

Regional and Local Government Planning: Decennial Census Data Needs and Assessment

Jill Kaneff

Senior Regional Demographer

Northern Virginia Regional Commission



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Equity Analysis

- Accurate race/ethnicity data is critical for assessing and improving aspects of a community to make a community fair and inclusive for all.
- Census block group and tract data is used by governments to determine where inequities exist.
- Affordable and fair housing is one of many services where policies and programs are continually being developed and reevaluated.

DHC vs 2010 Census Share Calculations

1. What percent of homeowners are Hispanic?

Race or Ethnicity Owners
Total Owner Occupied

2. What percent of all Hispanic households are owners versus renters?

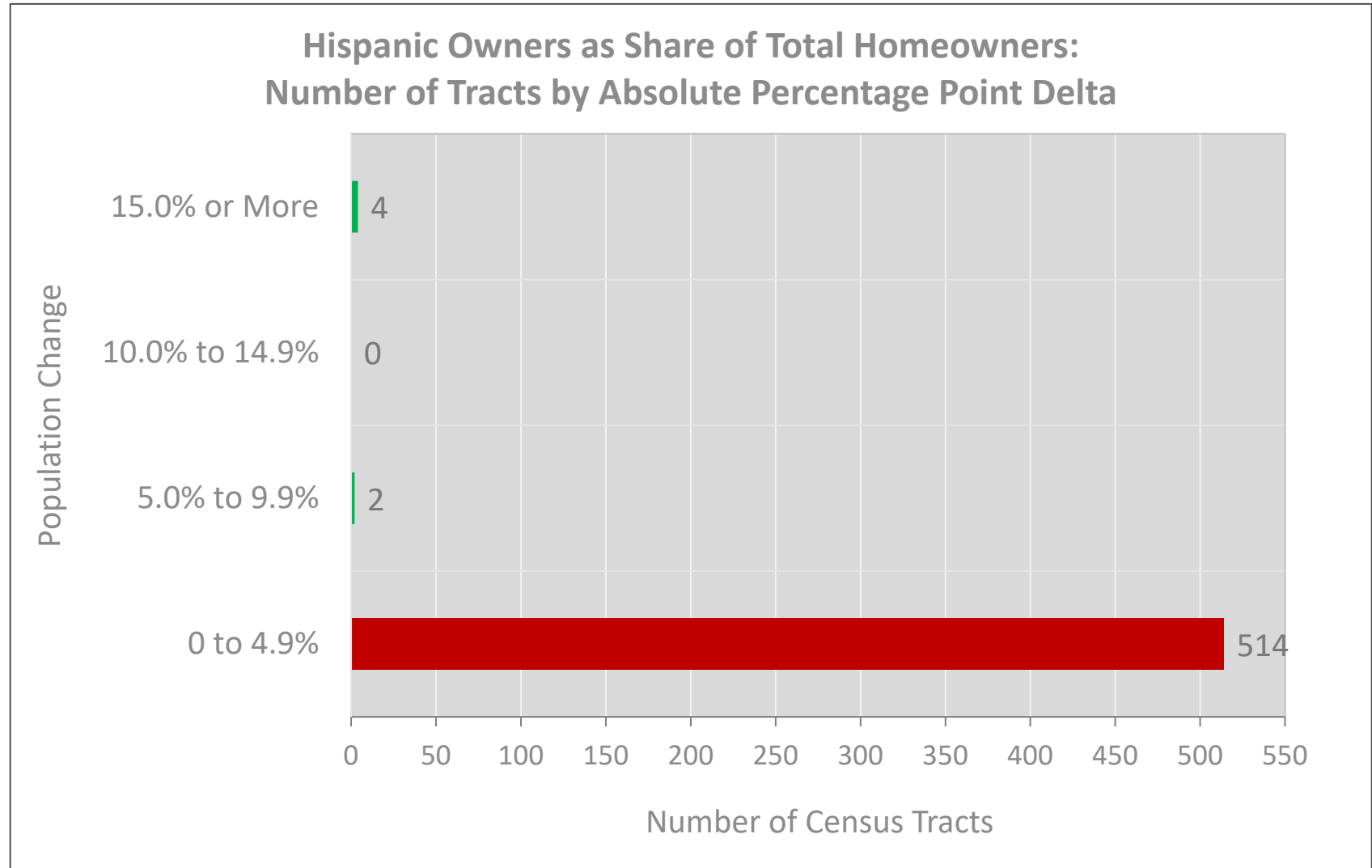
Race or Ethnicity Homeowners
Race or Ethnicity Total Occupied HU

Tract 5113901305

	DHC Demo	Original Census	Delta
Total Occupied HU	1003	1002	1
Owner Occupied HU	867	875	-8
Renter Occupied HU	136	127	9
Hispanic Total Occupied	53	37	16
Owner Occupied	22	28	-6
Renter Occupied	31	9	22
Hispanic Total Occupied Share of Total Occupied	5.3%	3.7%	1.6%
Hispanic Owner Occupied Share of Total Owner Occupied	2.5%	3.2%	-0.7%
Hispanic Owner Occupied Share of Hispanic Total Occupied	41.5%	75.7%	-34.2%

DHC Shares Using Tract Overall Totals for Denominator

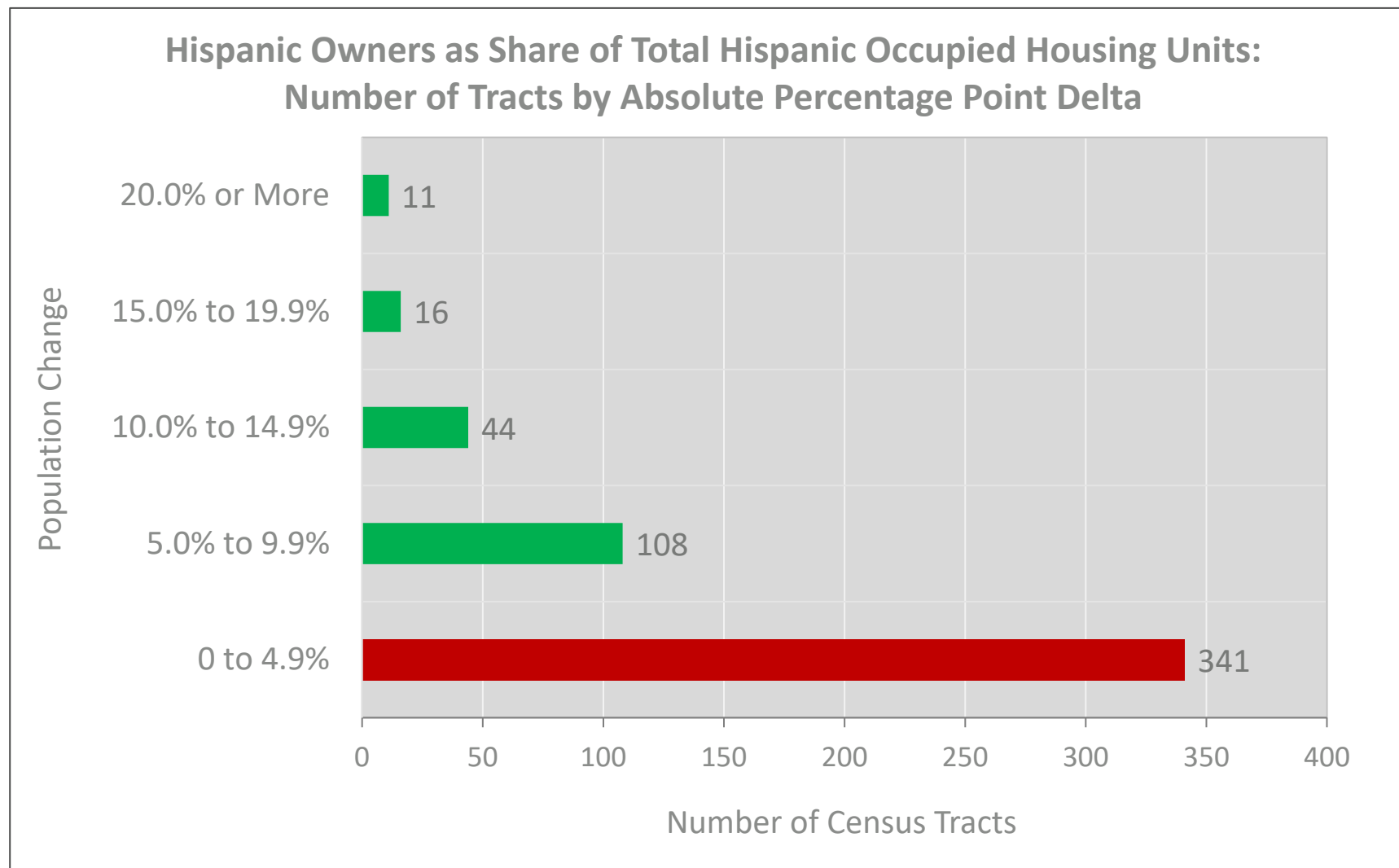
- **Total Overall as Denominator:**
Examples are share of total occupied or share of total owner occupied (#1)
- Tract level share (percentages) margins of error are within reason and data are **usable**



Sources: 2010 Census; 2010 Demonstration Data released March-April 2022.

DHC Shares Using Tract Sub-Totals for Denominator

- **Sub-Total as Denominator:**
Example is Total Hispanic Occupied HU (#2)
- Tract level share (percentages) margins of error are **problematic and unusable**



Sources: 2010 Census; 2010 Demonstration Data released March-April 2022.

Population and Household Estimates/Forecasts: Uses

Facility Planning

- Fire Stations
- Schools
- Parks
- Other Local Facilities

Transportation Planning

- Travel demand assessment
- Traffic volume vs. road capacity assessment
- Transportation actions needed to meet clean air future targets
- Planning Transportation Improvements

Accurate Decennial Census numbers for small geographies are critical for accurate long-term planning and proper use of taxpayer dollars

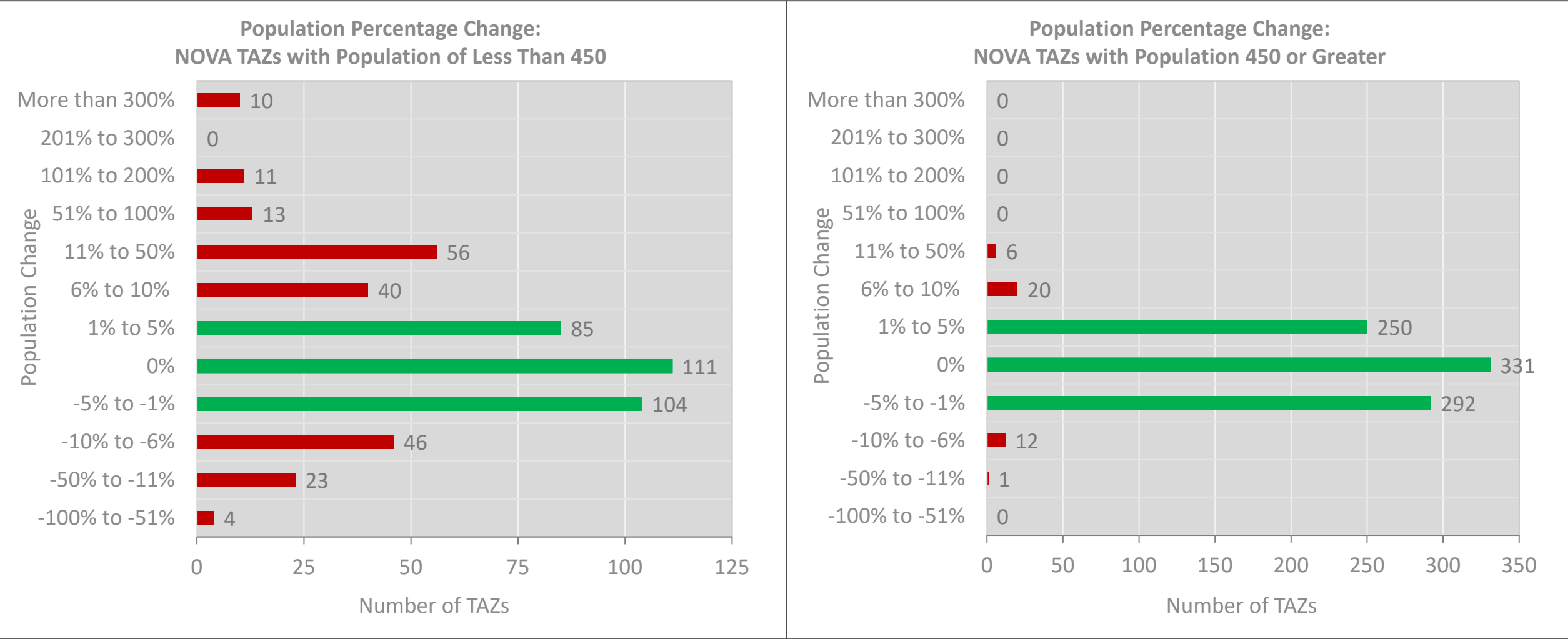
Population and Household Estimates/Forecasts: Non-Census Geographies

- Traffic Analysis Zone (TAZ) is an example of a small geography used by local and regional governments to estimate and forecast population and households.
- Block aggregated Decennial Census data is used as the foundational base numbers for intercensal estimates and forecast.
- A difference of a few hundred in Decennial Census population can mean the difference between a new facility being built or not (e.g., school, fire station).
- Disclosure Avoidance [Handbook](#) was released by the Census Bureau on November 2. Minimum population threshold of 450 is recommended.

NOVA TAZs with Population Less than 450 (2010 DP): **503**

NOVA TAZs with Population 450 or Greater (2010 DP): **912**

Population Percentage Change From 2010 Census to DP: Accuracy Across NOVA Traffic Analysis Zones (TAZs)



Sources: 2010 Census; 2010 Demonstration Data released June 2021.

Population and Household Estimates/Forecasts: Decennial Census Data Variables Needed

Decennial Census block data are aggregated to TAZs to calculate the base numbers used for intercensal estimates and long-term forecasts.

- Population
- Household Population (Det. DHC)
- Households
- Average Household Size (Det. DHC)
- Occupancy Rate (% of Housing Units Occupied)

Accurate Decennial Census numbers for small geographies are critical for accurate long-term planning and proper use of taxpayer dollars

Population and Household Estimates/Forecasts: Formulas

General formulas used by local governments in the Washington, D.C. region without access to data sources other than U.S. Census Bureau data and local government permits.

New Households =

Housing Units Permitted * Decennial Census Occupancy Rate

Total Households =

Decennial Census Households + New Households

Population =

Decennial Census Population + (New Households * Decennial Census Average Household Size)

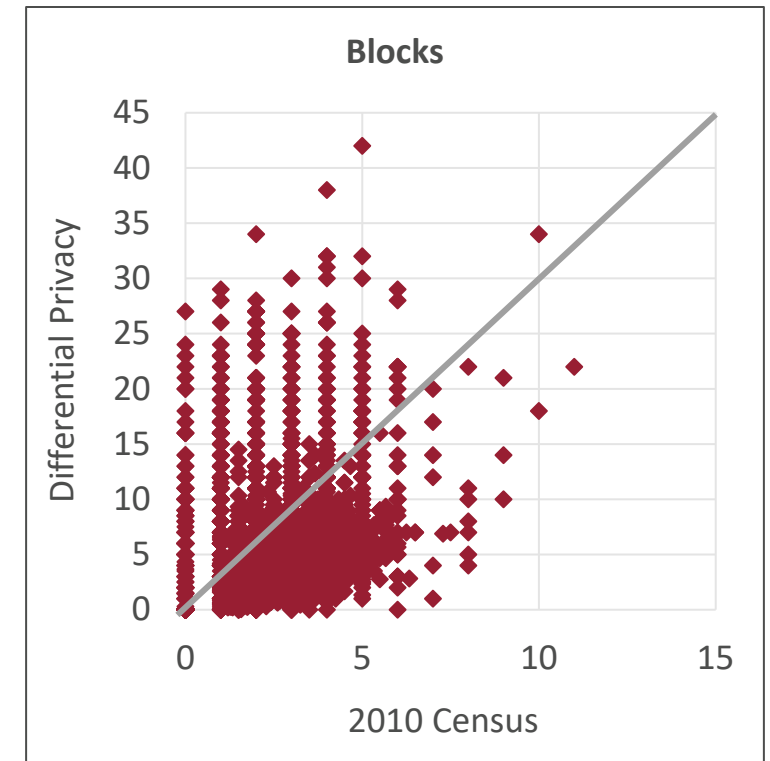
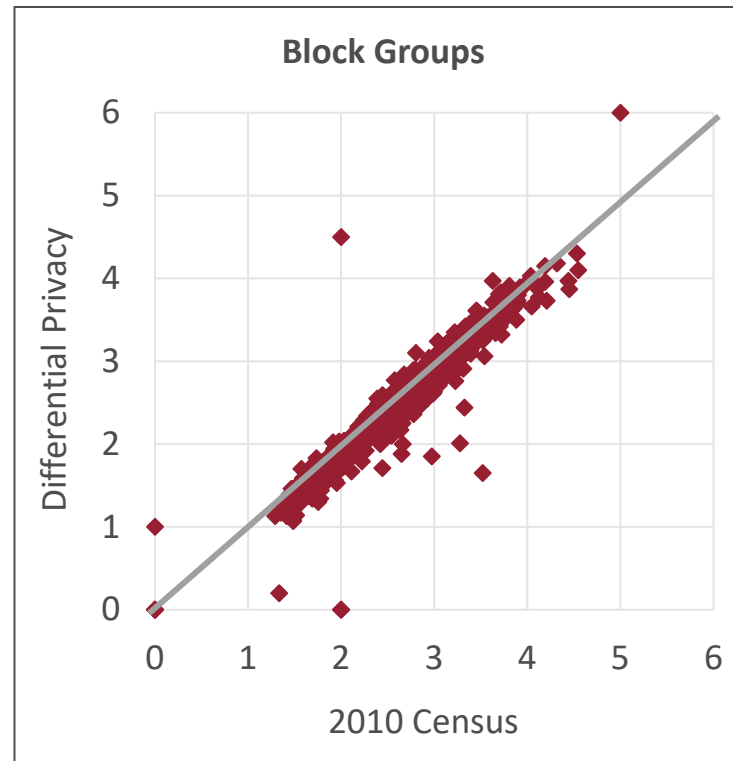
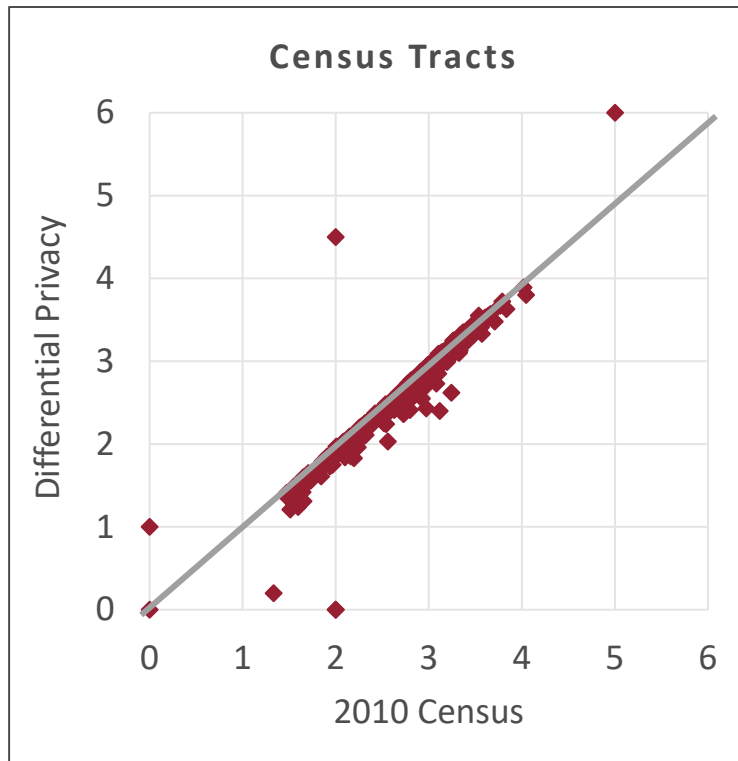
Average Household Size

	Redistricting File	Detailed Demographic and Housing Characteristics File
Population And Housing	• Separated during processing, producing improbable results • Improbable results for TAZs smaller geographies with less than 400. • Relatively fair results for 400 to 1000 person TAZs. • Reliable results for 1000+ person TAZs	• Joined during processing, leaving results of household size more intact

- Average Household Sizes for tracts and smaller will not match between these 2020 Census products according to the Census Bureau
- Person-Household Join tables of DHC release will be the primary source and most accurate according to the Census Bureau

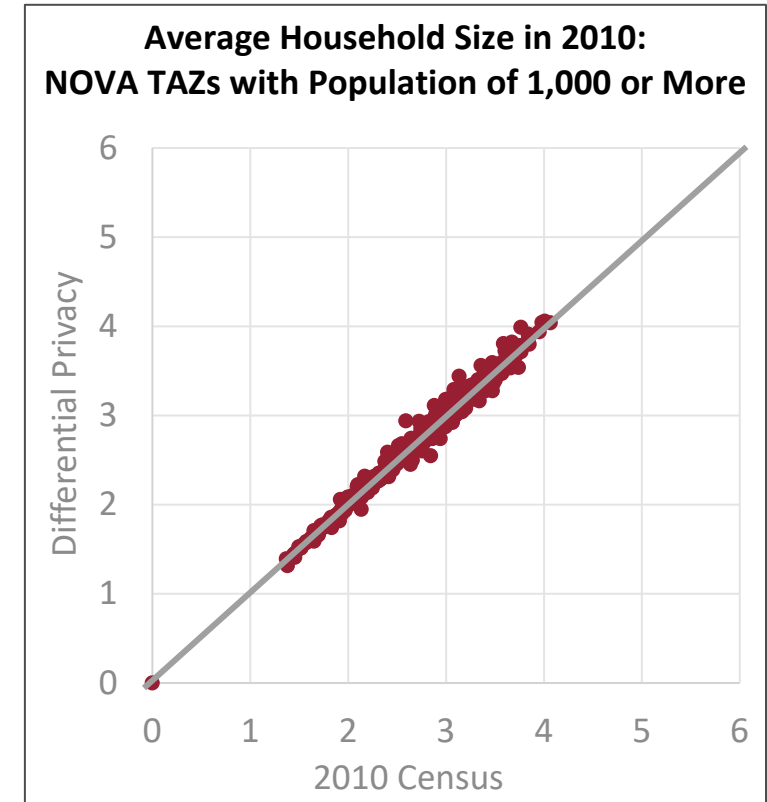
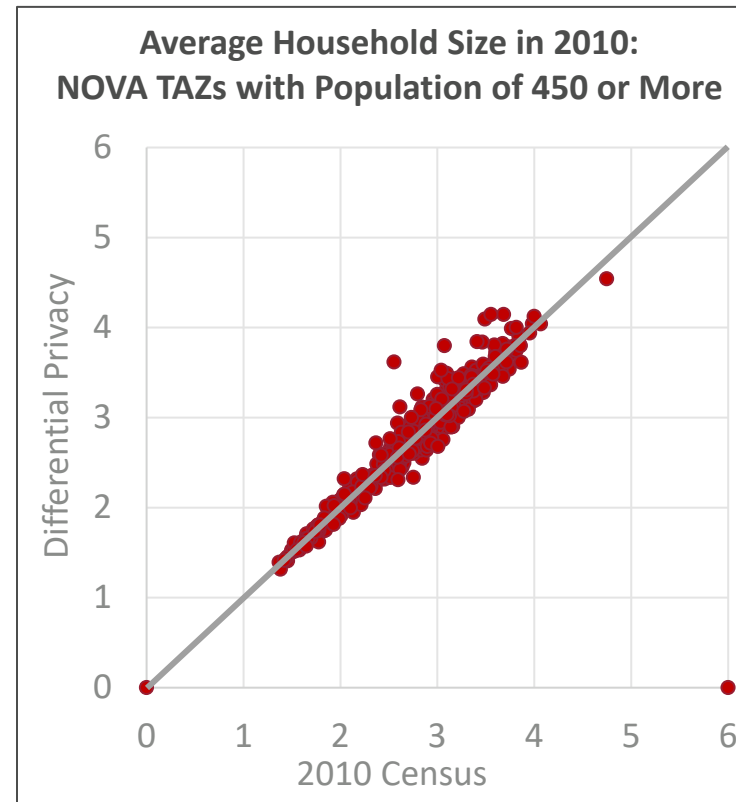
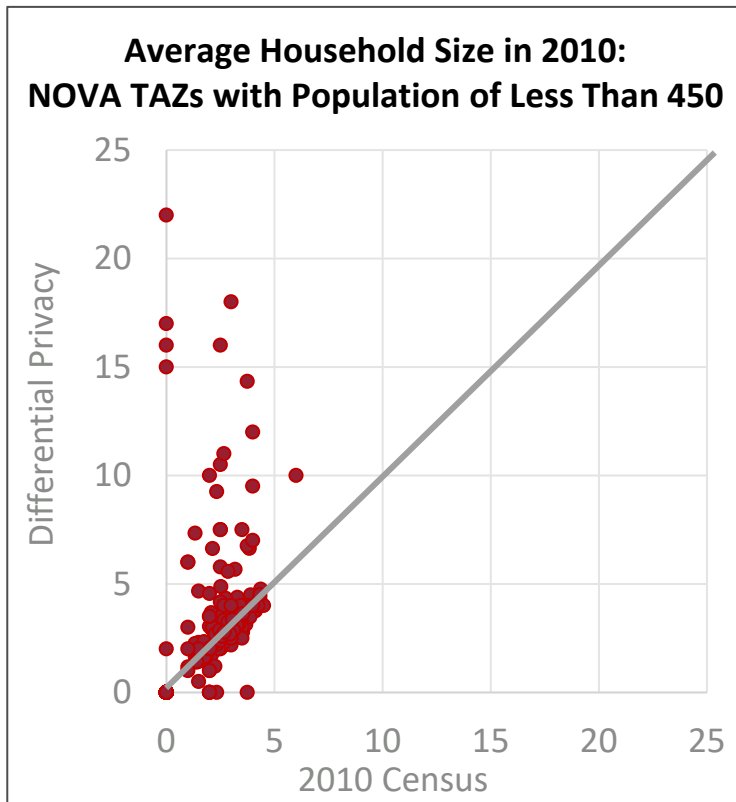
Average Household Size from Redistricting File: Accuracy Across NOVA Geographies

Biased to lower household sizes – Recommended fix when devising Detailed DHC



Sources: 2010 Census; 2010 Demonstration Data released June 2021.

Average Household Size from Redistricting File: Accuracy Across NOVA Traffic Analysis Zones (TAZs)



Sources: 2010 Census; 2010 Demonstration Data released June 2021.

Redistricting Data File: Assessment of Differential Privacy Final Adopted

Data Accuracy Assessment

- **County/City and Tract:** Highly reliable and usable for population, housing, and race data variables.
- **Block group:** Usable but with much caution. Reliability judgement calls now need made by analysts based on local knowledge.
- **Blocks:** Not reliable and not recommended for use in assessing demographic characteristics, unless combined to form areas of 450 or more persons per Census Bureau guidance.
 - Impact is loss of data for neighborhood, resiliency, emergency, transportation, and other planning and policy making.

Thank You!

Jill Kaneff
Senior Regional Demographer
Northern Virginia Regional Commission

JKaneff@novaregion.org