Section 5: Transportation Equity Benefit Analysis

Summary

The State of Rhode Island's Transportation Equity Benefit Analysis, or TEBA, was developed by the Rhode Island Division of Statewide Planning. The TEBA identifies and geographically locates Select Population Groups (SPG) in the State of Rhode Island that are protected from discrimination under the law, and groups that may face transportation challenges. In compliance with Federal requirements, the TEBA also determines how the state's transportation investments outlined in fiscally constrained years (FFY 2022-2025) of the FFY 2022-2031 State Transportation Improvement Program (STIP) impact these select population groups. The select population groups within the TEBA are either directly protected under Title VI of the Civil Rights Act of 1964, or can be linked to protected populations under Title VI.

Objective

The objective of the TEBA is to assess the distribution of transportation investments across select population groups for the first four fiscally constrained years (FFY 2022-2025) of the FFY 2022–2031 STIP.

Population Identification

In an effort to provide the most thorough TEBA, the population identification component was conducted in two parts:

1. Data collection and research on equity and its pertinence to federal statutory requirements and Executive Orders, focused on the following select population groups:
    a. Minority individuals
        - *Black or African American*
        - *American Indian and Alaskan Native*
        - *Asian*
        - *Native Hawaiian and Other Pacific Islander*
        - *Other*
        - *Two or More Races*
        - *Hispanic or Latino Origin*
    b. Individuals in Poverty/Low-Income groups

2. Data collection and research of other select population groups protected from discrimination under federal laws that influence transportation decision-making:
    a. Female Householder with children under 18
    b. School-age Children (ages 5-19)
    c. Aging Individuals (≥65)
    d. Individuals with a Disability
    e. Individuals with limited English proficiency (LEP), including the top five LEP language groups in Rhode Island, as follows:
        - *Spanish*
        - *Other Indo-European*
        - *French, Haitian, or Cajun*
        - *Other Asian and Pacific Island*
        - *Chinese (incl. Mandarin and Cantonese*

What is Environmental Justice?

Environmental Justice is the fair treatment and meaningful involvement of all people regardless of race, color, national origin, or income with respect to the development, implementation, and enforcement of environmental laws, regulations, and policies. - U.S. EPA[1]

1   U.S. Environmental Protection Agency (EPA). "What is Environmental Justice?" Environmental Justice. 2015. 05 Oct. 2015. http://www.epa.gov/environmentaljustice/.

An Overview of Federal Nondiscrimination Executive Orders, Statutes & Authorities

The following is an overview of the Environmental Justice (EJ) and Title VI federal nondiscrimination executive orders, statutes and authorities which the TEBA follows. The overview also includes information on protected populations addressed within the TEBA, and information on Metropolitan Planning Organization (MPO) responsibilities. The Division of Statewide Planning serves as staff to the Rhode Island State Planning Council, MPO for the State of Rhode Island.

Environmental Justice

Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations was signed in 1994.

Overview: Executive Order 12898 mandates that each Federal agency develop an EJ strategy that identifies and addresses disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority and low-income populations. A Federal agency's EJ strategy must list programs, policies,

planning, and participation processes that, at a minimum:

- Promote enforcement of all health and environmental authorities in areas with minority and low-income populations.

- Ensure greater public participation.

- Improve research and data collection relating to the health and environment of minority and low-income populations.

- Identify differential patterns of consumption of natural resources among minority and low-income populations[1].

Populations protected and addressed:
Minority, Low-Income

Responsibility: MPOs are charged with evaluating their plans and programs for EJ sensitivity and expanding outreach efforts to low-income, minority, and other potentially disadvantaged populations, as part of the U.S. Department of Transportation's certification requirements.

Title VI

Title VI was enacted as part of the landmark Civil Rights Act of 1964.

Overview: Title VI prohibits discrimination on the basis of race, color, and national origin in programs receiving federal financial assistance.

Populations protected and addressed: Race, color, national origin, including minority (also protected within E.O. 12898).

Responsibility: As a recipient of U.S. Department of Transportation Funds, the MPO is responsible for complying with U.S. DOT regulations related to Title VI.[2]

Other Federal Nondiscrimination Statutes and Authorities

In addition to Title VI, there are other federal nondiscrimination statutes that afford legal protection to specific populations which were considered in the population identification component. Those populations include the following:

Non-discrimination of Age

Age Discrimination Act of 1975: Pursuant to regulations prescribed under Section 6103 of this title, no person in the United States shall, on the basis of age, be excluded from participation, in be denied the benefits of, or be subjected to discrimination under, any program or activity receiving Federal financial assistance.[3]

Populations protected and addressed:
Individuals of any and all ages.

Non-discrimination of Individuals with Disabilities

The Americans with Disabilities Act of 1990 (ADA),[4] as amended (42 U.S.C. § 12101 et seq.), and Section 504 of the Rehabilitation Act of

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1 Federal Highway Administration (FHWA). "Environmental Justice Reference Guide: What is Environmental Justice?." Reference Guide 2015. Web. 06 Sept. 2017. https://www.fhwa.dot.gov/environment/environmental_justice/ publications/reference_guide_2015/section04.cfm.

2 Federal Highway Administration (FHWA). "Environmental Justice Reference Guide: What is Environmental Justice?". Reference Guide 2015. Web. 05 Oct. 2015. https://www.fhwa.dot.gov/environment/environmental_justice/ publications/reference_guide_2015/section00.cfm

3 U.S. Department of Labor (DOL). "Age Discrimination Act of 1975". Web. 05 Oct. 2015. http://www.dol.gov/oasam/regs/statutes/age_act. htm

4 Americans with Disabilities Act (ADA). "Americans with Disabilities Act of 1990, As Amended". 25 Mar. 2009. Web. 5 Oct. 2015. http://www. ada.gov/pubs/ada.htm.

1973[5] prohibit discrimination on the basis of disability. The ADA provides comprehensive civil rights protections to any qualified person with a disability and it forbids discrimination not only in government programs, benefits and services, but also in employment practices, access to public accommodations, and telecommunications.

Populations protected and addressed:
Individuals with disabilities

Non-discrimination of National Origin and Individuals with Limited English Proficiency (LEP)

Executive Order 13166, Improving Access to Service Persons with Limited English Proficiency was signed into law in 2000 and clarifies Title VI of the Civil Rights Act of 1964 with regards to national origin discrimination against persons with limited English proficiency. "Executive Order 13166 requires federal agencies to examine the services they provide, identify any need for services for those with limited English proficiency, and develop and implement a system to provide those services so LEP persons can have meaningful access to them. Compliance standards for recipients of federal funds were developed by the U.S. Department of Justice and are articulated in the policy document "Enforcement of the Civil Rights Act of 1964—National Origin Discrimination against Persons with Limited English Proficiency (2002)."[6]

Populations protected and addressed:
Individuals of any national origin, as well as individuals with limited English proficiency.

Responsibility: As a recipient of U.S. Department of Transportation funds, the MPO is responsible for complying with regulations related to non-discrimination according to age, individuals with disabilities, national origin, and individuals with limited English proficiency.

Demographic and Socioeconomic Profile Data

Methodology

After evaluating the Federal requirements and populations specifically protected under the law, a list of Select Population Groups (SPG) was finalized for the TEBA.

Within part one of the population identification component of the TEBA, data was collected to examine the following select population groups in compliance with Environmental Justice Executive Order 12898 and Title VI (minority individuals):

1. Data collection and research on equity and its pertinence to federal statutory requirements and Executive Orders, focused on the following select population groups:
   a. Minority individuals
      - *Black or African American*
      - *American Indian and Alaskan Native*
      - *Asian*
      - *Native Hawaiian and Other Pacific Islander*
      - *Other*
      - *Two or More Races*
      - *Hispanic or Latino Origin*
   b. Individuals in Poverty/Low-Income groups

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5   U.S. Department of Health and Human Services (HHS). "Your Rights Under Section 504 of the Rehabilitation Act" Jun 2006. Web. 5 Oct. 2015. http://www.hhs.gov/sites/default/files/ocr/civilrights/resources/fact-sheets/504.pdf

6   U.S. Department of Justice. "Executive Order 13166: Improving Access to Services for Persons with Limited English Proficiency ". 07 Aug 2015. Web. 5 Oct. 2015. http://www.justice.gov/crt/executive-order-13166.

The second part of the population identification component, as guided by other federal regulations, identified the following demographic or socioeconomic select population groups which may face transportation challenges:

   c. Female Householder with Children under 18
   d. School-age Children (ages 5-19)
   e. Aging Individuals (≥65)
   f. Individuals with a Disability
   g. Individuals with limited English proficiency (LEP), including the top five LEP language groups in Rhode Island, as follows:
- *Spanish*
- *Other Indo-European*
- *French, Haitian, or Cajun*
- *Other Asian and Pacific Island*
- *Chinese (including Mandarin and Cantonese*

Thresholds

Thresholds were developed in an effort to create a metric or screening tool to identify populations with a "significant presence." The "greater than or equal to the state average" threshold is intended to identify greater percentages of select population groups in the state. The threshold was utilized with the goal of identifying concentrated groups based on state averages without the intent of overlooking any "readily identifiable" populations. The numeric thresholds used to quantify a significant presence of the select population group vary per indicator. Select populations that are above the state average qualify as a significant presence. The "greater than or equal to the state average" threshold is used for all but one Select Population Group: individuals with limited English proficiency. For the limited English proficiency SPG, the Safe Harbor thresholds were used to ensure increased inclusivity. The MPO is in compliance

with Title VI obligations by incorporating Safe Harbor thresholds in the analysis.[7] Safe Harbor thresholds are typically applied to written documents, however the goal of the threshold remains within this analysis: to identify those populations with limited English proficiency using a threshold that is both inclusive and identifies multiple language groups within a given geography.

Data Source

American Community Survey (ACS)

The U.S. Census Bureau data product utilized in this analysis was the American Community Survey (ACS). The ACS is an ongoing annual sample-based survey of the United States population. The most recent 5-year estimates completed in 2019 was utilized for this analysis. The ACS data provides basic demographic information similar to the decennial Census, but also provides far greater detail on various demographic and socioeconomic characteristics, including the following relevant data that will be utilized in this analysis:

- Minority Individuals (Race)
- Hispanic or Latino Origin
- School Age Children (Ages 5-19)
- Aging Individual (Age ≥ 65)
  - Data Source = 2019 ACS Table DP05
- Individuals in Poverty/Low-Income (200% of Poverty Level)

7 U.S. Department of Health and Human Services. "Fact Sheet on Guidance to Federal Financial Assistance Recipients Regarding Title VI Prohibition against National Origin Discrimination Affecting Limited English Proficient (LEP) Persons". Web. 18 Sept. 2017. http://www.hhs.gov/civil-rights/ for-individuals/special-topics/limited-english-proficiency/fact-sheet-guidance/ index.html.

- Data Source = 2019 5-Year ACS Table S1701
- Female householder with children under 18
  - Data Source = 2019 5-Year ACS Table 11005
- Individuals with a Disability
  - Data Source = 2019 5-Year ACS Table S1810
- Individuals with limited English proficiency
  - Data Source = 2019 5-Year ACS Table B16001

The ACS is based on sample data, or a "snapshot," collected by the U.S. Census Bureau (as opposed to 100 percent counts of the population in the decennial Census). As a result, there is a noted margin of error (where available) indicated in each of the statewide averages where ACS data is utilized.

Population Totals

Due to the use of multiple data sources, and multiple American Community Surveys, the total population value varies per select population group. For example, the individuals in poverty/ low-income SPG utilizes 2019 ACS data from a survey with a total population count of 1,057,231. The individuals with limited English proficiency SPG also utilizes 2019 ACS data, however the total population count within that survey is equal to 1,002,559, which is limited to persons 5 years old and older.

Mapping

Data for each of the seven select population groups were mapped using Geographic Information Systems (GIS) to visually identify the locations of concentrated Select Population Groups. Using the GIS maps created, further analysis was conducted on transportation infrastructure projects in the FFY 2022-2025 STIP and potentially impacted groups to ensure nondiscrimination and the equitable distribution of transportation investments. The seven select population groups were mapped at the U.S. Census tract level for all Rhode Island tracts.

Demographic and socioeconomic factors were mapped using a thematic (quantitative progression) method to capture populations that may not meet or exceed the statewide average for that indicator; populations that may bypass inclusion in the "greater than or equal to" threshold were acknowledged for their select population group presence.

The following is a list of the nineteen maps created for the TEBA, per select population group:

1. Figure 5-4: Percentage of Minority Individuals in RI by U.S. Census Tract
   a. Figure 5-5: Percentage of Black or African American Individuals in RI by U.S. Census Tract
   b. Figure 5-6: Percentage of American Indian and Alaskan Native Individuals in RI by U.S. Census Tract
   c. Figure 5-7: Percentage of Asian Individuals in RI by U.S. Census Tract
   d. Figure 5-8: Percentage of Hawaiian and Other Pacific Islander Individuals in RI by U.S. Census Tract
   e. Figure 5-9: Percentage of Other Individuals in RI by U.S. Census Tract
   f. Figure 5-10: Percentage of Two or More Race Individuals in RI by U.S. Census Tract
   g. Figure 5-11: Percentage of Hispanic or Latino Origin Individuals in RI by U.S. Census Tract
2. Figure 5-12: Percentage of Individuals in Poverty or with a Low-Income in RI by U.S. Census Tract
3. Figure 5-13: Percentage of Female Householders with Children under 18 in RI by U.S. Census Tract

4. Figure 5-14: Percentage of School-Age Children in RI by U.S. Census Tract

5. Figure 5-15: Percentage of Aging Individuals in RI by U.S. Census Tract

6. Figure 5-16: Percentage of Individuals with Disabilities in RI by U.S. Census Tract

Maps using the state average threshold were produced for limited English proficiency and the top five limited English proficiency language groups. Thematic maps for the limited English proficiency category would have yielded very few tract results, as some of the top five language groups only have one or two Census tracts represented as a significant presence using the Safe Harbor threshold.

7. Figure 5-17: Percentage of Limited English Proficiency (LEP) Individuals in RI by U.S. Census Tract
    a. Figure 5-18: Percentage of LEP Individuals in RI by U.S. Census Tract - Spanish
    b. Figure 5-19: Percentage of LEP Individuals in RI by U.S. Census Tract – Other Indo-European
    c. Figure 5-20: Percentage of LEP Individuals in RI by U.S. Census Tract – French, Haitian, or Cajun
    d. Figure 5-21: Percentage of LEP Individuals in RI by U.S. Census Tract – Other Asian and Pacific Island
    e. Figure 5-22: Percentage of LEP Individuals in RI by U.S. Census Tract – Chinese (incl. Mandarin and Cantonese)

Population Definitions

The following are the definitions of the select population groups included within the TEBA:

1—Minority (Environmental Justice and Title VI)

According to the Federal Transit Administration (FTA): "A minority population means any readily identifiable group or groups of persons who live in a geographic proximity, and if circumstances warrant, geographically dispersed or transient persons such as migrant workers or Native Americans who will be similarly affected by a proposed [transportation] program, policy or activity."[8]

Minority individuals include persons who identify as any one of the following groups defined by the U.S. Census Bureau in accordance with guidelines provided by the U.S. Office of Management and Budget (OMB):

- Black or African-American
- Hispanic or Latino of any race
- Asian American
- American Indian or Alaska Native
- Native Hawaiian or Pacific Islander

OMB considers Hispanic or Latino of any Race within the minority population because this statistic is a characteristic of ethnicity, it is tracked as a unique select population group. Additionally, for this analysis, we are including these categories:

- Other
- Two or more races

Accordingly, the "non-minority" population consists of all other persons not included in any of the above named groups, namely those

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8   U.S. Department of Transportation, Federal Transit Administration. "Environmental Justice Policy Guidance for Federal Transit Administration Recipients." 15 Aug 2012. Page 6. http://www.fta.dot.gov/documents/ FTA_ EJ_Circular_7.14-12_FINAL.pdf

identifying as non-Hispanic white alone. For this analysis, the category of "not Hispanic or Latino, white alone" has been subtracted from the state's total 2019 ACS population to determine the state's total minority population.

The minority category is protected under the Environmental Justice Executive Order 12898, and is also pertinent to Title VI.

State Average: 28% of the RI population (1,057,231) identifies as minority

Source: ACS 2019 Table DP05

Margin of error: +/- 958

2—Individuals in Poverty/Low-Income (Environmental Justice)

For the TEBA analysis, the ACS poverty thresholds (below 200% of poverty) were utilized. The ACS poverty thresholds were selected because the data featured the number of individuals within the population as opposed to the number of families or households in the state. It was concluded that data pertaining to individuals rather than number of families or households would be more inclusive. Additionally, the ACS threshold was selected to account for the state's high cost of living relative to nationally defined poverty thresholds, and to capture the greatest number of individuals living within the margins of poverty in Rhode Island.

According to the ACS's 2019 figures for poverty status in the past 12 months, "Below 200% of poverty" includes all those described as "in poverty" under the official definition, plus some people who have income above poverty but less than 2 times their poverty threshold." [9]

The U.S. Census Bureau established poverty status for individuals based on a combination of an individual's household composition, size, and income. The individuals in poverty/low-income category is protected in the Environmental Justice Executive Order 12898.

State Average: 26.9% of the RI population (273,377 of 1,016,506) lives at or below 200 percent of the national poverty level (poverty status in the last 12 months for individuals)

Source: ACS 2019 Table S1701

Margin of error: +/- 4,791

3—Female Households with Children Under 18

The female households with children under 18 select population group was included within the TEBA analysis to reflect the transportation challenges associated with being a single mother. Single mothers are often lower-earning families and are also more likely to cite location as a reason for difficulty, due to a lack of childcare facilities in lower-income neighborhoods – and perhaps, barriers to accessing affordable reliable transportation.

State Average: 8.0% of the RI population (32,766 of 410,489) lives in a female household (no male or husband present) with children under 18

Source: ACS 2019 Table B11005

Margin of error: +/- 1,382

4—School-Age Children

The school-age children select population group was included within the TEBA analysis to reflect the transportation challenges associated with a young demographic, who are typically dependent on adults for transportation, including trips to school. Children commute to school in many ways. Travel modes outlined within the "How Children Get to School" travel pattern report by the National Center for Safe Routes to School include: family vehicle, walking, biking, school bus, transit, or other.[10]

For the TEBA Analysis, the age range designated to school-age children is 5-19 years of age. There is comprehensive Census data to support the aforementioned age bracket, which was selected to be inclusive of students in both primary and secondary school.

State Average: 17.8% of the RI population (188,218 of 1,057,231) is aged 5-19

Source: ACS 2019 Table DP05

Margin of error:
» 5-9 years +/-1,223
» 10-14 years +/- 1,259
» 15-19 years +/- 580

5—Aging Population (≥65)

Aging individuals, as well as individuals of all ages are protected from age discrimination under the Age Discrimination Act of 1975. While each aging individual may not experience mobility challenges, the likelihood of a mobility challenge increases with an individual's age. The aging population group (aged 65 and older) was selected for analysis because this population qualifies for select mobility programs with an age requirement in the state. For example, the Rhode Island Public Transit Authority (RIPTA) offers individuals aged 65 and older the opportunity to ride a RIPTA bus at a discounted rate with a RIPTA "Reduced Fare Bus ID pass" at off-peak commuting times.

Aging individuals, in addition to individuals of all ages, are protected from age discrimination under the Age Discrimination Act of 1975.

State Average: 16.8% of the RI population is ≥ age 65 (177,889 of 1,057,231)

Source: ACS 2019 Table S1701

Margin of error:
» 65-74 years +/- 241
» 75-84 years +/- 868
» 85 years and over +/- 832

6—Individuals With A Disability

The individuals with a disability select population group was selected for inclusion within the TEBA as this group may experience limited travel mobility due to a disability. Additionally, this group may exhibit different travel patterns and needs than other population groups.

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10 National Center for Safe Routes to School. "How Children Get to School: School Travel Patterns From 1969-2009." November 2011. 07 Dec. 2015. http://saferoutesinfo.org/sites/default/files/resources/NHTS_school_travel_report_2011_0.pdf

Individuals with a disability were identified according to the ACS identification of serious difficulty with four basic areas of functioning—hearing, vision, cognition, and ambulation. The functional limitations namely include bathing and dressing, and difficulty performing errands such as shopping, or visiting a doctor's office alone.

State Average: 13.4% of the civilian non-institutionalized population (139,446 of 1,041,575) has a disability

Source: ACS 2019 Table S1810

Margin of error: +/- 2,569

7—Individuals with Limited English Proficiency (LEP)

The inability to speak English "very well" can be a barrier to accessing goods and services, including transportation. Additionally, identifying the limited English proficiency populations and their locations serves as a critical component to the Division of Statewide Planning's outreach efforts, particularly in assessing the need to develop the Division's publications and written materials in additional languages.

The 2019 5-Year ACS features a table entitled, "Language spoken at home by ability to speak English for the population 5 years and over." The LEP Federal Interagency website (Lep.gov) defines LEP individuals as those individuals that self-identified as speaking English "less than very well" in the aforementioned ACS table.[11]

Individuals with LEP are protected from discrimination under Executive Order 13166, Improving Access to Service Persons with Limited English Proficiency.

State Average: 8.5% of the RI population ≥ age 5 speaks English "less than very well" (84,875 of 1,002,559)

Source: ACS 2019 Table B16001

Margin of error: There are 12 language groups included within Table B16001. Each language group features a margin of error for the "speak English less than very well" value. Due to the combination of data values, there is not a margin of error available for the combined LEP language groups.

The 2019 5-year ACS Survey data was also used to identify the top 5-LEP language groups in the State of Rhode Island within the analysis.

1. Spanish
2. Other Indo-European
3. French, Haitian, or Cajun
4. Other Asian and Pacific Island
5. Chinese (incl. Mandarin and Cantonese)

Key Findings: Population Identification

Of the 240 Census tracts considered in the TEBA analysis, there are 10 without SPG tract designation, which suggests that 230 or 95.8% of Rhode Island's Census tracts are designated as select population group tracts from one or more select population groups (Figure 5-1: SPG Tracts and Non-SPG Tracts).

In addition, as depicted in Table 5-1, Select Population Group Figures, and Table 5-2, Presence of Select Population Groups in Rhode Island, the population identification component

of the TEBA suggests Rhode Island's highest state averages among the select population groups (SPG) include the minority population group (28.0% of Rhode Island's population) and the low-income population group (26.9% of Rhode Island's population).

The select population group with the greatest Census tract representation in the state is the individuals with a disability SPG. While only 13.4% of the population as a whole, there is a significant presence (above the state average) of individuals with a disability in 114 of Rhode Island's 240 Census tracts, or 47.5% of Rhode Island's Census tracts. There are several other SPG tracts representing significant SPG presence among the following populations: aging individuals (50.4% of RI tracts), individuals in poverty/low income (41.7% of RI tracts), school-age children (37.5% of RI tracts), and minority individuals (36.7% of RI tracts).

Table 5-1: Select Population Group Figures

Select Population Group Code		Select Population Groups (SPG)	Total RI Population within the Data Source	Total SPG Population in RI	Percentage of RI Population
1		Minority Individuals (Race)	1,057,231	295,799	28.0%
	1.1	Black or African American		71,561	6.8%
	1.2	American Indian & Alaskan Native		5,277	0.5%
	1.3	Asian		35,958	3.4%
	1.4	Native Hawaiian & Other Pacific Islander		810	0.1%
	1.5	Other		57,807	5.5%
	1.6	Two or More Races		35,221	3.3%
	1.7	Hispanic or Latino Origin	1,057,231	163,226	15.4%
2		Individuals in Poverty/Low-Income (200% of Poverty Level)	1,016,506	273,377	26.9%
3		Female Householder w/Children under 18	410,489	32,766	8.0%
4		School-Age Children (Ages 5-19)	1,057,231	188,218	17.8%
5		Aging Individuals (≥ 65)	1,057,231	177,889	16.8%
6		Individuals w/ a Disability	1,041,575	139,446	13.4%
7		Individuals w/Limited English Proficiency (All Languages)	1,002,559	84,875	8.5%
		Top 5 LEP Language Groups in the State of RI			
	7.1	Spanish	1,002,559	52,056	5.2%
	7.2	Other Indo-European	1,002,559	13,911	1.4%
	7.3	French, Haitian, or Cajun	1,002,559	4,840	0.5%
	7.4	Other Asian and Pacific Islander	1,002,559	4,829	0.5%
	7.5	Chinese (includes Mandarin and Cantonese)	1,002,559	3,664	0.4%
8		Carless Households	410,489	38,759	9.4%

Table 5-2: Presence of Select Population Groups in Rhode Island

Select Population Group Code		Select Population Groups (SPG)	Significant Presence Threshold*	Number of Tracts the Meet Threshold	Percentage of Total Census Tracts**
1		Minority Individuals (Race)	≥28.0% SA	87	36.3%
	1.1	Black or African American	≥6.8% SA	88	36.7%
	1.2	American Indian & Alaskan Native	≥0.5% SA	64	26.7%
	1.3	Asian	≥3.4% SA	87	36.3%
	1.4	Native Hawaiian & Other Pacific Islander	≥0.1% SA	21	8.8%
	1.5	Other	≥5.5% SA	63	26.3%
	1.6	Two or More Races	≥3.3% SA	100	41.7%
	1.7	Hispanic or Latino Origin	≥15.4% SA	70	29.2%
2		Individuals in Poverty/Low-Income (200% of Poverty Level)	≥26.9% SA	100	41.7%
3		Female Householder w/Children under 18	≥8.0% SA	89	37.1%
4		School-Age Children (Ages 5-19)	≥17.8% SA	90	37.5%
5		Aging Individuals (≥ 65)	≥16.8% SA	121	50.4%
6		Individuals w/ a Disability	≥13.4% SA	114	47.5%
7		Individuals w/Limited English Proficiency (All Languages)	≥8.5% SA	74	30.8%
		Top 5 LEP Language Groups in the State of RI			
	7.1	Spanish	5.0%	58	24.2%
	7.2	Other Indo-European	5.0%	13	5.4%
	7.3	French, Haitian, or Cajun	5.0%	5	2.1%
	7.4	Other Asian and Pacific Islander	5.0%	2	0.8%
	7.5	Chinese (includes Mandarin and Cantonese)	5.0%	2	0.8%
8		Carless Households	≥9.4% SA	96	40.0%

* Significant Presence Threshold is the threshold that quantifies whether there is a significant presence of the select population group within a census tract.
"SA" is an abbreviation of state average.
** The total number of census tracts within Rhode Island, excluding water-only tracts and the airport, is 240 tracts. There are a total of 244 US census tracts in the state of Rhode Island.

STIP Project Distribution

Analysis Overview

To assess the distribution of projects within FFY 2022-2025 of the FFY 2022-2031 STIP, the state developed the Transportation Equity Benefit Analysis, or TEBA. For the TEBA, select population group data in Rhode Island was paired with STIP project and investment locations to assess the distribution of the transportation investments.

Methodology

Select Population Groups (SPG)

Utilizing the finalized list of Select Population Groups (SPG) identified in the population identification component, the Census tracts with populations at or above the state average for each SPG or category were identified, with the exception of individuals with limited English proficiency, which utilized the Safe Harbor threshold:

1. Minority individuals
2. Individuals in poverty/low-income groups
3. Female Householder with Children under 18
4. School-age Children (ages 5-19)
5. Aging Individuals (≥65)
6. Individuals with a Disability
7. Individuals with limited English proficiency (LEP), including the top five LEP language groups in Rhode Island, as follows:
    - Spanish
    - Other Indo-European
    - French, Haitian, or Cajun
    - Other Asian and Pacific Island
    - Chinese (including Mandarin and Cantonese)

Selected Projects and Funding Programs

Next, the TEBA utilized project costs within six of the STIP's funding programs and paired it with select population group data. All projects with site specific physical locations, and funded at any point between FFY 2022-2025 were included within the analysis. Project data within the following six funding programs were highlighted within the analysis:

- Bridge Program
- Corridor Projects Program
- Major Capital Projects Program
- Pavement Program
- Traffic Safety Program
- Active Transportation Program

Administrative and operational costs and statewide line items not associated with a physical location were not identified in this geographically-driven analysis.

Select Population Group Tracts

For the TEBA analysis, the geographic locations of the select population groups, or SPG tracts, were identified in relation to the number and value of FFY 2022-2025 STIP projects in Rhode Island.

Dividing Investments Based on Location

Most assets had an investment value associated with a single location, located in a single Census tract. However, there were a limited number of instances in which a project occurred in multiple Census tracts.

In instances where a project overlapped neighboring tracts relatively equally (ex. half of a roadway improvement in one tract, the other half in another tract), the investment associated

with that asset was split equally between both Census tracts.

In instances where a mapped project overlapped a neighboring Census tract by more than half, funding was allocated in full to the tract which held the majority of the project in an effort to avoid overlap in the allocation of investments. In instances where a mapped project occurred in several different locations, project funds were divided by the number of mapped locations and split. For example, if a project had an investment of $100,000 and featured points in a Johnston tract and a Pawtucket tract, $50,000 was allocated to each tract.

Note that for the investment portion of the analysis, assets included in the STIP federal fiscal years 2022-2025 was used. The "Total Investment" also excludes assets that are not site specific, i.e., Operations.

Combining SPG and STIP Projects and Investments

Using the Select Population Group (SPG) and the STIP project data within each of the six STIP programs, the following data tables were created for the analysis:

- Table 5-3: Distribution of Assets and Investments in Tracts with a Significant Presence of Minority Individuals
- Table 5-4: Distribution of Assets and Investments in Tracts with a Significant Presence of Individuals in Poverty or with a Low-Income (200% of Poverty)
- Table 5-5: Distribution of Assets and Investments in Tracts with a Significant Presence of Female Householders with Children under 18

- Table 5-6: Distribution of Assets and Investments in Tracts with a Significant Presence of School-Age Children (5-19)
- Table 5-7: Distribution of Assets and Investments in Tracts with a Significant Presence of Aging Individuals (≥65)
- Table 5-8: Distribution of Assets and Investments in Tracts with a Significant Presence of Individuals with a Disability
- Table 5-9: Distribution of Assets and Investments in Tracts with a Significant Presence of Limited English Speaking Populations

Findings

Key Findings: Select Population Groups

Based on the data within Table 5-10: Summary Table of SPG Tracts and Allocated Investments, it appears that the percentage of STIP asset costs allocated to select population group tracts exceeds the percentage of tracts identified as SPG tracts in the State of Rhode Island for all select population groups, except for aging individuals which comprise 50.4% of SPG tracts with 43.9% of STIP asset costs allocated.

Of all RI tracts, 37.5% are school-age SPG tracts, and 54.9% of all STIP asset costs allocated between FFY 2022- 2025 have been allocated to school-age tracts meeting the SPG threshold. The trend of elevated percentages of funds allocated to SPG tracts repeats for individuals with disabilities and individuals with limited English proficiency SPG tracts. The individuals with disabilities SPG tracts of represent 47.5% of RI tracts, with 64.9% STIP asset costs allocated to SPG tracts. Finally, the individuals with limited English proficiency SPG tracts comprise 30.8% of all RI tracts, and includes 46.5% of STIP asset costs allocated.

Key Findings: Environmental Justice (EJ)

The allocation of investments in minority and individuals in poverty/low income tracks is summarized in Table 5-10: Summary Table of SPG Tracts and Allocated Investments. The assessment highlighted the following findings: Of all RI tracts, 36.3% are minority SPG tracts, and 50.7% of all STIP asset costs between FFY 2022-2025 have been allocated to minority tracts meeting the SPG threshold. The SPG tracts for individuals in poverty/ low income represent 41.7% of tracts in the state, and have 50.5% of asset costs allocated to them from all STIP asset costs allocated.

After evaluating the groups as two individual select population groups, the minority and individuals in poverty/low-income SPG tracts were combined to assess tracts with significant representation from one, or both EJ populations. For this portion of the analysis, these tracts with significant representation of one or both EJ population groups will be referred to as Environmental Justice, or EJ SPG tracts. Figure 5-2: Environmental Justice SPG Tracts, illustrates all EJ SPG tracts in Rhode Island. In instances where there was representation from both select population groups that met their respective SPG tract thresholds, tracts were counted once to eliminate overlap. The funding associated with the EJ SPG tracts were analyzed throughout the state according to the specific STIP investments. The results of this analysis can be found in Table 5-10: Environmental Justice SPG Tract Funding Summary.

There is a total of 73 EJ SPG tracts in RI, or 30.3% (73/240 tracts). The total percentage of all STIP asset costs allocated to EJ SPG Tracts within the four fiscally constrained is 49.3% exceeding the percentage of designated EJ SPG tracts throughout RI (30.3%). Furthermore, almost half of the percentage of all STIP site specific asset costs allocated to SPG Tracts reach environmental justice select population group tracts.

Transit Access Analysis

In addition to evaluating the select population groups, carless households were analyzed as this population is more likely to be dependent on public transportation for their transportation needs. Therefore a transit access analysis was completed for Rhode Island's carless households. Additionally, each of the select population groups was included in the transit access analysis, as individuals within the select population groups may also rely upon transit services.

The 2019 ACS 5-Year data was used to determine the total number of households in RI (410,489) and the total number of carless households (38,759) to calculate the state percentage of carless households (9.4%). Of Rhode Island's 240 tracts, 96 or 40.0% of tracts have a significant presence of carless households, as shown in Figure A-3: Carless Household's Transit Access. Next, RIPTA's bus routes along with each set of SPG tracks were mapped to evaluate transit access across all select population groups as summarized in Table 5-12 Transit Access Summary. Of the 96 carless household SPG tracts in the state, 95, or 99% of tracts intersect with RIPTA routes.

In addition, for each of the select population groups, the number of SPG tracts intersecting RIPTA routes yield high percentages in relation to the total number of SPG tracts per group. Percentages of SPG tracts intersecting RIPTA routes range from the high eighties to the high nineties for each group. Eighty-seven percent of

aging SPG tracts intersect with RIPTA bus routes, while 99% of minority, poverty/low-income, and a combination of both population tracts (EJ tracts) intersect with RIPTA bus routes.

Conclusion

Of all tracts in Rhode Island, 96% are SPG tracts, some of which meet the threshold designation with the presence of more than one Select Population Group. The geographic presence of select population groups throughout the state was assessed in relation to the STIP's project investments between FFY 2022-2025.

In an effort to highlight data from select population group tracts that are more geographically concentrated, environmental justice or EJ SPG tracts were analyzed as well: A major finding concludes that 49.3% of the STIP asset costs allocated reach minority and low-income/poverty SPG tracts in Rhode Island.

Finally, a transit access analysis was conducted to determine the percentage of carless household SPGs, along with the other SPG tracks, to determine the percentage of SPG tracts intersecting RIPTA bus routes. The key finding within that analysis is that the majority of all SPG tracts intersect RIPTA bus routes. For the carless households select population group, 99% of all carless household SPG tracts intersect with RIPTA bus routes. Public transit services serve a critical role in providing access to the community, especially to those select population groups, such as carless households, which are more likely to be reliant on transit services. In addition, investments made in roadways, bridges and other transportation infrastructure enhance the transportation system, benefiting all residents and visitors alike in their travel throughout the state.

Table 5-3: Distribution of Assets and Investments in Tracts with a Significant Presence of Minority Individuals

STIP Funding Program	Total # of Assets	Total Investment	Within Minority SPG Tracts			
			# of Assets	% of Total # of Assets	Area Investment	$ of Total Investment
Active Transportation	34	$44,070,000	9	26%	$19,360,000	44%
Bridge	193	$382,105,000	52	27%	$117,695,215	31%
Corridor Projects	43	$17,800,000	13	30%	$4,263,085	24%
Major Capitol Projects	85	$800,860,000	41	48%	$552,359,844	69%
Pavement Program	180	$178,448,567	41	23%	$51,607,510	29%
Traffic Safety	51	$63,528,800	9	18%	$8,946,563	14%
Total	586	$1,486,812,367	165	28.2%	$754,232,217	50.7%

Table 5-4: Distribution of Assets and Investments in Tracts with a Significant Presence of Individuals in Poverty or with a Low-Income (200% of Poverty)

STIP Funding Program	Total # of Assets	Total Investment	Within Poverty/Low-Income SPG Tracts			
			# of Assets	% of Total # of Assets	Area Investment	$ of Total Investment
Active Transportation	34	$44,070,000	14	41%	$24,955,568	57%
Bridge	193	$382,105,000	56	29%	$103,528,131	27%
Corridor Projects	43	$17,800,000	13	30%	$4,263,085	24%
Major Capitol Projects	85	$800,860,000	43	51%	$549,529,126	69%
Pavement Program	180	$178,448,567	70	39%	$58,671,960	33%
Traffic Safety	51	$63,528,800	14	27%	$11,103,158	17%
Total	586	$1,486,812,367	210	35.8%	$752,051,029	50.6%

Table 5-5: Distribution of Assets and Investments in Tracts with a Significant Presence of Female Householders with Children under 18

STIP Funding Program	Total # of Assets	Total Investment	Within Female Householder with Children SPG Tracts			
			# of Assets	% of Total # of Assets	Area Investment	$ of Total Investment
Active Transportation	34	$44,070,000	8	24%	$8,160,568	19%
Bridge	193	$382,105,000	66	34%	$175,189,756	46%
Corridor Projects	43	$17,800,000	13	30%	$4,117,254	23%
Major Capitol Projects	85	$800,860,000	43	51%	$395,289,616	49%
Pavement Program	180	$178,448,567	42	23%	$57,437,098	32%
Traffic Safety	51	$63,528,800	16	31%	$6,032,698	9%
Total	586	$1,486,812,367	188	32.1%	$646,226,989	43.5%

Table 5-6: Distribution of Assets and Investments in Tracts with a Significant Presence of School-Age Children (5-19)

STIP Funding Program	Total # of Assets	Total Investment	Within School-Age Children SPG Tracts			
			# of Assets	% of Total # of Assets	Area Investment	$ of Total Investment
Active Transportation	34	$44,070,000	11	32%	$12,562,500	29%
Bridge	193	$382,105,000	105	54%	$233,861,367	61%
Corridor Projects	43	$17,800,000	23	53%	$9,946,249	56%
Major Capitol Projects	85	$800,860,000	46	54%	$441,352,696	55%
Pavement Program	180	$178,448,567	80	44%	$98,716,015	55%
Traffic Safety	51	$63,528,800	22	43%	$19,660,614	31%
Total	586	$1,486,812,367	287	49.0%	$816,099,442	54.9%

Table 5-7: Distribution of Assets and Investments in Tracts with a Significant Presence of Aging Individuals (≥65)

STIP Funding Program	Total # of Assets	Total Investment	Within Aging SPG Tracts			
			# of Assets	% of Total # of Assets	Area Investment	$ of Total Investment
Active Transportation	34	$44,070,000	31	91%	$28,467,500	65%
Bridge	193	$382,105,000	116	60%	$202,138,151	53%
Corridor Projects	43	$17,800,000	19	44%	$6,278,573	35%
Major Capitol Projects	85	$800,860,000	42	49%	$254,135,005	32%
Pavement Program	180	$178,448,567	144	80%	$111,819,568	63%
Traffic Safety	51	$63,528,800	38	75%	$50,586,117	80%
Total	586	$1,486,812,367	390	66.6%	$653,424,916	43.9%

Table 5-8: Distribution of Assets and Investments in Tracts with a Significant Presence of Individuals with a Disability

STIP Funding Program	Total # of Assets	Total Investment	Within Disability SPG Tracts			
			# of Assets	% of Total # of Assets	Area Investment	$ of Total Investment
Active Transportation	34	$44,070,000	18	53%	$21,492,247	49%
Bridge	193	$382,105,000	94	49%	$184,424,487	48%
Corridor Projects	43	$17,800,000	22	51%	$10,192,670	57%
Major Capitol Projects	85	$800,860,000	70	82%	$621,028,221	78%
Pavement Program	180	$178,448,567	113	63%	$99,458,518	56%
Traffic Safety	51	$63,528,800	24	47%	$28,017,112	44%
Total	586	$1,486,812,367	341	58.2%	$964,613,255	64.9%

Table 5-9: Distribution of Assets and Investments in Tracts with a Significant Presence of Limited English Speaking Populations

STIP Funding Program	Total # of Assets	Total Investment	Within LEP SPG Tracts			
			# of Assets	% of Total # of Assets	Area Investment	$ of Total Investment
Active Transportation	34	$44,070,000	5	15%	$10,120,000	23%
Bridge	193	$382,105,000	54	28%	$105,951,793	28%
Corridor Projects	43	$17,800,000	11	26%	$602,859	3%
Major Capitol Projects	85	$800,860,000	41	48%	$545,284,405	68%
Pavement Program	180	$178,448,567	27	15%	$28,326,089	16%
Traffic Safety	51	$63,528,800	7	14%	$1,547,103	2%
Total	586	$1,486,812,367	145	24.7%	$691,832,250	46.5%

Table 5-10: Summary Table of SPG Tracts and Allocated Investments

Group Code	Select Population Groups (SPG)	Percentage of Total Census Tracts with a Significant SPG Presence	Percentage of Total Asset Costs Allocated to SPG Tracts
1	Minority Individuals	36.3%	50.7%
2	Individuals in Poverty/Low-Income (200% of Poverty Level)	41.7%	50.6%
3	Female Householders with Children Under 18	37.1%	43.5%
4	School-Age Children (5-19)	37.5%	54.9%
5	Aging Individuals (65)	50.4%	43.9%
6	Individuals with Disability	47.5%	64.9%
7	Individuals with Limited English Proficiency (All Languages)	30.8%	46.5%

Table 5-11: Environmental Justice SPG Tract Funding Summary

STIP Funding Program	Total # of Assets	Total Investment	Within Minority and Low-Income SPG Tracts (73 of RI tracts)			
			# of Assets	% of Total # of Assets	Area Investment	$ of Total Investment
Active Transportation	34	$44,070,000	11	32%	$22,660,000	51%
Bridge	193	$382,105,000	46	24%	$89,885,422	24%
Corridor Projects	43	$17,800,000	13	30%	$4,263,085	24%
Major Capitol Projects	85	$800,860,000	36	42%	$564,117,794	70%
Pavement Program	180	$178,448,567	33	18%	$43,318,046	24%
Traffic Safety	51	$63,528,800	9	18%	$8,946,563	14%
Total	586	$1,486,812,367	148	25.3%	$733,190,909	49.3%

Table 5-12: Transit Access Summary

Group Code	STIP Funding Program	Total SPG Tracts	Number of SPG Tracts Intersecting RIPTA Routes	Percentage SPG Tracts Intersecting RIPTA Routes
1	Minority Individuals	87	86	99%
1.1	Black or African American	88	87	99%
1.2	American Indian & Alaskan Native	64	61	95%
1.3	Asian	87	83	95%
1.4	Native Hawaiian & Other Pacific Islander	21	21	100%
1.5	Other	63	62	98%
1.6	Two or More Races	100	95	95%
1.7	Hispanic or Latino Origin	70	69	99%
2	Individuals in Poverty/Low-Income (200% of Poverty Level)	100	97	97%
	Environmental Justice Tracts (Minority & Poverty/ Low-Income)	73	72	99%
3	Female Householder w/Children under 18	89	84	94%
4	School-Aged Children (Ages 5-19)	90	84	93%
5	Aging Individuals (≥65)	121	105	87%
6	Individuals with a Disability	114	111	97%
7	Individuals with Limited English Proficiency (All Languages)	74	74	100%
	Top 5 LEP Language Groups in the State of RI			
7.1	Spanish	58	58	100%
7.2	Other Indo-European	13	13	100%
7.3	French, Haitian, or Cajun	5	5	100%
7.4	Other Asian and Pacific Islander	2	2	100%
7.5	Chinese	2	2	100%
8	Carless Households	96	95	99%

Figure 5-1: SPG Tracts and Non-SPG Tracts
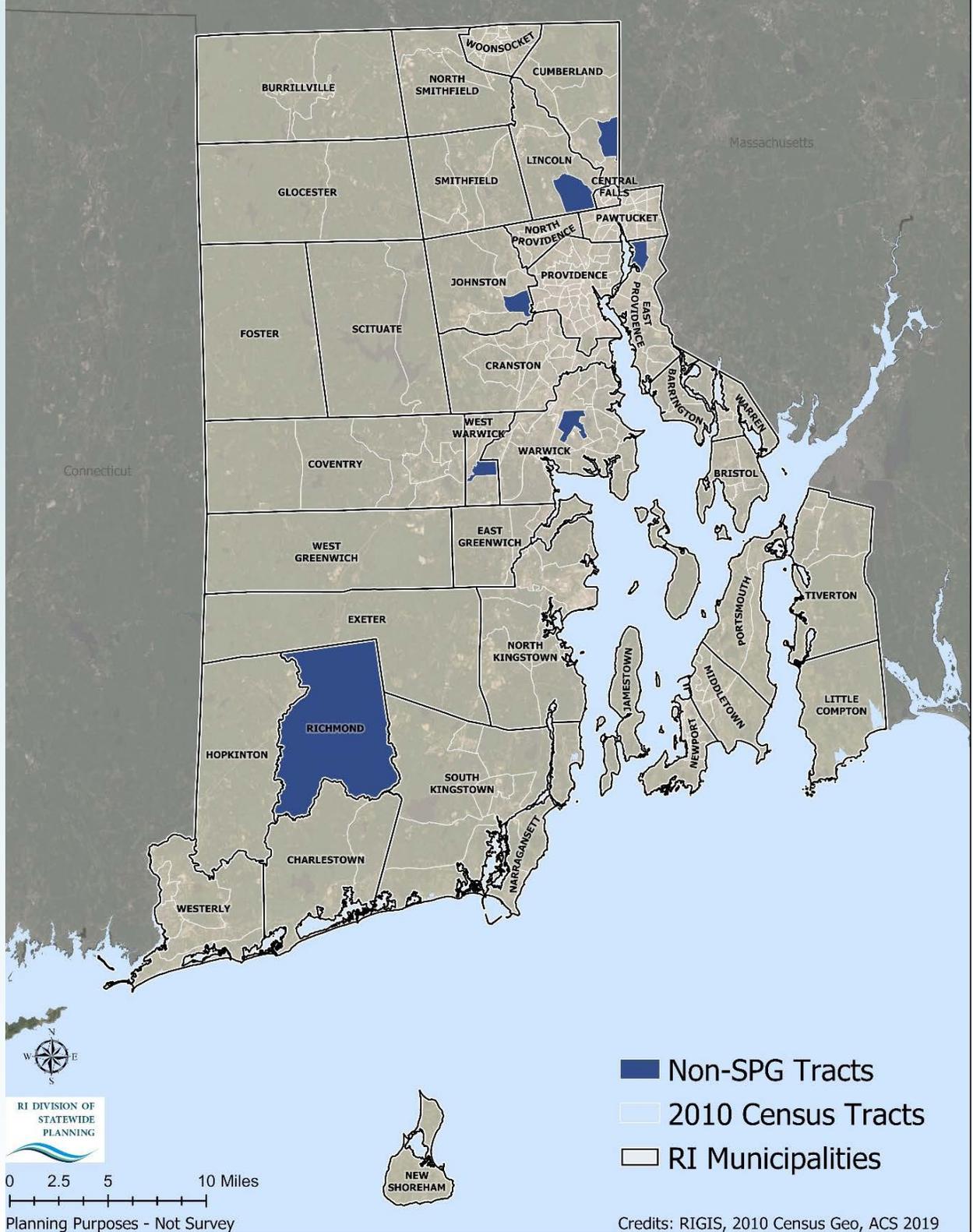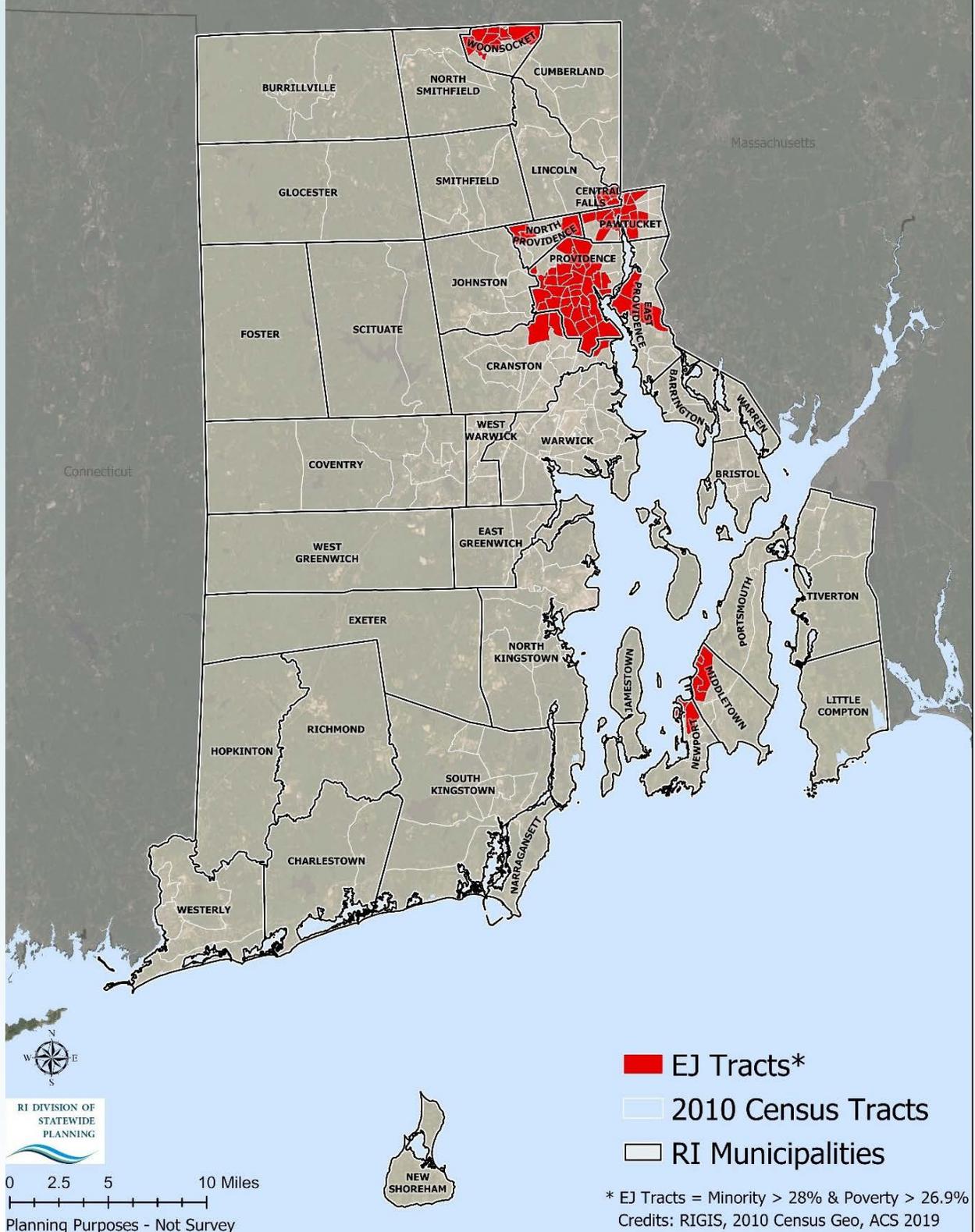
Figure 5-2: Environmental Justice SPG Tracts
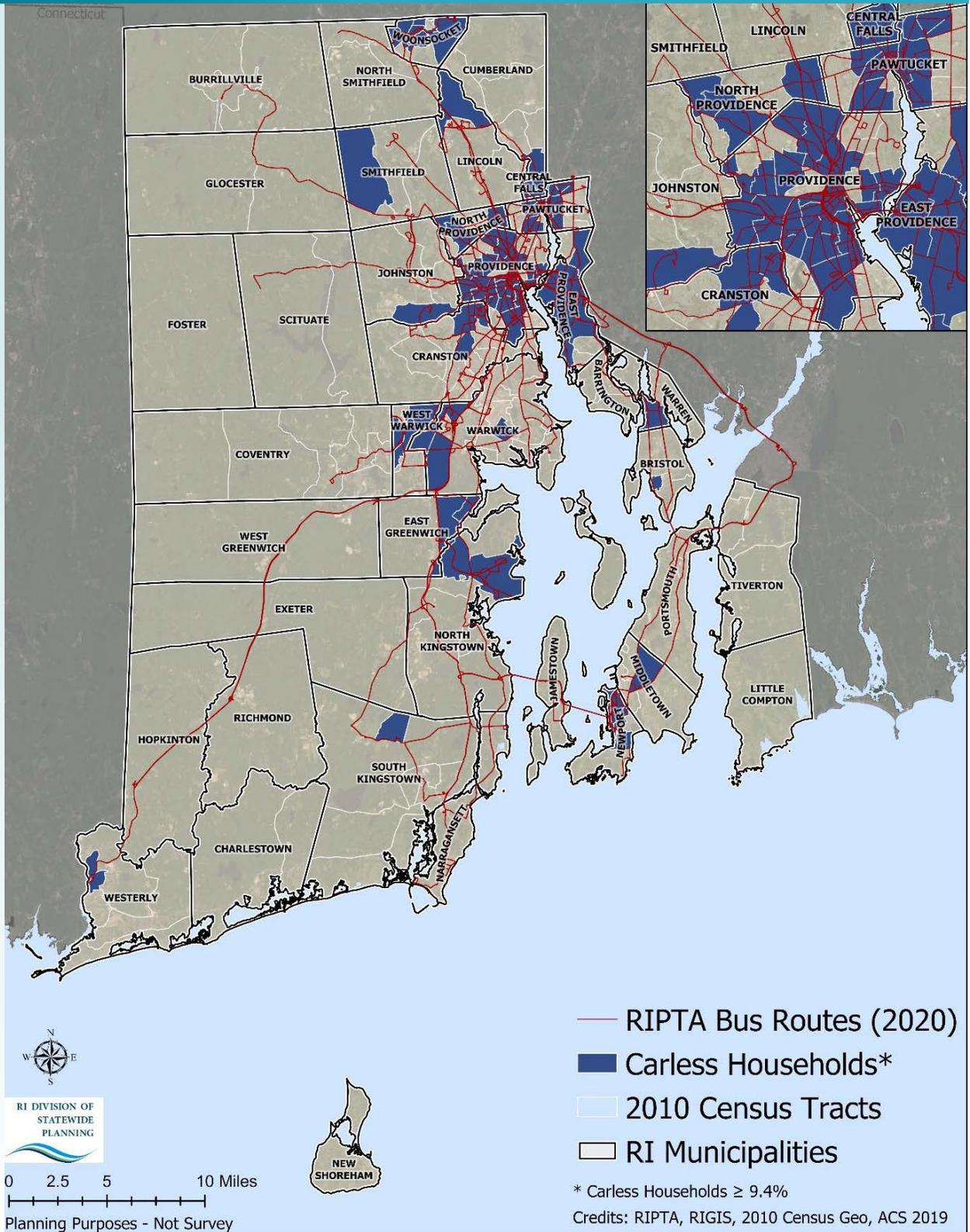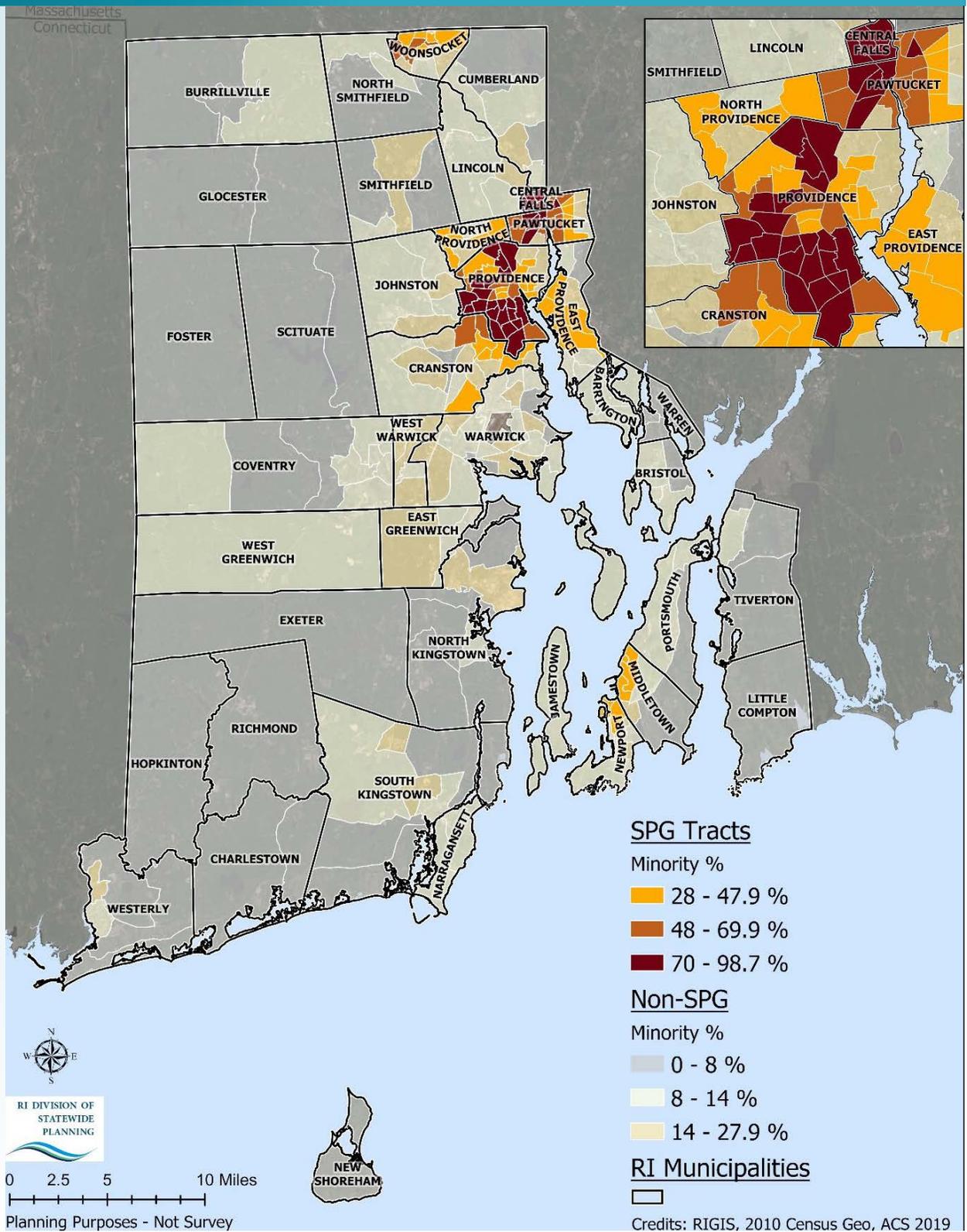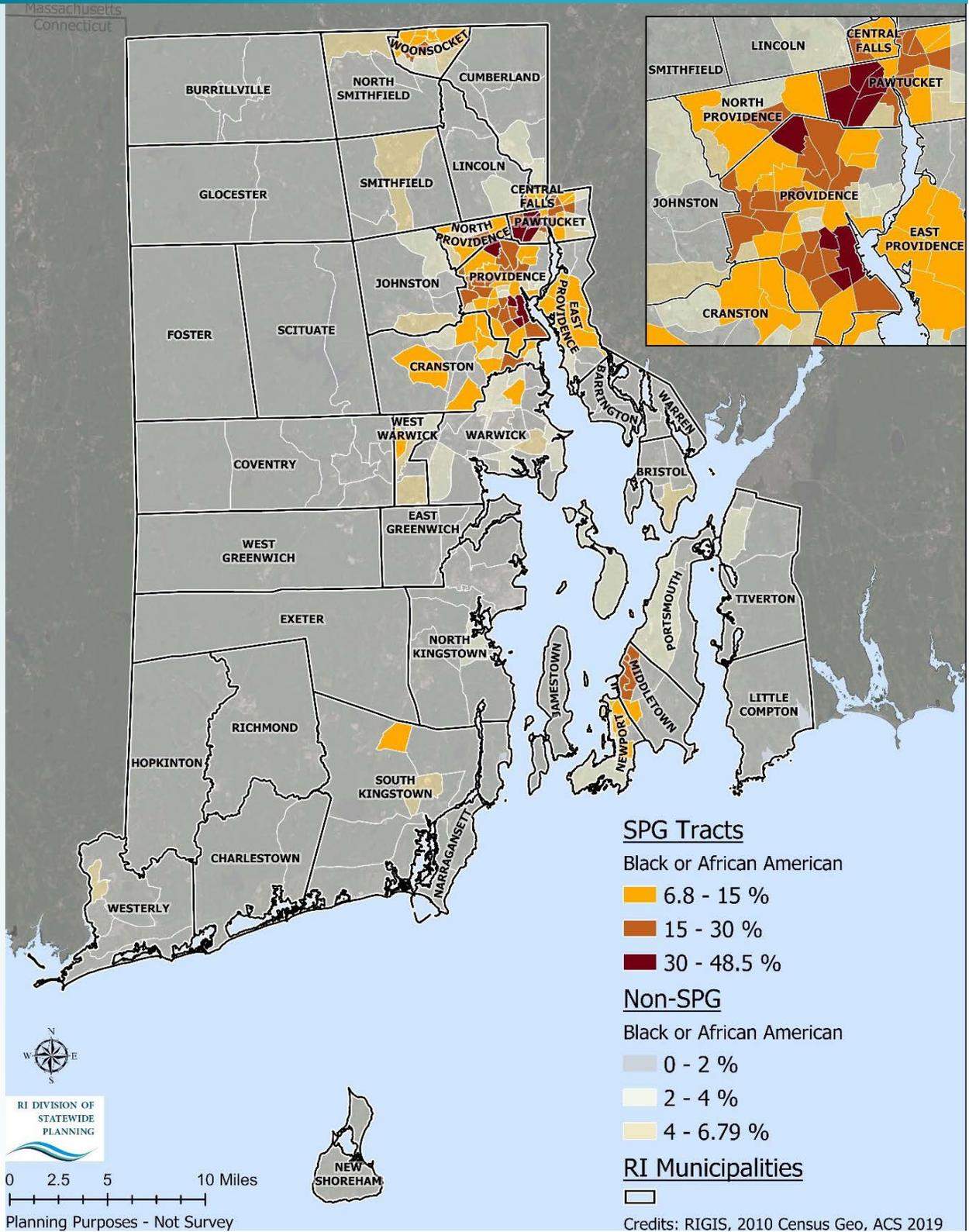
Figure 5-3: Carless Household's Transit Access

RIPTA Bus Routes (2020)
Carless Households*
2010 Census Tracts
RI Municipalities

* Carless Households ≥ 9.4%
Credits: RIPTA, RIGIS, 2010 Census Geo, ACS 2019

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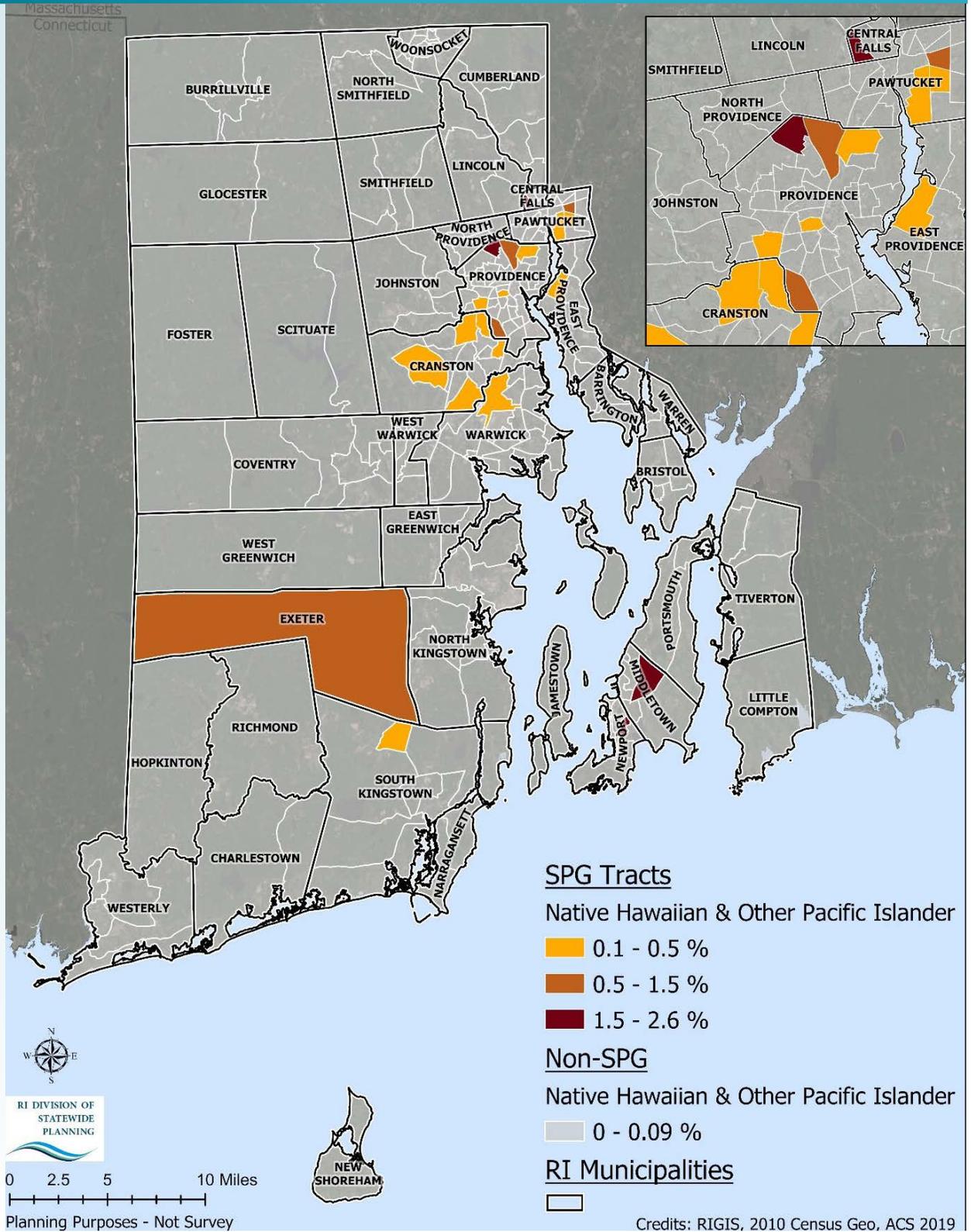0   2.5   5   10 Miles

Planning Purposes - Not Survey

Figure 5-4: Percentage of Minority Individuals in RI by U.S. Census Tract

SPG Tracts
Minority %
- 28 - 47.9 %
- 48 - 69.9 %
- 70 - 98.7 %

Non-SPG
Minority %
- 0 - 8 %
- 8 - 14 %
- 14 - 27.9 %

RI Municipalities

Planning Purposes - Not Survey

Credits: RIGIS, 2010 Census Geo, ACS 2019

Figure 5-5: Percentage of Black or African American Individuals in RI by U.S. Census Tract

Figure 5-6: Percentage of American Indian and Alaskan Native Individuals in RI by U.S. Census Tract
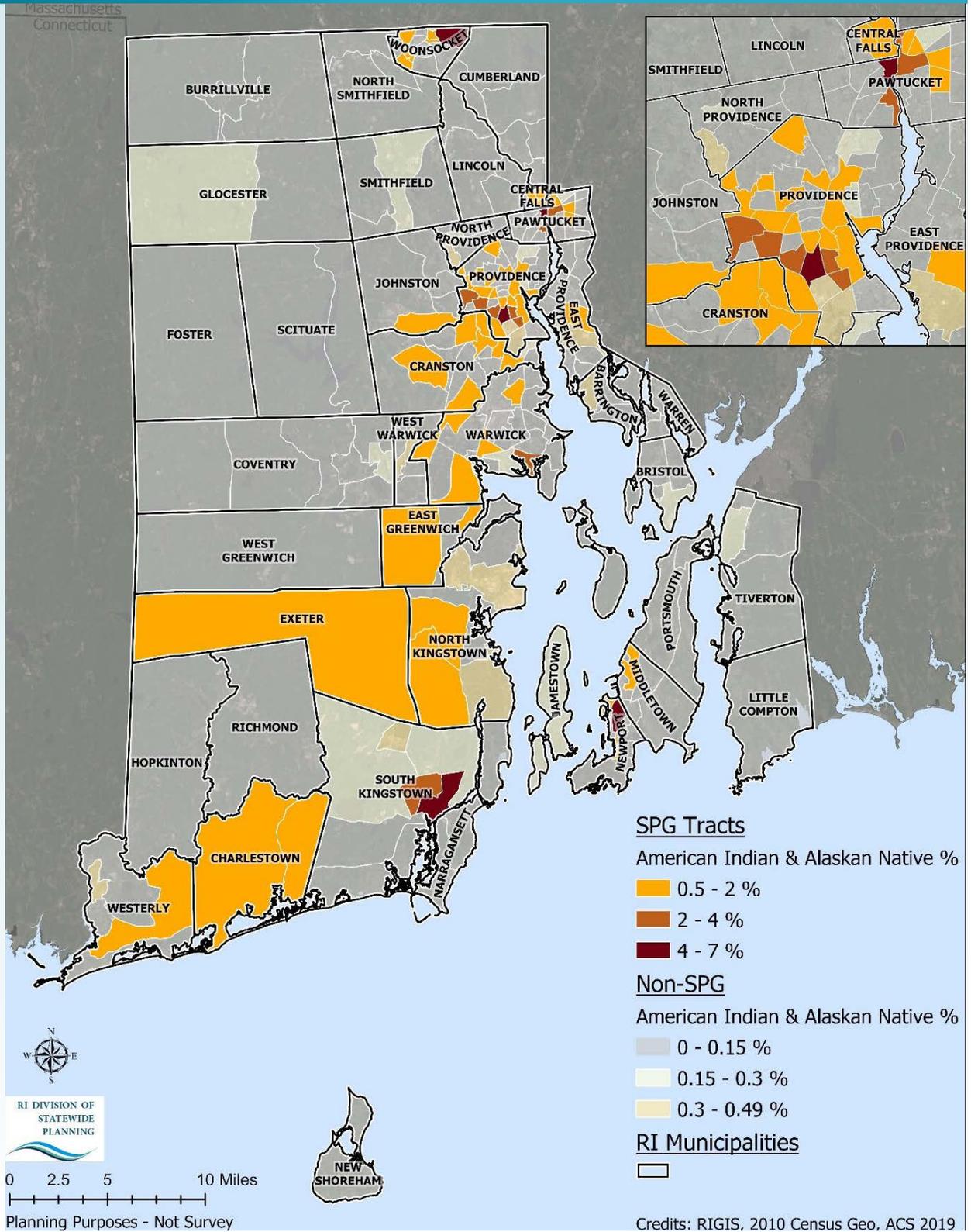
Figure 5-7: Percentage of Asian Individuals in RI by U.S. Census Tract
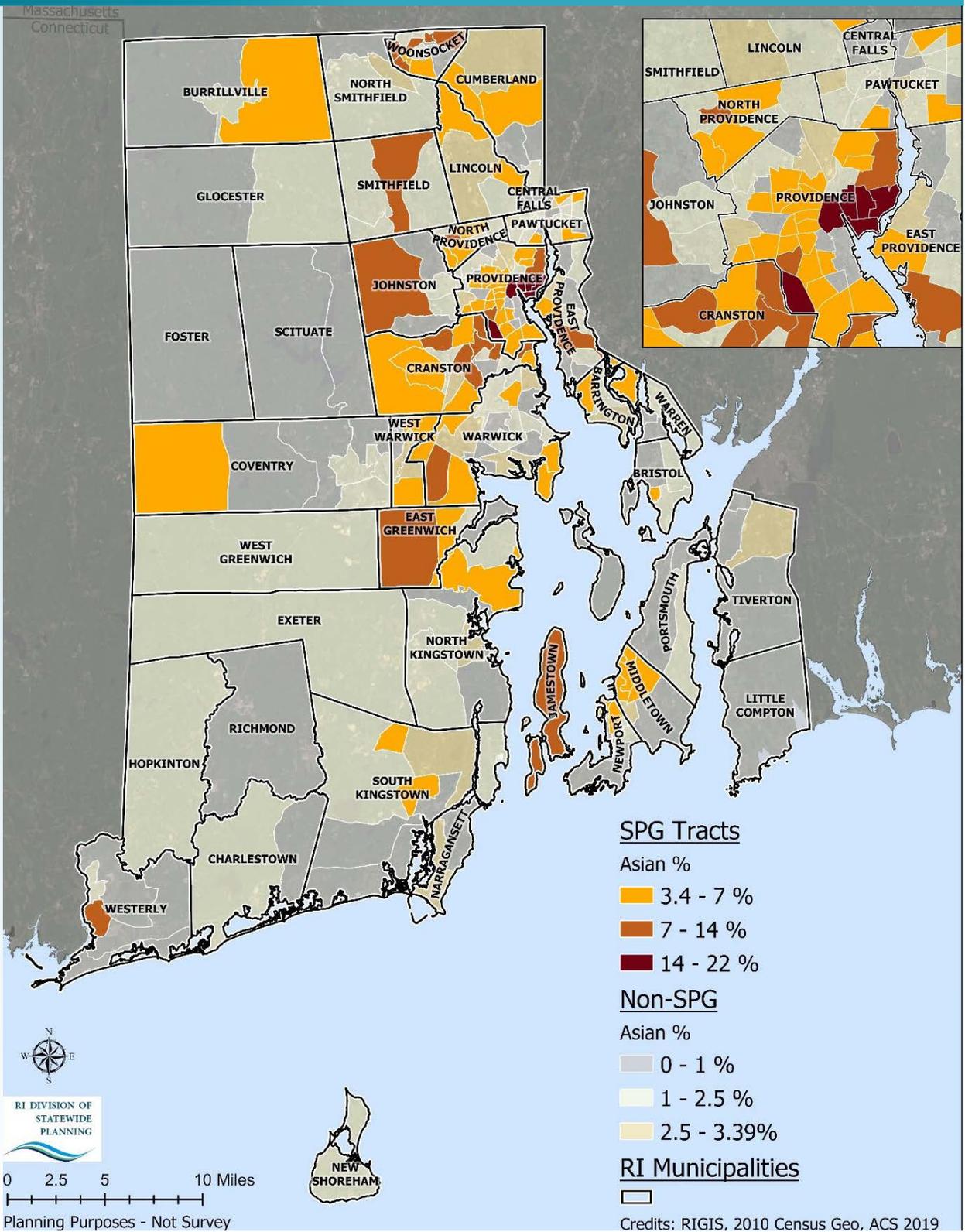
Figure 5-8: Percentage of Hawaiian and Other Pacific Islander Individuals in RI by U.S. Census Tract

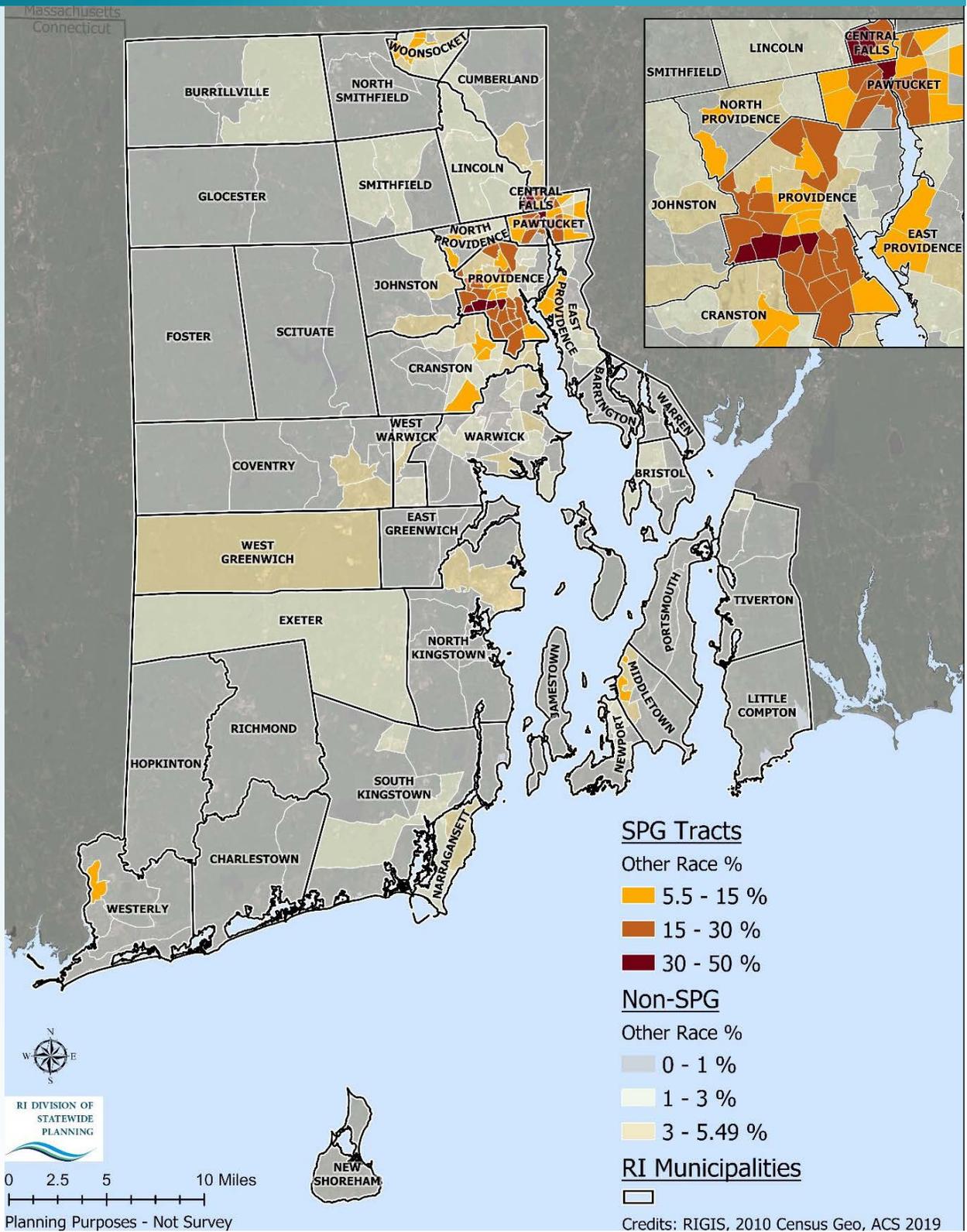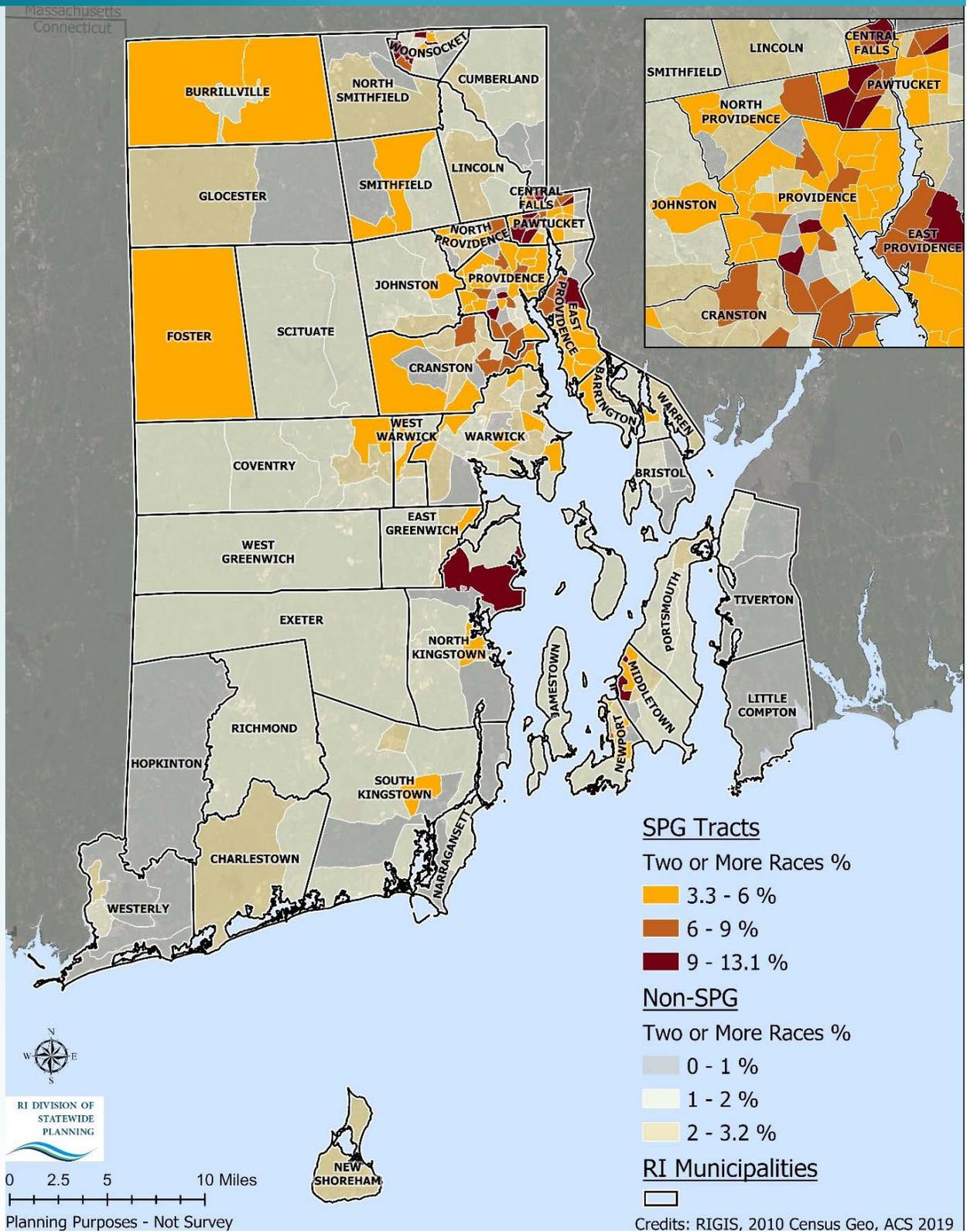# Figure 5-9: Percentage of Other Individuals in RI by U.S. Census Tract
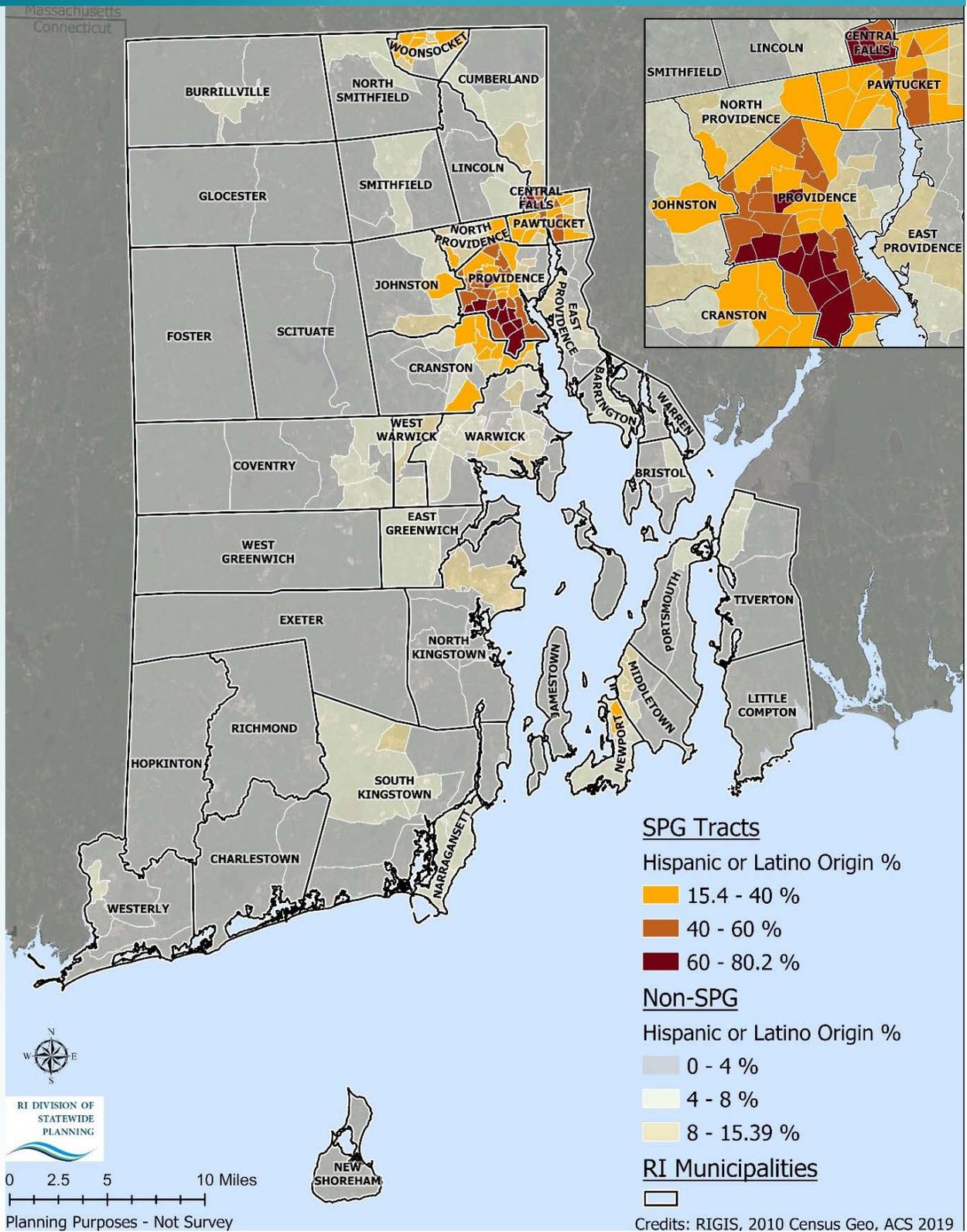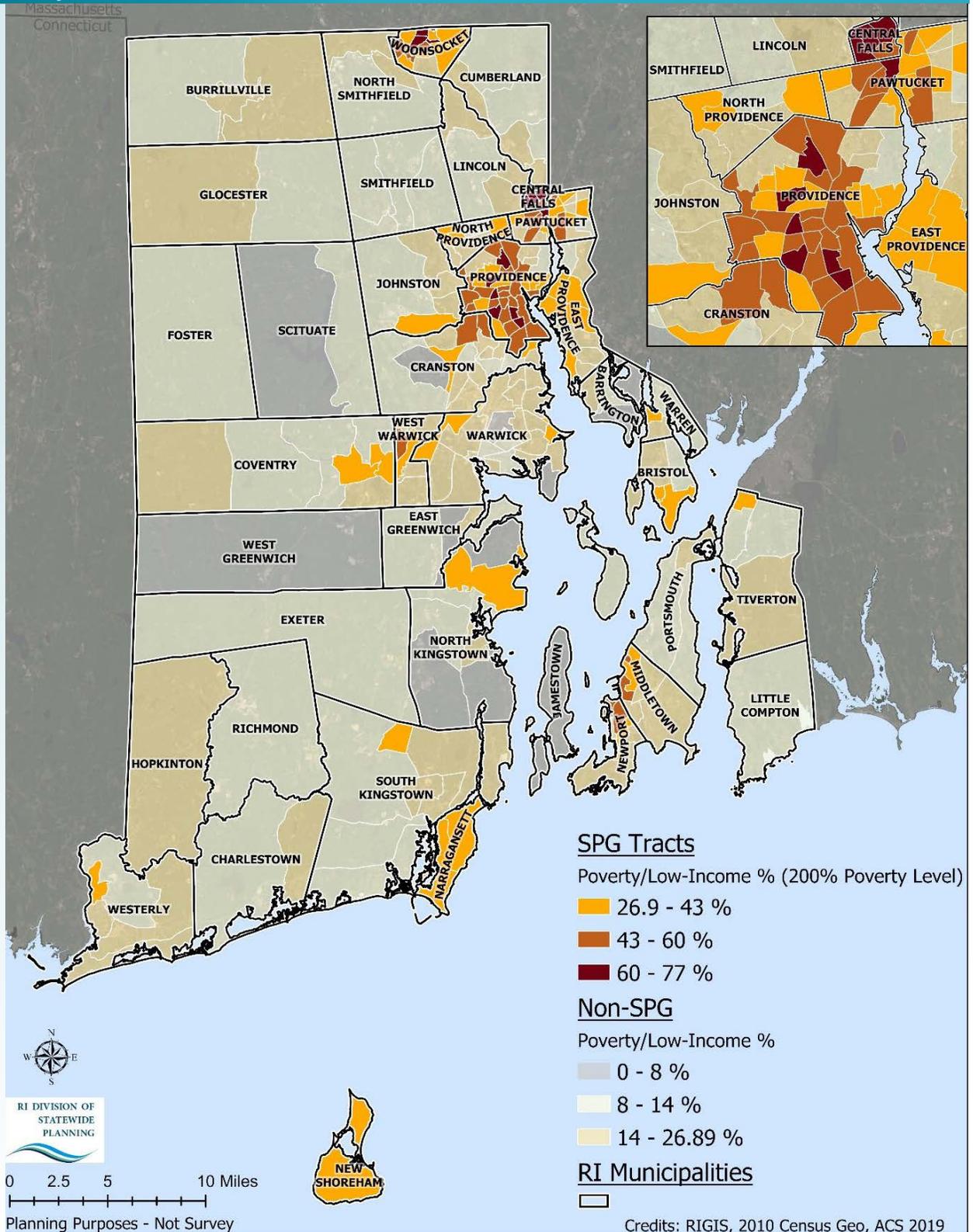

SPG Tracts
Other Race %
■ 5.5 - 15 %
■ 15 - 30 %
■ 30 - 50 %

Non-SPG
Other Race %
■ 0 - 1 %
■ 1 - 3 %
■ 3 - 5.49 %

RI Municipalities
□

Credits: RIGIS, 2010 Census Geo, ACS 2019

Planning Purposes - Not Survey

Figure 5-10: Percentage of Two or More Race Individuals in RI by U.S. Census Tract

Figure 5-11: Percentage of Hispanic or Latino Origin Individuals in RI by U.S. Census Tract

SPG Tracts
Hispanic or Latino Origin %
- 15.4 - 40 %
- 40 - 60 %
- 60 - 80.2 %

Non-SPG
Hispanic or Latino Origin %
- 0 - 4 %
- 4 - 8 %
- 8 - 15.39 %

RI Municipalities

Credits: RIGIS, 2010 Census Geo, ACS 2019

Planning Purposes - Not Survey

Figure 5-12: Percentage of Individuals in Poverty or with a Low-Income in RI by U.S. Census Tract

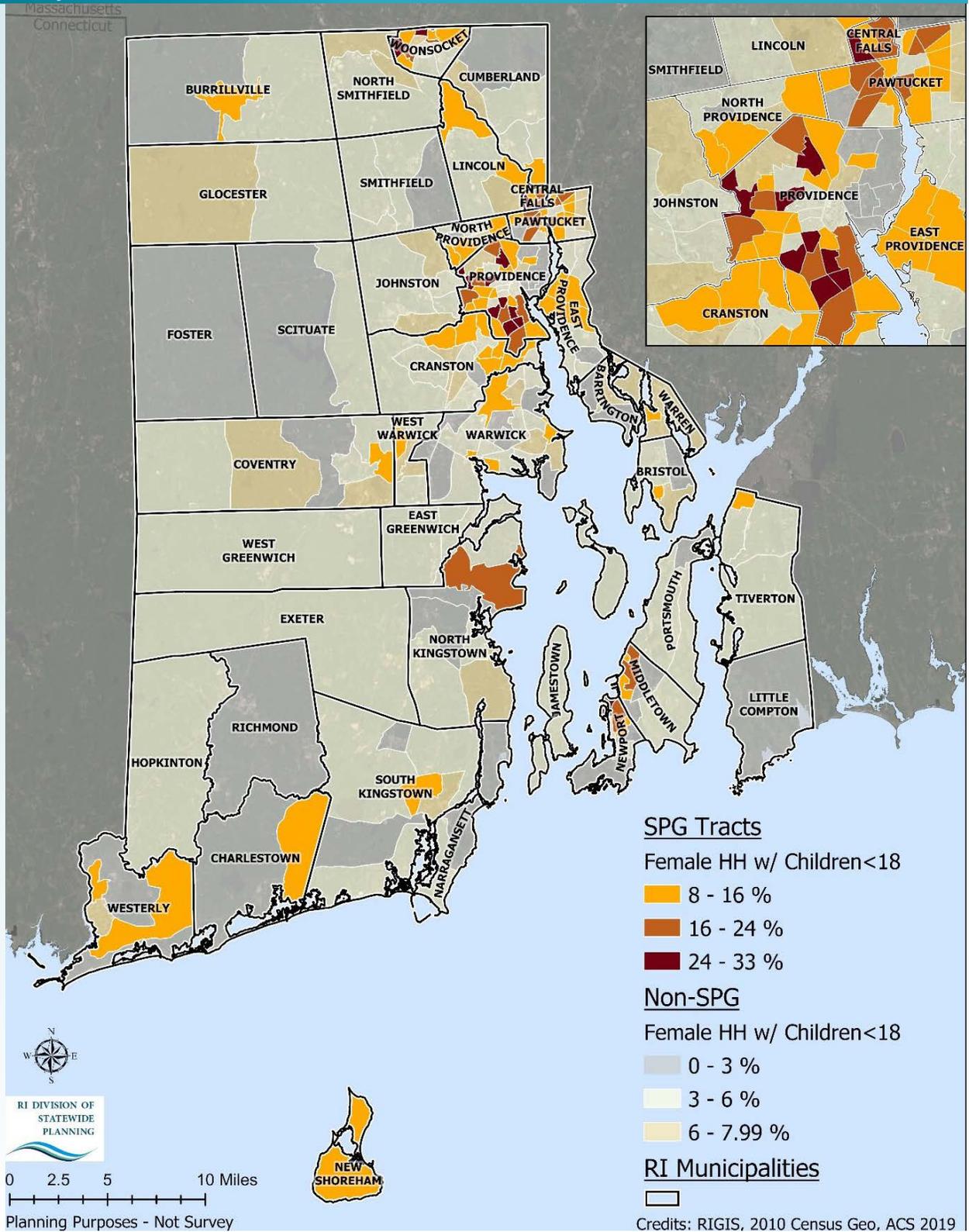**Figure 5-13: Percentage of Female Householders with Children Under 18 in RI by U.S. Census Tract**

SPG Tracts
Female HH w/ Children<18

- 8 - 16 %
- 16 - 24 %
- 24 - 33 %

Non-SPG
Female HH w/ Children<18

- 0 - 3 %
- 3 - 6 %
- 6 - 7.99 %

RI Municipalities

Credits: RIGIS, 2010 Census Geo, ACS 2019

Planning Purposes - Not Survey

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PLANNING

0   2.5   5   10 Miles

Figure 5-14: Percentage of School-Age Children in RI by U.S. Census Tract
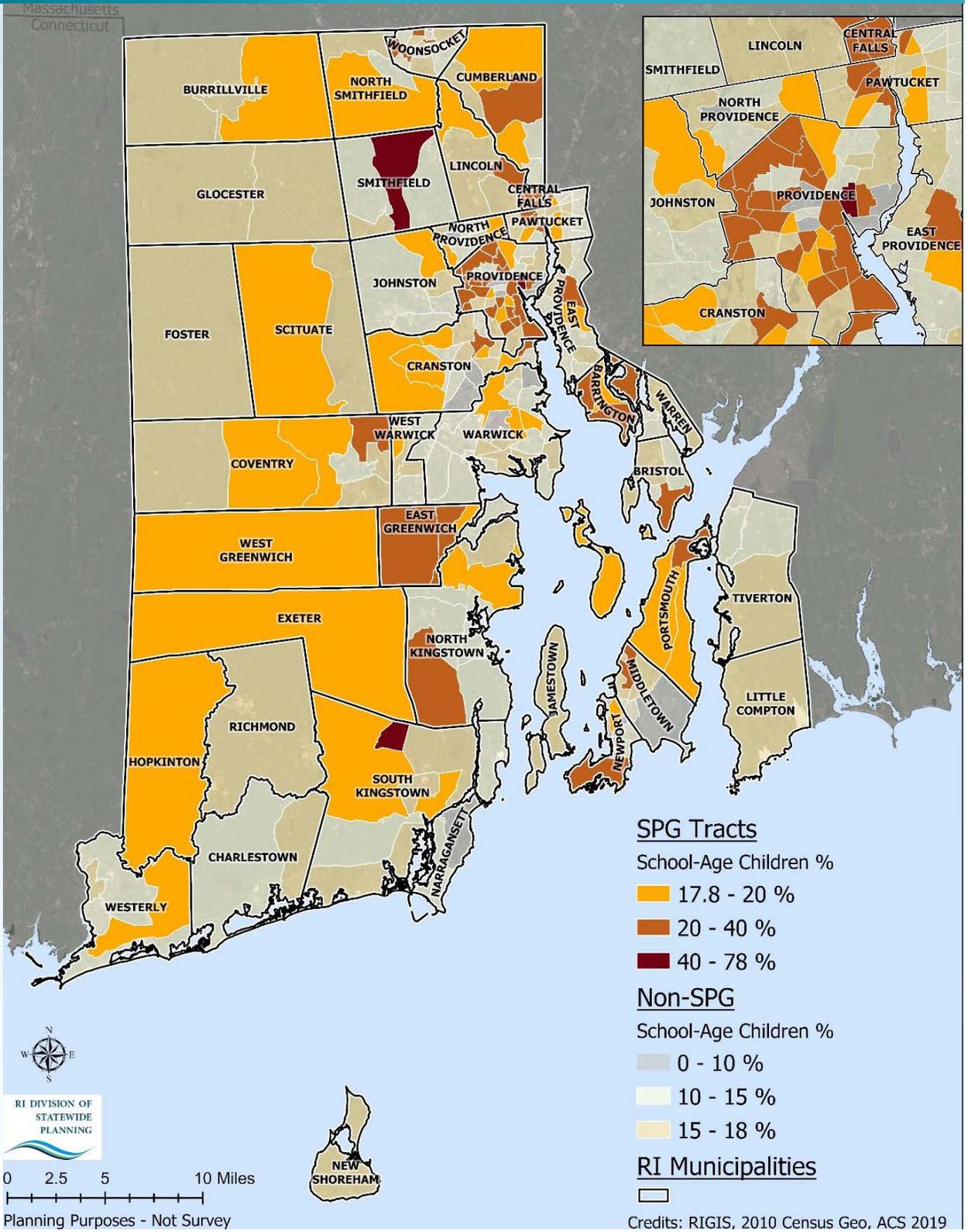
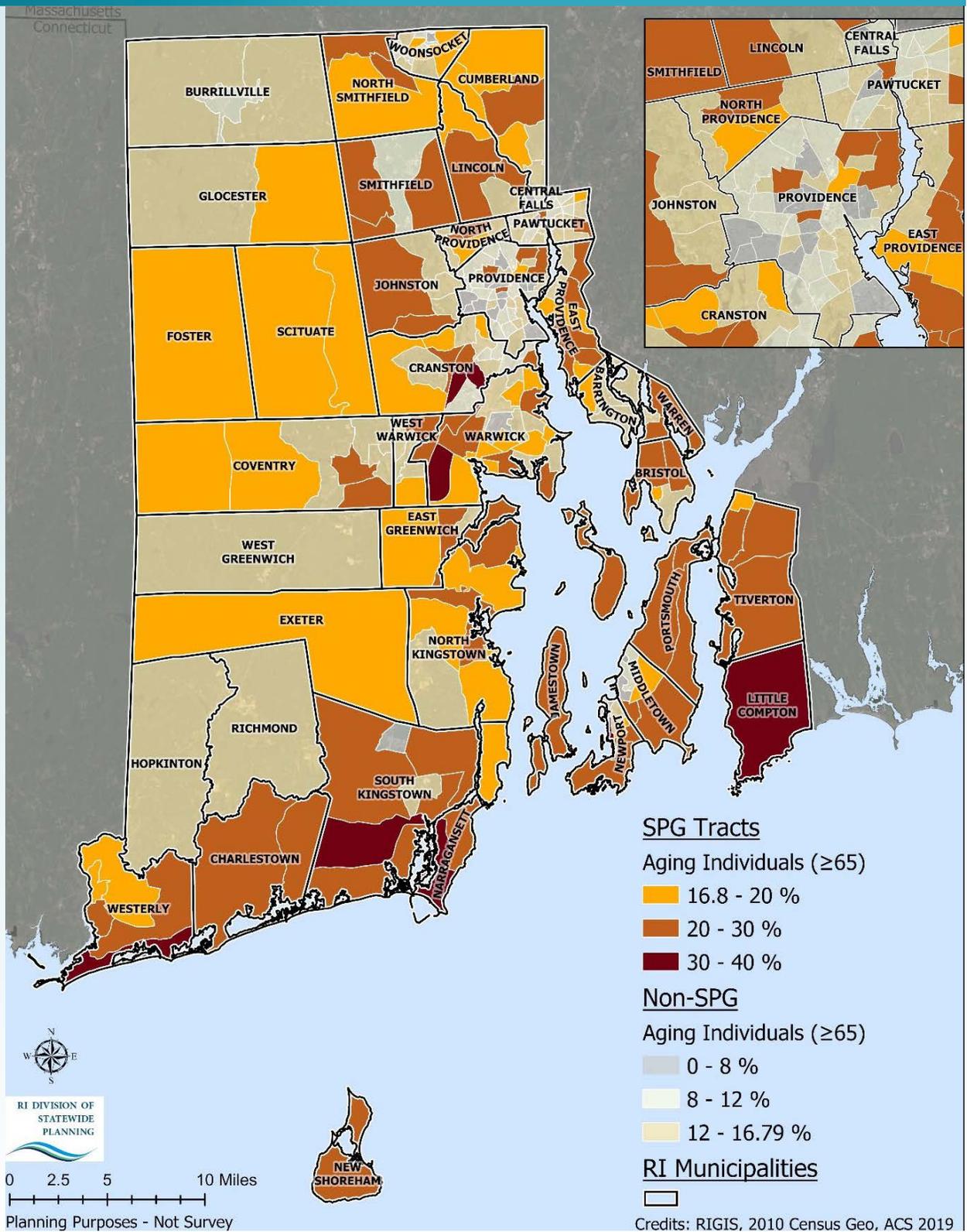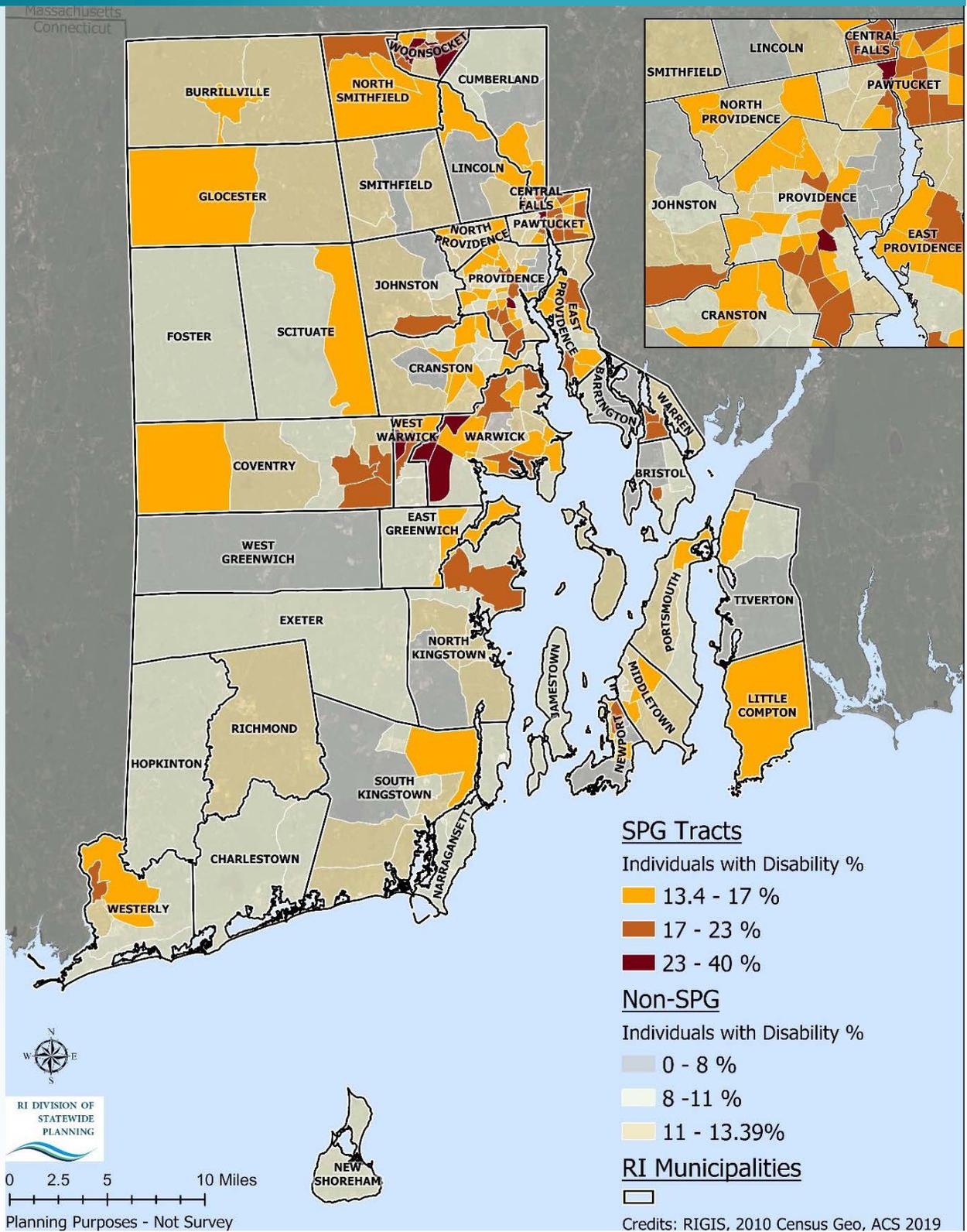Figure 5-15: Percentage of Aging Individuals in RI by U.S. Census Tract

Figure 5-16: Percentage of Individuals with Disabilities in RI by U.S. Census Tract

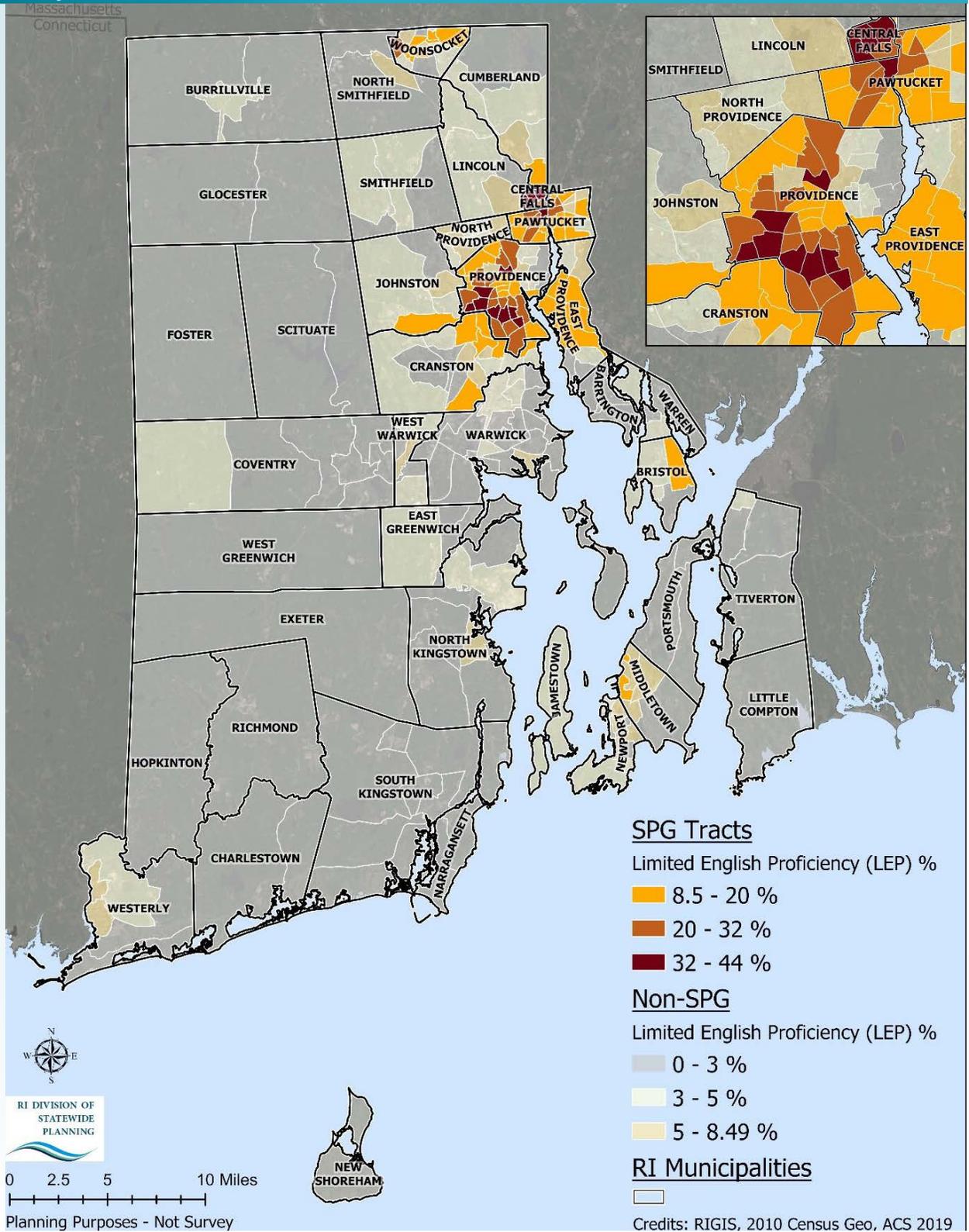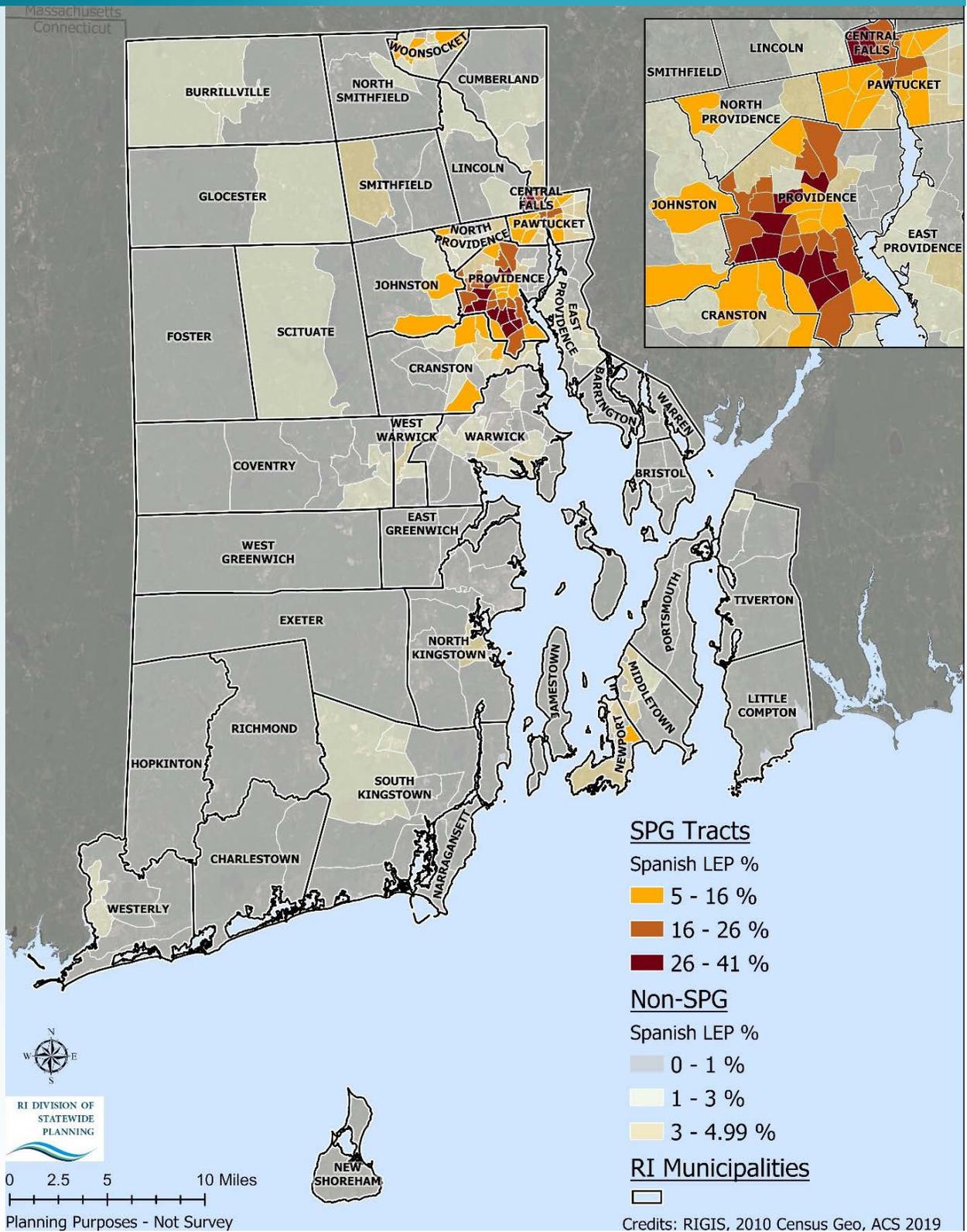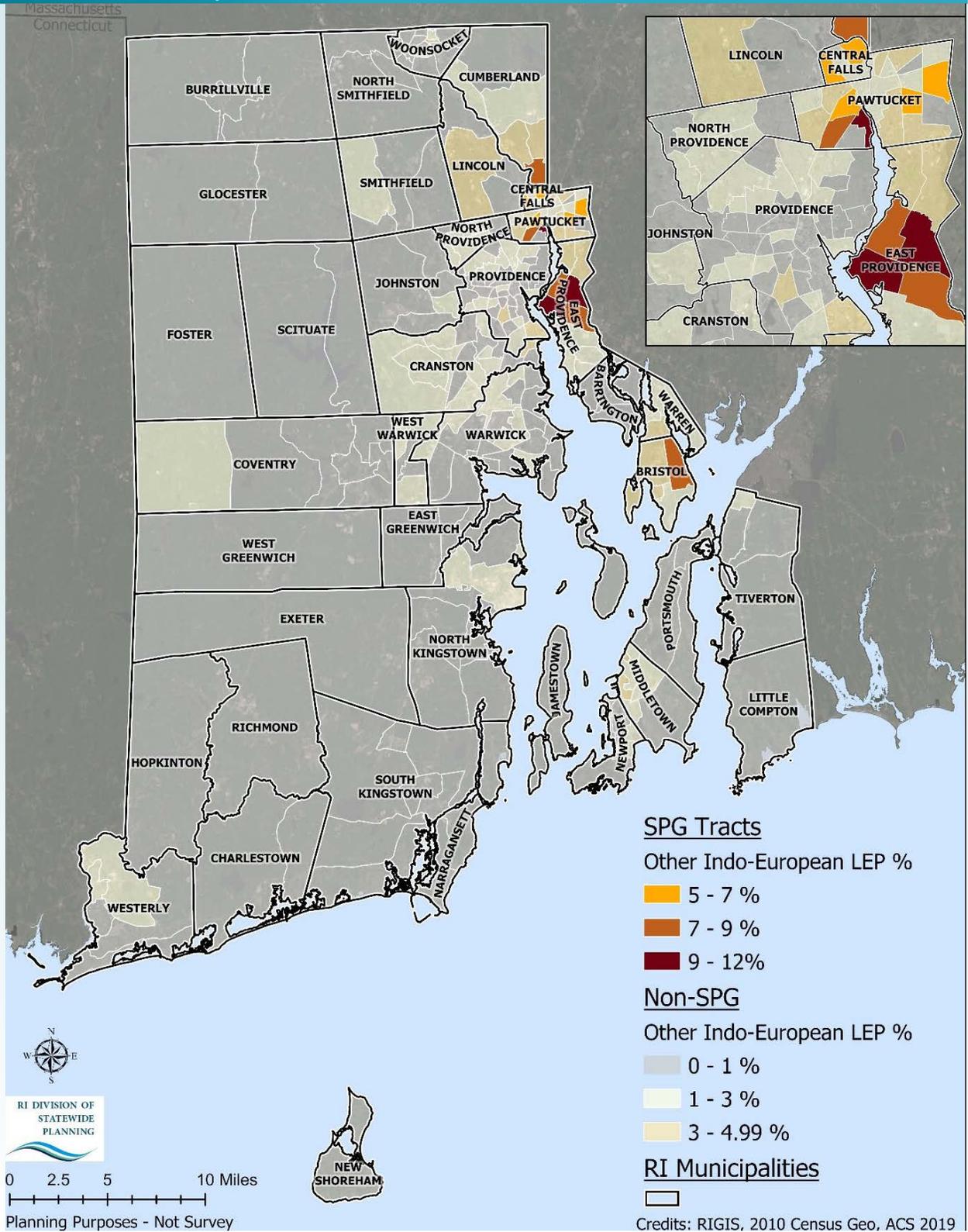Figure 5-17: Percentage of Limited English Proficiency (LEP) Individuals in RI by U.S. Census Tract
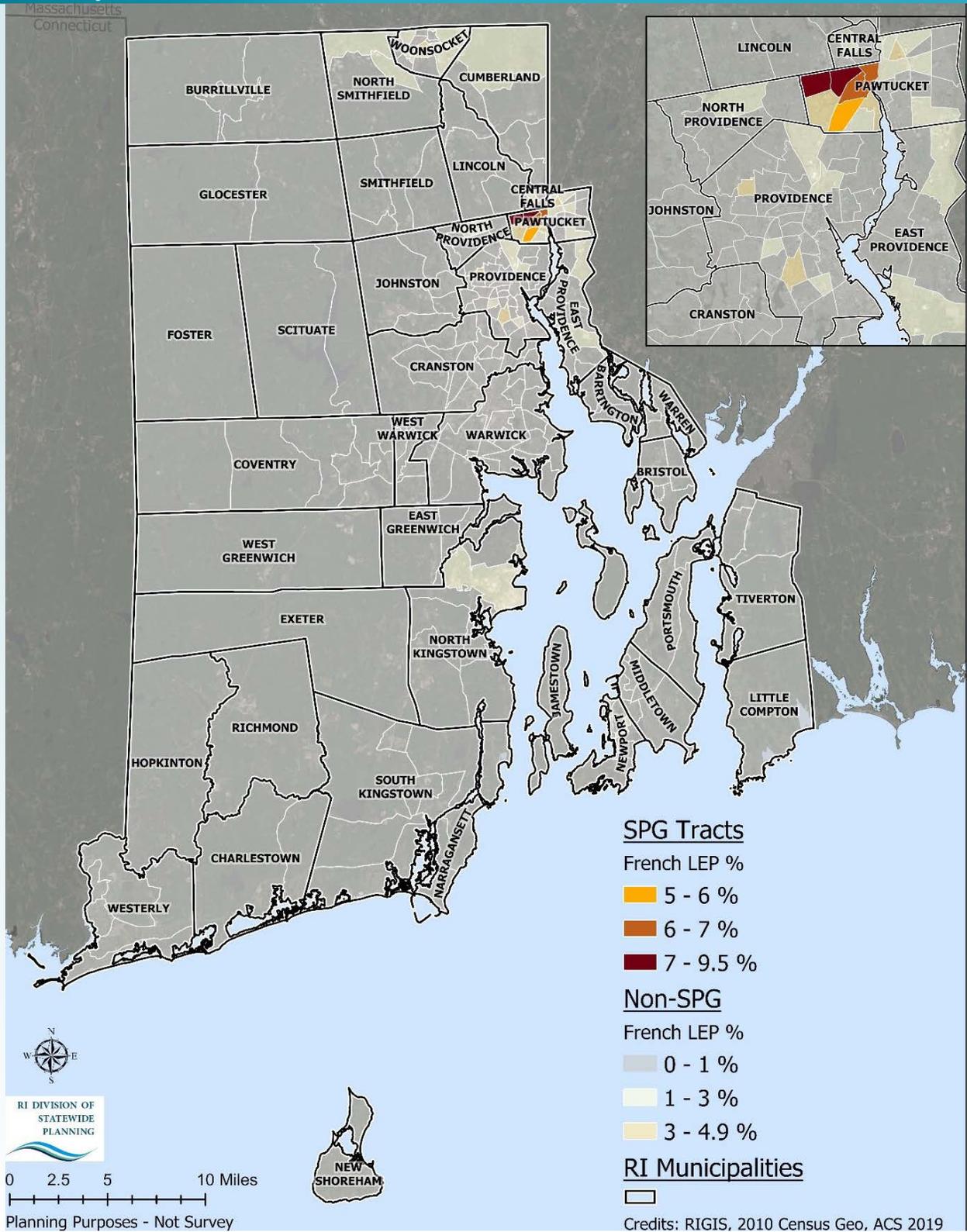
Figure 5-18: Percentage of LEP Individuals in RI by U.S. Census Tract—Spanish

SPG Tracts
Spanish LEP %
- 5 - 16 %
- 16 - 26 %
- 26 - 41 %

Non-SPG
Spanish LEP %
- 0 - 1 %
- 1 - 3 %
- 3 - 4.99 %

RI Municipalities

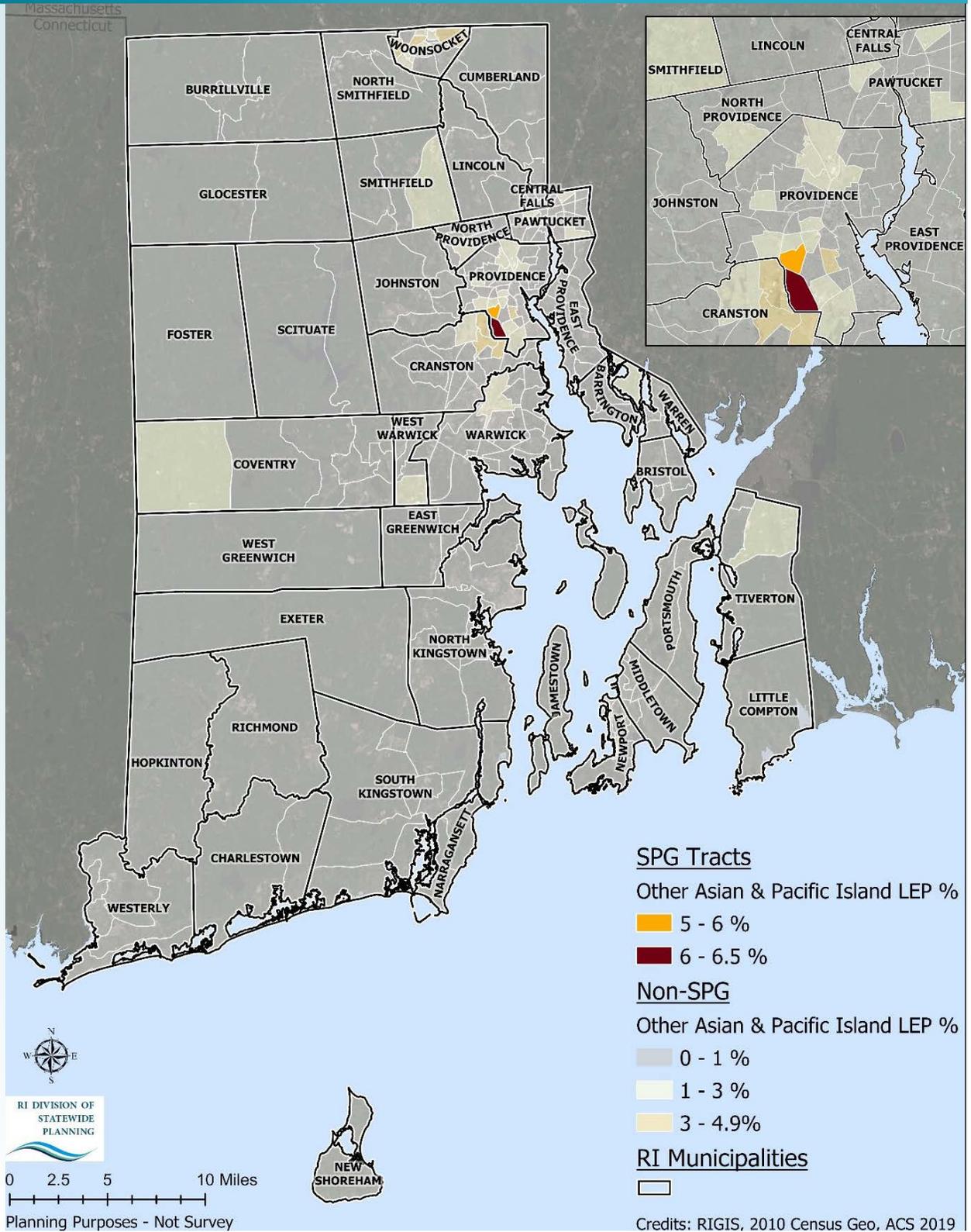Planning Purposes - Not Survey

Credits: RIGIS, 2010 Census Geo, ACS 2019

Figure 5-19: Percentage of LEP Individuals in RI by U.S. Census Tract—Other Indo-European

Figure 5-20: Percentage of LEP Individuals in RI by U.S. Census Tract—French, Haitian, or Cajun

SPG Tracts
French LEP %
■ 5 - 6 %
■ 6 - 7 %
■ 7 - 9.5 %

Non-SPG
French LEP %
■ 0 - 1 %
■ 1 - 3 %
■ 3 - 4.9 %

RI Municipalities
□

Credits: RIGIS, 2010 Census Geo, ACS 2019

Planning Purposes - Not Survey

Figure 5-21: Percentage of LEP Individuals in RI by U.S. Census Tract—Other Asian and Pacific Island

Figure 5-22: Percentage of LEP Individuals in RI by U.S. Census Tract—Chinese (including Mandarin and Cantonese)

SPG Tracts
Chinese (Incl. Mandarin & Cantonese)
- 5 - 6 %
- 6 - 6.5 %

Non-SPG
Chinese (Incl. Mandarin & Cantonese)
- 0 - 1 %
- 1 - 3 %
- 3 - 4.9 %

RI Municipalities

Planning Purposes - Not Survey

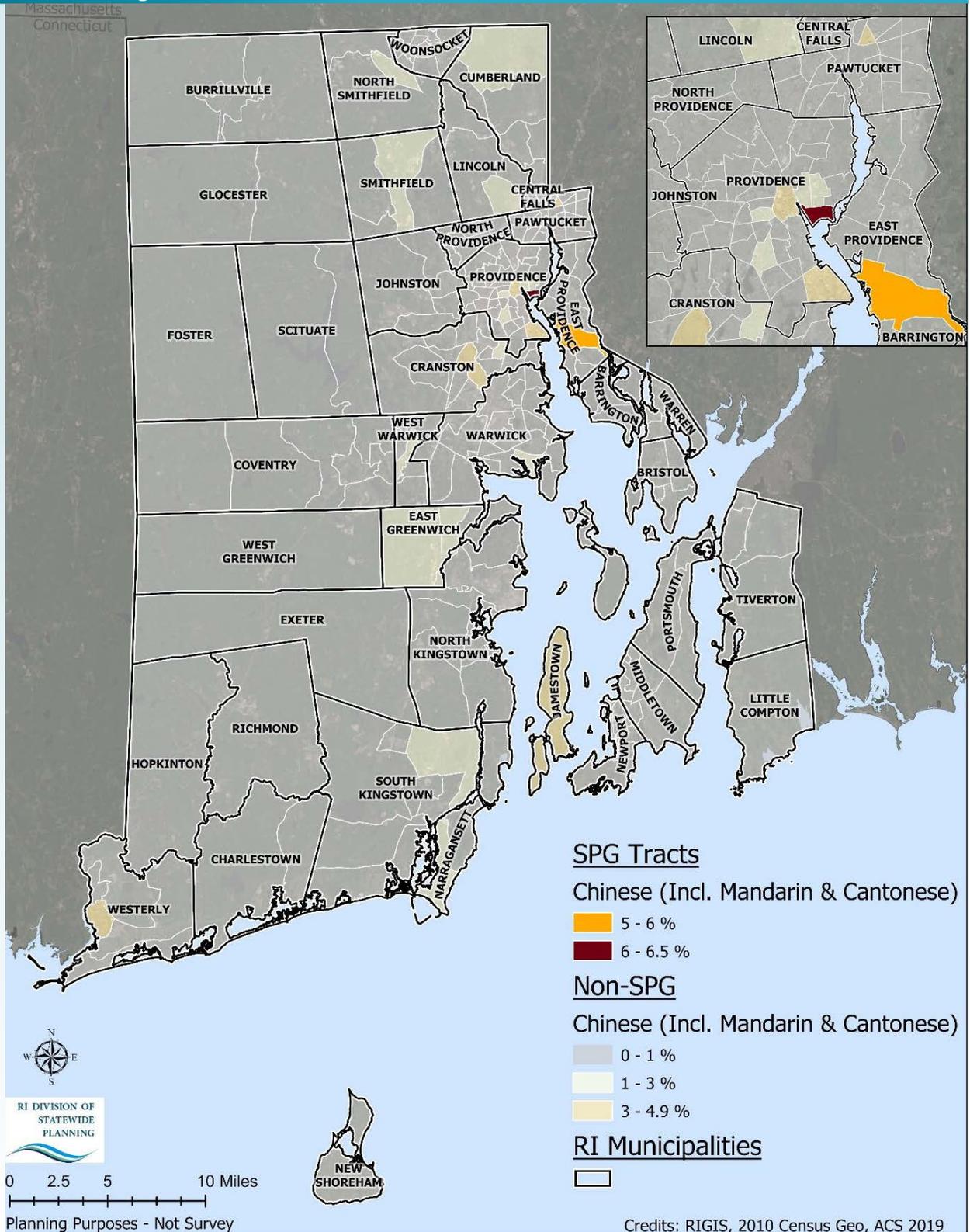Credits: RIGIS, 2010 Census Geo, ACS 2019

Figure 5-23: Percentage of Carless Households in RI by U.S. Census Tract

SPG Tracts
Carless Household %
- 9.4 - 17 %
- 17 - 28 %
- 28 - 52 %

Non-SPG
Carless Household %
- 0 - 3 %
- 3 - 6 %
- 6 - 9.2 %

RI Municipalities

Credits: RIGIS, 2010 Census Geo, ACS 2019

Planning Purposes - Not Survey