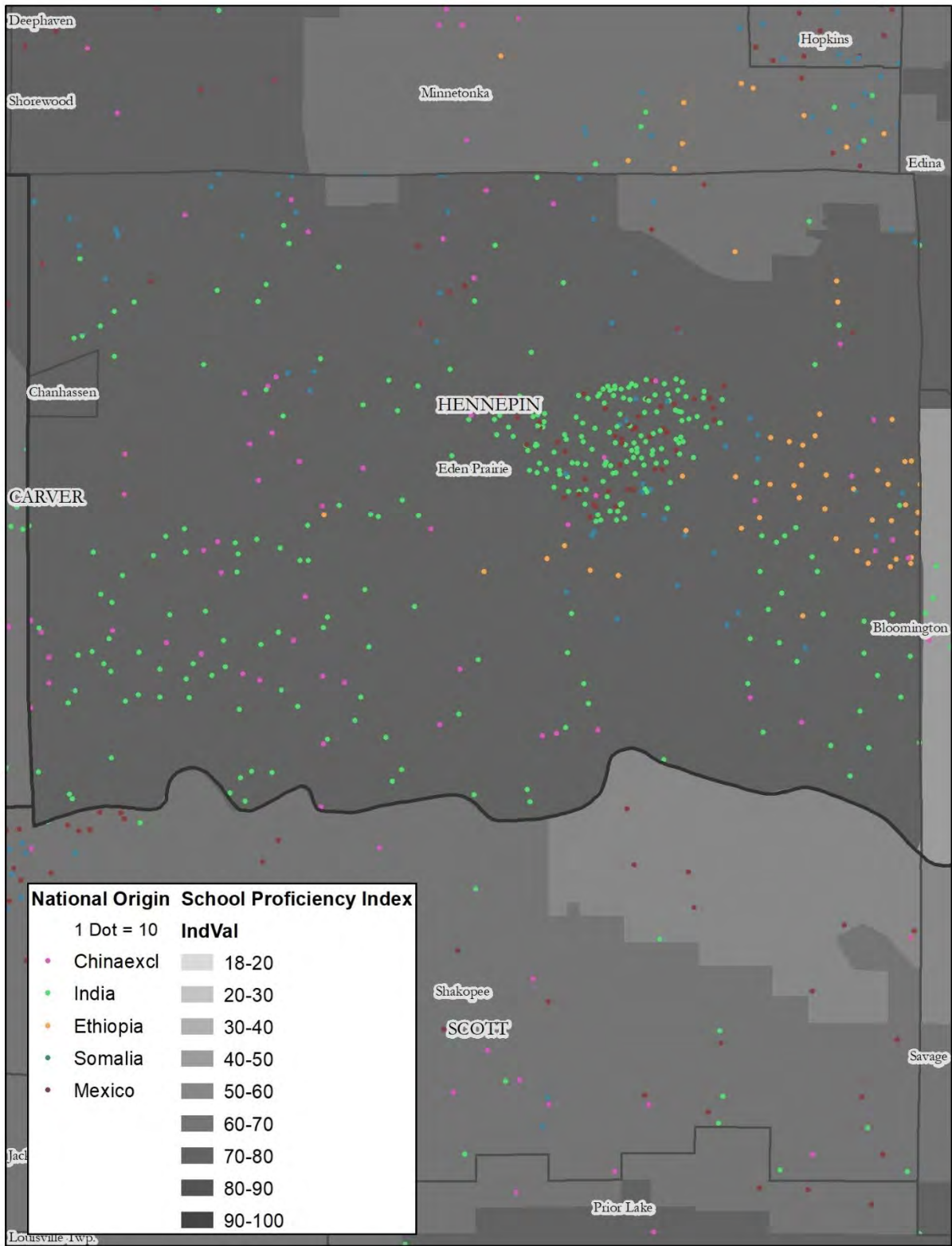
Map 10: Bloomington, National Origin, School Proficiency



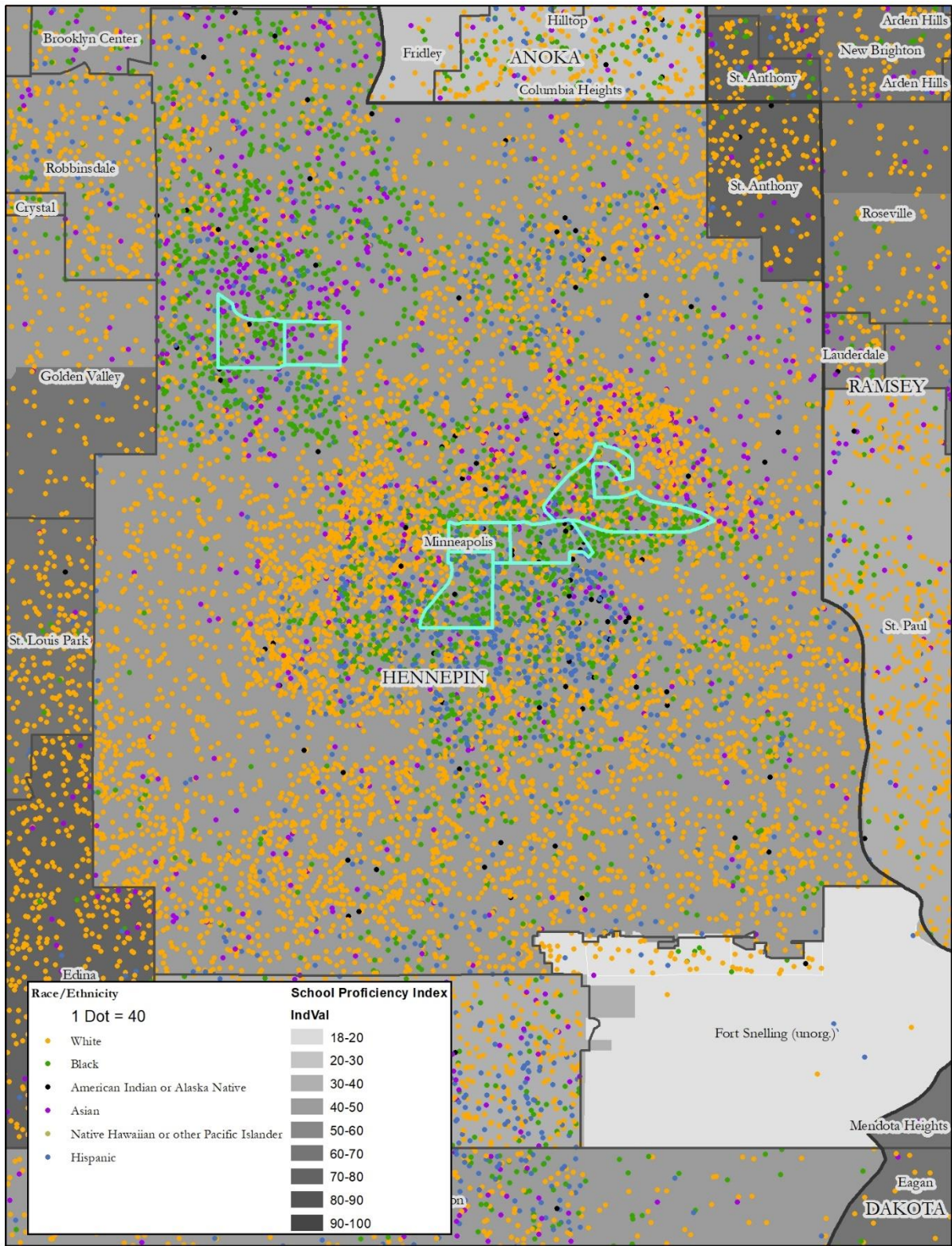
Map 11: Eden Prairie, Race, School Proficiency



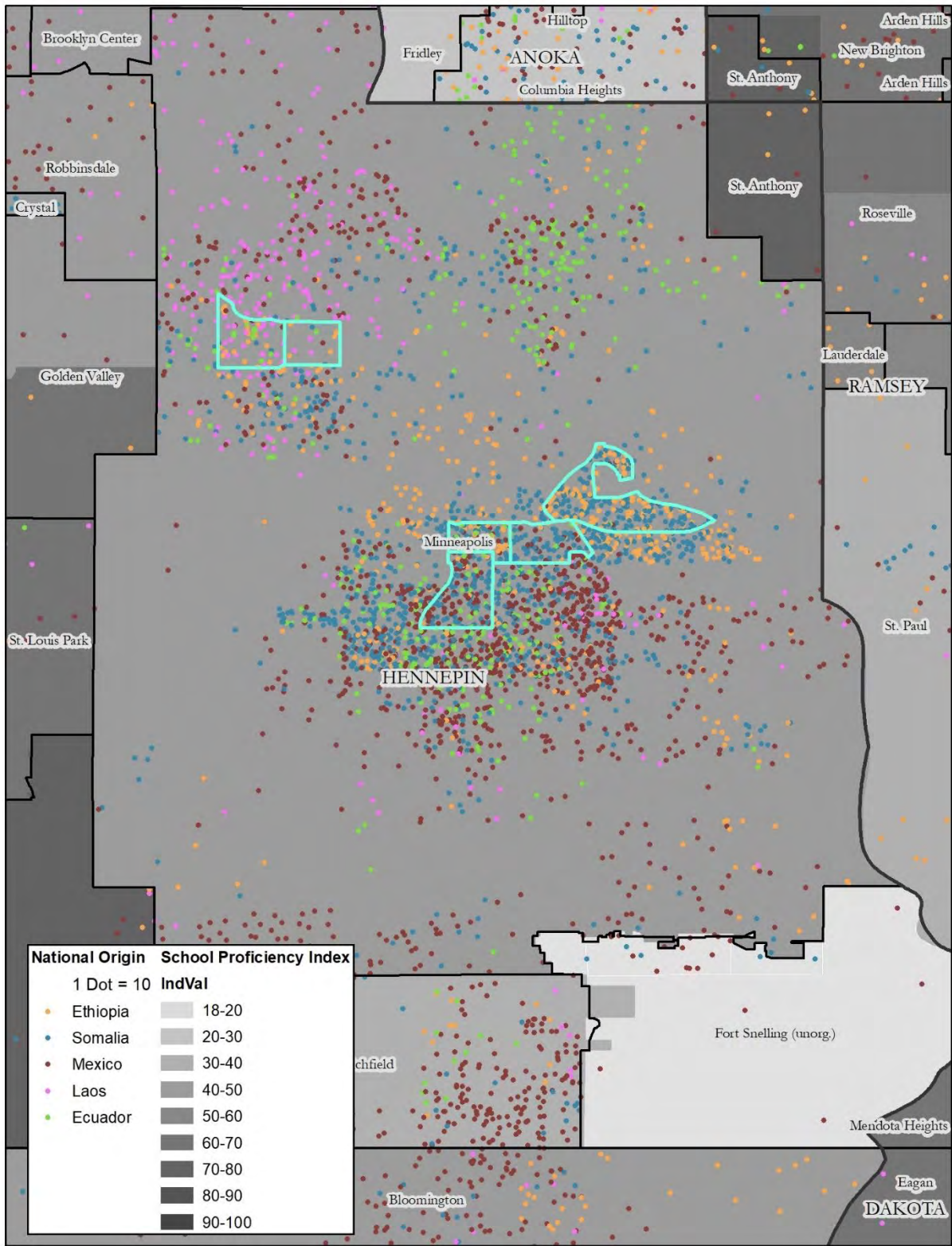
Map 12: Eden Prairie, National Origin, School Proficiency



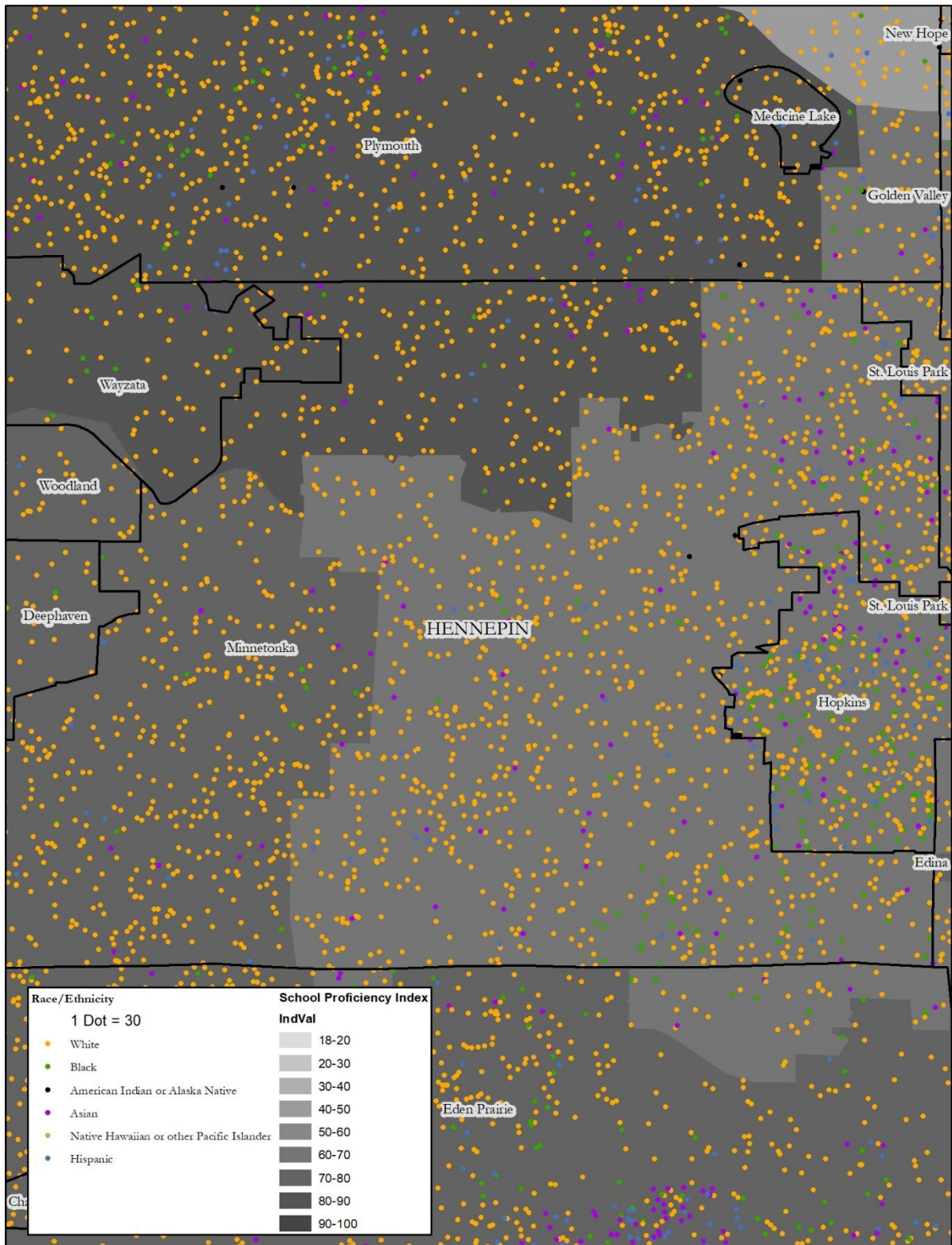
Map 13: Minneapolis, Race, School Proficiency



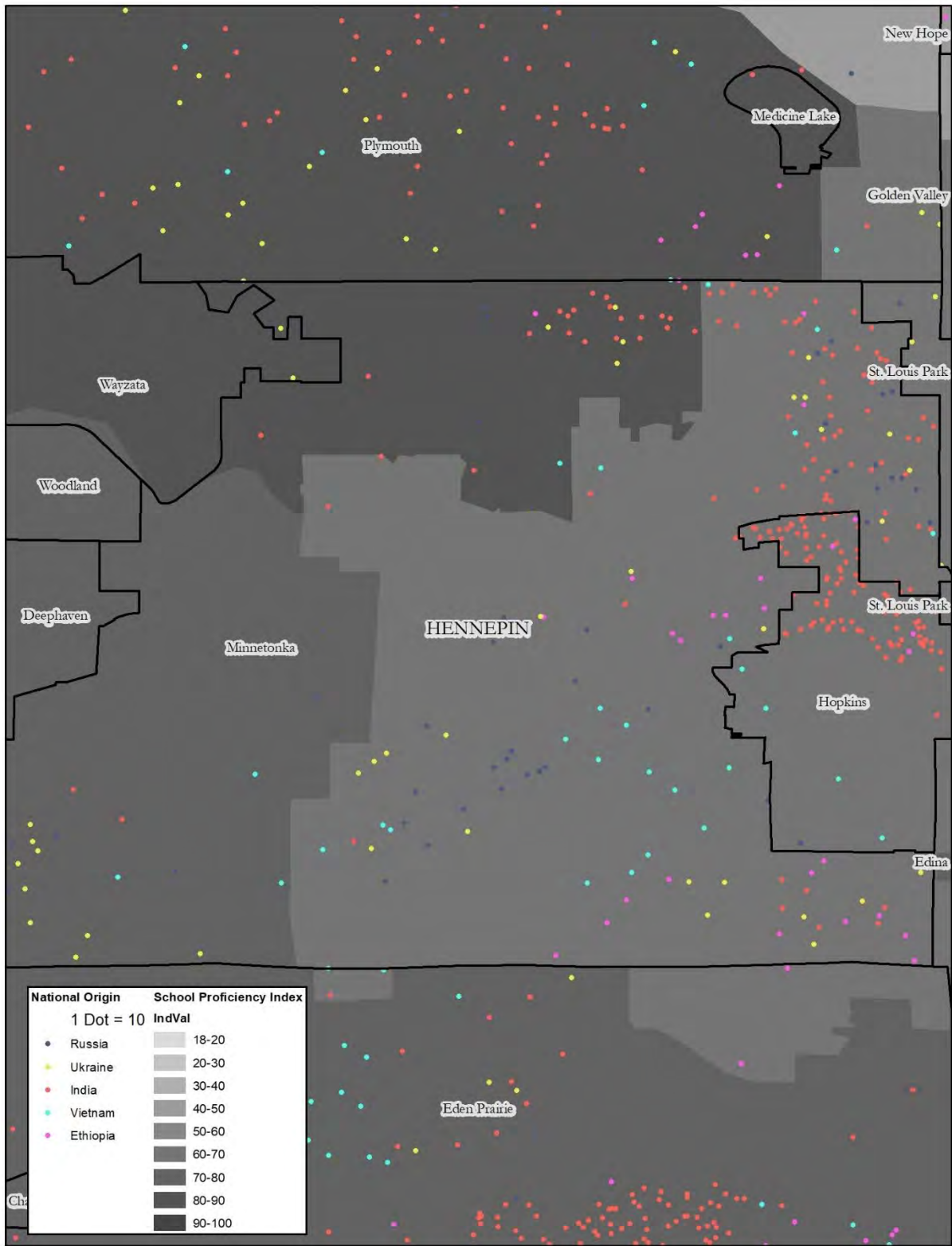
Map 14: Minneapolis, National Origin, School Proficiency



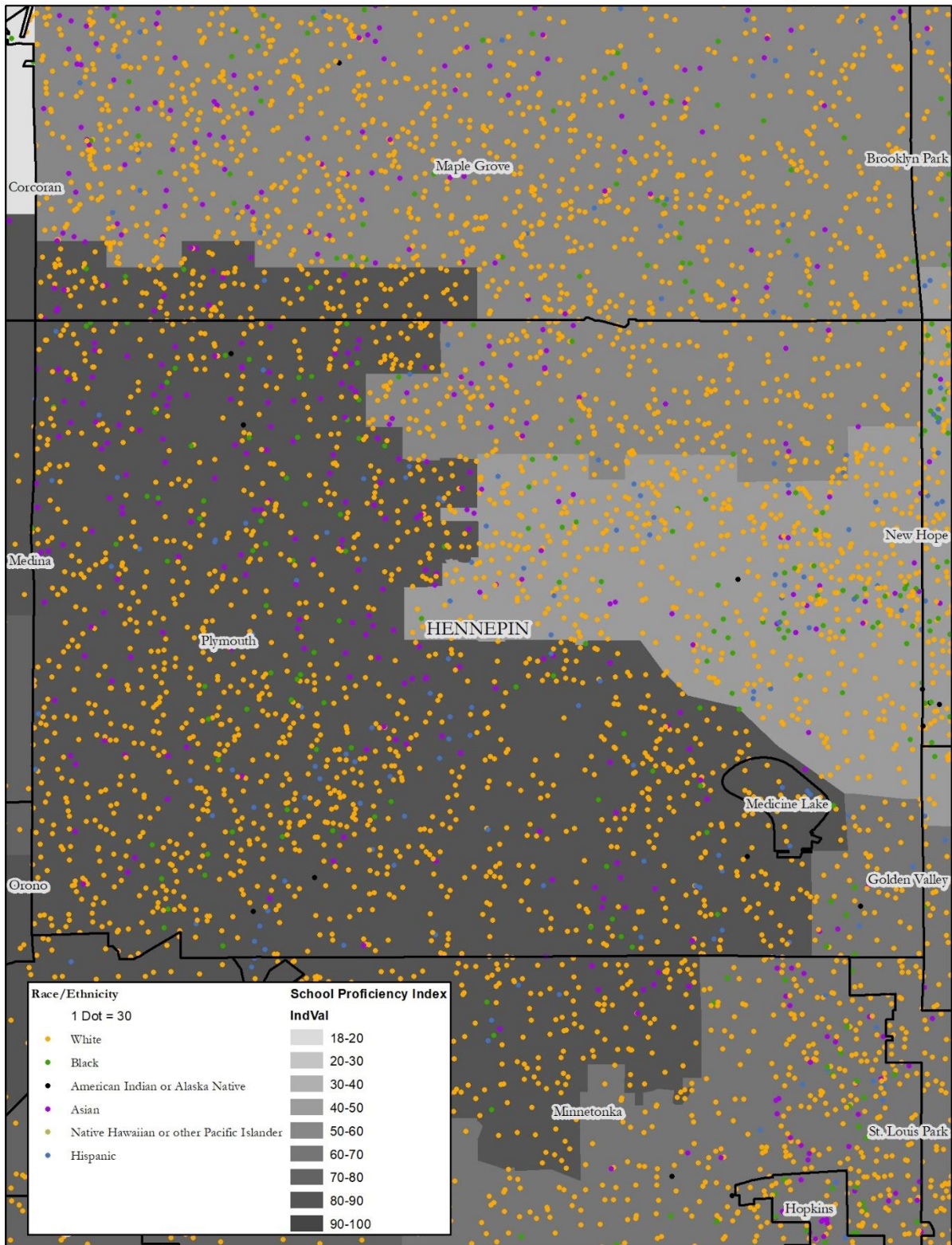
Map 15: Minnetonka, Race, School Proficiency



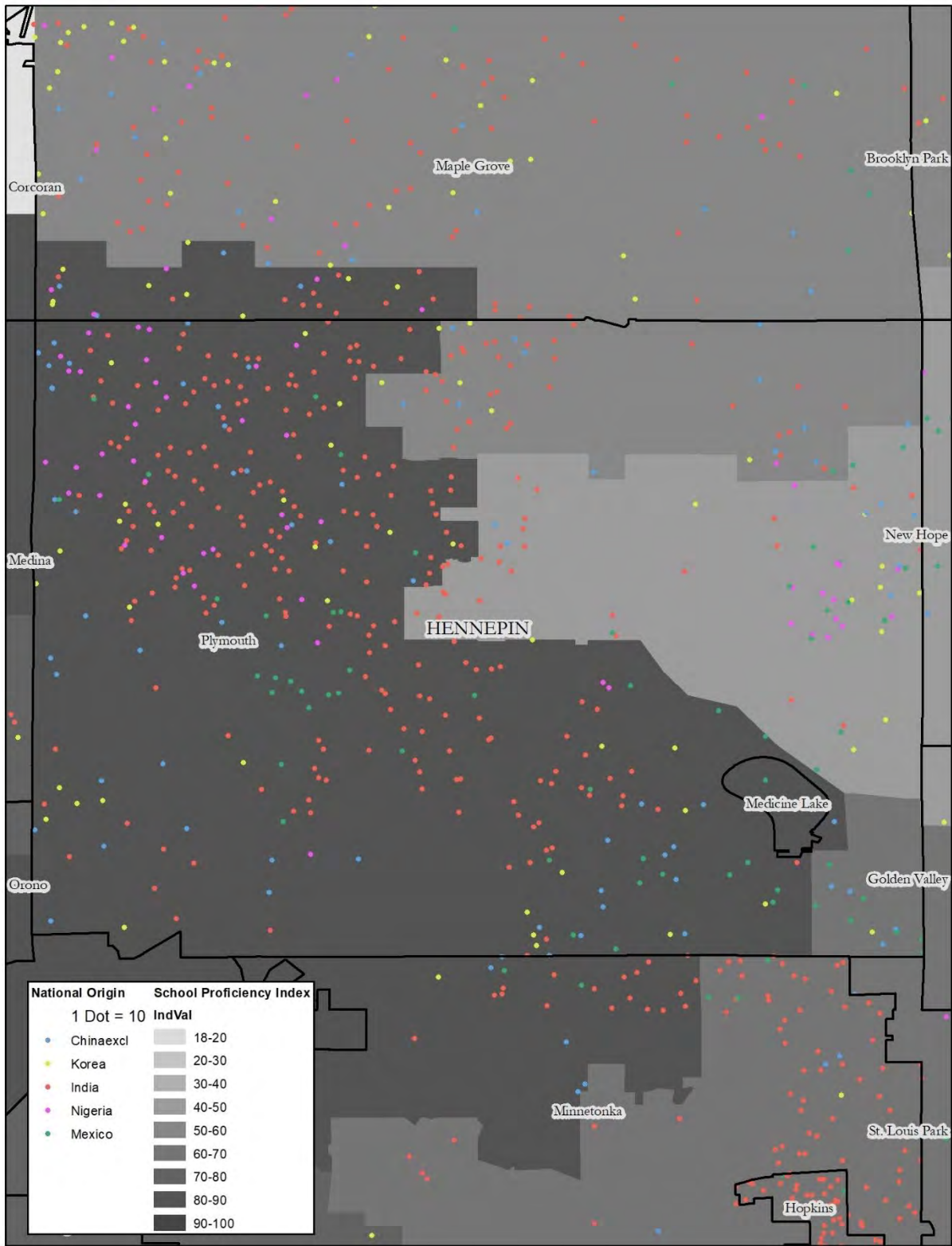
Map 16: Minnetonka, National Origin, School Proficiency



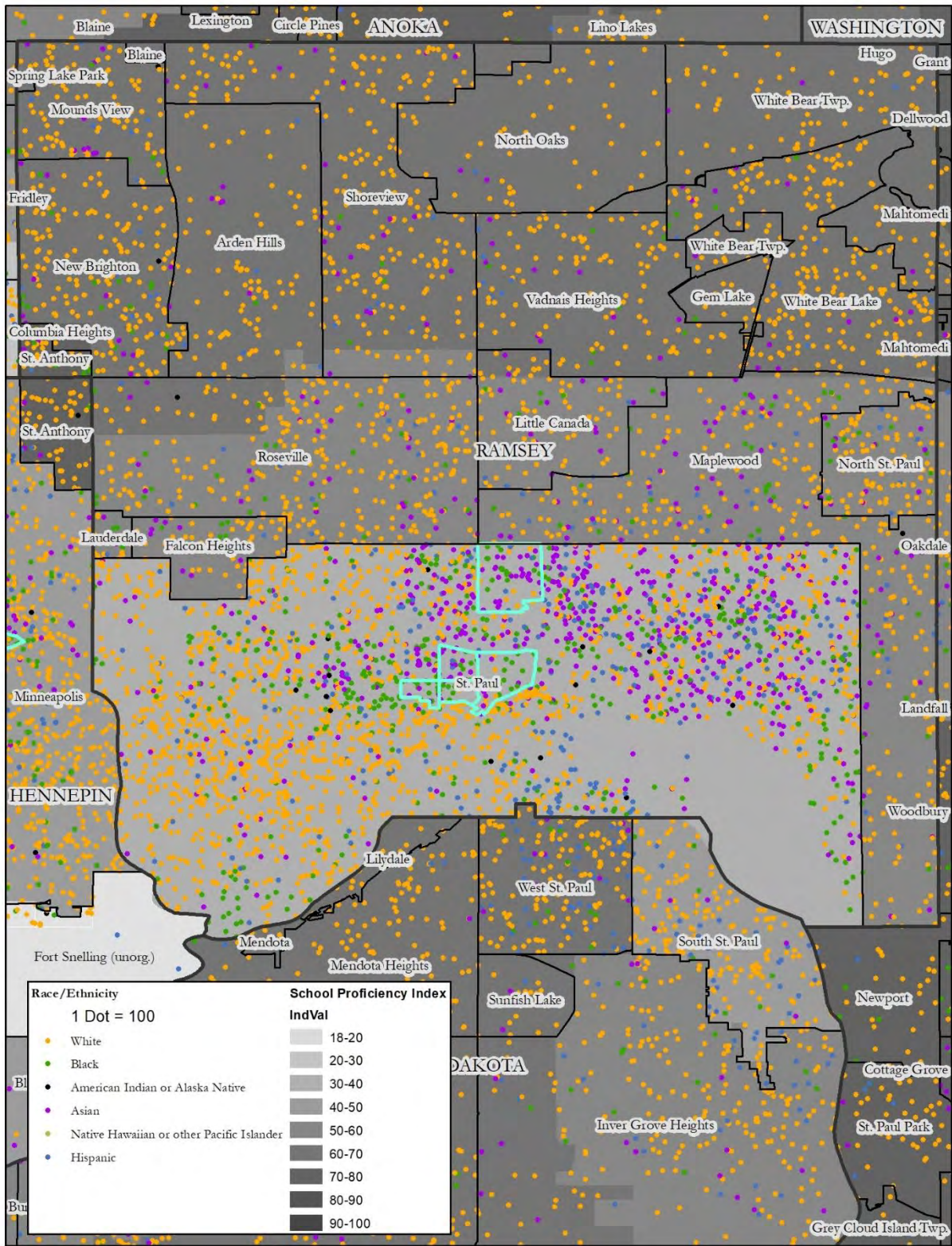
Map 17: Plymouth, Race, School Proficiency



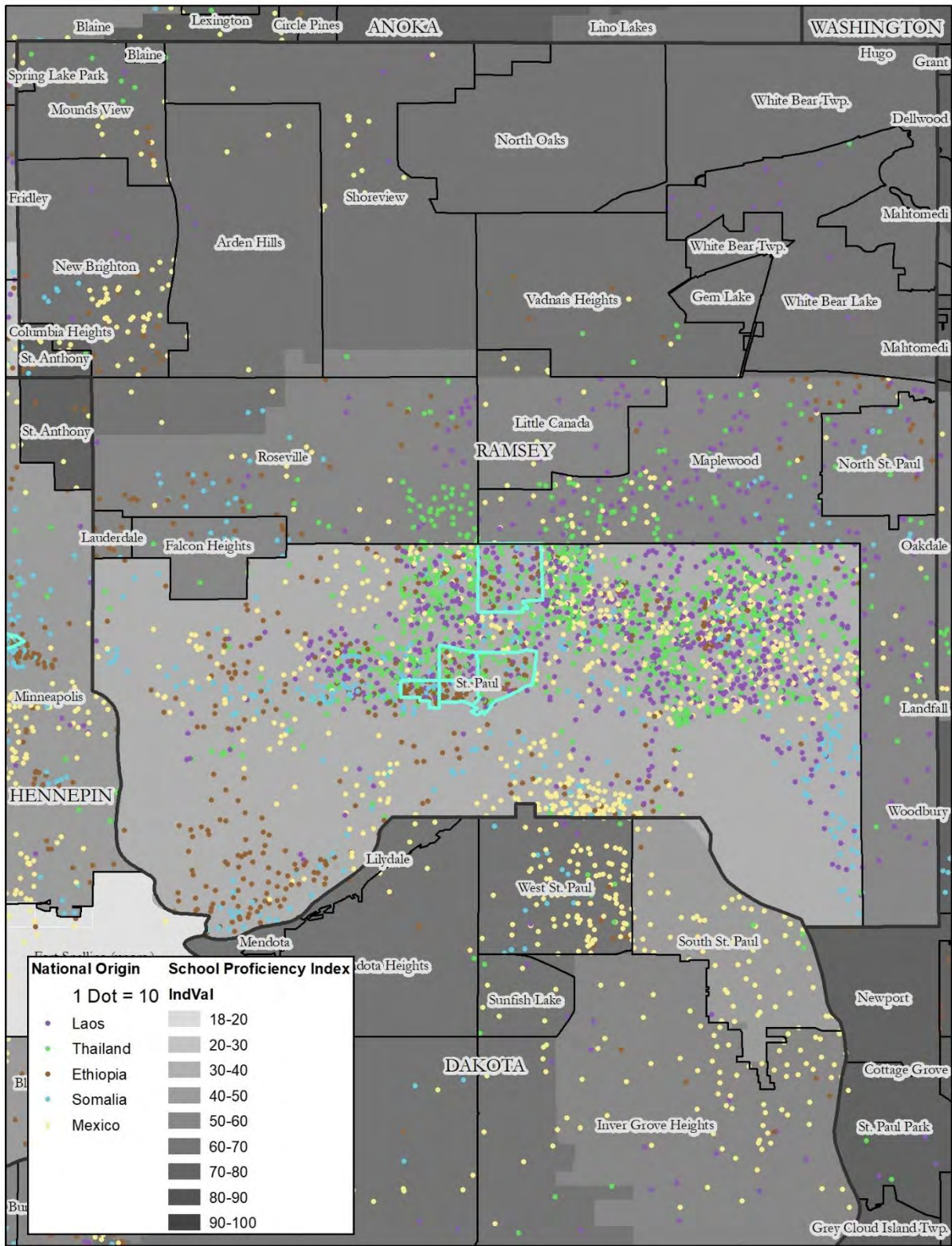
Map 18: Plymouth, National Origin, School Proficiency



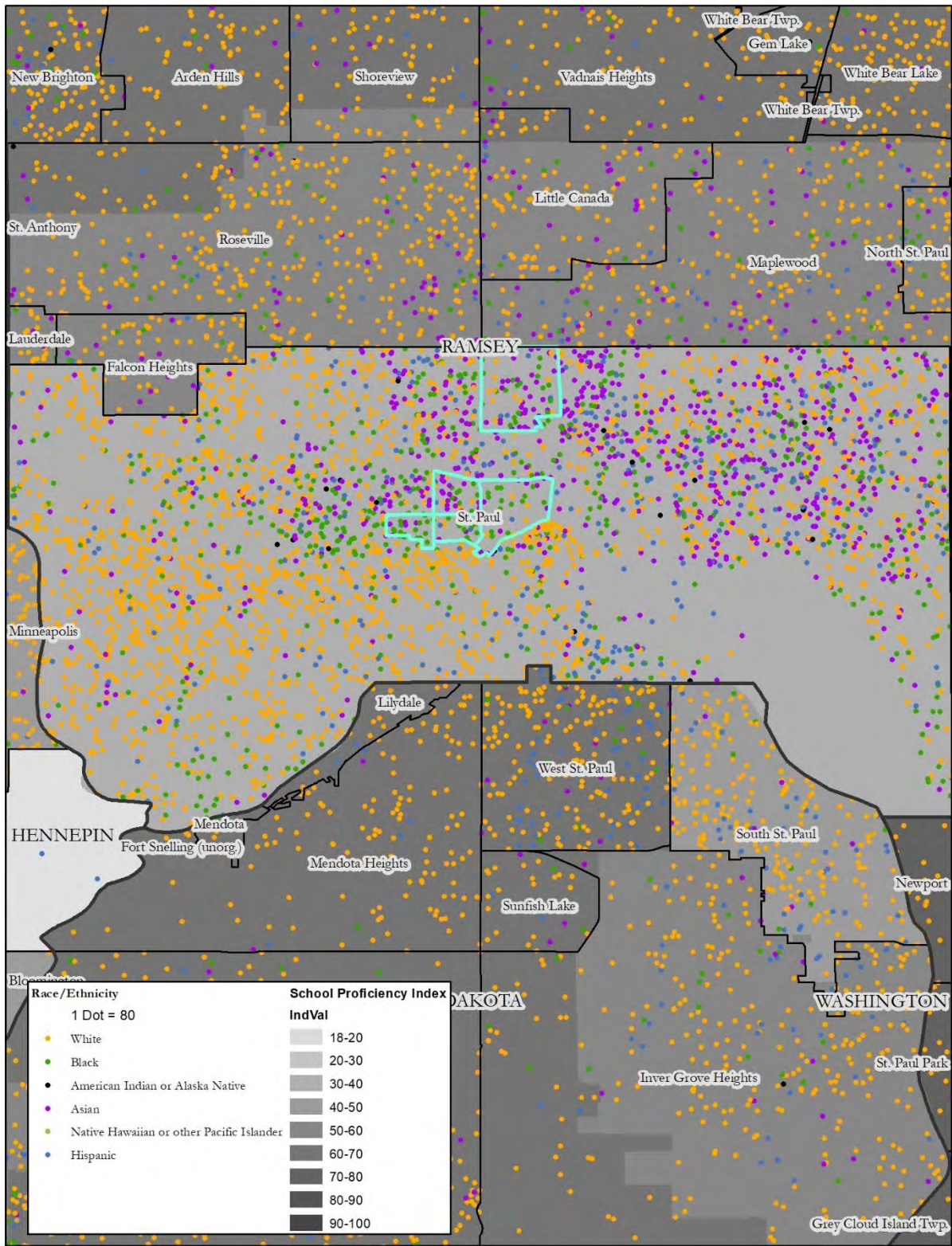
Map 19: Ramsey County, Race, School Proficiency



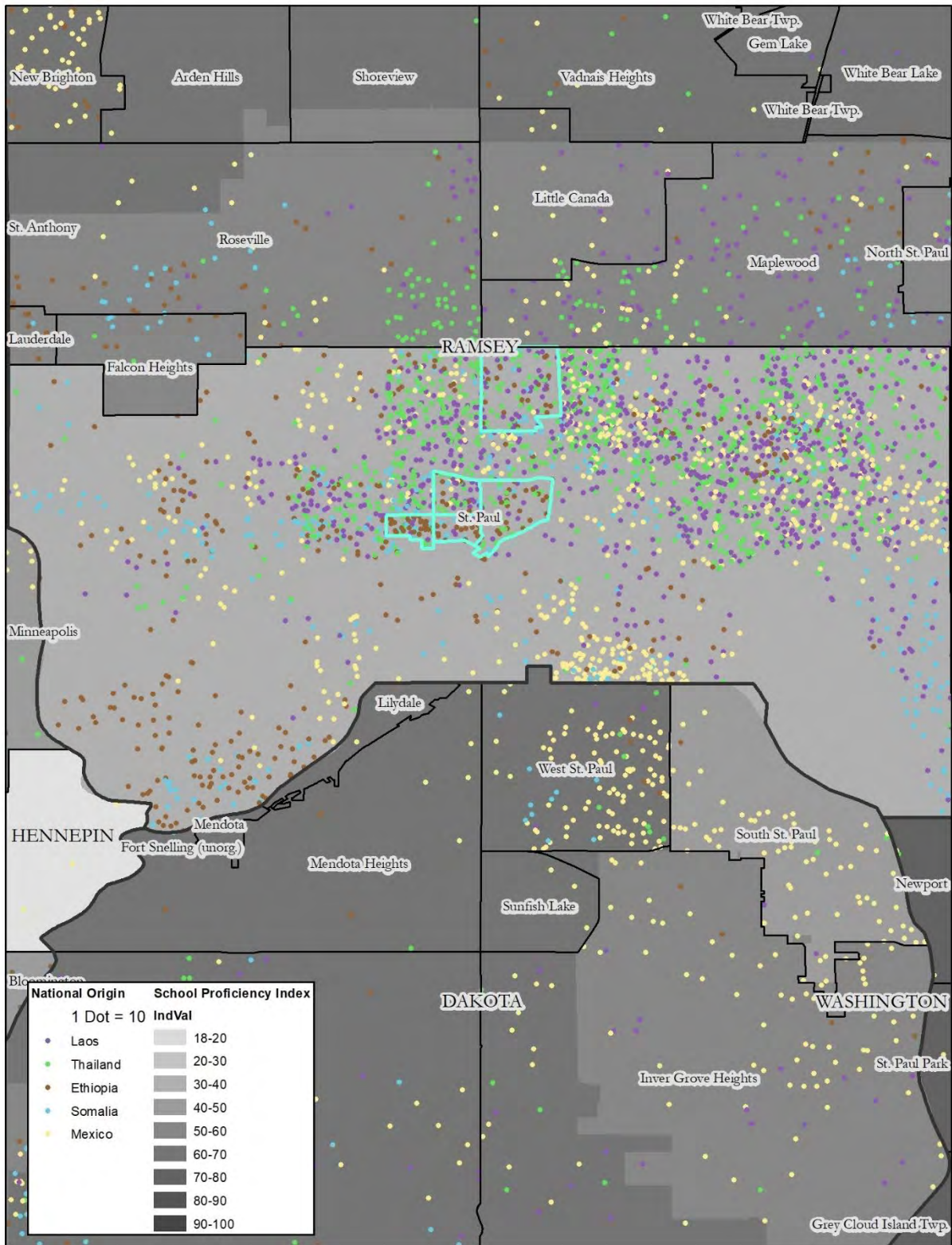
Map 20: Ramsey County, National Origin, School Proficiency



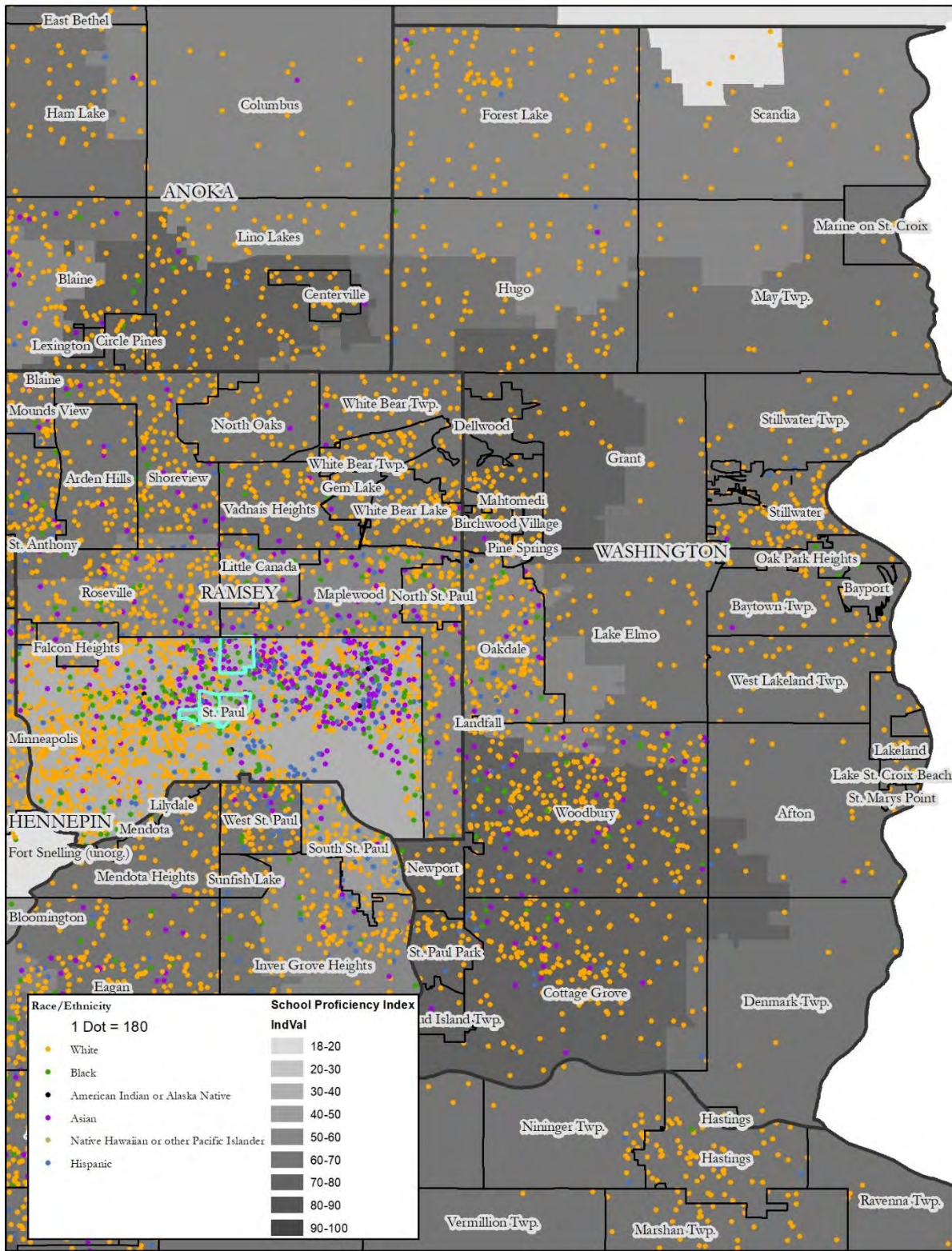
Map 21: St. Paul, Race, School Proficiency



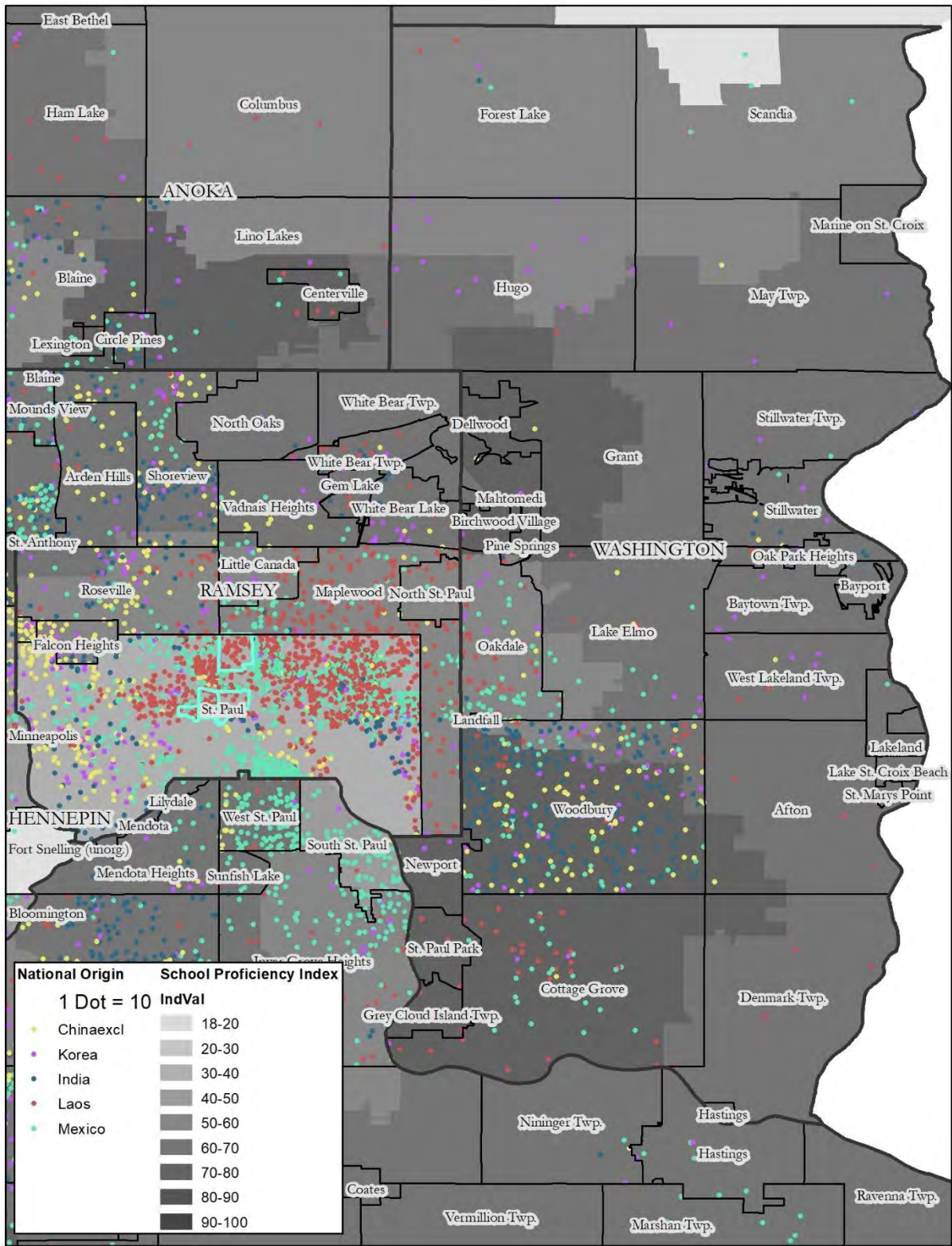
Map 22: St. Paul, National Origin, School Proficiency



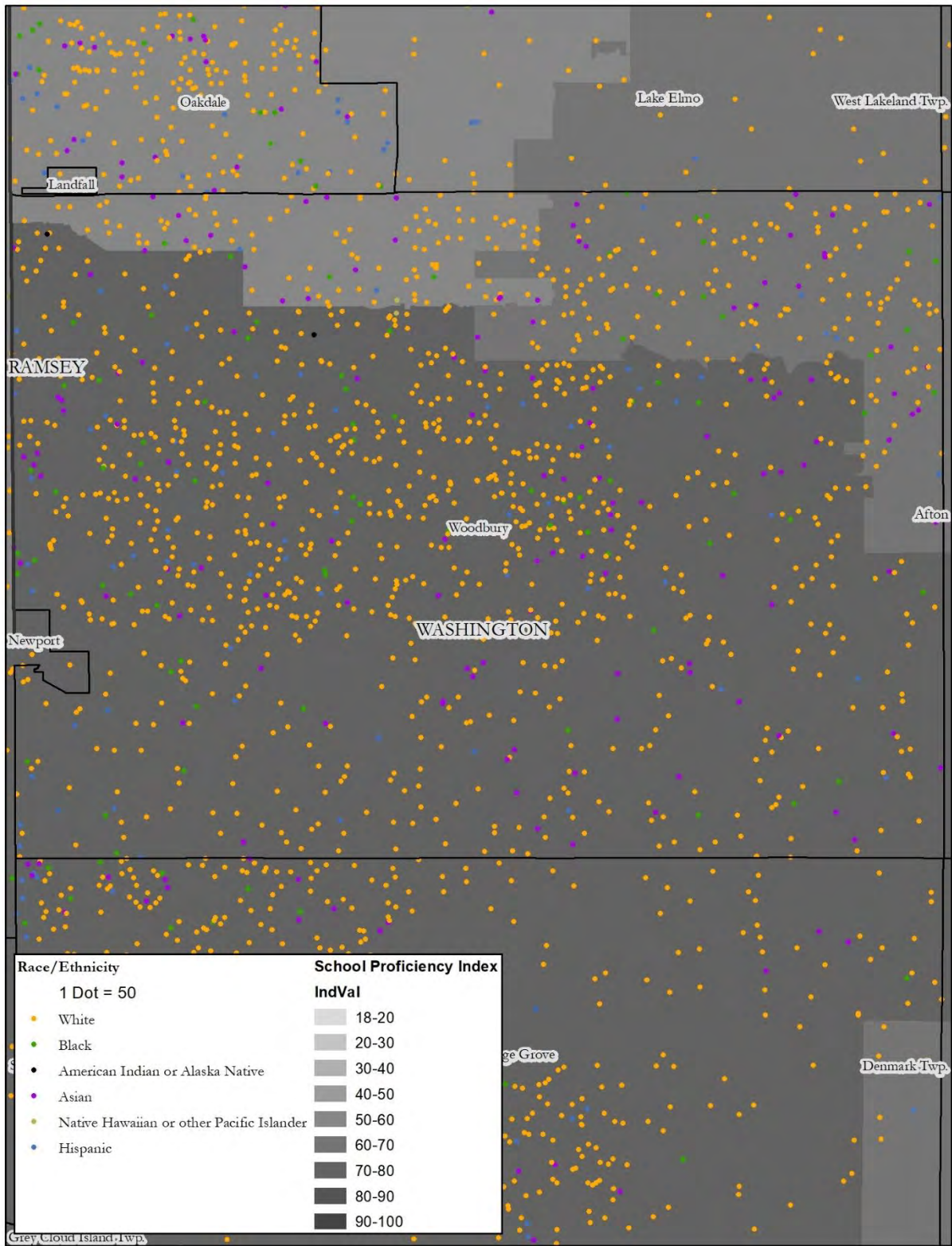
Map 23: Washington County, Race, School Proficiency



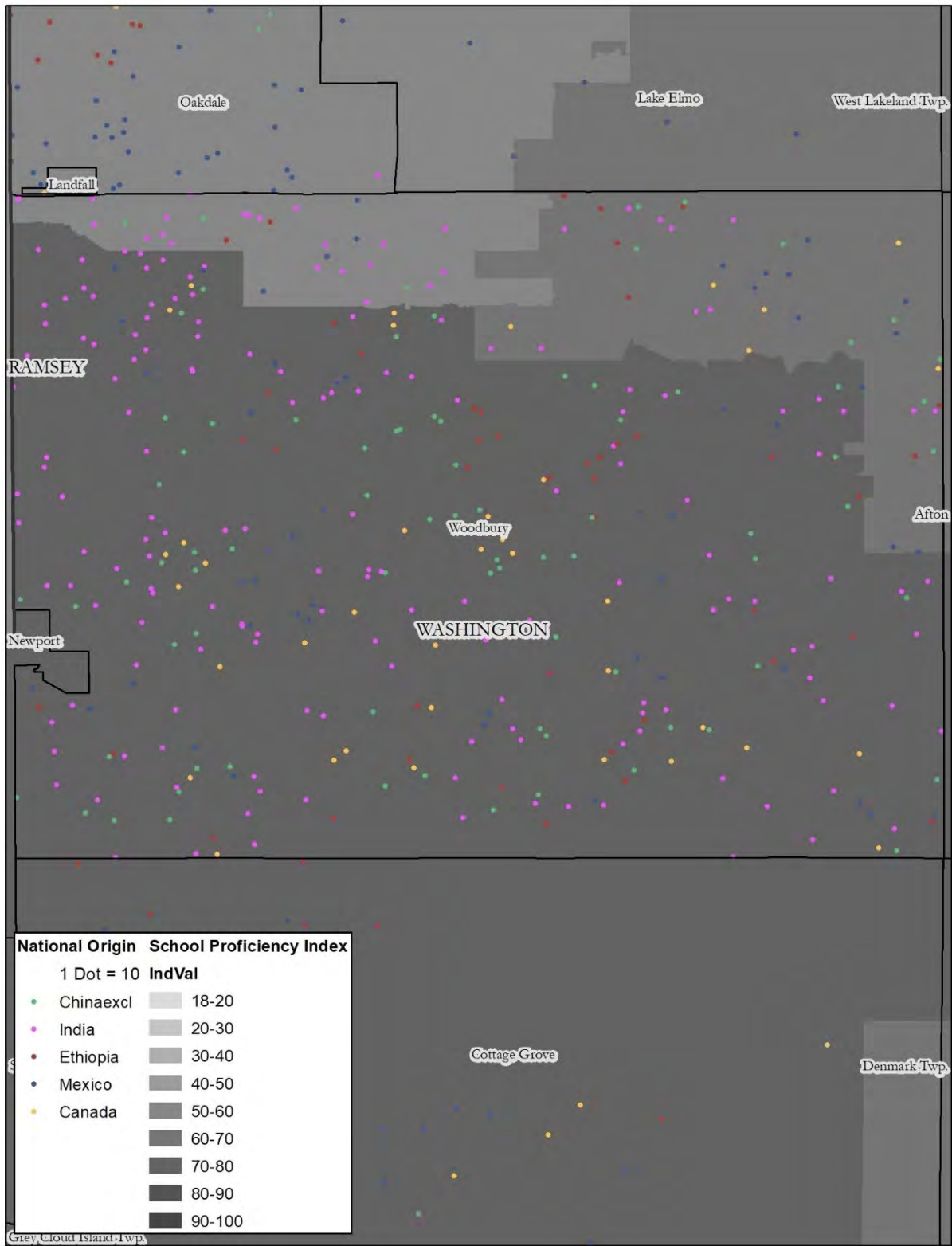
Map 24: Washington County, National Origin, School Proficiency



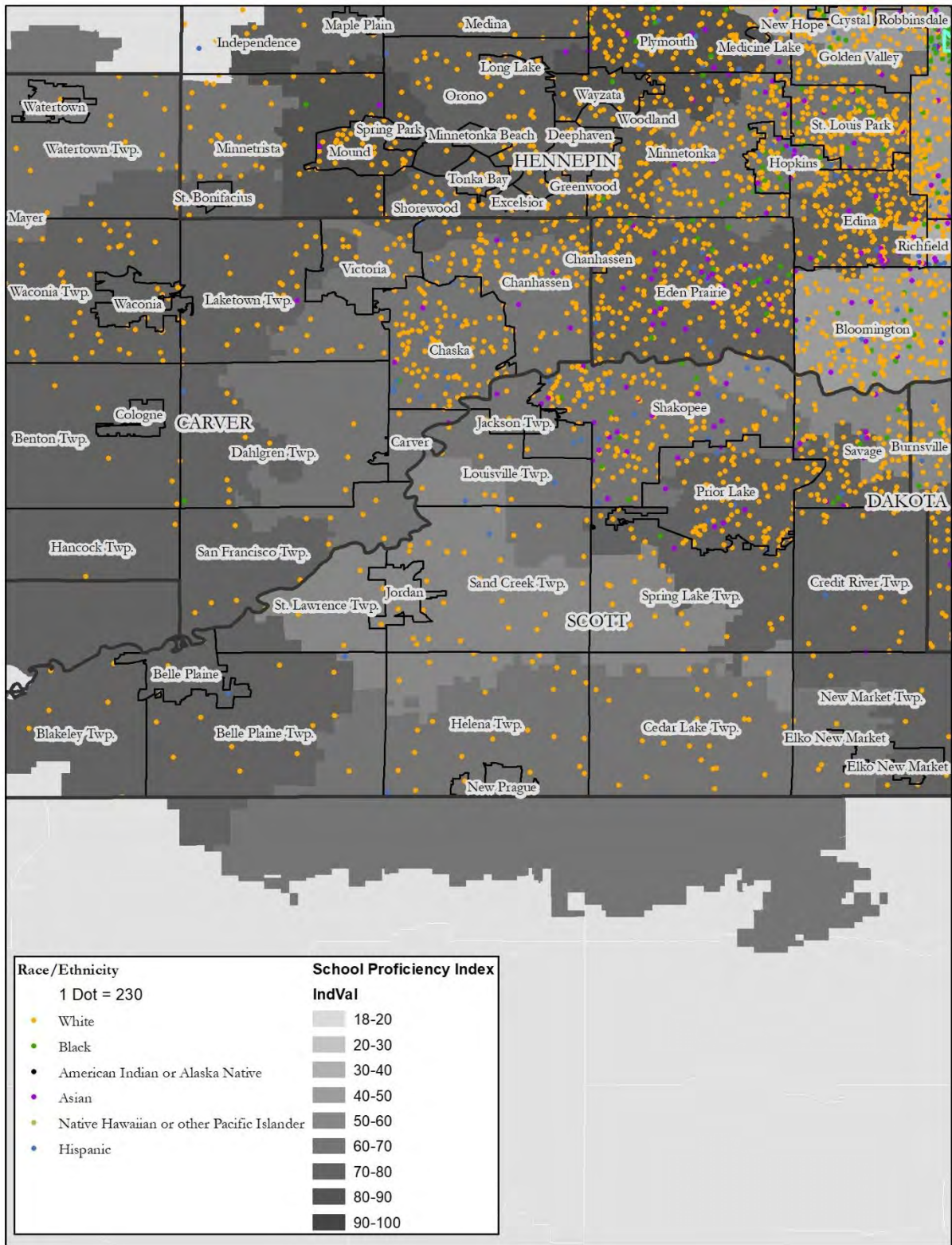
Map 25: Woodbury, Race, School Proficiency



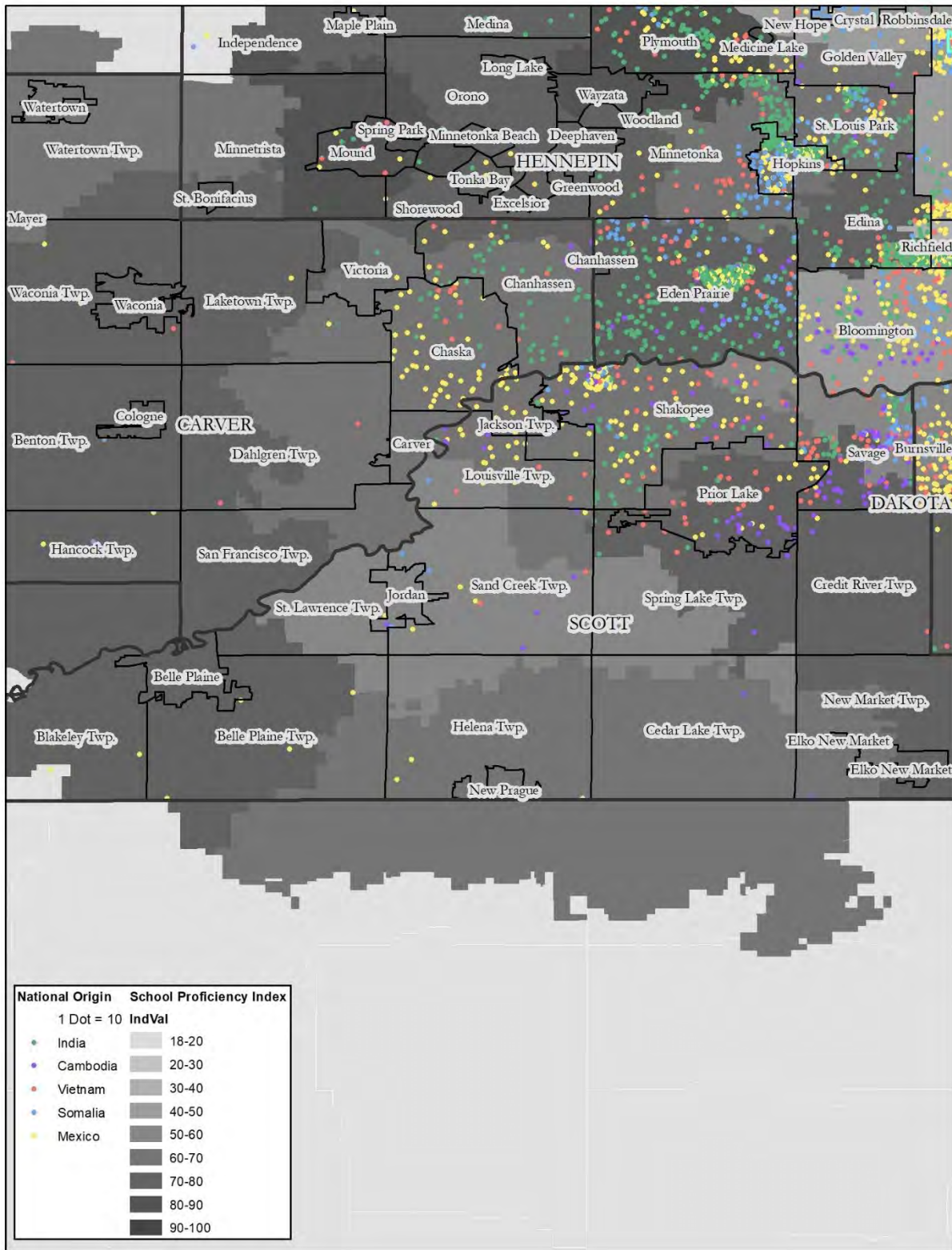
Map 26: Woodbury, National Origin, School Proficiency



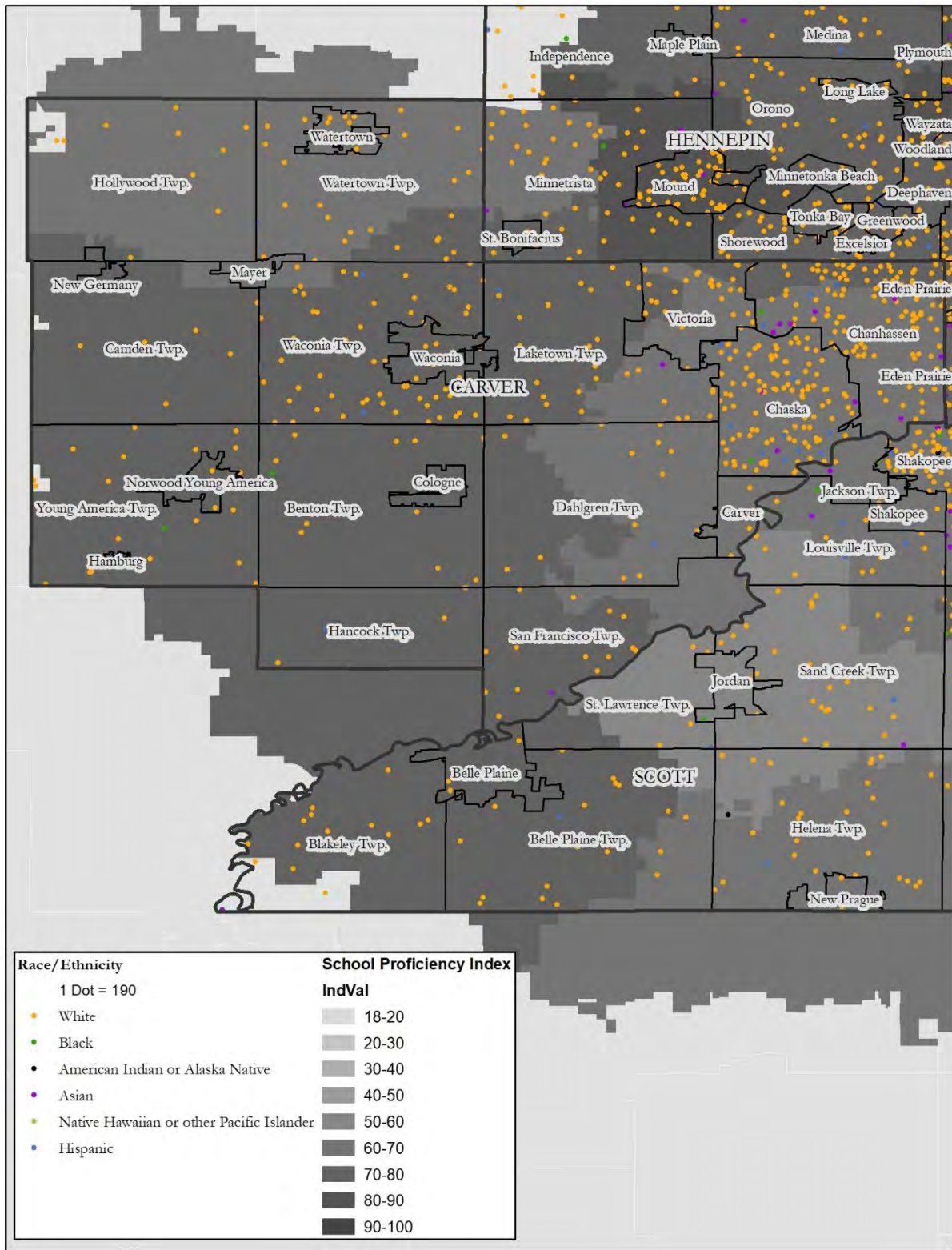
Map 27: Scott County, Race, School Proficiency



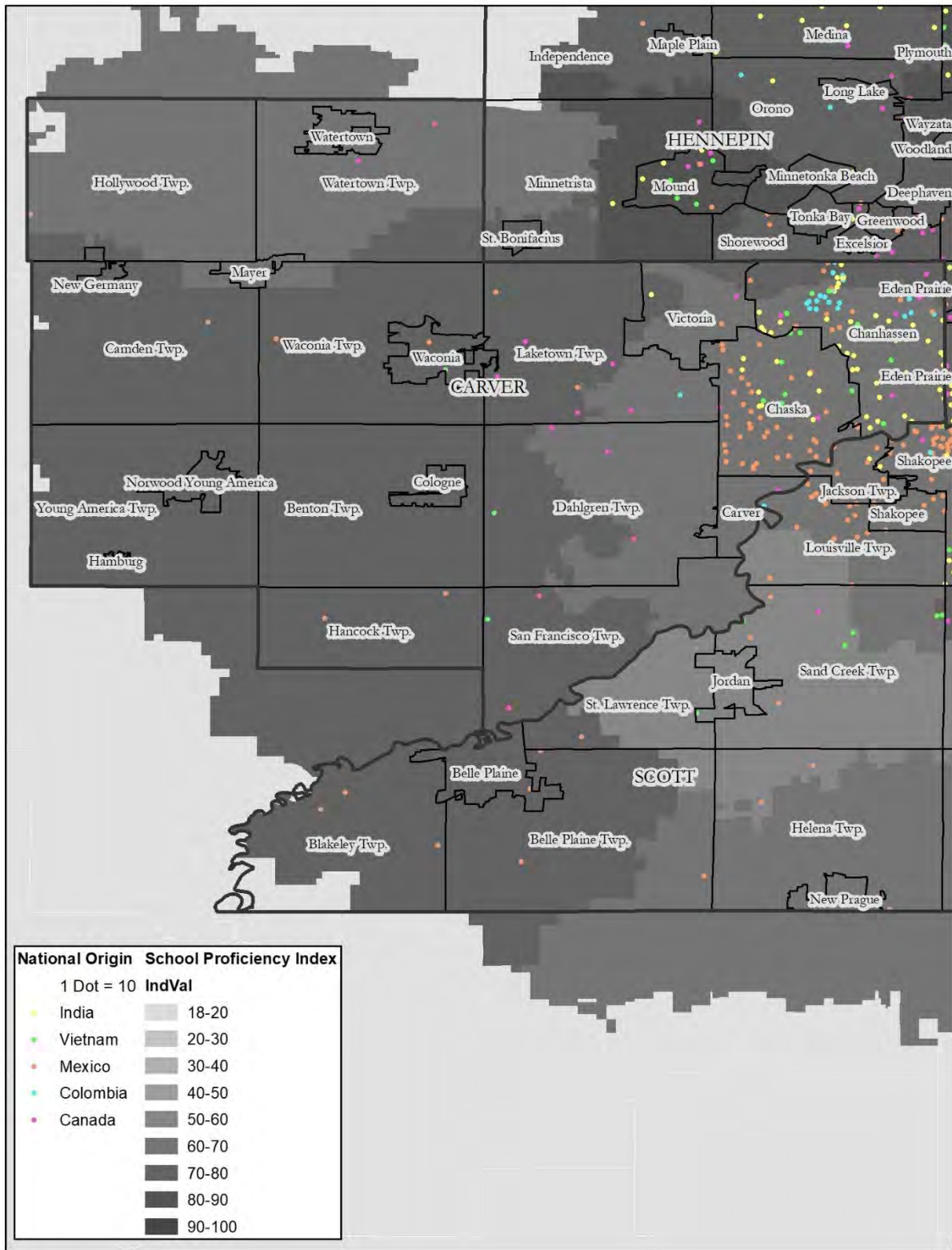
Map 28: Scott County, National Origin, School Proficiency



Map 29: Carver County, Race, School Proficiency

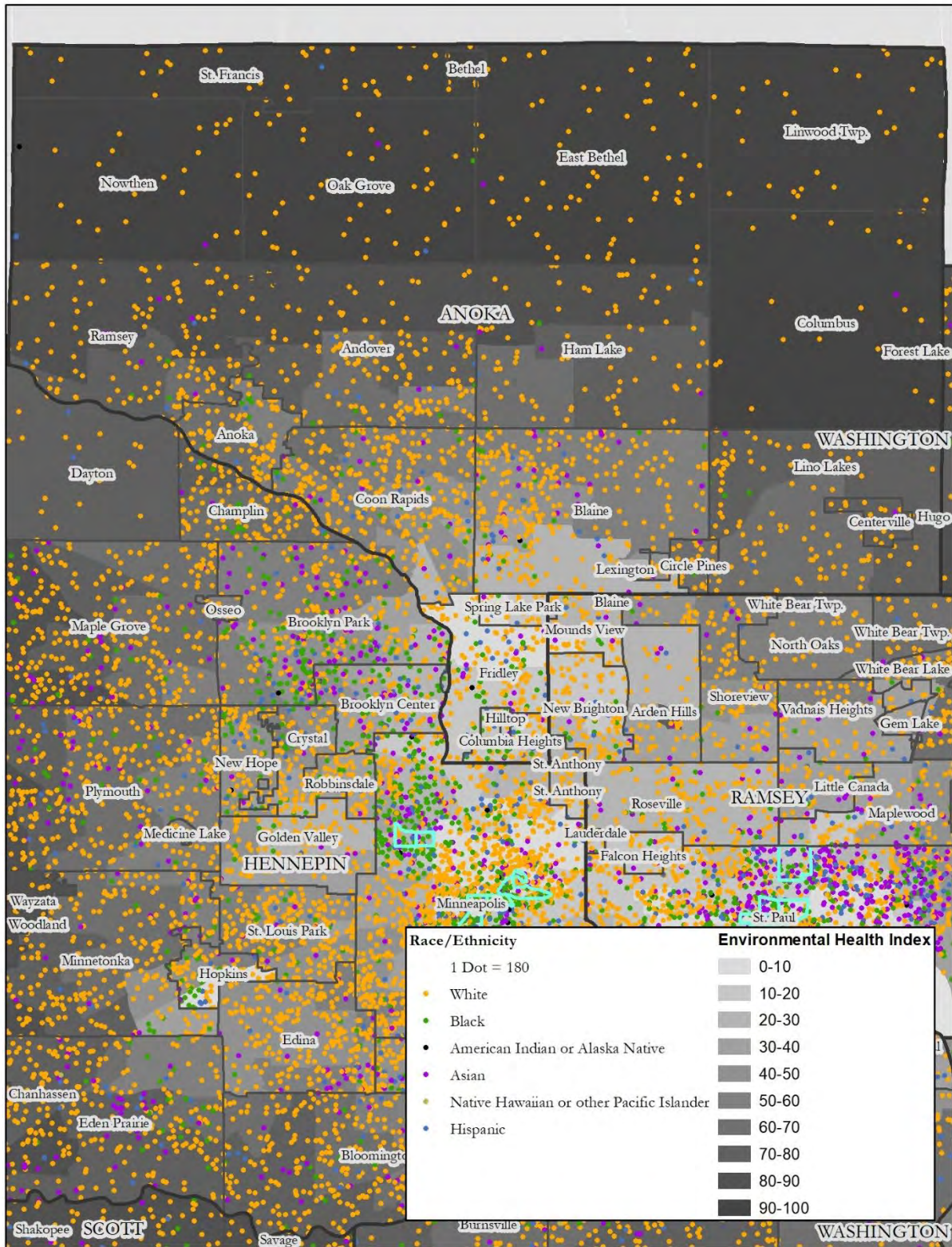


Map 30: Carver County, National Origin, School Proficiency

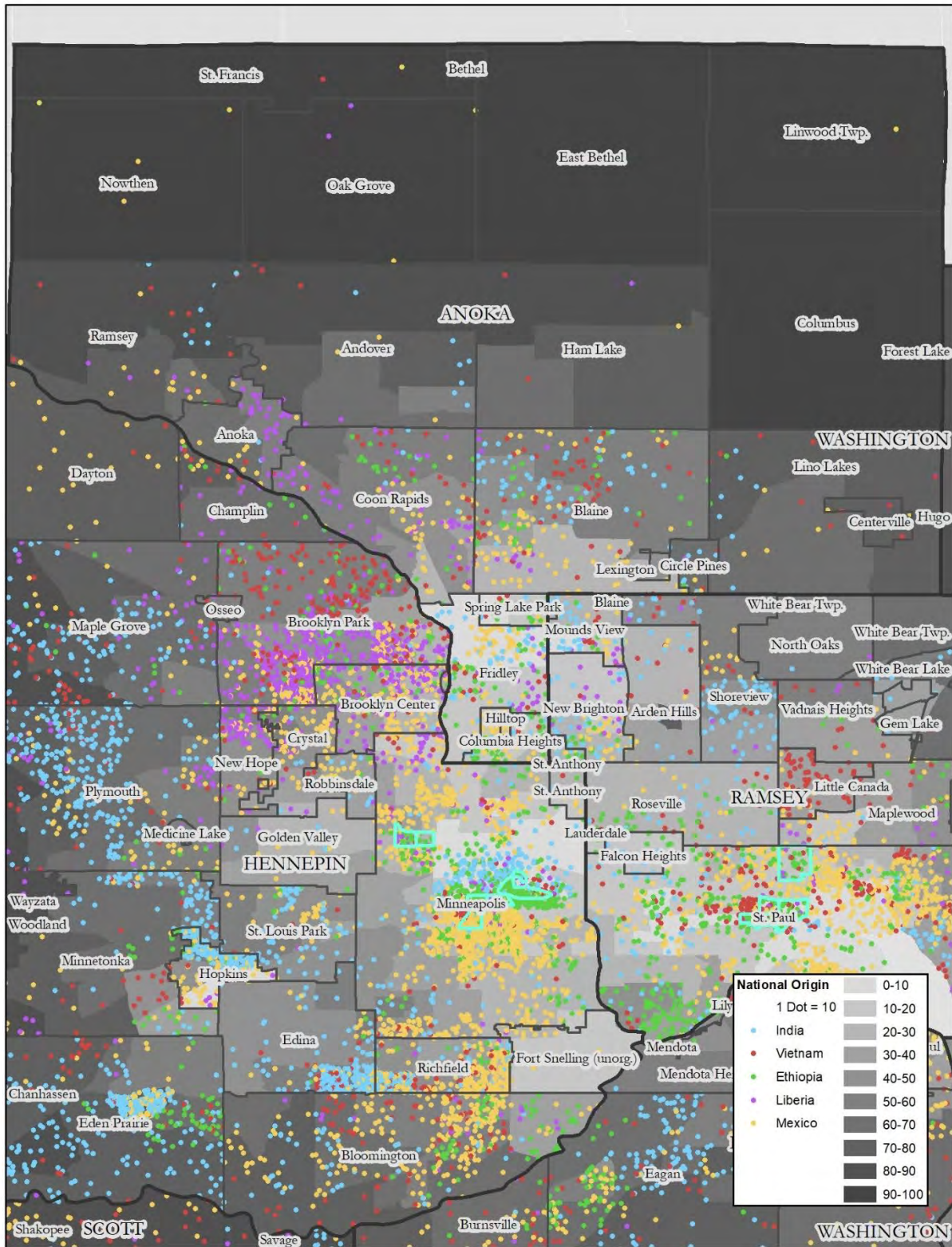


Environmental Index Maps

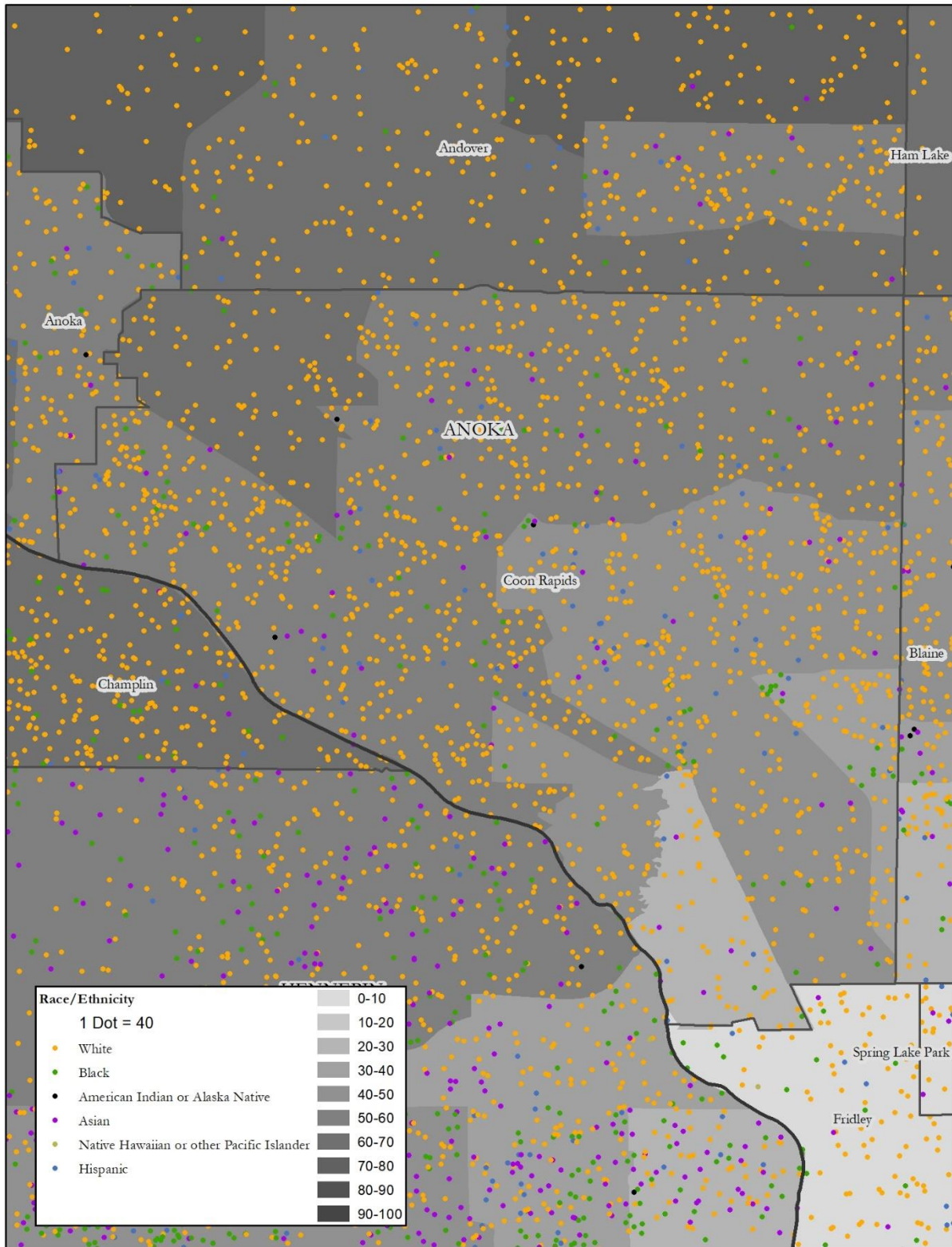
Map 1: Anoka County, Race, Environmental Health



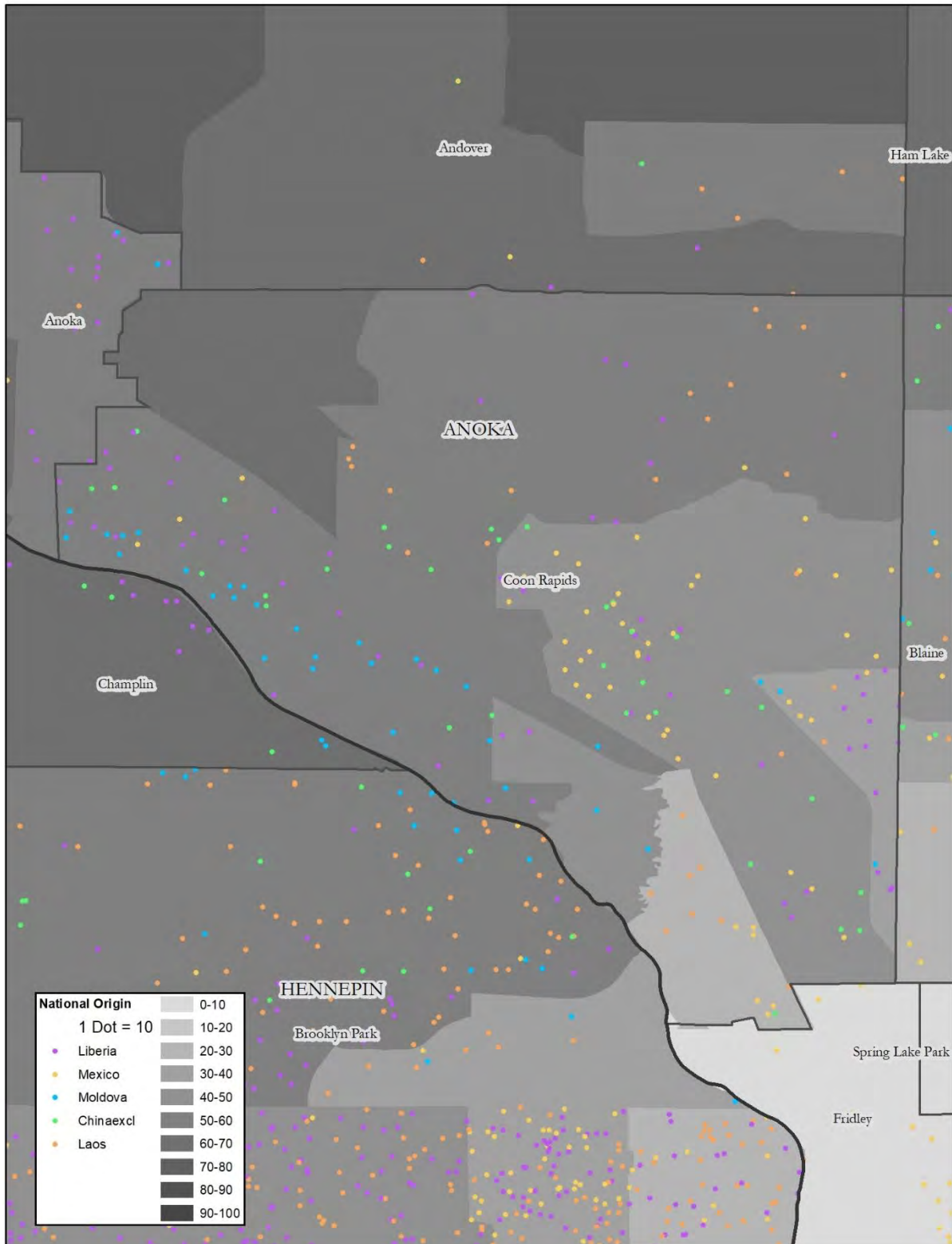
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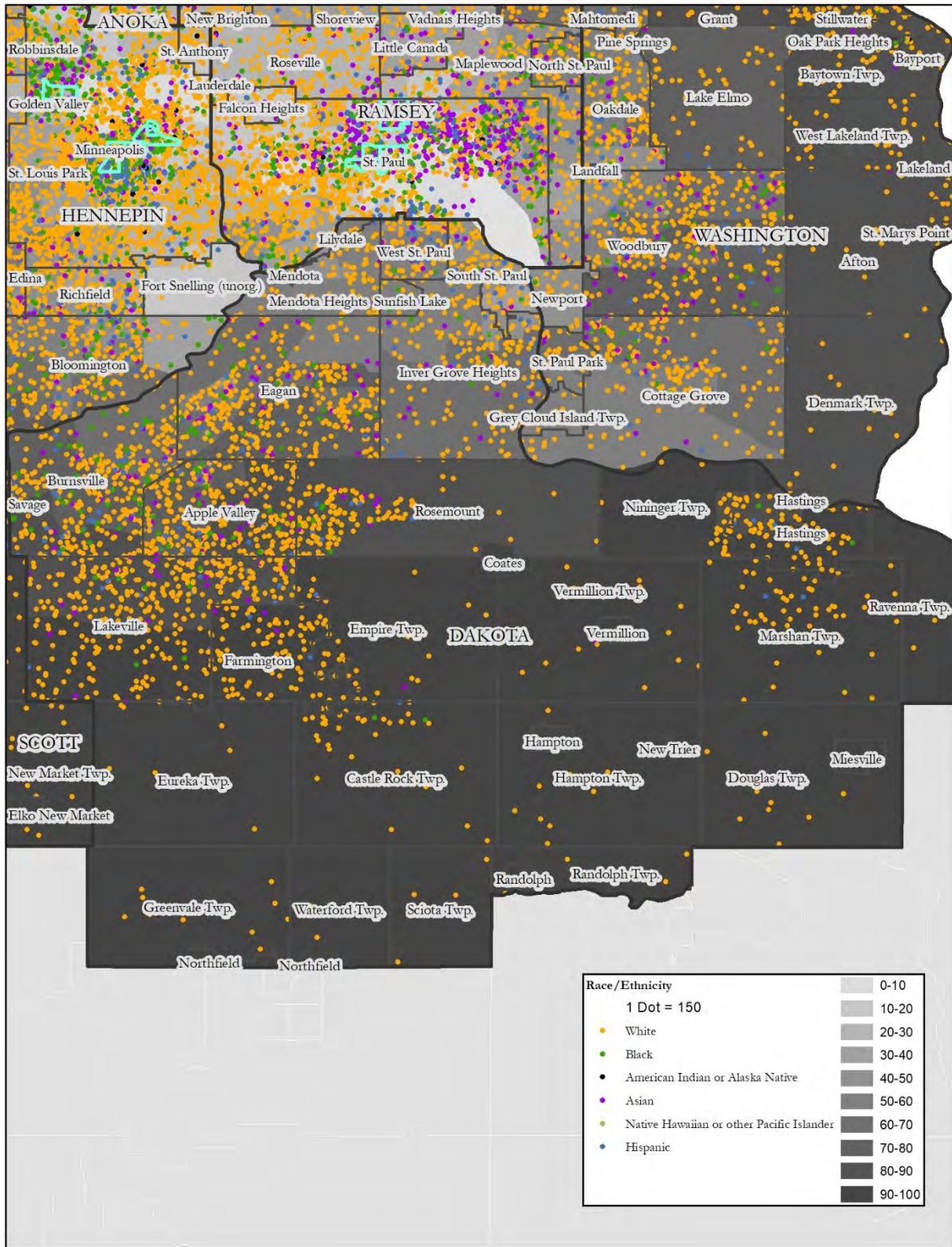
Map 3: Coon Rapids, Race, Environmental Health



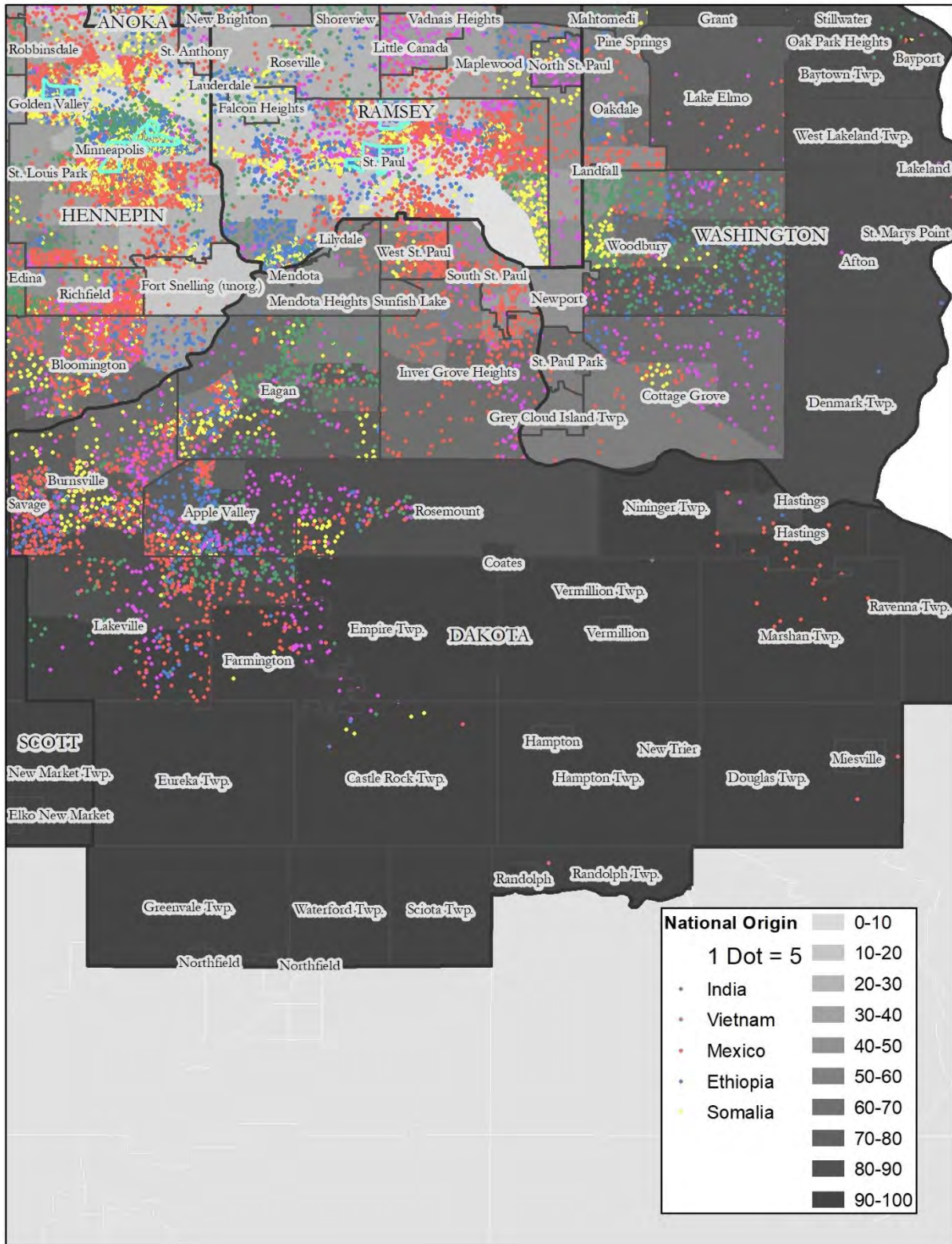
Map 4: Coon Rapids, National Origin, Environmental Health



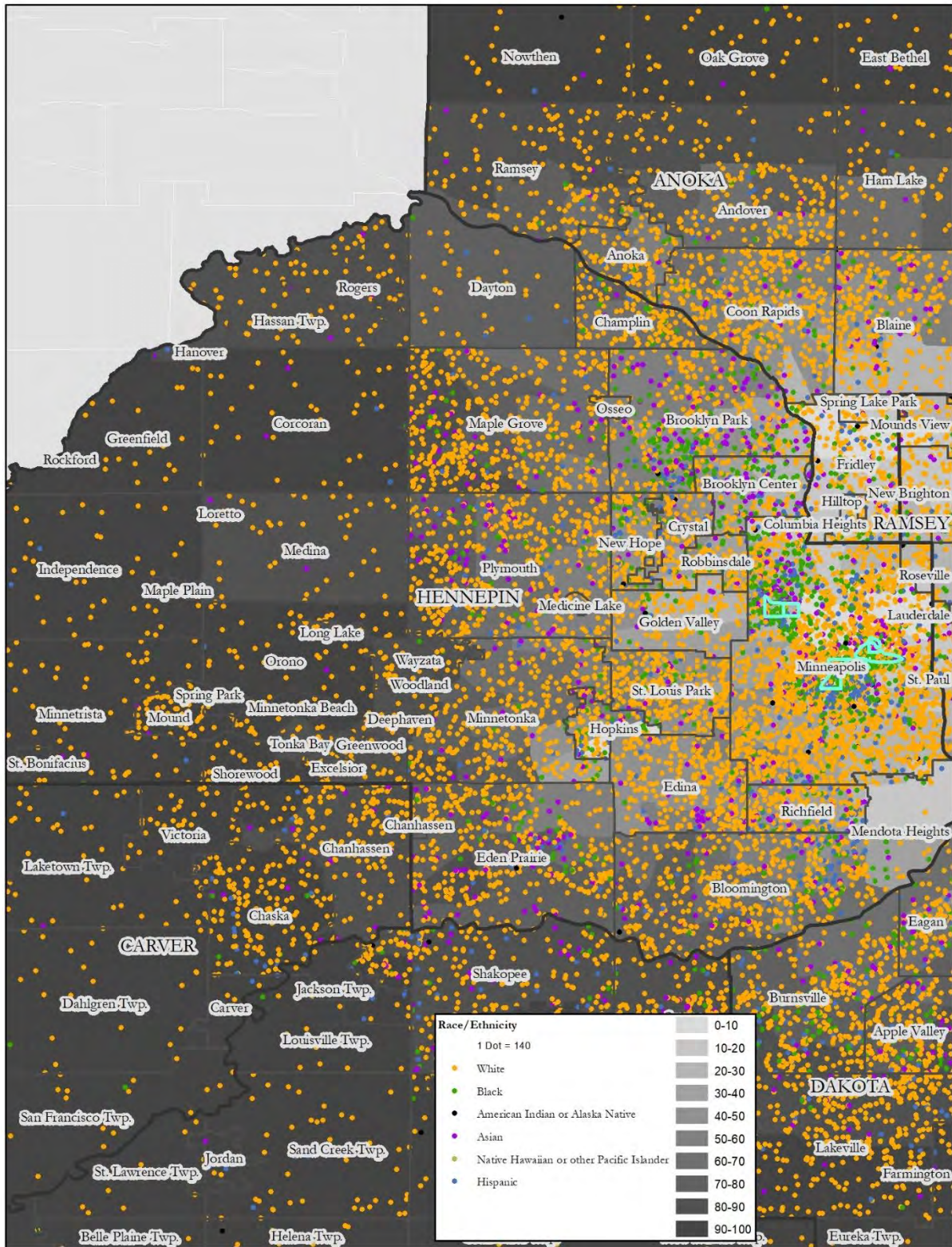
Map 5: Dakota County, Race, Environmental Health



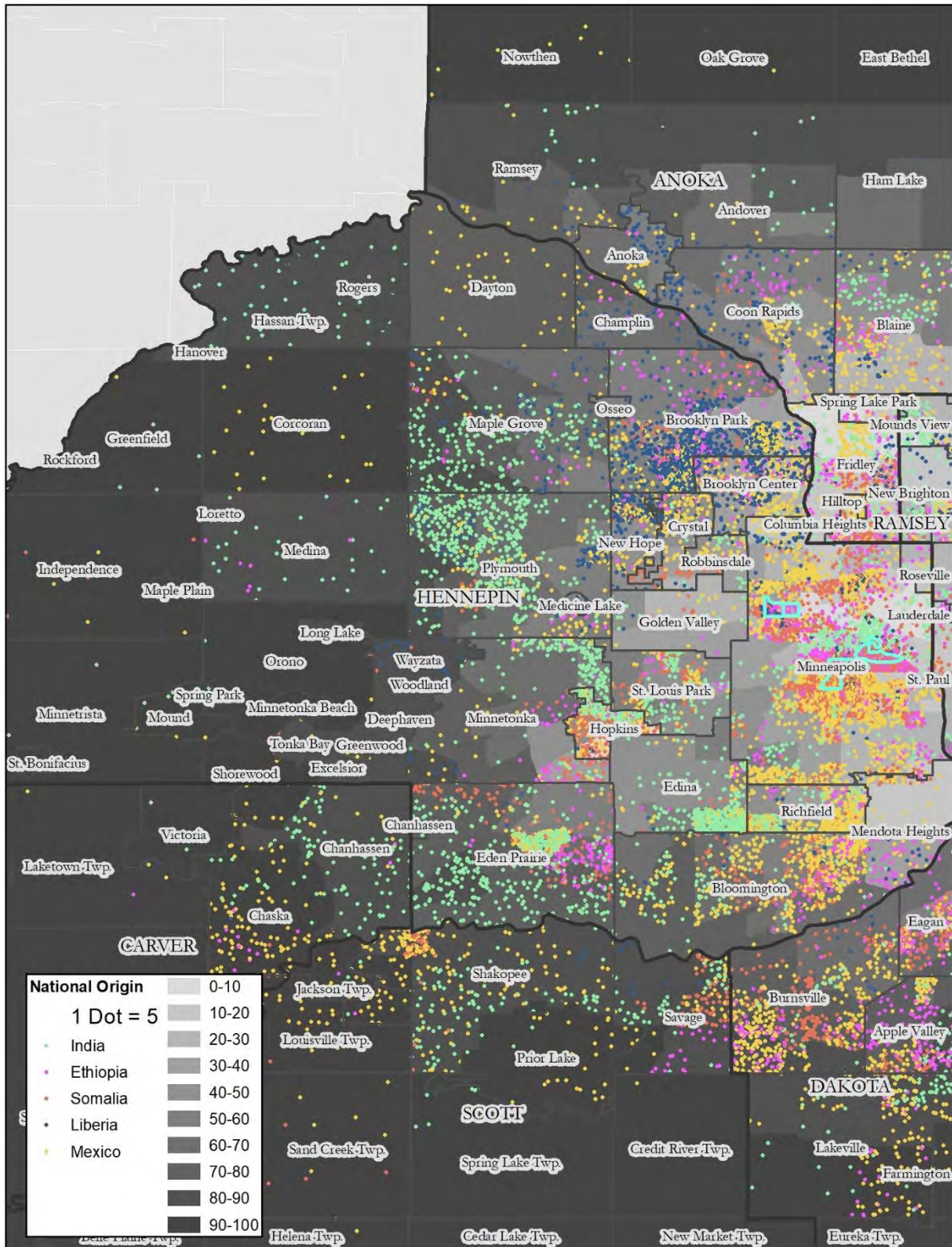
Map 6: Dakota County, National Origin, Environmental Health



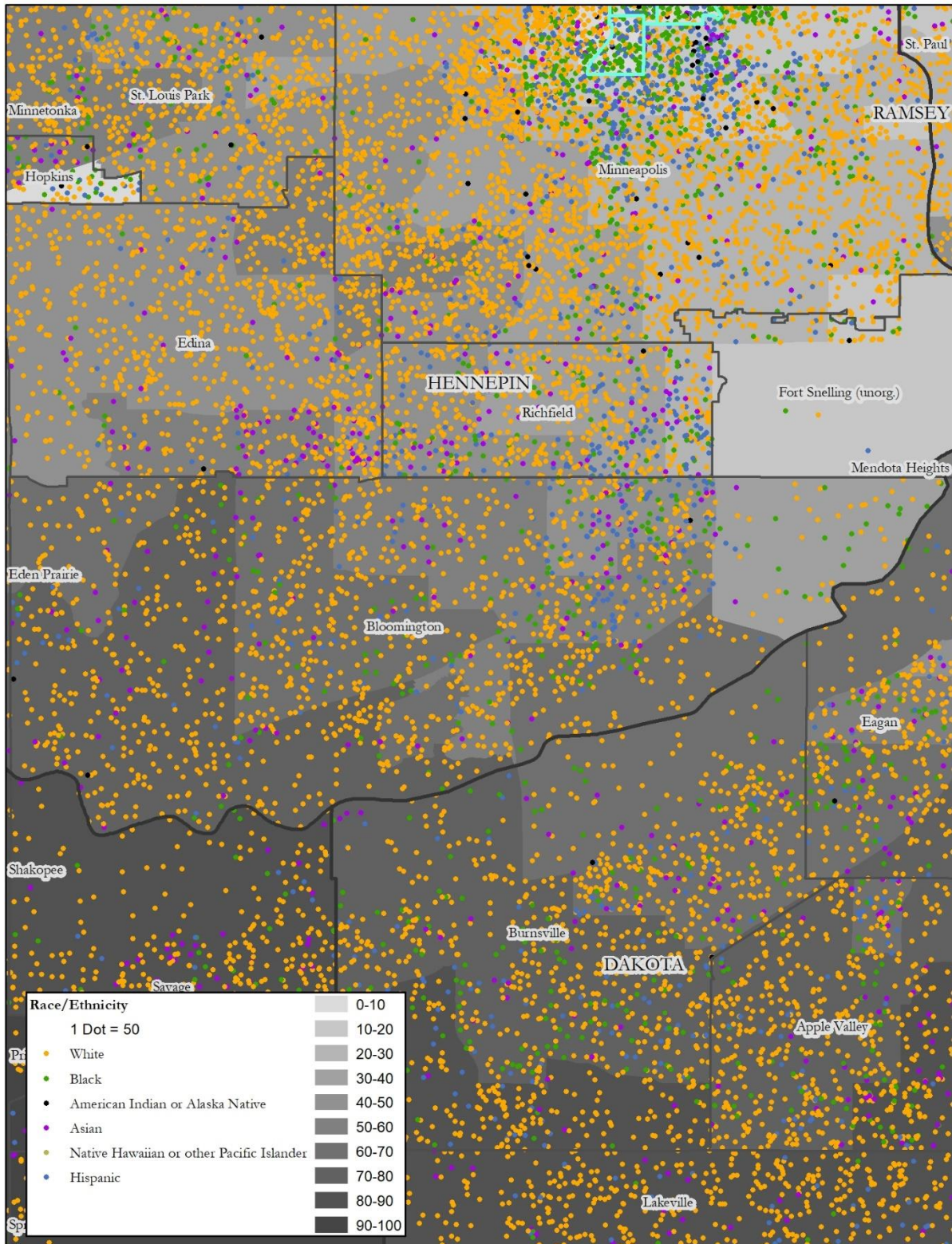
Map 7: Hennepin County, Race, Environmental Health



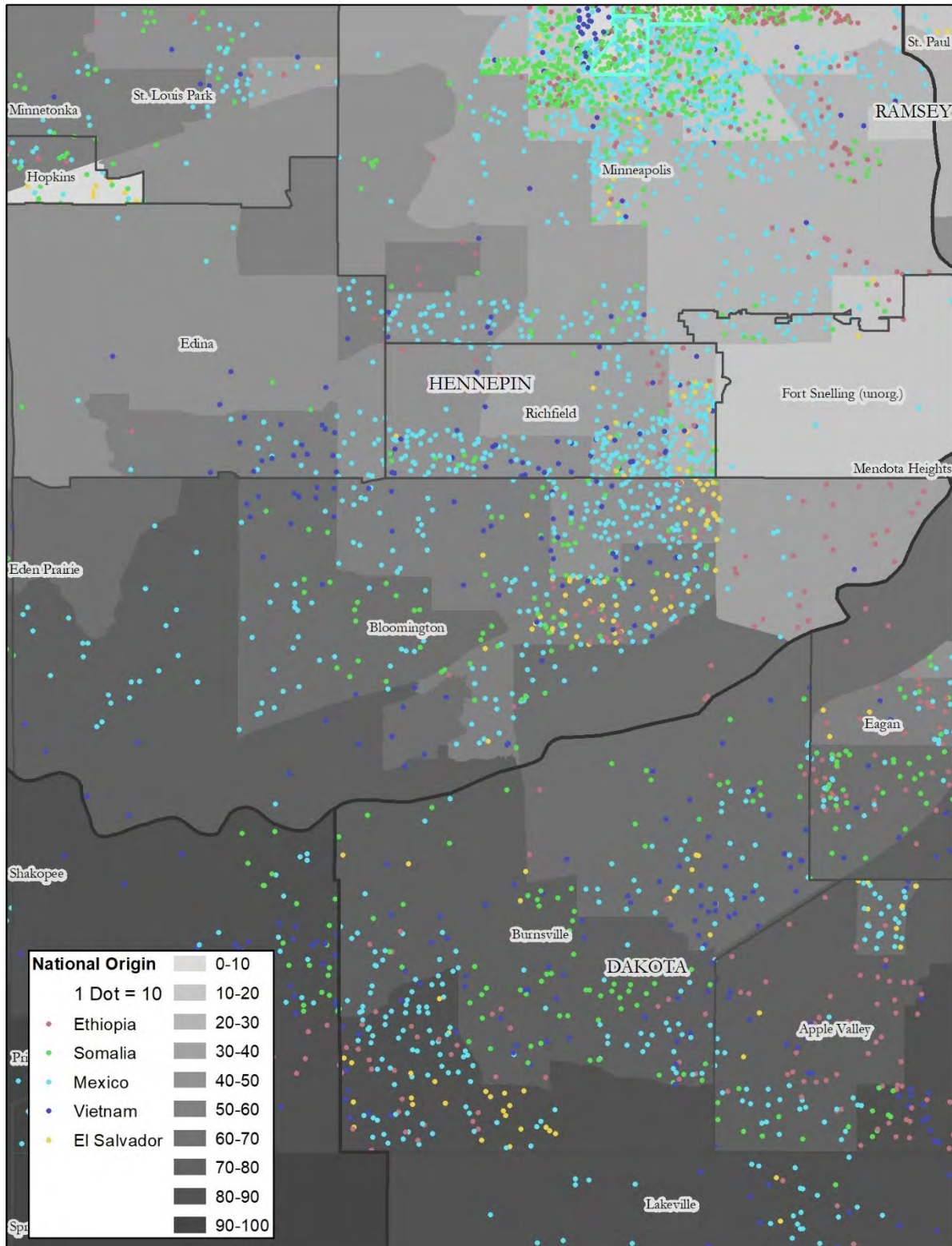
Map 8: Hennepin County, National Origin, Environmental Health



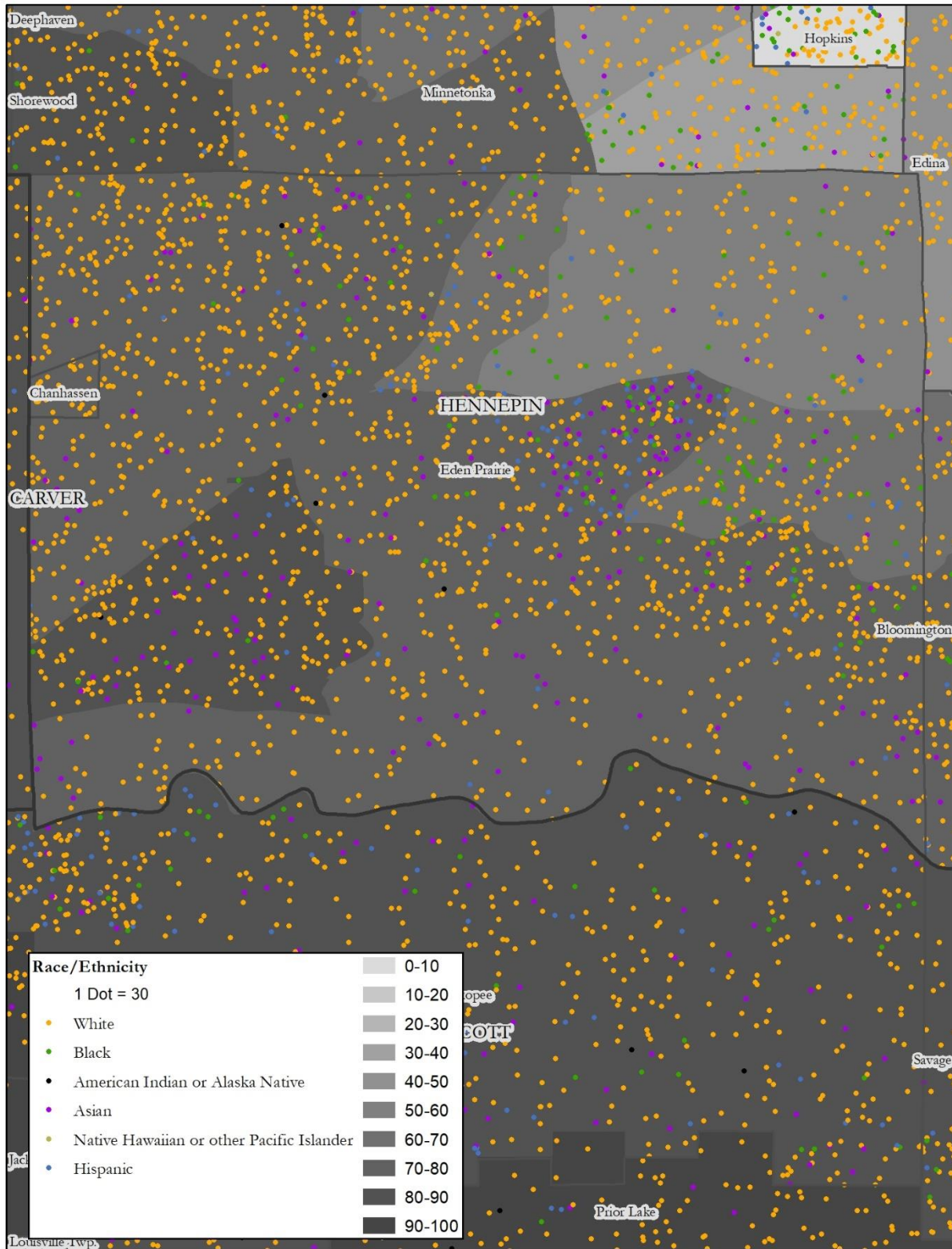
Map 9: Bloomington, Race, Environmental Health



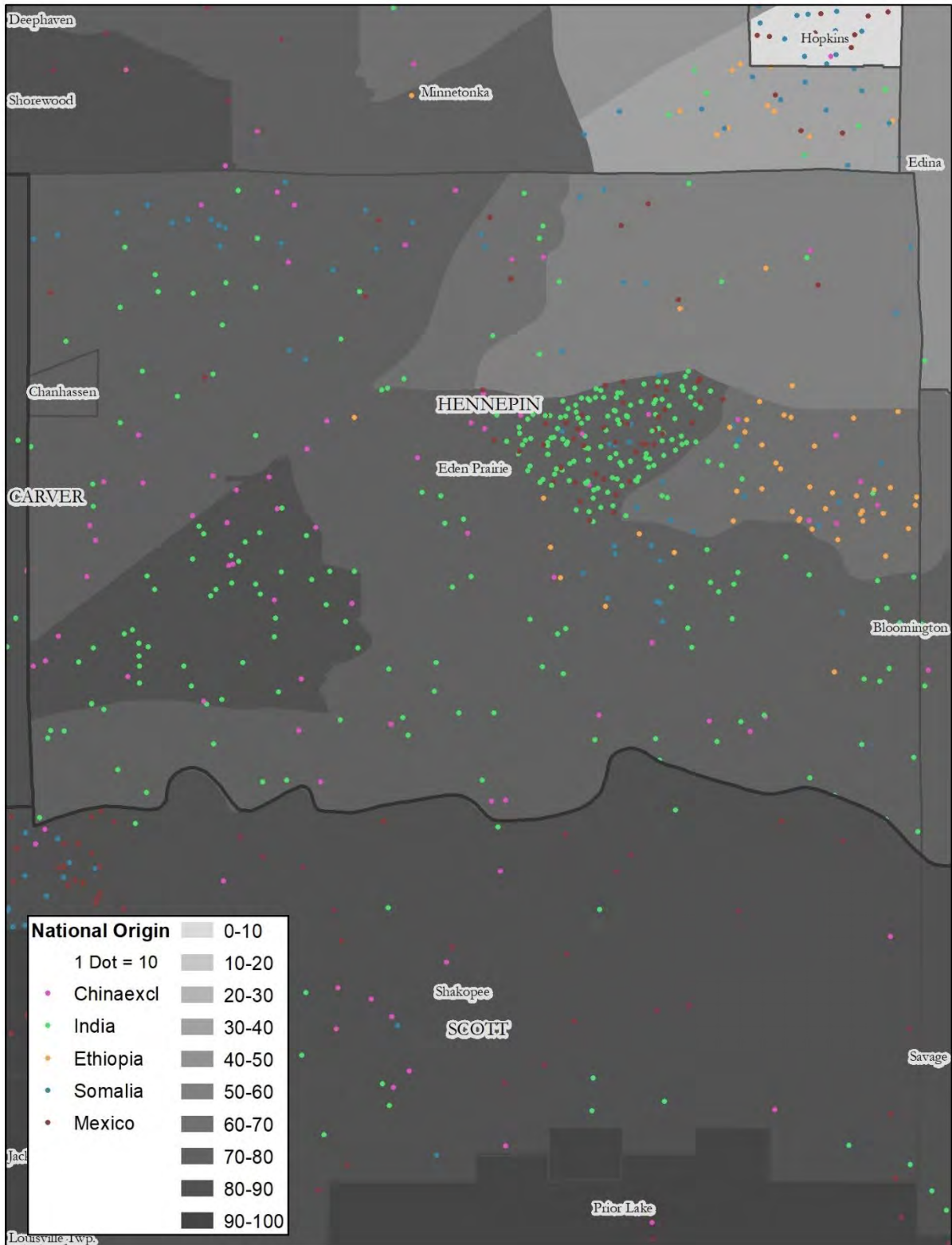
Map 10: Bloomington, National Origin, Environmental Health



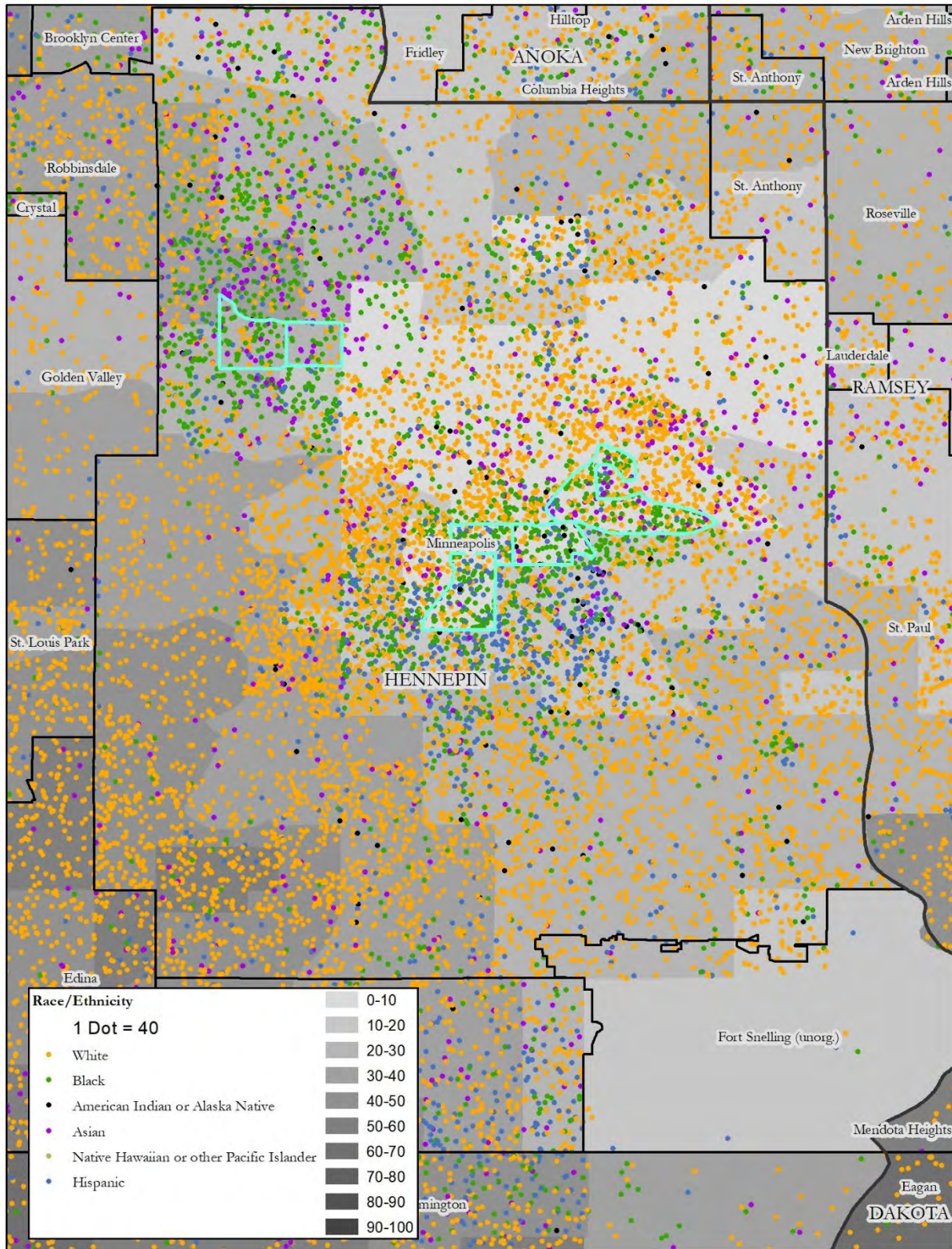
Map 11: Eden Prairie, Race, Environmental Health



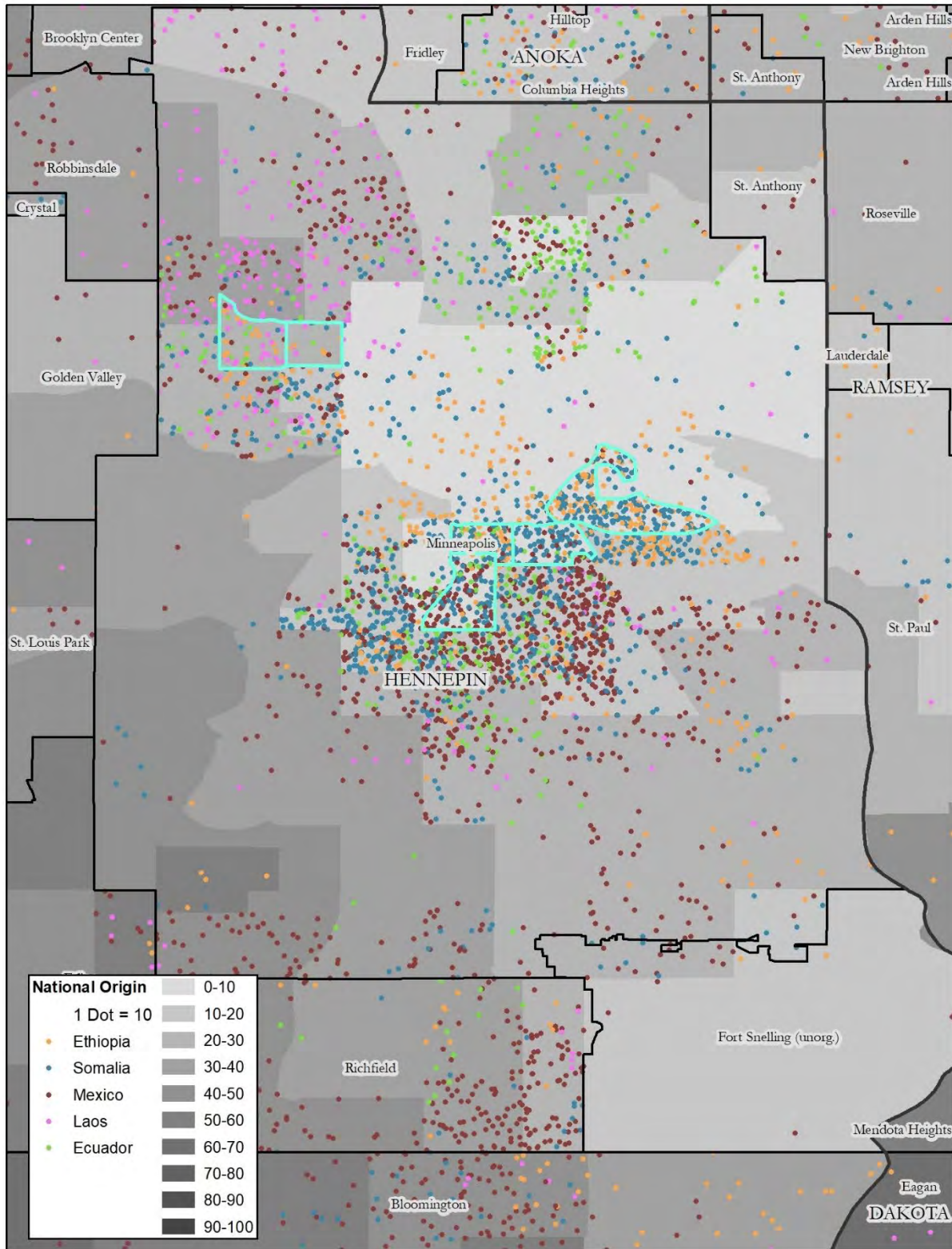
Map 12: Eden Prairie, National Origin, Environmental Health



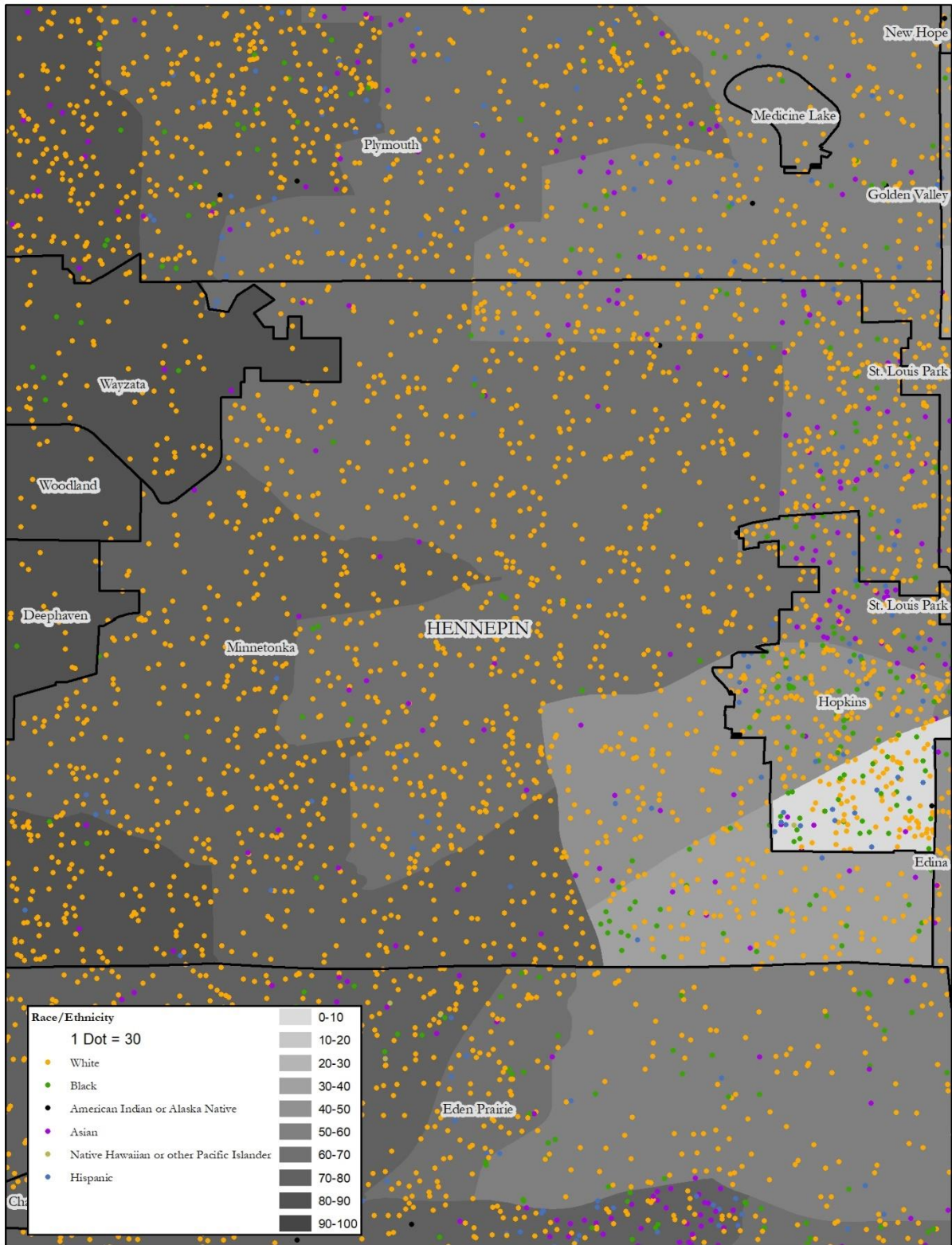
Map 13: Minneapolis, Race, Environmental Health



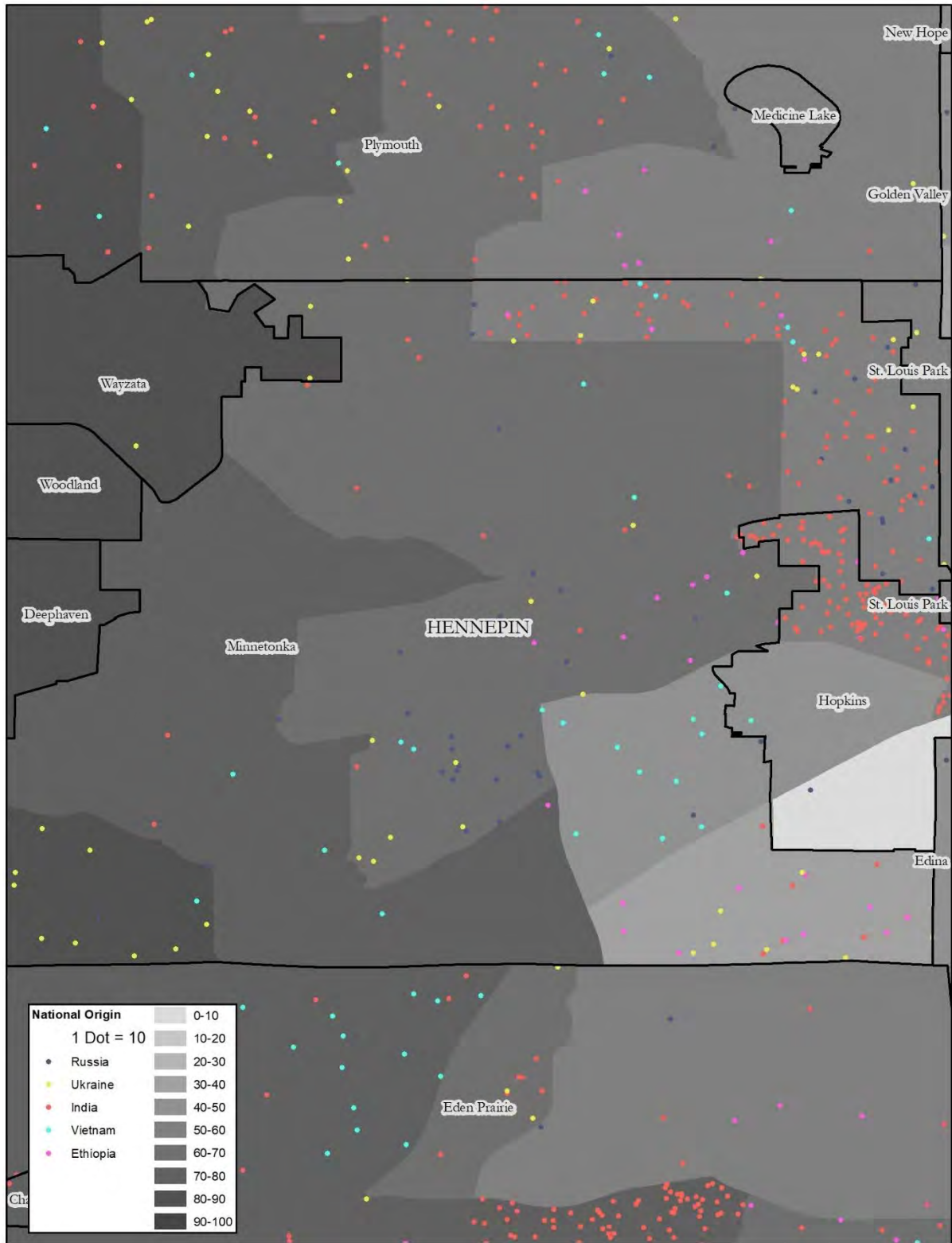
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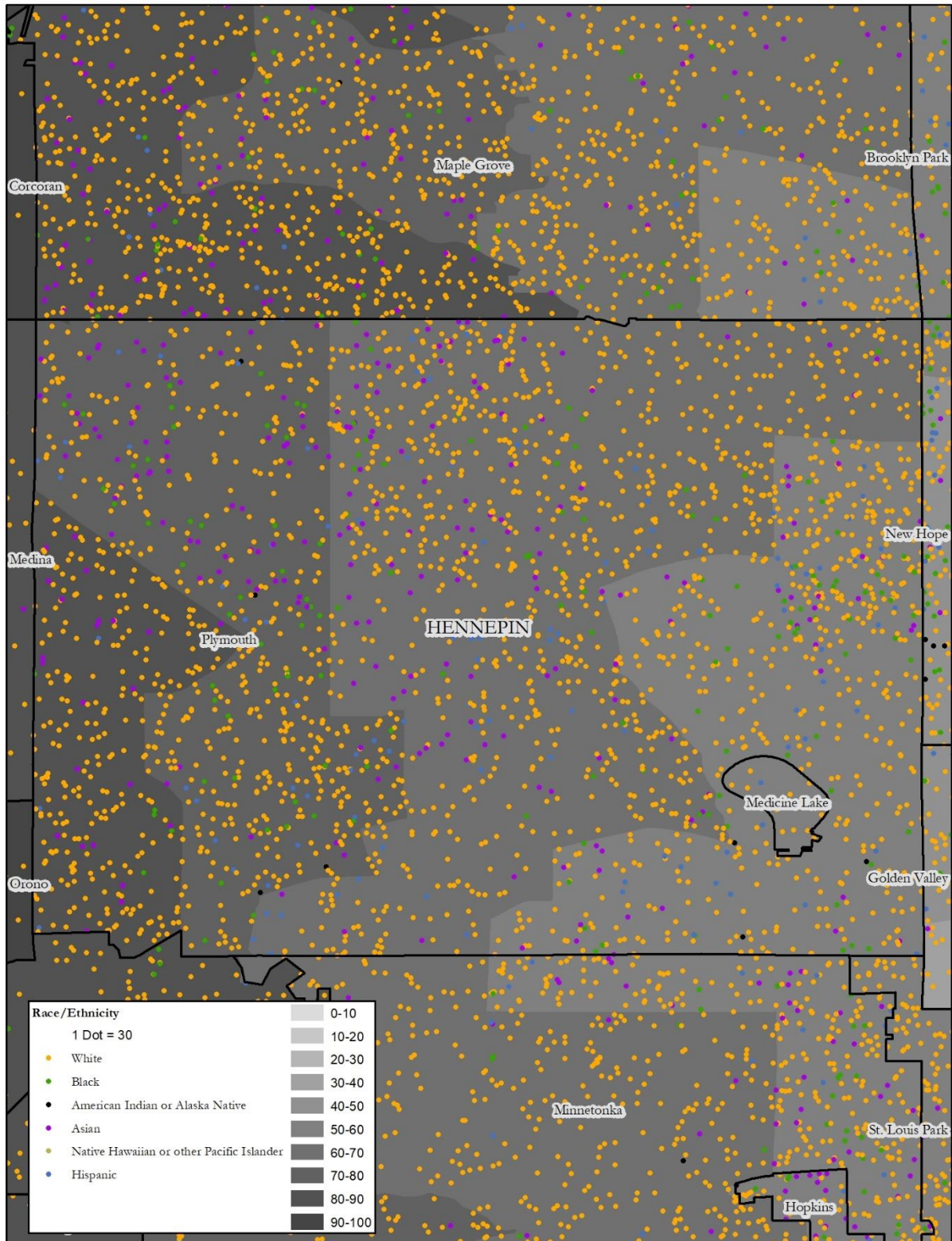
Map 15: Minnetonka, Race, Environmental Health



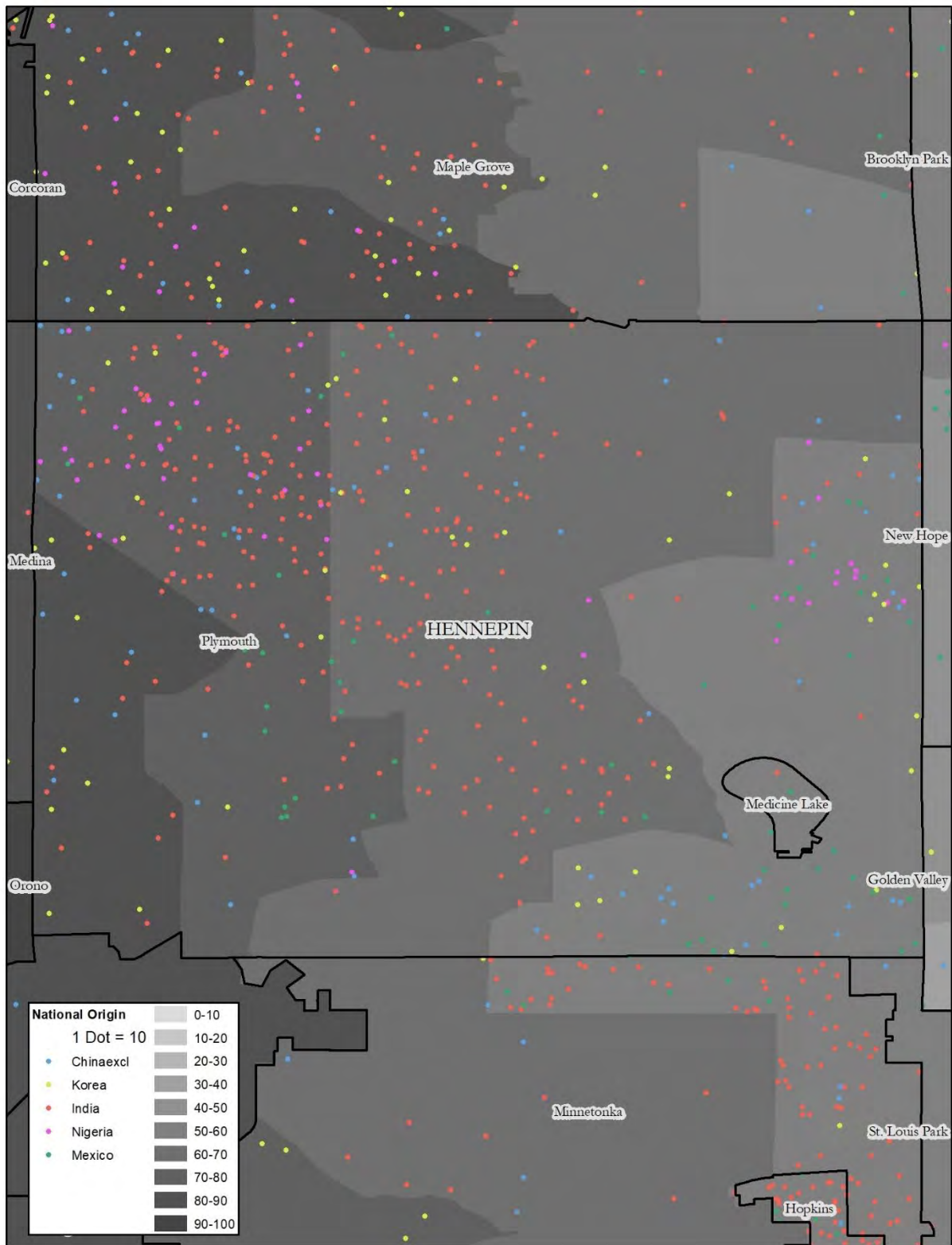
Map 16: Minnetonka, National Origin, Environmental Health



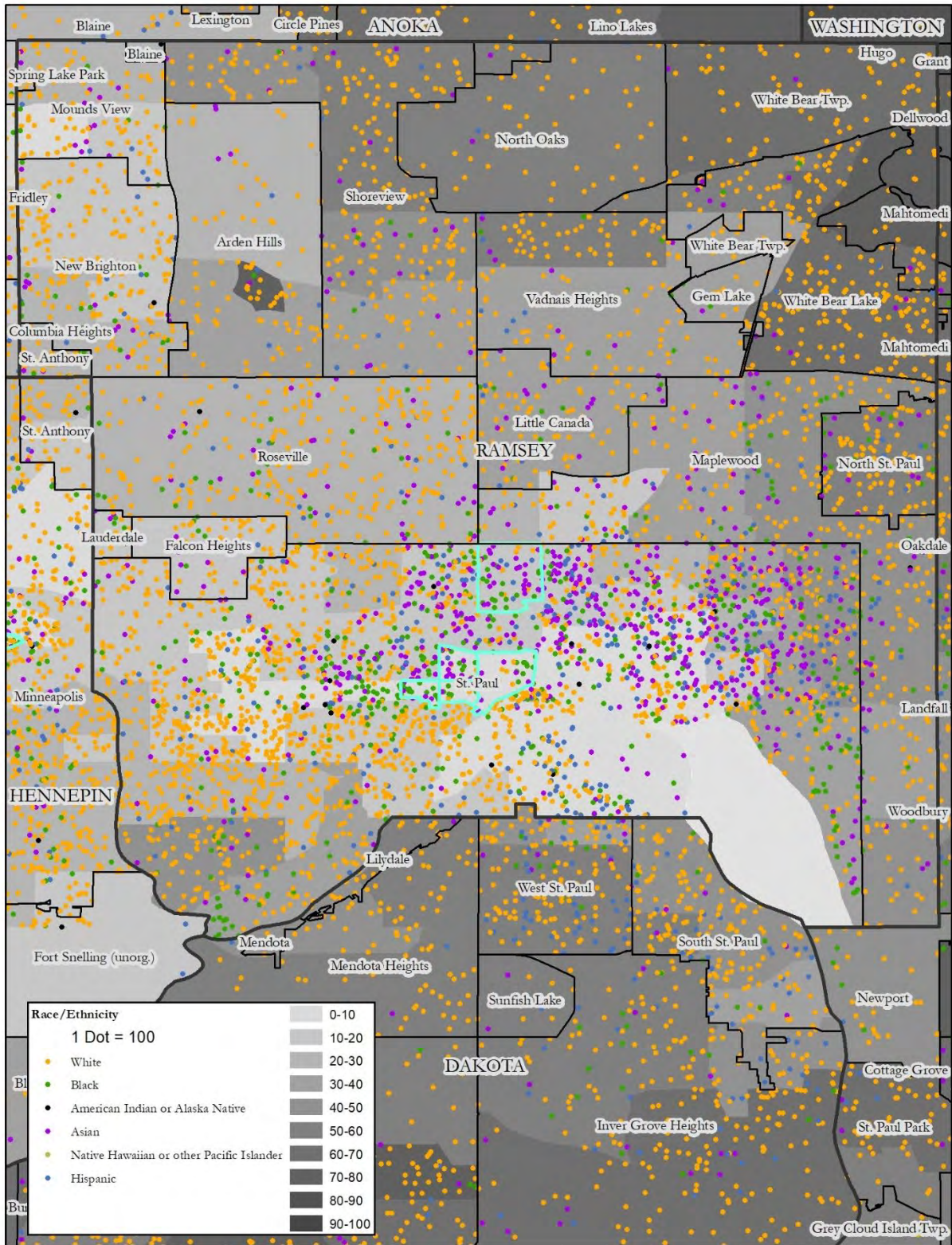
Map 17: Plymouth, Race, Environmental Health



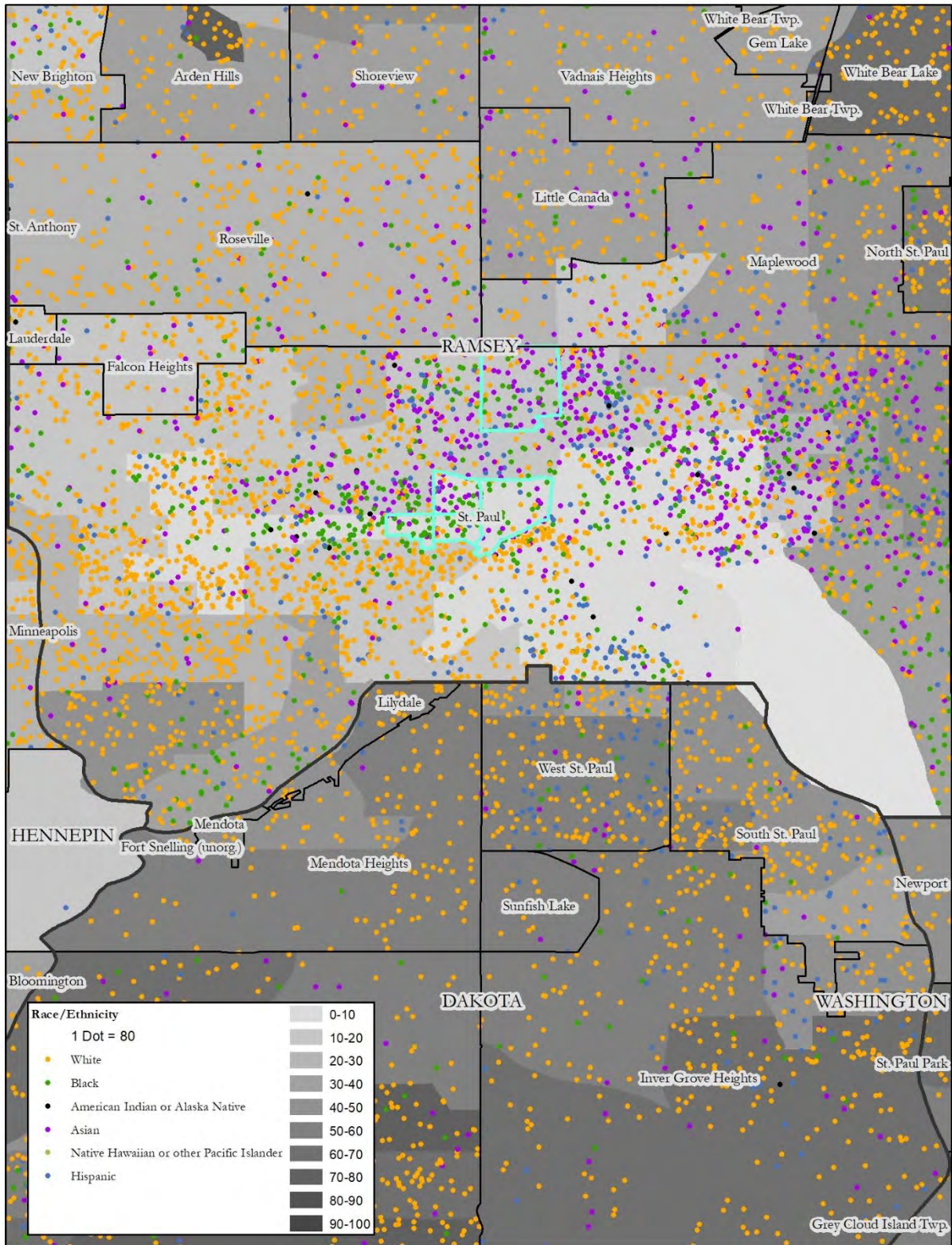
Map 18: Plymouth, National Origin, Environmental Health



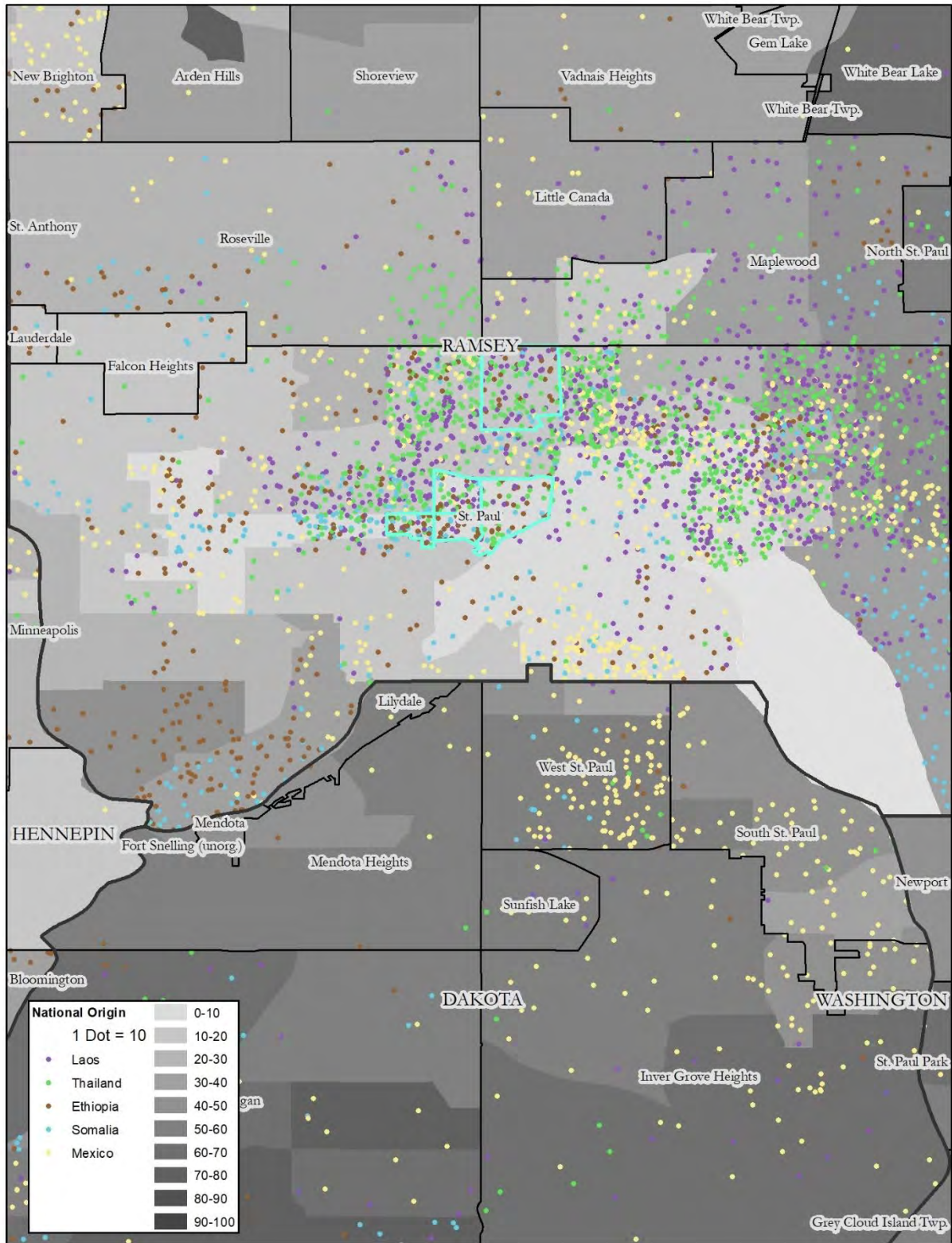
Map 19: Ramsey County, Race, Environmental Health



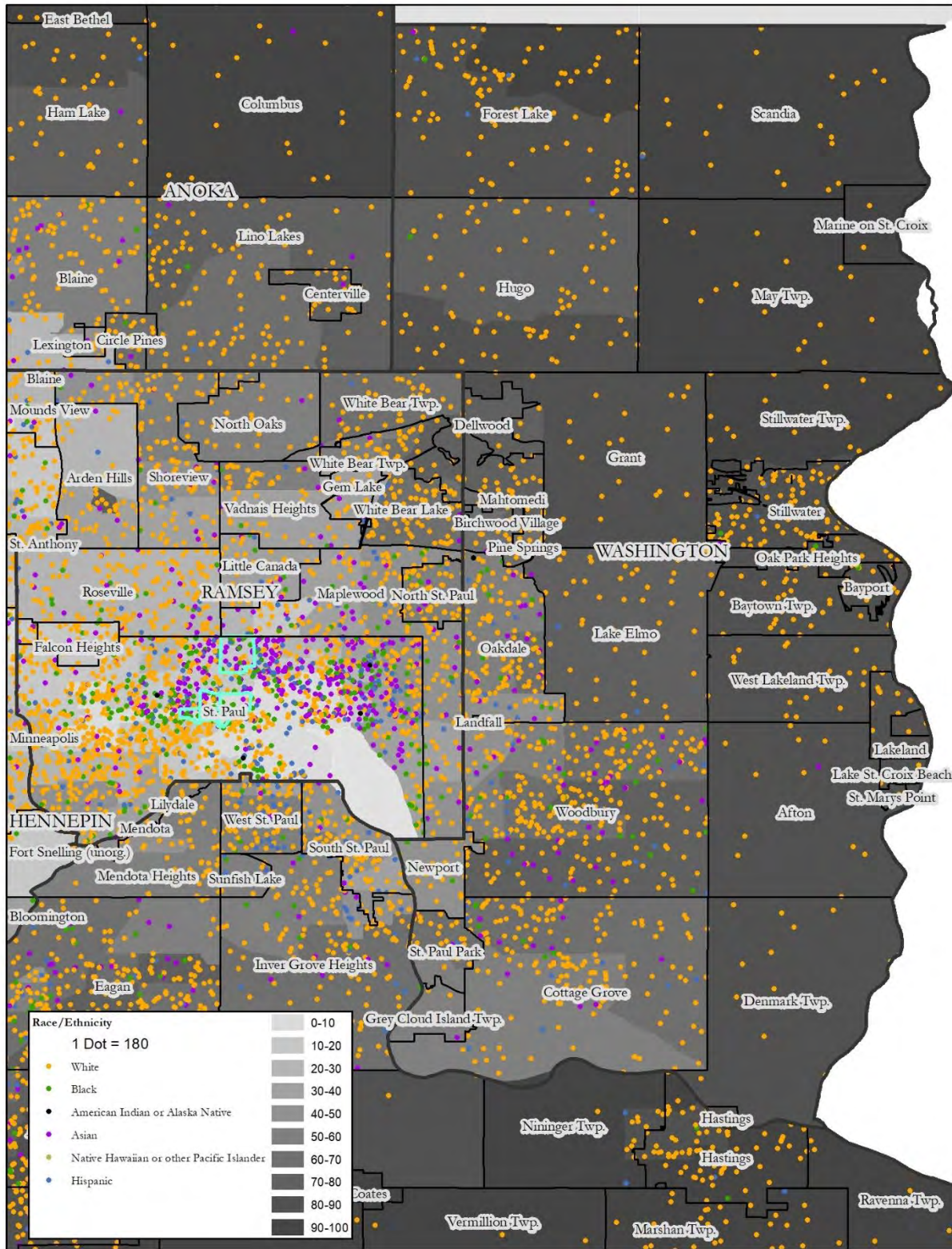
Map 21: St. Paul, Race, Environmental Health



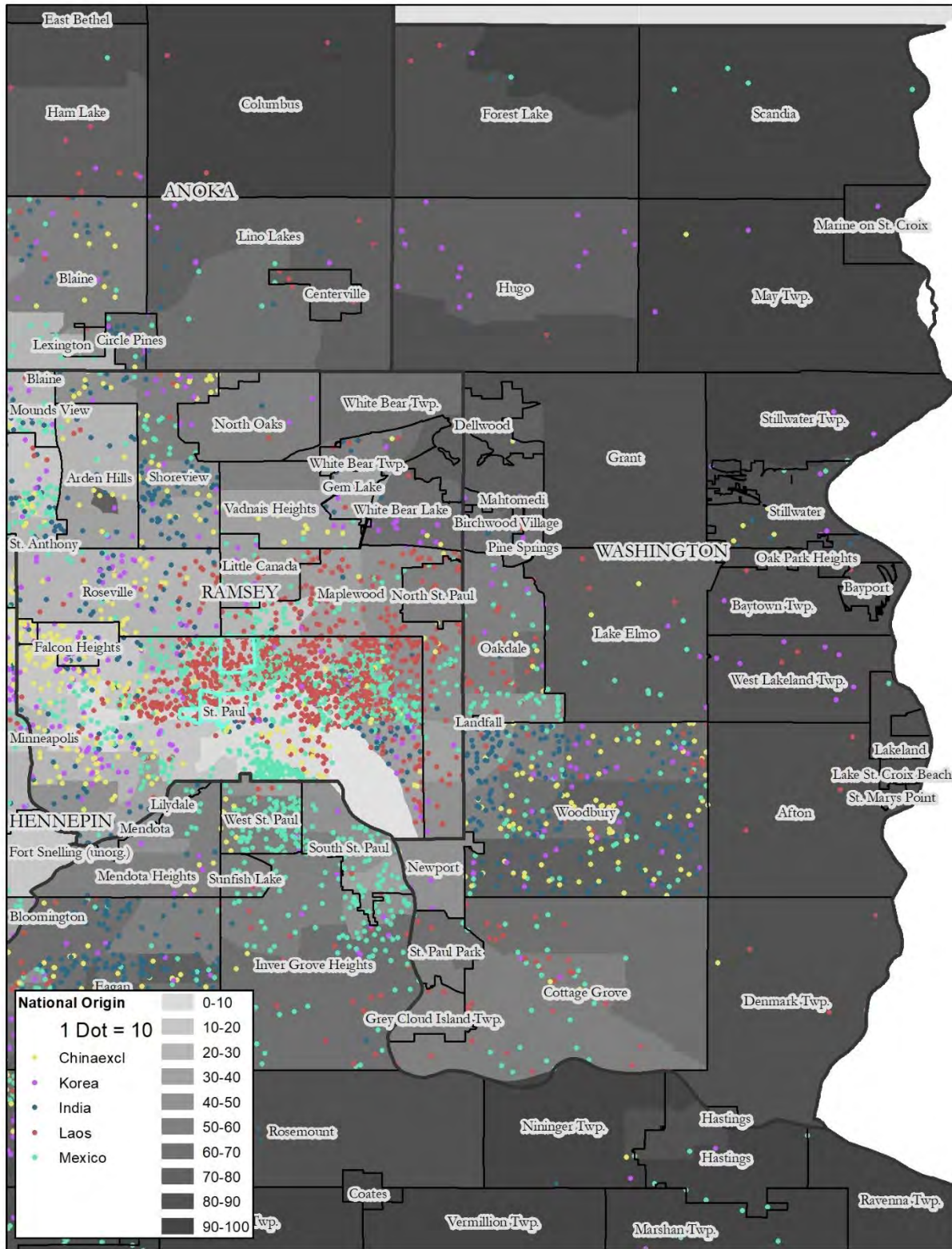
Map 22: St. Paul, National Origin, Environmental Health



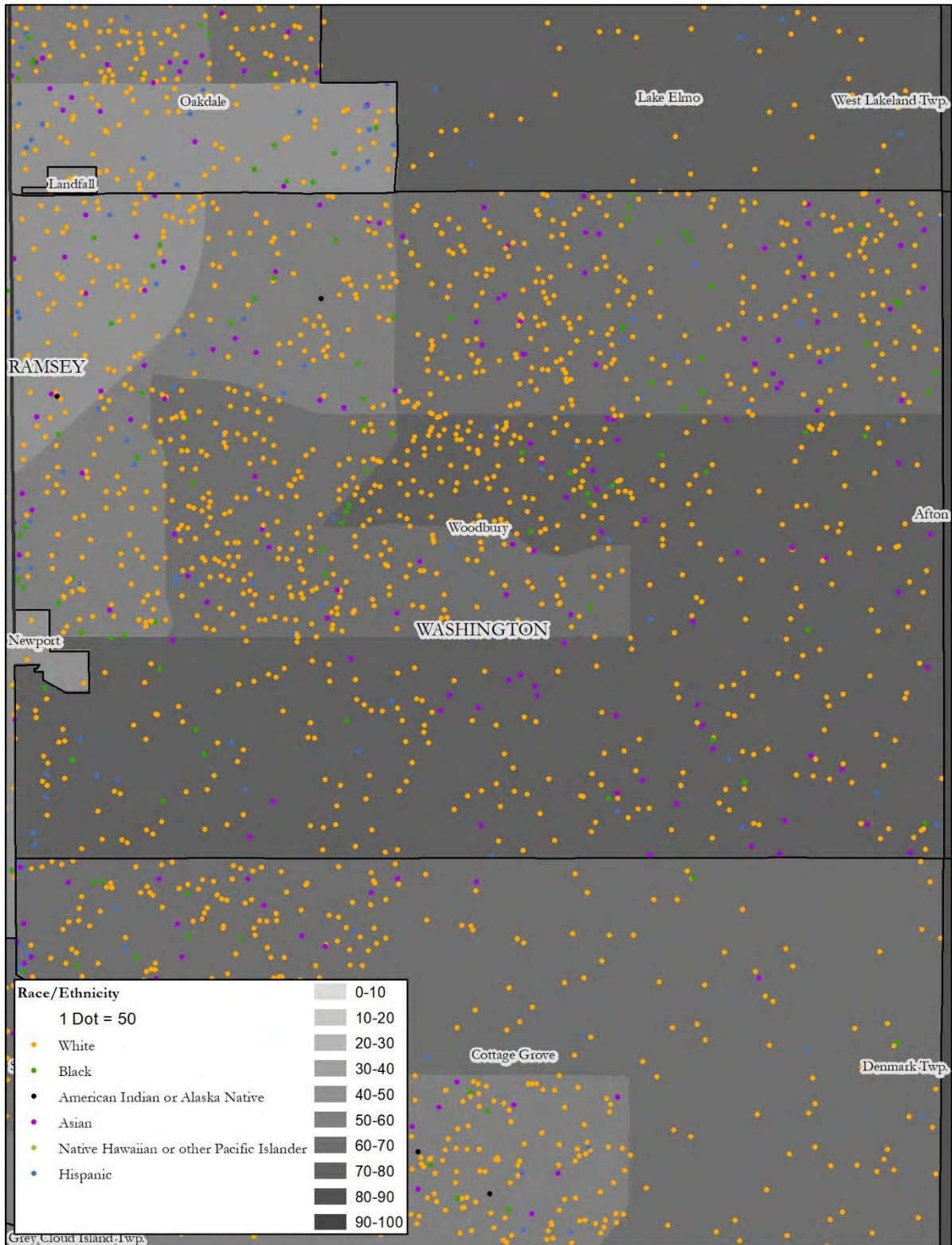
Map 23: Washington County, Race, Environmental Health



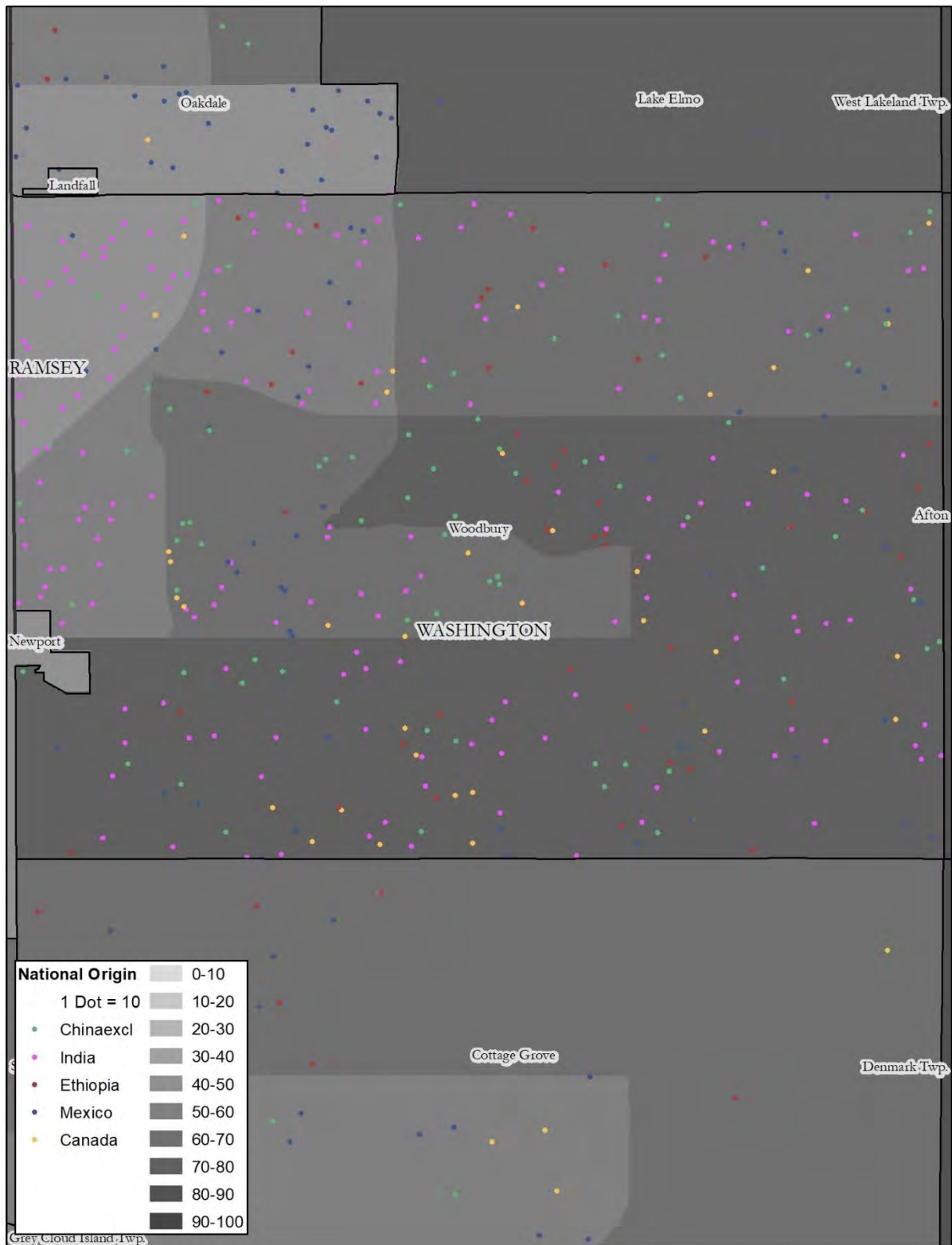
Map 24: Washington County, National Origin, Environmental Health



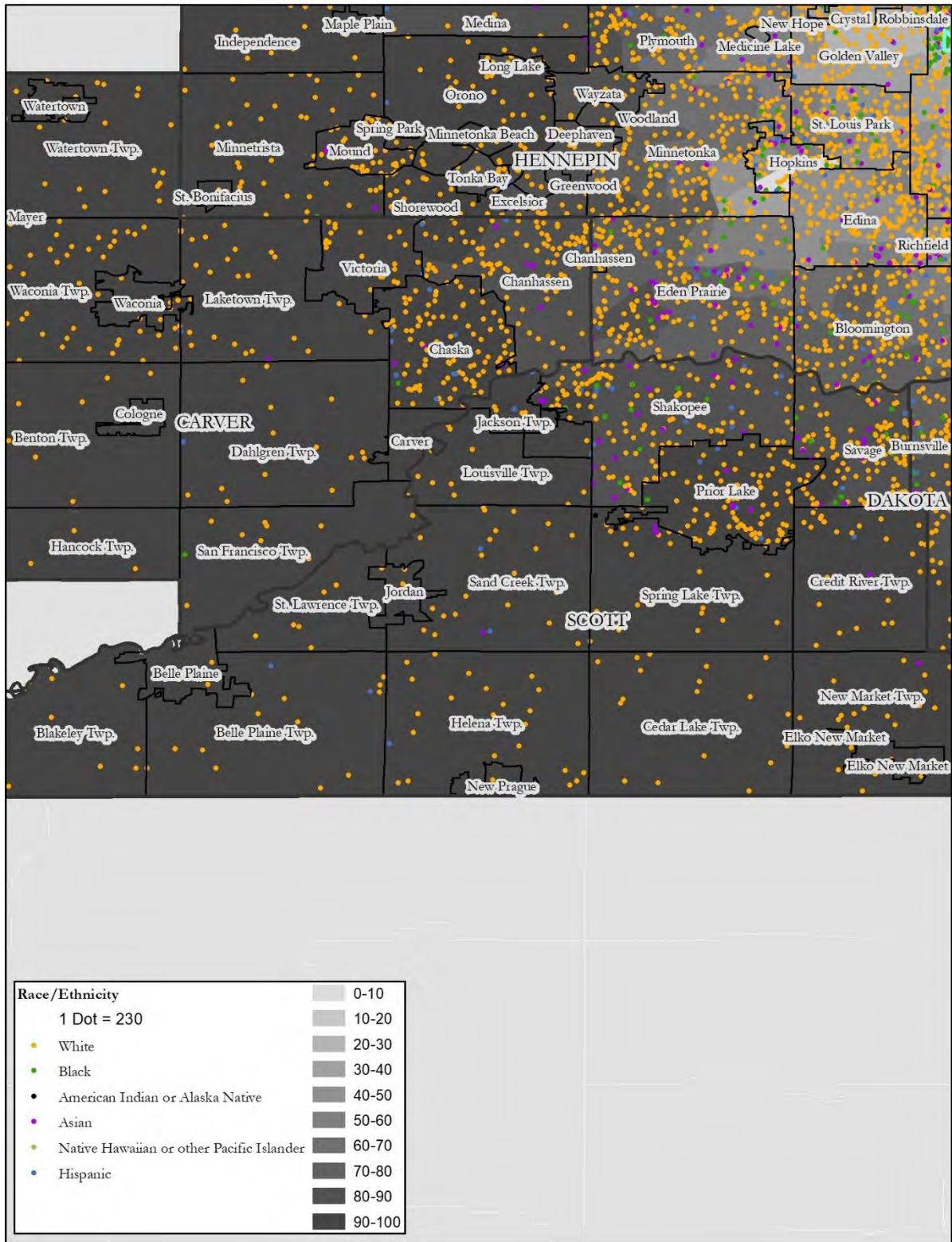
Map 25: Woodbury, Race, Environmental Health



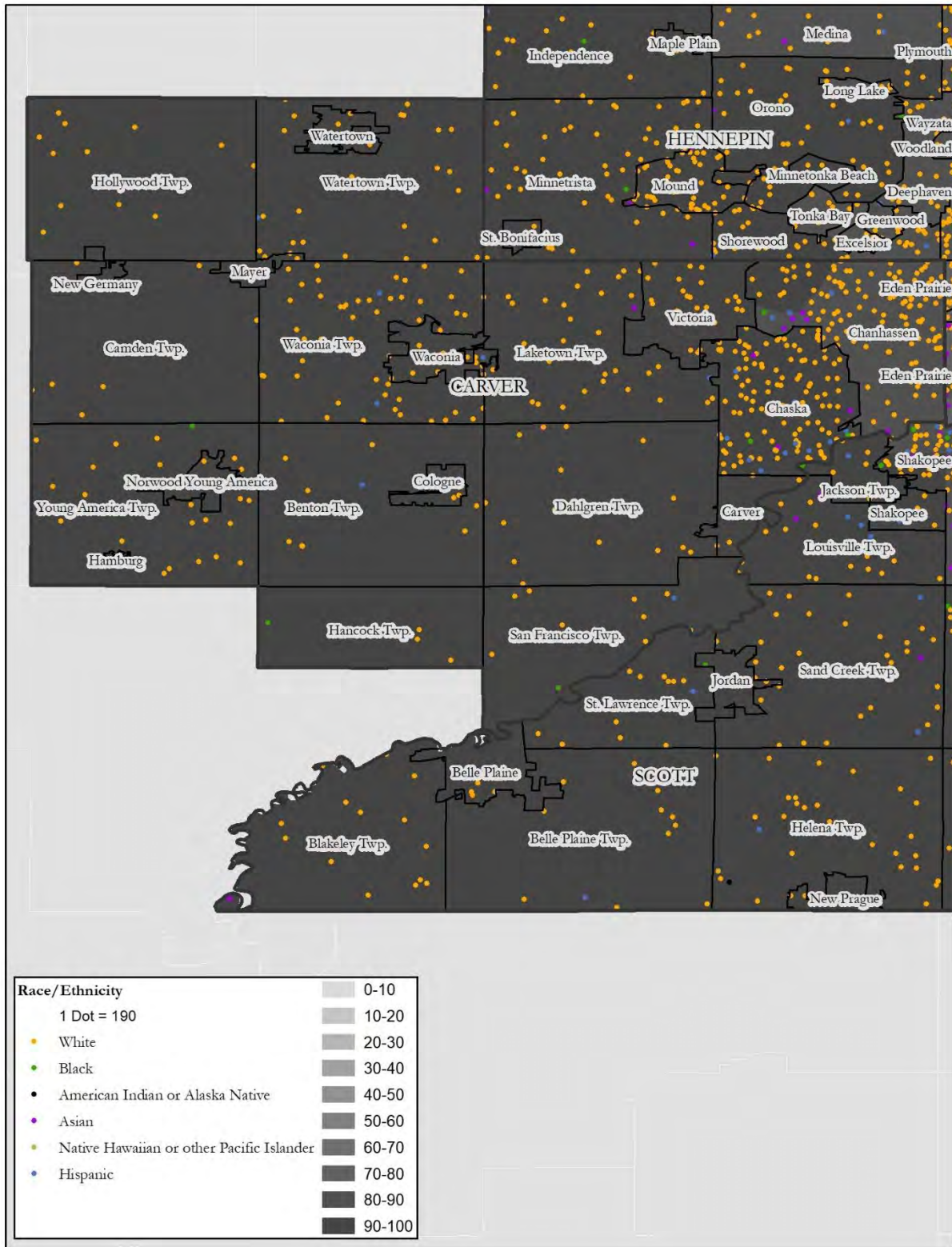
Map 26: Woodbury, National Origin, Environmental Health



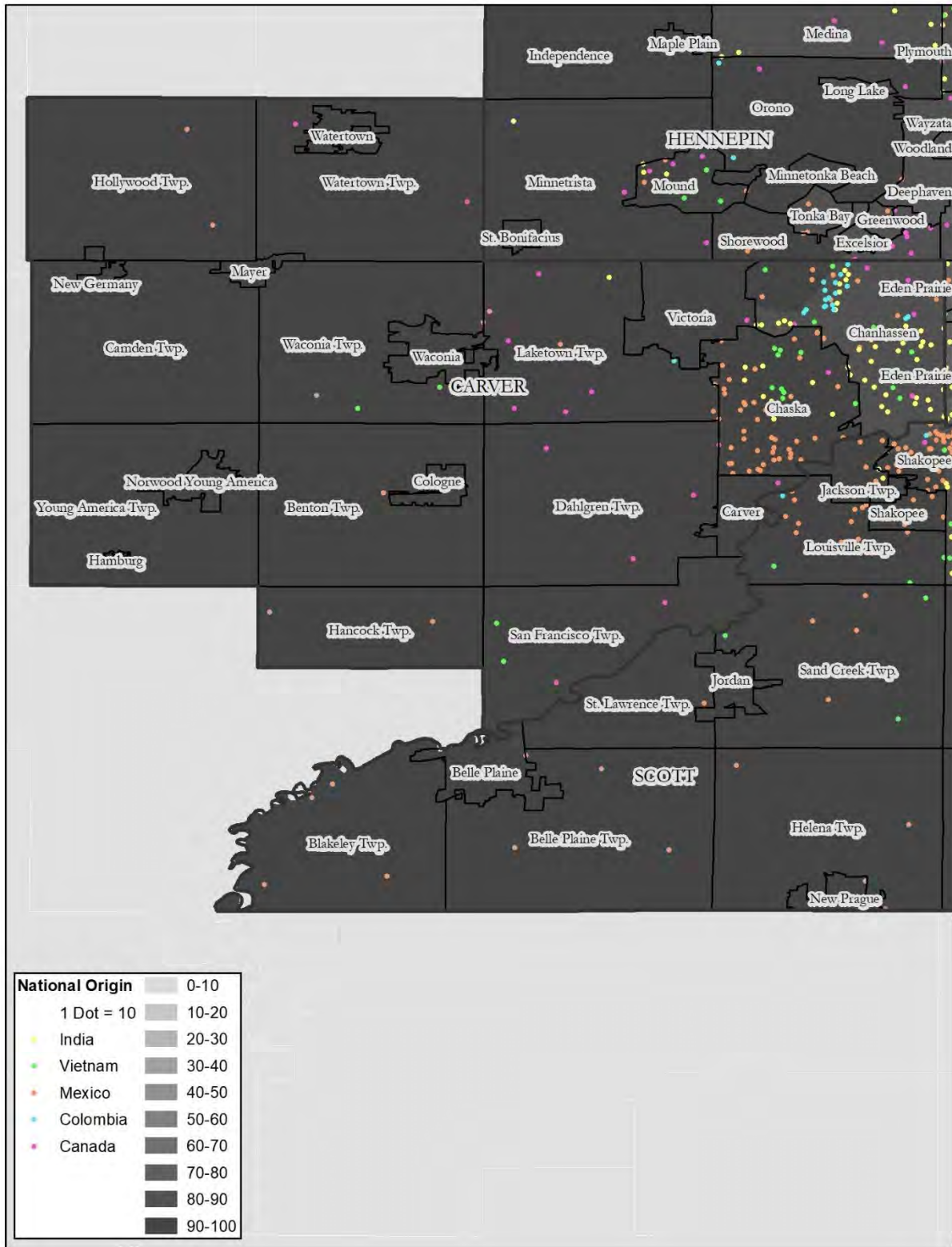
Map 27: Scott County, Race, Environmental Health



Map 29: Carver County, Race, Environmental Health



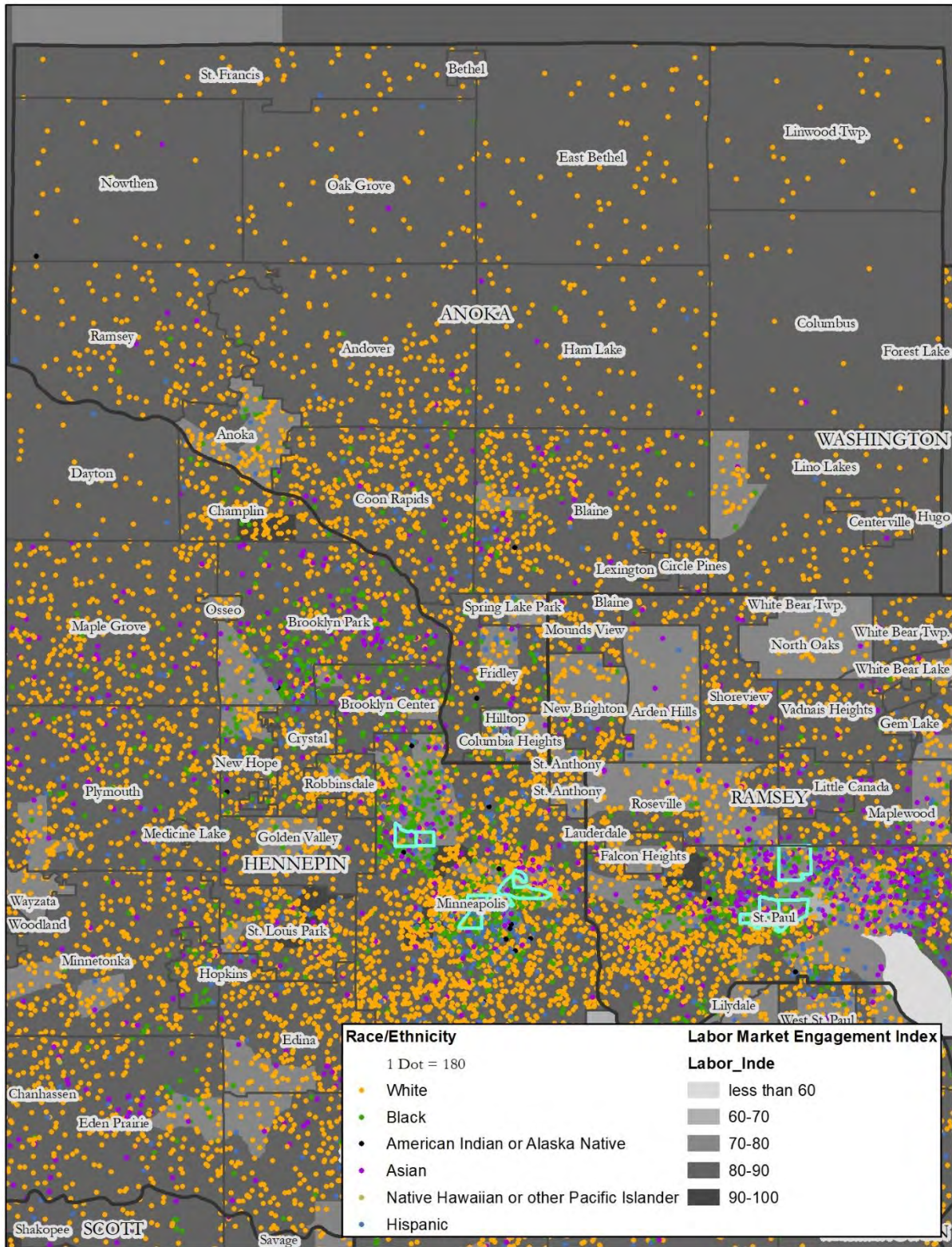
Map 30: Carver County, National Origin, Environmental Health



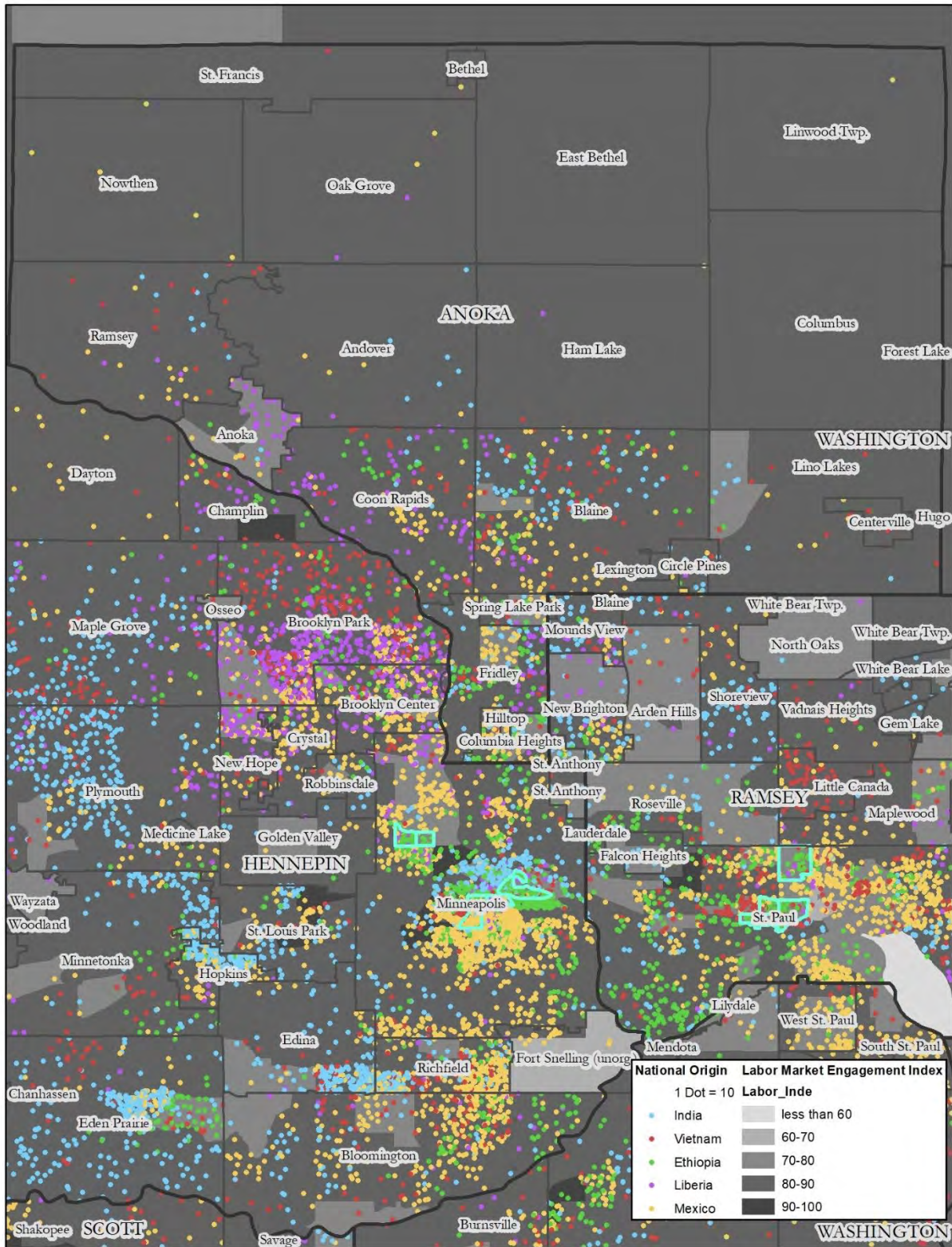
Economic Opportunities Maps

- 1. Labor Market Index**
- 2. Jobs Proximity Index**

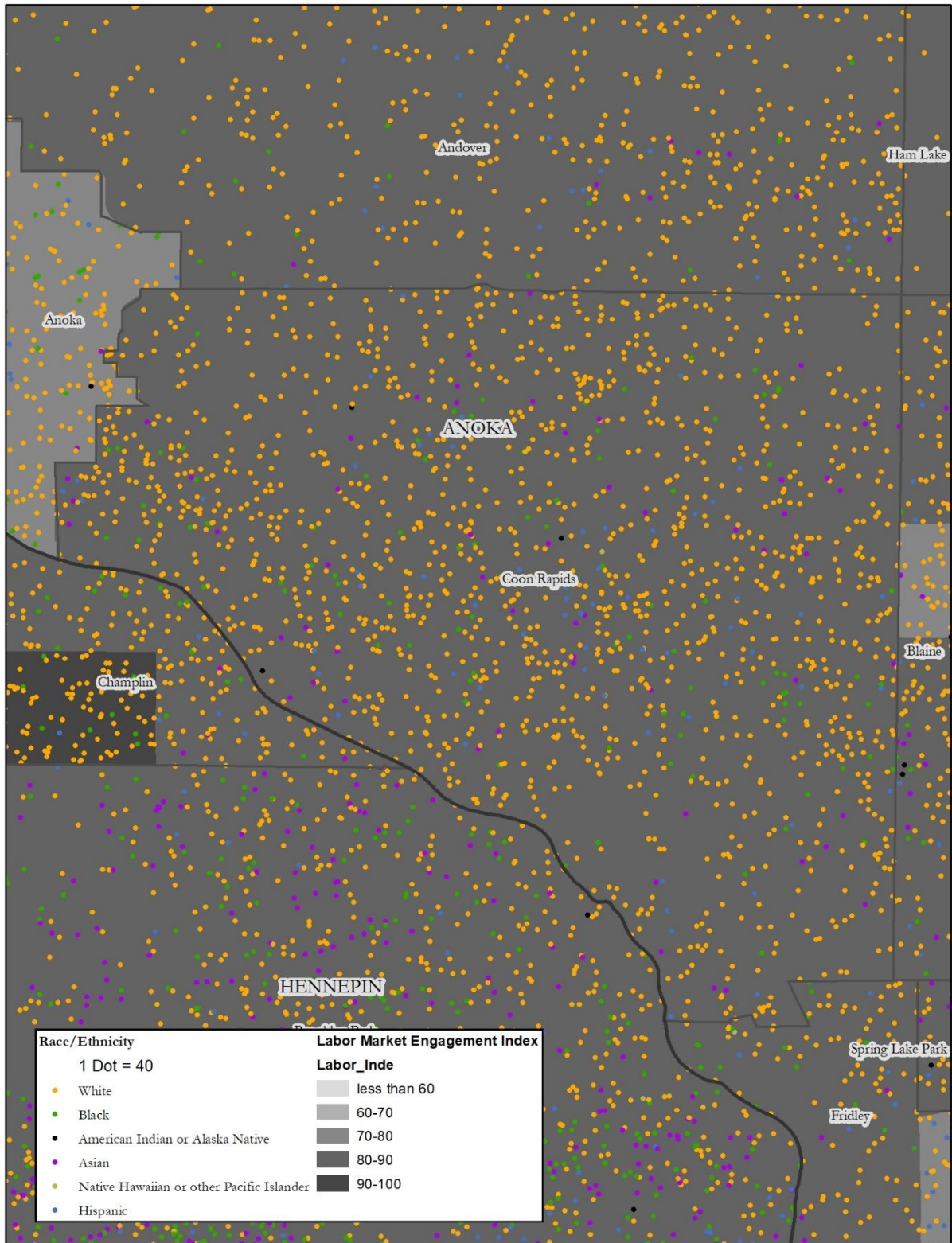
Map 1: Anoka County, Race, Labor Market Index



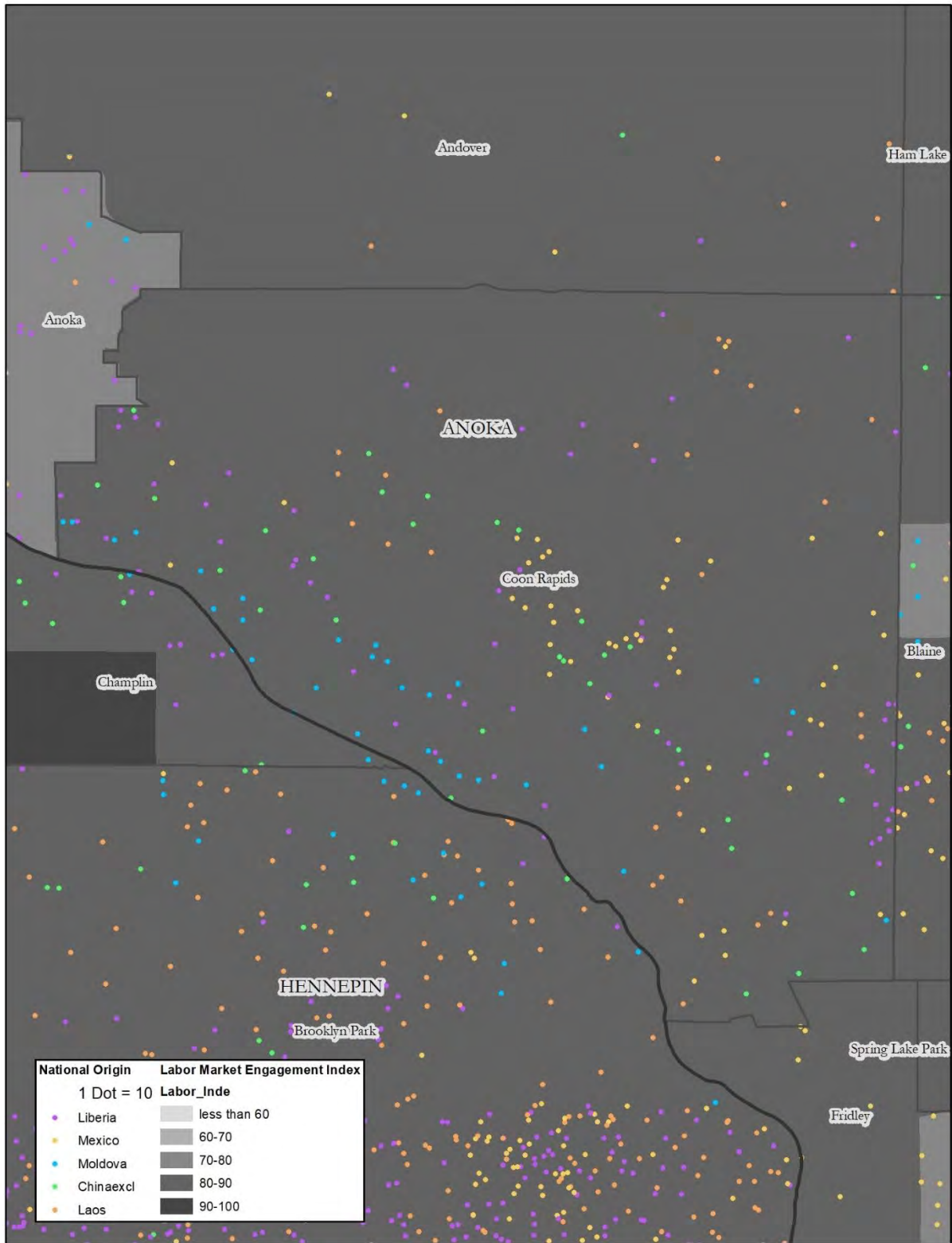
Map 2: Anoka County, National Origin, Labor Market Index



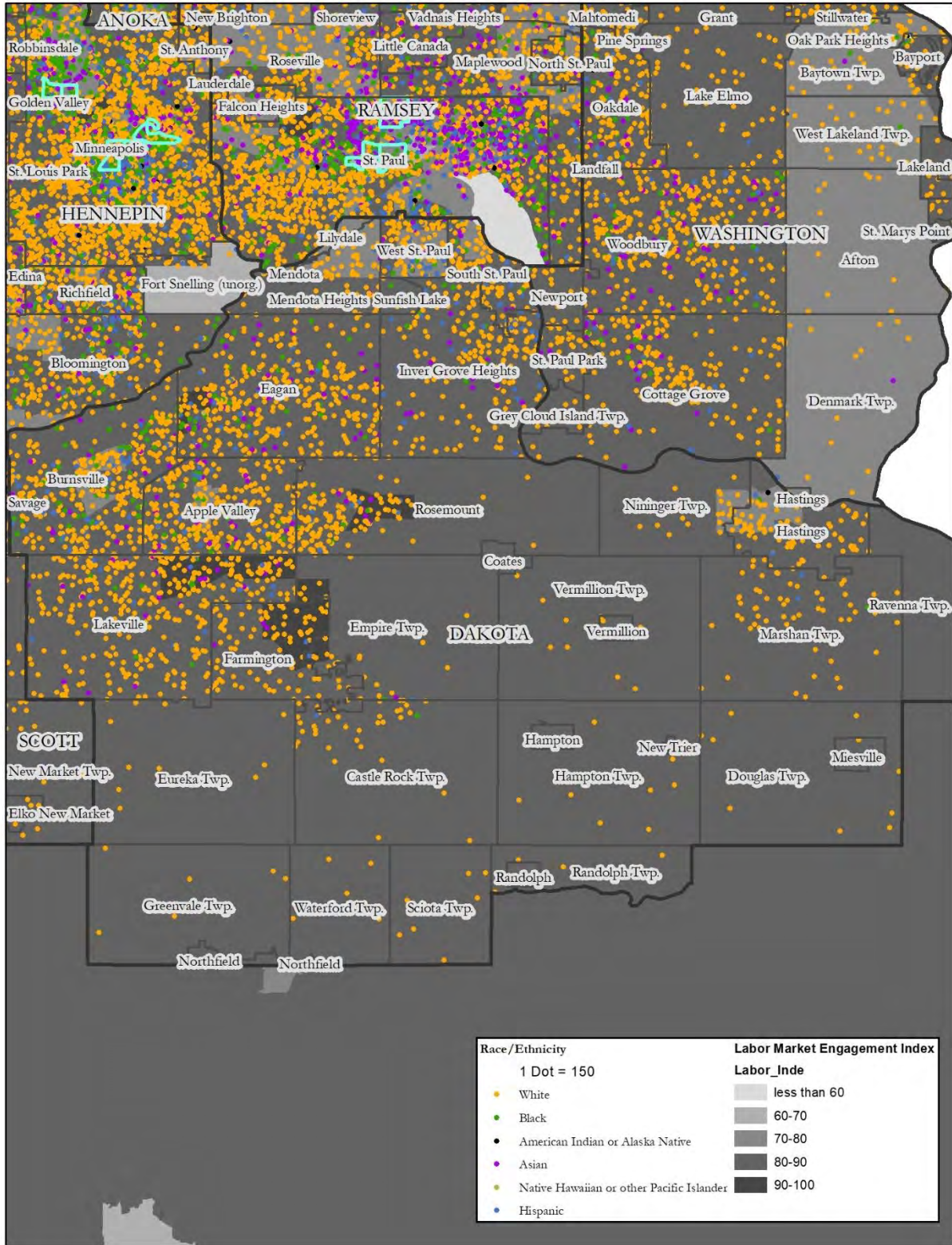
Map 3: Coon Rapids, Race, Labor Market Index



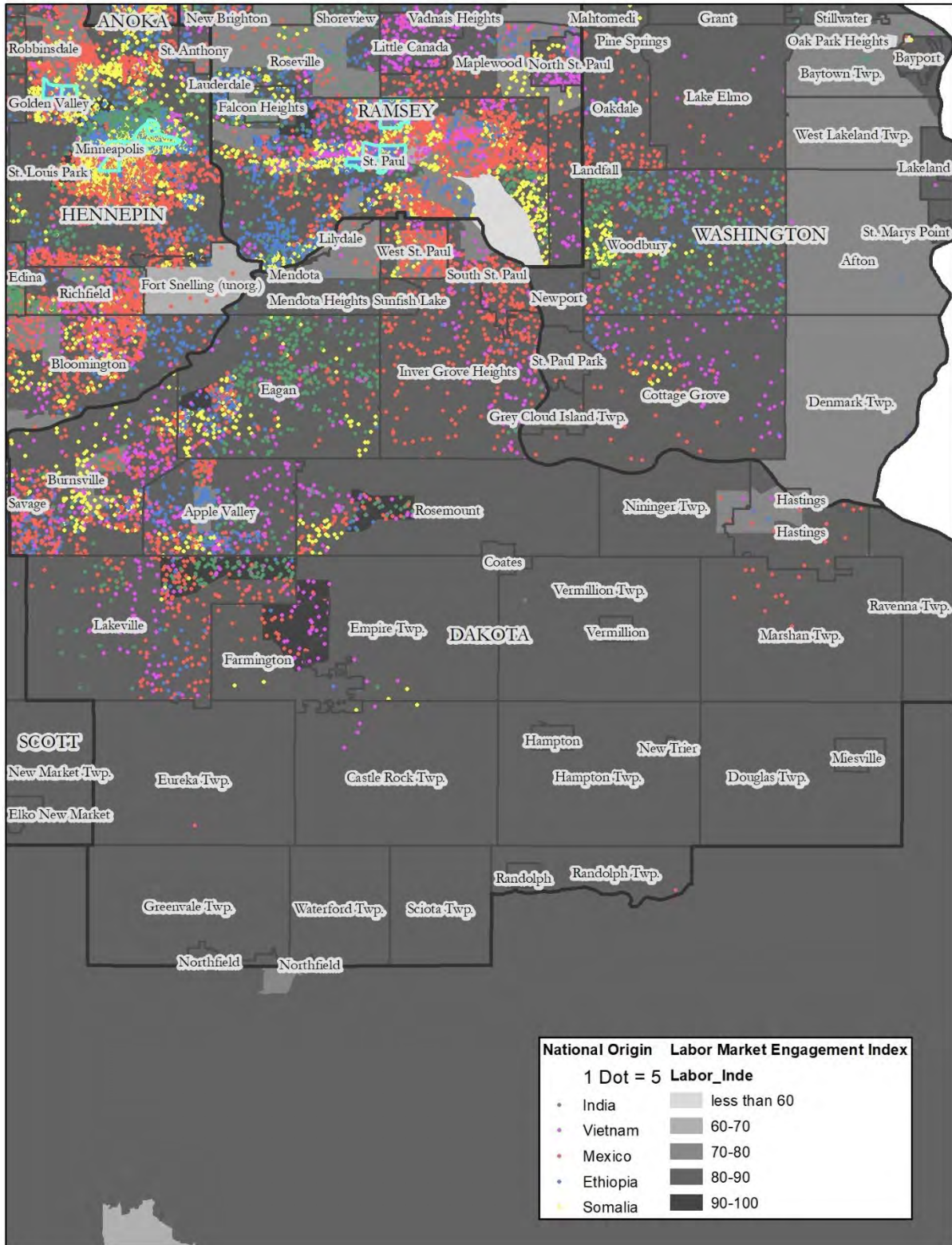
Map 4: Coon Rapids, National Origin, Labor Market Index



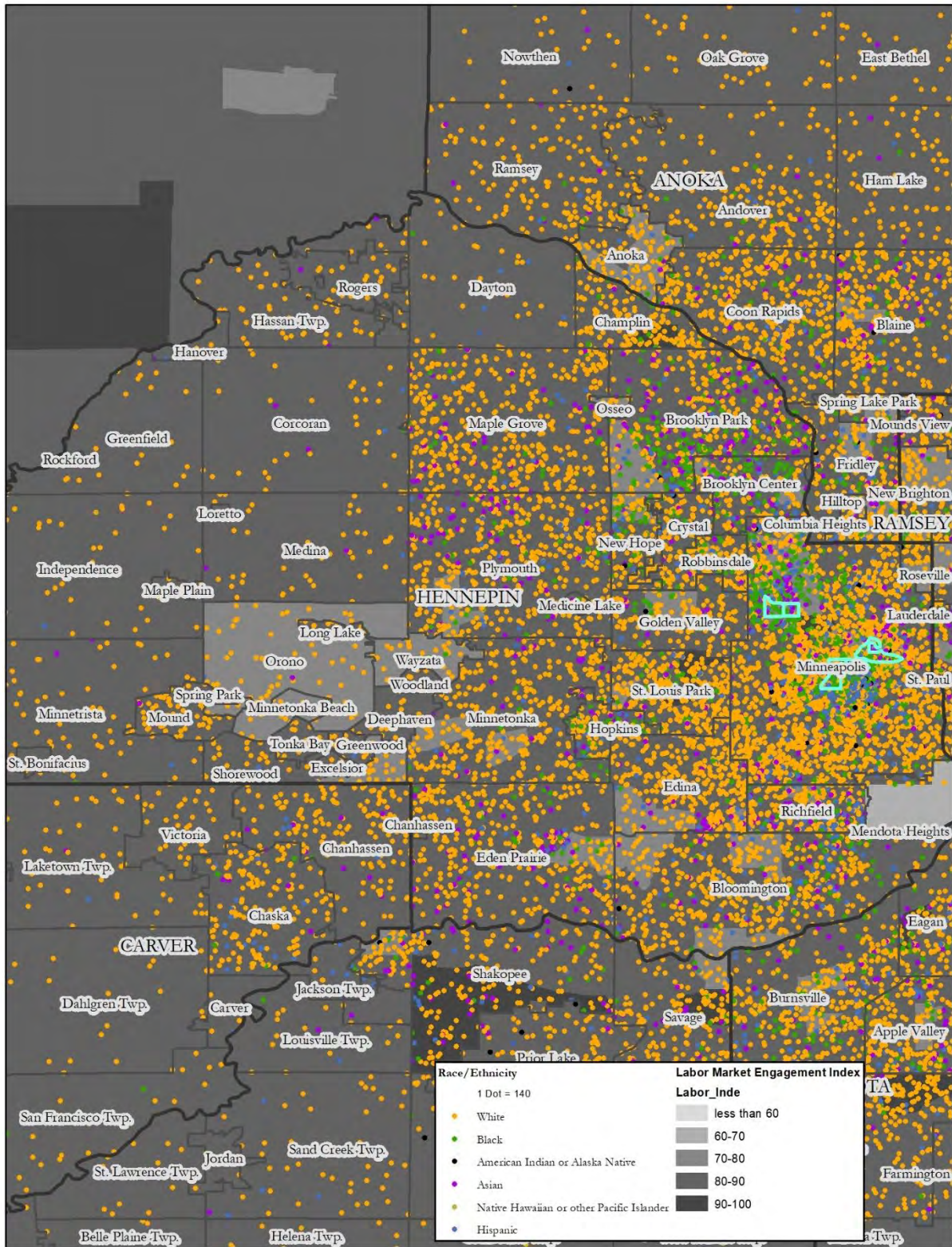
Map 5: Dakota County, Race, Labor Market Index



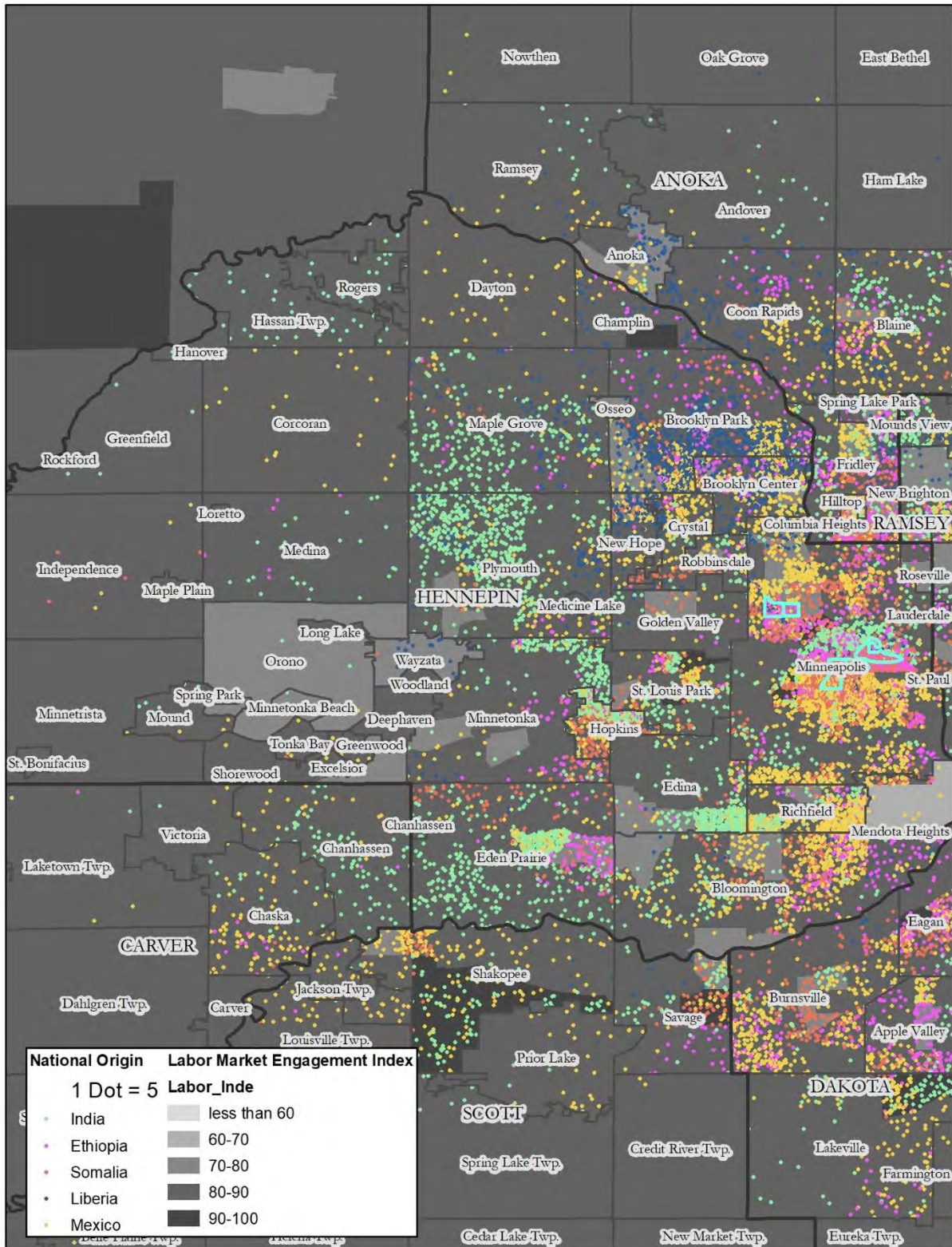
Map 6: Dakota County, National Origin, Labor Market Index



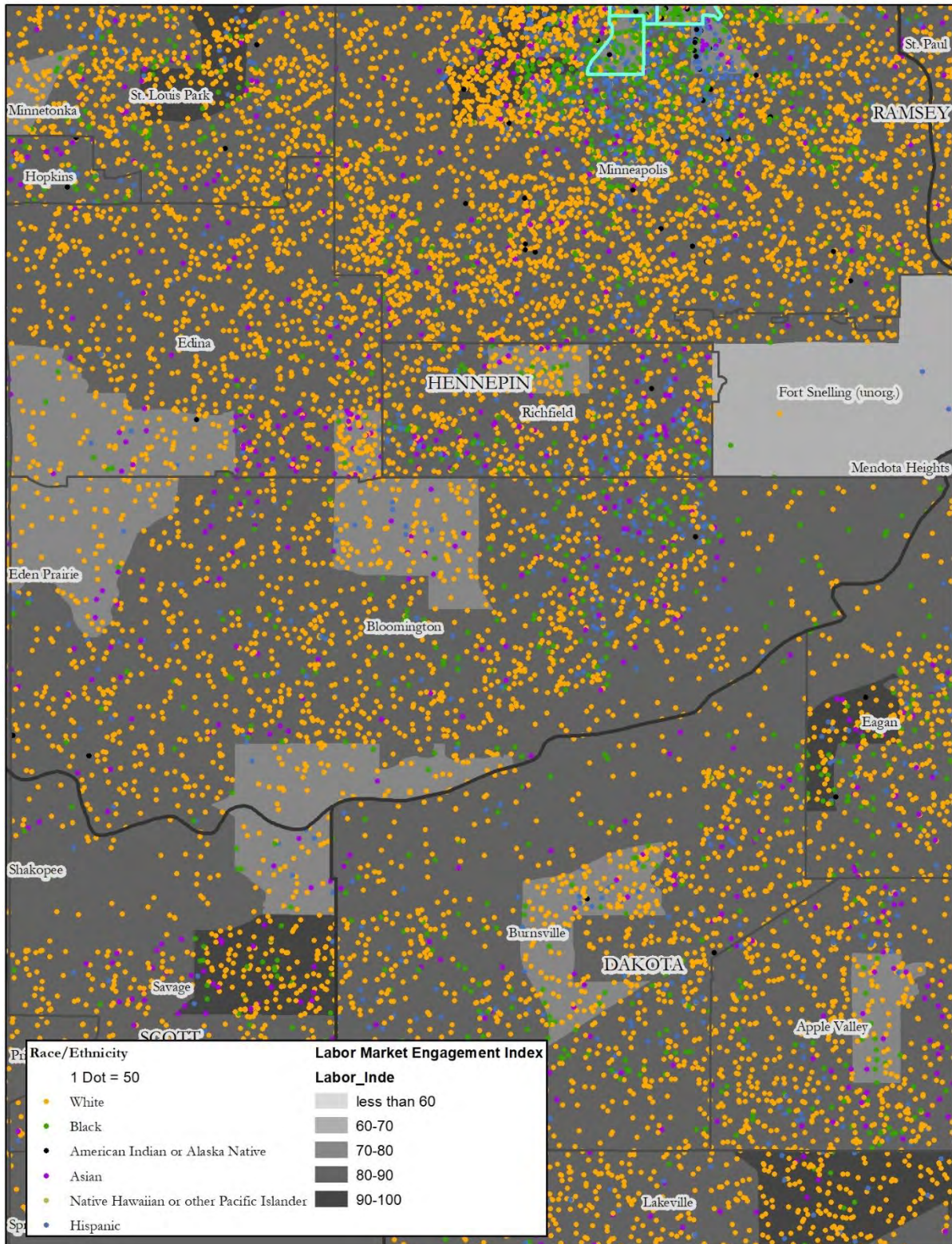
Map 7: Hennepin County, Race, Labor Market Index



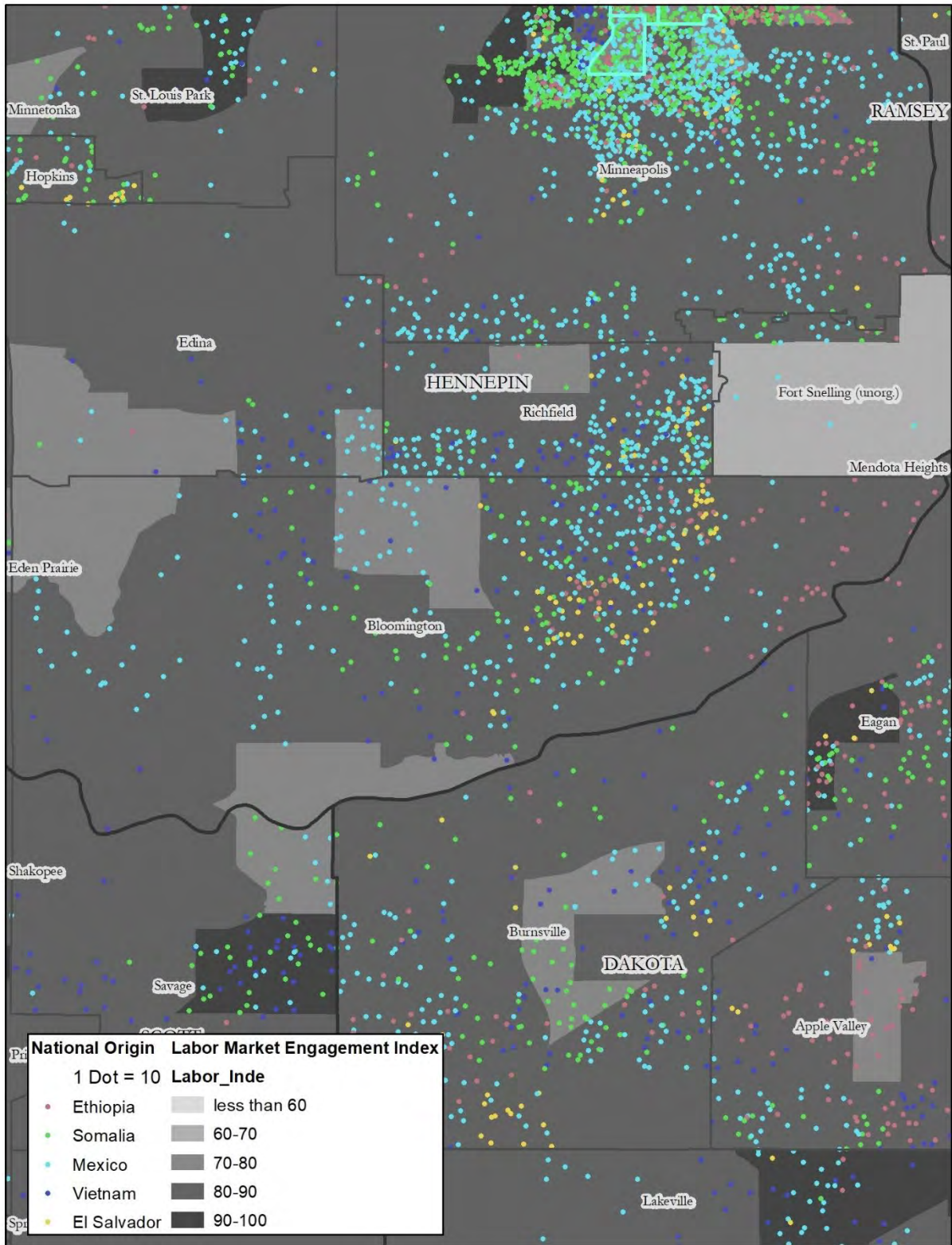
Map 8: Hennepin County, National Origin, Labor Market Index



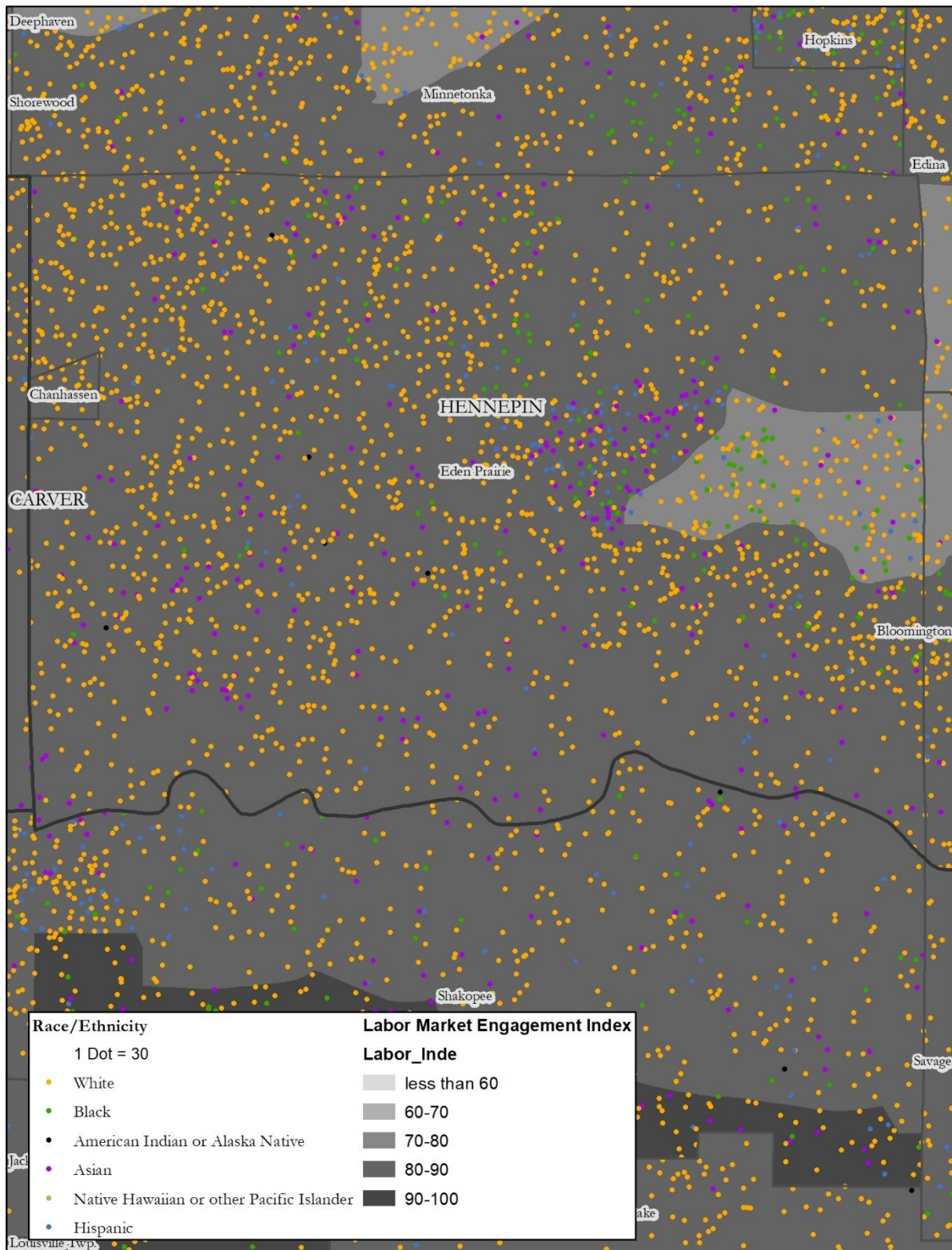
Map 9: Bloomington, Race, Labor Market Index



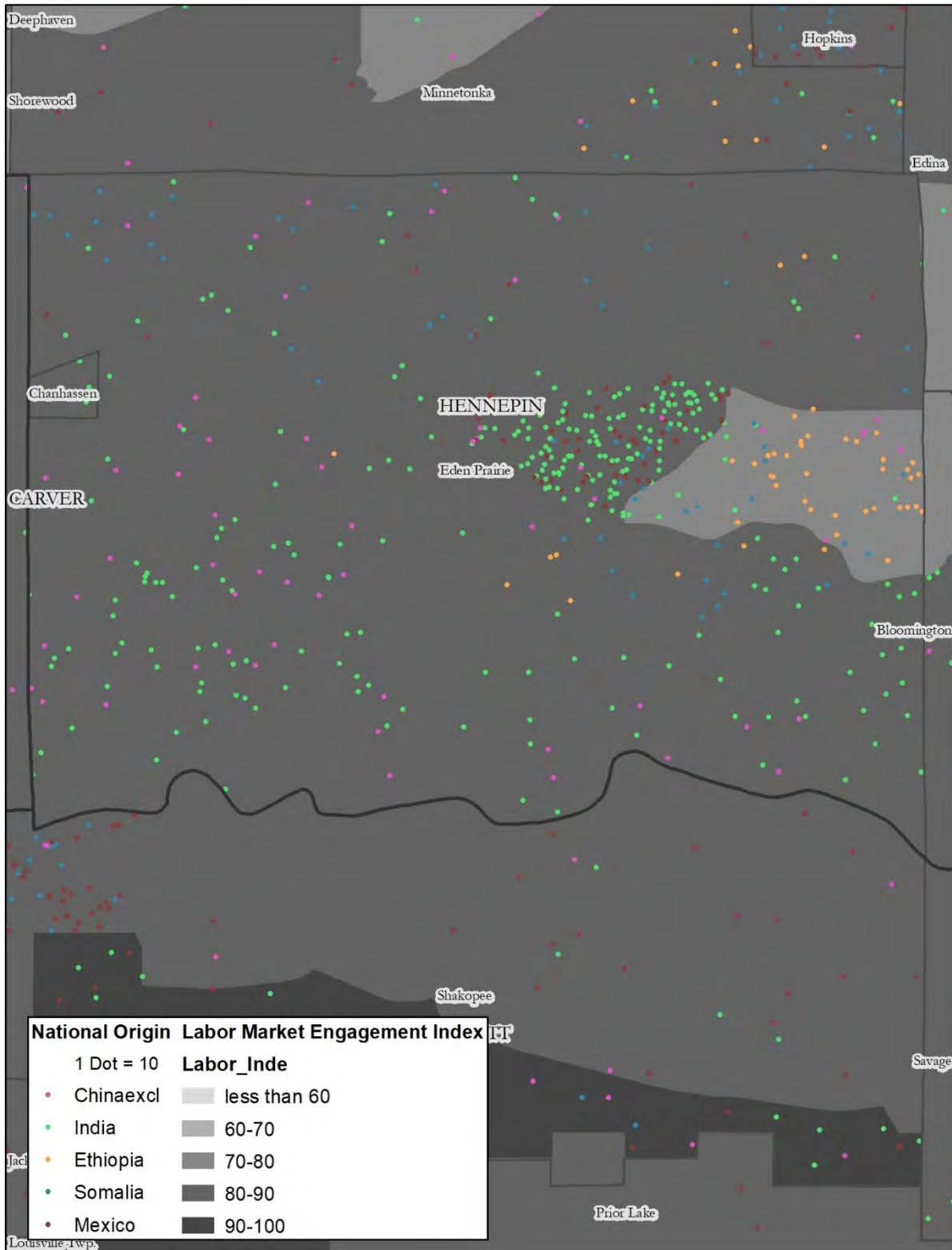
Map 10: Bloomington, National Origin, Labor Market Index



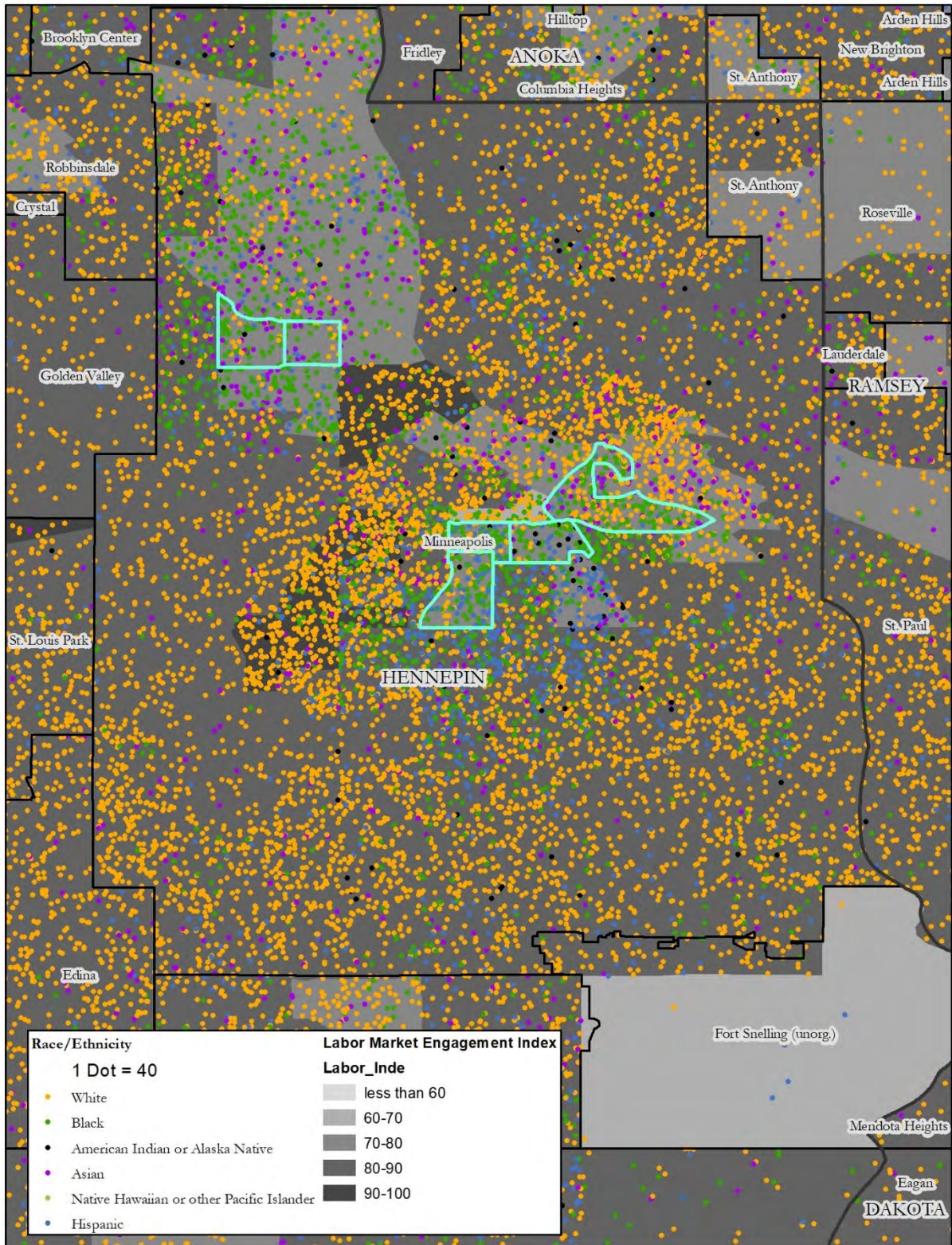
Map 11: Eden Prairie, Race, Labor Market Index



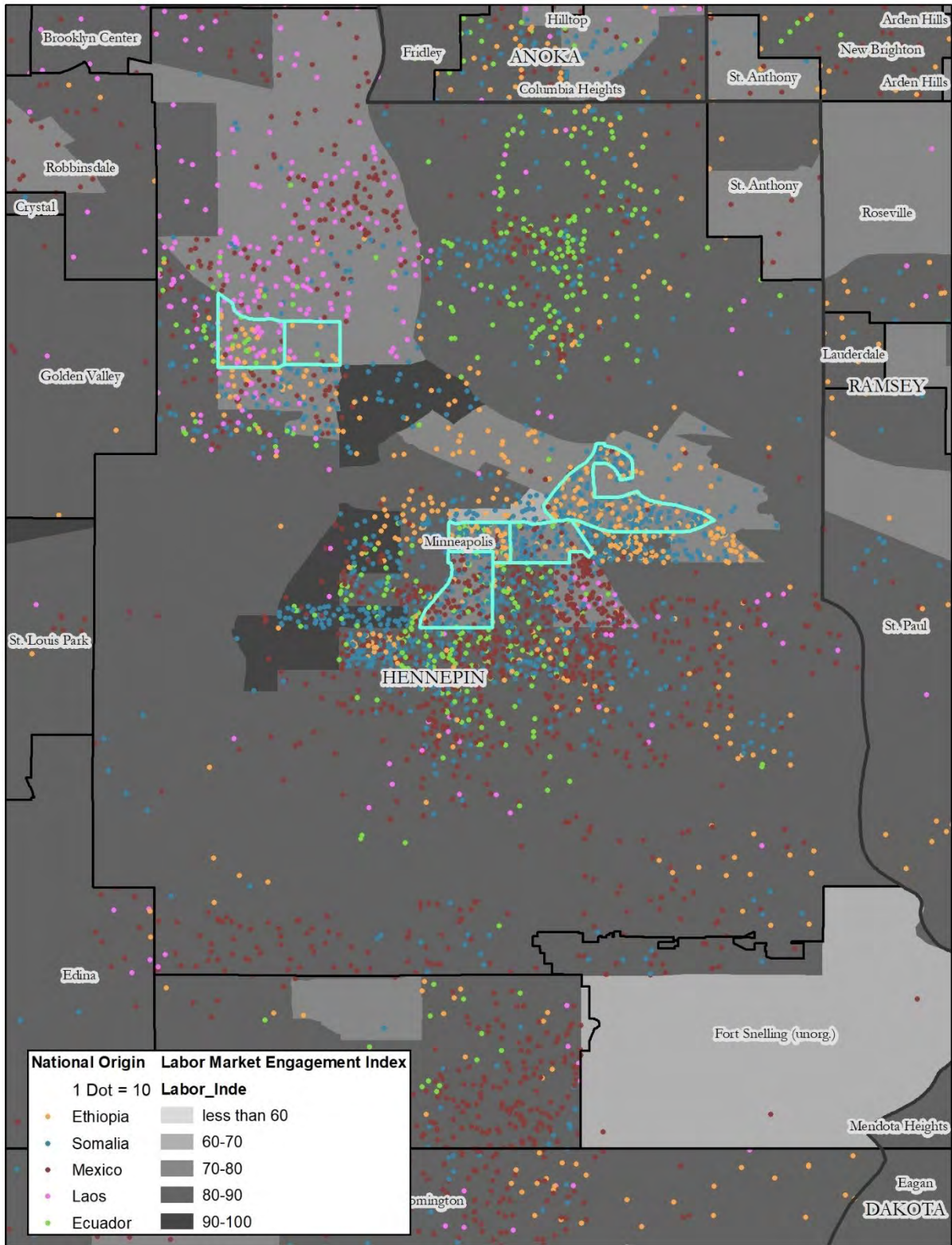
Map 12: Eden Prairie, National Origin, Labor Market Index



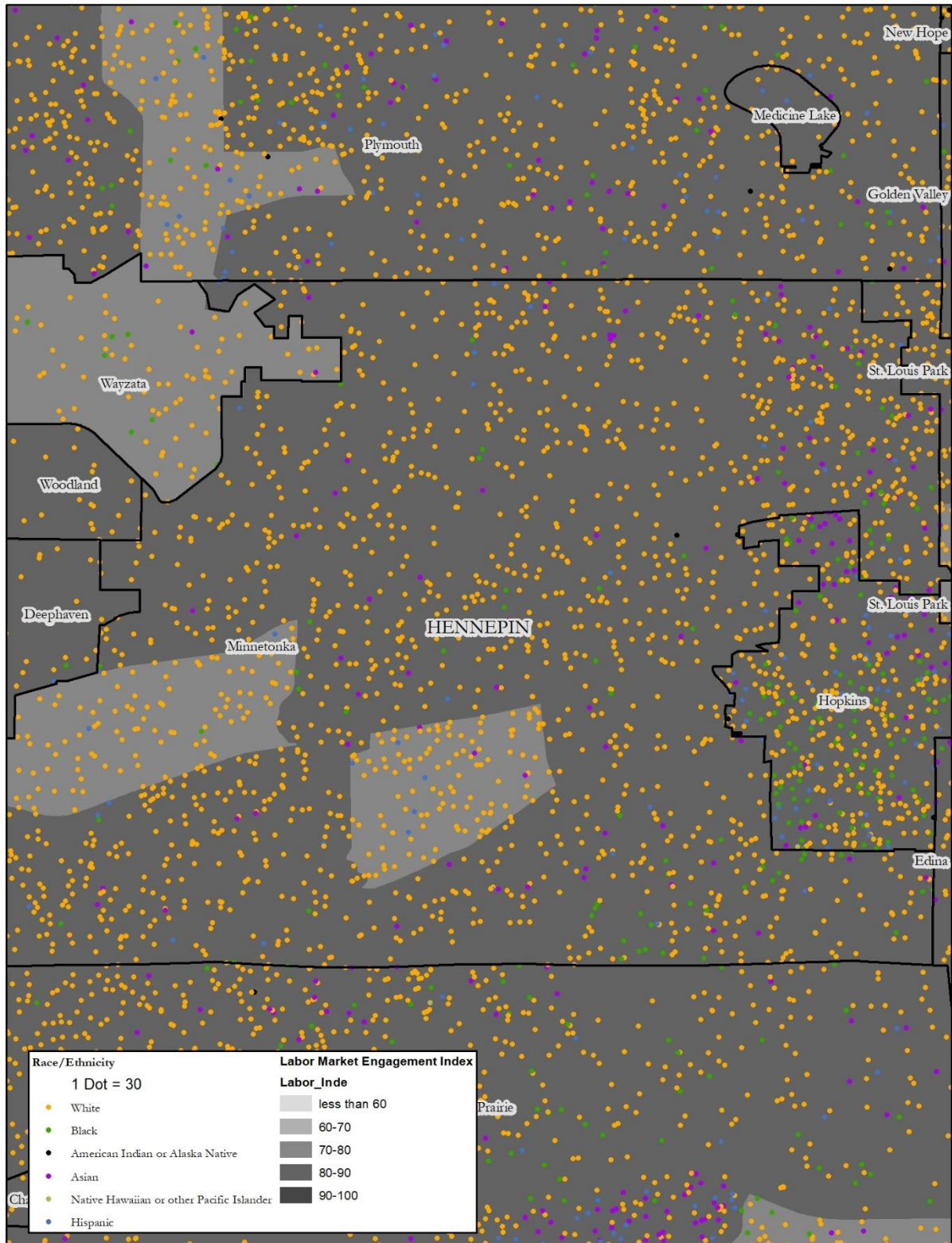
Map 13: Minneapolis, Race, Labor Market Index



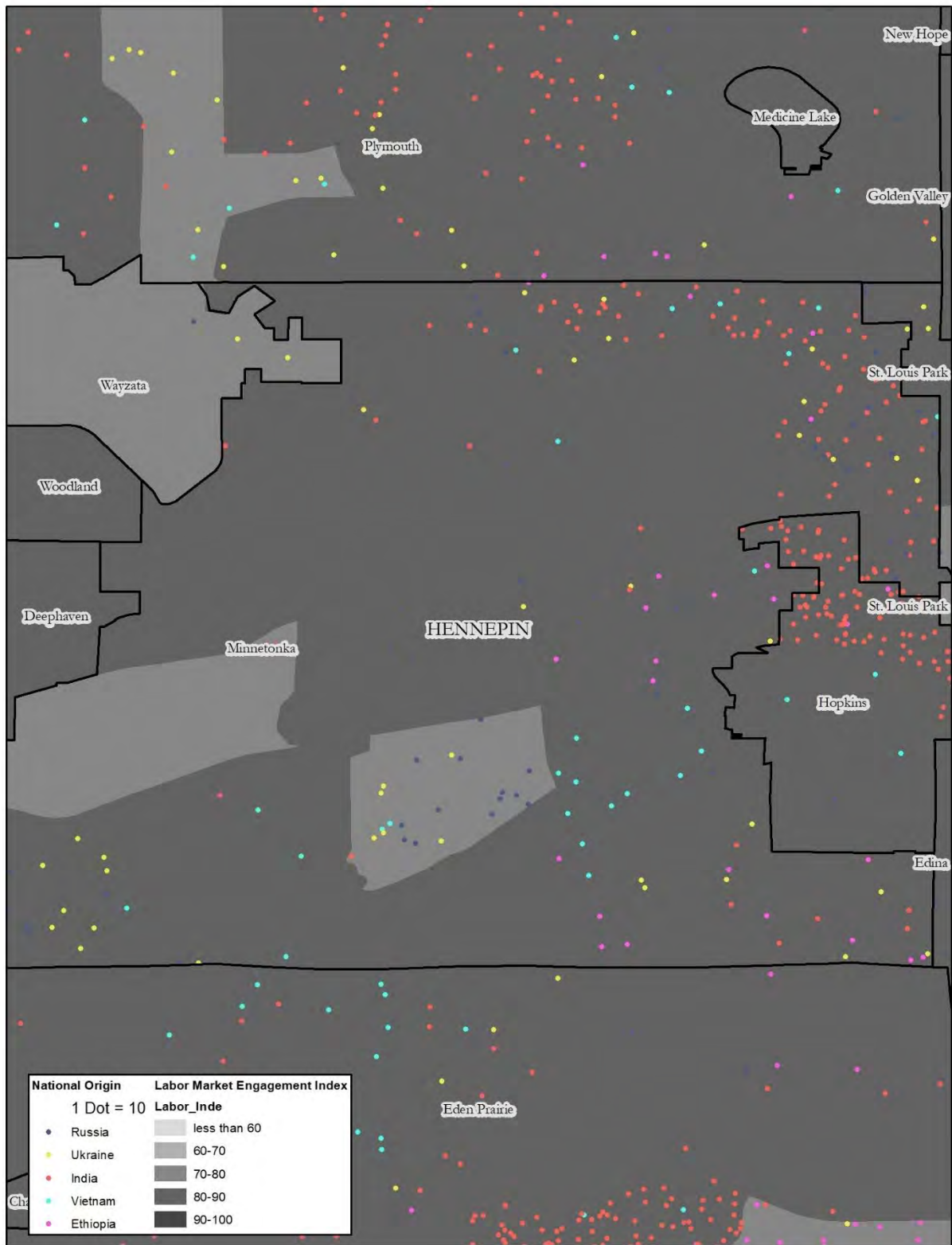
Map 14: Minneapolis, National Origin, Labor Market Index



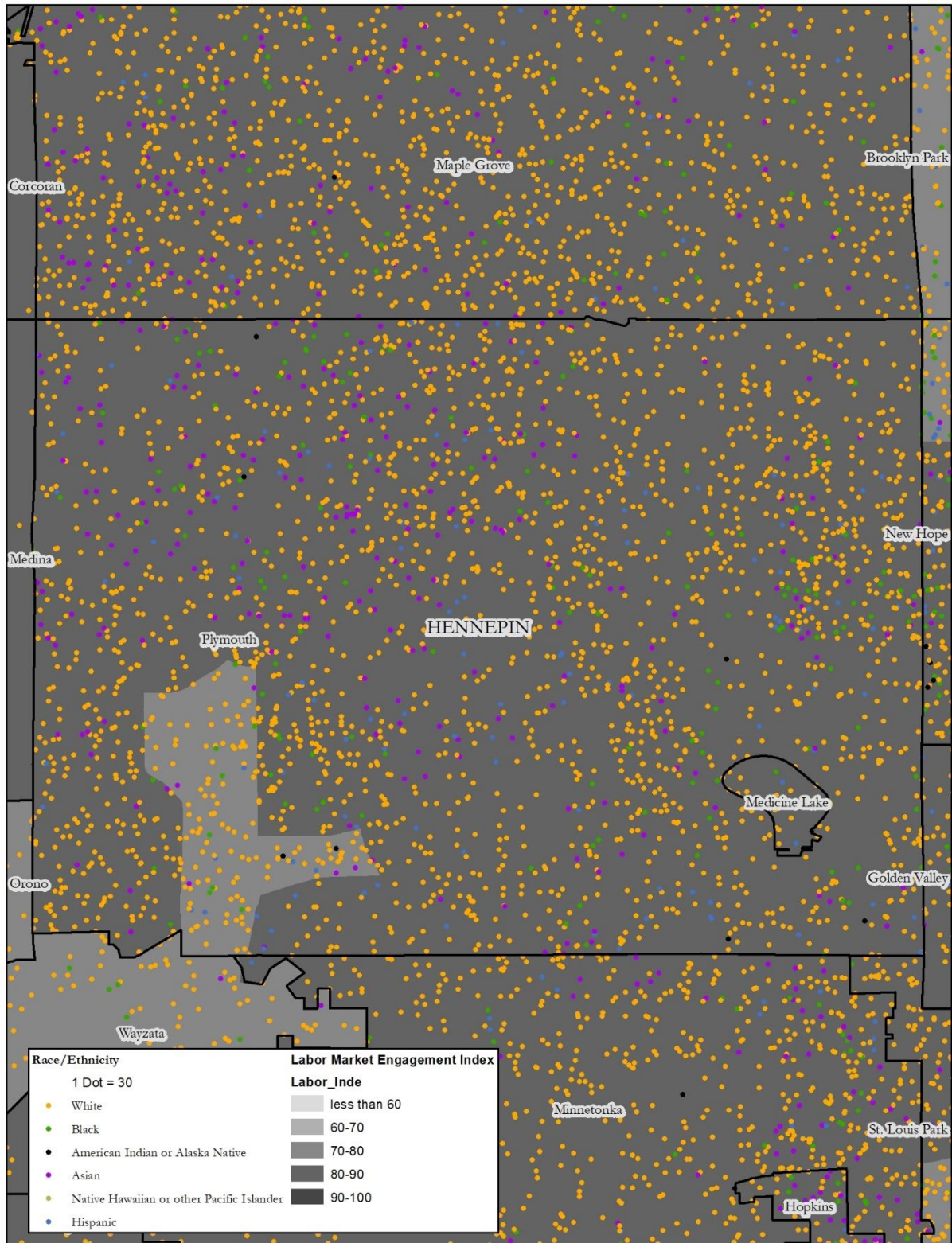
Map 15: Minnetonka, Race, Labor Market Index



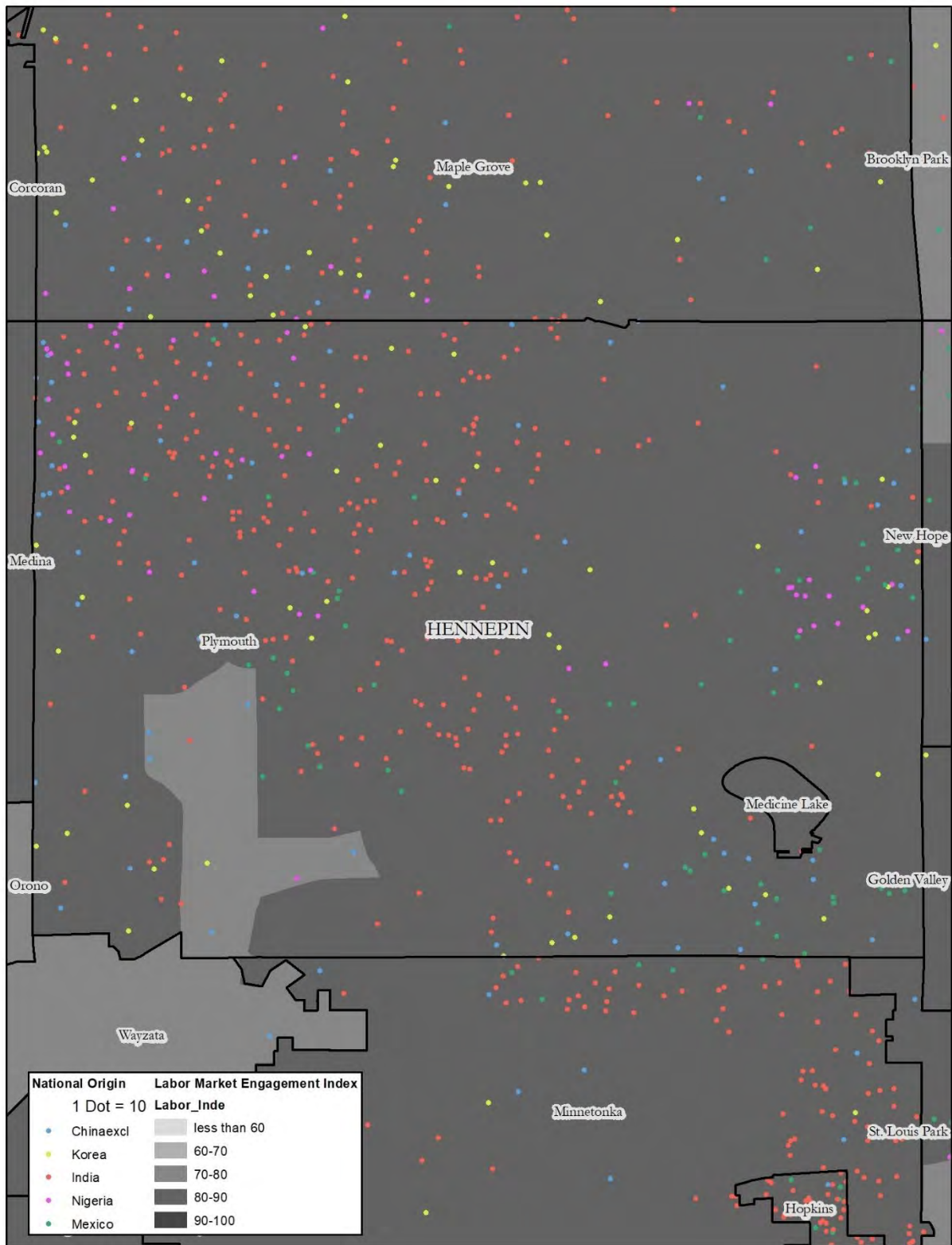
Map 16: Minnetonka, National Origin, Labor Market Index



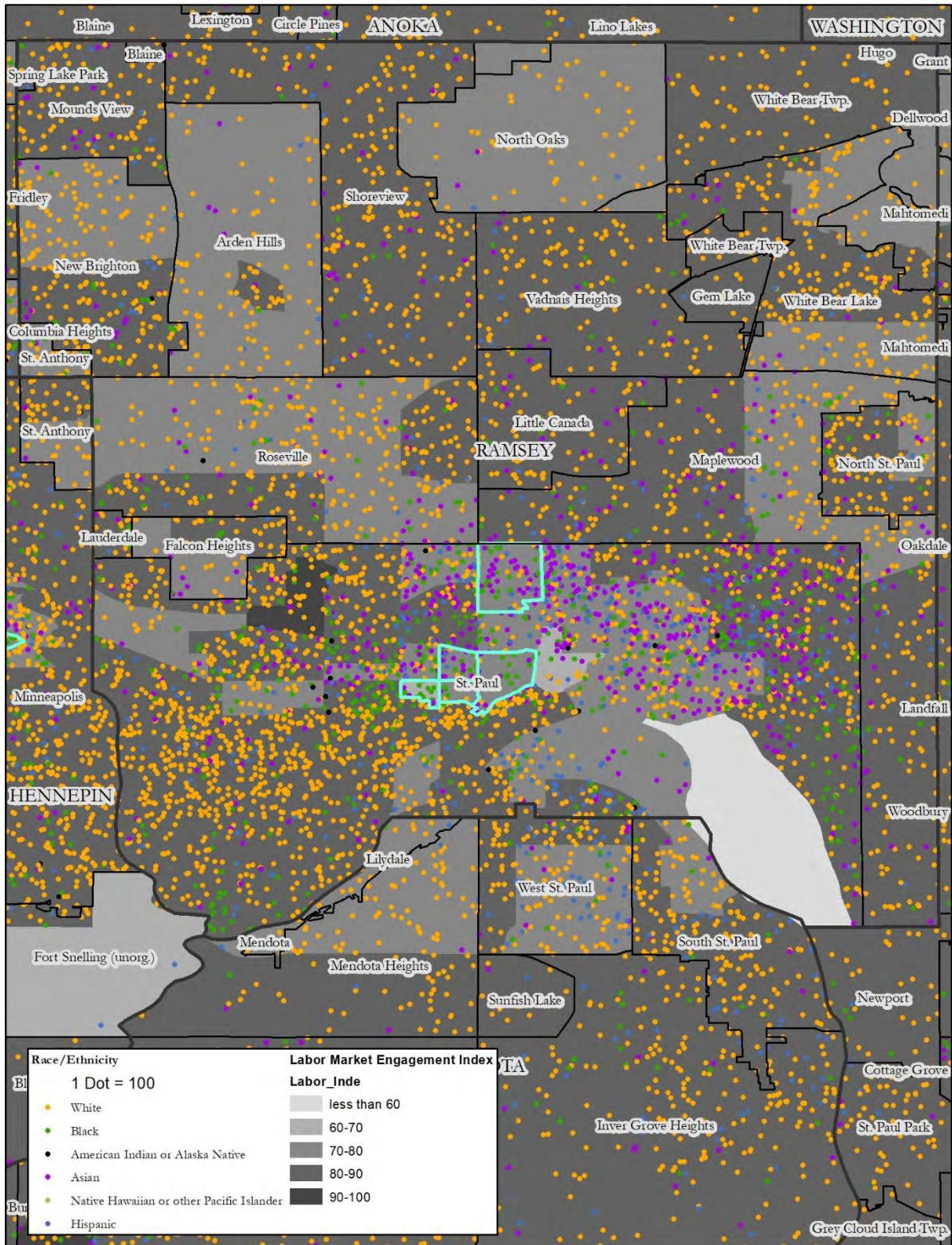
Map 17: Plymouth, Race, Labor Market Index



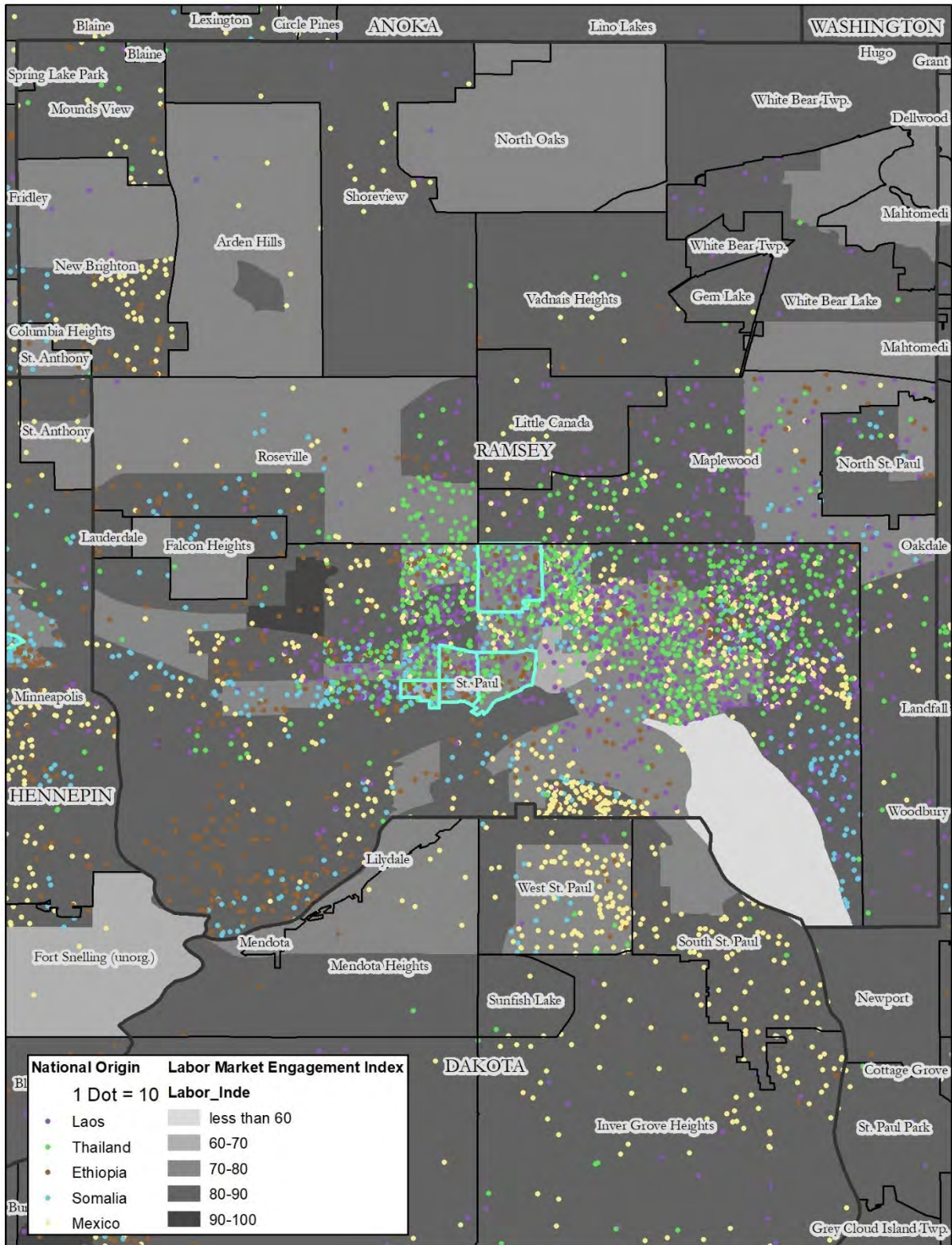
Map 18: Plymouth, National Origin, Labor Market Index



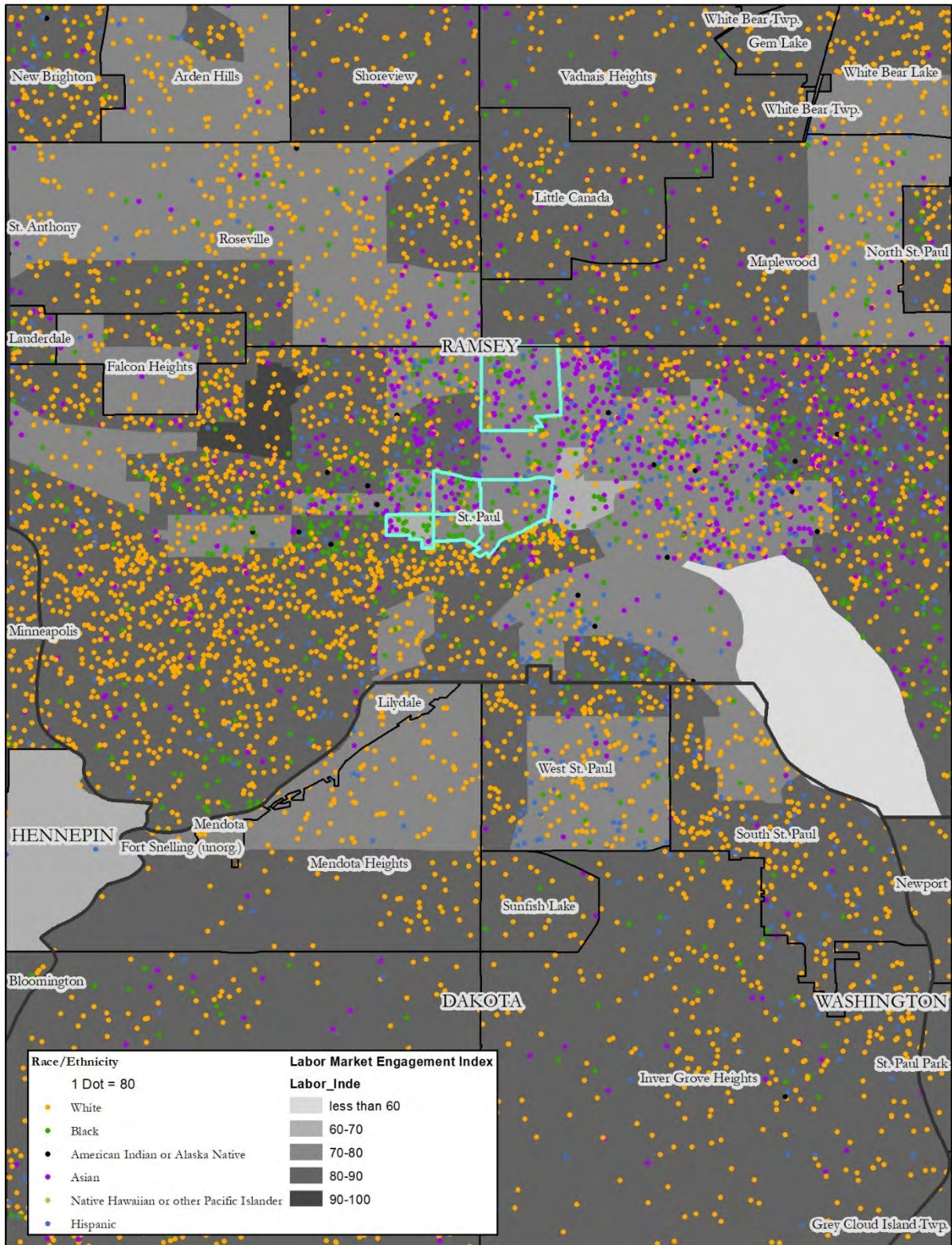
Map 19: Ramsey County, Race, Labor Market Index



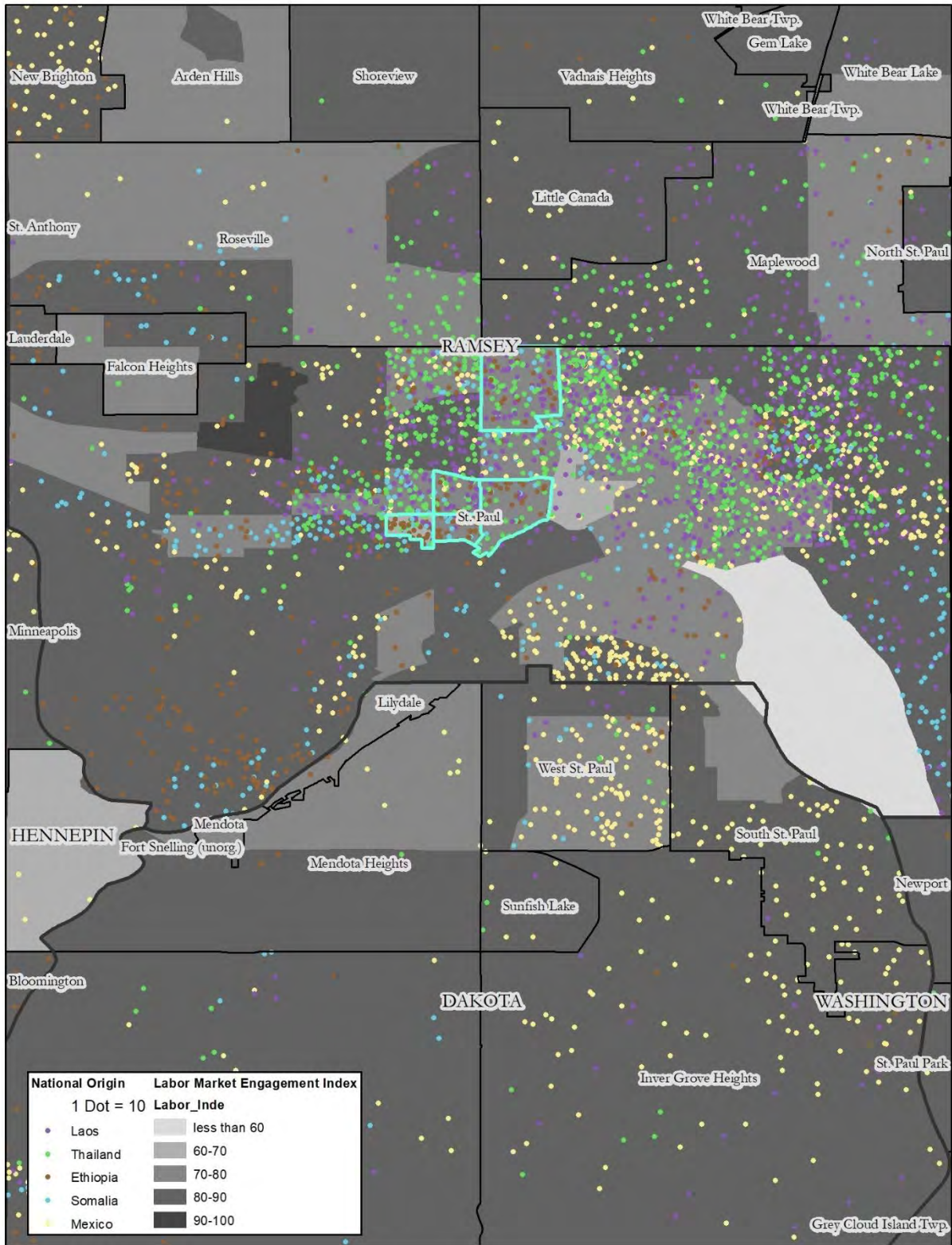
Map 20: Ramsey County, National Origin, Labor Market Index



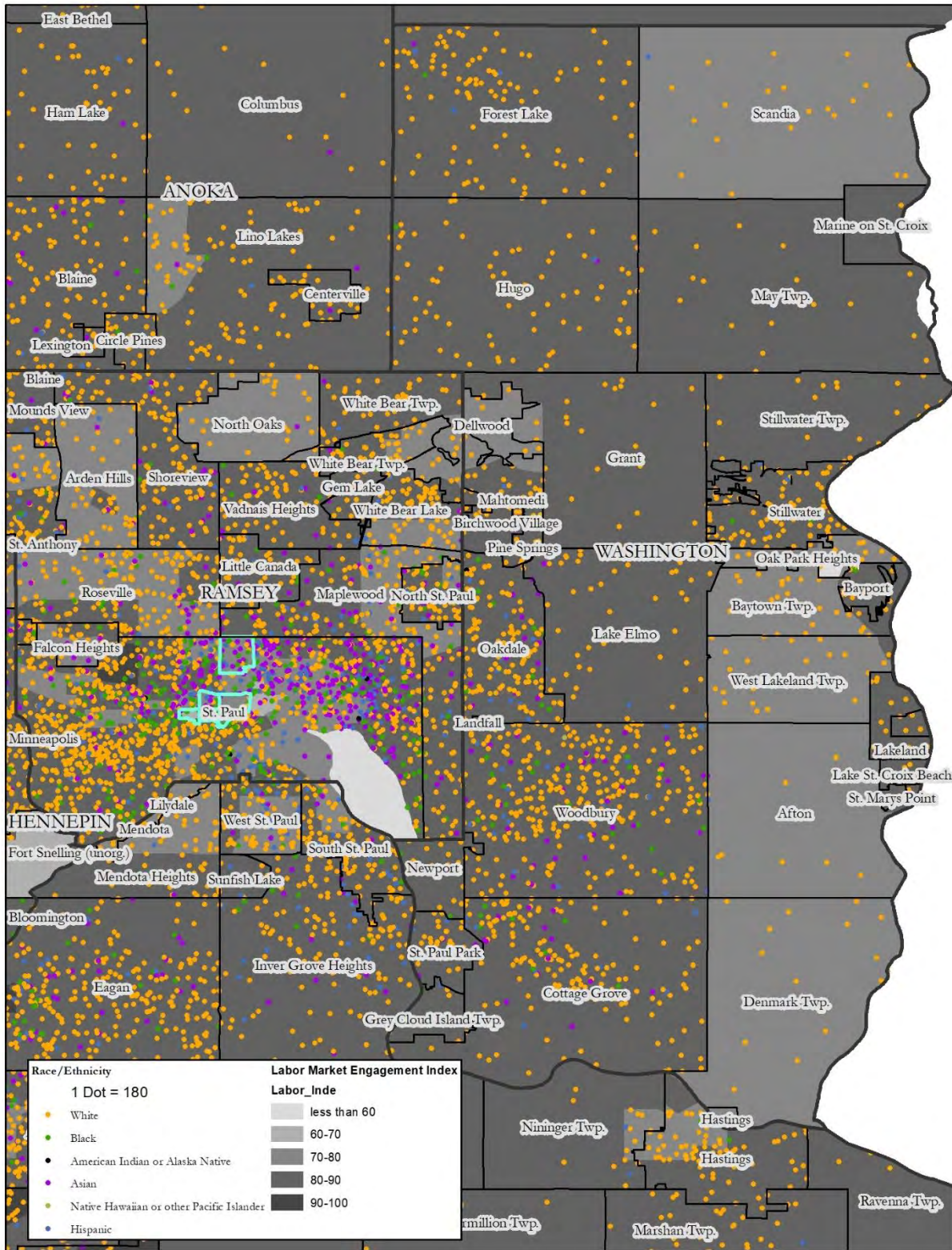
Map 21: St. Paul, Race, Labor Market Index



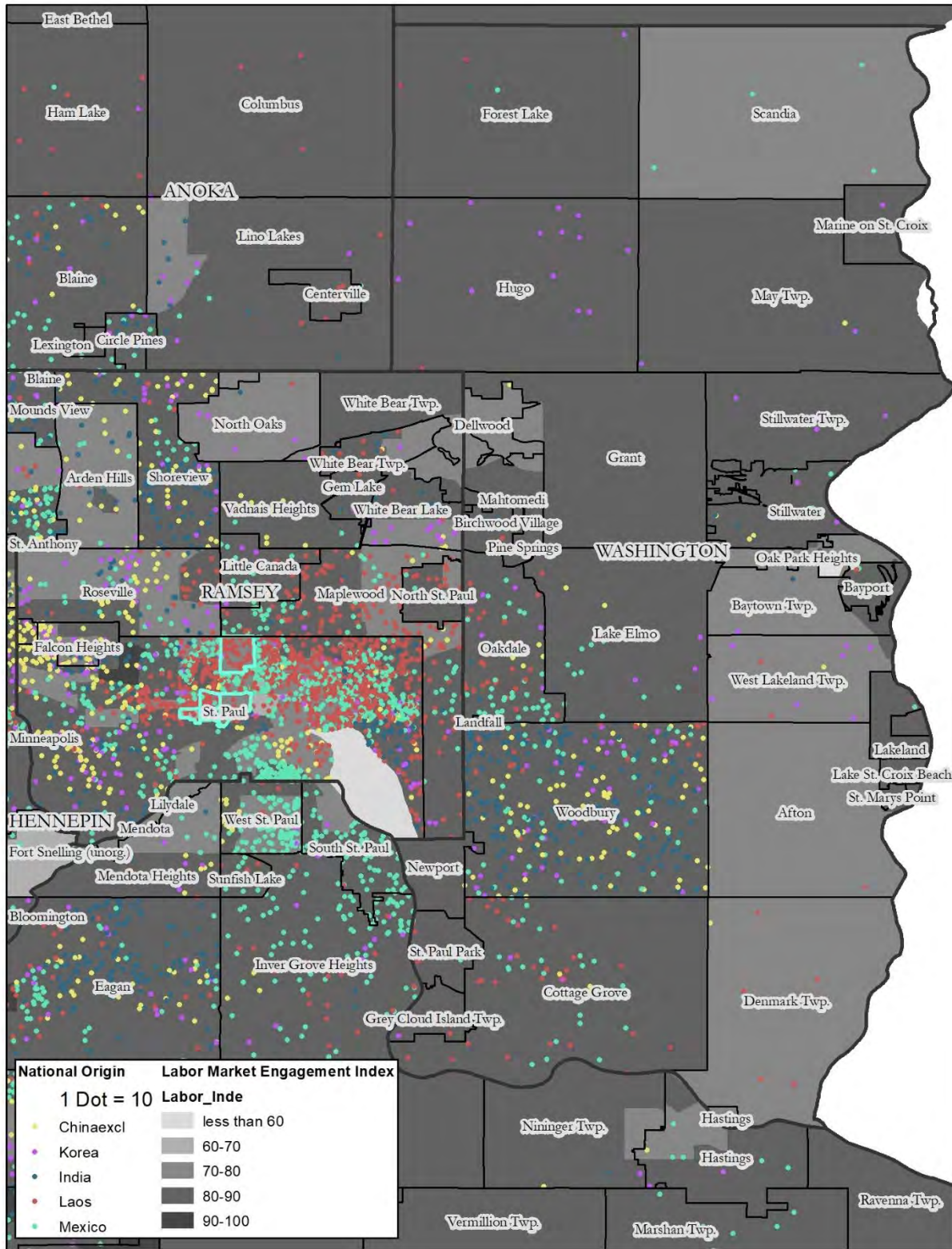
Map 22: St. Paul, National Origin, Labor Market Index



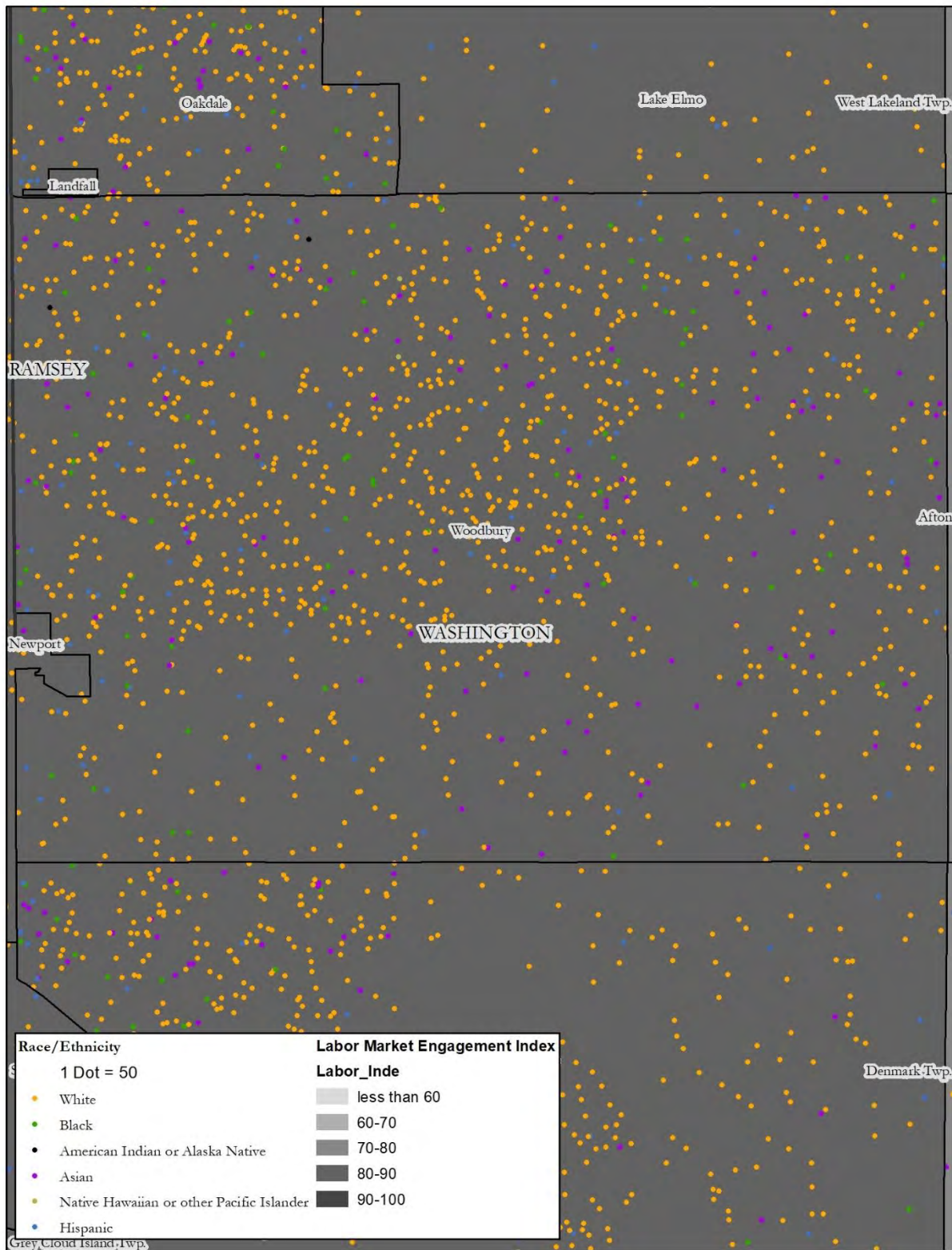
Map 23: Washington County, Race, Labor Market Index



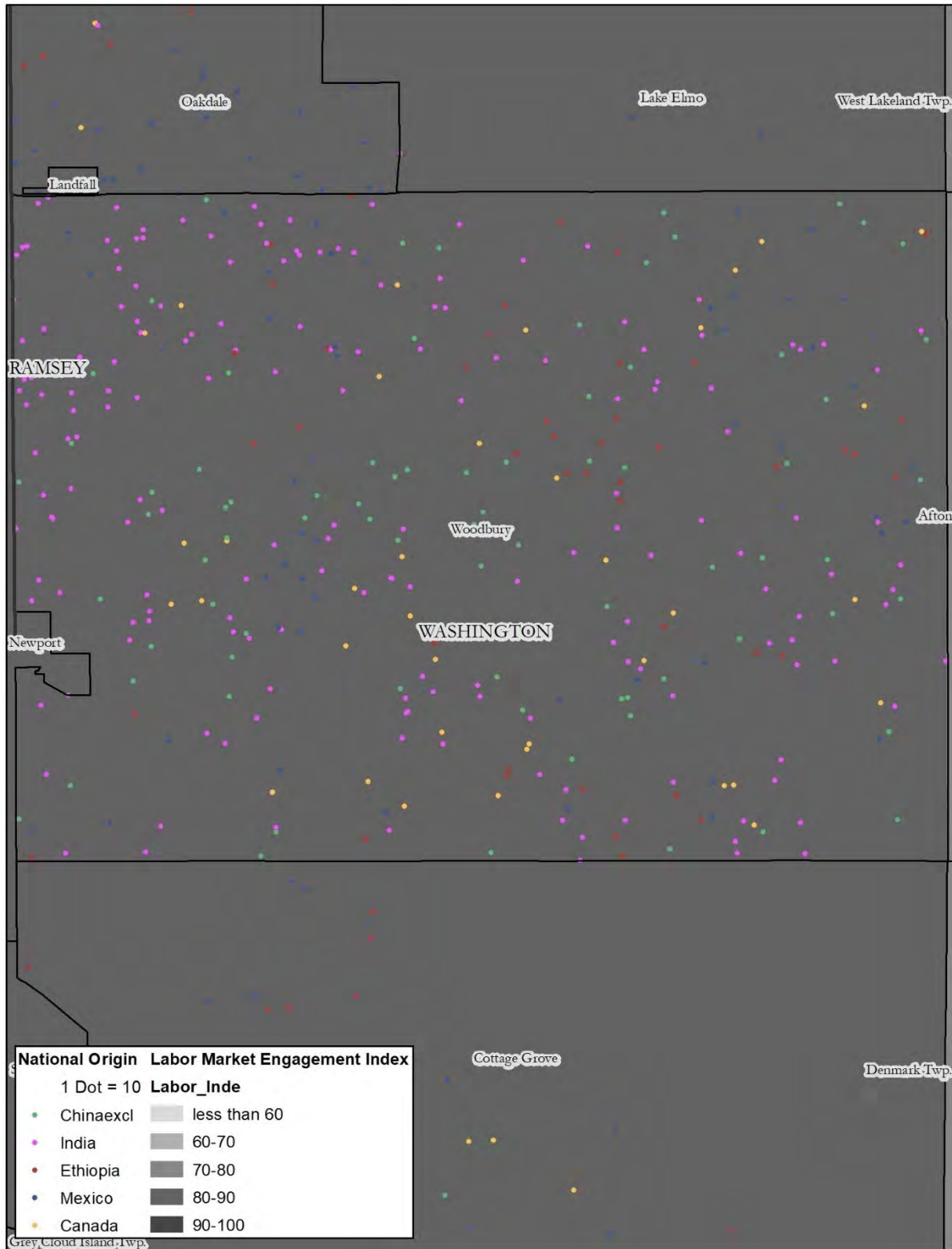
Map 24: Washington County, National Origin, Labor Market Index



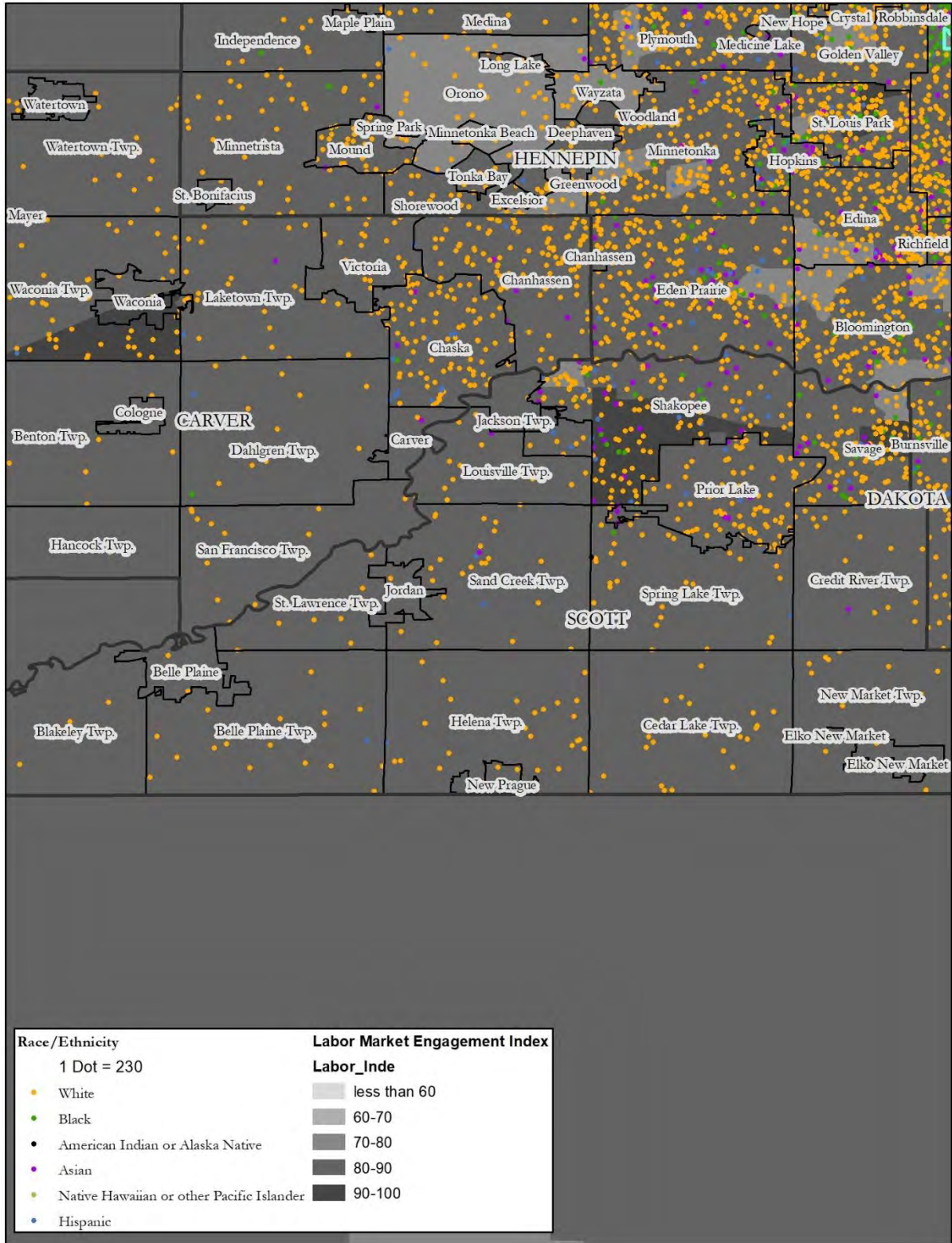
Map 25: Woodbury, Race, Labor Market Index



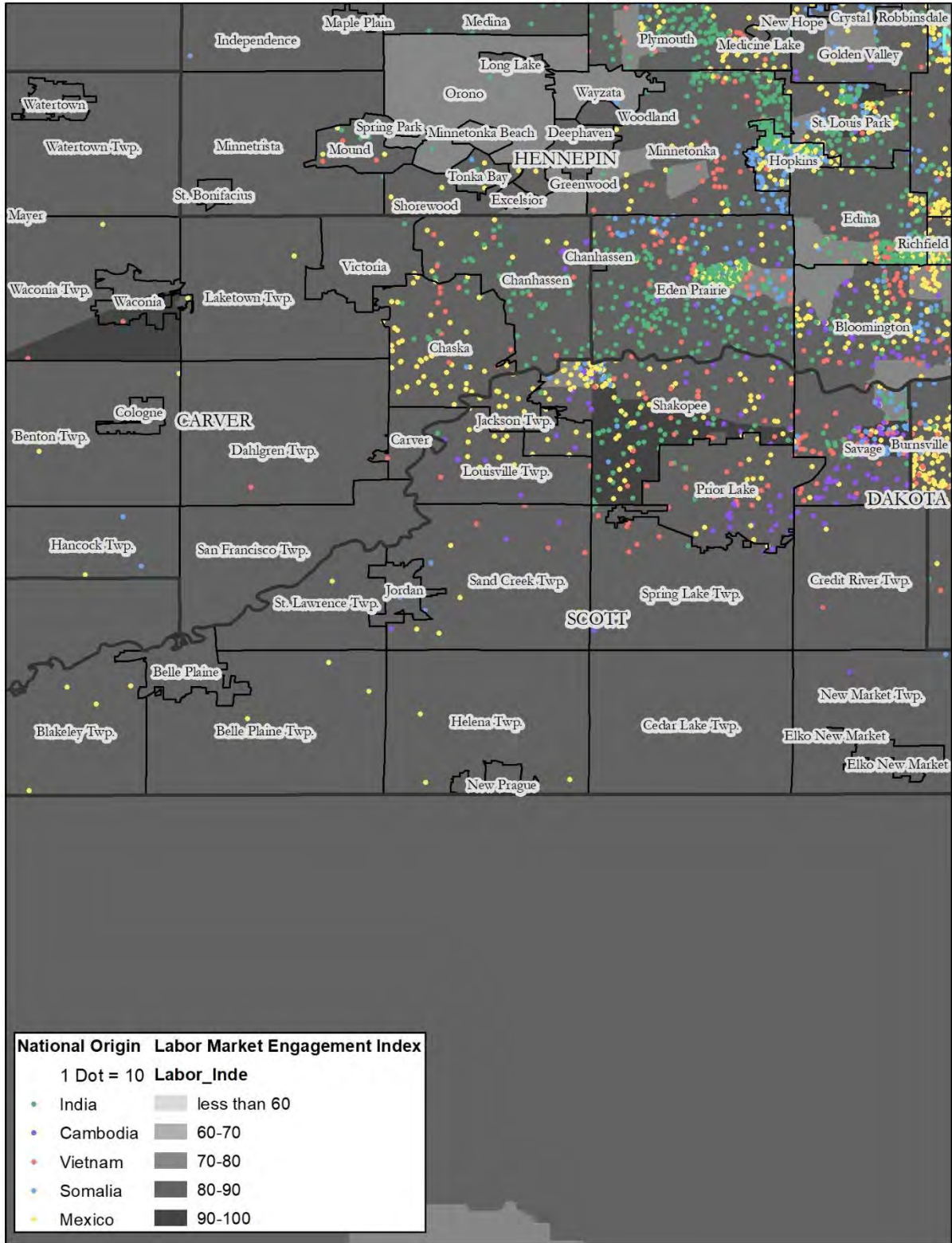
Map 26: Woodbury, National Origin, Labor Market Index



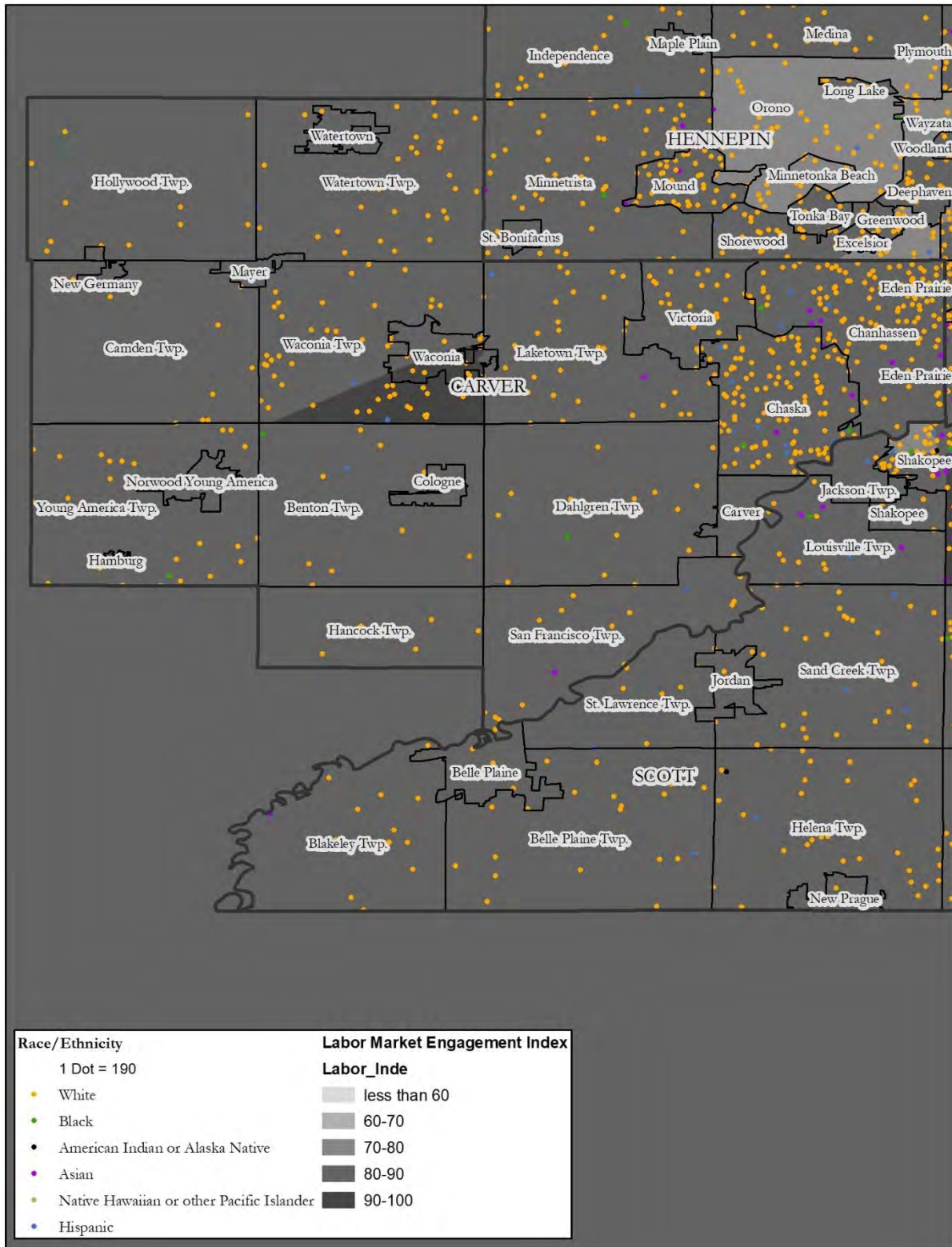
Map 27: Scott County, Race, Labor Market Index



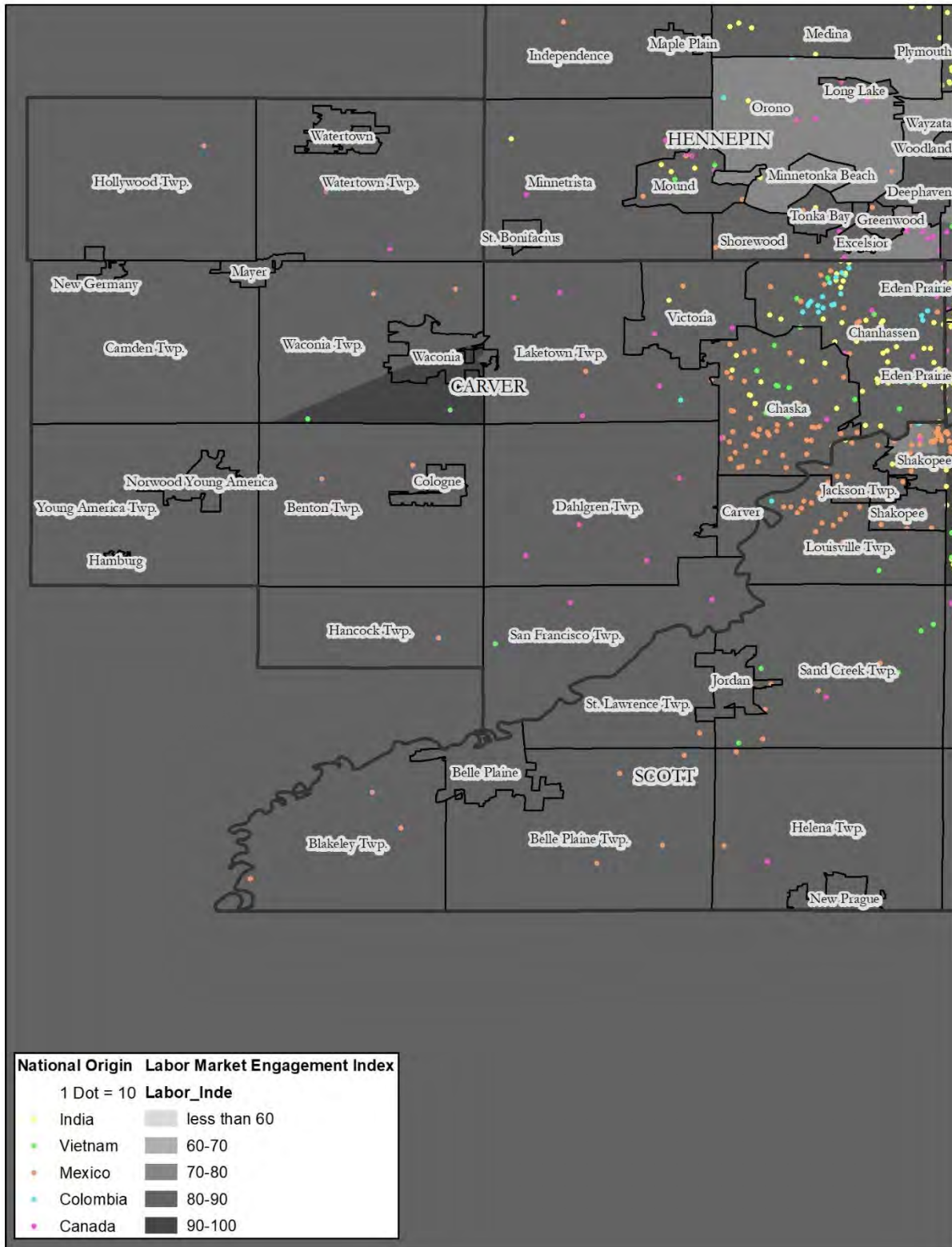
Map 28: Scott County, National Origin, Labor Market Index



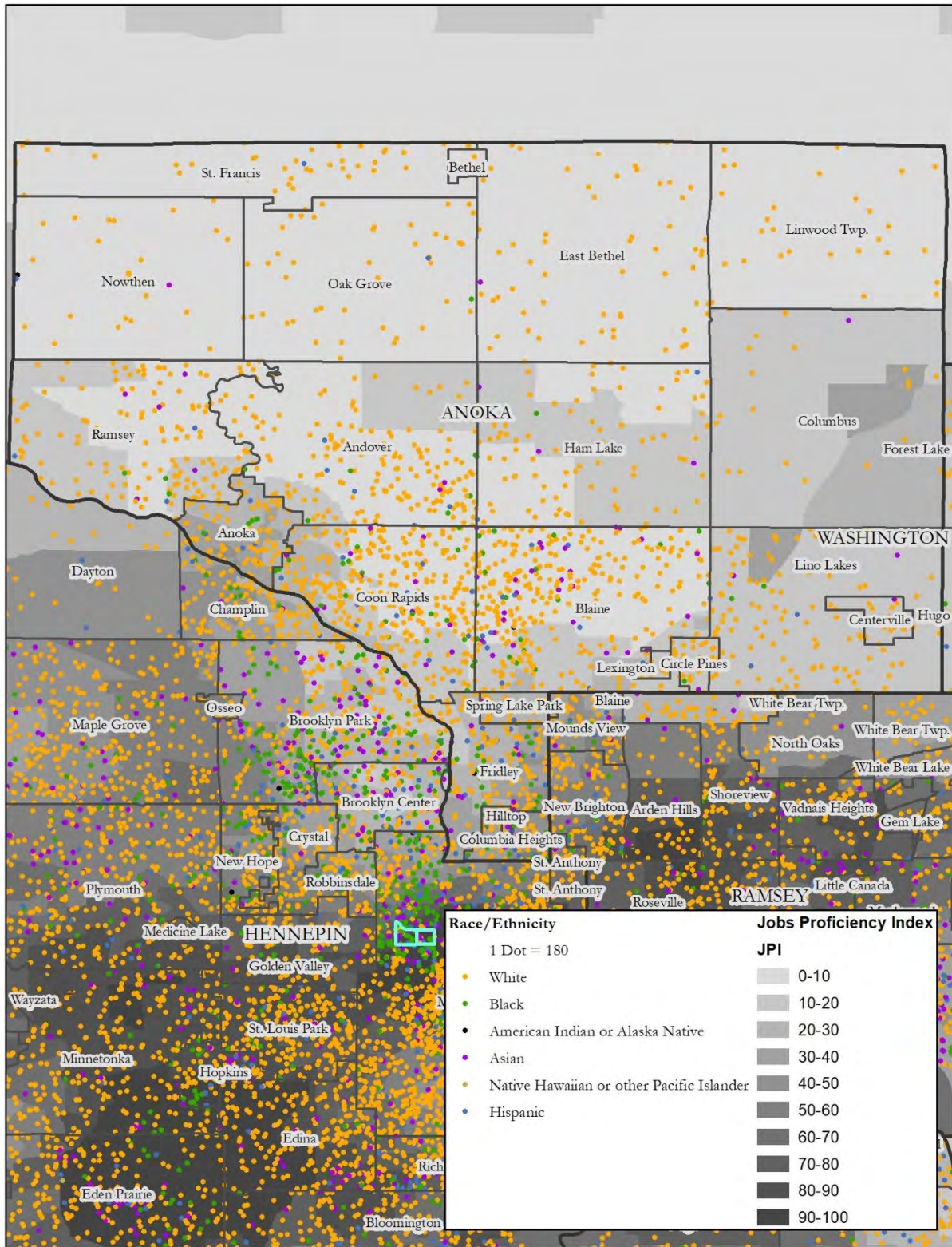
Map 29: Carver County, Race, Labor Market Index



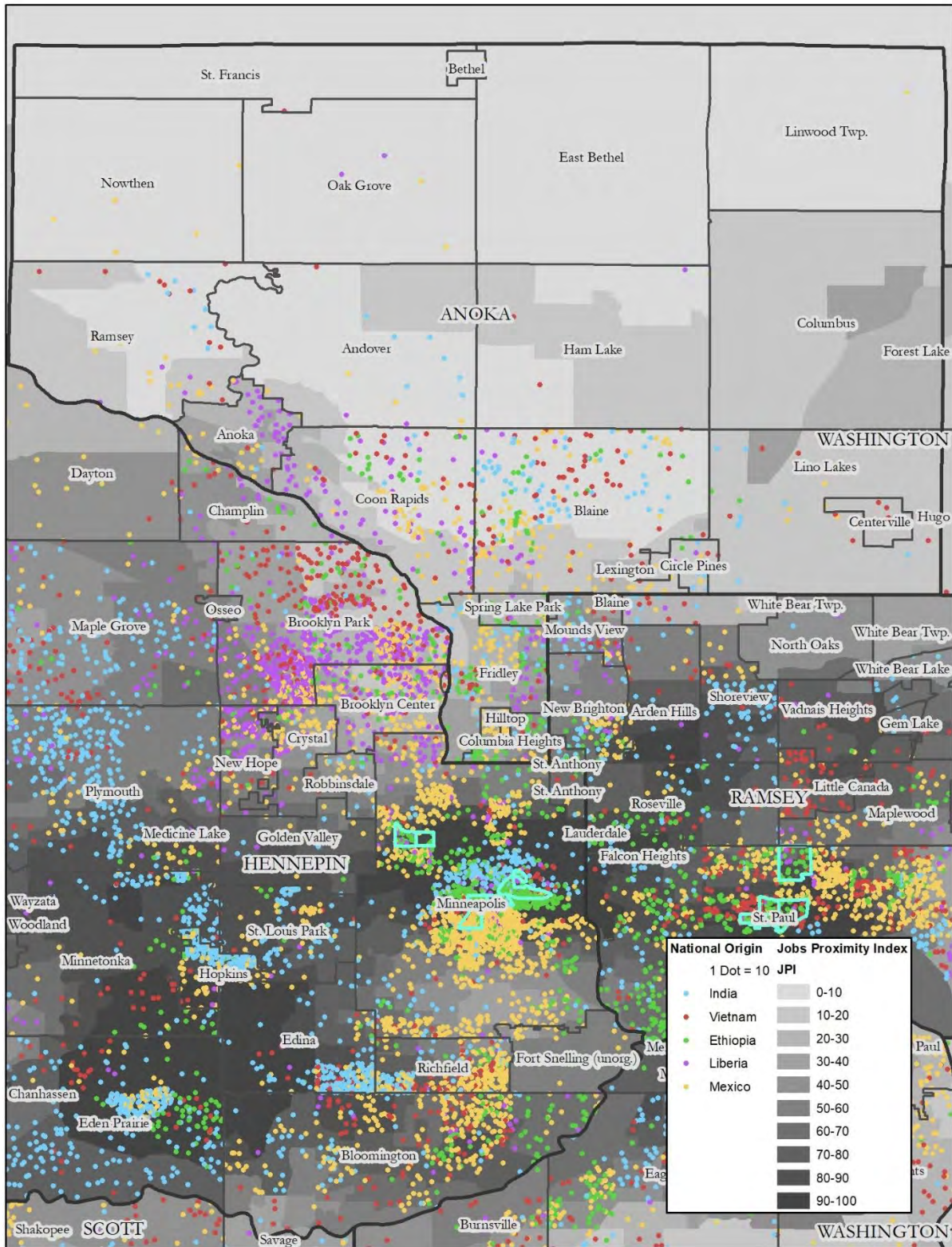
Map 30: Carver County, National Origin, Labor Market Index



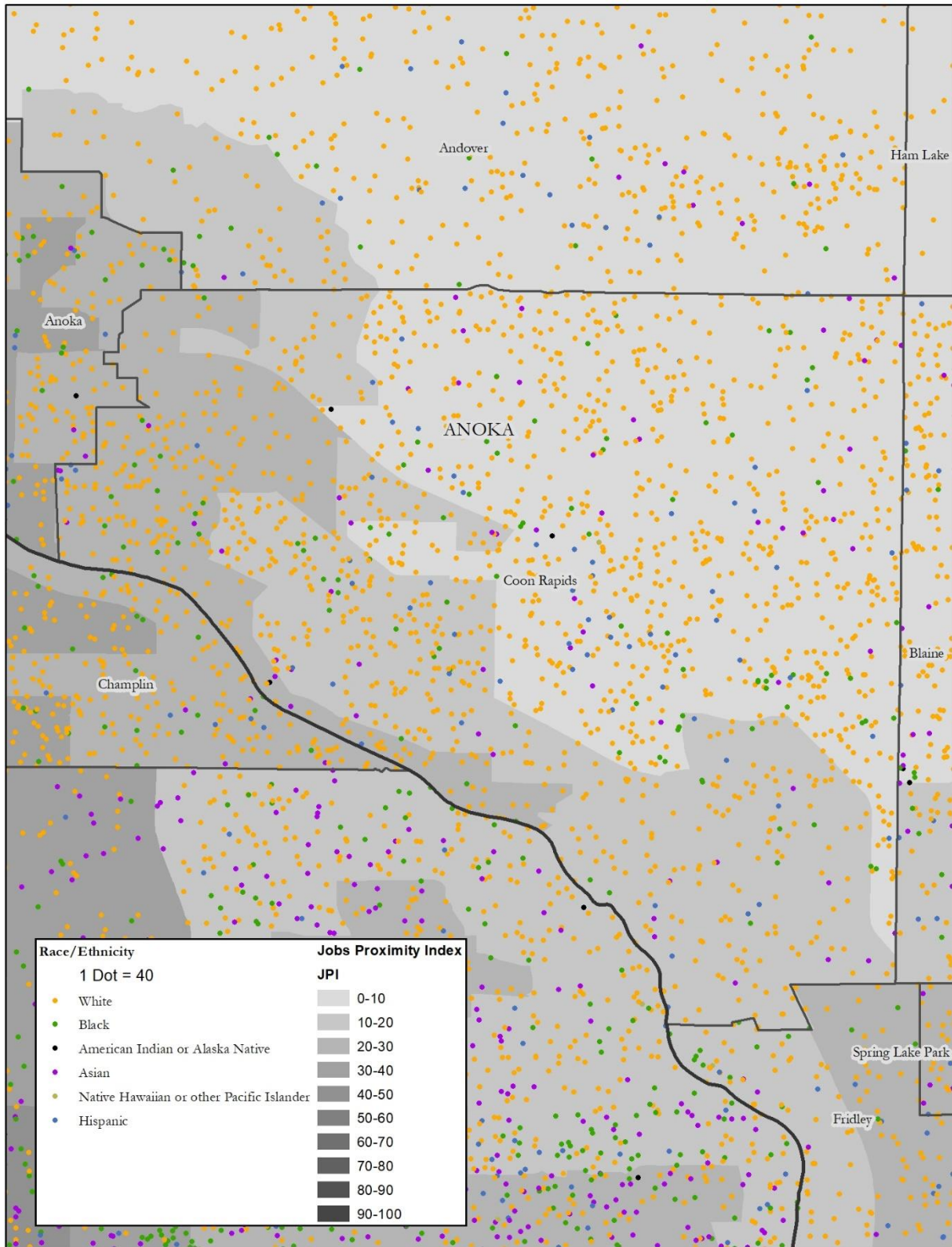
Map 31: Anoka County, Race, Jobs Proximity Index



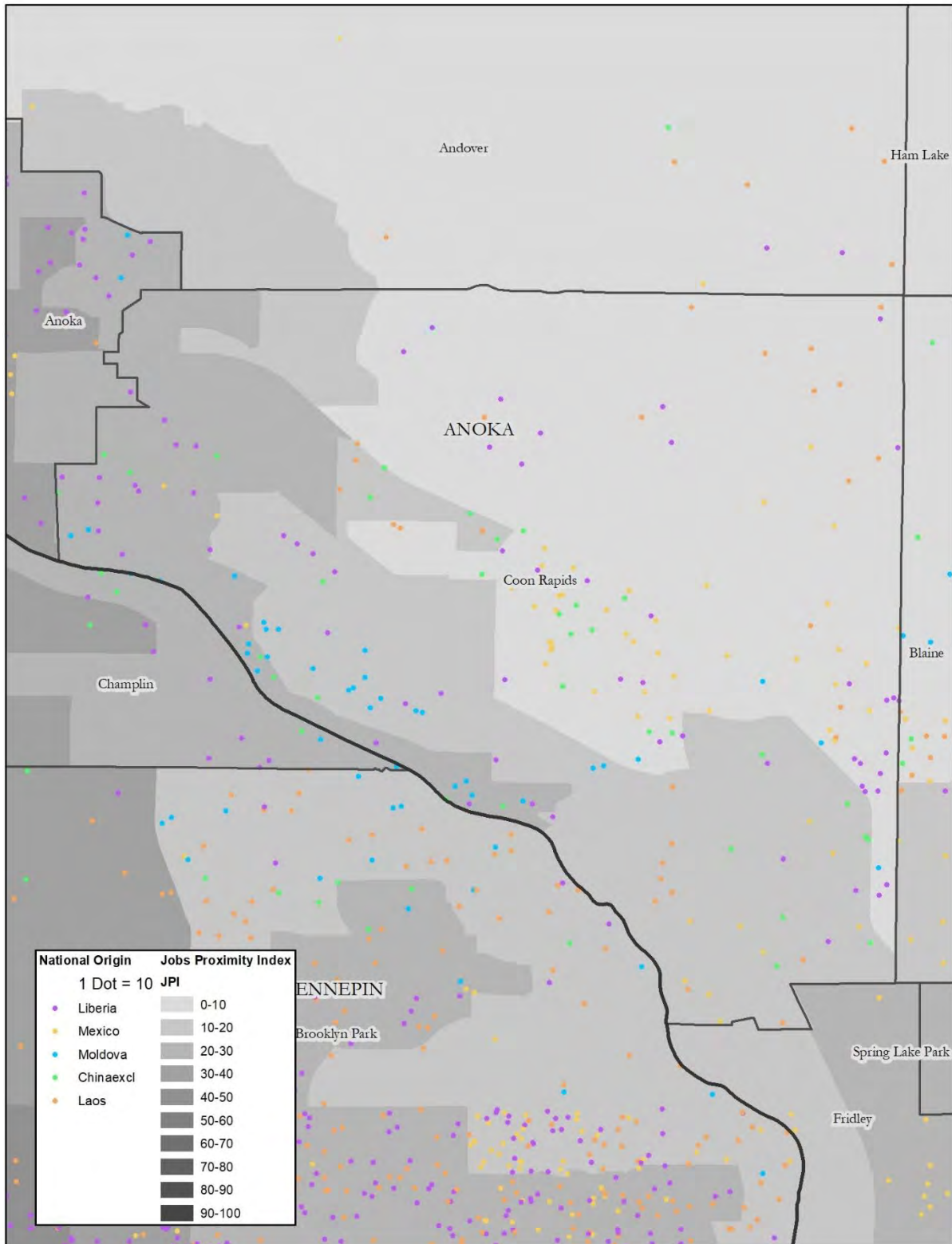
Map 32: Anoka County, National Origin, Jobs Proximity Index



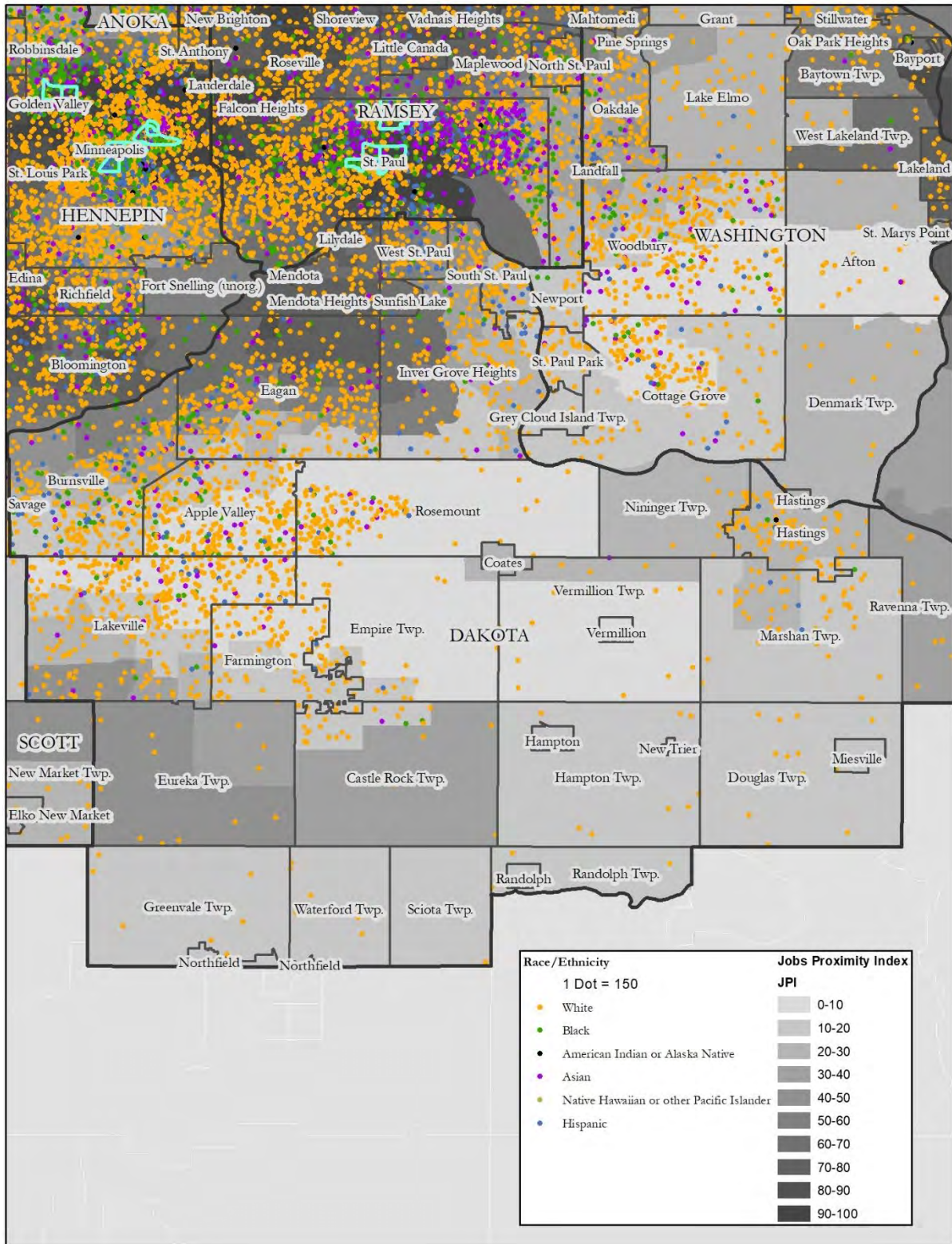
Map 33: Coon Rapids, Race, Jobs Proximity Index



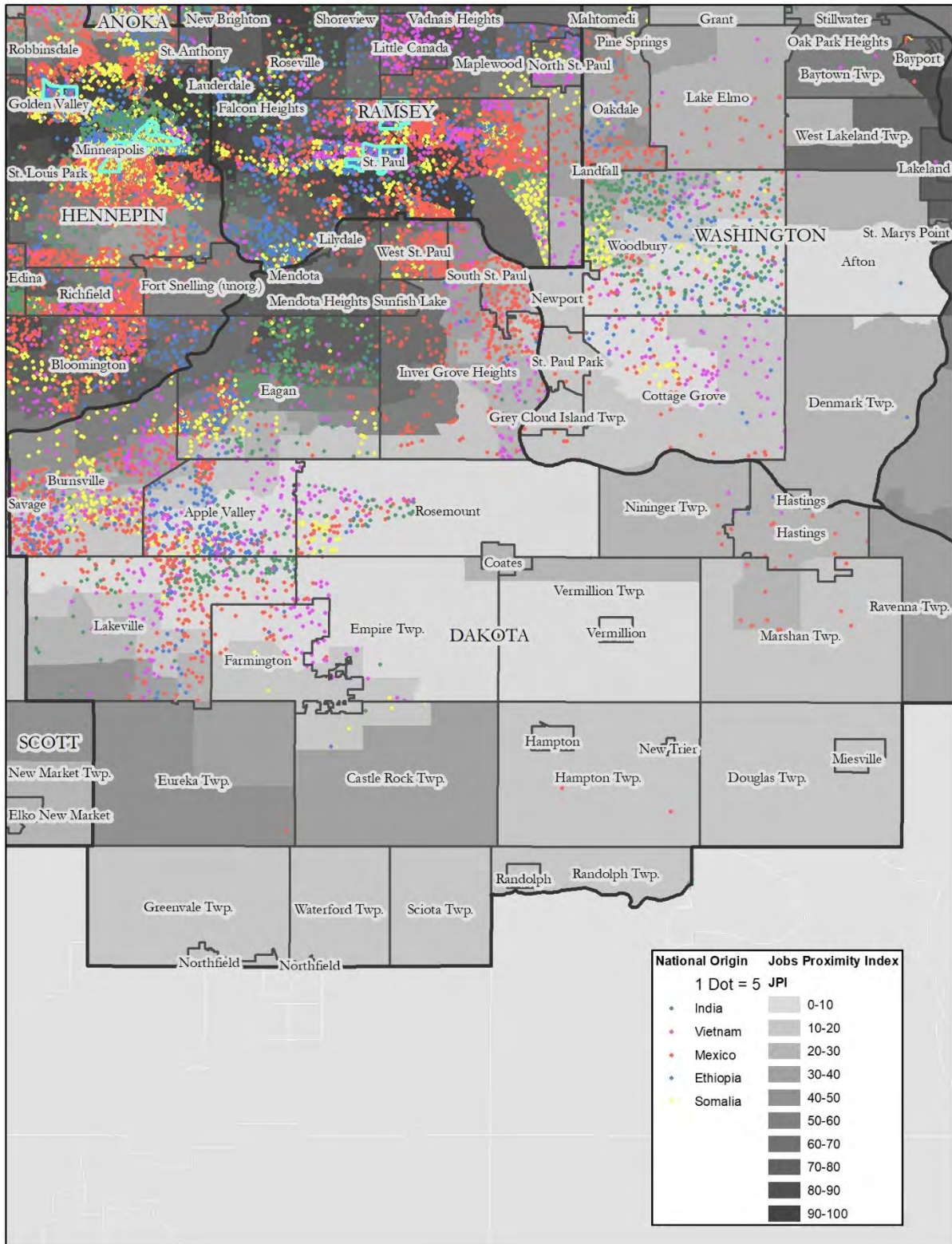
Map 34: Coon Rapids, National Origin, Jobs Proximity Index



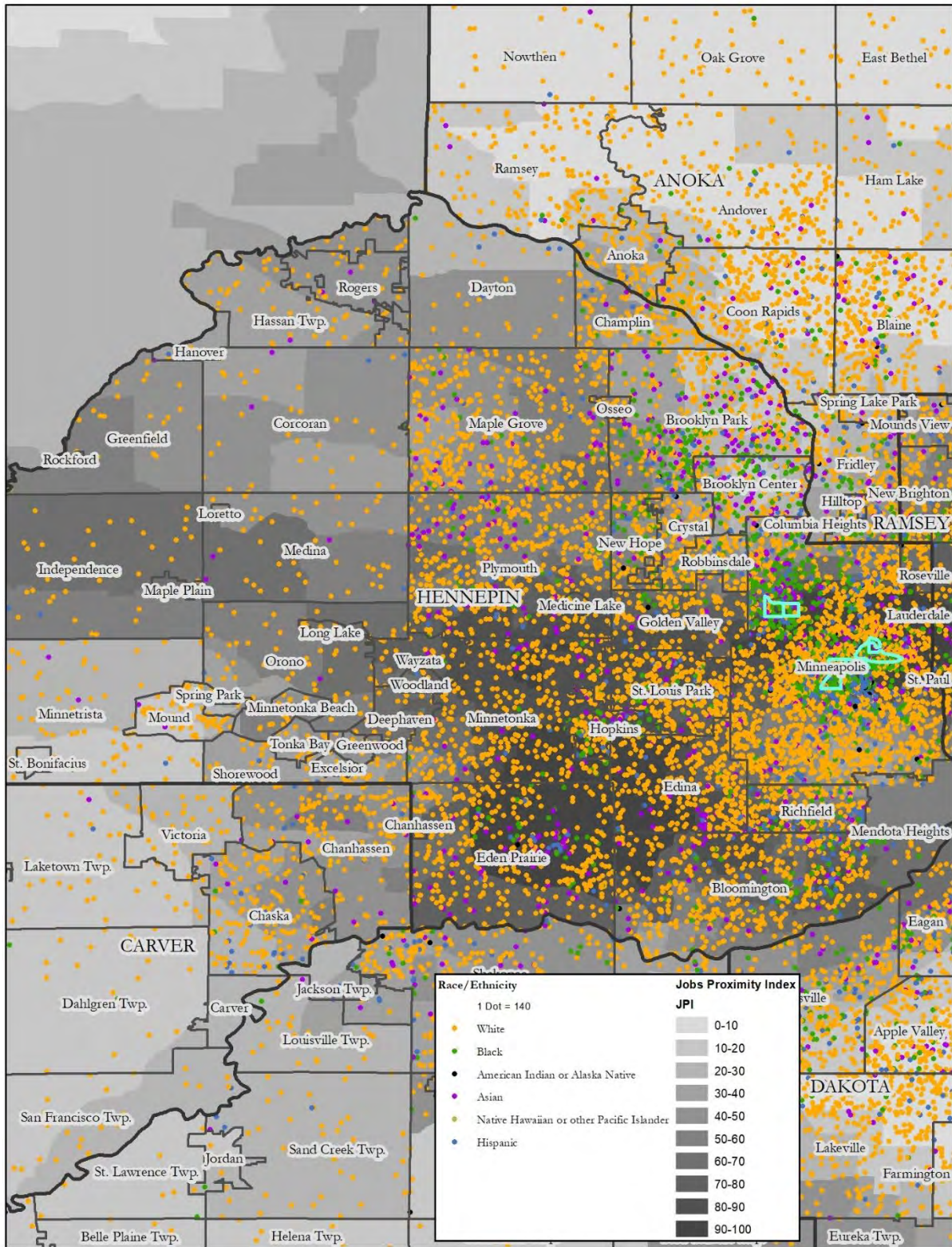
Map 35: Dakota County, Race, Jobs Proximity Index



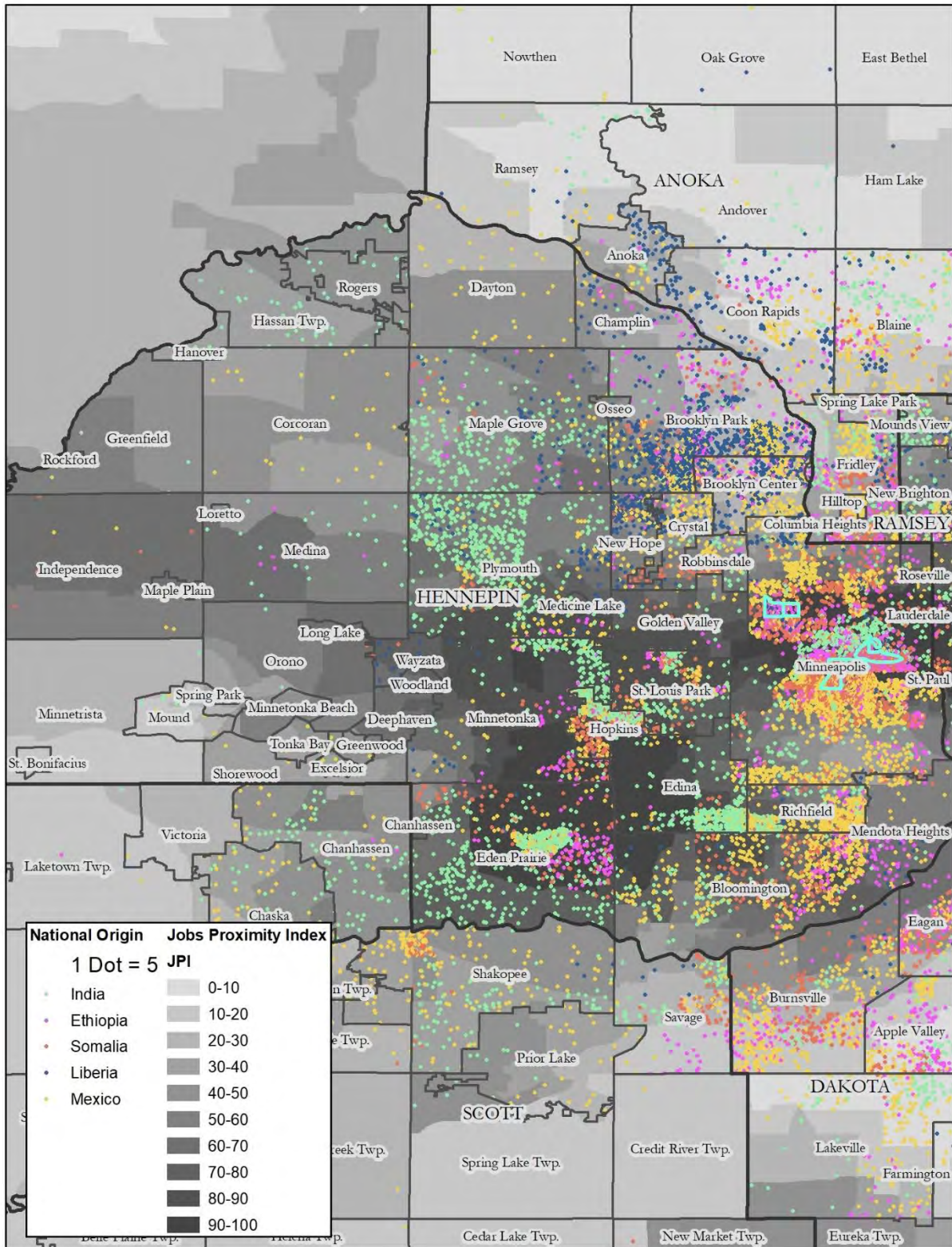
Map 36: Dakota County, National Origin, Jobs Proximity Index



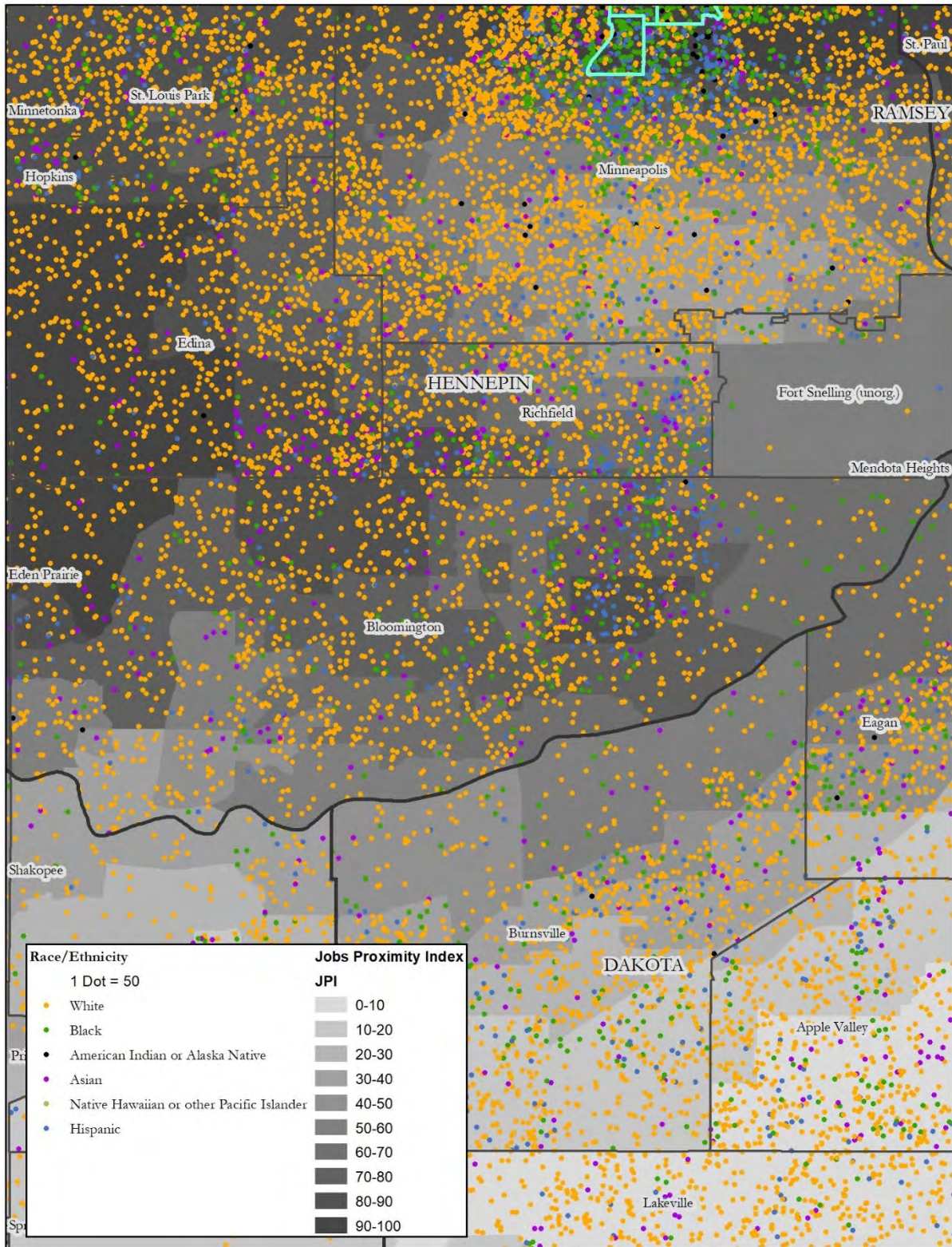
Map 37: Hennepin County, Race, Jobs Proximity Index



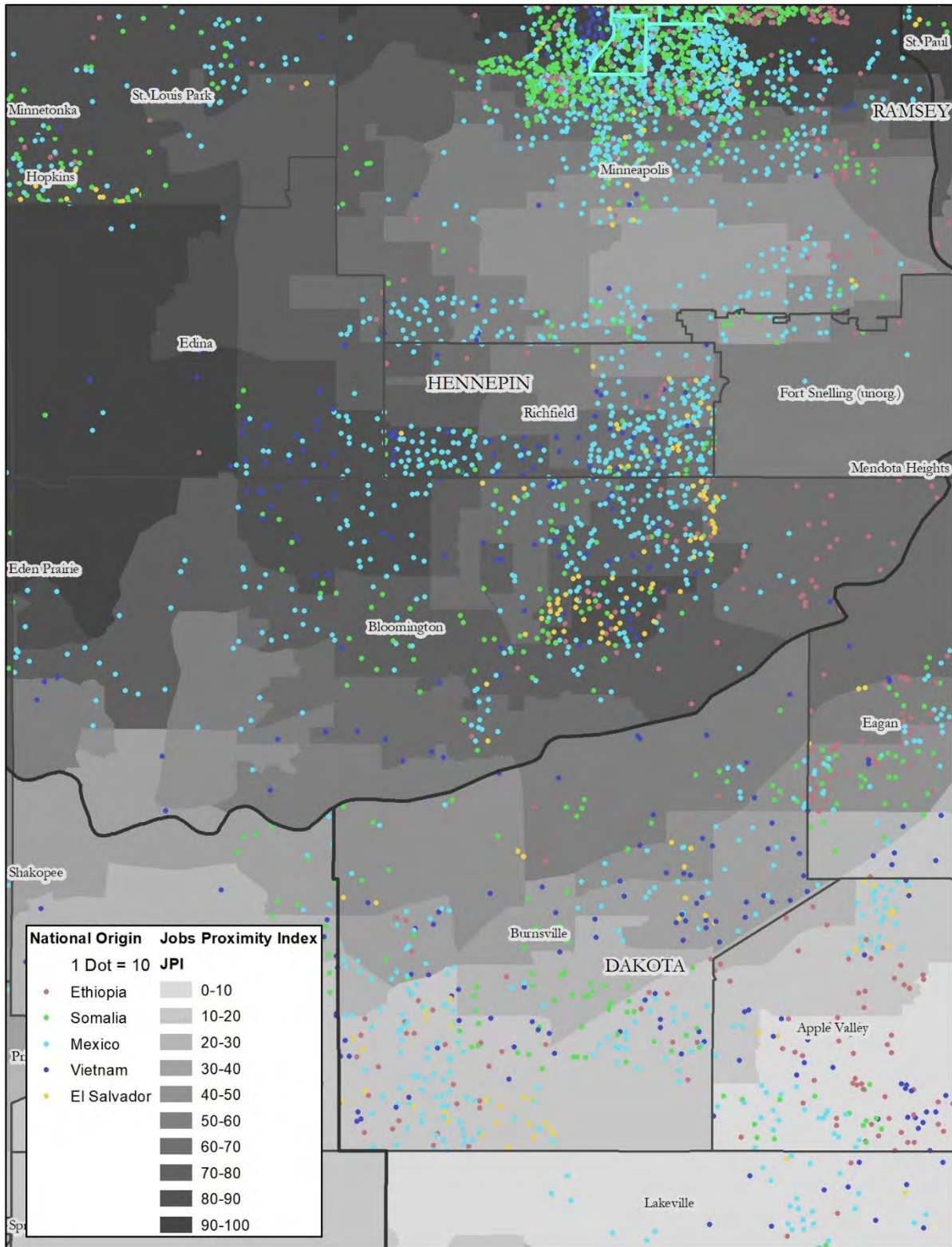
Map 38: Hennepin County, National Origin, Jobs Proximity Index



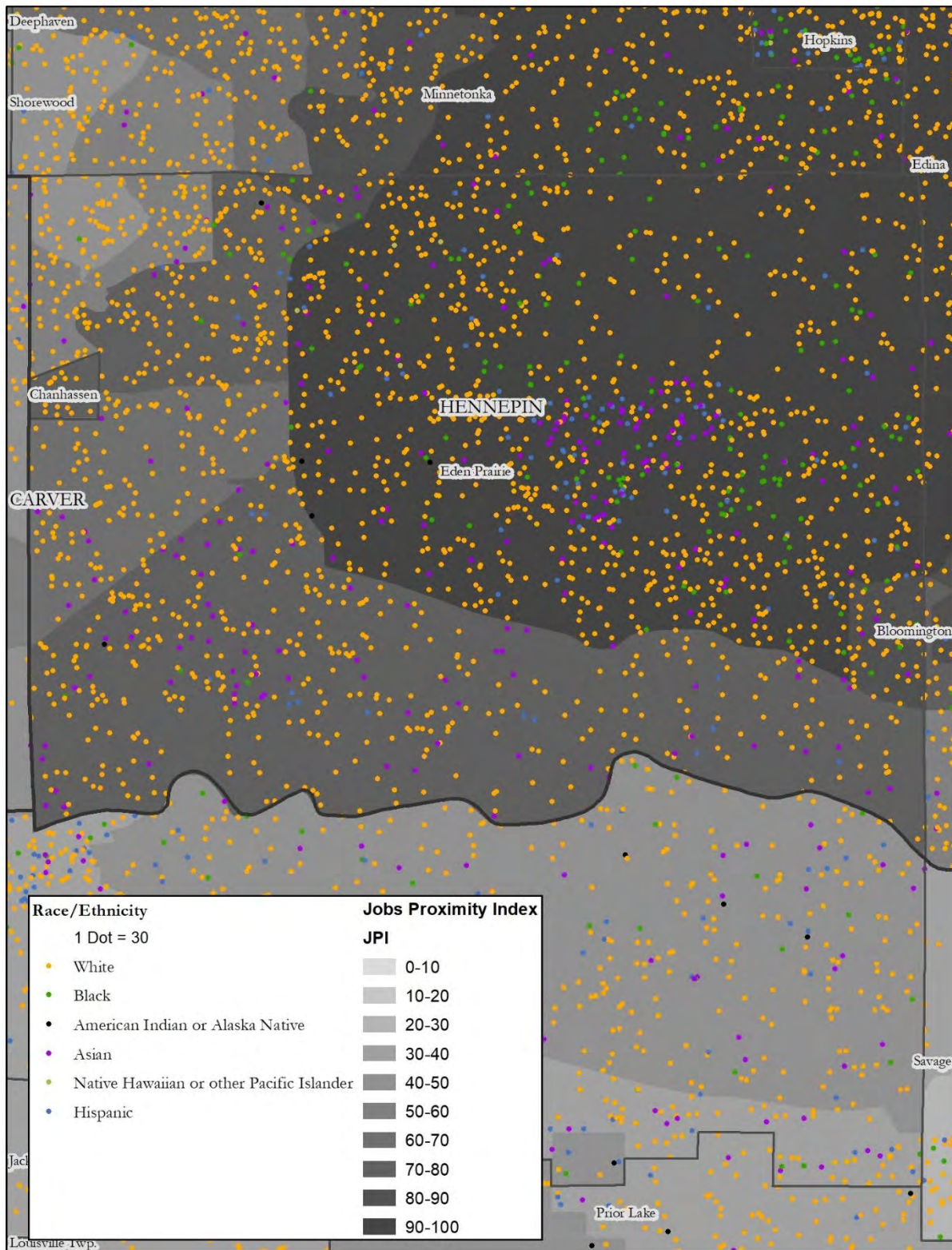
Map 39: Bloomington, Race, Jobs Proximity Index



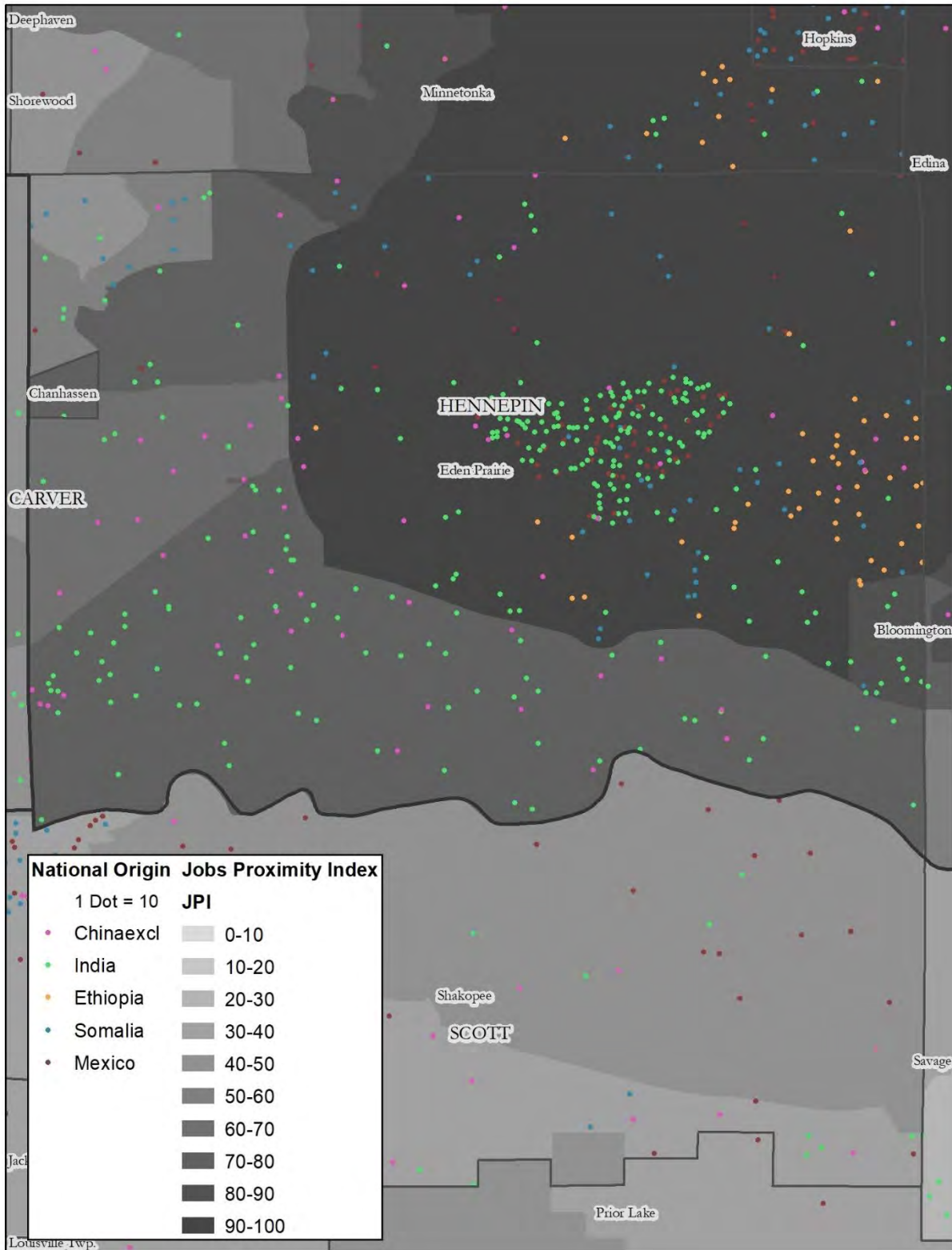
Map 40: Bloomington, National Origin, Jobs Proximity Index



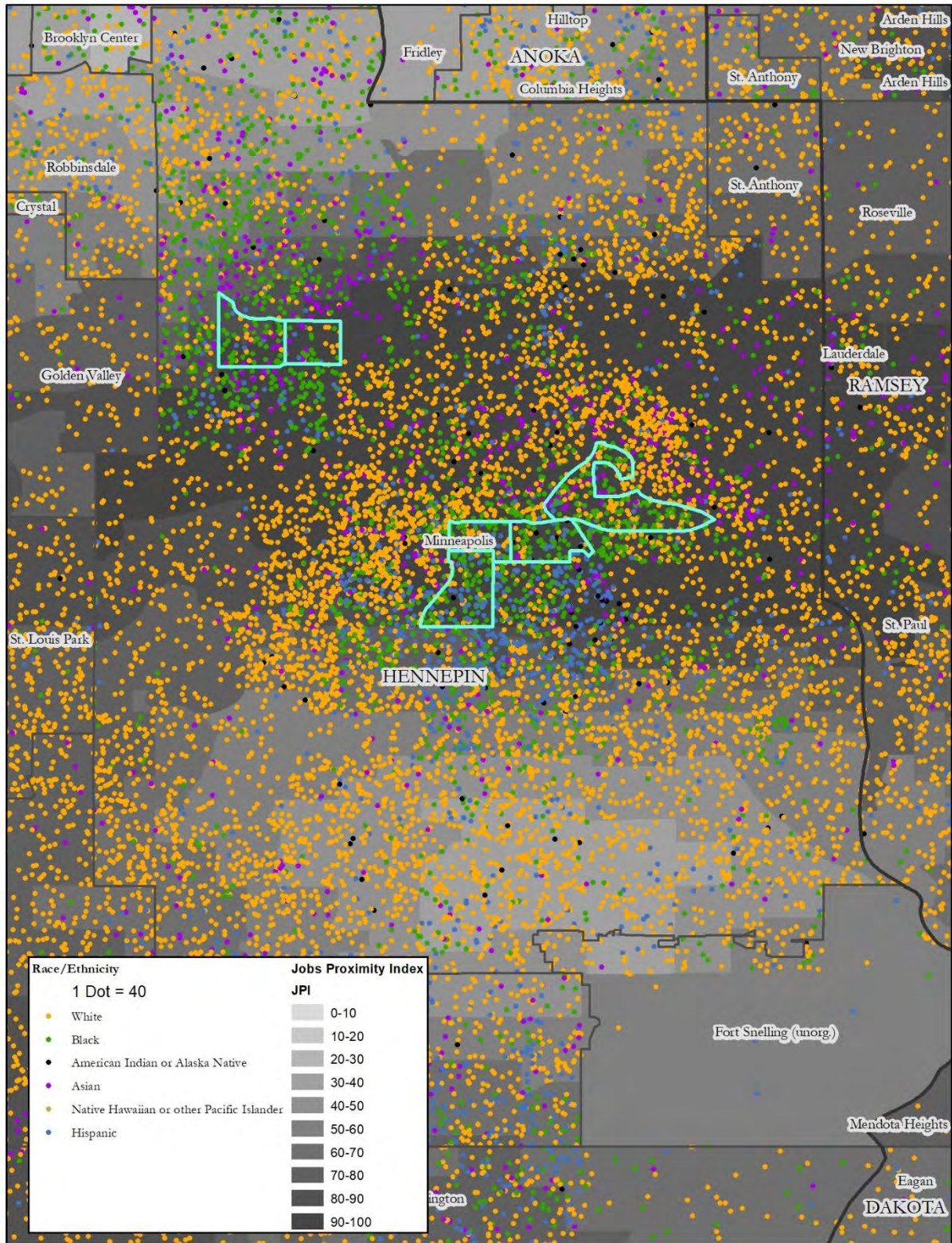
Map 41: Eden Prairie, Race, Jobs Proximity Index



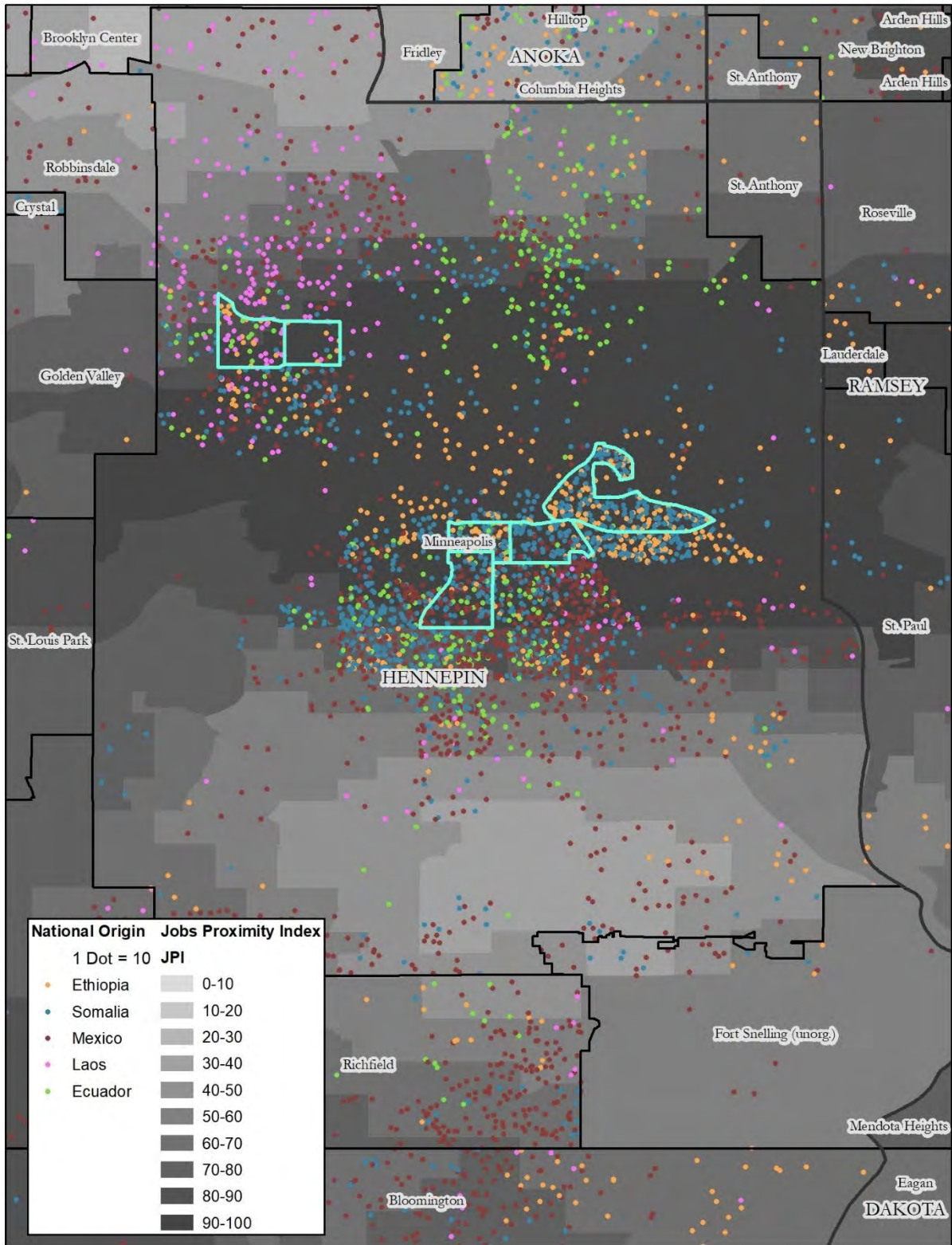
Map 42: Eden Prairie, National Origin, Jobs Proximity Index



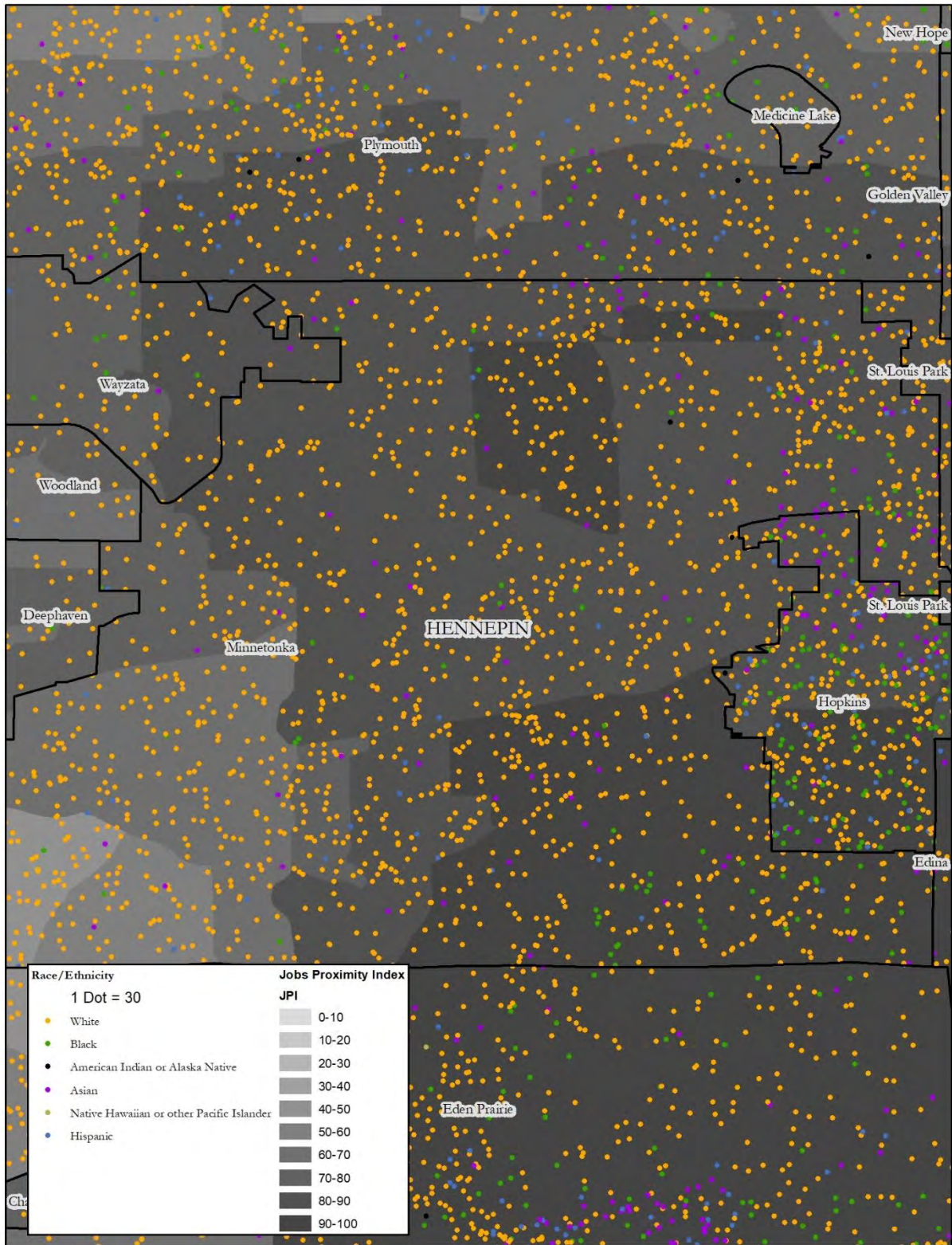
Map 43: Minneapolis, Race, Jobs Proximity Index



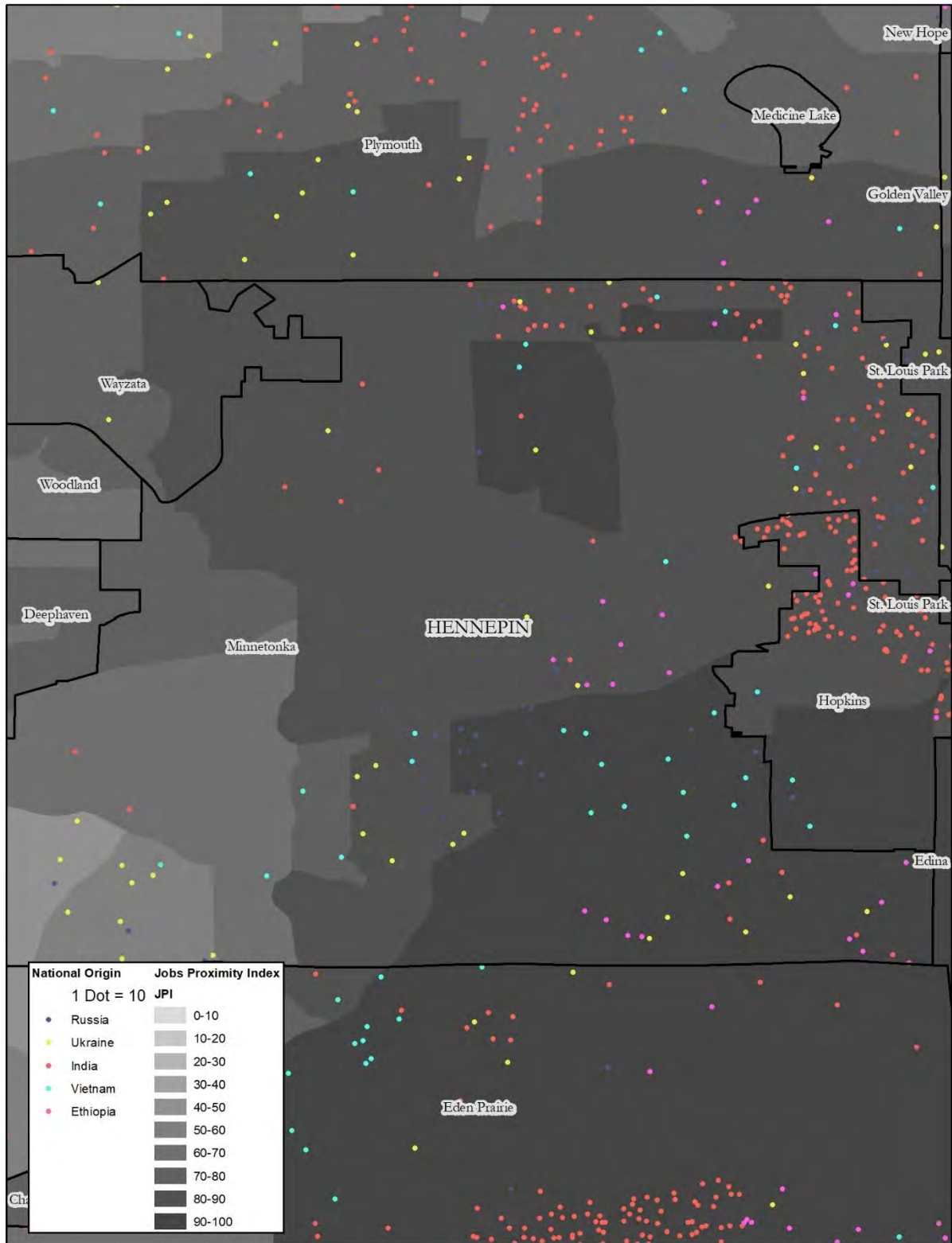
Map 44: Minneapolis, National Origin, Jobs Proximity Index



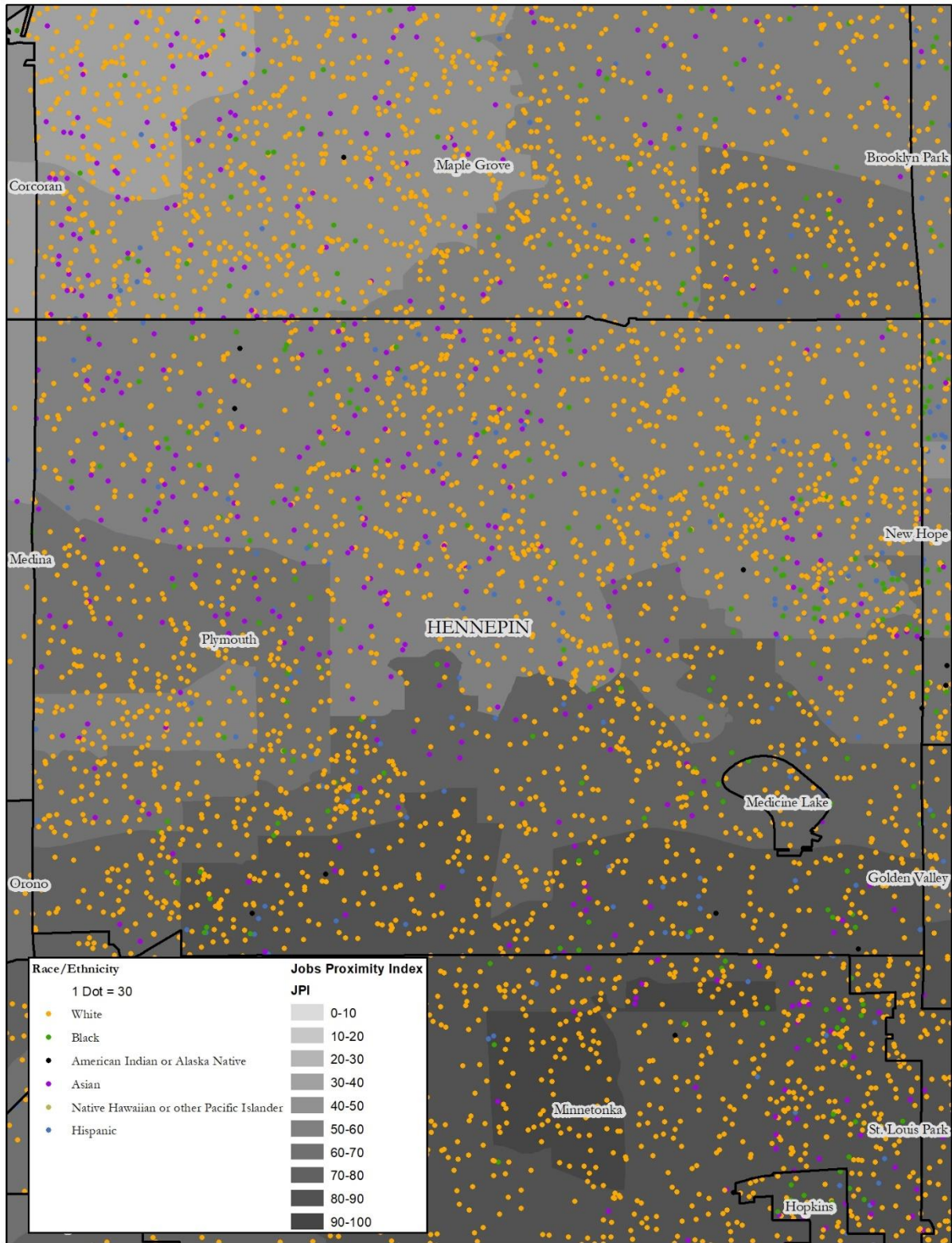
Map 45: Minnetonka, Race, Jobs Proximity Index



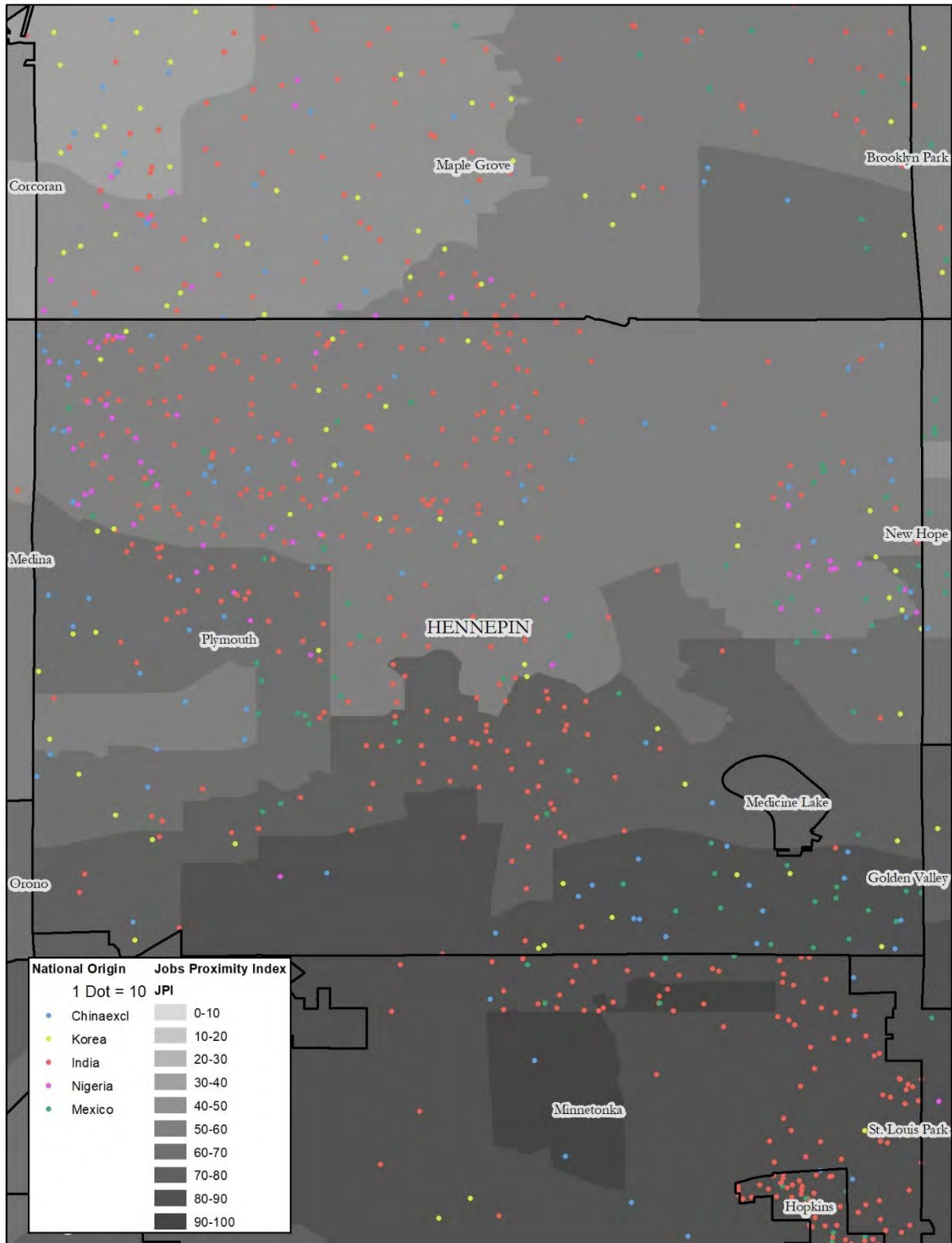
Map 46: Minnetonka, National Origin, Jobs Proximity Index



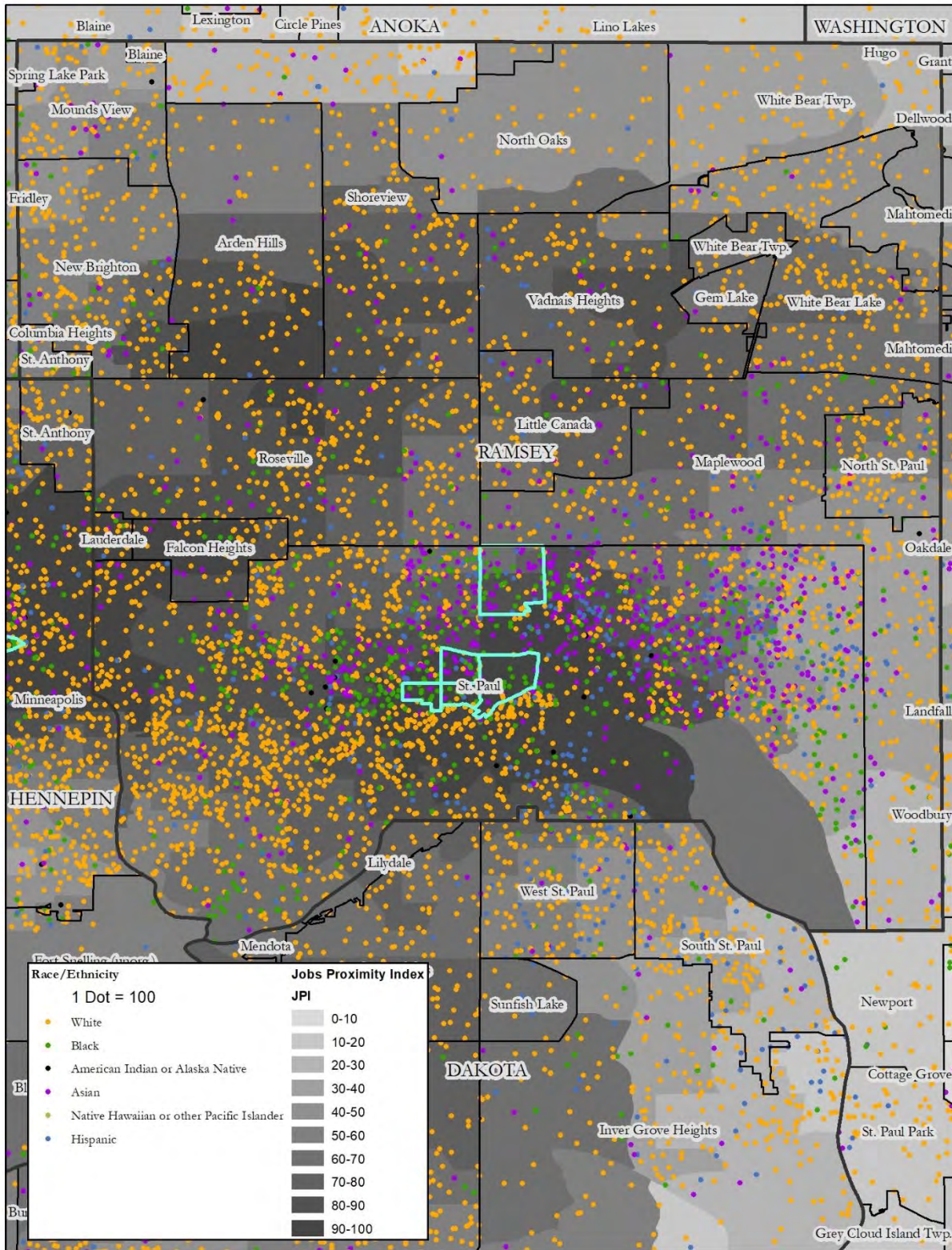
Map 47: Plymouth, Race, Jobs Proximity Index



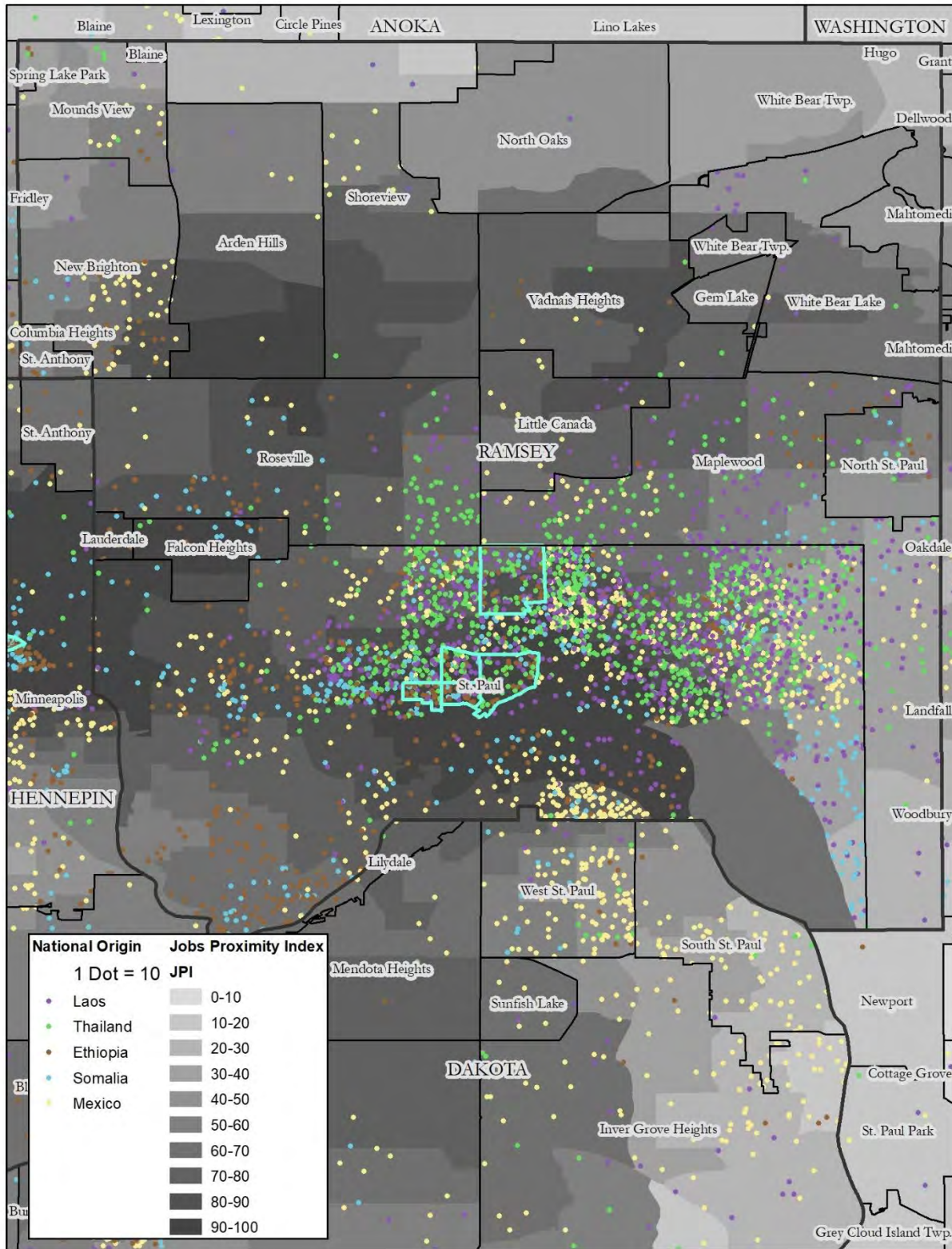
Map 48: Plymouth, National Origin, Jobs Proximity Index



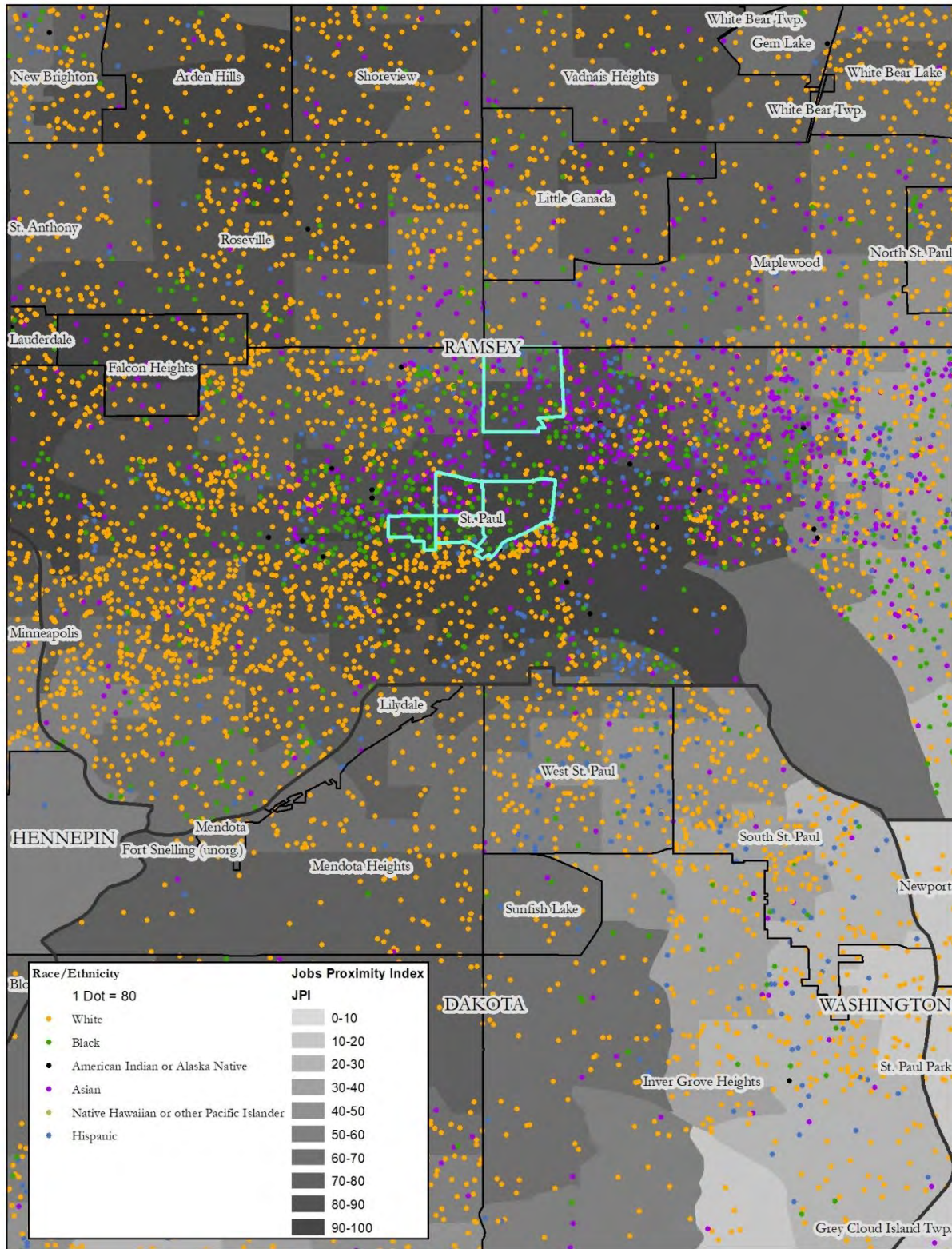
Map 49: Ramsey County, Race, Jobs Proximity Index



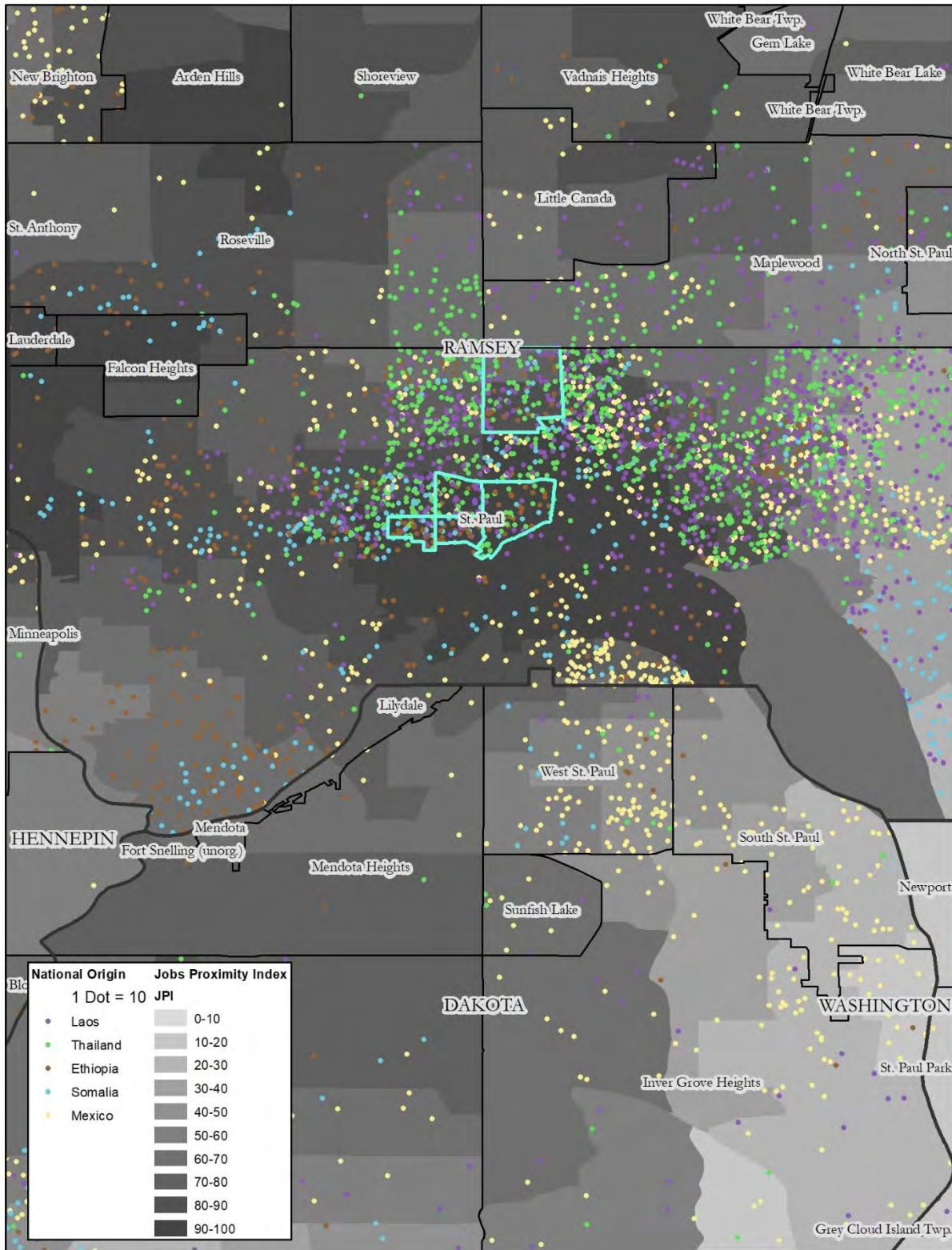
Map 50: Ramsey County, National Origin, Jobs Proximity Index



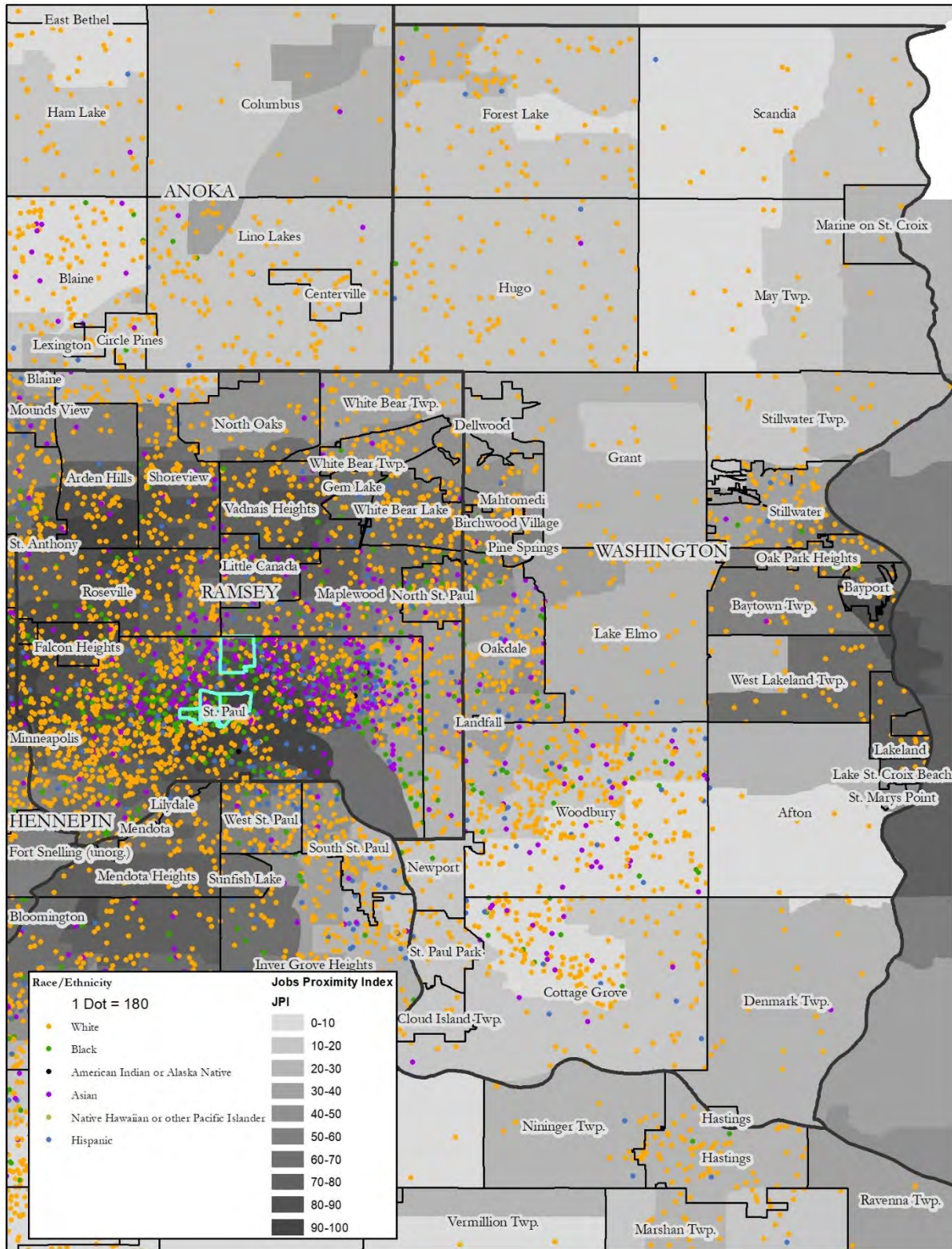
Map 51: St. Paul, Race, Jobs Proximity Index



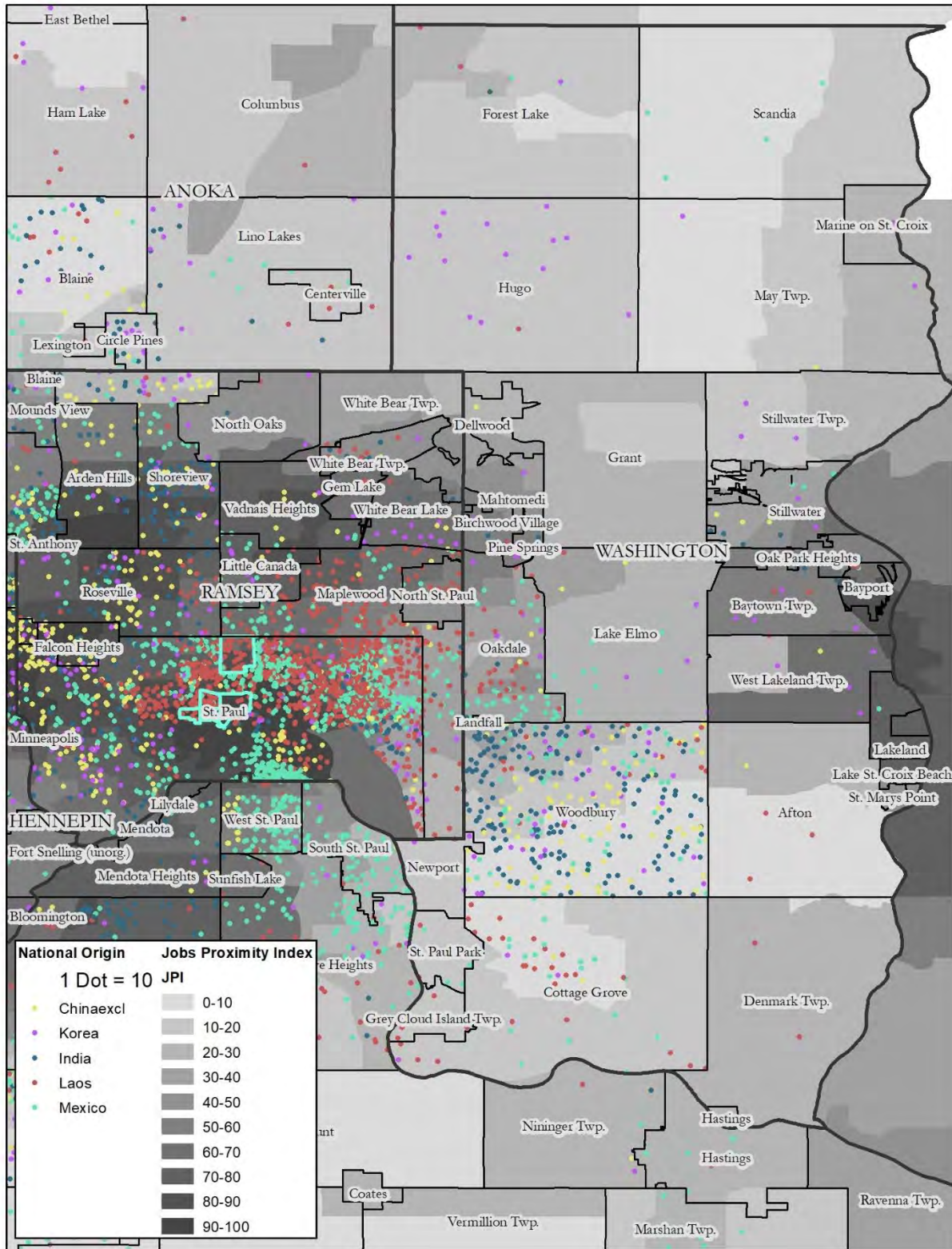
Map 52: St. Paul, National Origin, Jobs Proximity Index



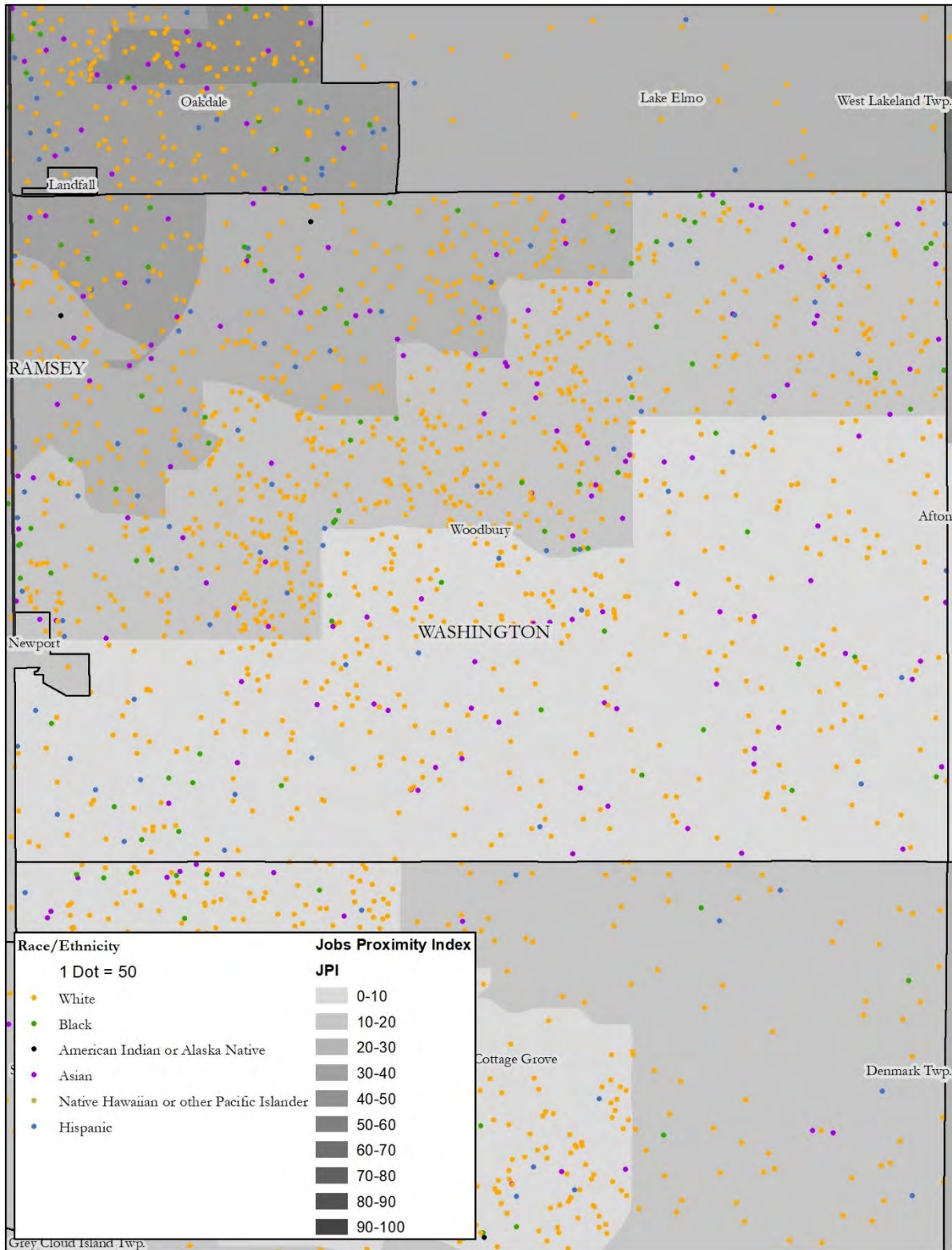
Map 53: Washington County, Race, Jobs Proximity Index



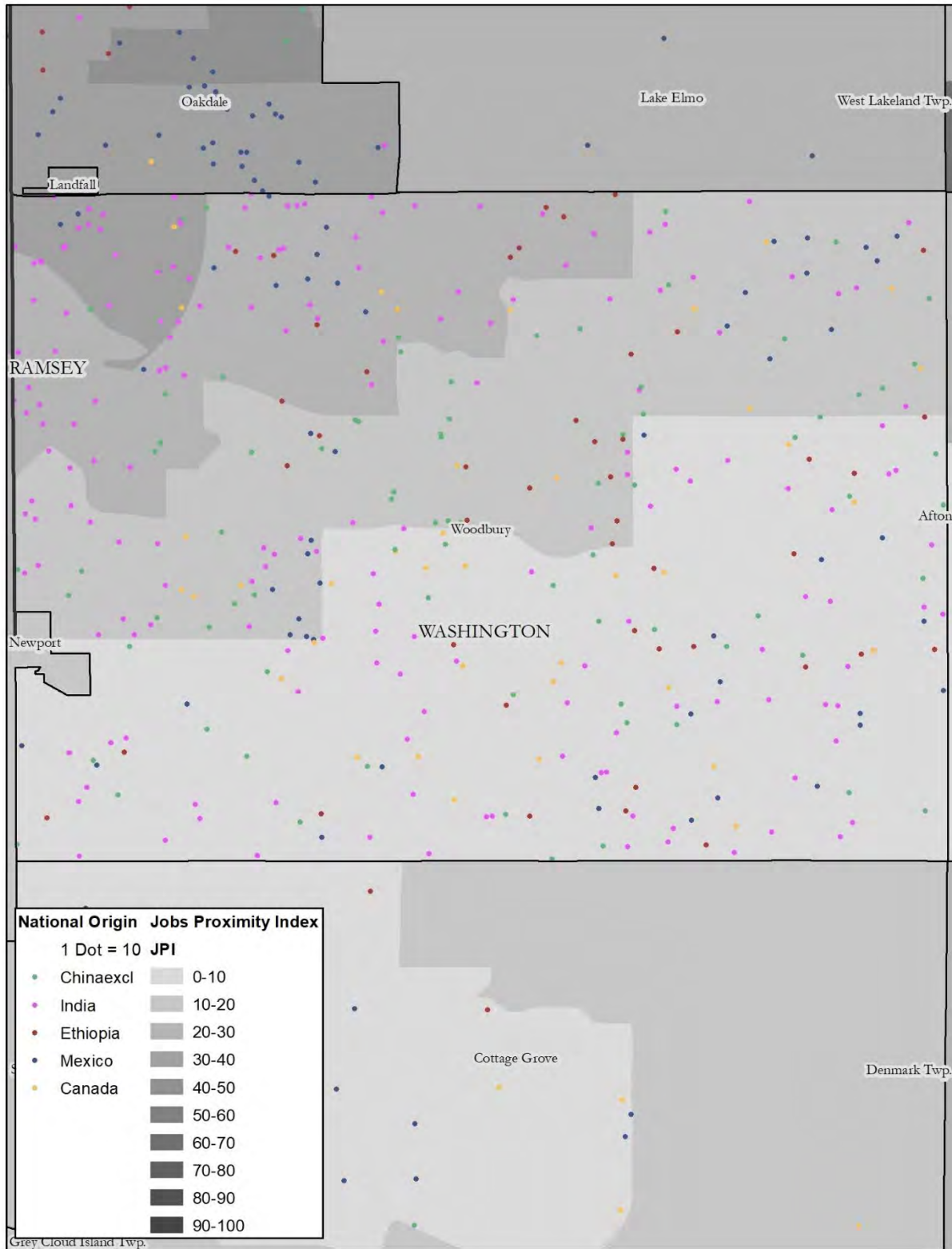
Map 54: Washington County, National Origin, Jobs Proximity Index



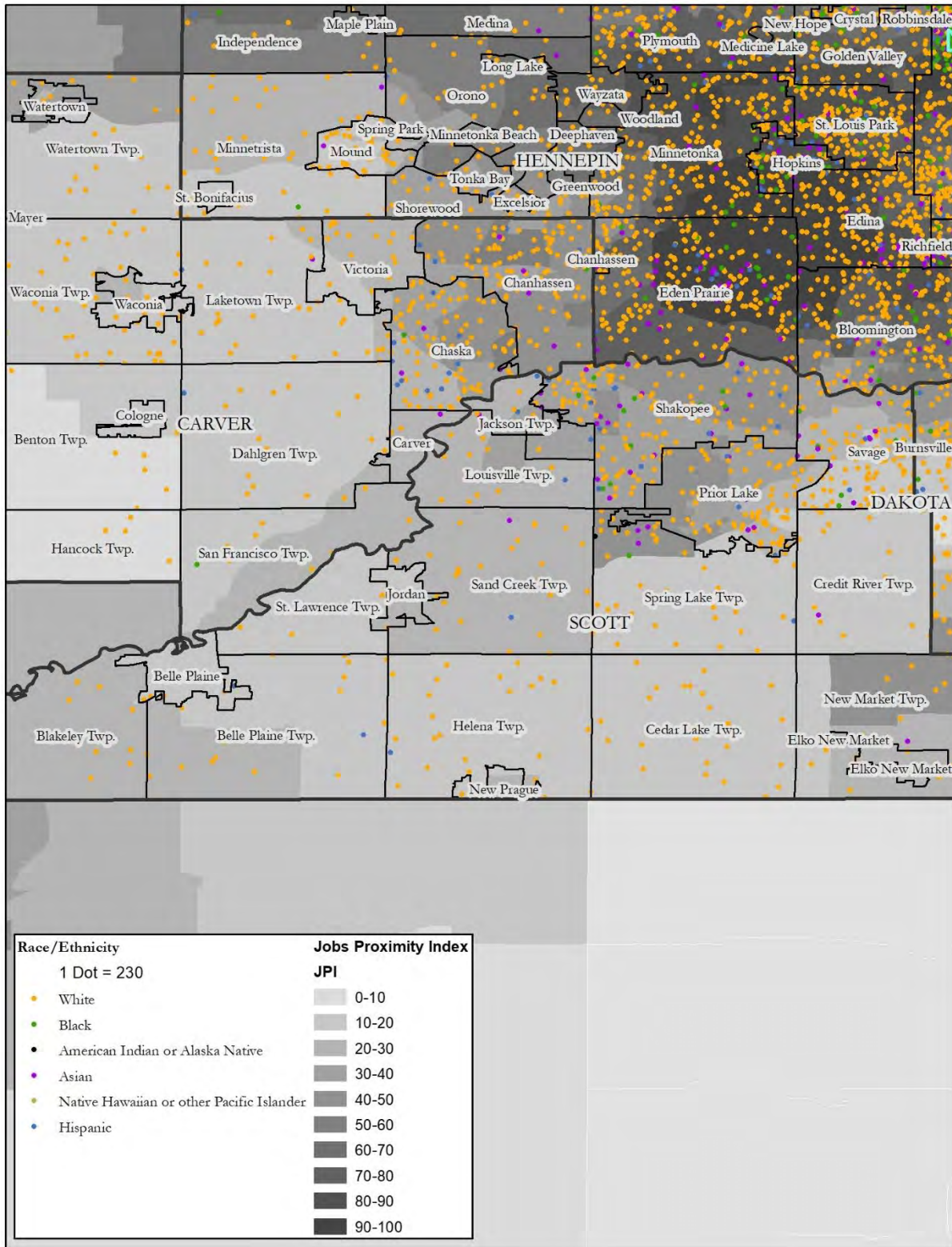
Map 55: Woodbury, Race, Jobs Proximity Index



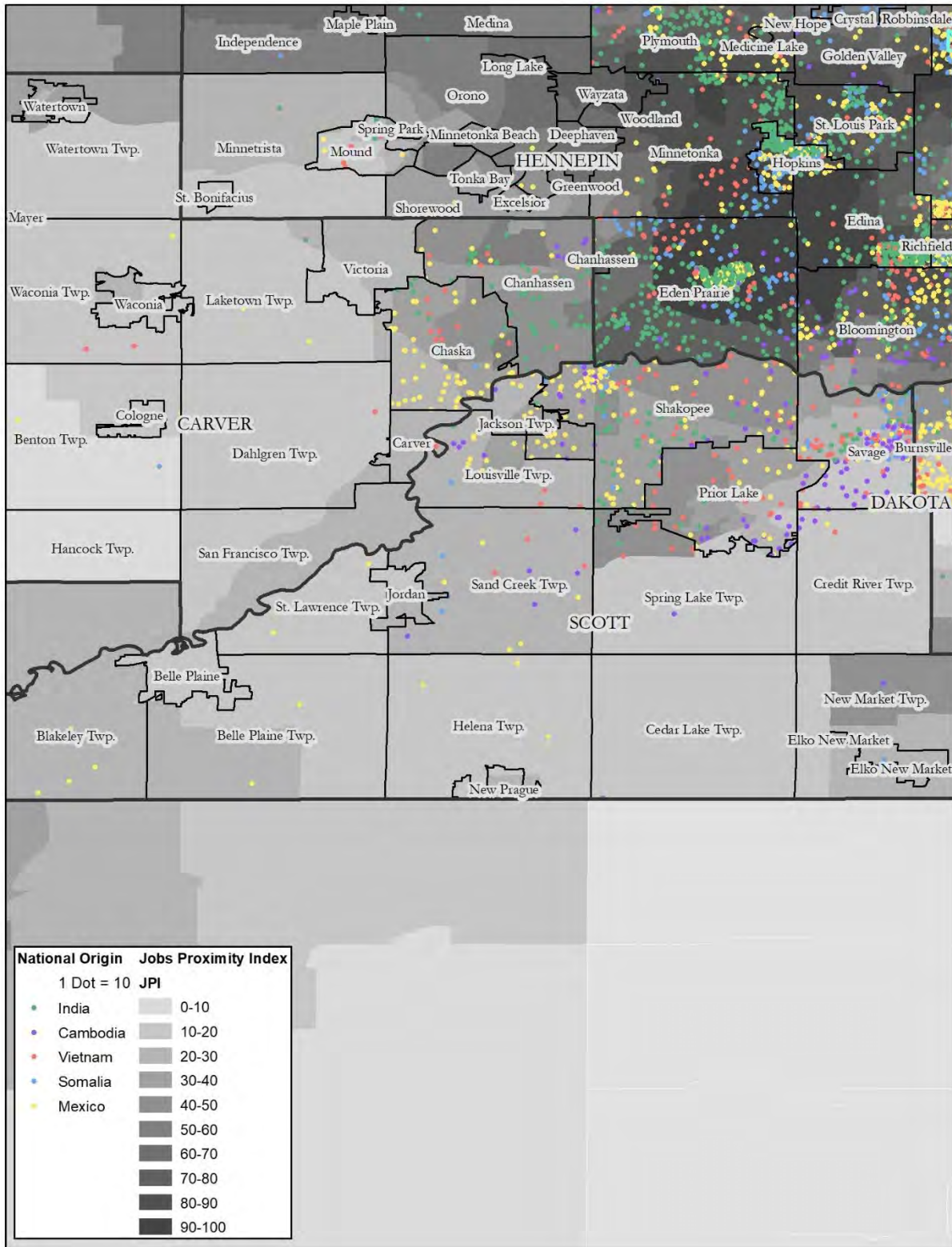
Map 56: Woodbury, National Origin, Jobs Proximity Index



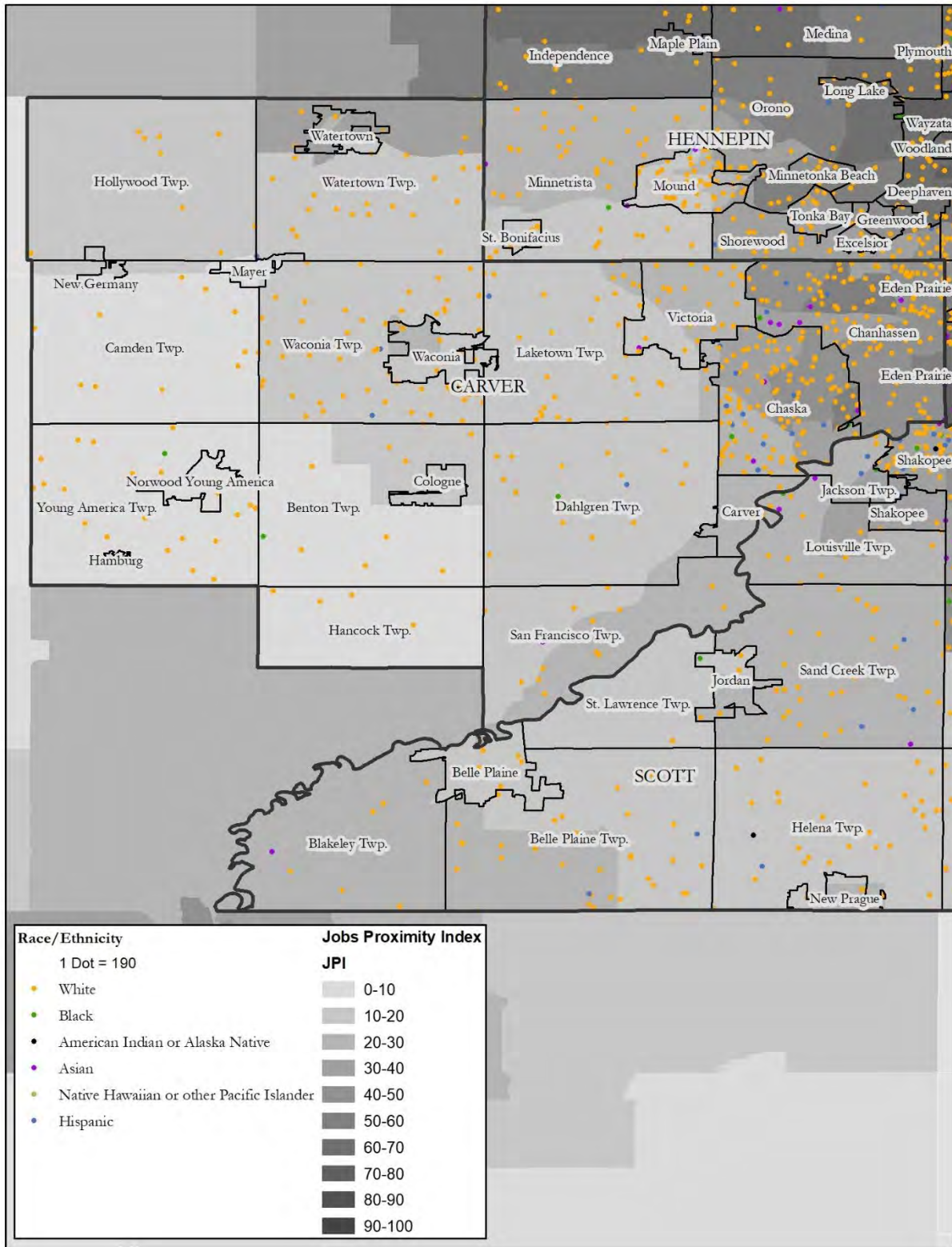
Map 57: Scott County, Race, Jobs Proximity Index



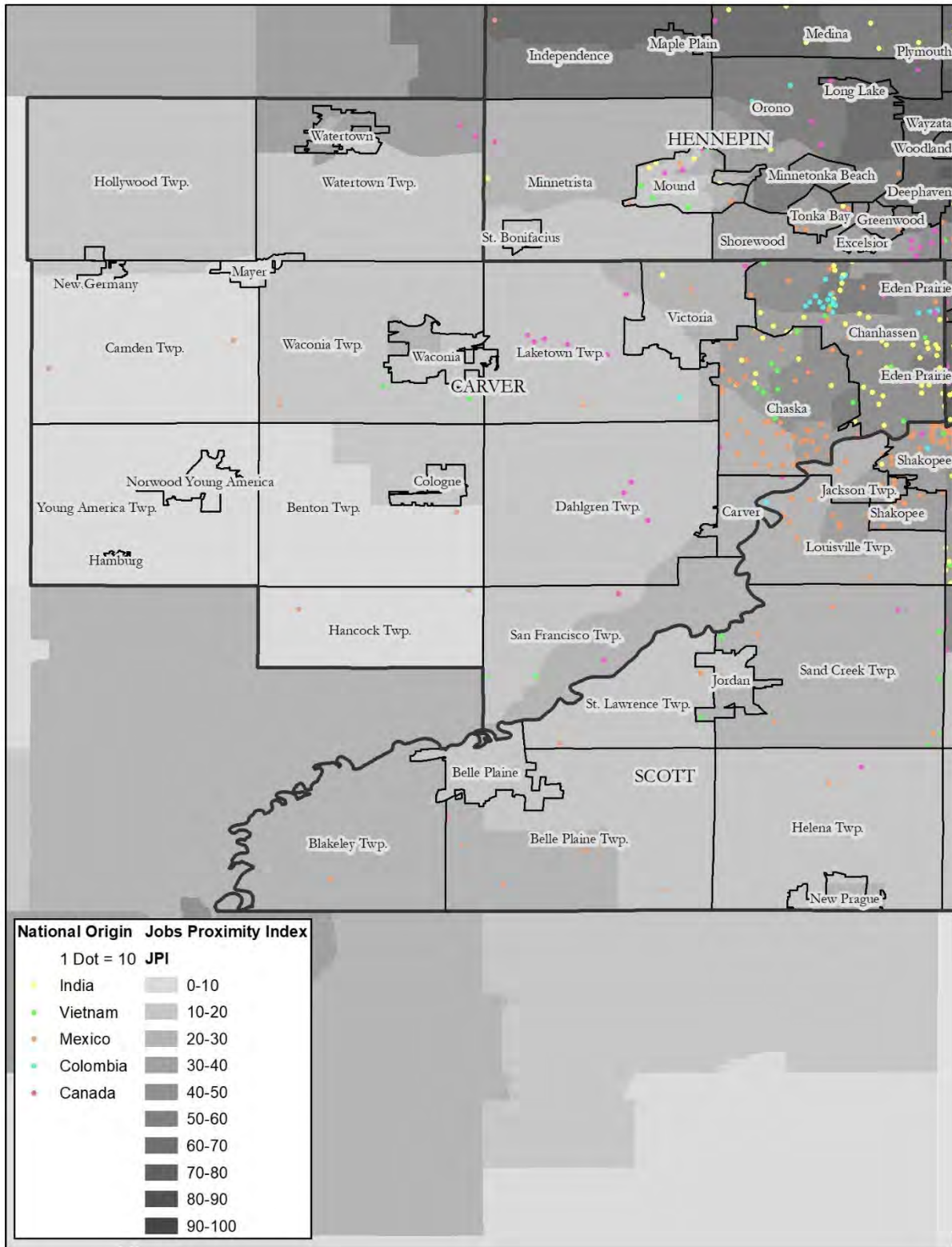
Map 58: Scott County, National Origin, Jobs Proximity Index



Map 59: Carver County, Race, Jobs Proximity Index



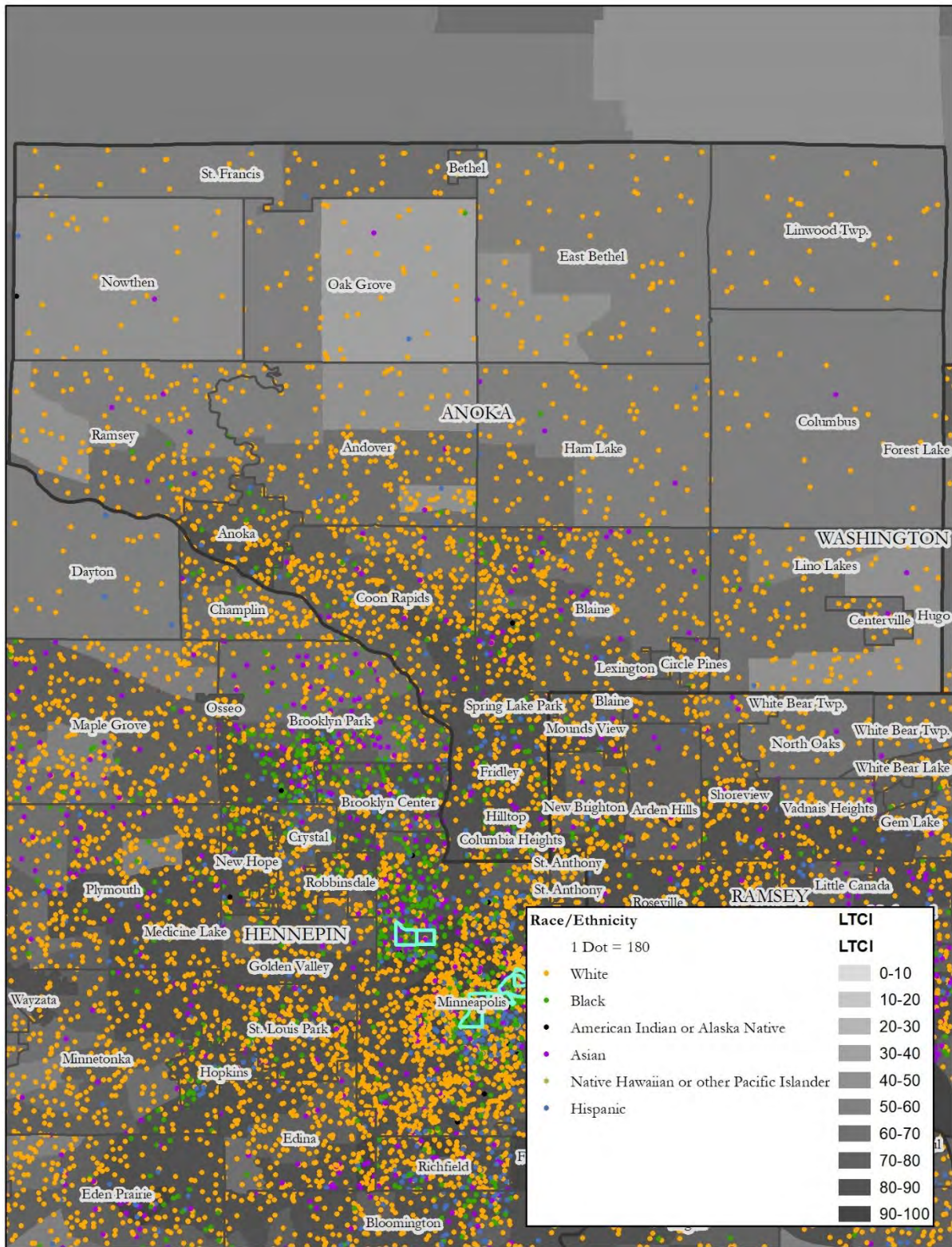
Map 60: Carver County, National Origin, Jobs Proximity Index



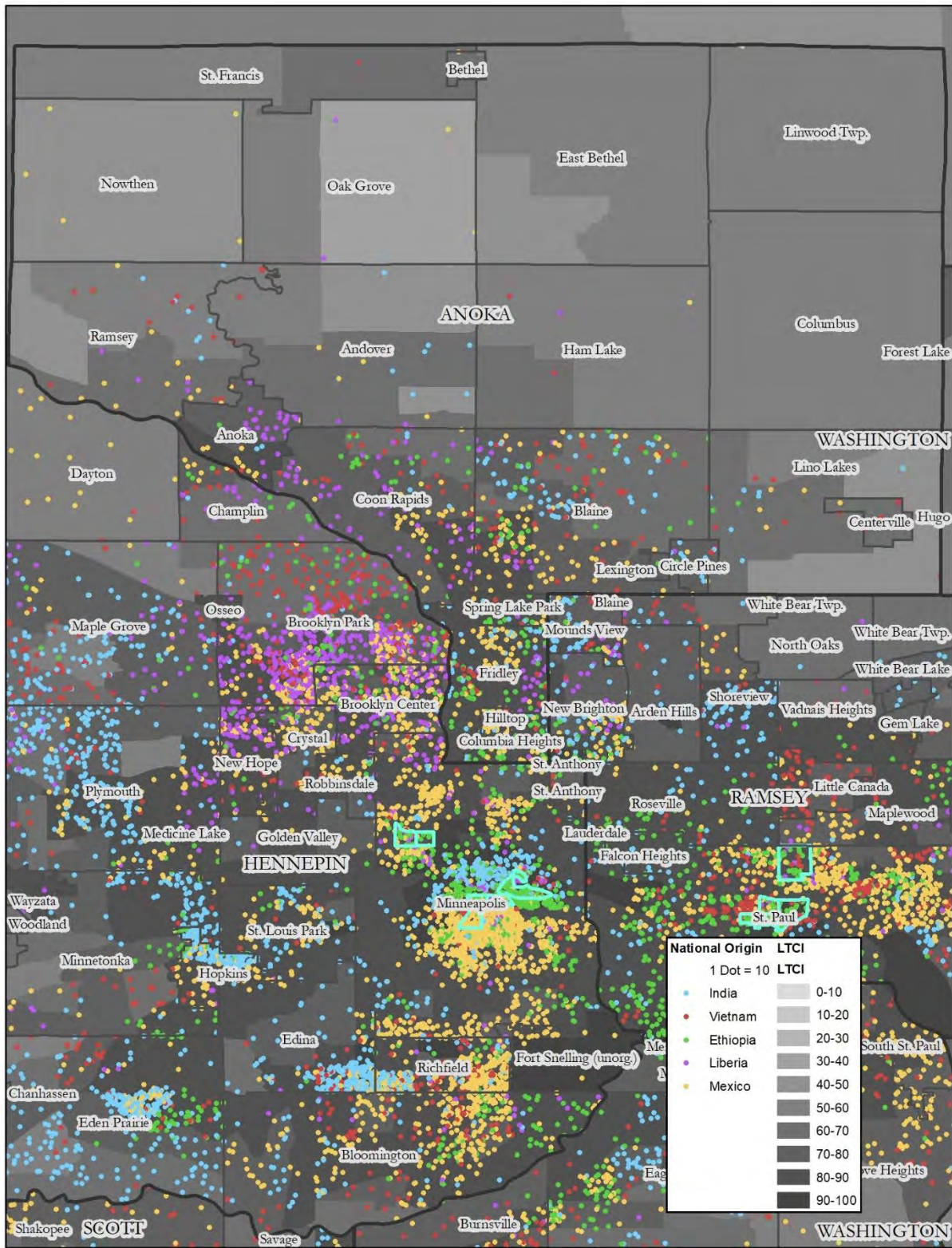
Transportation

- 1. Low Transportation Cost Index**
- 2. Transit Trips Index**

Map 1: Anoka County, Race, Low Transportation Cost Index



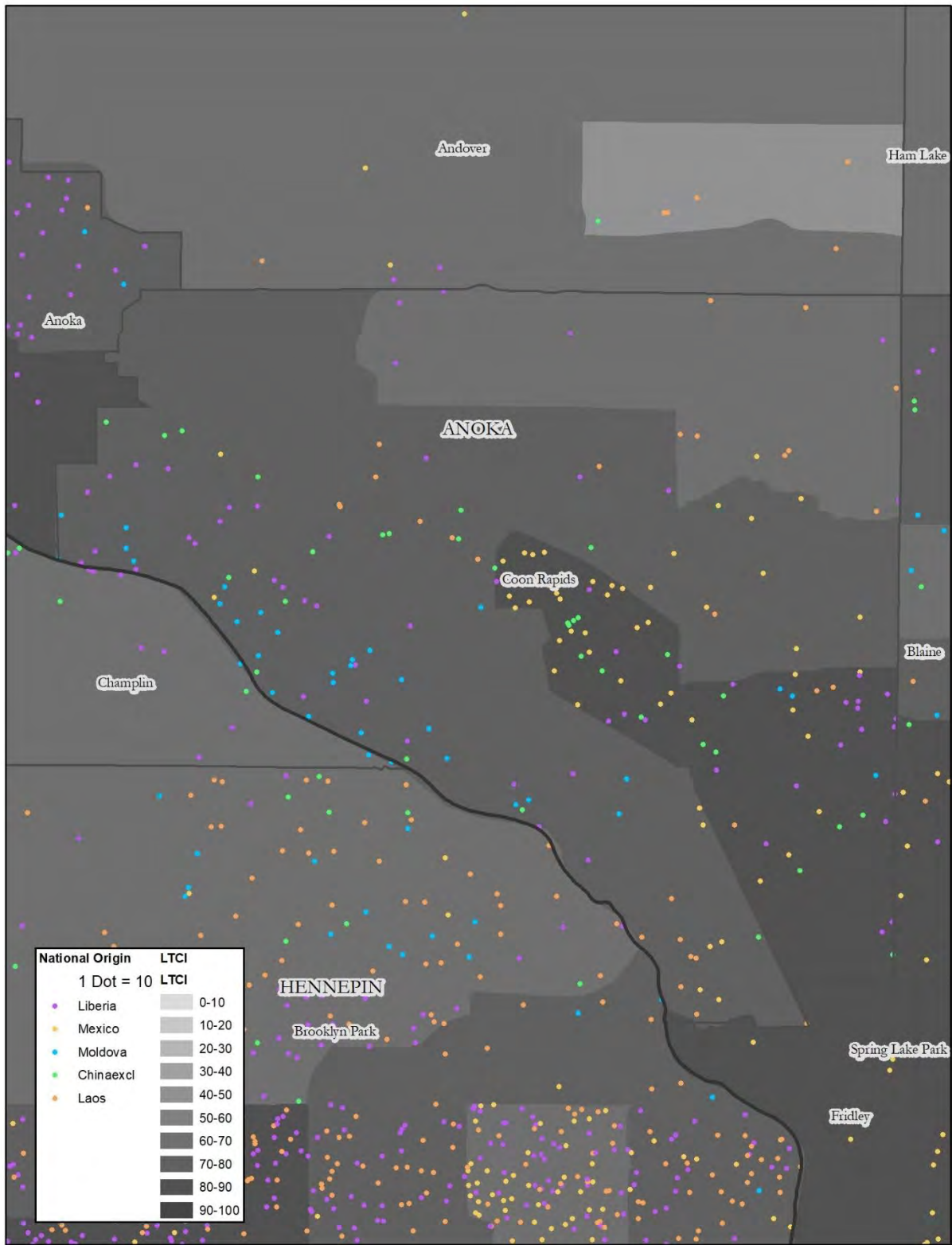
Map 2: Anoka County, National Origin, Low Transportation Cost Index



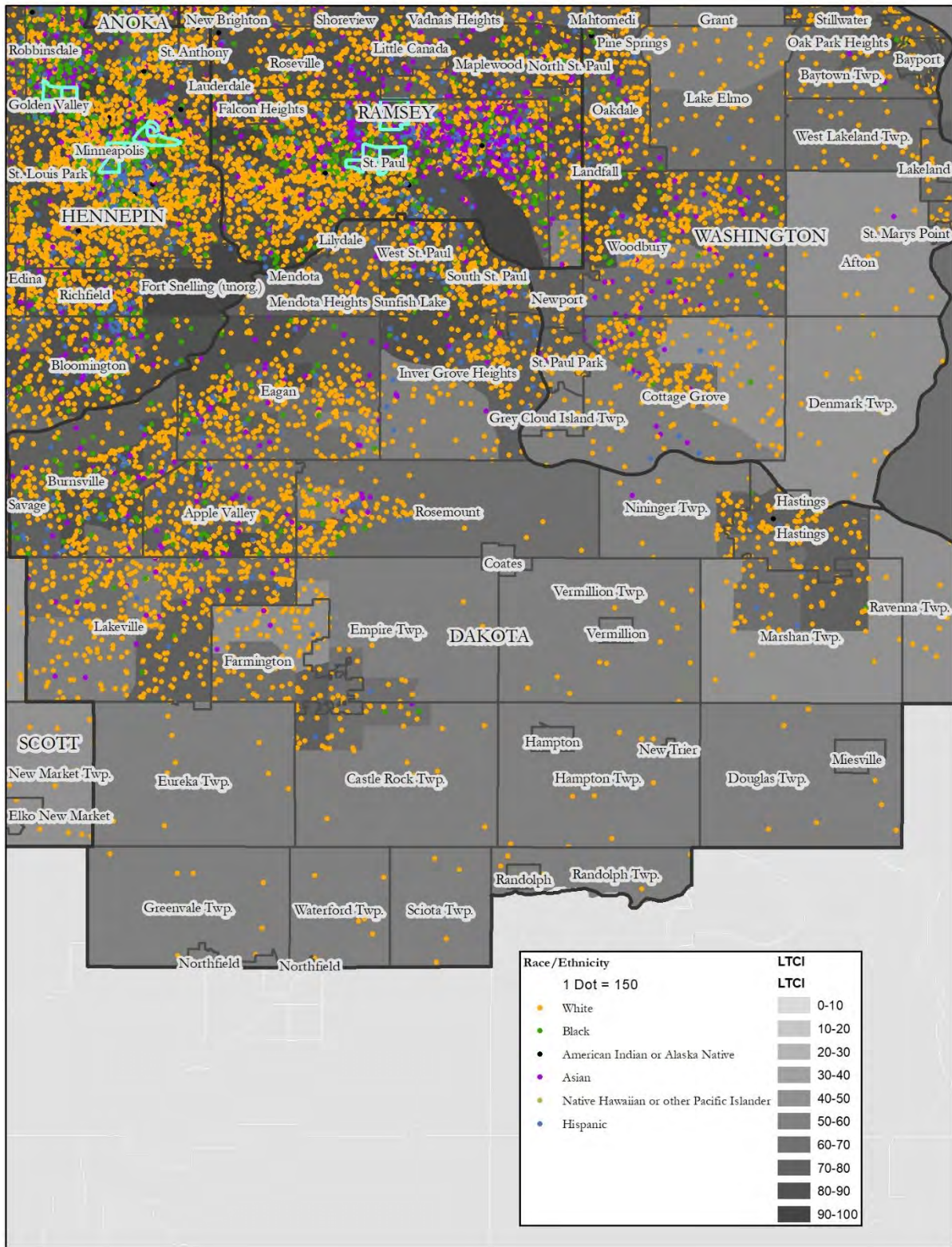
Map 3: Coon Rapids, Race, Low Transportation Cost Index



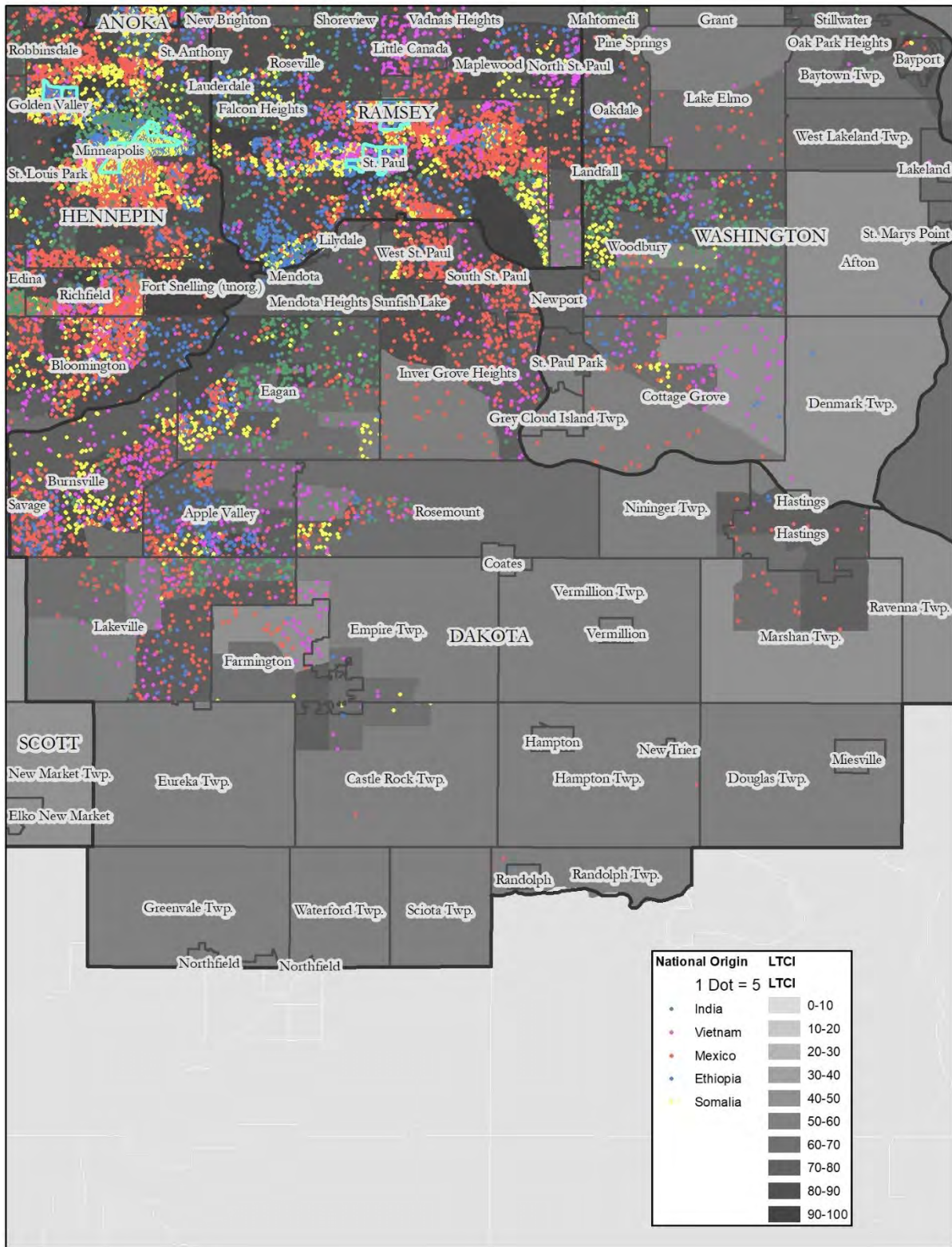
Map 4: Coon Rapids, National Origin, Low Transportation Cost Index



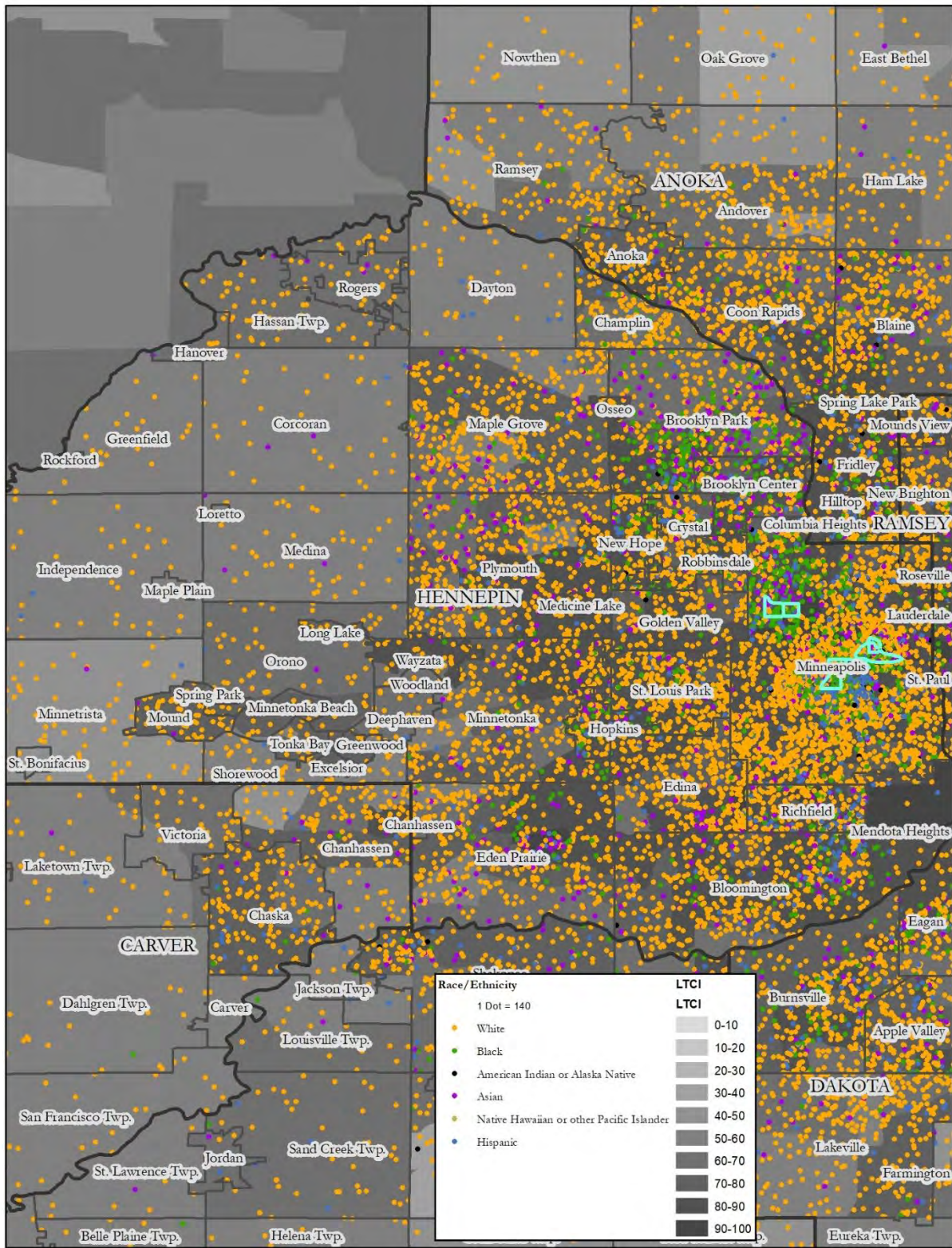
Map 5: Dakota County, Race, Low Transportation Cost Index



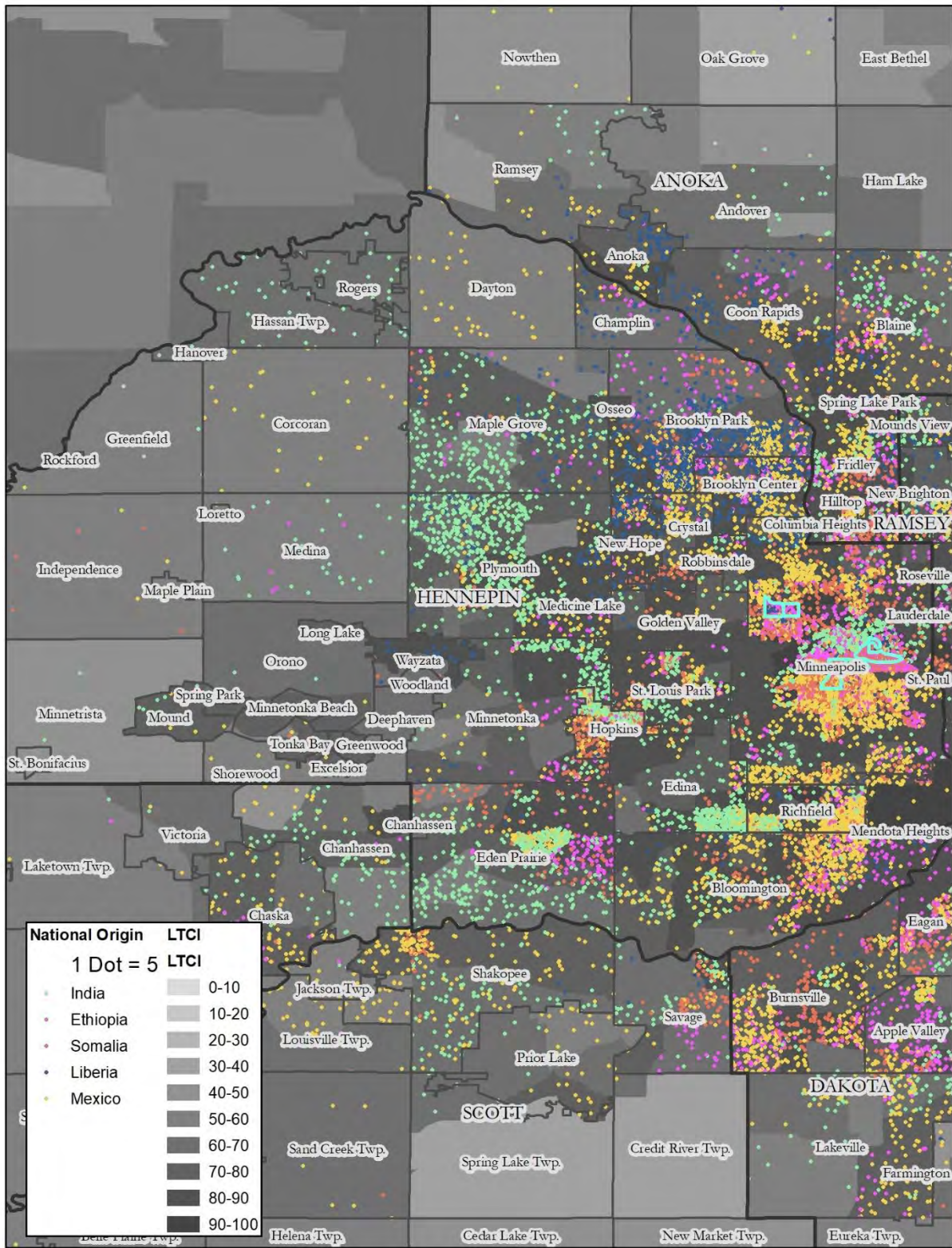
Map 6: Dakota County, National Origin, Low Transportation Cost Index



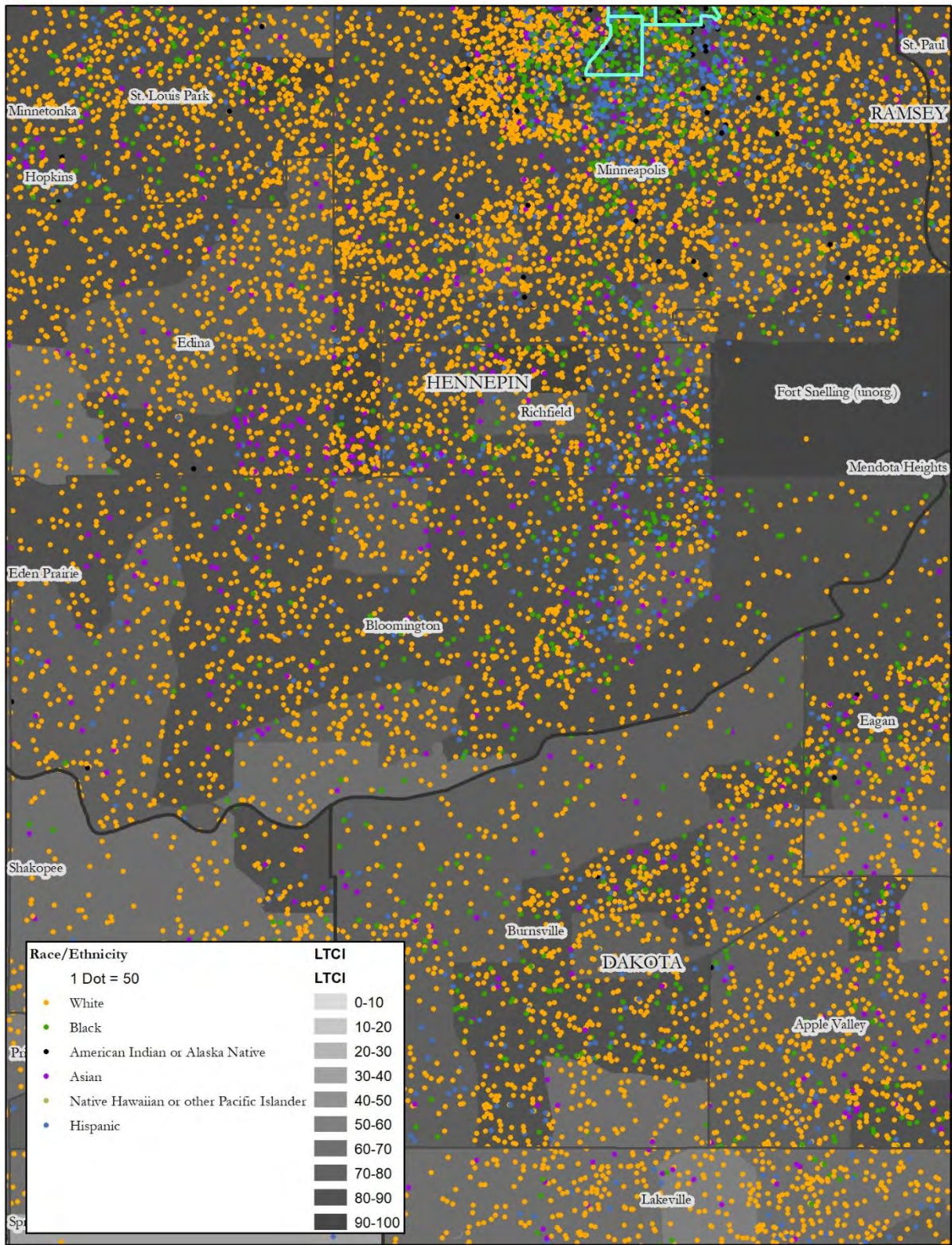
Map 7: Hennepin County, Race, Low Transportation Cost Index



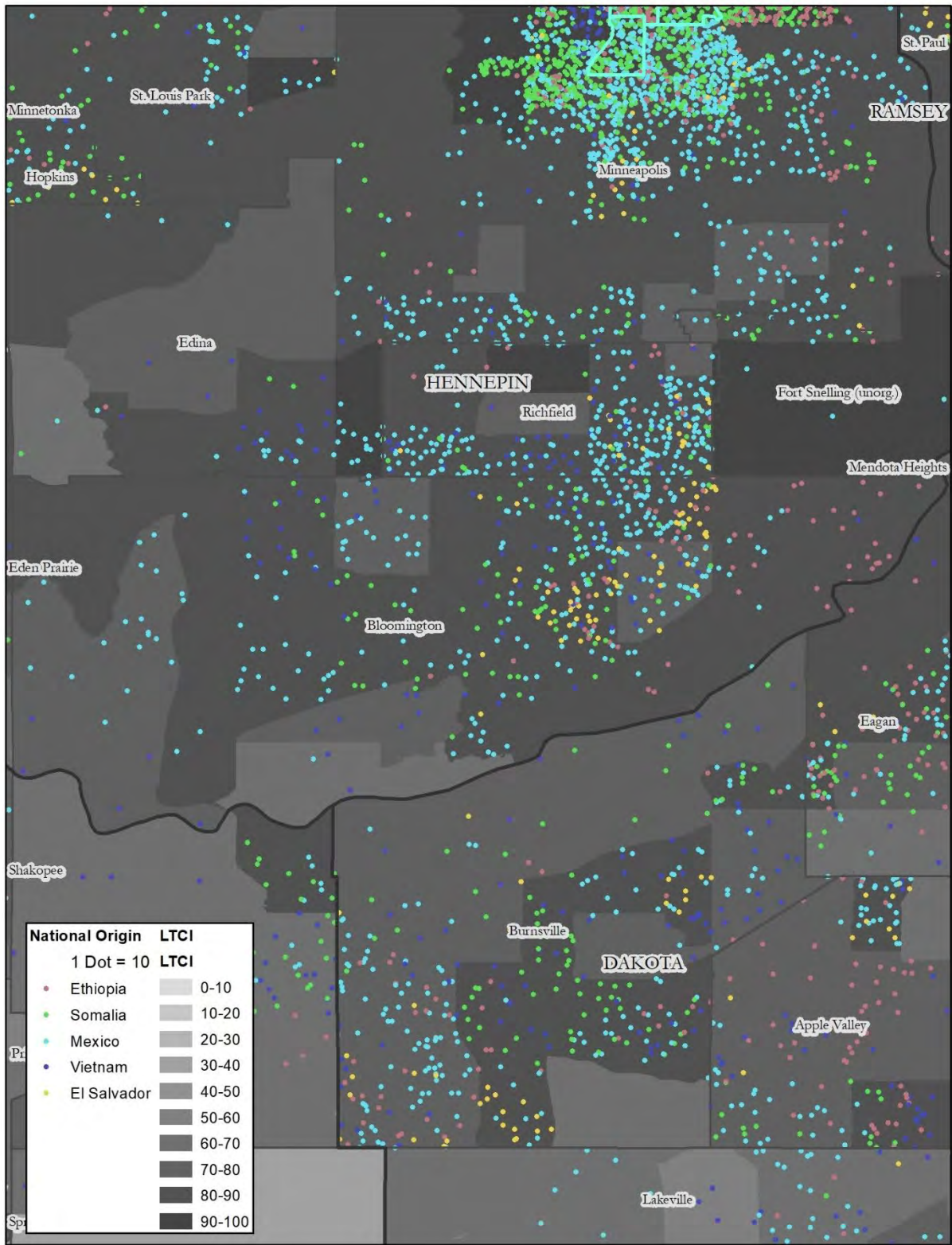
Map 8: Hennepin County, National Origin, Low Transportation Cost Index



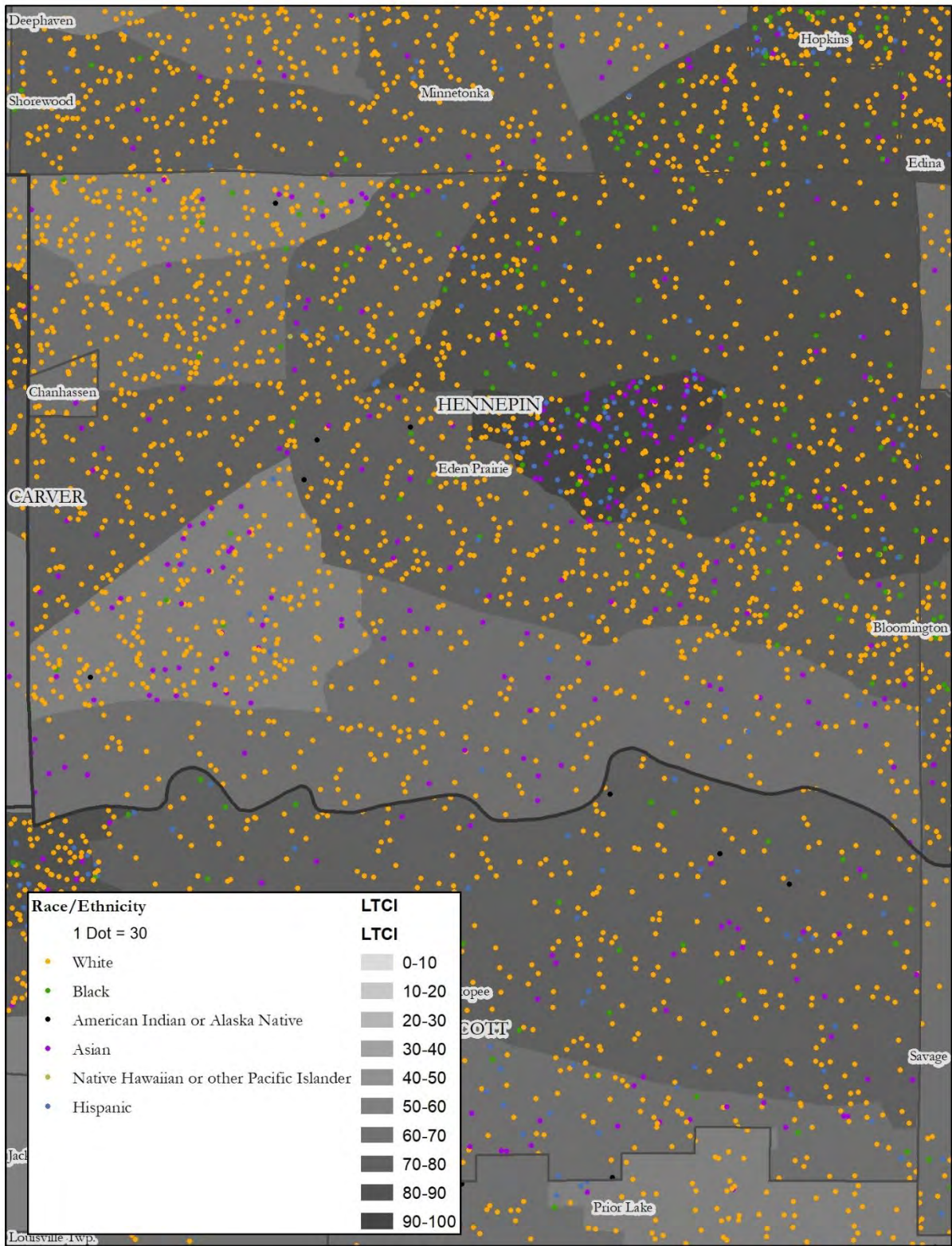
Map 9: Bloomington, Race, Low Transportation Cost Index



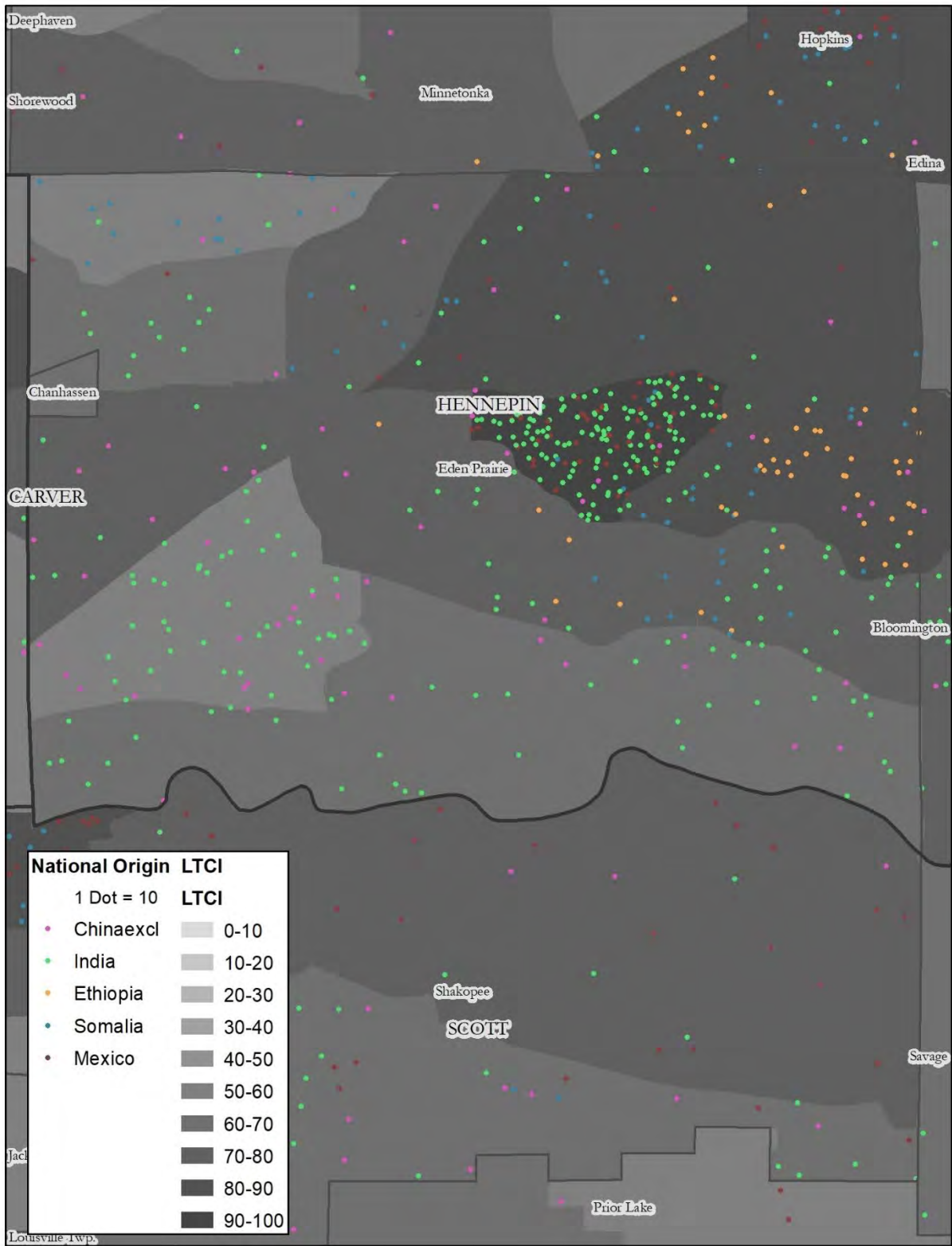
Map 10: Bloomington, National Origin, Low Transportation Cost Index



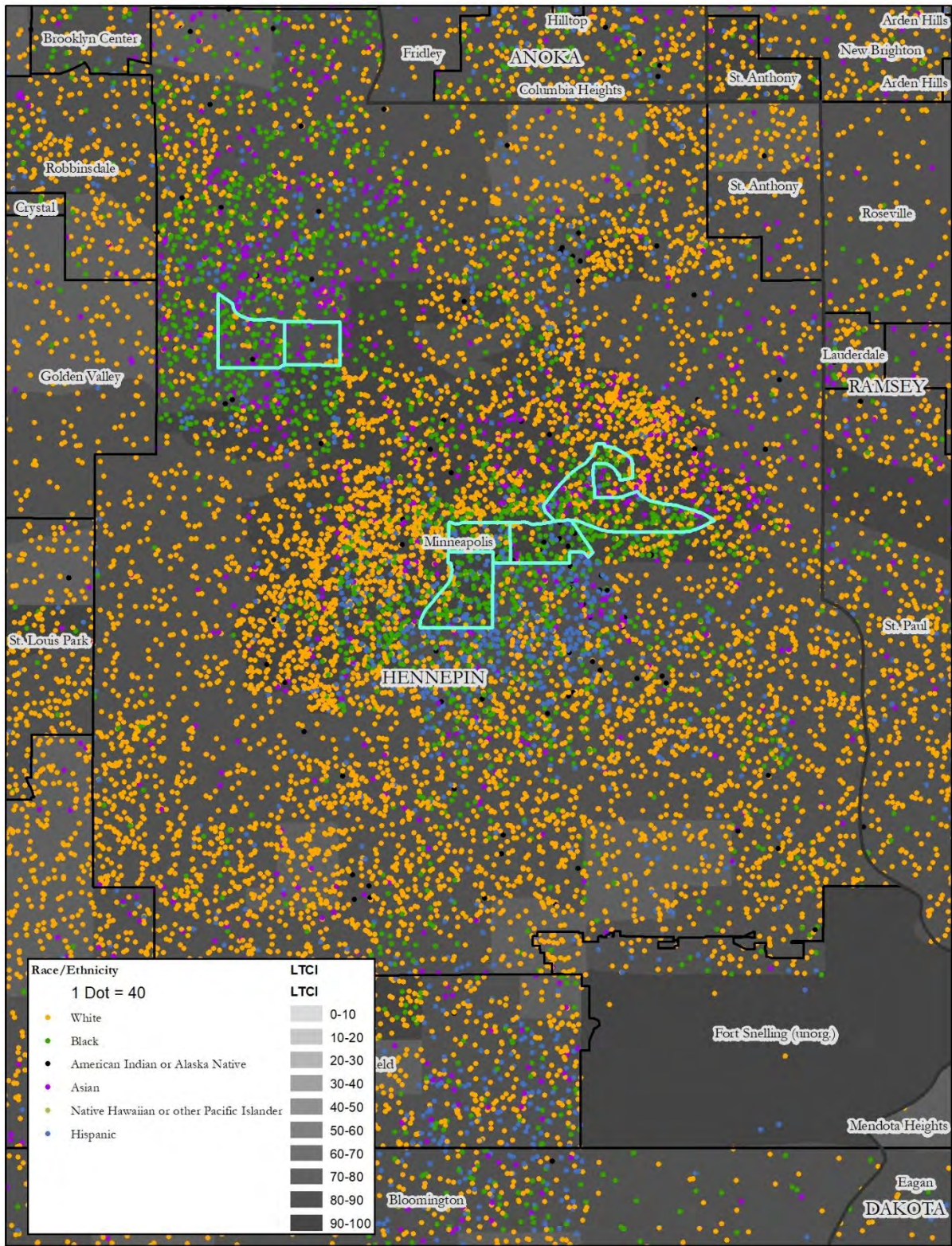
Map 11: Eden Prairie, Race, Low Transportation Cost Index



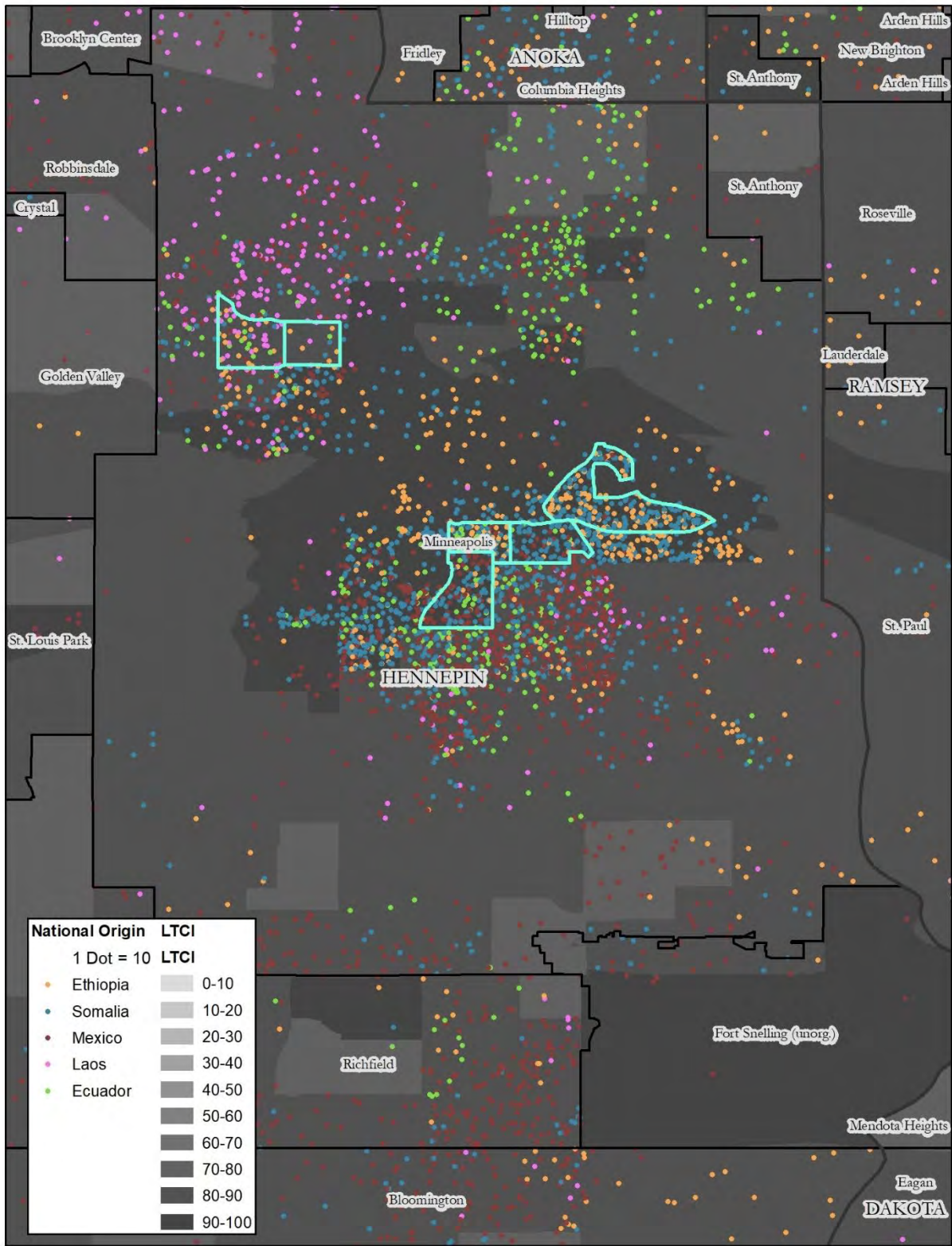
Map 12: Eden Prairie, National Origin, Low Transportation Cost Index



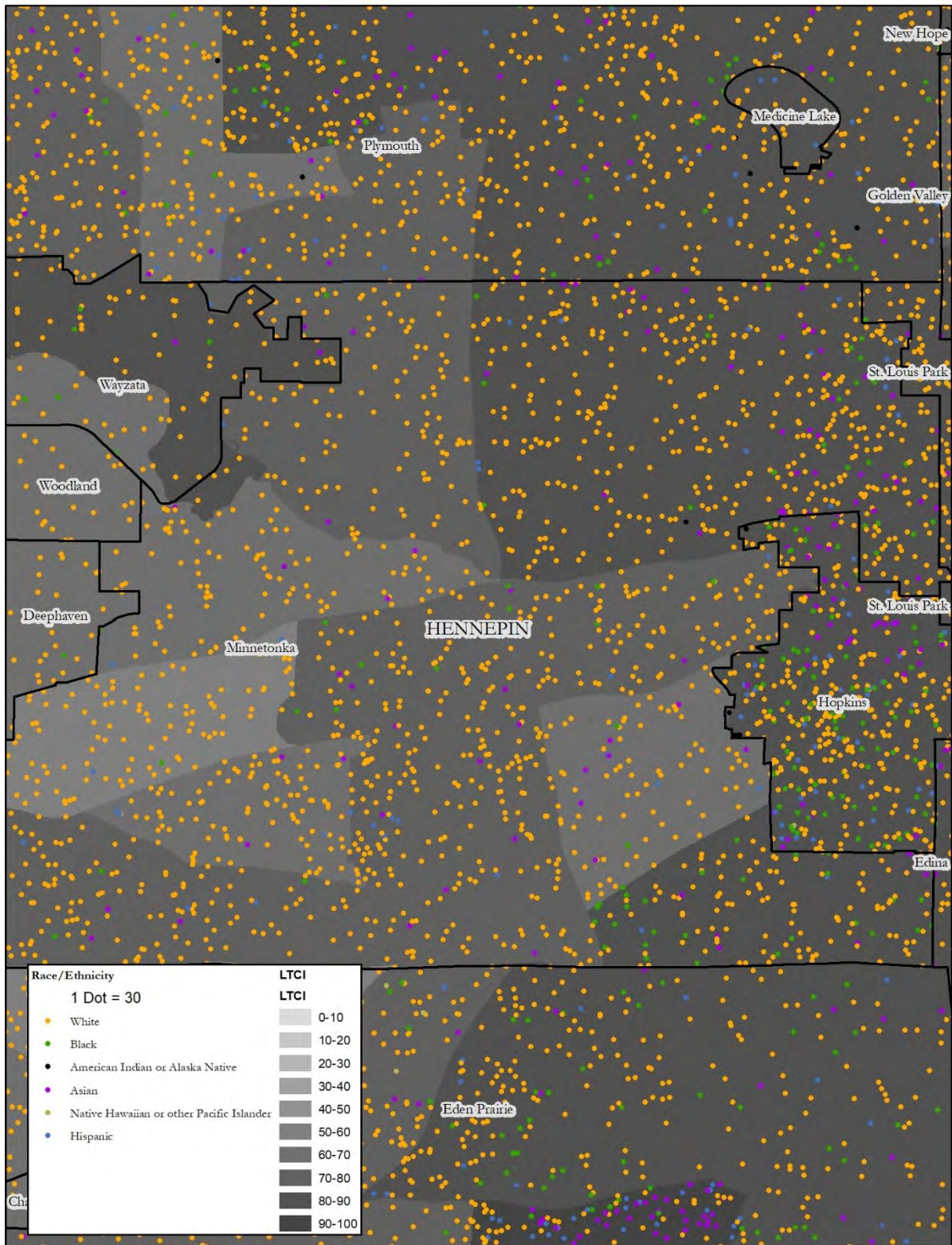
Map 13: Minneapolis, Race, Low Transportation Cost Index



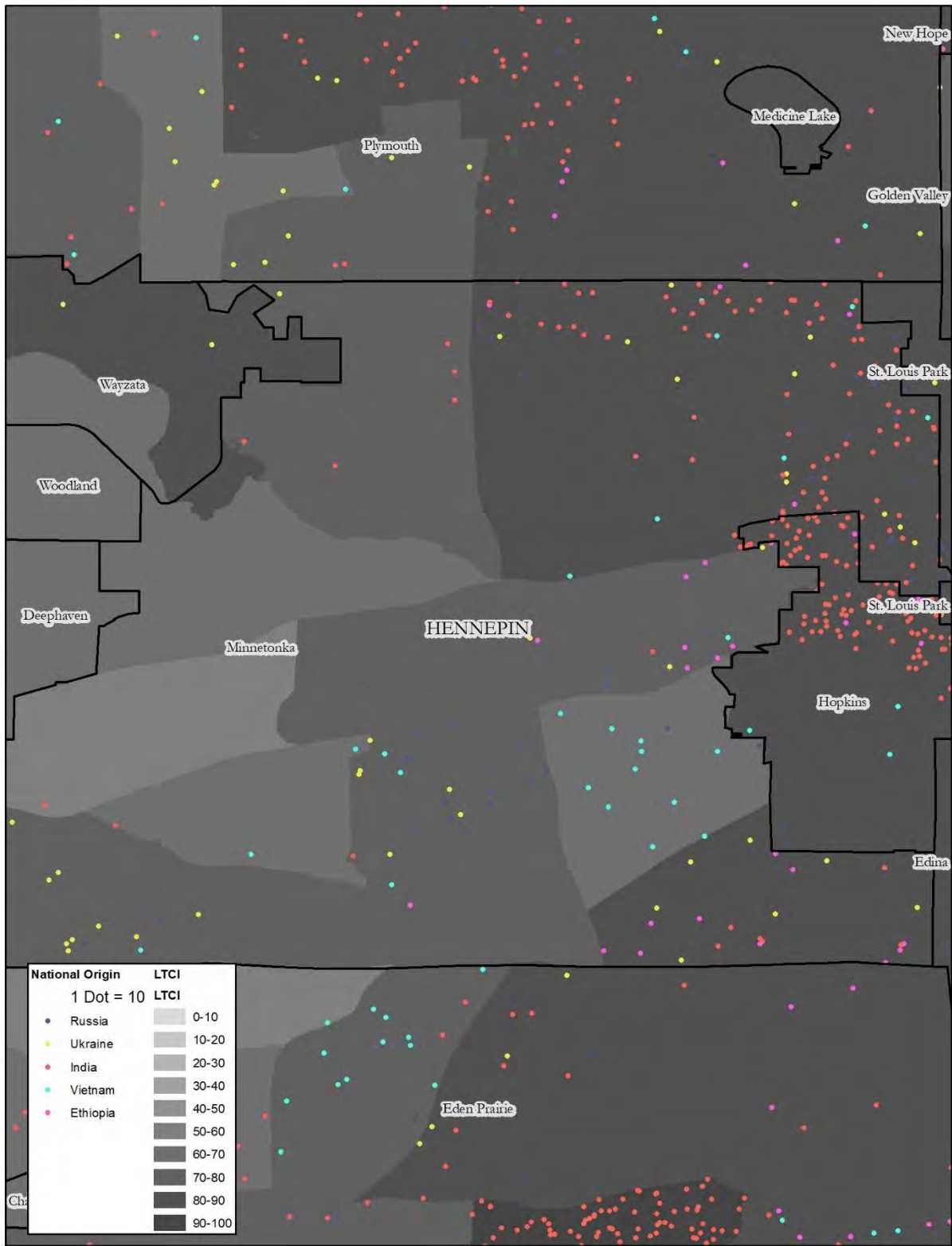
Map 14: Minneapolis, National Origin, Low Transportation Cost Index



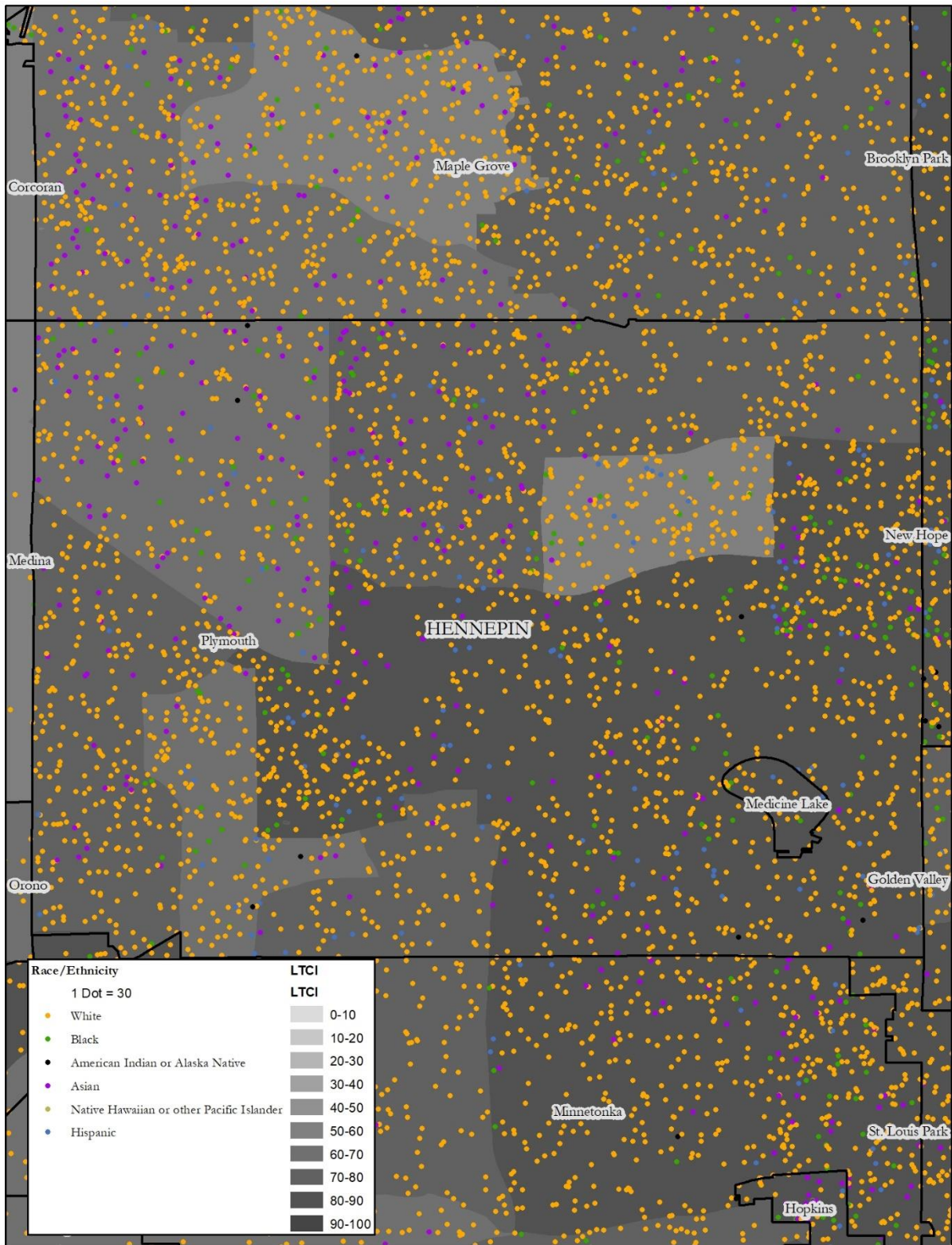
Map 15: Minnetonka, Race, Low Transportation Cost Index



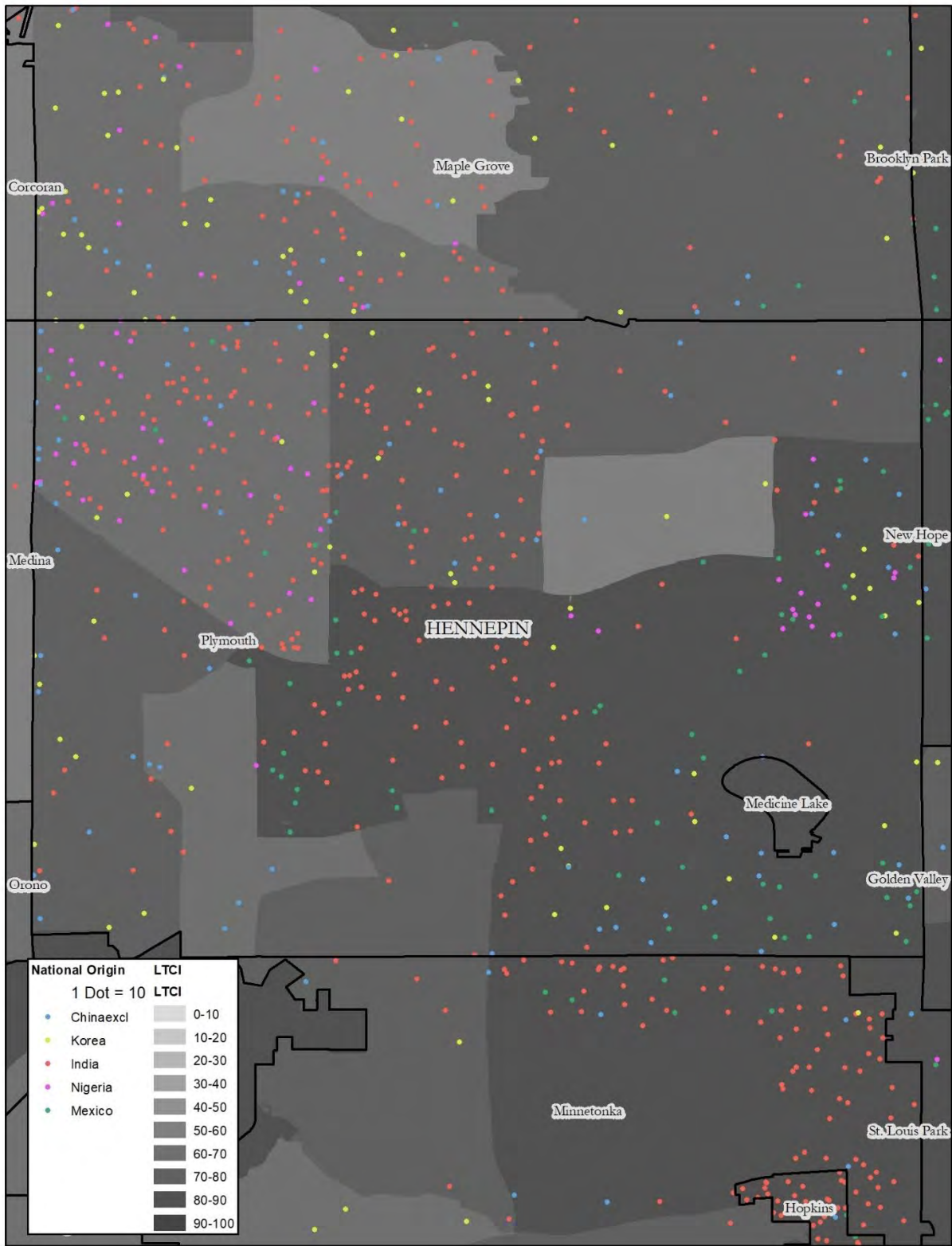
Map 16: Minnetonka, National Origin, Low Transportation Cost Index



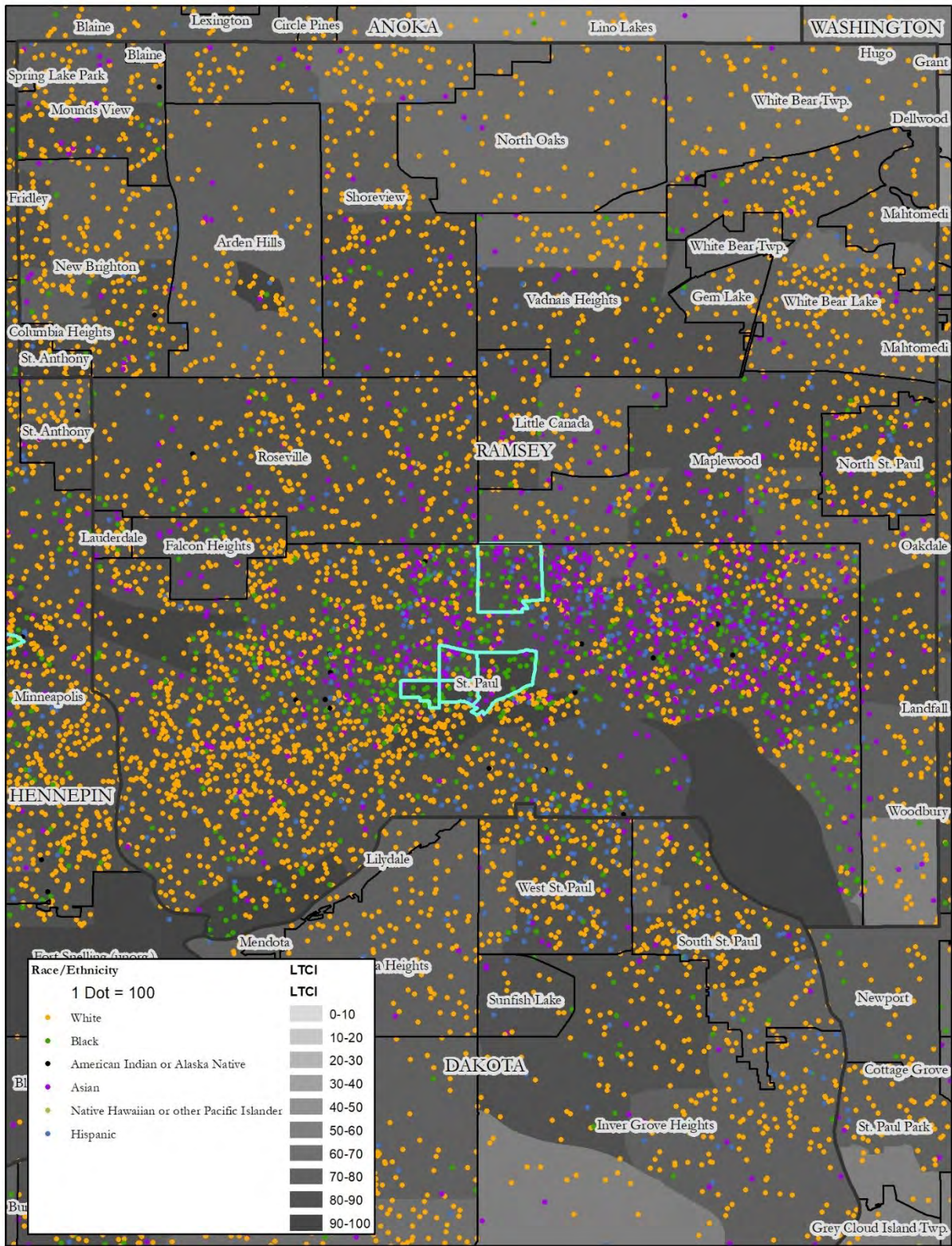
Map 17: Plymouth, Race, Low Transportation Cost Index



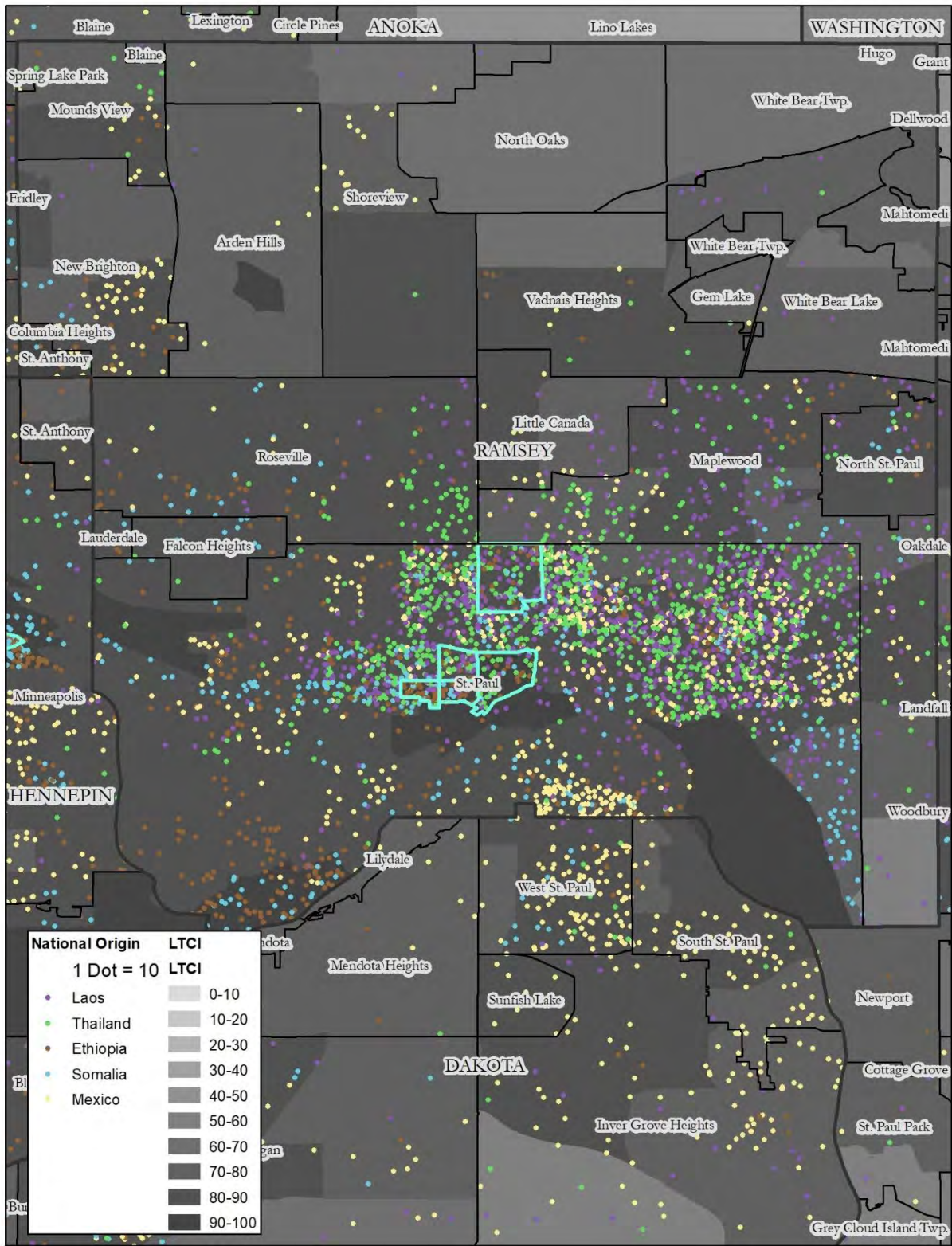
Map 18: Plymouth, National Origin, Low Transportation Cost Index



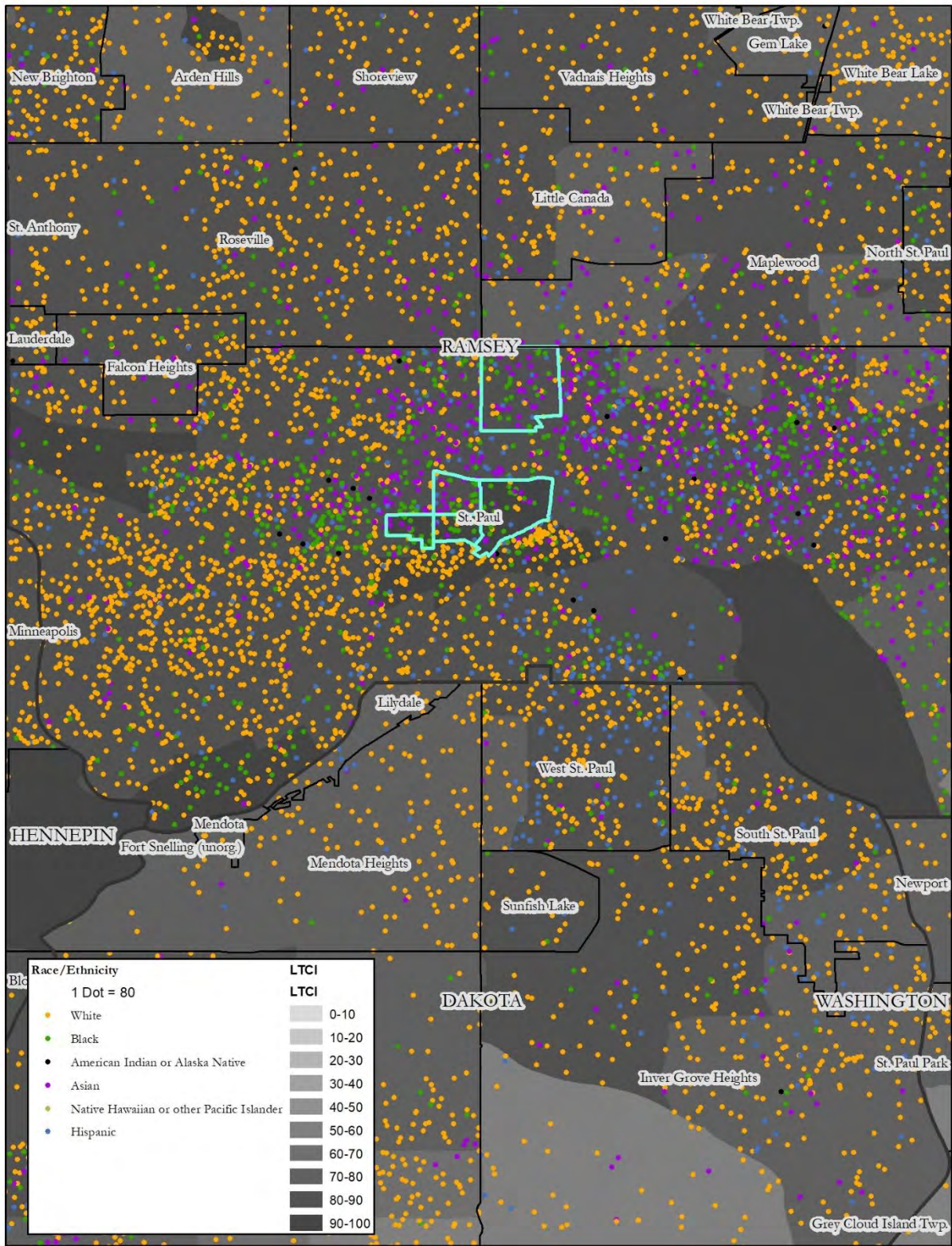
Map 19: Ramsey County, Race, Low Transportation Cost Index



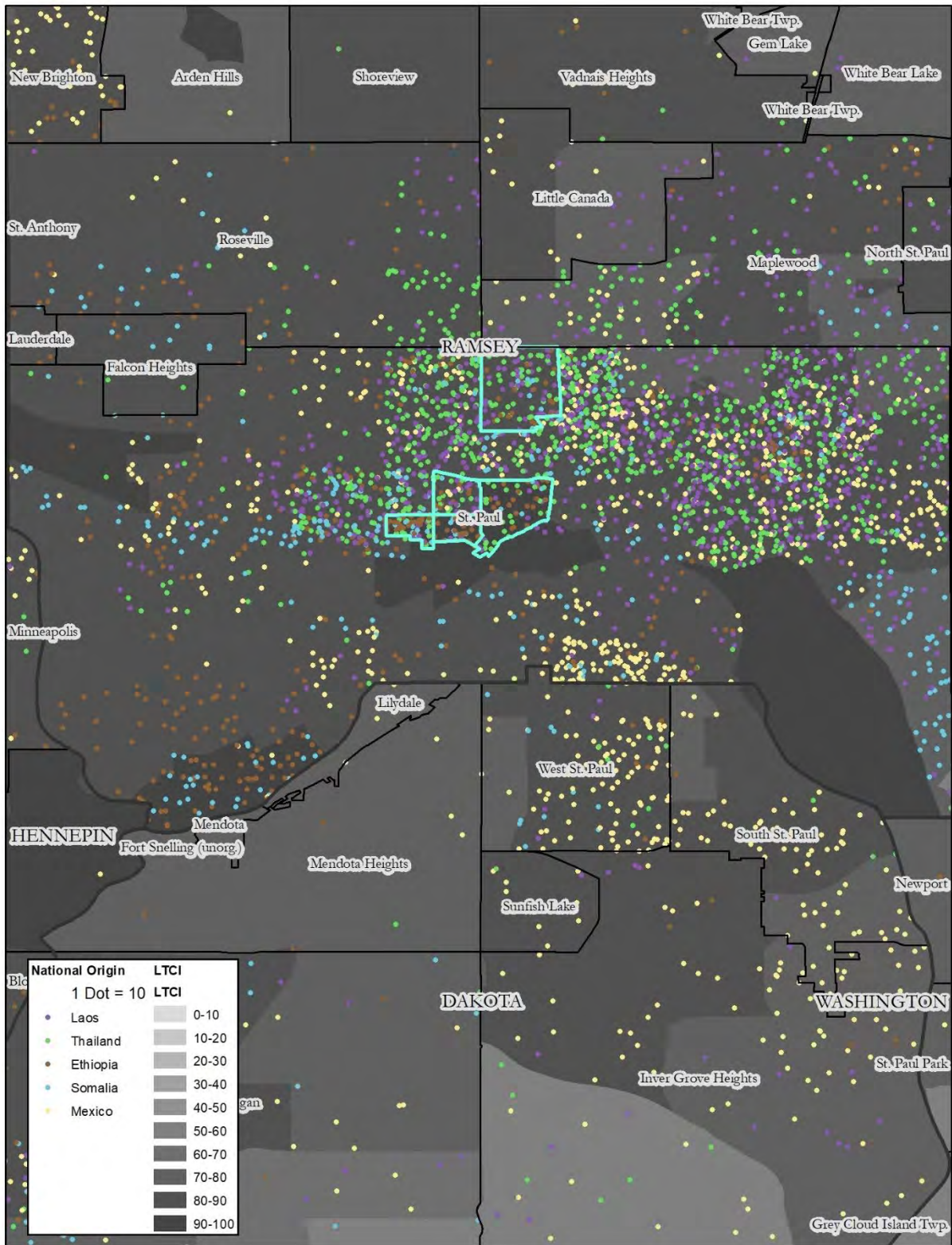
Map 20: Ramsey County, National Origin, Low Transportation Cost Index



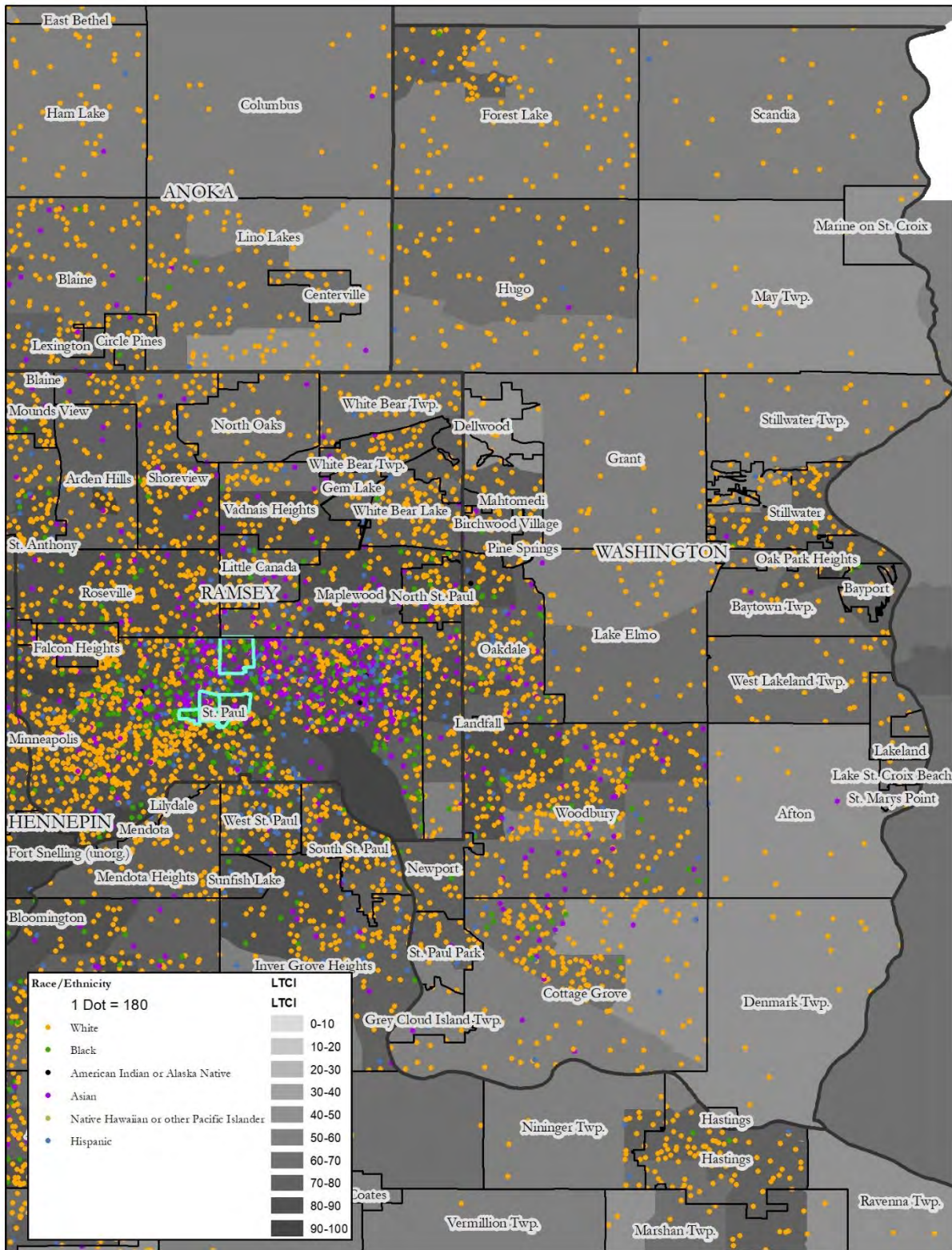
Map 21: St. Paul, Race, Low Transportation Cost Index



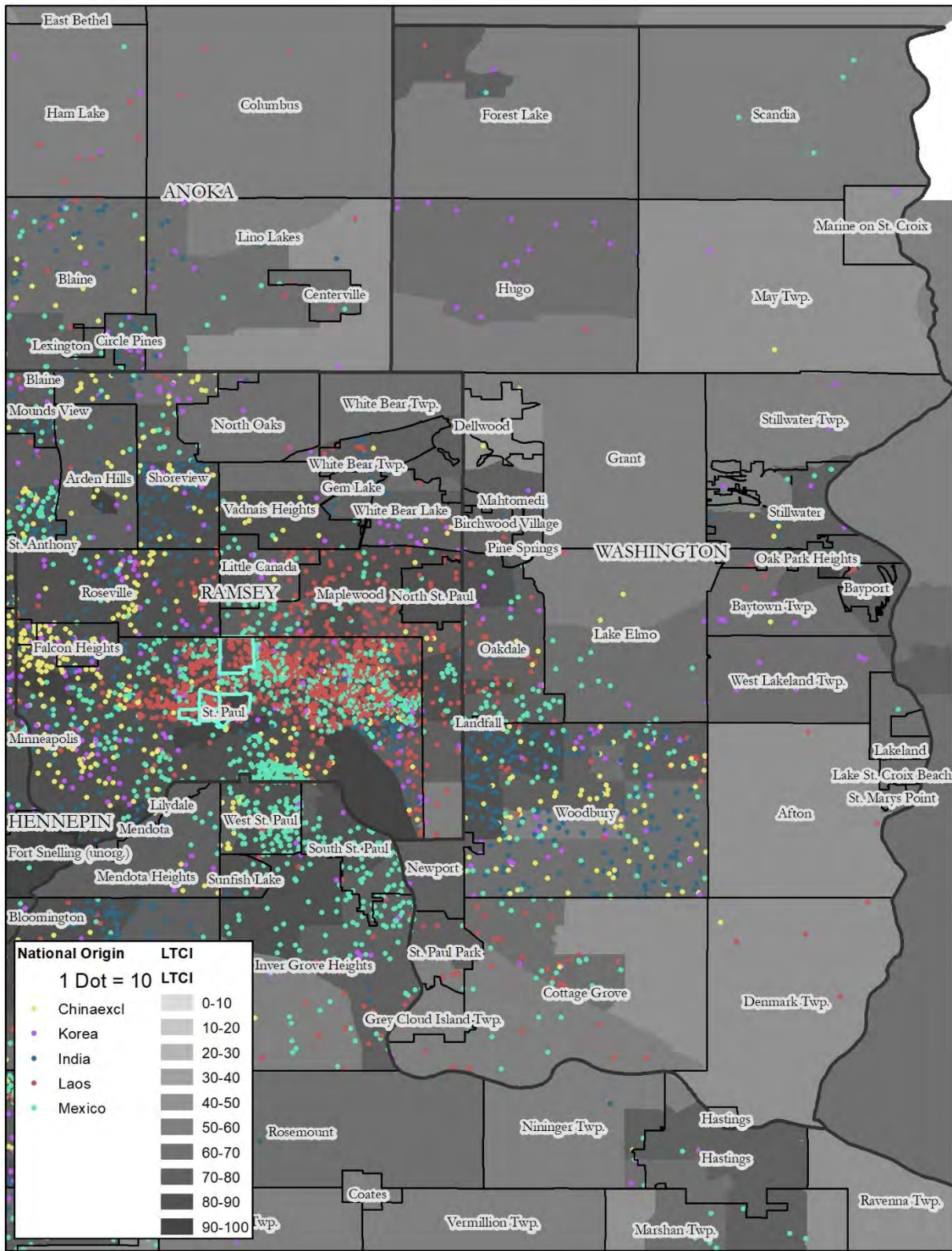
Map 22: St. Paul, National Origin, Low Transportation Cost Index



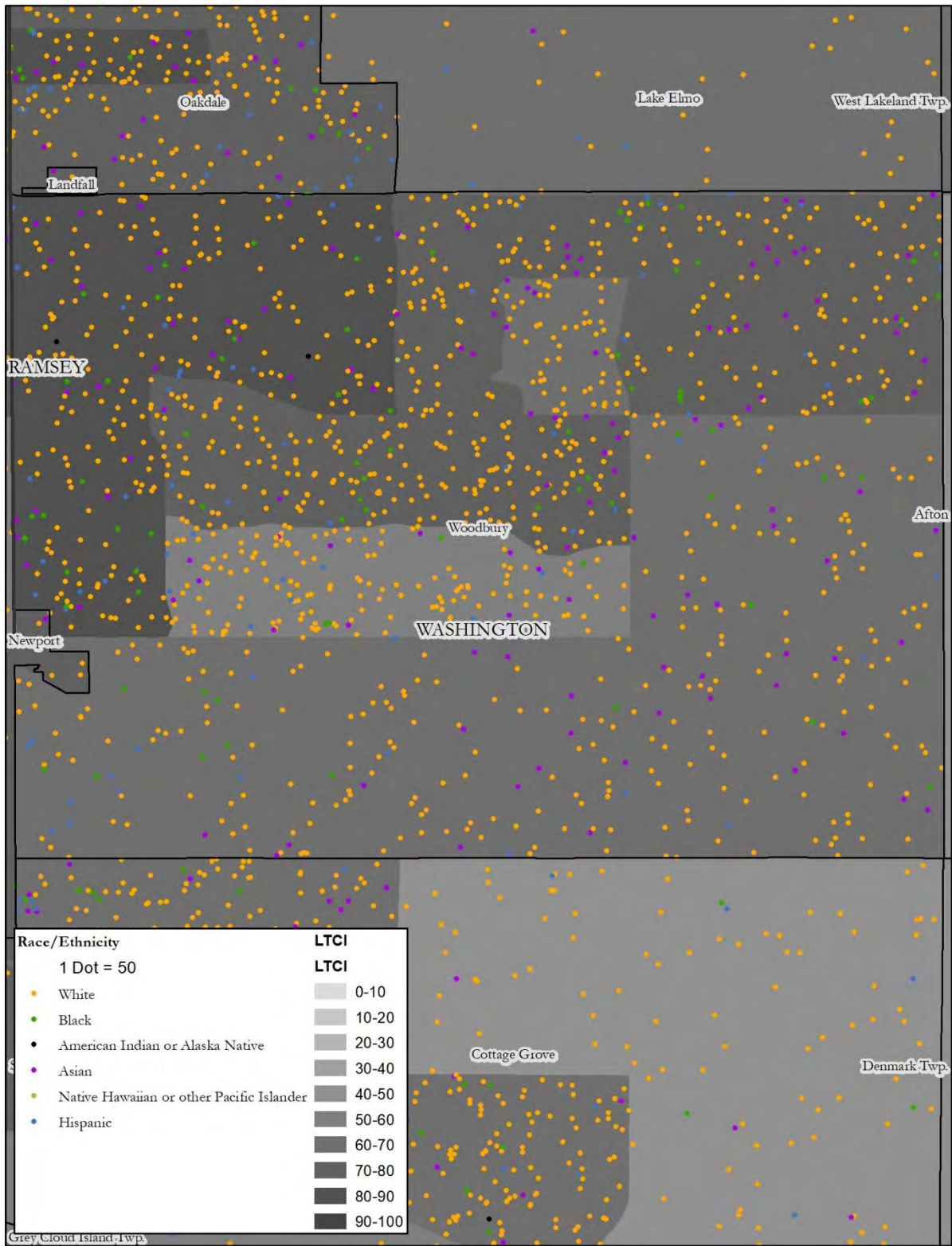
Map 23: Washington County, Race, Low Transportation Cost Index



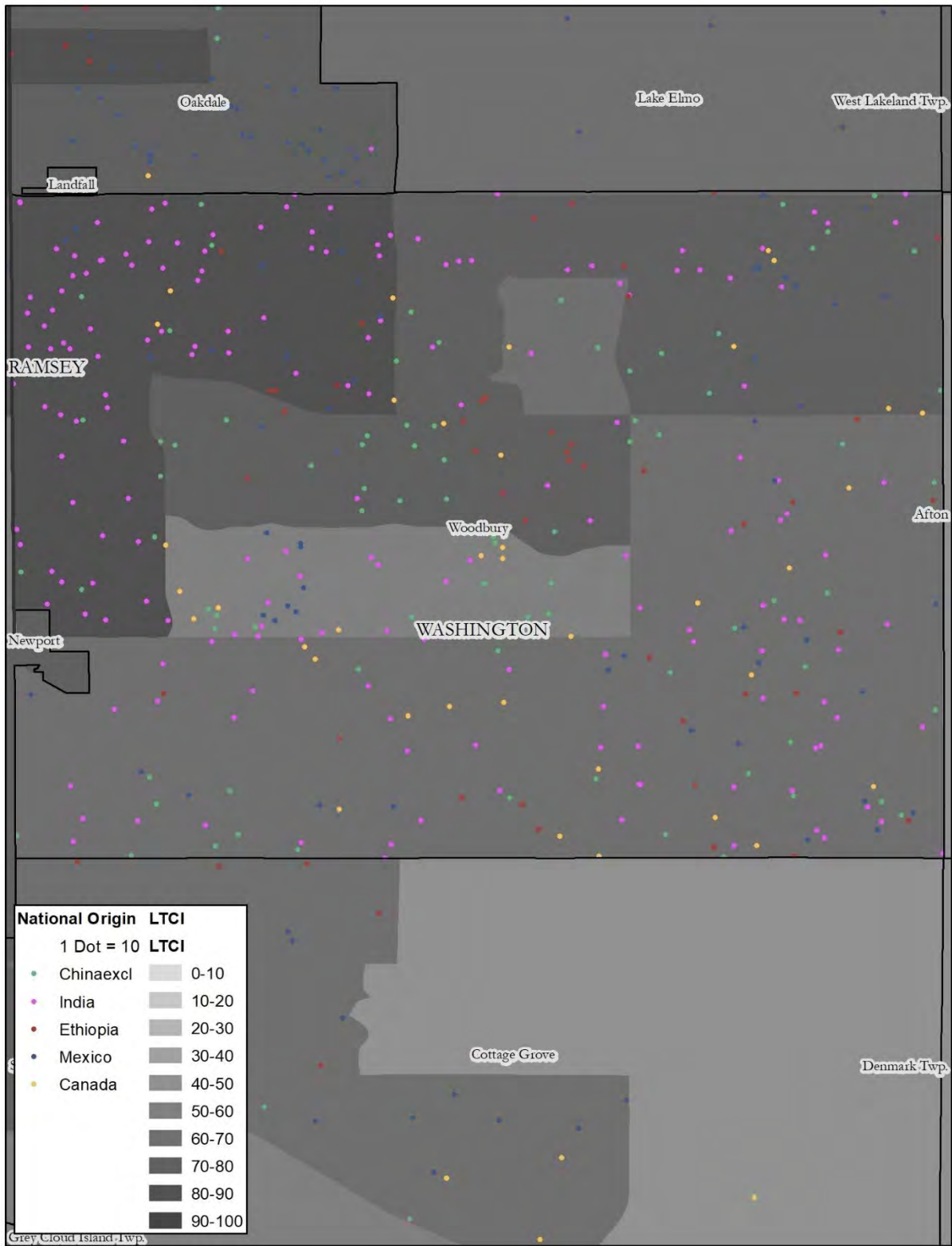
Map 24: Washington County, National Origin, Low Transportation Cost Index



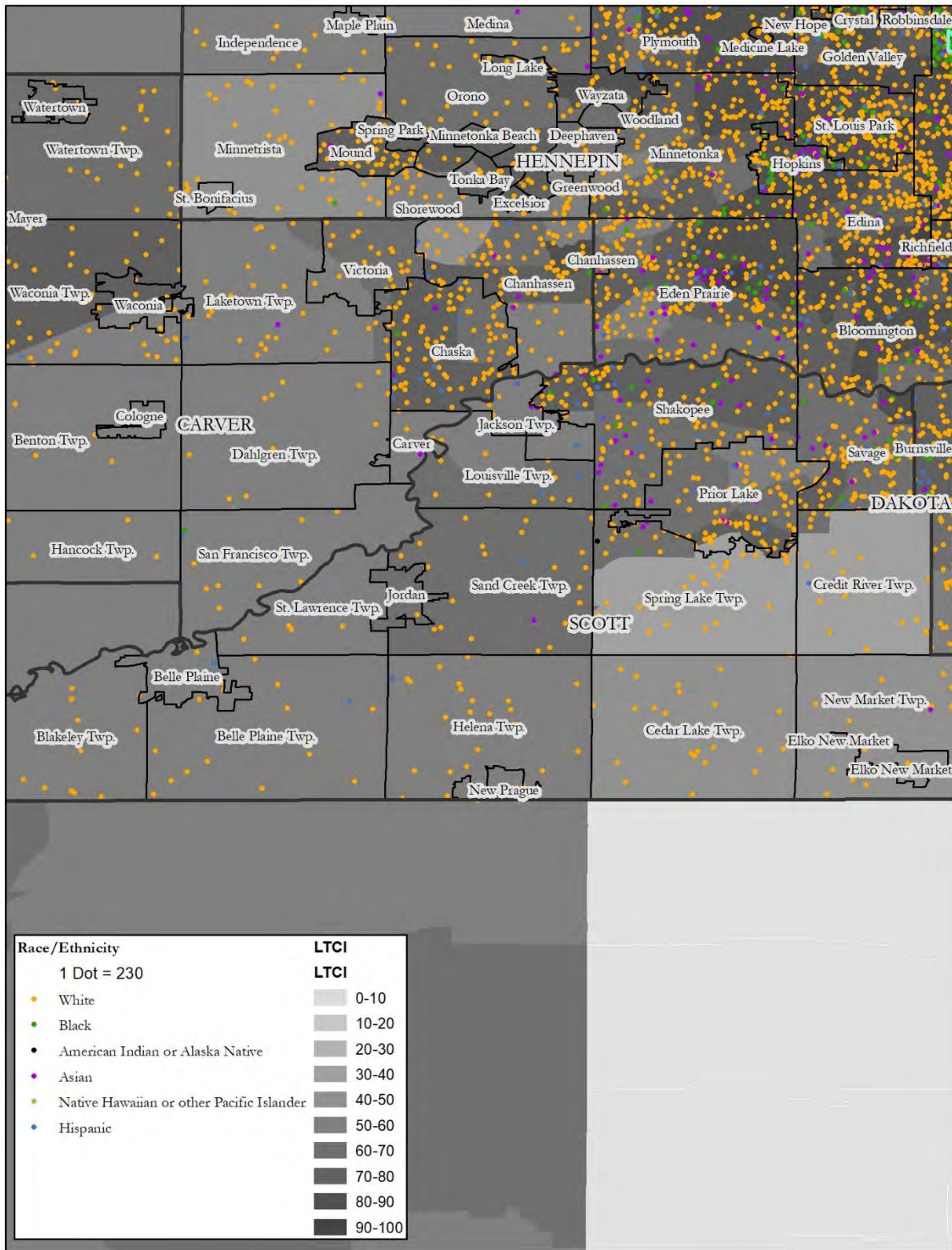
Map 25: Woodbury, Race, Low Transportation Cost Index



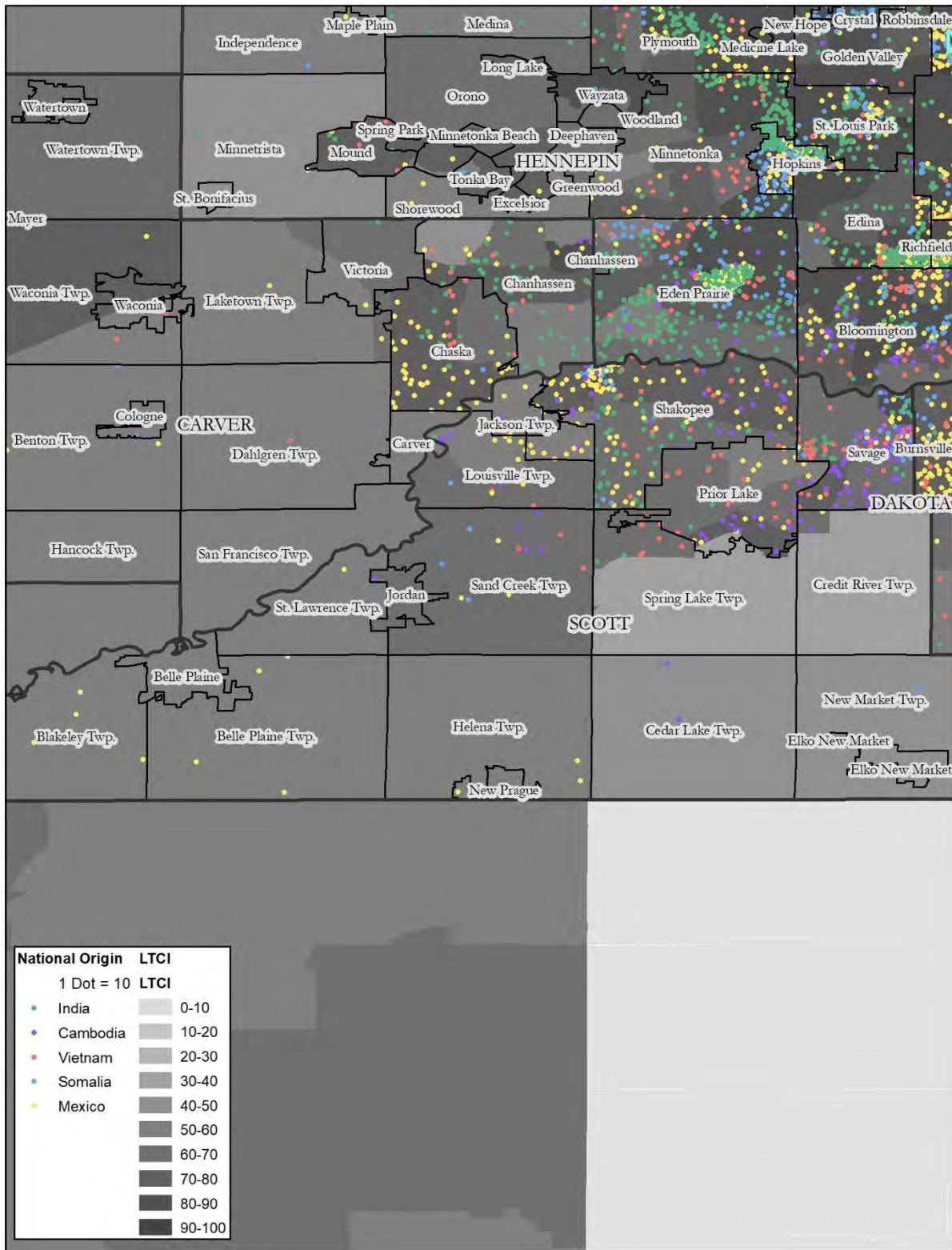
Map 26: Woodbury, National Origin, Low Transportation Cost Index



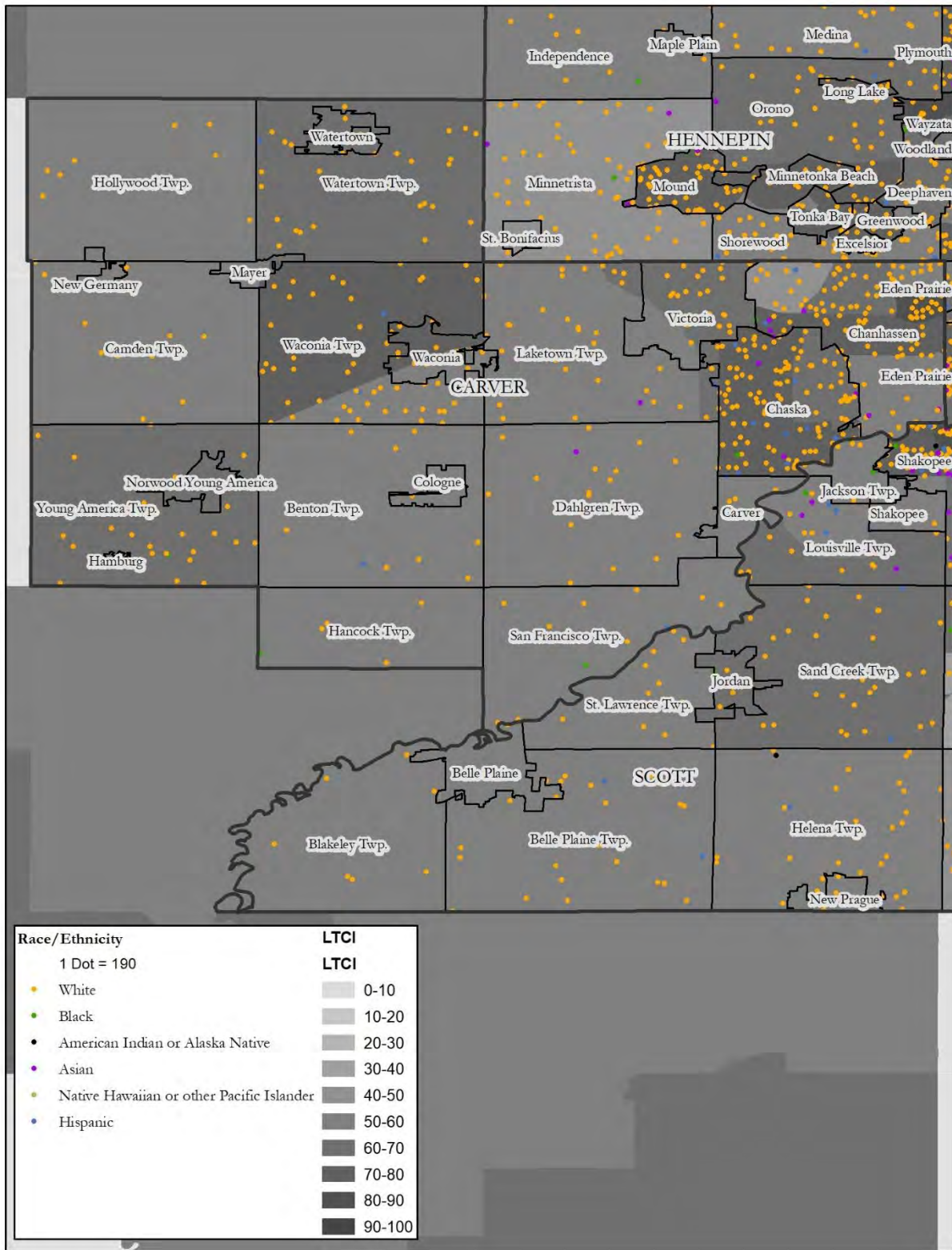
Map 27: Scott County, Race, Low Transportation Cost Index



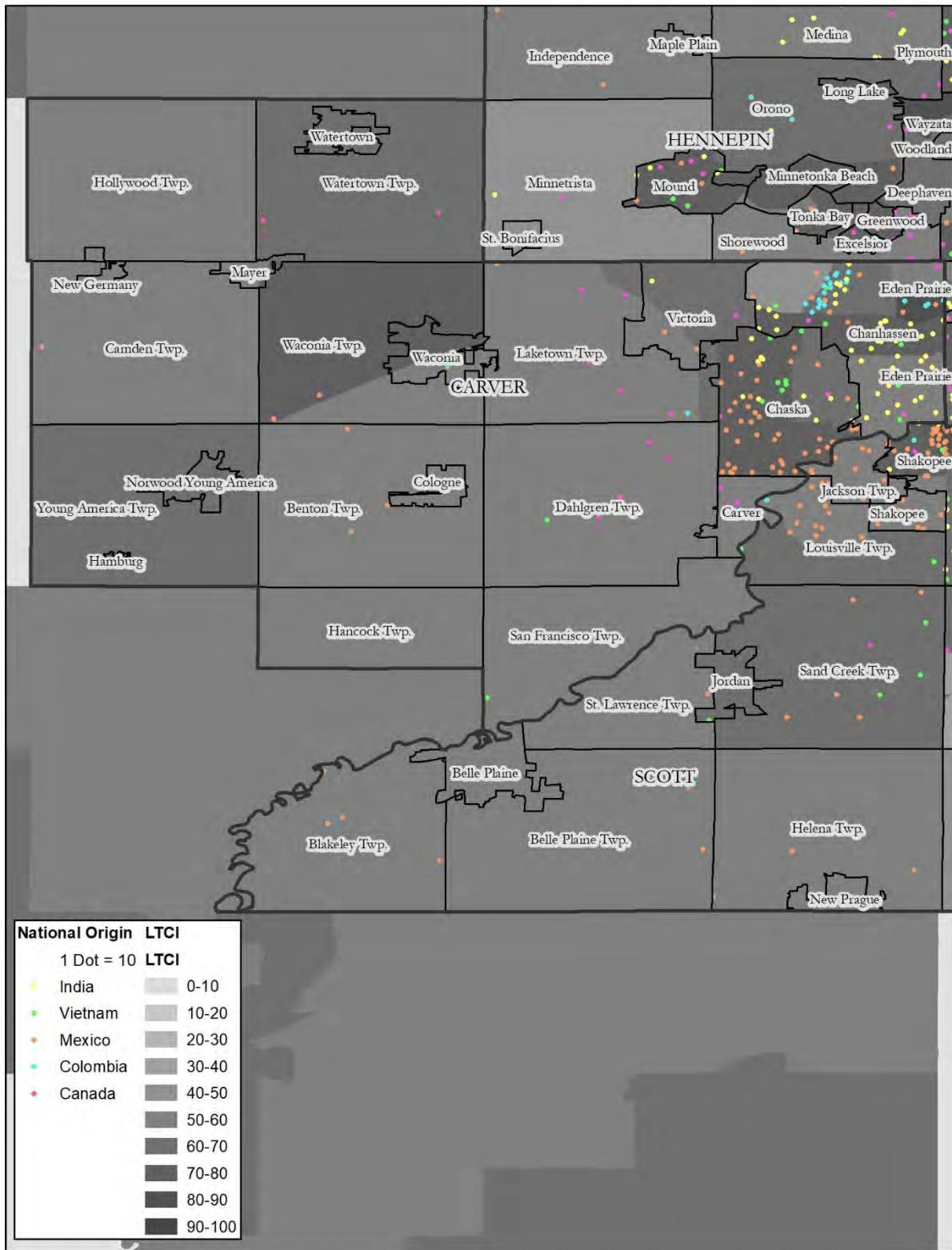
Map 28: Scott County, National Origin, Low Transportation Cost Index



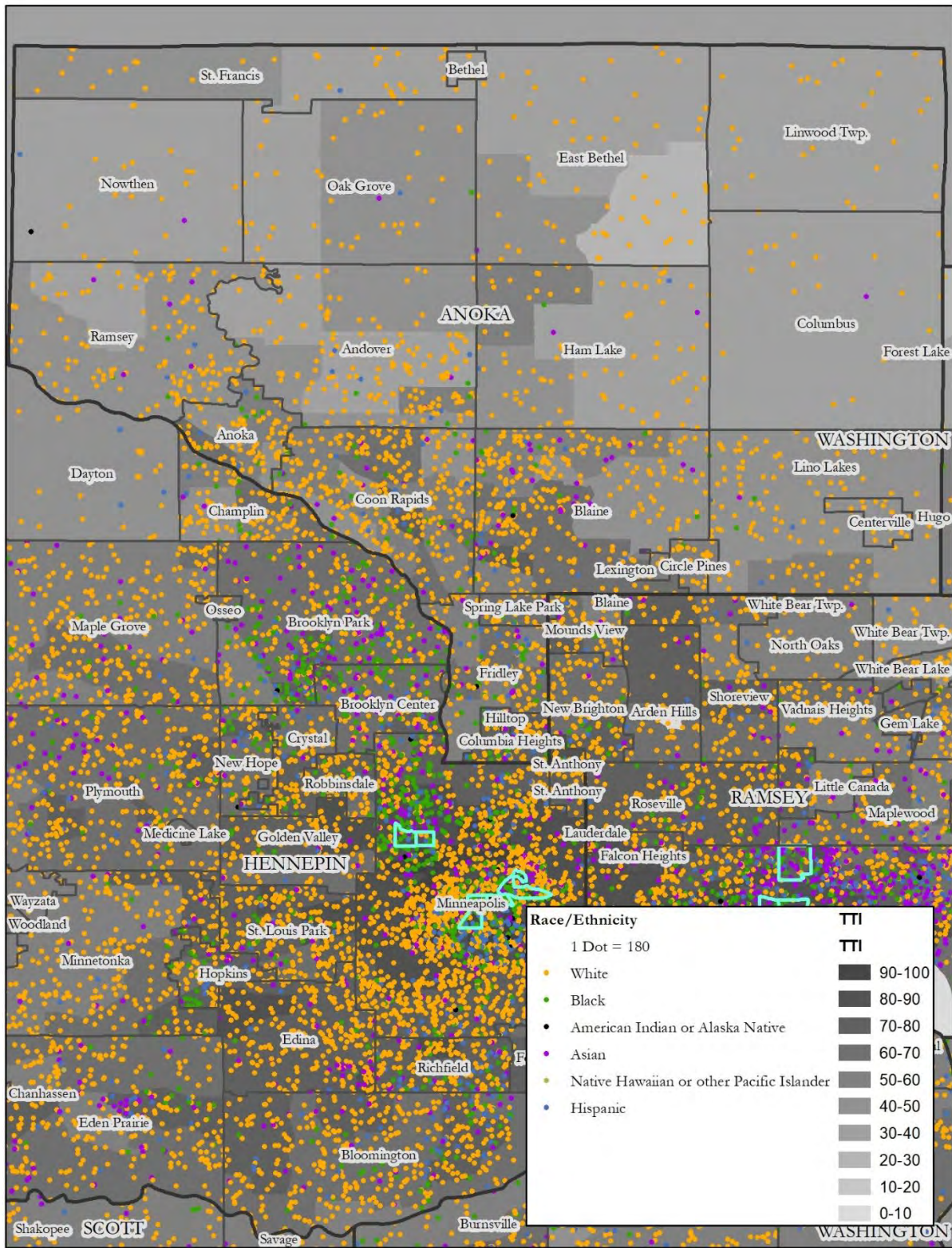
Map 29: Carver County, Race, Low Transportation Cost Index



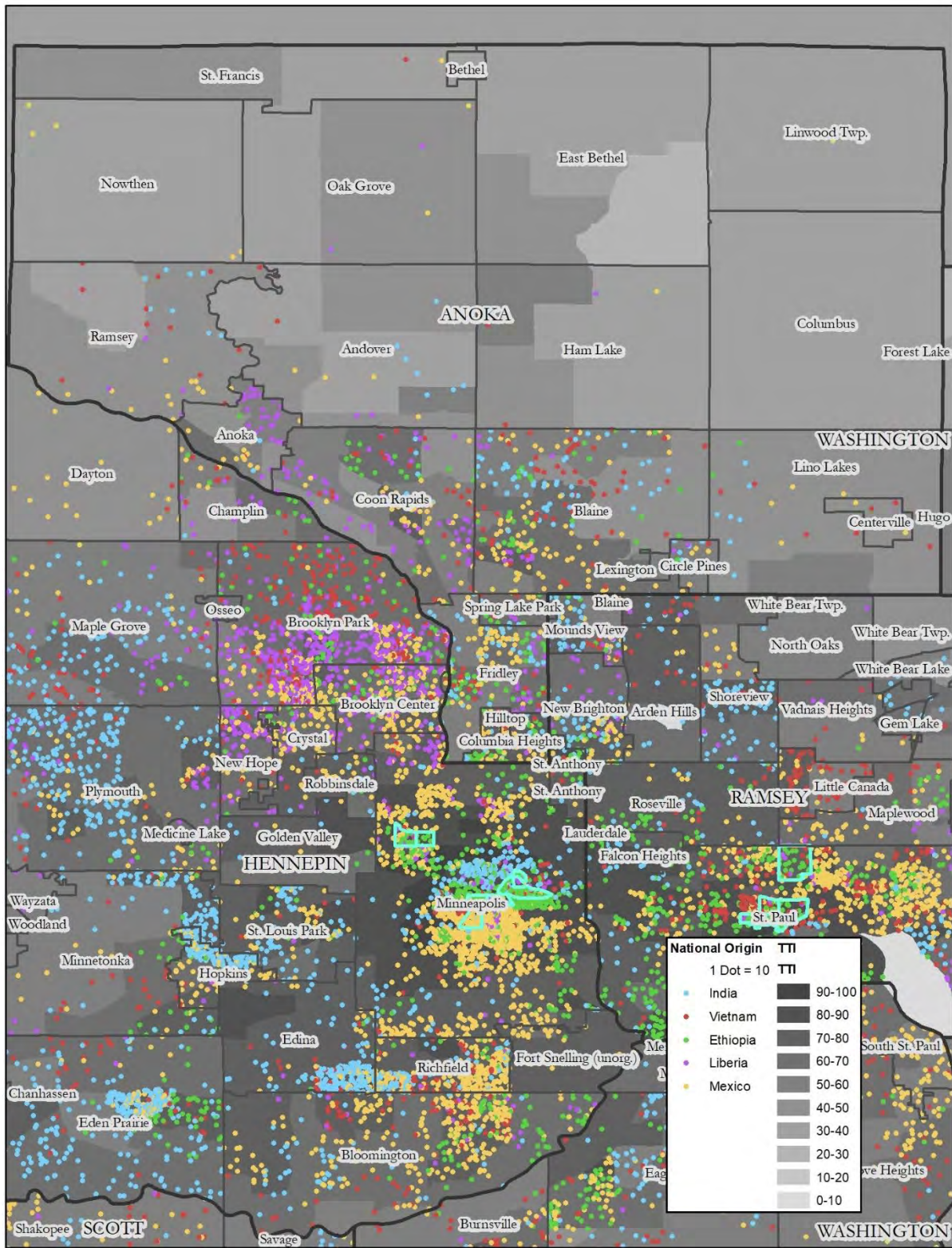
Map 30: Carver County, National Origin, Low Transportation Cost Index



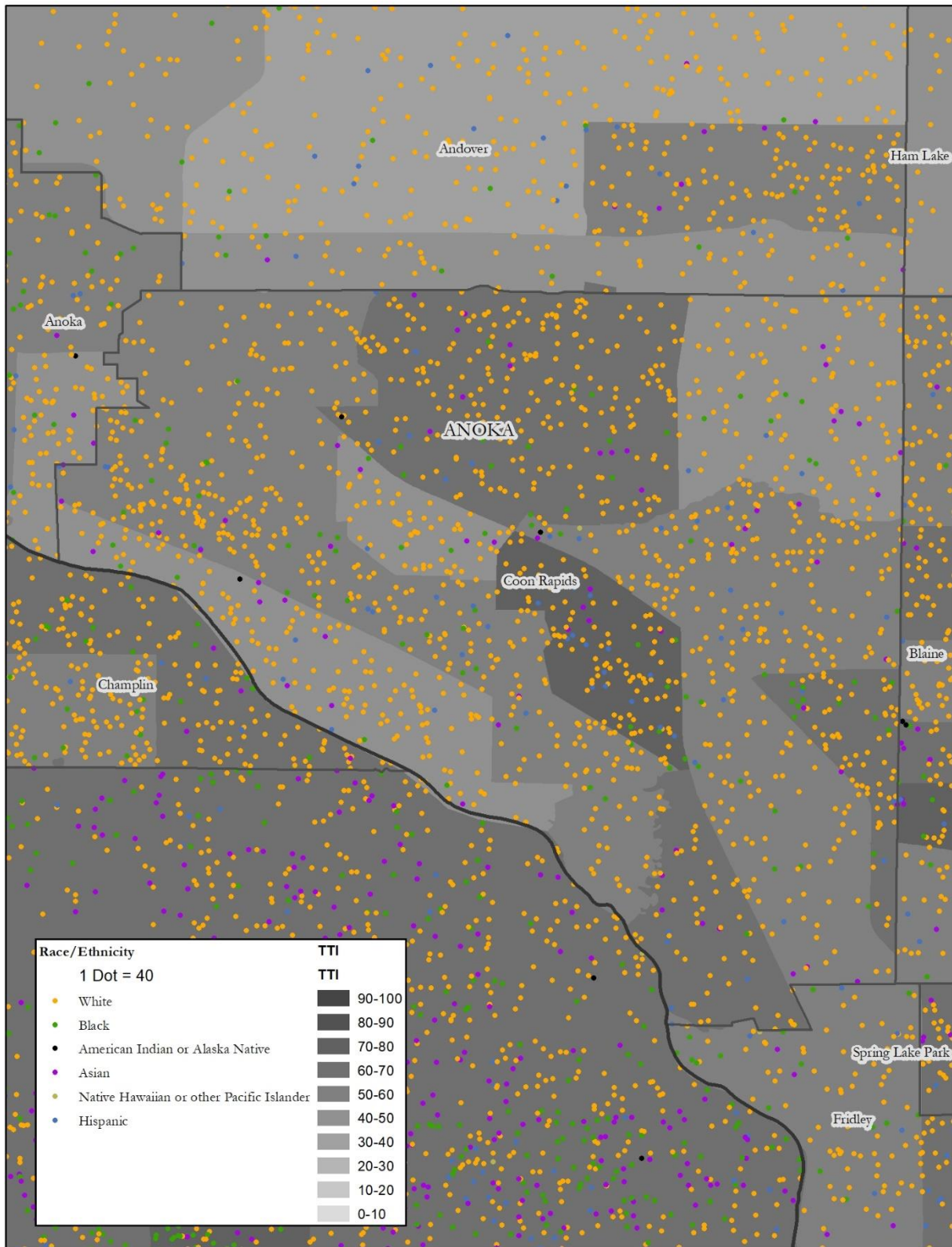
Map 31: Anoka County, Race, Transit Trips Index



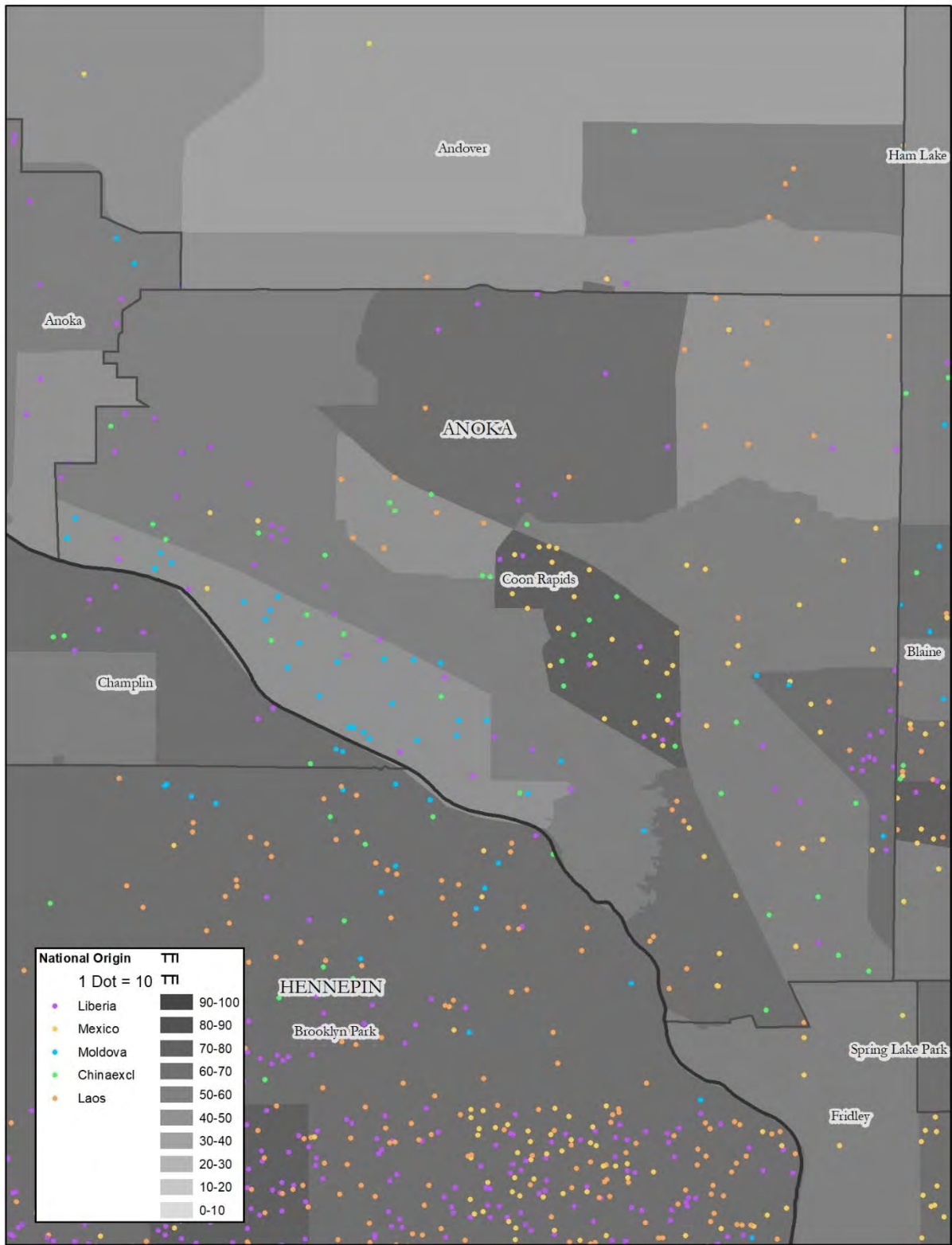
Map 32: Anoka County, National Origin, Transit Trips Index



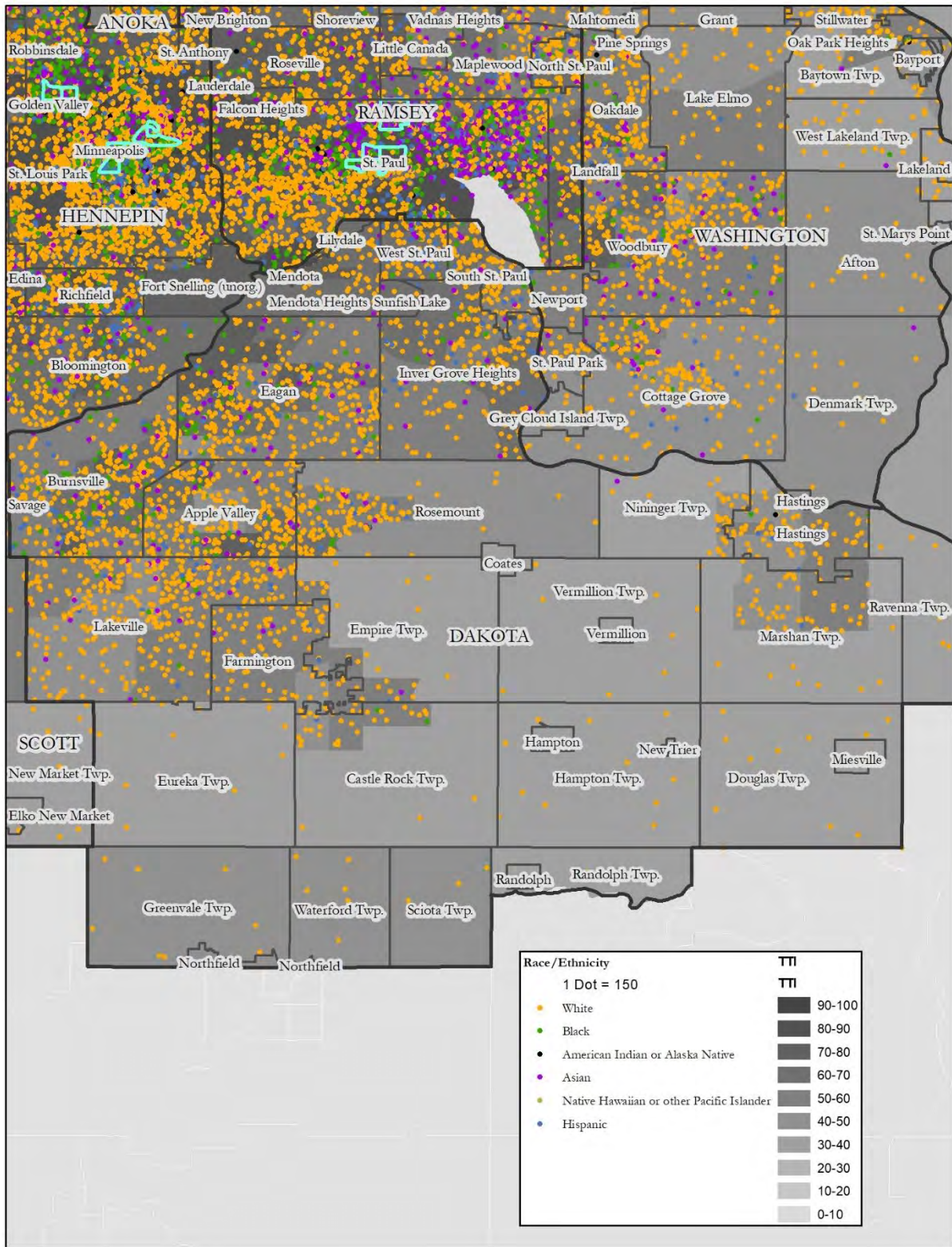
Map 33: Coon Rapids, Race, Transit Trips Index



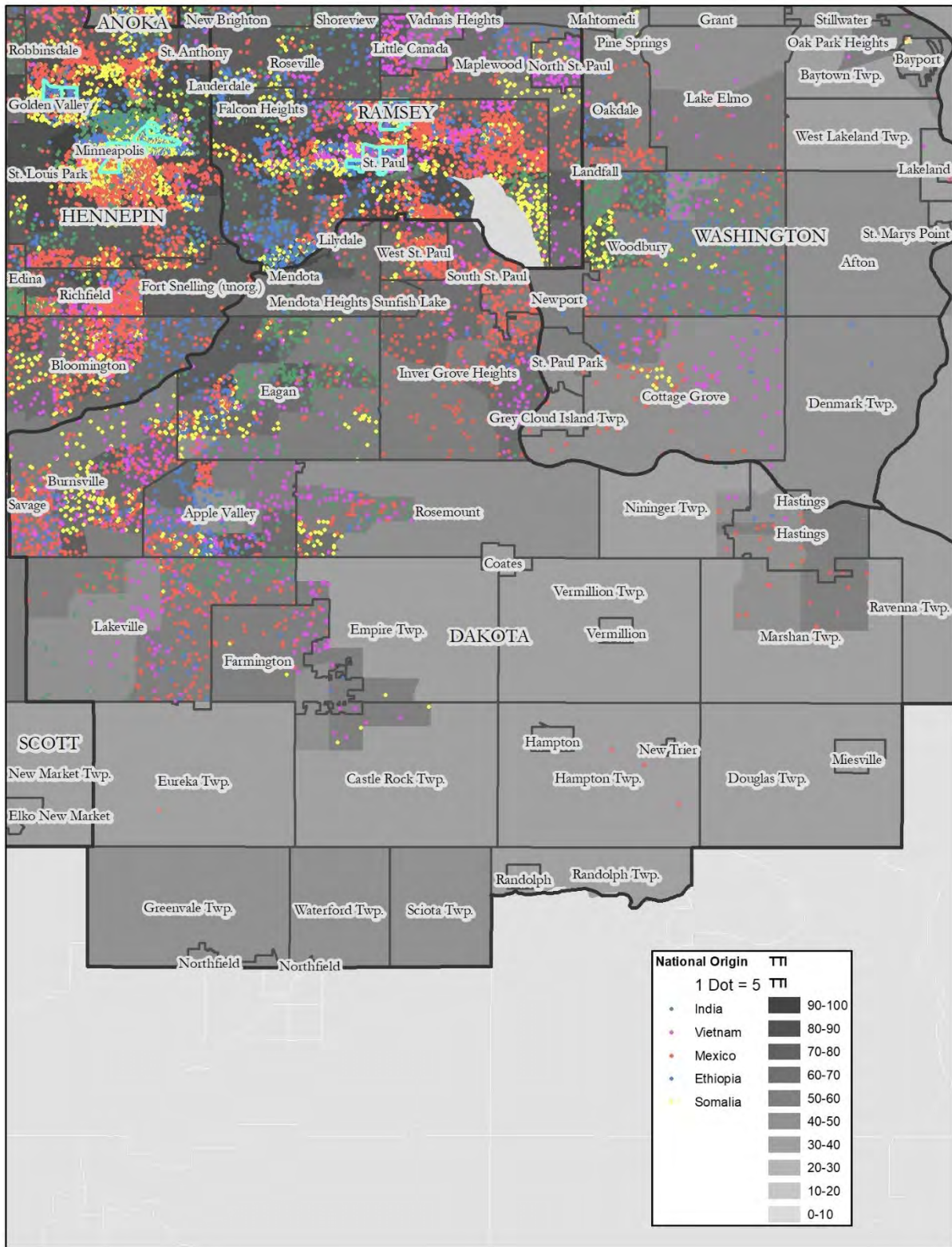
Map 34: Coon Rapids, National Origin, Transit Trips Index



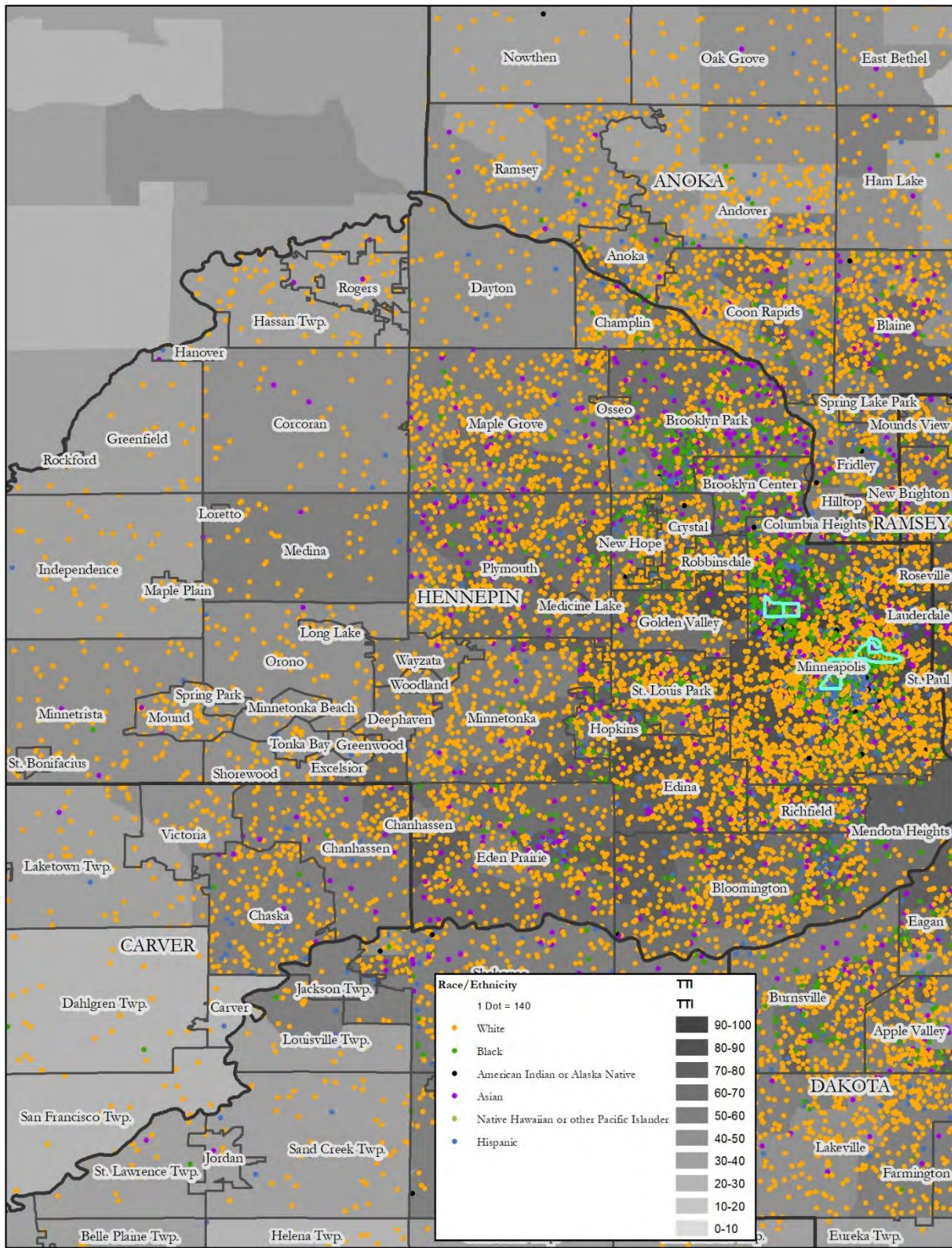
Map 35: Dakota County, Race, Transit Trips Index



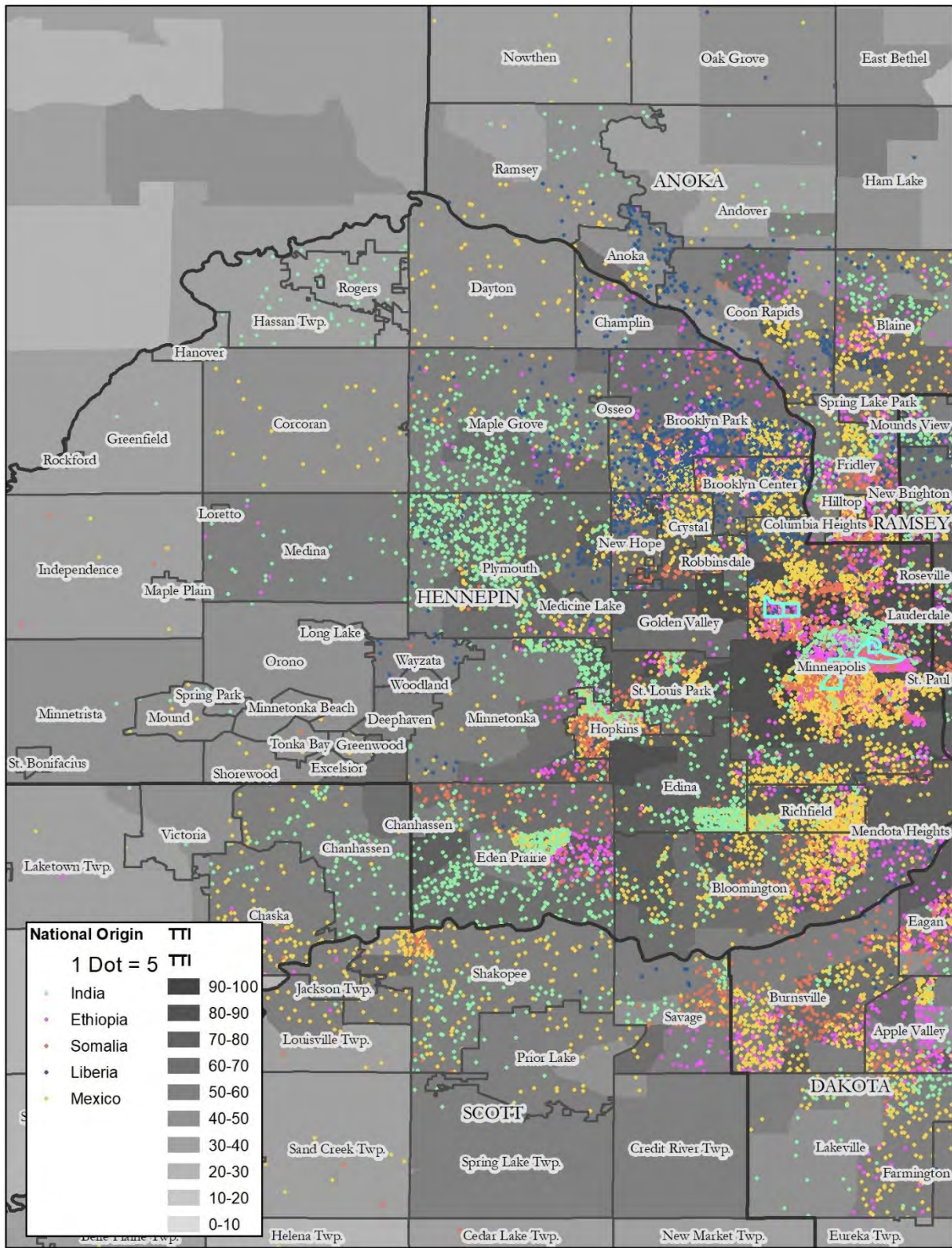
Map 36: Dakota County, National Origin, Transit Trips Index



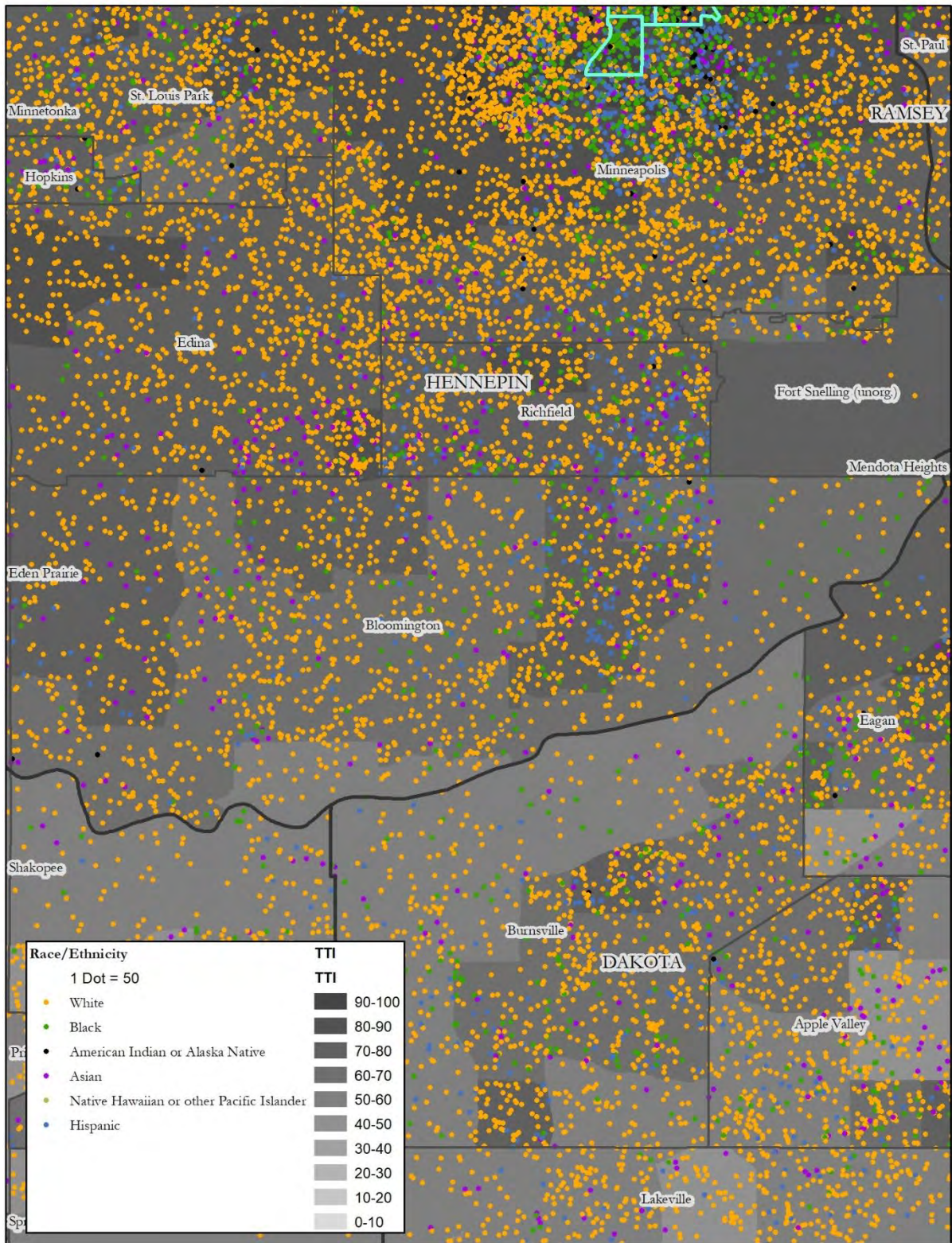
Map 37: Hennepin County, Race, Transit Trips Index



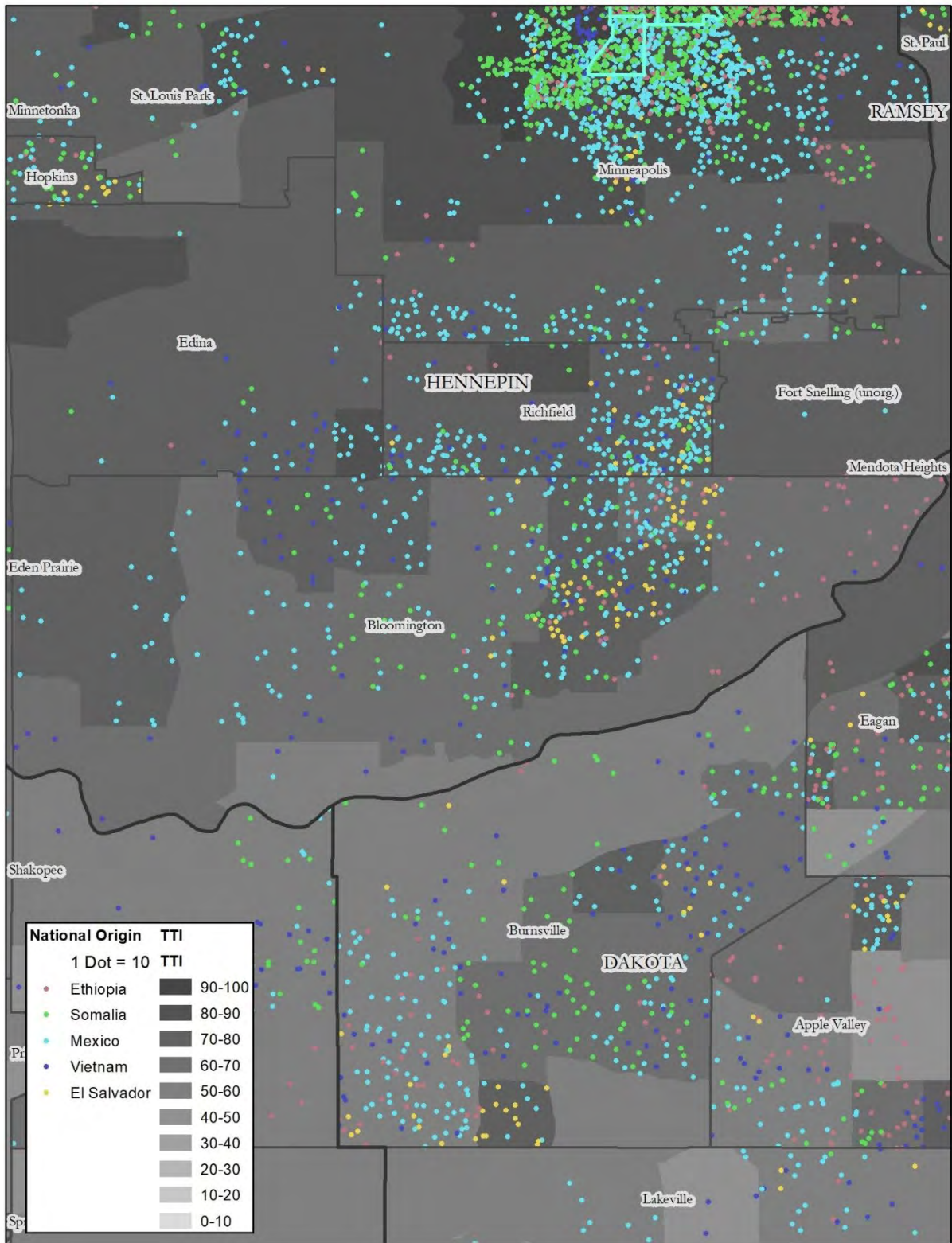
Map 38: Hennepin County, National Origin, Transit Trips Index



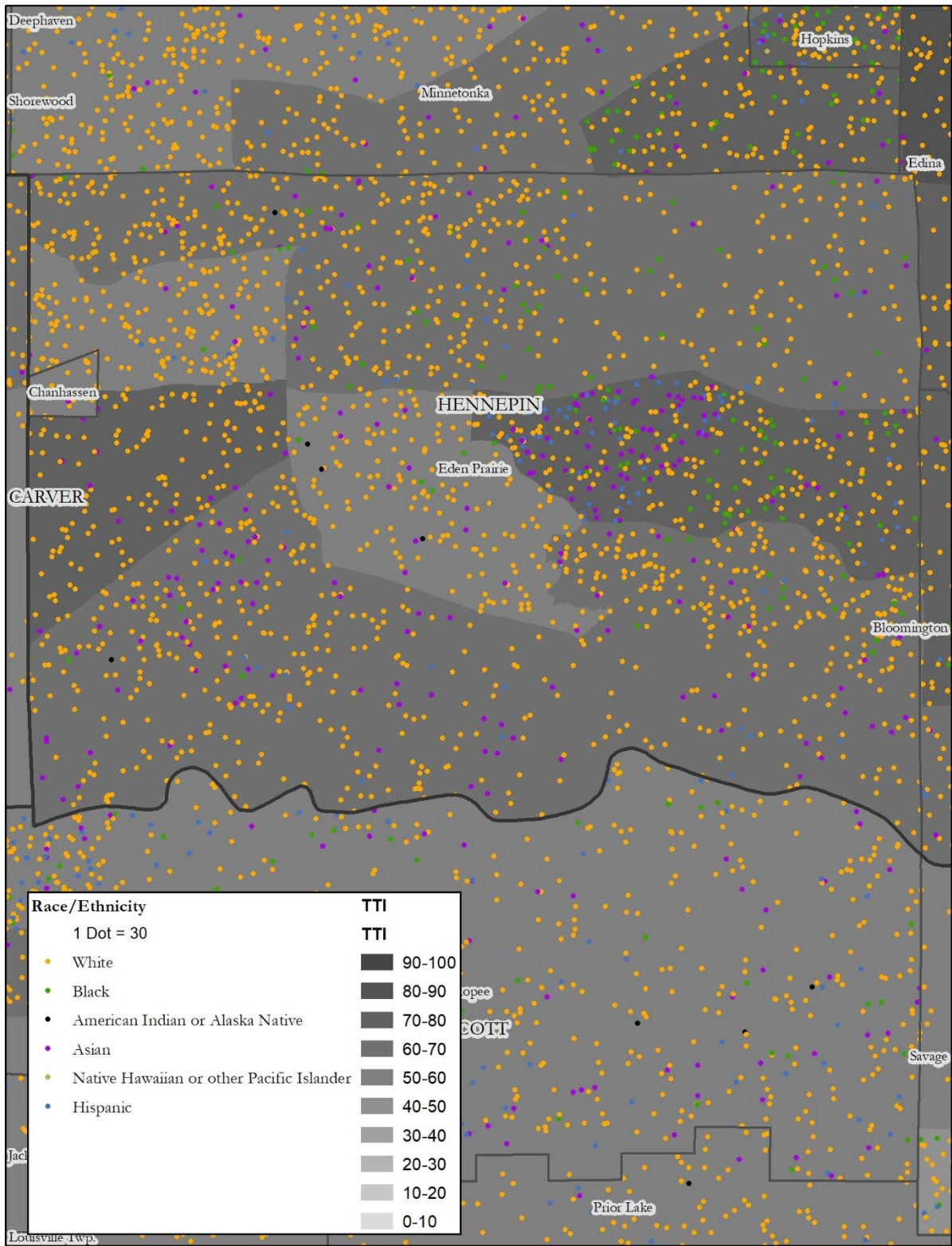
Map 39: Bloomington, Race, Transit Trips Index



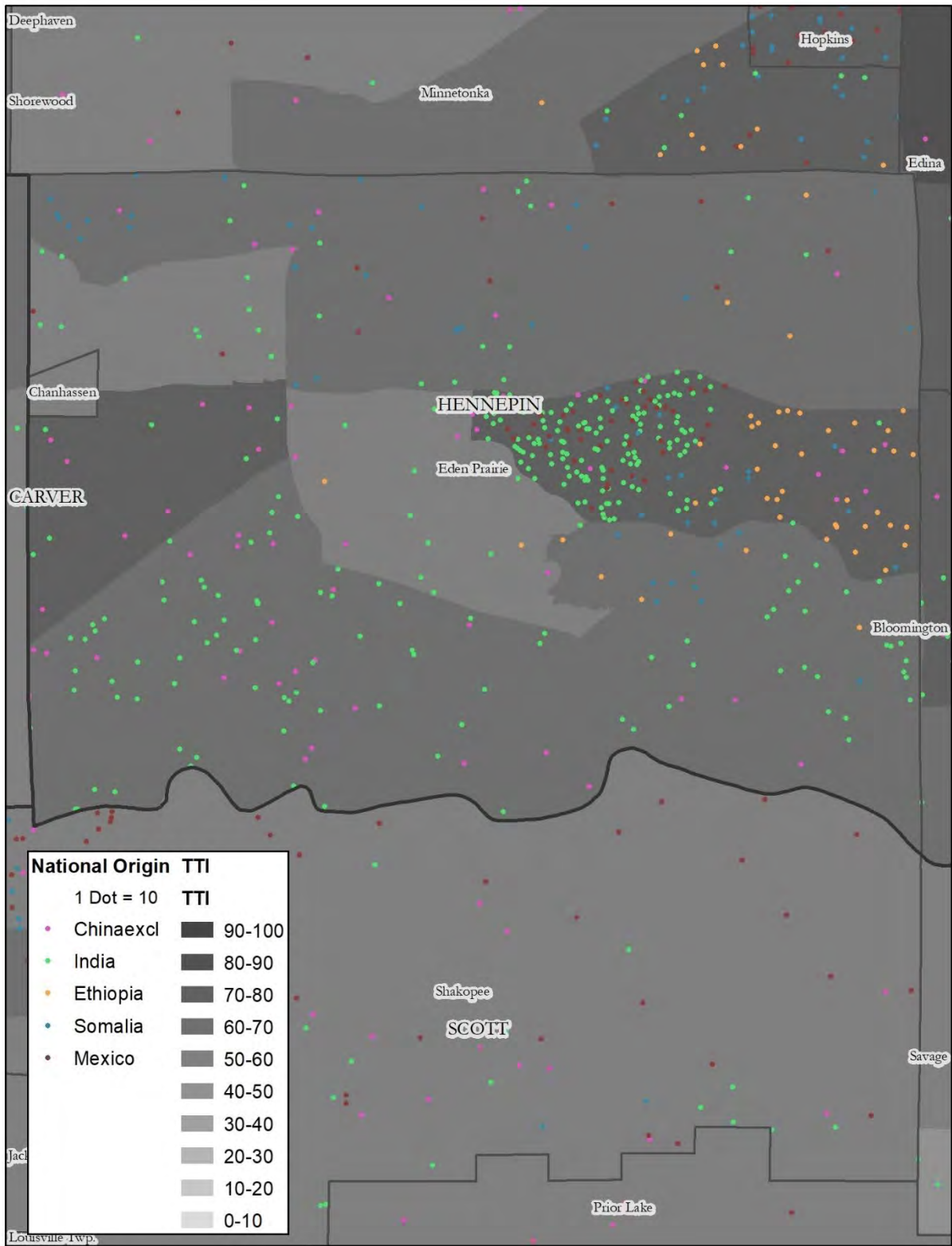
Map 40: Bloomington, National Origin, Transit Trips Index



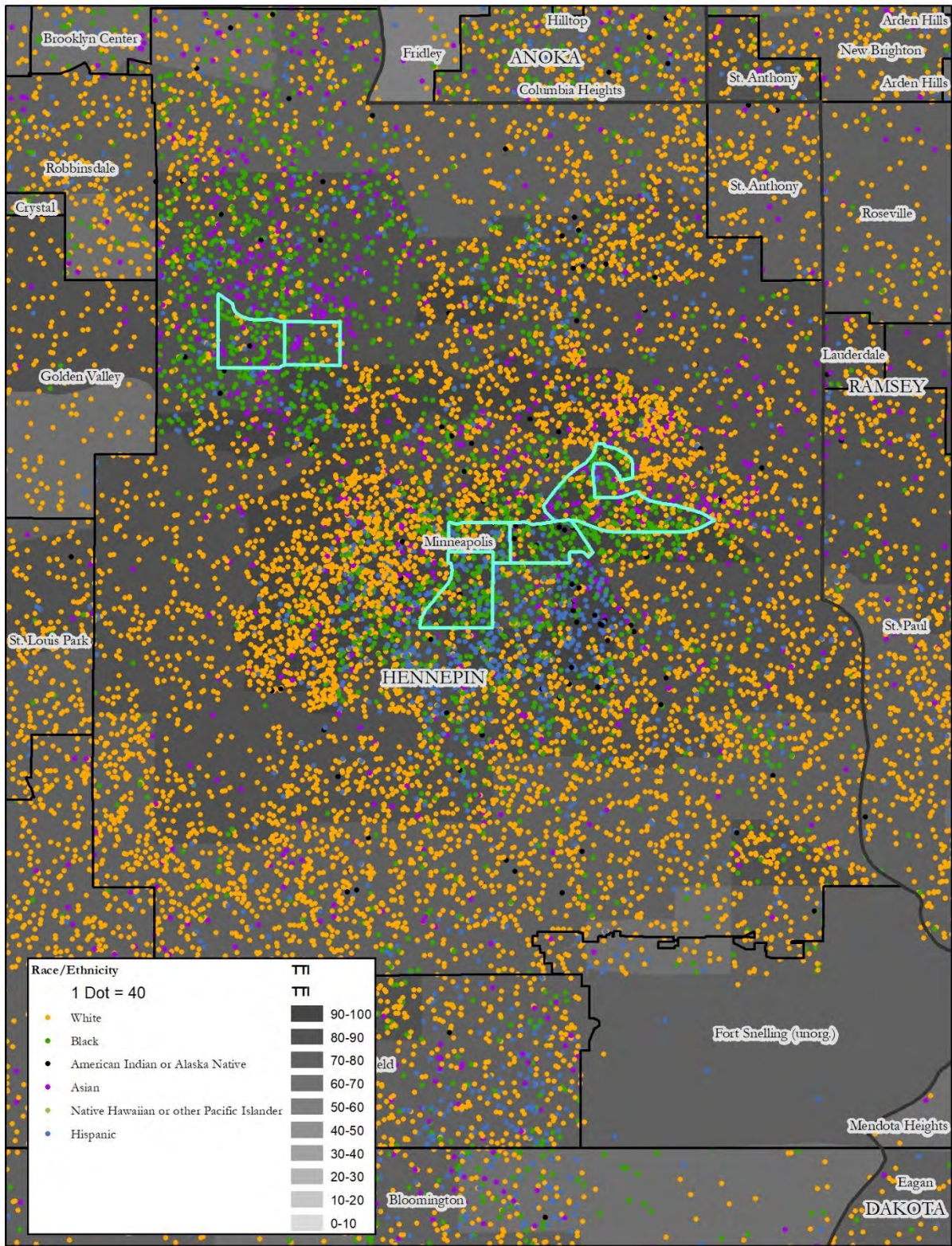
Map 41: Eden Prairie, Race, Transit Trips Index



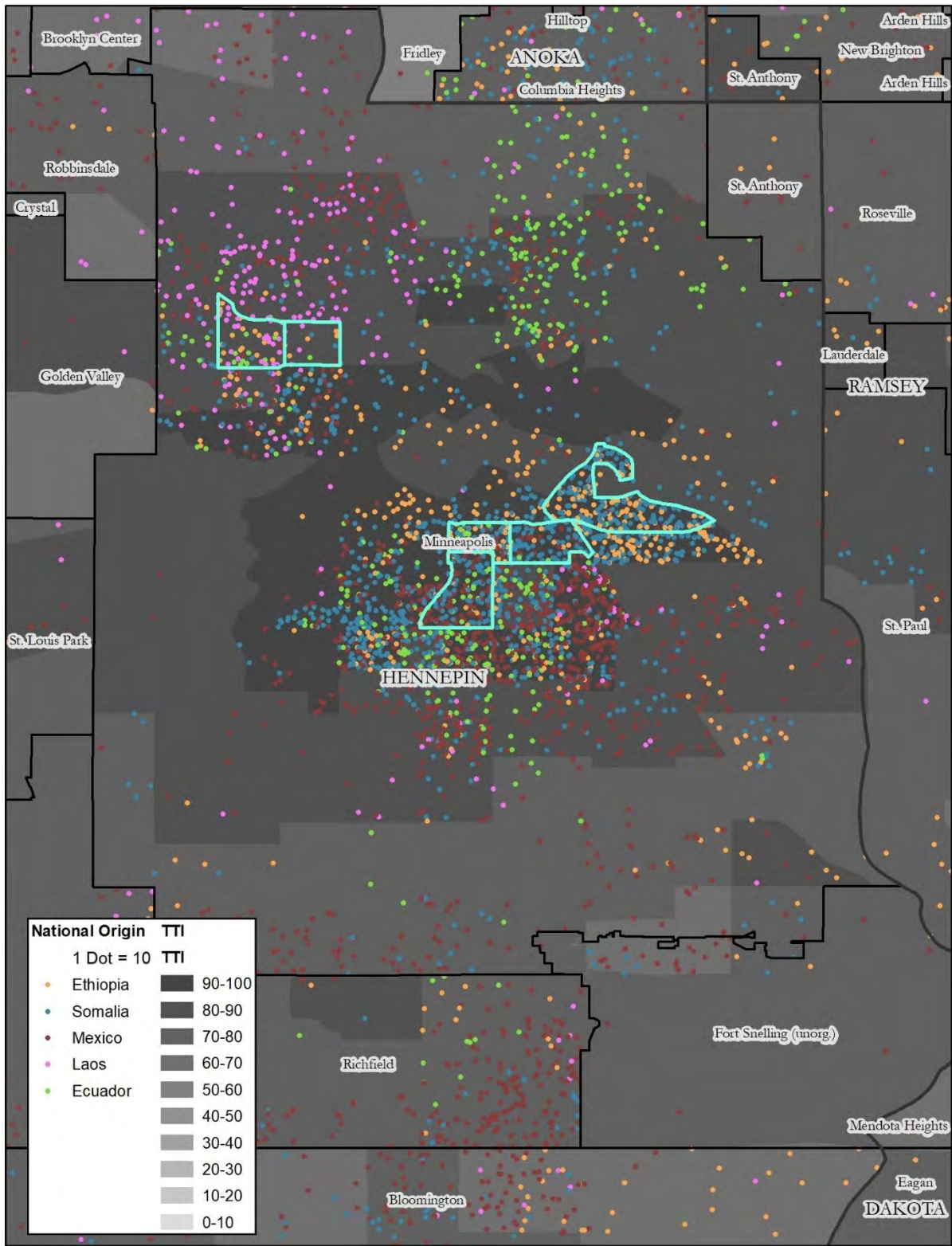
Map 42: Eden Prairie, National Origin, Transit Trips Index



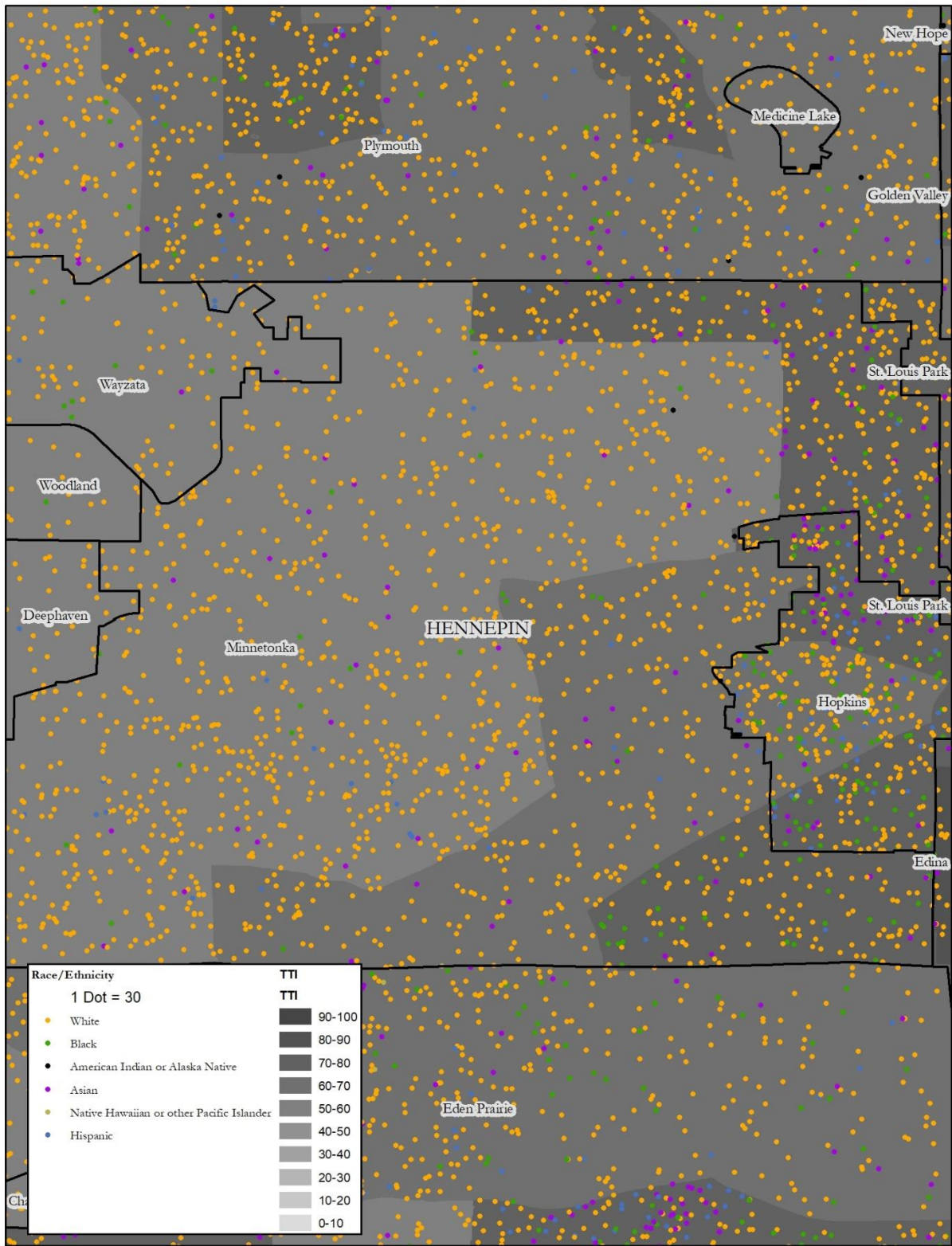
Map 43: Minneapolis, Race, Transit Trips Index



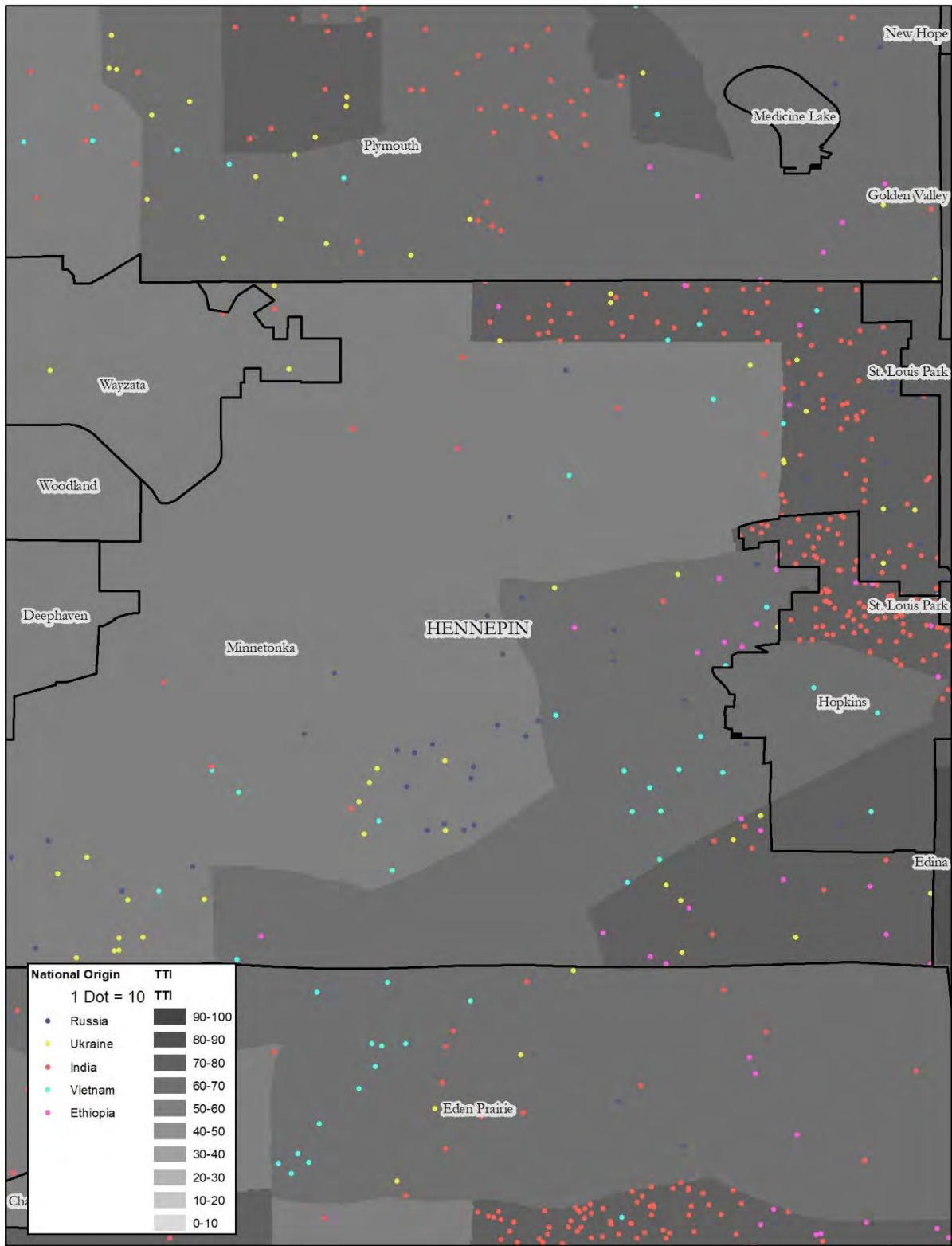
Map 44: Minneapolis, National Origin, Transit Trips Index



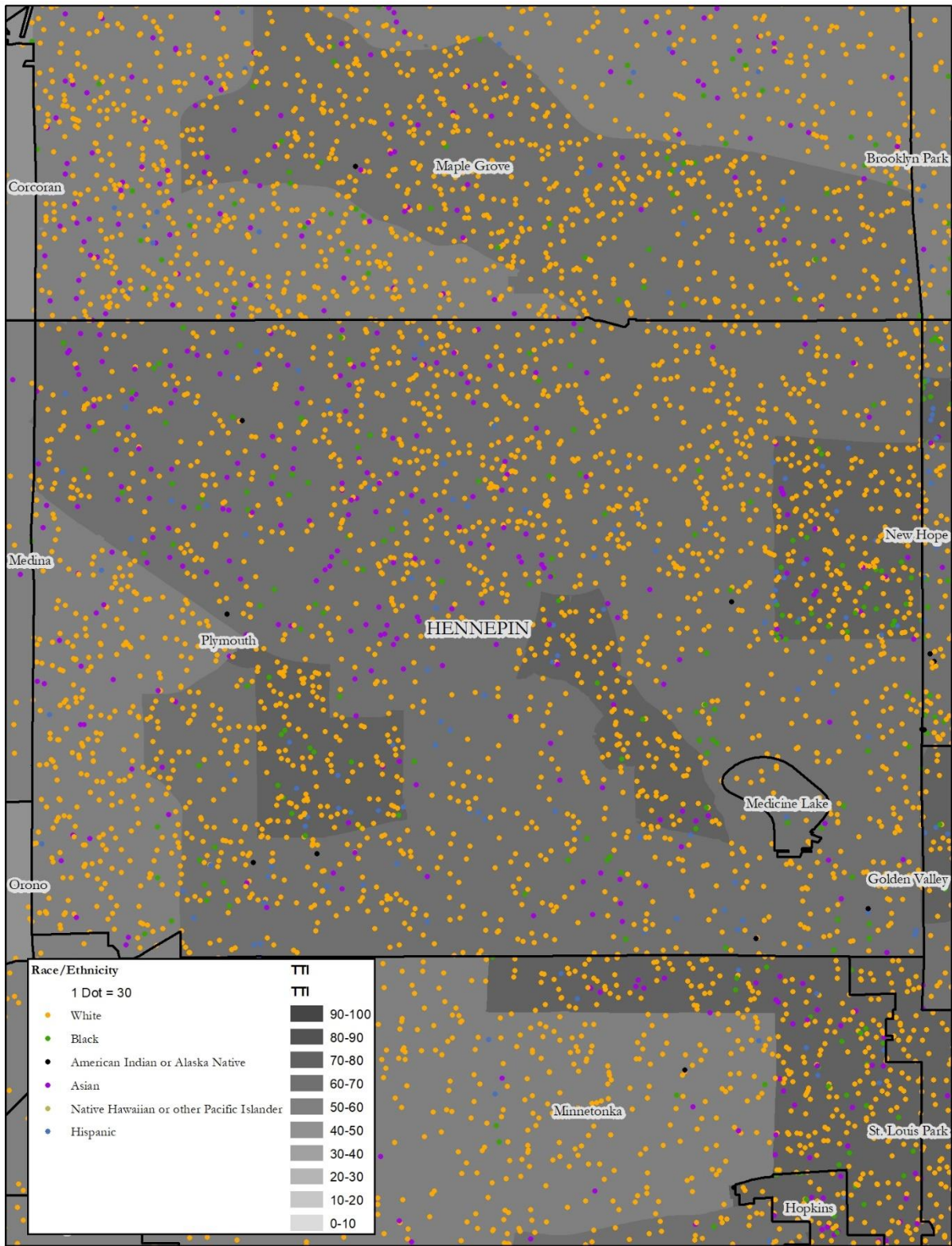
Map 45: Minnetonka, Race, Transit Trips Index



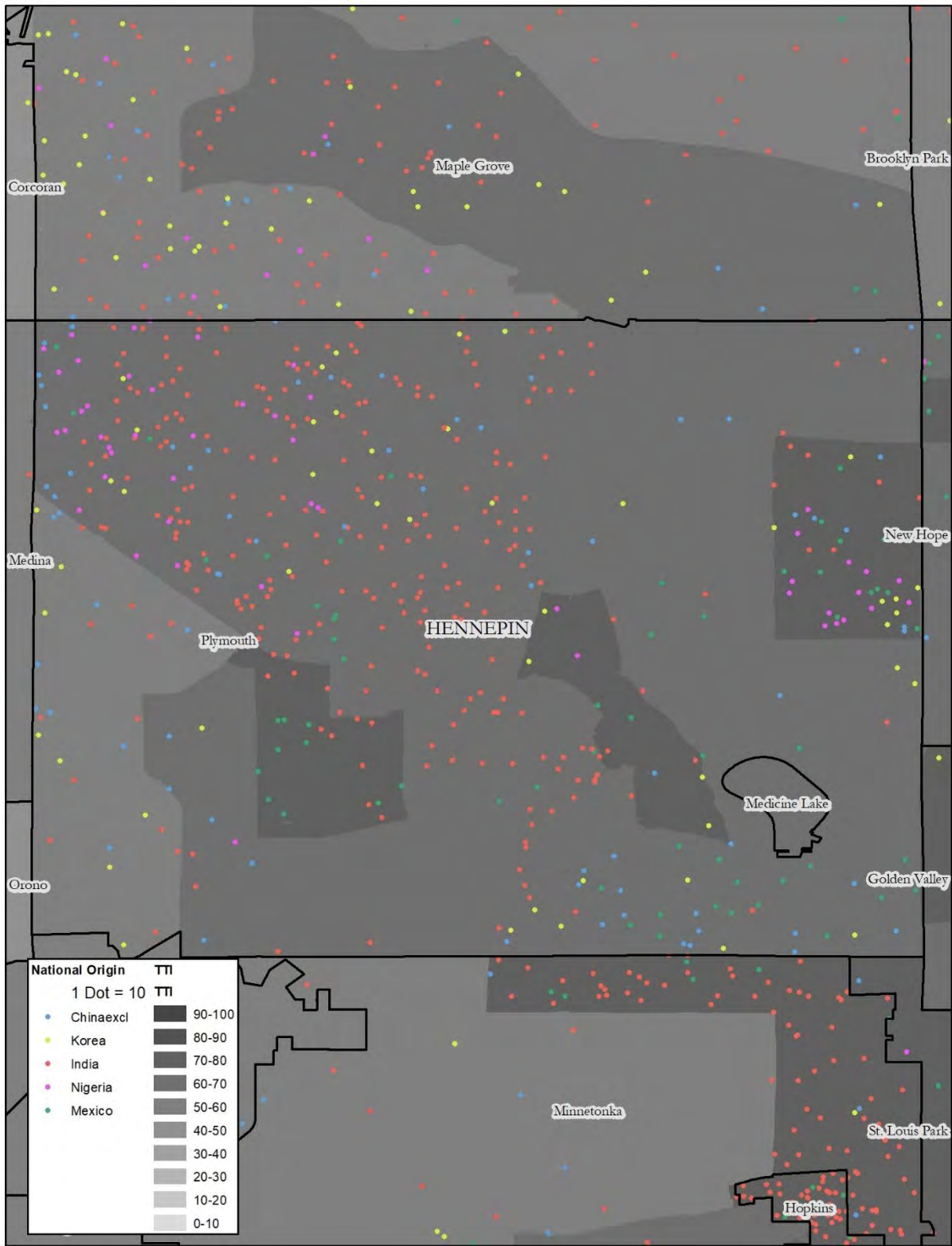
Map 46: Minnetonka, National Origin, Transit Trips Index



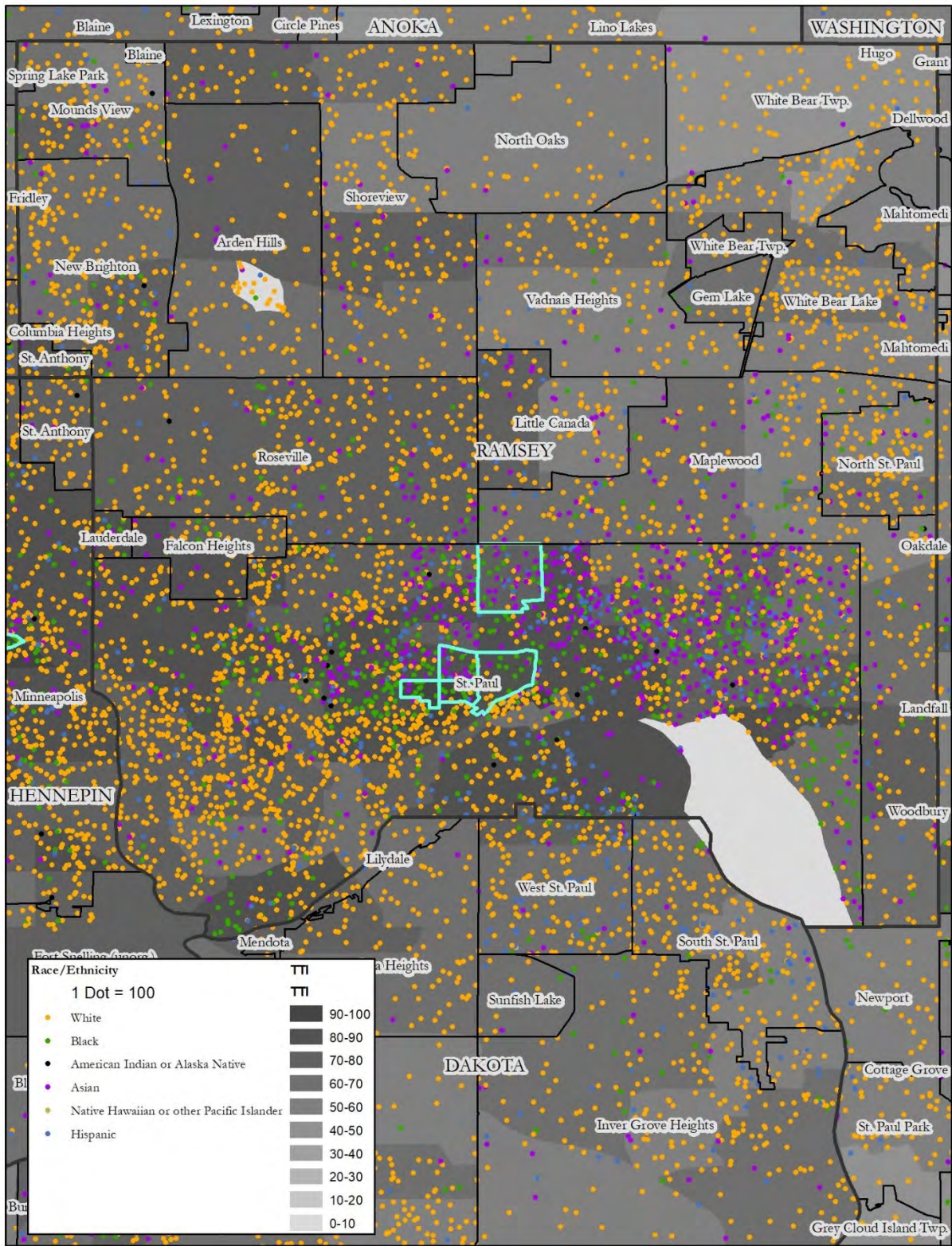
Map 47: Plymouth, Race, Transit Trips Index



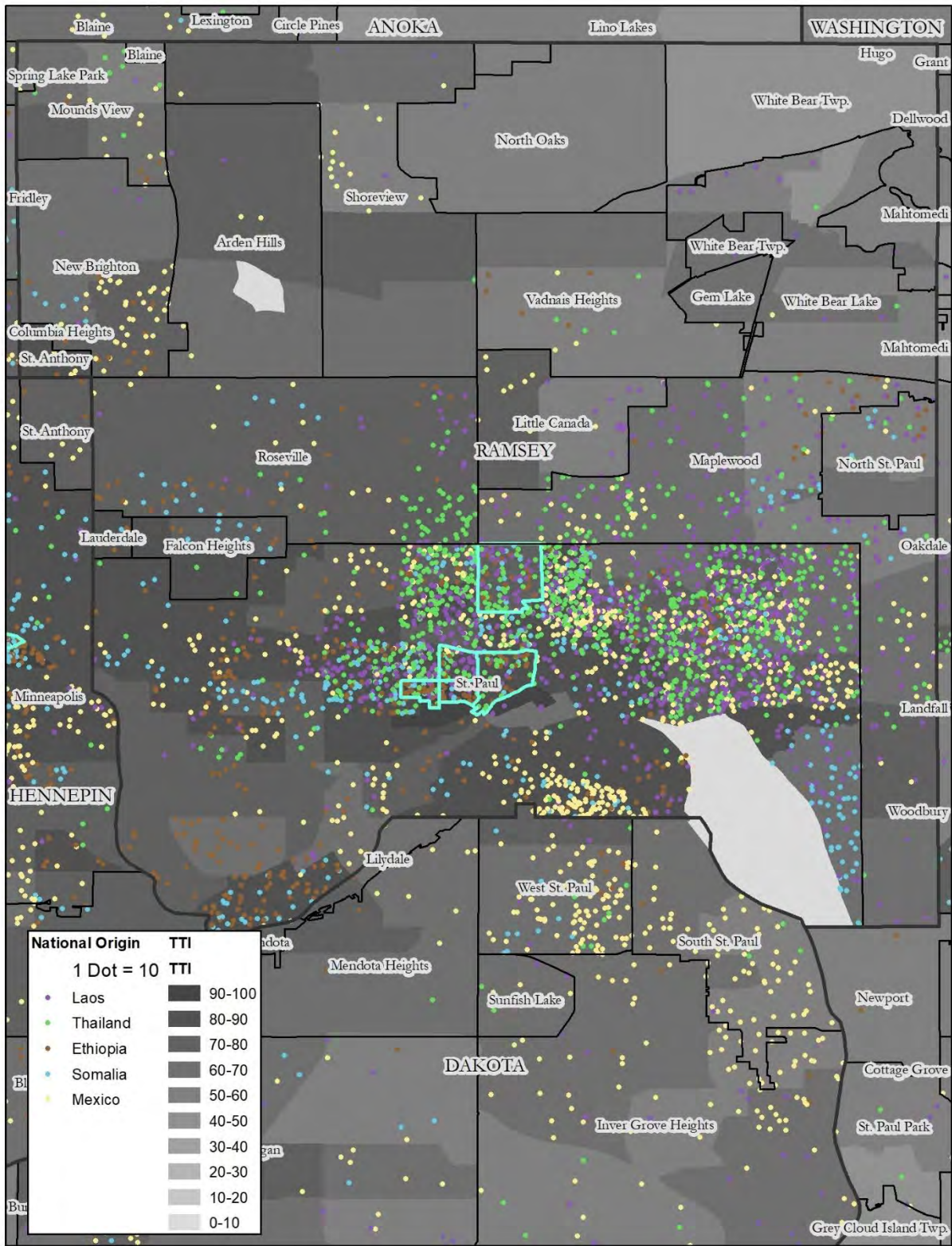
Map 48: Plymouth, National Origin, Transit Trips Index



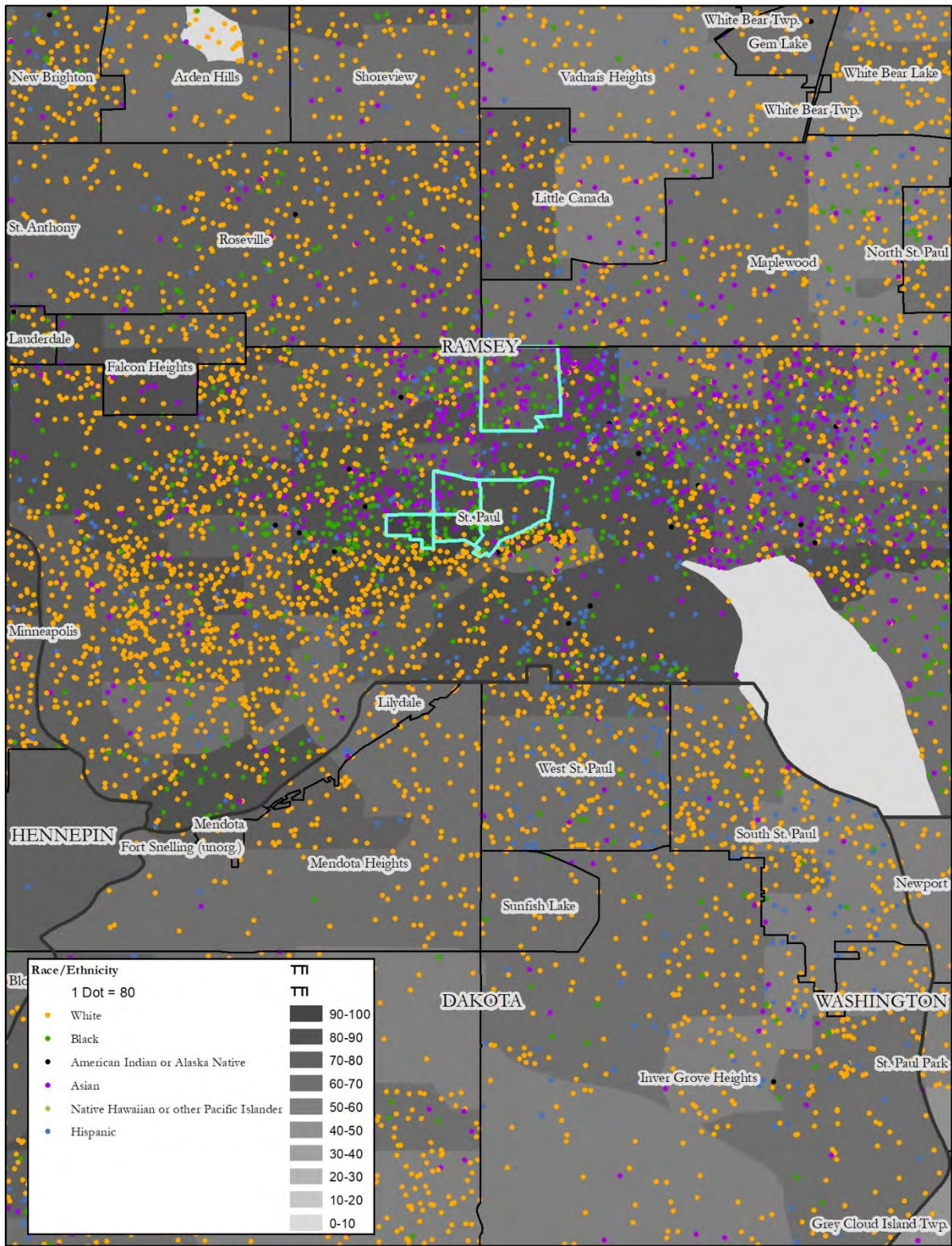
Map 49: Ramsey County, Race, Transit Trips Index



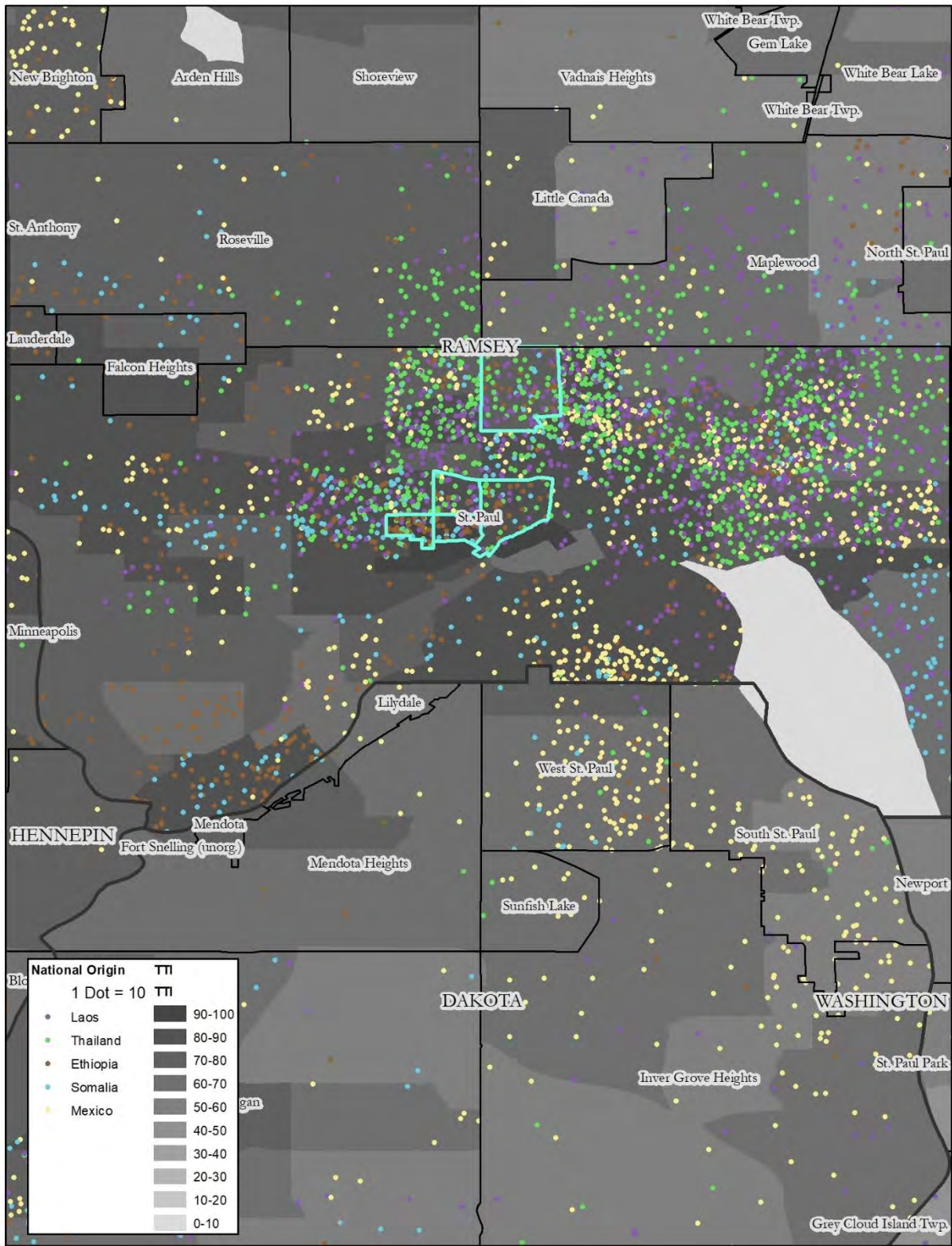
Map 50: Ramsey County, National Origin, Transit Trips Index



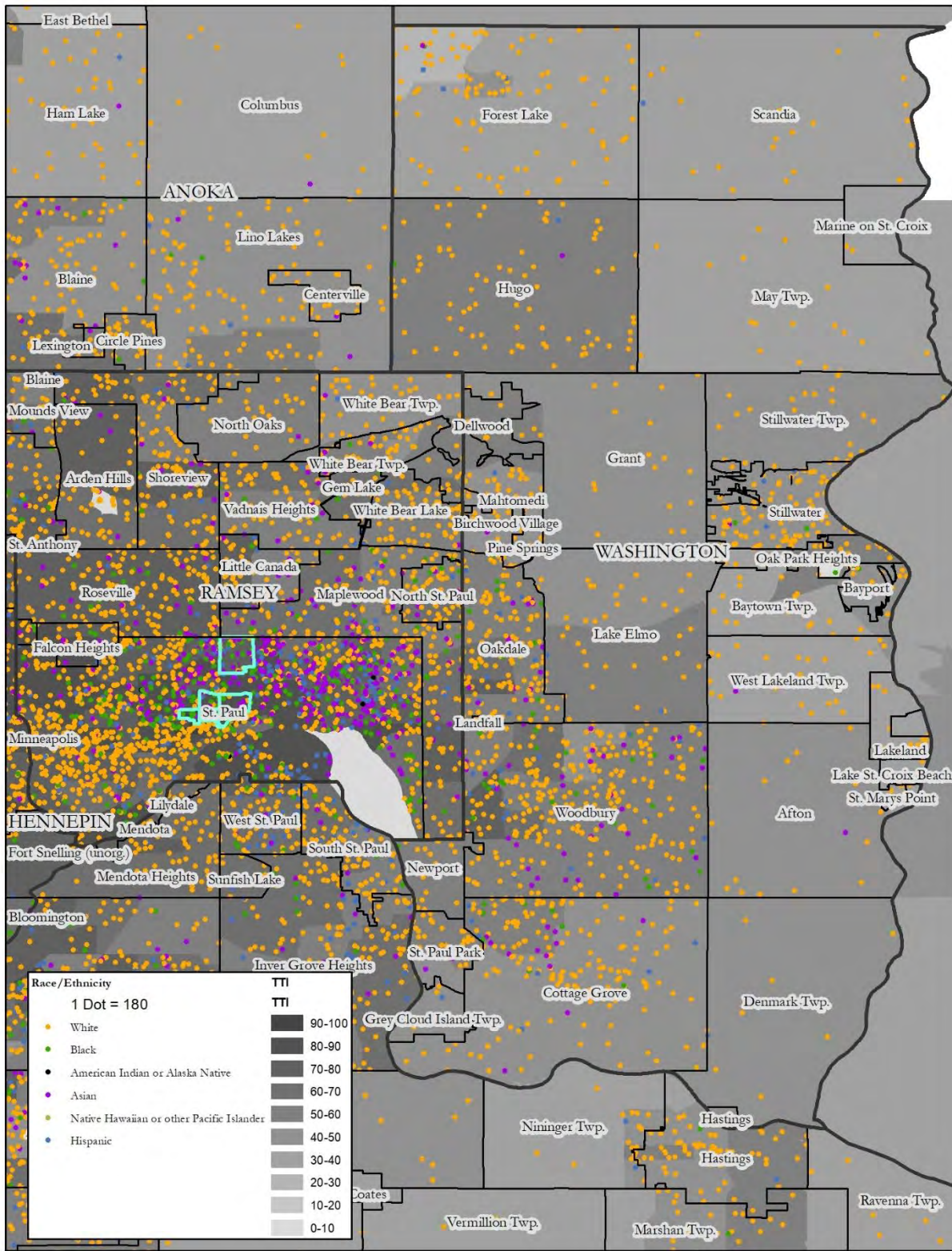
Map 51: St. Paul, Race, Transit Trips Index



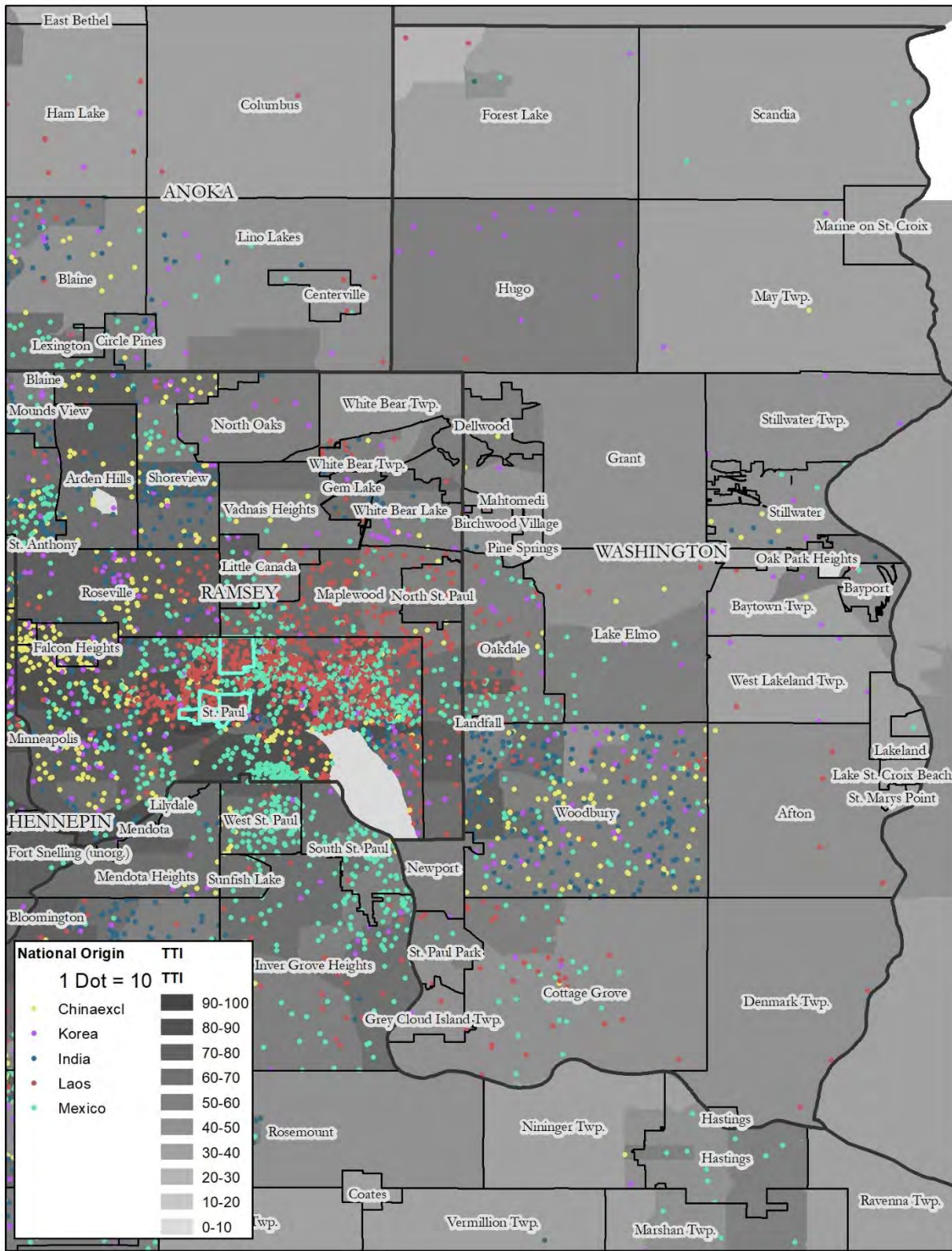
Map 52: St. Paul, National Origin, Transit Trips Index



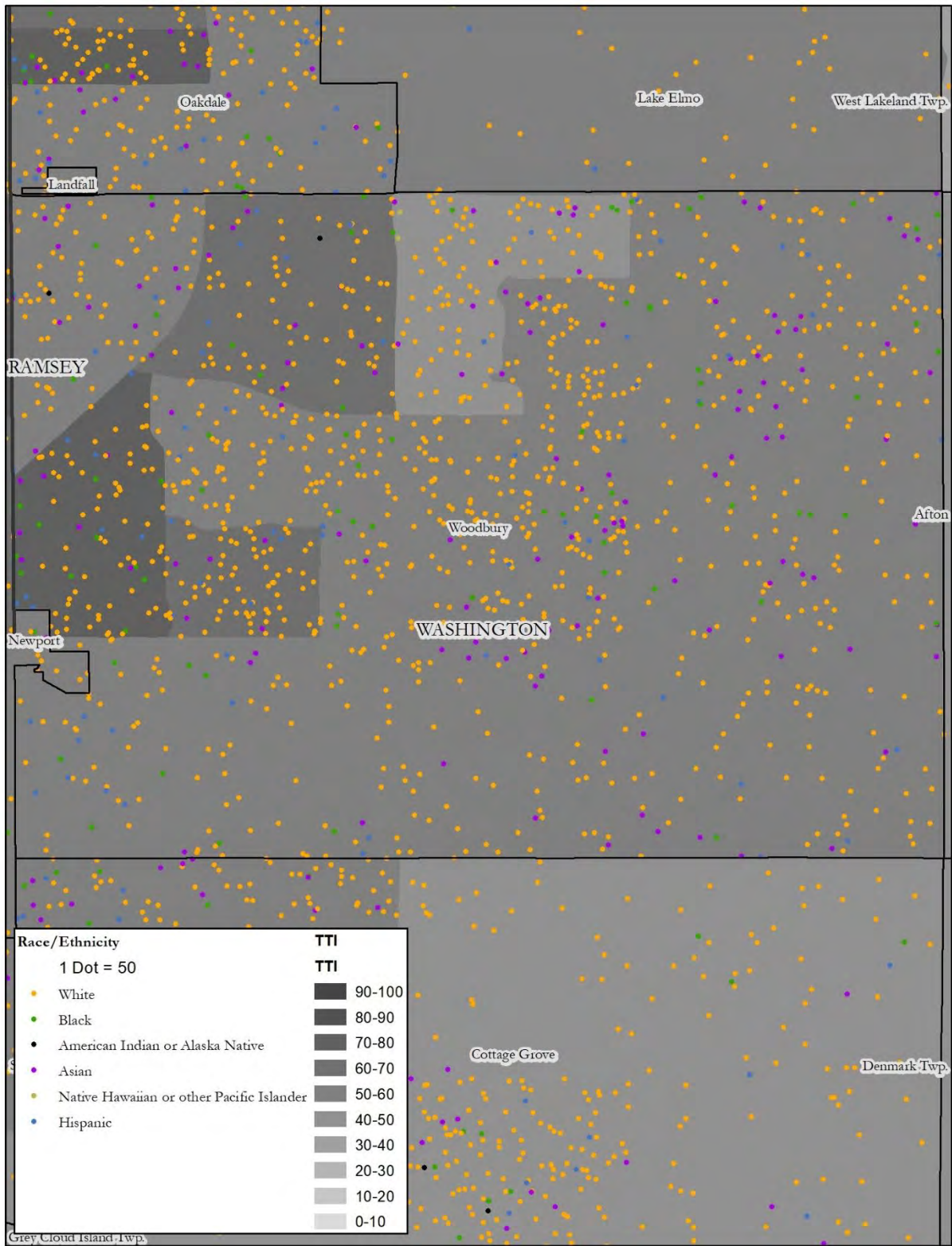
Map 53: Washington County, Race, Transit Trips Index



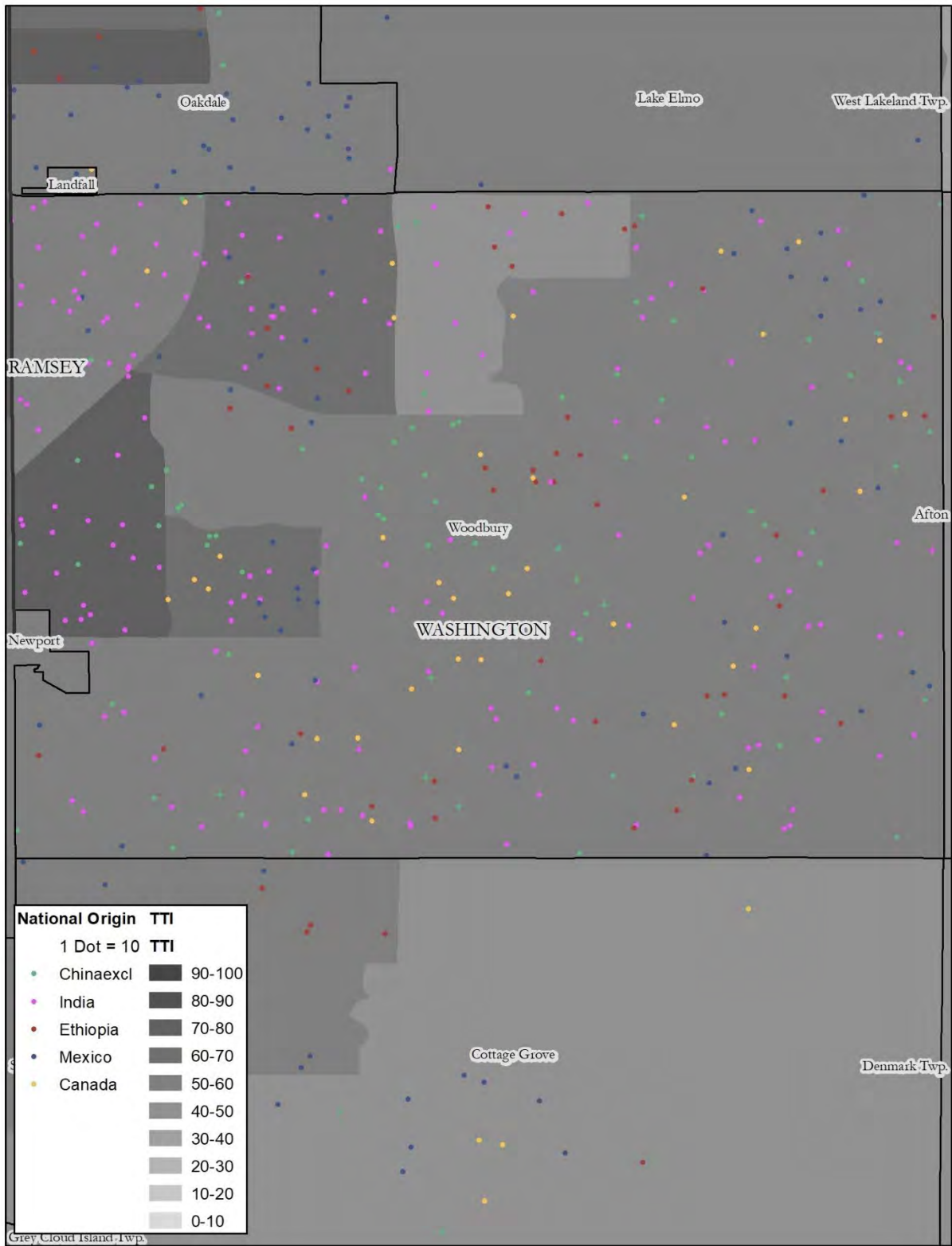
Map 54: Washington County, National Origin, Transit Trips Index



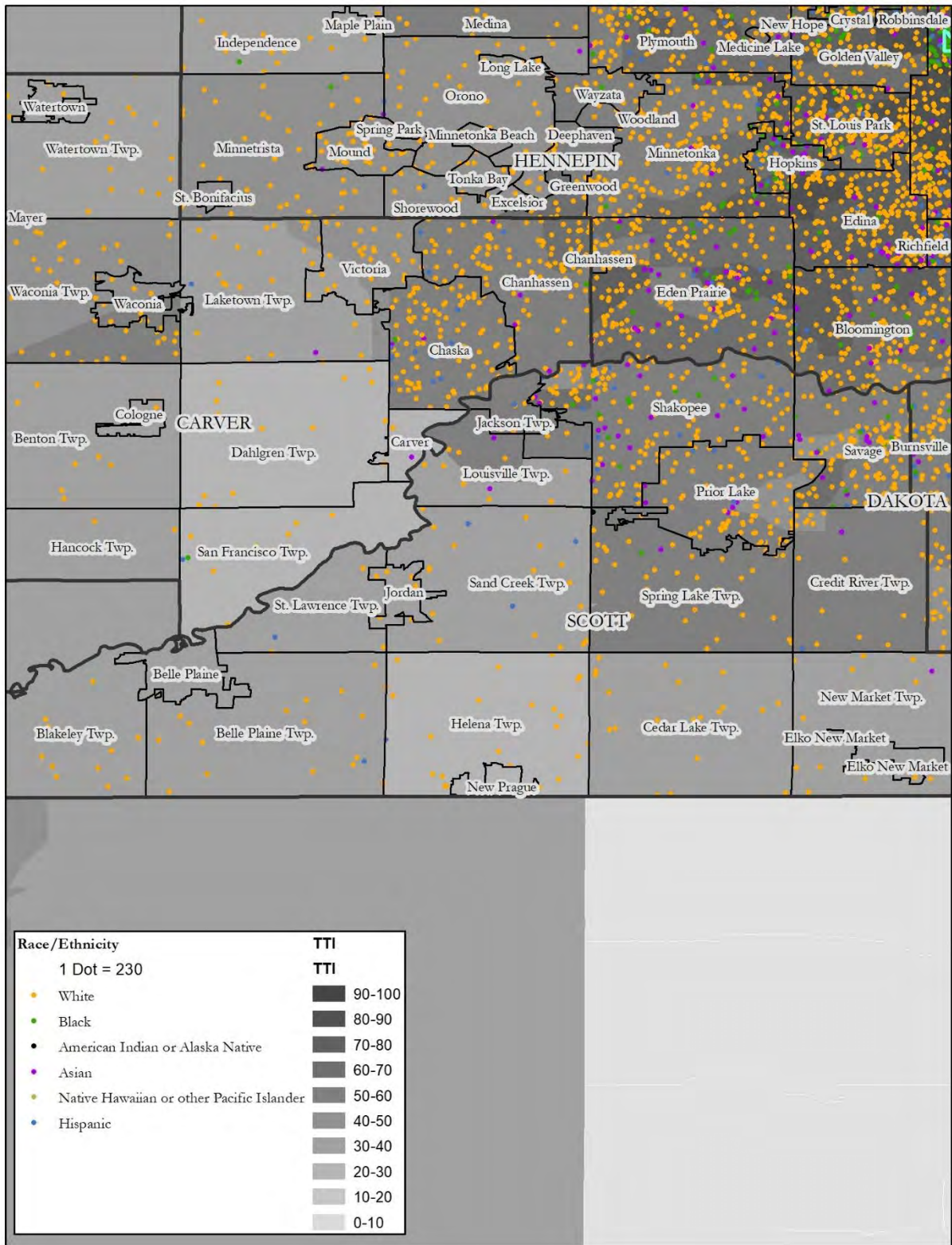
Map 55: Woodbury, Race, Transit Trips Index



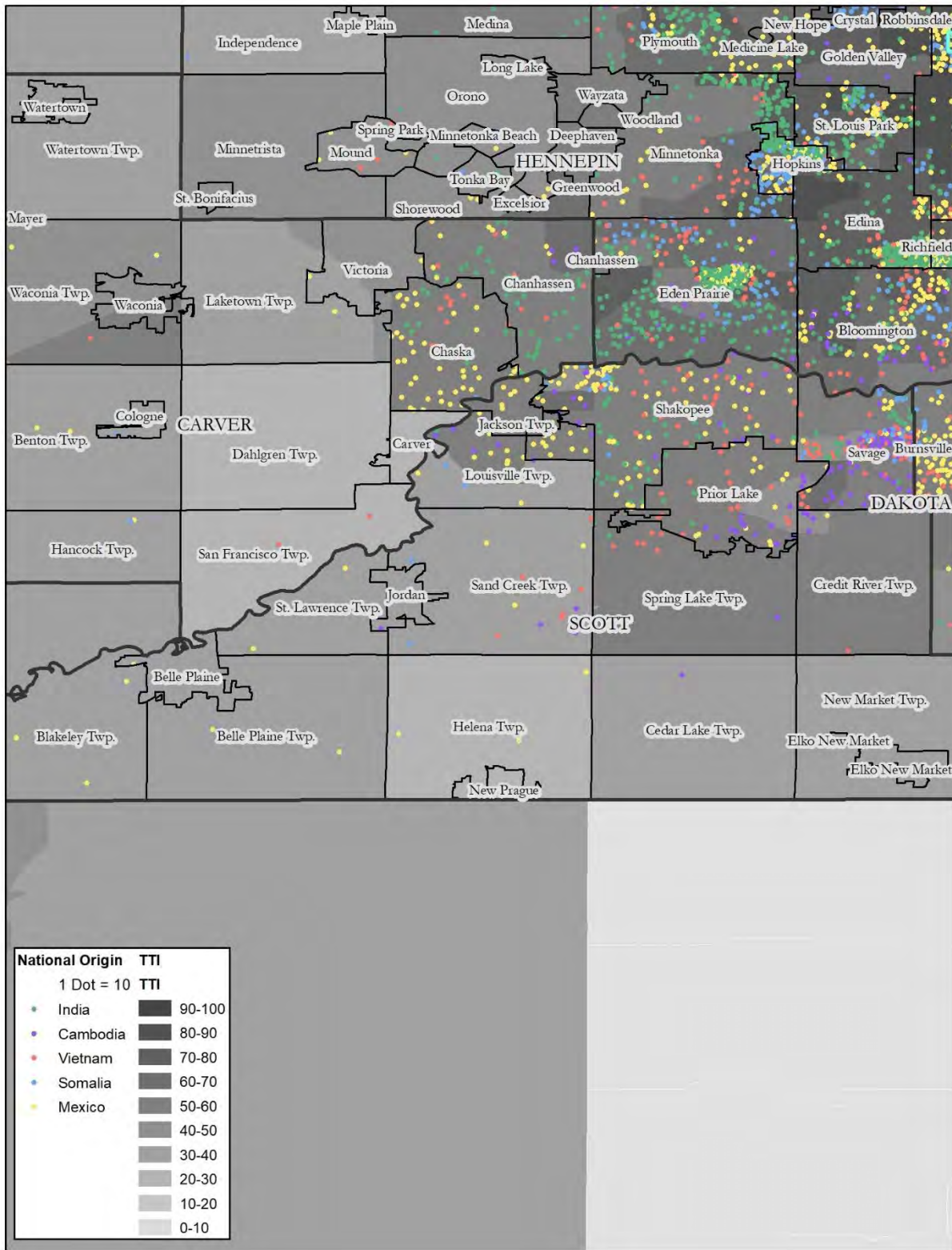
Map 56: Woodbury, National Origin, Transit Trips Index



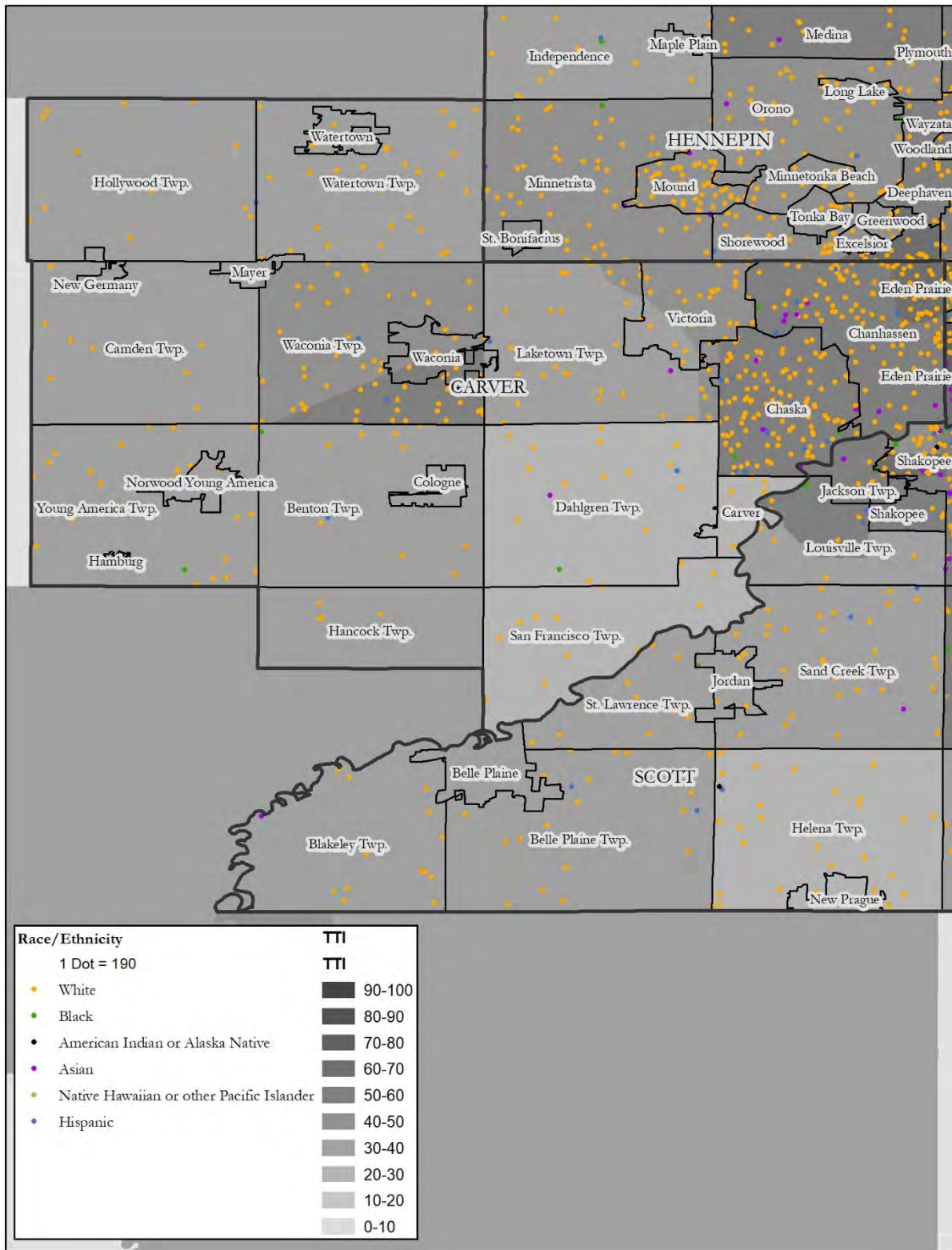
Map 57: Scott County, Race, Transit Trips Index



Map 58: Scott County, National Origin, Transit Trips Index



Map 59: Carver County, Race, Transit Trips Index



Map 60: Carver County, National Origin, Transit Trips Index

