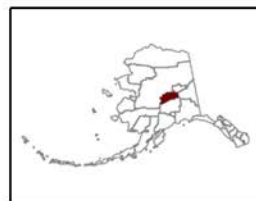
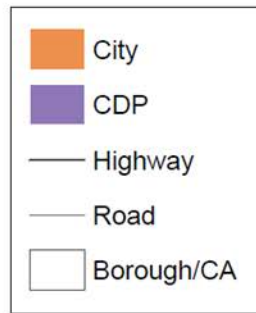


Denali Borough



CDP = Census Designated Place
CA = Census Area



Map Prepared by:
Alaska Department of Labor
& Workforce Development

September 2011

Source: US Census
2010 TIGERline

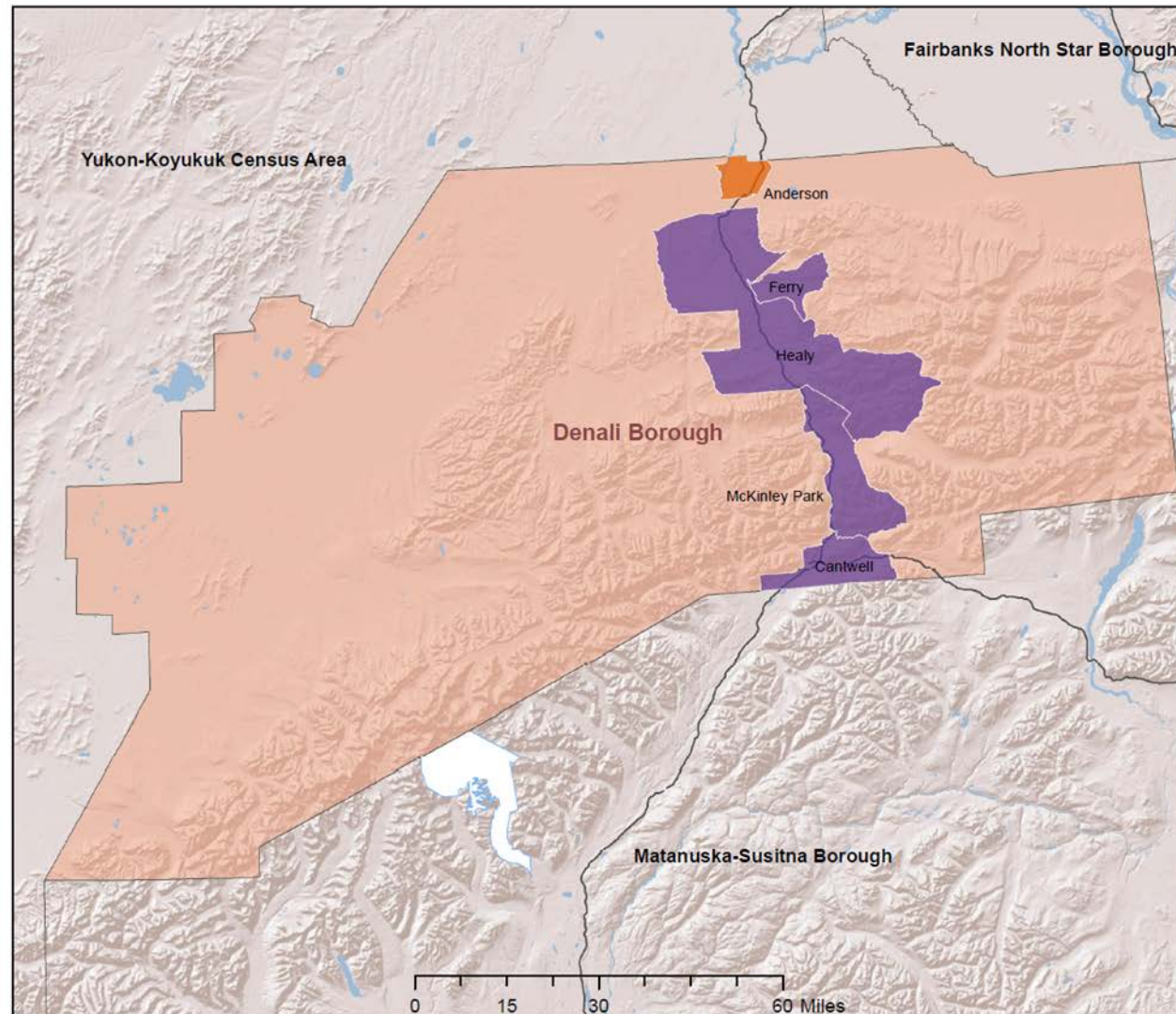


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Regional and Statewide Housing Characteristics

This census area summary only includes the highlights of housing characteristics at the census area level. The 2017 Alaska Housing Assessment provides a significant amount of data and analysis at statewide, ANCSA region and census area levels. That assessment provides a statewide analysis of housing characteristics, how they compare to national numbers, and the estimated housing needs. Within the 2017 Alaska Housing Assessment, written summaries are available for each individual ANCSA region and census area, and data profiles are also available characterizing the housing stock from the perspective of community, overcrowding, energy, affordability and need. These different tiers of information and analysis allow researchers, housing authorities, policymakers and others to generate answers to specific questions. For a more detailed discussion of estimating housing need and comparison of methods to previous housing assessments, see Appendix C Selected Methodology in 2017 Alaska Housing Assessment.

Denali Borough Dashboard

Population: The Alaska Department of Labor and Workforce Development's current (2015) population estimate for the Denali Borough is 1,781, a decrease of 6 percent from 2000.

Housing Units: There are currently 1,402 housing units in the Denali Borough. Of these, 722 are occupied, 62 are for sale or rent, and the remaining 1,025 are seasonal or otherwise vacant units.

Energy and Energy Costs: The average home in the Denali Borough is 1,784 square feet and uses 212 million BTUs of energy annually, compared to the statewide average of 227 million BTUs per year. Using AKWarm estimates, the average annual energy cost for homes in the Denali Borough is \$4,771. This is approximately 1.1 times the statewide average and 2.1 times the national average.

Overcrowding: An estimated 59 (8 percent) of occupied units are either overcrowded (3 percent) or severely overcrowded (6 percent). This is nearly 3 times the national average, and makes this census area the 12th most overcrowded census area in the state.

Drafty Homes and Ventilation: Approximately 154 (29 percent) of occupied homes in the Denali Borough are drafty, exceeding seven air changes per hour at 50 Pascals (ACH50). The statewide average is 36 percent. In contrast, there are an estimated 329 occupied housing units (62 percent) in the Denali Borough that are relatively airtight and lack a continuous ventilation system. These homes are at higher risk of issues with moisture and indoor air quality.

Affordability: On average, approximately 120 (17 percent) of households in the Denali Borough are cost-burdened, spending more than 30 percent of total household income on housing costs, including rent, utilities and energy. Statewide 31 percent of households are cost-burdened.

Senior Housing: There are an estimated 20 beds in senior housing facilities in the Denali Borough. Currently the Alaska Department of Labor and Workforce Development estimates there are 190 seniors in the census area and projects an increase to 387 by 2030.

Housing Issues: There are an estimated 327 homes built before the 1980s in the Denali Borough that have not been retrofitted through a state program in the past 10 years. Approximately 81 (11 percent) homes in the Denali Borough lack complete kitchens and approximately 84 (12 percent) lack complete bathrooms.

Denali Borough Housing Need Highlights

The primary housing need in the Denali Borough census area is for senior housing. The ratio of senior age dependents to the working age population is higher than the statewide average, and is projected to increase by 2.6 times by 2030. The primary pressure for housing in the next decade, therefore, will come from households with seniors. A second housing need is to retrofit homes to ensure healthy indoor air and increase energy efficiency.

Housing Gap: There are 1,402 housing units in the census area. An estimated 8 percent of occupied units are overcrowded or severely overcrowded, which is nearly three times the national average.¹ Approximately 60 percent of residences area are vacant, the vast majority (56.7 percent) are vacant because they are used seasonally or recreationally and only 3.4 percent of the houses are available for sale or rent.

Affordable Housing Need: The average annual energy cost for homes in the Denali Borough census area is \$4,771, approximately 1.1 times the state average and 2.1 times the national average.² This makes approximately 17 percent of households cost-burdened, meaning they spend more than 30 percent of their income on housing.³

Senior Housing Needs: There are no beds in senior housing facilities in the census area. The senior population is 190.⁴ This population is projected to increase to 387 by 2030.⁵

Retrofit Needs: Approximately 5 percent of occupied homes in the Denali Borough are estimated to be inefficient, using around four times more energy than if they had been built to AHFC's Building Energy Efficiency Standard (BEES).⁶ This is just less than the statewide average of 6 percent of inefficient homes; however, the census area has a large need for retrofits of existing housing stock. Nearly two-thirds of occupied homes are relatively airtight but lack mechanical ventilation, putting them at risk for moisture and indoor air quality issues.⁷ Twenty-nine percent of homes are drafty, exceeding 7 air changes per hour at 50 Pascals (ACH50).

¹ U.S. Census Bureau. (2016). *American Community Survey, 2010–2014 American Community Survey Five-year Estimates*.

² U.S. Energy Information Administration, Independent Statistics and Analysis. (2016). Residential Energy Consumption Survey (RECS): 2009. Retrieved from <https://www.eia.gov/consumption/residential/data/2009/index.php>

³ U.S. Census Bureau. (2016). *American Community Survey, 2010–2014 American Community Survey Five-year Estimates*.

⁴ AHFC Senior Housing Office. (2016). *Inventory List: Independent Living Homes/Facilities*. Revised 5/02/2016. Retrieved from <https://www.ahfc.us/senior-support/>

⁵ Hunsinger, Eddie, Sandberg, E., & Brooks, L. (2016). *Alaska Population Projections 2015 to 2045*. Alaska Department of Labor and Workforce Development, Research and Analysis Section.

⁶ See Appendix C: Methodology for details.

⁷ See Appendix C: Methodology for details.

Approximately 327 (23 percent) of homes were built before 1980 and have not undergone a retrofit from a state program in the past 10 years.

Denali Borough Summary

Community

The Denali Borough census area is located in Interior Alaska. Its communities are near the Parks Highway, which runs from Anchorage to Fairbanks and bisects the census area. Denali Borough is located in the Doyon Native Corporation ANCSA region. The average home size in the census area is 1,736 square feet.

The ratio of dependents, including those under 16 and over 65, relative to the working age population in the Denali Borough is lower than the statewide average and lower than the national ratio.⁸ The Denali Borough is expected to see an increase in the nonworking age population by 2030.

The ratio of senior age dependents to the working age population is higher than the statewide average and lower than the national average. The Denali Borough region is projected to see the ratio of senior age dependents to working age dependents increase by 2.6 times by 2030.

There are no registered dedicated beds in senior housing in the Denali Borough.⁹ Currently the Alaska Department of Labor and Workforce Development estimates there are 190 seniors in the census area and projects that there will be 387 senior citizens by 2030.¹⁰ Statewide an estimated 2.8 percent of senior citizens live in assisted care housing. Nationally, approximately 3.5 percent of senior citizens are in senior living facilities.¹¹

Comparison of the growth rates in the senior age (65+) segment of the population to the dependent age (0 to 15) population indicate that in the Denali Borough region the primary pressure for new housing over the next 15 years will come from households with elderly people.

⁸ Hunsinger, Eddie, Sandberg, E., & Brooks, L. (2016). "Alaska Population Projections 2015 to 2045." Alaska Department of Labor and Workforce Development, Research and Analysis Section.

U.S. Census Bureau. (2016). *American Community Survey, 2010-2014 American Community Survey Five-year Estimates*.

⁹ AHFC Senior Housing Office. (2016). *Inventory List: Independent Living Homes/Facilities*. Revised 5/02/2016. Retrieved from <https://www.ahfc.us/senior-support/>

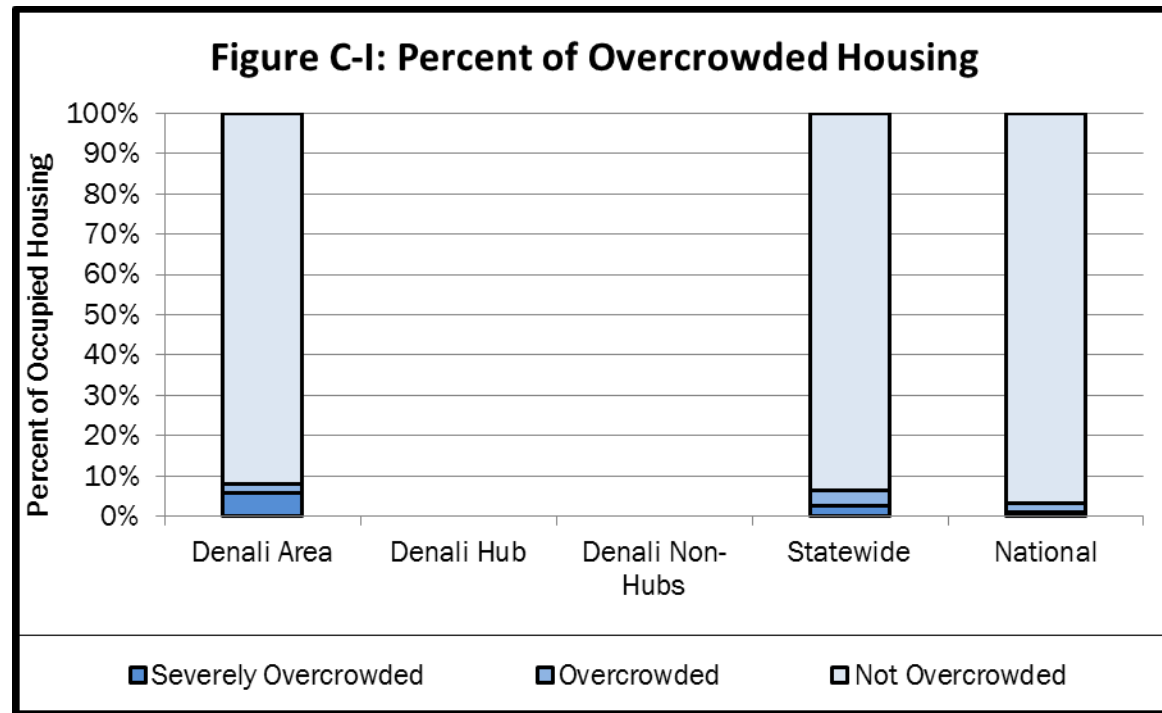
¹⁰ Hunsinger, Eddie, Sandberg, E., & Brooks, L. (2016). "Alaska Population Projections 2015 to 2045." Alaska Department of Labor and Workforce Development, Research and Analysis Section.

¹¹ Ribbe, M., Ljunggren, G., Steel, K., Topinkova, E., Hawes, C., Ikegami, N., ... Jonnson, P. (1997). "Nursing Homes in 10 Nations: A Comparison Between Countries and Settings." *Age and Ageing*. 26(S2), 3-12.

Overcrowding¹²

The Denali Borough is the 12th most overcrowded census area in Alaska. Approximately 8 percent of households are overcrowded in the census area as a whole. The rate of overcrowding in the Denali Borough is more than 1.3 times the statewide average (6.4 percent) and approximately 2.5 times more than the national average (3.3 percent).

Approximately 3.4 percent of housing units in the Denali Borough are available for sale or rent. Additionally, 56.7 percent of housing units in the Denali Borough are considered vacant because they are used for seasonal, recreational or other non-year-round purposes.

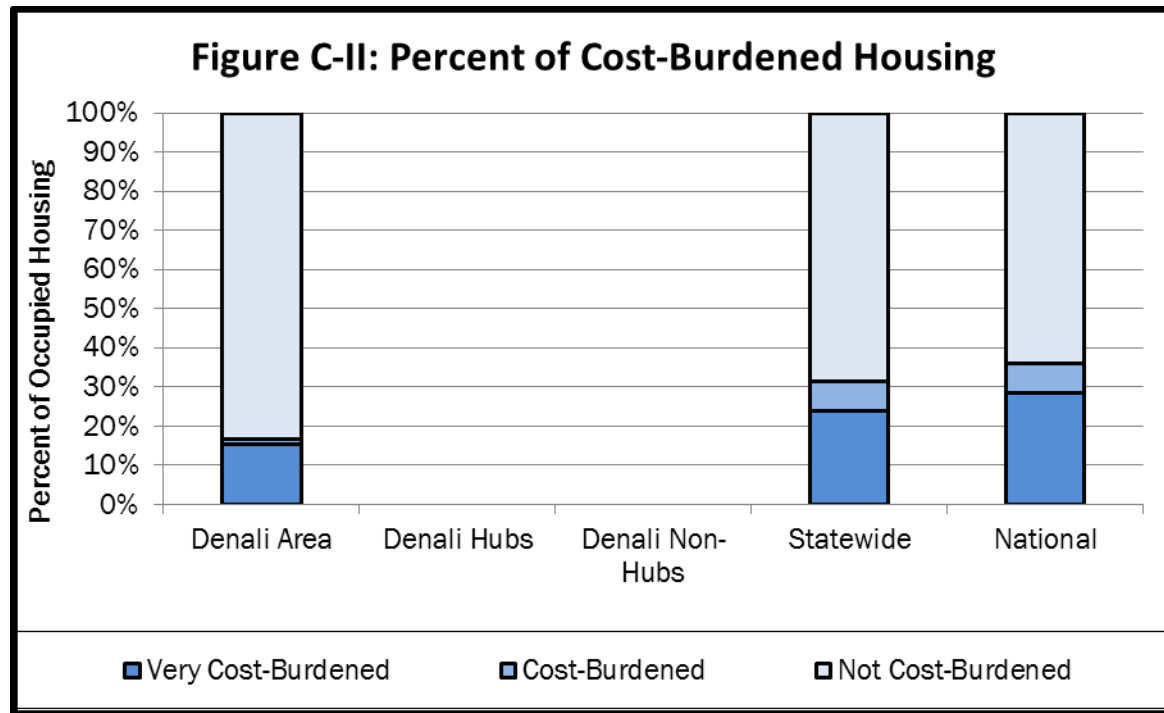


¹² U.S. Census Bureau. (2016). *American Community Survey, 2010-2014 American Community Survey Five-year Estimates*.

Affordability¹³

According to estimates from the U.S. Census American Community Survey (ACS), 17 percent of households in the Denali Borough are cost-burdened, that is, spend more than 30 percent of their income on housing costs. The rate of cost-burdened households in the Denali Borough is less than half of the national average (36 percent).

The median household income in the Denali Borough is \$79,167. This is higher than the statewide median of \$71,829. The national median is \$53,482.



¹³ U.S. Census Bureau. (2016). *American Community Survey, 2010-2014 American Community Survey Five-year Estimates*.

Energy¹⁴

Single-family Units

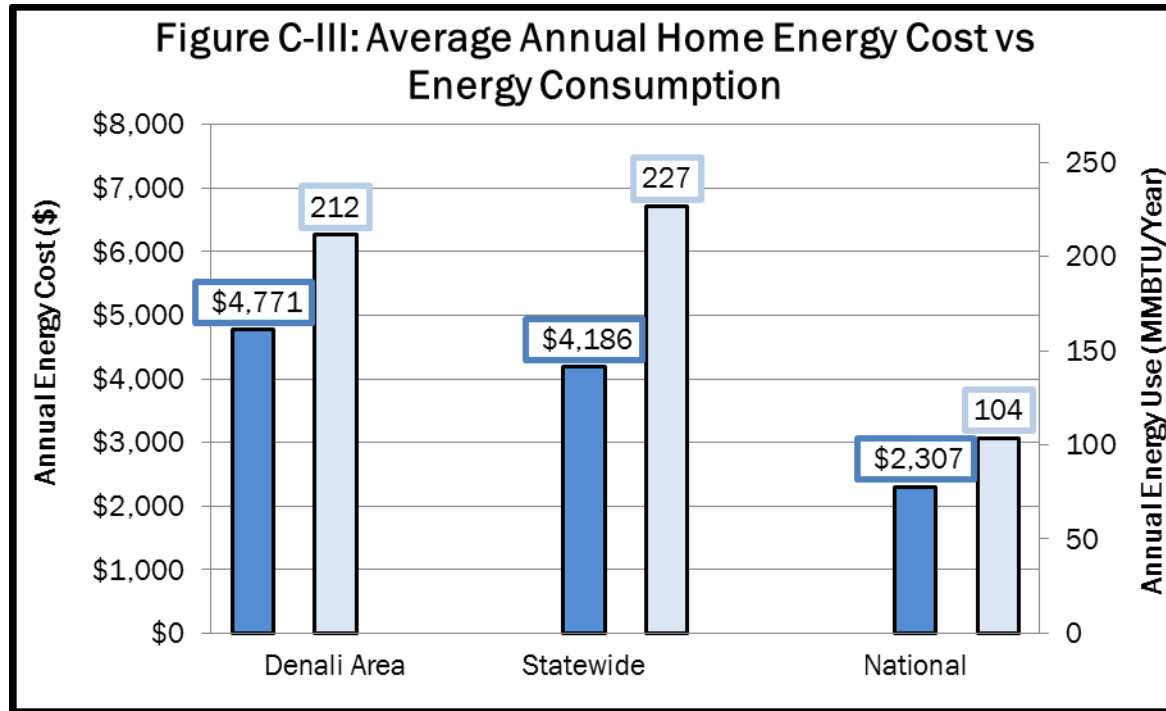
Single-family homes in the Denali Borough consume an average of 212 million BTUs per year, the eighth highest energy consumption in the state. This average annual energy consumption is 93 percent of the statewide average of 227 million BTUs and twice the national average.

Energy costs for single-family homes in the Denali Borough average \$4,771 annually. This is the eighth highest in the state. Denali Borough energy costs are 1.1 times the statewide average and 2.1 times the national average.

With an average footprint of 1,784 square feet, single-family homes in the Denali Borough are smaller than the statewide average of 1,955 square feet. Nationally the average house size is 2,425 square feet.

The energy use intensity (EUI), or annual energy used per square foot, for a single-family home in the Denali Borough averages 134,000 BTUs per square foot, the 14th highest in the state. This is approximately the same as the statewide average of 128,000 BTUs per square foot and 3.1 times the national average. The energy cost index (ECI), or annual energy cost per square foot, for a single-family home in the Denali Borough averages \$2.67, the 12th lowest in the state. This is 1.2 times the statewide average of \$2.31 per square foot and 2.8 times the national average of \$0.95 per square foot.

The home heating index (HHI) in the Denali Borough for the average single-family home is 7.84 BTUs/ft²/HDD. This is the sixth lowest in the state. The HHI for the Denali Borough is lower than the statewide average of 8.83 BTU/ft²/HDD. The normalized cost of energy, in terms of dollars per million BTUs, for a single-family home in the Denali Borough averages \$18.01, the fourth lowest



¹⁴ See Appendix C: Methodology for details.

in the state. This is 1.1 times the statewide average of \$15.80 per million BTUs and 81 percent of the national average of \$22.27 per million BTUs.

Inefficient and Older Homes¹⁵

Approximately 38 (5 percent) of the occupied homes in the Denali Borough are estimated to be 1-star homes. A 1-star home uses approximately four times more energy than if built to AHFC's Building Energy Efficiency Standard (BEES). Statewide, approximately 14,600 (6 percent) of occupied homes are estimated to be 1-star homes.

Older homes built before 1980 that have not been retrofitted are potentially homes in need. Approximately 23 percent of all homes in the Denali Borough fit these two criteria. This is lower than the statewide average of 39 percent.

¹⁵ See Appendix C: Methodology for details.

Housing Condition ¹⁶

Ventilation

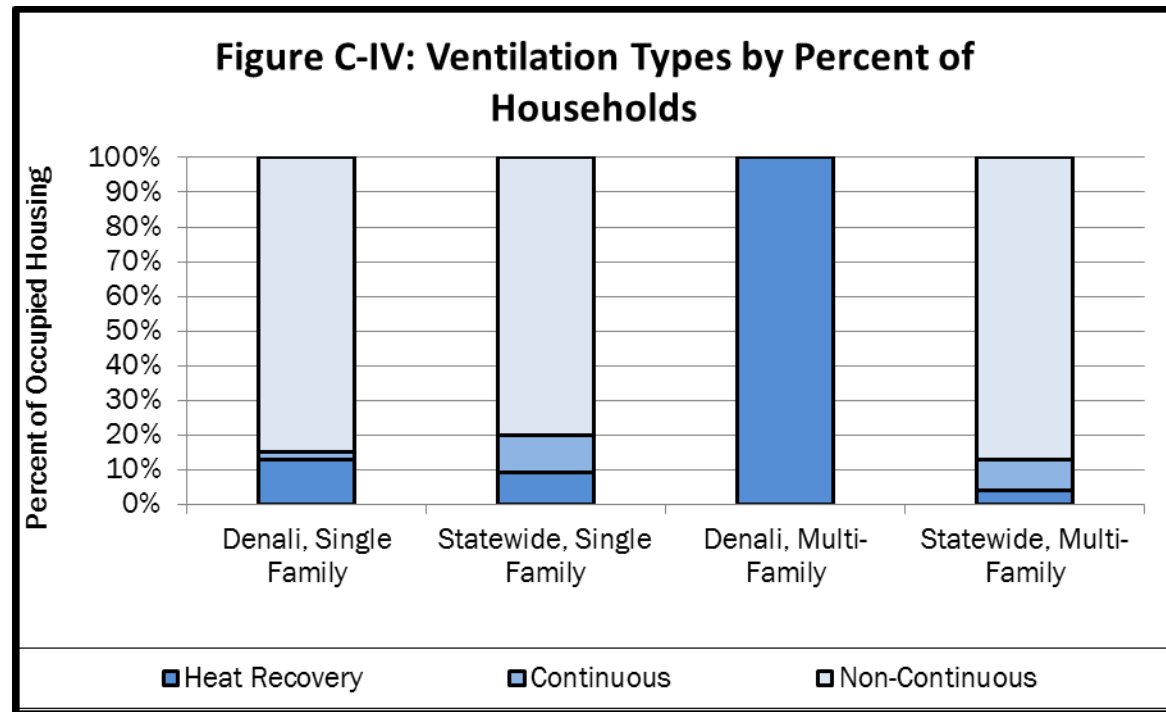
Approximately 15 percent of the occupied homes in the Denali Borough region have heat recovery or continuous mechanical ventilation systems installed. This is the 14th lowest in the state. Statewide approximately 20 percent of occupied homes have continuous mechanical ventilation systems, with or without heat recovery.

Indoor Air Quality

A tight home with no or inadequate ventilation has an increased risk of issues with indoor air quality or moisture. The Denali Borough has the second highest percentage of housing units in the state that are relatively airtight and lacking continuous mechanical ventilation. Approximately 179 (25 percent) of the occupied homes in the Denali Borough are estimated to be at moderate risk, with 265 (37 percent) estimated to be at high risk. Statewide, approximately 30 percent of occupied homes are estimated to be at moderate risk and 26 percent at high risk.

Draftiness

To quantify drafty homes, the following definitions were used. Drafty homes will see test results of between 7 and 12 air changes per hour at 50 Pascals (ACH50) when subjected to a blower door test. Very drafty homes will see test results of greater than 12 ACH50. Approximately 115 (16 percent) of the occupied homes in the Denali Borough are estimated to be drafty, with 96 (13 percent) estimated to be very drafty. Statewide approximately 24 percent of occupied homes are estimated to be drafty and 12 percent are estimated to be very drafty.



¹⁶ See Appendix C: Methodology for details.