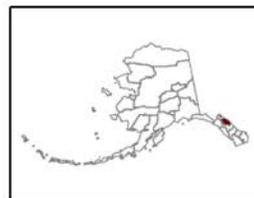
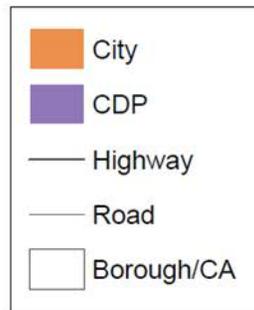


# City & Borough of Juneau



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.

## Juneau City and Borough Dashboard

**Population:** The Alaska Department of Labor and Workforce Development's current (2015) population estimate for the Juneau City and Borough is 33,277, an increase of 8 percent from 2000.

**Housing Units:** There are currently 13,549 housing units in the Juneau City and Borough. Of these, 12,081 are occupied, 434 are for sale or rent, and the remaining 592 are seasonal or otherwise vacant units.

**Energy and Energy Costs:** The average home in the City and Borough of Juneau is 1,841 square feet and uses 192 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 City and Borough of Juneau is \$4,374. This is approximately the same as the statewide average and 1.9 times the national average.

**Overcrowding:** An estimated 616 (5 percent) of occupied units are either overcrowded (4 percent) or severely overcrowded (1 percent). This is nearly twice the national average, and makes this census area the 12th least overcrowded census area in the state.

**Drafty Homes and Ventilation:** Approximately 7,264 (58 percent) of occupied homes in the City and Borough of Juneau are drafty, exceeding seven air changes per hour at 50 Pascals (ACH50). The statewide average is 36 percent. In contrast, there are an estimated 6,137 occupied housing units (49 percent) in the City and Borough of Juneau 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 3,579 (30 percent) of households in the City and Borough of Juneau 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 202 beds in senior housing facilities in the City and Borough of Juneau. Currently the Alaska Department of Labor and Workforce Development estimates there are 3,655 seniors in the census area and projects an increase to 6,783 by 2030.

**Housing Issues:** There are an estimated 3,884 homes built before the 1980s in the City and Borough of Juneau that have not been retrofitted through a state program in the past 10 years. Approximately 210 (2 percent) homes in the City and Borough of Juneau lack complete kitchens and approximately 176 (1 percent) lack complete bathrooms.

## Juneau City and Borough Housing Need Highlights

The two primary housing needs in the City and Borough of Juneau are to increase affordability and to increase availability of housing facilities for seniors.

Recent research has found that while seniors living in Juneau have higher than average incomes, there is a shortage of independent and assisted-living senior housing facilities.<sup>1</sup> Without increasing affordable and available senior housing, this problem will become exacerbated as the senior population is projected to nearly double by 2030.<sup>2</sup>

**Housing Gap:** The *2012 Juneau Housing Needs Assessment* found low rates of recent construction. Data from Alaska Department of Labor show that the current rate appears adequate to meet projected population growth;<sup>3</sup> however, the current rate of construction is not enough to fully alleviate existing overcrowding by the year 2025.

**Affordable Housing Need:** The City and Borough of Juneau has a rate of housing cost-burden that is nearly the same as the statewide average.<sup>4</sup> Housing affordability for renters in Juneau is particularly challenging, with renter households needing to work 76 hours per week at jobs paying the average renter wage in order to afford a two-bedroom rental unit at the fair market rent.<sup>5</sup> This is the worst ratio of average renter wage to housing costs in the state.

**Senior Housing Needs:** There are 202 beds in senior housing facilities in the City and Borough of Juneau;<sup>6</sup> however, there are an estimated 3,655 seniors. This number is projected to nearly double by 2030.<sup>7</sup> The percentage of seniors living in senior housing facilities is similar to the statewide average.

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<sup>1</sup> Agnew Beck Consulting, & Northern Economics, Inc. (2014). *Juneau Senior Housing and Services Market Demand Study*. Retrieved from [http://www.jedc.org/sites/default/files/images/Juneau\\_SHS\\_Report\\_with\\_Appendices\\_October\\_2014.pdf](http://www.jedc.org/sites/default/files/images/Juneau_SHS_Report_with_Appendices_October_2014.pdf)

<sup>2</sup> Hunsinger, Eddie, Sandberg, E., & Brooks, L. (2016). *Alaska Population Projections 2015 to 2045*. Alaska Department of Labor and Workforce Development, Research and Analysis Section.

<sup>3</sup> Juneau Economic Development Corporation. (2012). *Juneau Housing Needs Assessment*. Retrieved from [http://www.jedc.org/sites/default/files/2012\\_Juneau\\_Housing\\_Needs\\_Assessment\\_v\\_11.20.12.pdf](http://www.jedc.org/sites/default/files/2012_Juneau_Housing_Needs_Assessment_v_11.20.12.pdf)

<sup>4</sup> U.S. Census Bureau. (2016). *American Community Survey, 2010–2014 American Community Survey Five-year Estimates*.

<sup>5</sup> Yentel, D., Aurand, A., Emmanuel, D., Errico, E., Leong, G. M., & Rodrigues, K. (2016). *Out of Reach 2016*. National Low Income Housing Coalition. Retrieved from [http://nlihc.org/sites/default/files/oor/OOR\\_2016.pdf](http://nlihc.org/sites/default/files/oor/OOR_2016.pdf)

<sup>6</sup> AHFC Senior Housing Office. (2016). *Inventory List: Independent Living Homes/Facilities*. Revised 5/02/2016. Retrieved from <https://www.ahfc.us/senior-support/>

<sup>7</sup> Hunsinger, Eddie, Sandberg, E., & Brooks, L. (2016). *Alaska Population Projections 2015 to 2045*. Alaska Department of Labor and Workforce Development, Research and Analysis Section.

Authors of the *Juneau Senior Housing and Services Market Demand Study* found that the second and third biggest areas needing improvement were “limited options for senior assisted living” and “affordable senior housing.”<sup>8</sup> Additionally, they identified that as of May 2014 there was an active waitlist for assisted living of 97 people. The study also found that the projected increase in seniors ages 85 and older was expected to grow at an even faster rate from 285 in 2014 to 1,393 by 2042, an increase of nearly 500 percent. The study also estimated that the population of seniors with Alzheimer’s will triple by 2042. These 85 and older Alaskans and Alaskans with Alzheimer’s tend to require the highest level of long-term care and services and represent a significant growth need for assisted living facilities in particular. The market demand study identified other gaps for seniors, including the need for independent senior housing with and without supportive services.

**Retrofit Needs:** Juneau has an aging housing stock with an estimated 50 percent of homes built before 1980 without a recent energy retrofit, higher than the statewide average of 39 percent.<sup>9</sup> All of these homes have potential for an energy retrofit, with an estimated 10 percent of occupied homes rated 1-star likely being the most cost-effective. These retrofits should prioritize reducing draftiness while maintaining indoor air quality because an estimated 59 percent of housing units in Juneau are drafty.

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<sup>8</sup> Agnew Beck Consulting, & Northern Economics, Inc. (2014). *Juneau Senior Housing and Services Market Demand Study*. Retrieved from [http://www.jedc.org/sites/default/files/images/Juneau SHS Report with Appendices October 2014.pdf](http://www.jedc.org/sites/default/files/images/Juneau_SHS_Report_with_Appendices_October_2014.pdf)

<sup>9</sup> See Appendix C: Methodology for details.

## Juneau City and Borough Summary

### Community

The City and Borough of Juneau is located in the Southeast panhandle of Alaska, and the Sealaska Native Corporation ANCSA region. The city of Juneau is the state capitol. The average home size in the census area is 1,725 square feet.

The ratio of dependents, including those under 16 and over 65, relative to the working age population in the City and Borough of Juneau is lower than the statewide average and lower than the national ratio.<sup>10</sup> The City and Borough of Juneau 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 City and Borough of Juneau region is projected to see the ratio of senior age dependents to working age dependents increase by 1.9 times by 2030.

There are an estimated 202 dedicated beds in senior housing in the City and Borough of Juneau, with 48 of those dedicated to assisted care living.<sup>11</sup> Currently the Alaska Department of Labor and Workforce Development estimates there are 3,655 seniors in the census area and projects that there will be 6,783 senior citizens by 2030.<sup>12</sup> In the City and Borough of Juneau 1.3 percent of senior citizens are in assisted care housing. This is lower than the statewide rate of 2.8 percent of senior citizens in assisted care housing. Nationally, approximately 3.5 percent of senior citizens are in senior living facilities.<sup>13</sup>

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 City and Borough of Juneau region the primary pressure for new housing over the next 15 years will come from households with elderly people.

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<sup>10</sup> 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*.

<sup>11</sup> AHFC Senior Housing Office. (2016). *Inventory List: Independent Living Homes/Facilities*. Revised 5/02/2016. Retrieved from <https://www.ahfc.us/senior-support/>

<sup>12</sup> Hunsinger, Eddie, Sandberg, E., & Brooks, L. (2016). "Alaska Population Projections 2015 to 2045." Alaska Department of Labor and Workforce Development, Research and Analysis Section.

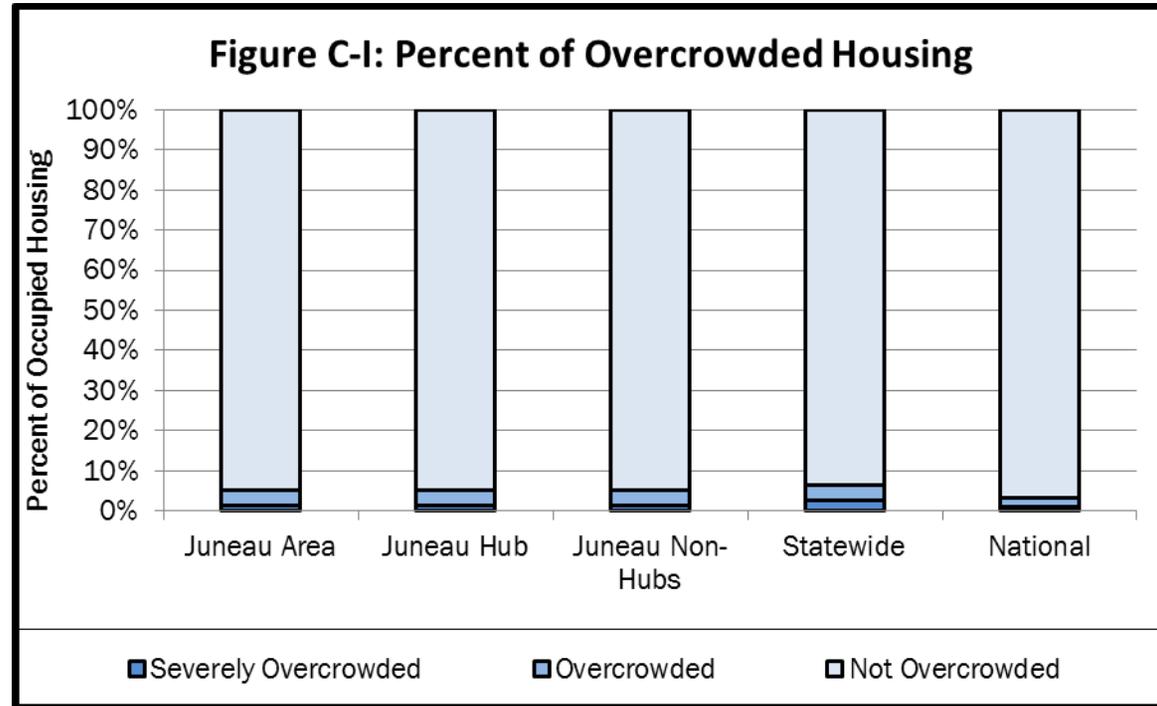
<sup>13</sup> Ribbe, M., Ljunggren, G., Steel, K., Topinkova, E., Hawes, C., Ikegami, N., ... Jonnson, P. (1997). "Nursing Homes in 10 Nations: A Comparison Between Countries and Settings." *Age and Ageing*. 26(S2), 3-12.

## Overcrowding<sup>14</sup>

The City and Borough of Juneau is the 12th least overcrowded census area in Alaska. Approximately 5 percent of households are overcrowded in the census area as a whole. The rate of overcrowding in the City and Borough of Juneau is nearly 80 percent of the statewide average (6.4 percent) and approximately 1.5 times more than the national average (3.3 percent).

Overcrowding is defined as households with more than 1 person per room. Severe overcrowding is defined as households with more than 1.5 persons per room.

Approximately 3 percent of housing units in the City and Borough of Juneau are available for sale or rent. Additionally, 5 percent of housing units in the City and Borough of Juneau are considered vacant because they are used for seasonal, recreational or other non-year-round purposes.

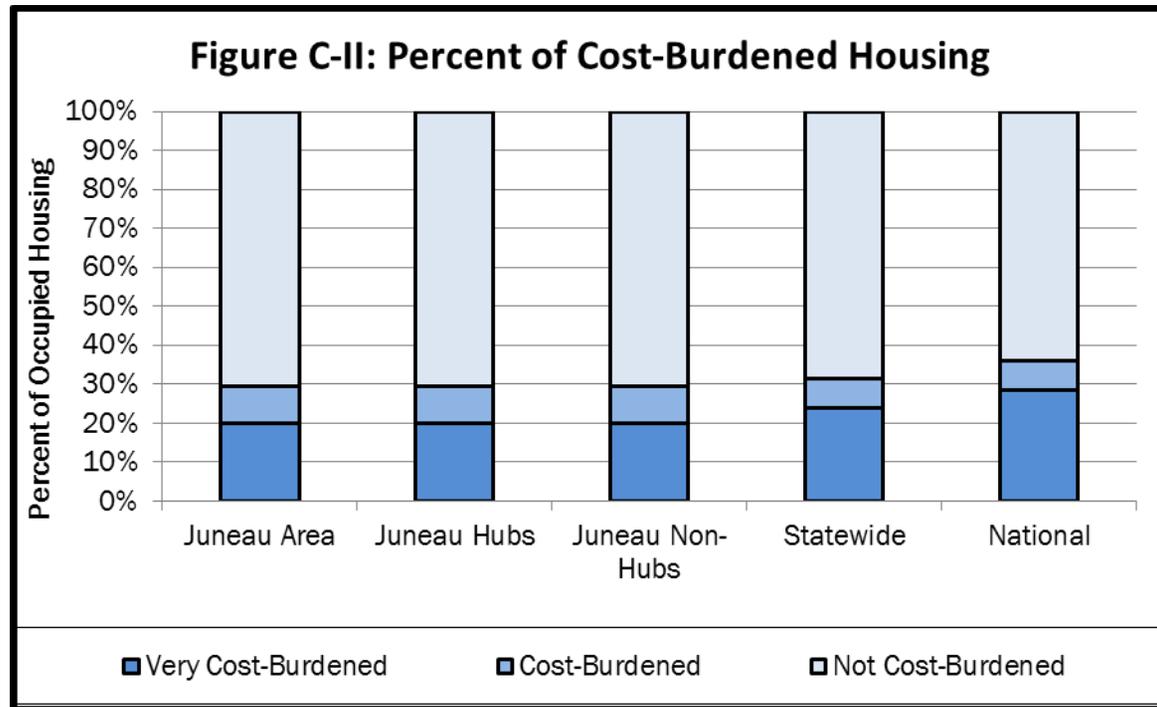


<sup>14</sup> U.S. Census Bureau. (2016). *American Community Survey, 2010-2014 American Community Survey Five-year Estimates*.

### Affordability<sup>15</sup>

According to estimates from the U.S. Census American Community Survey (ACS), 30 percent of households in the City and Borough of Juneau are cost-burdened, that is, spend more than 30 percent of their income on housing costs. The rate of cost-burdened households in the City and Borough of Juneau is 82 percent of the national average (36 percent).

The median household income in the City and Borough of Juneau is \$84,750. This is higher than the statewide median of \$71,829. The national median is \$53,482.



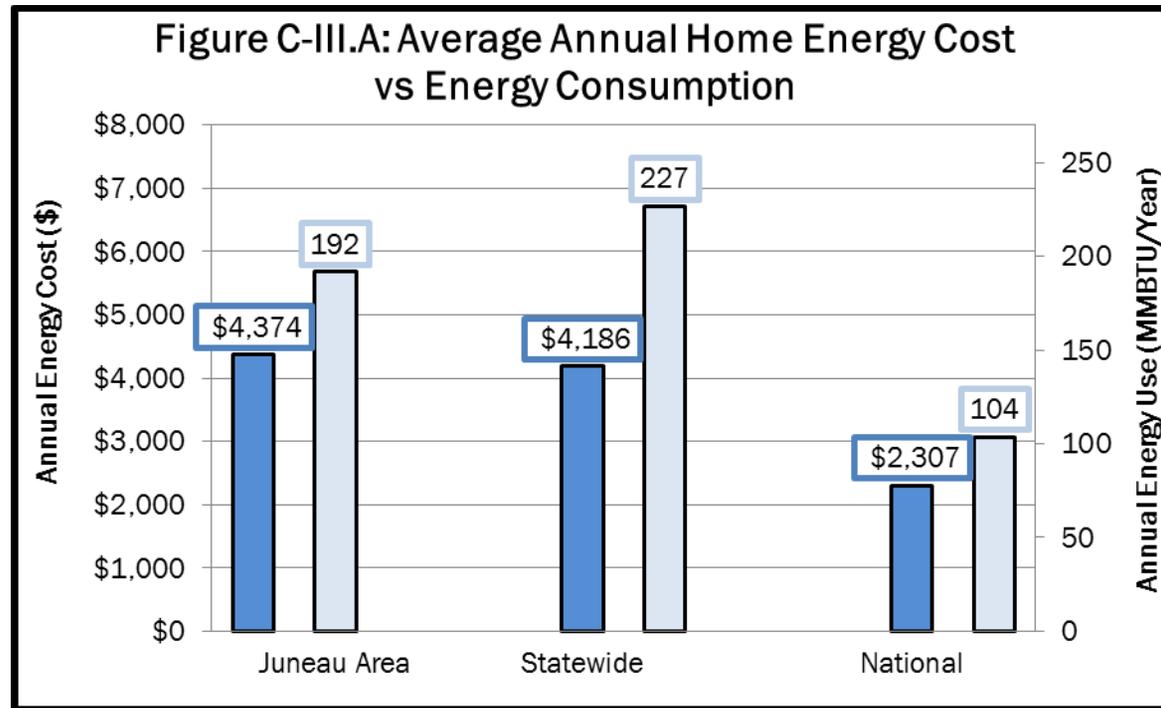
<sup>15</sup> U.S. Census Bureau. (2016). *American Community Survey, 2010-2014 American Community Survey Five-year Estimates*.

## Energy<sup>16</sup>

### Single-family Units

Single-family homes in the City and Borough of Juneau consume an average of 192 million BTUs per year, the 11th highest energy consumption in the state. This average annual energy consumption is 85 percent of the statewide average of 227 million BTUs and 1.9 times the national average.

Energy costs for single-family homes in the City and Borough of Juneau average \$4,374 annually. This is the 15th highest in the state. City and Borough of Juneau energy costs are approximately the same as the statewide average and 1.9 times the national average.



With an average footprint of 1,841 square feet, single-family homes in the City and Borough of Juneau 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 City and Borough of Juneau averages 111,000 BTUs per square foot, the third lowest in the state. This is 87 percent of the statewide average of 128,000 BTUs per square foot and 2.6 times the national average. The energy cost index (ECI), or annual energy cost per square foot, for a single-family home in the City and Borough of Juneau averages \$2.38, the seventh lowest in the state. This is approximately equivalent to the statewide average of \$2.31 per square foot and 2.5 times the national average of \$0.95 per square foot.

The home heating index (HHI) in the City and Borough of Juneau for the average single-family home is 10.1 BTUs/ft<sup>2</sup>/HDD. This is the seventh highest in the state. The HHI for the City and Borough of Juneau is higher than the statewide average of 8.83 BTU/ft<sup>2</sup>/HDD. The normalized cost of energy, in terms of dollars per million BTUs, for a single-family home in the City and Borough

<sup>16</sup> See Appendix C: Methodology for details.

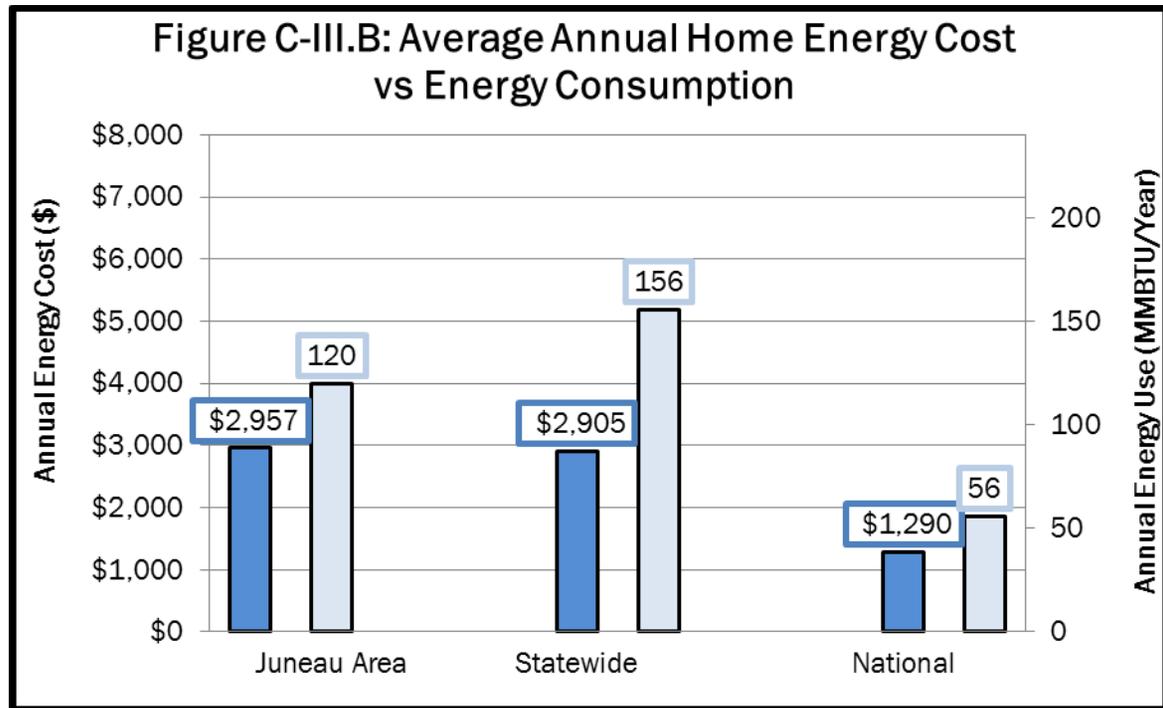
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of Juneau averages \$19.52, the eighth lowest in the state. This is 1.2 times the statewide average of \$15.80 per million BTUs and 88 percent of the national average of \$22.27 per million BTUs.

### Multifamily Units

Multifamily housing units in the City and Borough of Juneau consume an average of 120 million BTUs per year, the 15th highest energy consumption in the state. This average annual energy consumption is 77 percent of the statewide average of 156 million BTUs and 1.9 times the national average.

Energy costs for multifamily housing units in the City and Borough of Juneau average \$2,957 annually. This is the 14th lowest in the state. City and Borough of Juneau energy costs are approximately the same as the statewide average and 2.3 times the national average.



With an average footprint of 1,239 square feet, multifamily housing units in the City and Borough of Juneau are smaller than the statewide average of 1,284 square feet. Nationally the average unit in multifamily housing is 930 square feet.

The energy use intensity (EUI), or annual energy used per square foot, for a multifamily housing unit in the City and Borough of Juneau averages 102,000 BTUs per square foot, the 11th lowest in the state. This is 80 percent of the statewide average of 128,000 BTUs per square foot and 1.7 times the national average. The energy cost index (ECI), or annual energy cost per square foot, for a multifamily housing unit in the City and Borough of Juneau averages \$2.39, the ninth lowest in the state. This is approximately equivalent to the statewide average of \$2.27 per square foot and 1.7 times the national average of \$1.39 per square foot.

The home heating index (HHI) in the City and Borough of Juneau for the average multifamily housing unit is 8.31 BTUs/ft<sup>2</sup>/HDD. This is the 10th highest in the state. The HHI for the City and Borough of Juneau is approximately the same as the statewide average of 8.28 BTU/ft<sup>2</sup>/HDD. The normalized cost of energy, in terms of dollars per million BTUs, for a unit in multifamily housing

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in the City and Borough of Juneau averages \$18.49, the eighth lowest in the state. This is 1.4 times the statewide average of \$12.79 per million BTUs and 80 percent of the national average of \$23.12 per million BTUs.

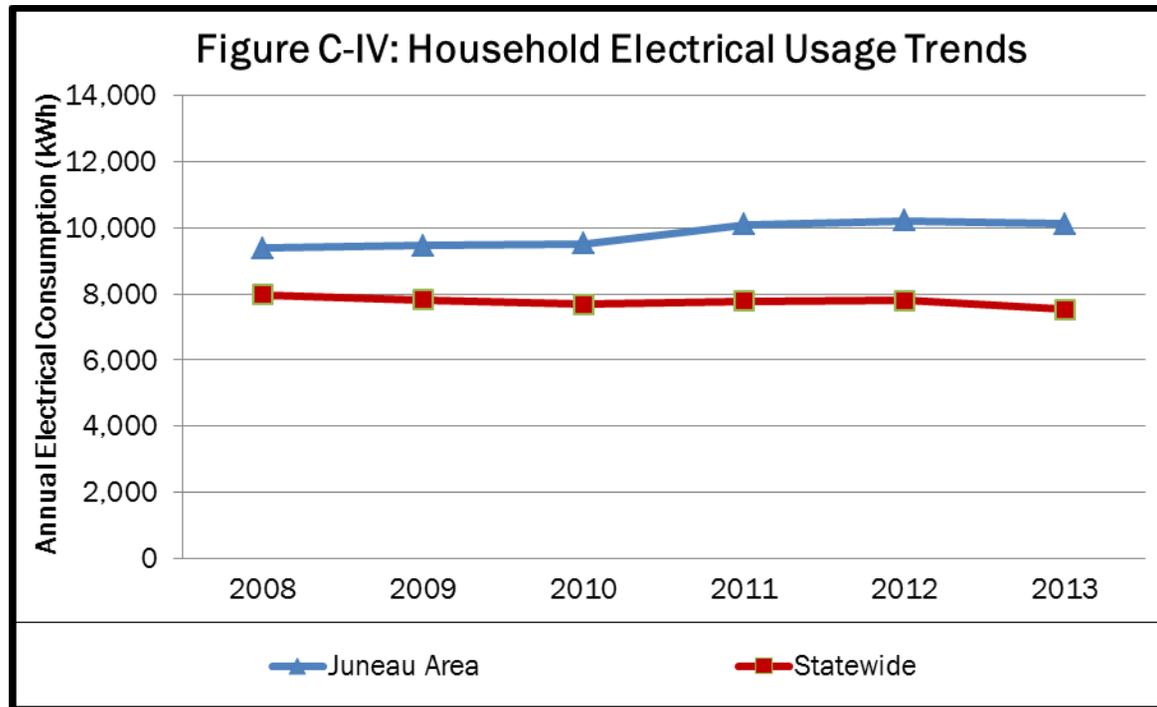
### Historical Household Electricity Usage<sup>17</sup>

In 2013 the average household in the City and Borough of Juneau consumed 10,111 kWh of electricity annually. This is approximately 8 percent more than in 2008. Statewide, the average household consumed 7,540 kWh of electricity in 2013, a decrease of 5 percent since 2008.

### Inefficient and Older Homes<sup>18</sup>

Approximately 1,190 (10 percent) of the occupied homes in the City and Borough of Juneau 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 50 percent of all homes in the City and Borough of Juneau fit these two criteria, higher than the statewide average of 39 percent.



<sup>17</sup> Fay, G., Villalobos Melendez, A. & West. C. (2014). *Alaska Energy Statistics: 1960-2011*. UAA Institute of Social and Economic Research. Retrieved from [http://iser.uaa.alaska.edu/Publications/2013\\_12-AlaskaEnergyStatistics2011Report\\_Final\\_2014-04-30.pdf](http://iser.uaa.alaska.edu/Publications/2013_12-AlaskaEnergyStatistics2011Report_Final_2014-04-30.pdf)

<sup>18</sup> See Appendix C: Methodology for details.

## Housing Condition<sup>19</sup>

### Ventilation

Approximately 13 percent of the occupied homes in the City and Borough of Juneau region have heat recovery or continuous mechanical ventilation systems installed. This is the 11th lowest in the state. Statewide approximately 20 percent of occupied homes have continuous mechanical ventilation systems, with or without heat recovery.

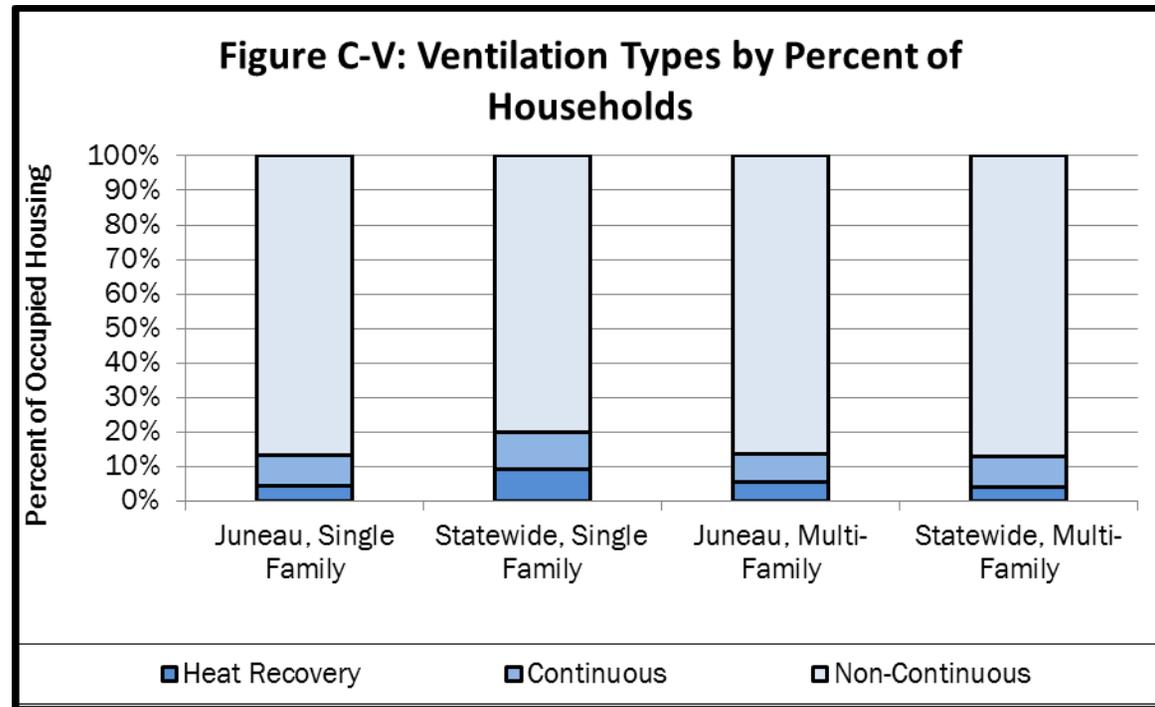
### Indoor Air Quality

A tight home with no or inadequate ventilation has an increased risk of issues with indoor air quality or moisture. The City and Borough of Juneau has the 13th highest percentage of housing units in the state that are both relatively airtight and lack continuous mechanical ventilation.

Approximately 4,084 (34 percent) of the occupied homes in the City and Borough of Juneau are estimated to be at moderate risk, with 1,826 (15 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 4,664 (39 percent) of the occupied homes in the City and Borough of Juneau are estimated to be drafty, with 2,418 (20 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.



<sup>19</sup> See Appendix C: Methodology for details.