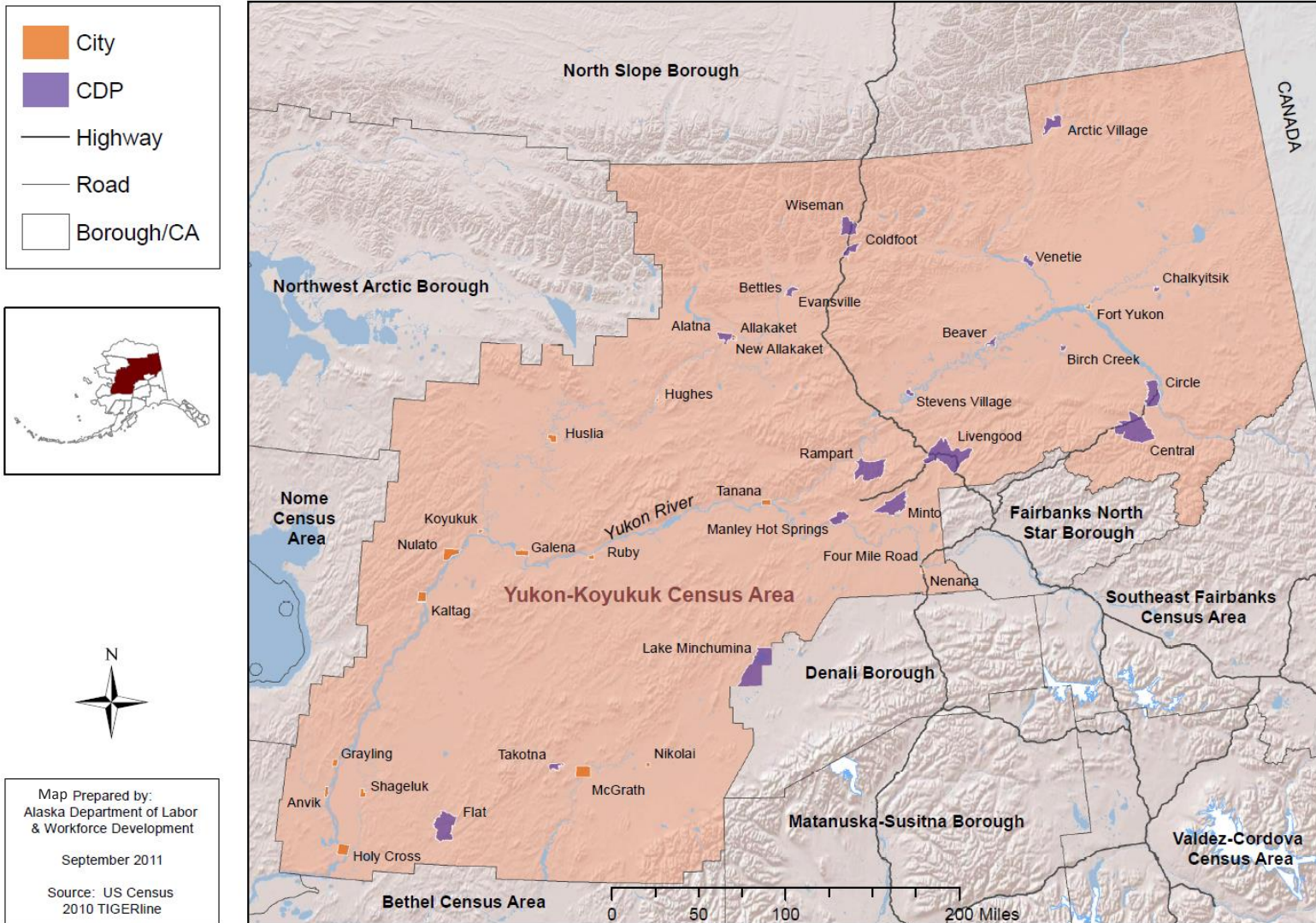


# Yukon-Koyukuk Census Area



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| Allakaket                  Data Quantity: Medium .....                                    | 7      |
| Anvik                        Data Quantity: Medium .....                                  | 9      |
| Arctic Village              Data Quantity: Low .....                                      | 11     |
| Beaver                       Data Quantity: Low .....                                     | 12     |
| Bettles                       Data Quantity: Low .....                                    | 13     |
| Birch Creek                 Data Quantity: Low .....                                      | 14     |
| Central                       Data Quantity: Medium .....                                 | 15     |
| Chalkyitsik                 Data Quantity: Low .....                                      | 17     |
| Circle                        Data Quantity: Medium .....                                 | 18     |

|                    |                             |    |
|--------------------|-----------------------------|----|
| Evansville         | Data Quantity: Low .....    | 20 |
| Fort Yukon         | Data Quantity: Low .....    | 21 |
| Four Mile Road     | Data Quantity: Low .....    | 22 |
| Galena             | Data Quantity: Medium ..... | 23 |
| Grayling           | Data Quantity: Medium ..... | 25 |
| Holy Cross         | Data Quantity: Medium ..... | 27 |
| Hughes             | Data Quantity: Medium ..... | 29 |
| Huslia             | Data Quantity: High .....   | 31 |
| Kaltag             | Data Quantity: Medium ..... | 35 |
| Koyukuk            | Data Quantity: Medium ..... | 37 |
| Livengood          | Data Quantity: Low .....    | 39 |
| Manley Hot Springs | Data Quantity: Medium ..... | 40 |
| McGrath            | Data Quantity: Medium ..... | 42 |
| Minto              | Data Quantity: Medium ..... | 44 |
| Nenana             | Data Quantity: High .....   | 46 |
| New Allakaket      | Data Quantity: Low .....    | 50 |
| Nikolai            | Data Quantity: Low .....    | 51 |
| Nulato             | Data Quantity: Low .....    | 52 |
| Rampart            | Data Quantity: Medium ..... | 53 |
| Ruby               | Data Quantity: Medium ..... | 55 |
| Shageluk           | Data Quantity: Medium ..... | 57 |
| Stevens Village    | Data Quantity: Medium ..... | 59 |
| Takotna            | Data Quantity: Medium ..... | 61 |

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|         |                             |    |
|---------|-----------------------------|----|
| Tanana  | Data Quantity: Medium ..... | 63 |
| Venetie | Data Quantity: Medium ..... | 65 |

## ***Yukon-Koyukuk Census Area Dashboard***

**Population:** The Alaska Department of Labor and Workforce Development's current (2012) population estimate for the Yukon-Koyukuk Census Area is 5,682—a decrease of 15% from 2000.

**Housing Units:** There are currently 4,027 housing units in the Yukon-Koyukuk Census Area. Of these, 2,041 are occupied, 134 are for sale or rent, and the remaining 1,852 are seasonal or otherwise vacant units (Profile Figure C6).

**Energy:** The average home in the Yukon-Koyukuk Census Area is 1,042 square feet and uses 165,000 BTUs of energy per square foot annually, 21% more than the statewide average of 137,000 BTUs per square foot.

**Energy Costs:** Using AKWarm estimates, average annual energy cost for homes in the Yukon-Koyukuk Census Area is \$5,890, which is approximately 2.1 times more than the cost in Anchorage, and 2.8 times more than the national average (Profile Figure C13).

**Energy Programs:** Approximately 19% of occupied housing in the Yukon-Koyukuk Census Area has completed either the Home Energy Rebate, Weatherization, or BEES programs since 2008, compared to 21% statewide (Profile Figure C12).

**Housing Quality:** Within current housing stock, newer homes have better energy performance. On average, homes built before 1940 are currently rated at 1-star-plus, compared to a current average rating of 3-star-plus for houses built after 2000.

**Air-tightness:** Within current housing stock, newer homes are tighter. On average, homes built in the last decade meet the 2009 BEES standard of 7 air-changes per hour at 50 pascals (ACH50). In contrast, homes built in the 1960s are 4.6 times leakier than those built since 2000 (Profile Figure C7).

**Ventilation:** An estimated 1,141 occupied housing units (or 56%) in the Yukon-Koyukuk Census Area are relatively air-tight and lack a continuous ventilation system. These houses are at higher risk of moisture and indoor air quality-related issues (Profile Figures C9-C10).

**Overcrowding:** 14% of occupied units are estimated to be either overcrowded (8%) or severely overcrowded (6%). This is roughly 5 times the national average, and makes the Yukon-Koyukuk Census Area the seventh most overcrowded census area in the state.

**Affordability:** On average, approximately 25% of households in the Yukon-Koyukuk Census Area spend more than 30% of total income on housing costs, which include rent, utilities, and energy costs. Based on average AKWarm estimates, annual energy costs constitute approximately 17% of census median area income for occupied housing.

## Yukon-Koyukuk Census Area Summary

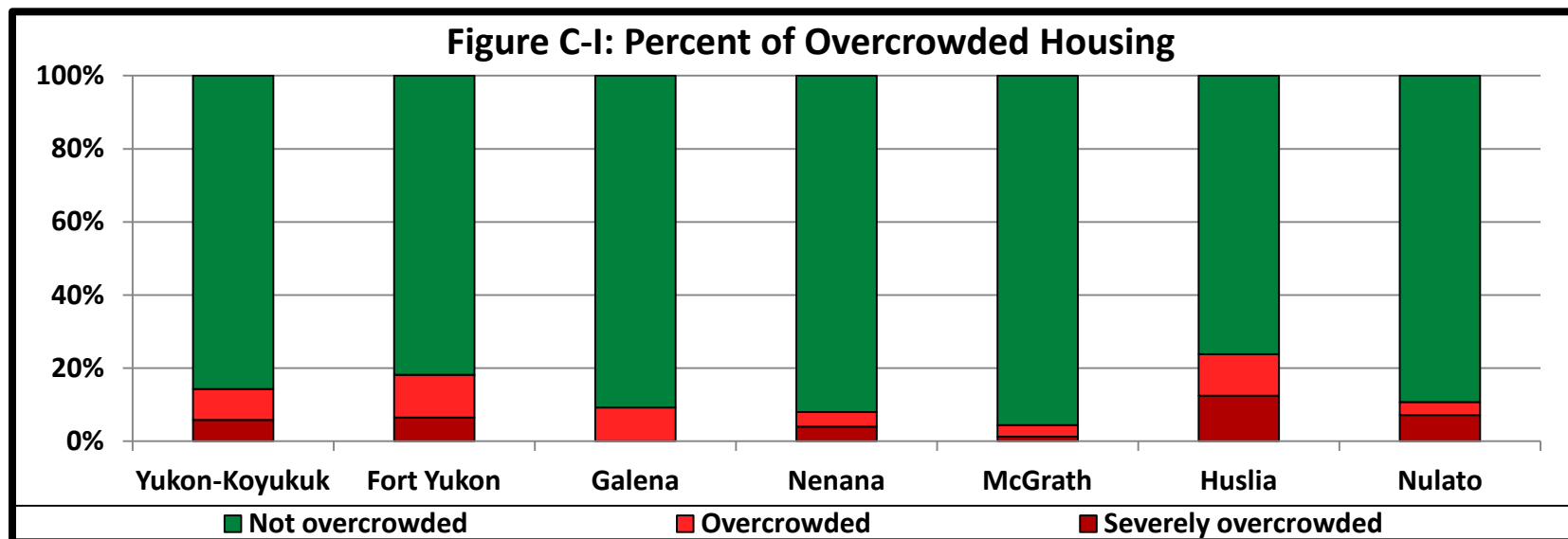
### Community

The Yukon-Koyukuk census area is located in Interior Alaska, stretching from the Canadian border to near the Western coast of Alaska. It is bisected by the Yukon River, which is joined by the Koyukuk River just before turning south. Most of the communities in the census area are located on the banks of one of these rivers or their tributaries. The census area is in the Doyon Native Corporation ANCSA region. Average homes in Yukon-Koyukuk range in size from 966 square feet in Huslia to 1,152 square feet in Nenana. The average home size for the entire census area is 1,042 square feet.

### Overcrowding

In the Yukon-Koyukuk census area, 14% of occupied housing units are overcrowded (Figure C-I). The six most populous communities in the region have overcrowding rates that range from a low of 4% in McGrath to a high of 24% in Huslia, which is almost twice the average for the census area. Among all communities in the census area, the most crowded is Takotna, with 38% of households having more than one person per room. The least crowded community in Yukon-Koyukuk is Arctic Village, with approximately no overcrowded households.

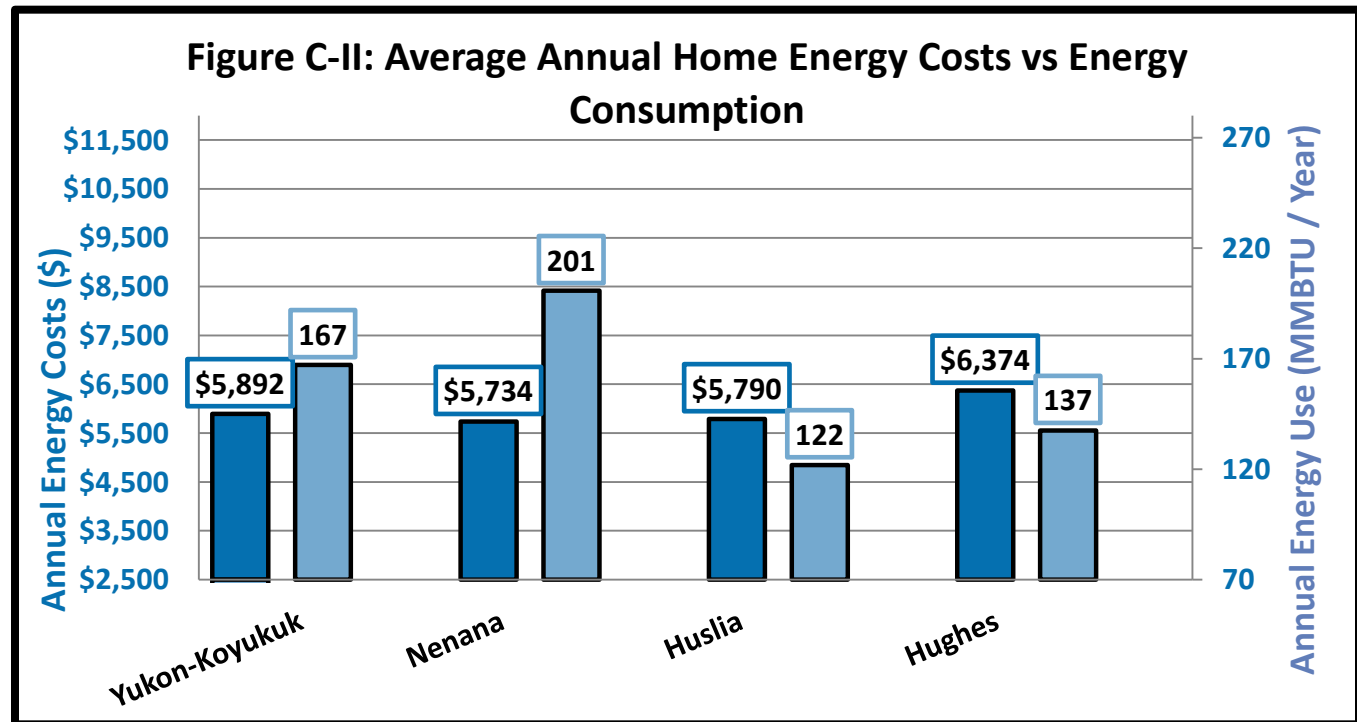
Approximately 3% of housing in the Yukon-Koyukuk census area is available for sale or rent. The amount of available housing in communities in the census area ranges from approximately no available housing in Circle to 21% of housing units considered available in Nikolai.



## Energy

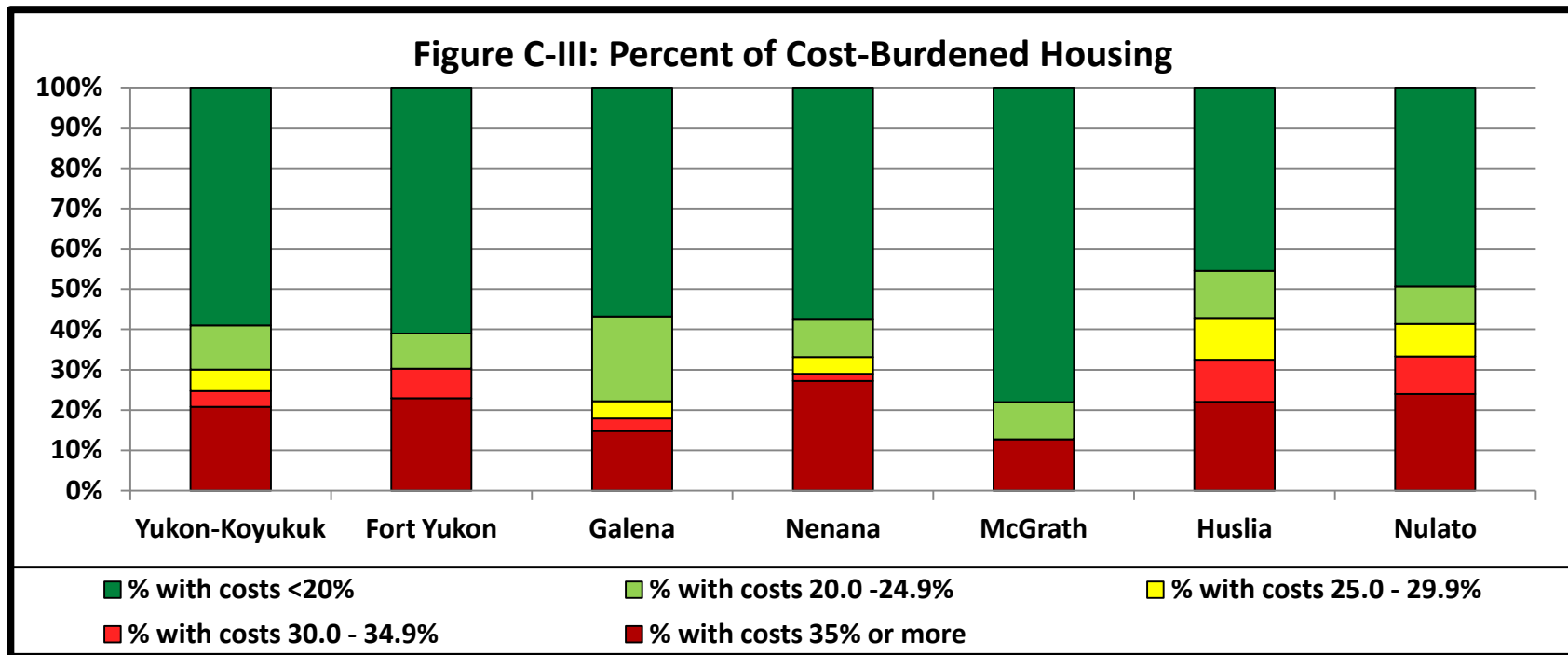
Average energy consumption in the Yukon-Koyukuk census area is 167 million BTUs, for an average annual energy cost of \$5,892 (Figure C-II). The lowest energy costs in the census area are found in the community of Nenana, where residents pay an average annual energy cost of \$5,734, despite having the highest home heating index in the census area, with homes using an average of 10.5 BTUs/ft<sup>2</sup>/HDD. The lowest average home heating index in Yukon-Koyukuk is found in Huslia, with homes using an average of 5.8 BTUs/ft<sup>2</sup>/HDD. The community of Hughes has the highest annual energy costs at \$6,374.

Between 38% and 48% of homes built in Yukon-Koyukuk communities since the 1990s have an HRV installed. Approximately 19% of homes in the census area have also participated in an energy program since 2003, including the Home Energy Rebate, Weatherization, or a BEES program. The community of Stevens Village has the highest participation, with an estimated 100% of homes having completed a program. The lowest participation rate is found in Arctic Village, where an estimated zero homes have participated. In the six most populous communities, participation rates range from 1% to 47%.



## Affordability

According to ACS estimates<sup>1</sup>, the percentage of cost-burdened homes in the Yukon-Koyukuk census area communities varies widely, from an estimated zero cost-burdened households in Hughes to almost half (48%) of households in Venetie spending more than 30% of household income on housing costs. The six most populous communities have between 13% and 33% of households that are cost-burdened (Figure C-III).



These communities include Nulato and Huslia, which both have roughly 1 in 3 households paying housing costs greater than 30% of household income. Overall, the census area has approximately 25% of households spending more than 30% of their income on housing costs.

Median household incomes for the census area also span a large range, from \$9,904 in Venetie to \$92,188 in Bettles. The six most populous communities have median household income between \$24,167 and \$69,821.

<sup>1</sup>CCHRC's analysis of ACS energy costs indicate that there are systematic underestimations for rural Alaska, which suggests that ACS-based cost burdened housing estimates are low. See Appendix A, "An Analysis of American Community Survey Energy Cost Estimates" for more details.



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## Community, Regional, and Statewide Housing Characteristics

This census area summary only includes the highlights of housing characteristics at the census area level. Detailed data profile with charts and tables for both the census area and for each of the communities within it follow. The 2014 Alaska Housing Assessment provides a significant amount of data and analysis at statewide, ANCSA region, census area, and community levels. This assessment provides a statewide analysis of housing characteristics, how they compare to national numbers, and the estimated housing needs. Within the 2014 Alaska Housing Assessment, written summaries are available for each individual ANCSA region and census area, and data profiles are available for each community and census area characterizing the housing stock from the perspective of community, overcrowding, energy and affordability. These different tiers of information and analysis allow researchers, housing authorities, policymakers and others to generate answers to specific questions. For a detailed discussion of estimating housing need and comparison of methods to previous Housing Assessments, see Appendix B, "Statewide Need Assessment" of the 2014 Alaska Housing Assessment.

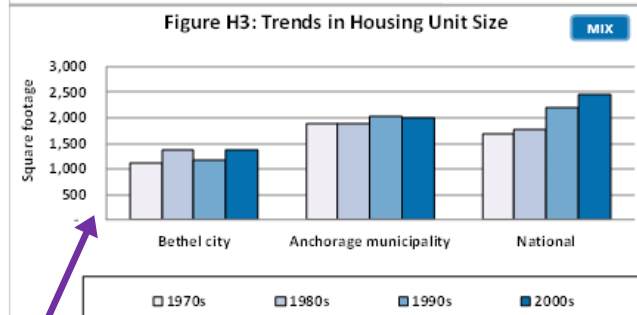
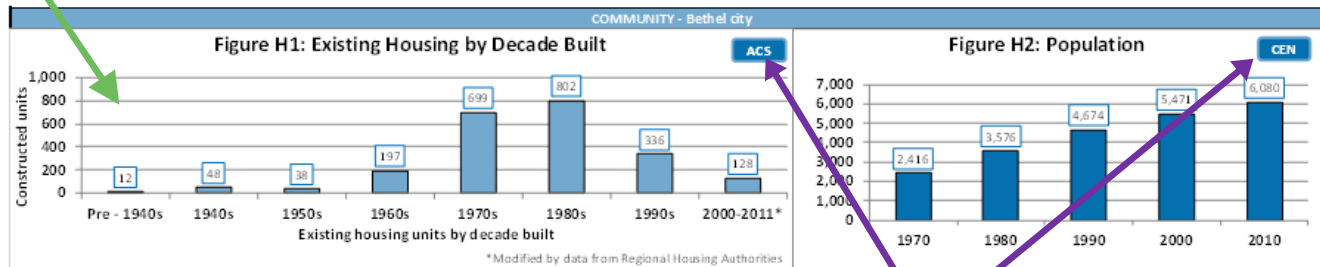
# How to Interpret the Profile: Data Sources, Definitions & Clarifications

1

This graph show the breakdown of *current* housing stock by the decade in which the housing units were built. It does *not* show trends over time.

The Alaska Building Energy Efficiency Standard (BEES) was established by AHFC for the State of Alaska to promote the construction of energy efficient buildings. The standards for specific building components are divided into four climate zones, from Zone 6 in Southeast AK to Zone 9 on the North Slope.

|                             |                                 |   |                     |
|-----------------------------|---------------------------------|---|---------------------|
| Community Profile for:      | Bethel city                     | ANCSA Region                            | Calista             |
| Regional Housing Authority: | AVCP Regional Housing Authority | BEES Climate Zone (Heating Degree Days) | Zone 8 (13,334 HDD) |



**Data Source Key:**

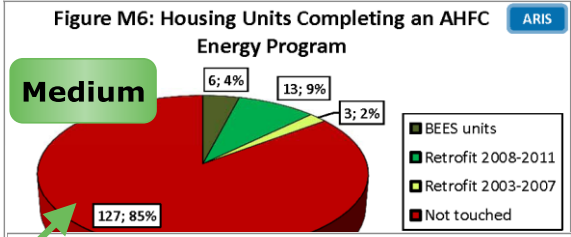
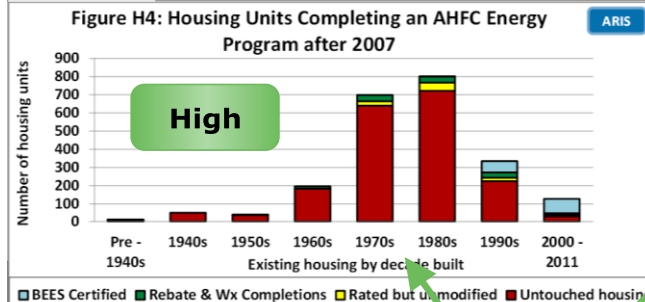
- 2011 American Community Survey 5 year estimates (ACS) **ACS**
- Alaska Retrofit Information System energy audits **ARIS**
- 2010 Decennial Census **CEN**
- Mixed data source; see individual graphs for details. **MIX**

**Data Sources:** National trends come from the 2009 Residential Energy Consumption Statistics published by the U.S. Energy Information Administration. Anchorage and census area data come from the Alaska Retrofit Information System.

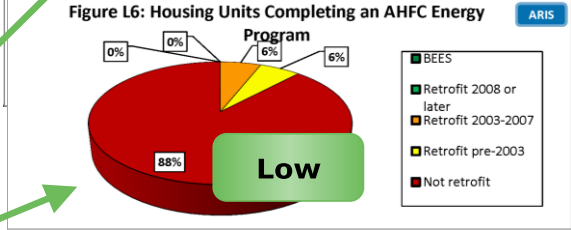
# How to Interpret the Profile: Data Sources, Definitions & Clarifications

1

Energy program activity within communities with high, medium and low amounts of ARIS data available. (See p.7 of "How to Interpret" for detail on data levels).



**Communities - AHFC Energy Program Activity**  
**High Data** - Reported by decade built for the housing units.  
**Medium Data** - Reported by percent of total housing units touched.  
**Low Data** - Have few or no post-2008 Weatherization/Rebate completions or BEES certifications in the ARIS database.



- PCE = Power Cost Equalization
- Average Annual Energy Cost with PCE: The cost to the household after it has been lowered by the PCE subsidy.
- Without PCE: The actual energy cost, including the amount paid by the State for PCE.

**American Community Survey (ACS) Data:**  
**Complete Plumbing:** Includes hot & cold running water, a flush toilet, and a bathtub or shower within the home.  
**Complete Kitchen:** Includes a sink with a faucet, a stove/range, and a refrigerator.

| Houses Lacking Complete Plumbing or Kitchen Facilities | # Households | % Households |
|--|--------------|--------------|
| Lack complete plumbing                                 | 3            | 10%          |
| Lack complete kitchen                                  | 0            | 0%           |

| Estimated Total Community Space Heating Fuel Use by Type |        |           |
|--|--------|-----------|
| Fuel Oil   | 20,816 | (gallons) |
| Nat Gas  | -      | (ccf)     |
| Electricity  | 15,459 | (kWh)     |
| Wood   | 3      | (cords)   |
| Propane  | -      | (gallons) |
| Coal   | -      | (tons)    |

|                                    |         |
|------------------------------------|---------|
| Avg Annual Energy Cost with PCE    | \$5,265 |
| Avg Annual Energy Cost without PCE | \$6,643 |

| Estimated Energy Prices as of January 2013 |        |
|--|--------|
| #1 Fuel oil cost (\$ / gallon)             | \$5.16 |
| Electricity with PCE (\$/kWh)              | \$0.03 |
| Electricity cost without PCE (\$/kWh)      | \$0.27 |

| Weatherization Program Retrofits (funding increased in 2008) |       |
|--|-------|
| Date Range   | Units |
| 2008-2011  | 17    |
| 2003-2007  | -     |
| 1990-2002  | 10    |

| Housing Stock Estimates         |    |
|---------------------------------|----|
| All Housing                     | Nu |
| All Occupied Housing            |    |
| All Housing                     |    |
| Vacant housing for Sale or Rent |    |

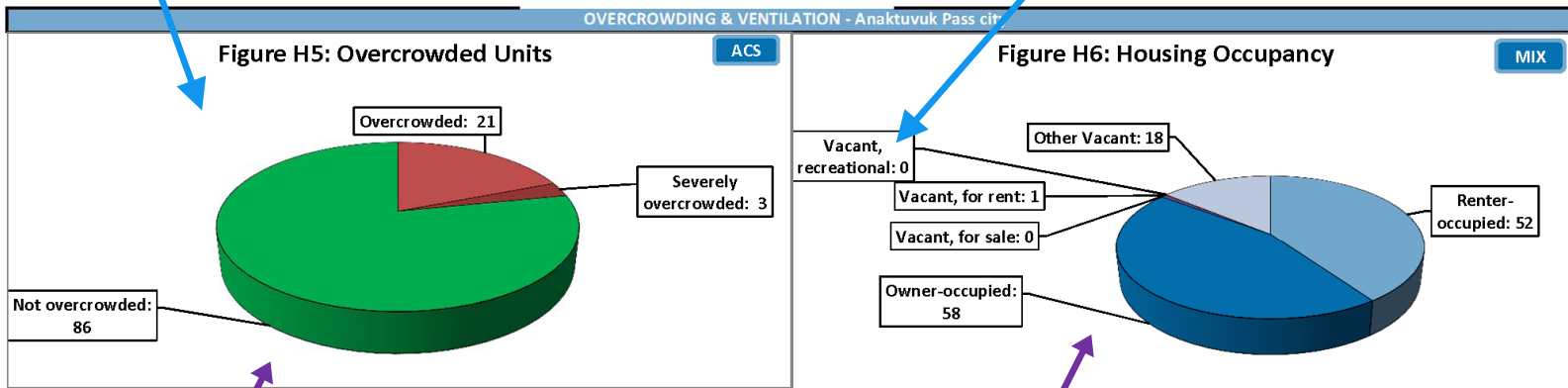
Units weatherized before 2008 are eligible to participate in the program again. (Data source: Alaska Housing Finance Corporation).

## How to Interpret the Profile: Data Sources, Definitions & Clarifications

2

**Overcrowded:** Housing units with more than 1 person per room  
**Severely Overcrowded:** Housing units with more than 1.5 people per room.  
 "Rooms" include bedrooms, living rooms, dining rooms, kitchens, and other finished, separated spaces, but not including bathrooms, porches, balconies, foyers, halls, or unfinished basements.

**Recreational:** For seasonal, recreational, or occasional use.



**Data Source:**  
 2011 American Community Survey 5-year estimates

**Data Sources:** The number of owner-occupied, renter-occupied, and total vacant units are taken from the 2011 ACS 5-year estimates. Data for vacancy type, only available from the decennial Census, were derived by taking the decennial census ratios by vacancy type and applying them to the total number of vacant units.

## How to Interpret the Profile: Data Sources, Definitions & Clarifications

2

**Heat Recovery:** Continuous mechanical ventilation with heat recovery operated with automatic controls.

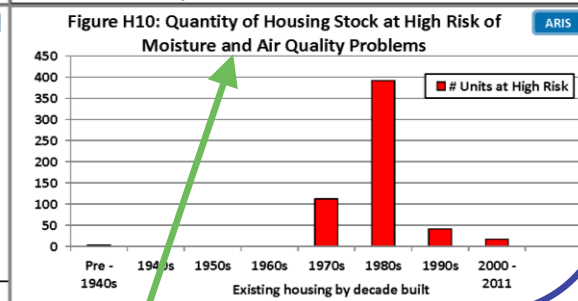
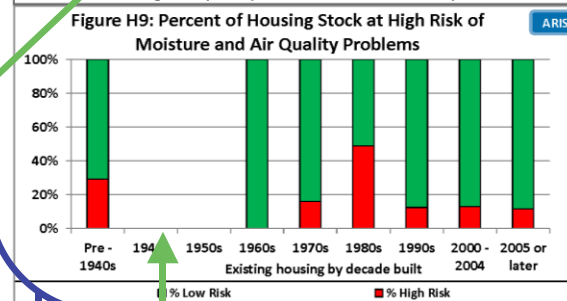
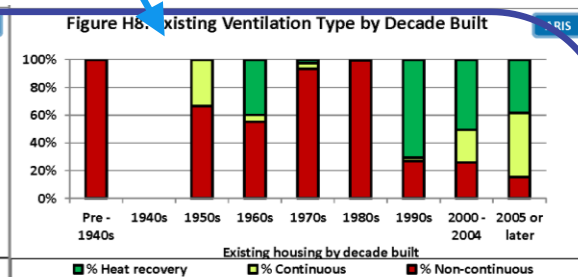
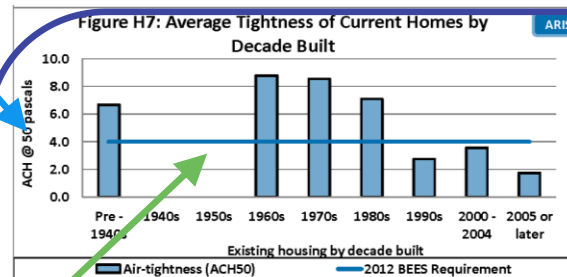
**Continuous:** Mechanical ventilation without heat recovery operated with automatic controls.

**Non-Continuous ventilation:** Includes homes with range and/or bath fans not operated using automatic controls.

**ACH50:** The results of a blower door test to measure building air leakage. Smaller numbers indicate tighter buildings. Tighter buildings lose less heated air to the outside and thus use less energy for space heating.

The 2012 Building Energy Efficiency Standard (BEES) for air-tightness is for reference only, as it was implemented after the majority of homes in Alaska were built.

Data Source:  
Alaska Retrofit Information System



Decades with no bar lack sufficient data for reporting. They should not be considered zero quantities.

**High Risk of Moisture and Air Quality Problems:** Note that moisture or poor indoor air quality have not been physically measured; these houses are considered "at-risk" because they are relatively air tight (less than 0.5 estimated natural air changes per hour) and do not have a continuous ventilation system.

# How to Interpret the Profile: Data Sources, Definitions & Clarifications

Rating stars and points are based on AHFC's AkWarm energy rating system.

**Average annual energy cost:**  
Includes all end uses. Costs are estimated using January 2013 energy prices, and include reductions from the PCE program.

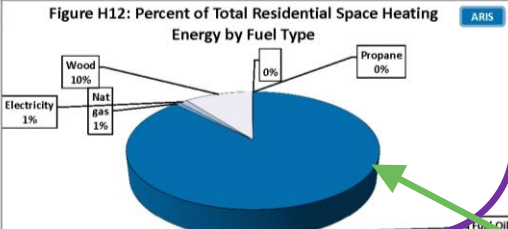
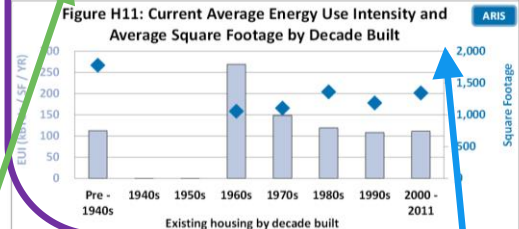
**Space Heating, DHW, Appliances:**  
Estimated annual energy for the end uses of: Space Heating, Domestic Hot Water, and all other energy including lights, appliances, and electronics.

**ECI: Energy Cost Index,** the amount of money spent on energy per year divided by square footage.

**Home Heating Index:** The energy used per square foot per year divided by the area's heating degree days.

The number of AkWarm records from each decade built that were used to calculate the averages reported.

| Current Residential Units by Year Built | Number of Records | Avg Energy Rating | Avg Energy Rating Points | Avg Sq. Feet | Avg Annual Energy Cost (with PCE) | Avg Annual Energy Use (million BTUs) | Avg Ann Energy by Use (million Btus) |     |            | Avg. EUI (kBtu/SqFt) | Avg. ECI (\$ / SqF) | Avg. Home Heating Index |
|---|-------------------|-------------------|--------------------------|--------------|-----------------------------------|--------------------------------------|--------------------------------------|-----|------------|----------------------|---------------------|-------------------------|
|   |                   |                   |                          |              |                                   |                                      | Space Heating                        | DHW | Appliances |                      |                     |                         |
| OVERALL                                 | 419               | 3-star            | 70.7                     | 1,237        | \$ 8,065                          | 160                                  | 102                                  | 27  | 26         | 132                  | \$ 6.97             | 6.5                     |
| Pre- 1940                               | 7                 | 3-star            | 68.3                     | 1,779        | \$ 11,107                         | 199                                  | 145                                  | 21  | 33         | 113                  | \$ 6.66             | 6.4                     |
| 1940-49                                 | 0                 | NR                | NR                       | NR           | NR                                | NR                                   | NR                                   | NR  | NR         | NR                   | NR                  | NR                      |
| 1950-59                                 | 3                 | NR                | NR                       | NR           | NR                                | NR                                   | NR                                   | NR  | NR         | NR                   | NR                  | NR                      |
| 1960-69                                 | 15                | 2-star            | 52.3                     | 1,056        | \$ 11,087                         | 287                                  | 225                                  | 35  | 27         | 269                  | \$ 10.60            | 16.0                    |
| 1970-79                                 | 71                | 2-star plus       | 64.5                     | 1,106        | \$ 7,961                          | 153                                  | 105                                  | 21  | 25         | 149                  | \$ 8.09             | 7.8                     |
| 1980-89                                 | 113               | 3-star plus       | 74.7                     | 1,361        | \$ 8,239                          | 157                                  | 100                                  | 30  | 26         | 119                  | \$ 6.40             | 5.8                     |
| 1990-99                                 | 111               | 4-star            | 79.9                     | 1,187        | \$ 6,395                          | 122                                  | 57                                   | 21  | 20         | 108                  | \$ 5.58             | 4.7                     |
| 2000-2004                               | 71                | 3-star plus       | 77.5                     | 1,388        | \$ 8,435                          | 143                                  | 80                                   | 35  | 27         | 118                  | \$ 7.24             | 5.2                     |
| 2005 or later                           | 28                | 5-star            | 91.9                     | 1,233        | \$ 4,504                          | 92                                   | 39                                   | 28  | 25         | 79                   | \$ 3.82             | 2.5                     |



**Data Source:** AkWarm ratings from AHFC's Alaska Retrofit Information System (ARIS).

Average energy characteristics of the *current* housing stock by decade built (high data communities) or by pre-/post-retrofit and new construction categories (medium data communities).

**Energy Use Intensity (EUI)** is the total amount of energy used per year per square foot of floor space.

This is the community's breakdown by fuel type of the energy (BTUs) used for home space heating. It is not the percent of housing using a given fuel in primary space heating devices. Because wood burning devices are inefficient, they may use a significant portion of total energy even if no homes in a community use wood as a primary fuel.

# How to Interpret the Profile: Data Sources, Definitions & Clarifications

3

Average building envelope characteristics of the *current* housing stock by decade built (high data communities) or by pre-/post-retrofit and new construction categories (medium data communities).

**ACH50:** The results of a blower door test to measure building leakiness. Smaller numbers indicate tighter buildings.

**R-value:** the capacity to resist heat flow. The higher the value, the better the insulator.

**U-value:** the conductance to heat flow. The lower the value, the better the insulator.

**Data Sources:** AkWarm ratings from AHFC's Alaska Retrofit Information System (ARIS).

**Current Bethel city Housing Envelope Characteristics By Decade Built**

| Current Residential Units by Year Built | Number of Records | ACH 50 | Ceiling R | Above Grade Wall R | Below Grade Wall R | Above Grade Floor R | On Grade Floor R | Below Grade Floor R | Door U | Garage Door U | Window U |
|---|-------------------|--------|-----------|--------------------|--------------------|---------------------|------------------|---------------------|--------|---------------|----------|
| OVERALL                                 | 419               | 6.4    | 23        | 17                 | 7                  | 30                  | NR               | 2                   | 0.36   | 0.27          | 0.54     |
| Pre- 1940                               | 7                 | 6.7    | 26        | 21                 | NR                 | 30                  | NR               | NR                  | 0.30   | NR            | 0.40     |
| 1940- 49                                | 0                 | NR     | NR        | NR                 | NR                 | NR                  | NR               | NR                  | NR     | NR            | NR       |
| 1950- 59                                | 3                 | NR     | NR        | NR                 | NR                 | NR                  | NR               | NR                  | NR     | NR            | NR       |
| 1960- 69                                | 15                | 8.8    | 16        | 14                 | NR                 | 21                  | NR               | NR                  | 0.44   | NR            | 1.65     |
| 1970- 79                                | 71                | 8.5    | 20        | 15                 | NR                 | 29                  | NR               | NR                  | 0.39   | NR            | 0.57     |
| 1980- 89                                | 113               | 7.1    | 29        | 17                 | NR                 | 32                  | NR               | NR                  | 0.30   | NR            | 0.44     |
| 1990- 99                                | 111               | 2.7    | 56        | 31                 | NR                 | 50                  | NR               | NR                  | 0.19   | 0.12          | 0.29     |
| 2000- 2004                              | 71                | 3.6    | 13        | 21                 | NR                 | 36                  | NR               | NR                  | 0.27   | 0.23          | 0.40     |
| 2005 or later                           | 28                | 1.7    | 41        | 22                 | NR                 | 41                  | NR               | NR                  | 0.20   | NR            | 0.31     |
| BEES 2009 - Climate Zone 8              |                   | 7.0    | 38        | 30                 | 15                 | 38                  | 15               | 15                  | 0.22   | 0.22          | 0.22     |
| BEES 2012 - Climate Zone 8              |                   | 4.0    | 48        | 30                 | 15                 | 38                  | 15               | 15                  | 0.22   | 0.22          | 0.22     |

The number of AkWarm records from each decade built that were used to calculate the averages reported.

"NR" is used when there are insufficient records to protect the confidentiality of the occupants.

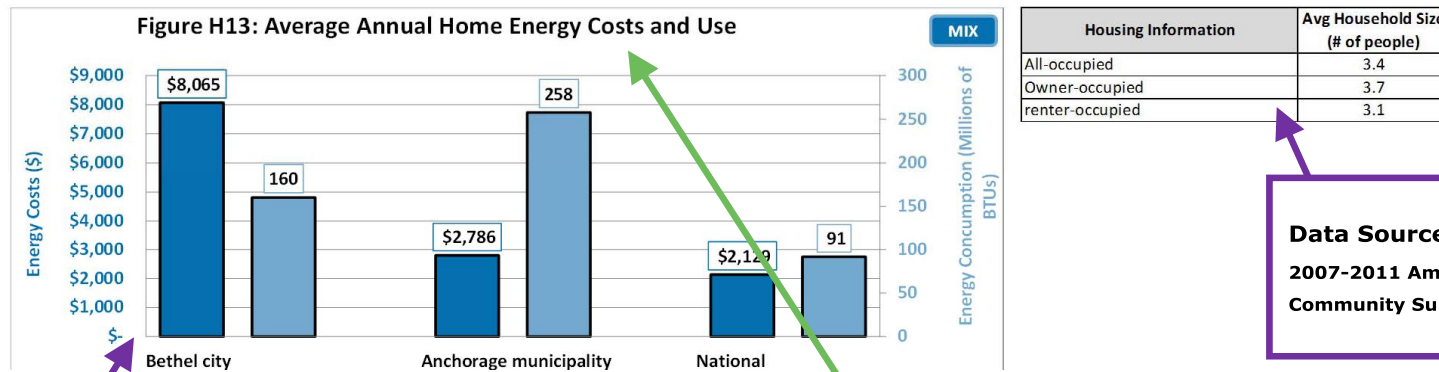
**Color Coding--**  
**Green:** the average value meets or exceeds the 2012 BEES requirement.  
**Yellow:** value is 75-99% of the 2012 BEES requirement.  
**Red:** value is less than 75% of the 2012 BEES requirement.

## How to Interpret the Profile: Data Sources, Definitions & Clarifications

4

Communities are categorized in this report by the amount of ARIS data available, and reporting is more extensive for locations with more data. Data quantities are defined as--  
**High:** ARIS records exist for housing units built in 7 of the 9 date ranges use in this report, and there are either more than 50 records or records totaling 20 percent or more of the total number of housing units.  
**Medium:** There are three or more ARIS records. Data are presented for an "overall" group if there are "As Is" ARIS records totaling at least 10% of the community's occupied housing units.  
**Low:** There are fewer than three ARIS records for the location.

Community Template - Data Quantity: High



**Data Source:**  
2007-2011 American Community Survey

**Data Sources:** Census Area and Anchorage data come from AFHC's Alaska Retrofit Information System.  
National figures come from the U.S. Energy Information Administration's 2009 Residential Energy Consumption Statistics (RECS) for "cold"/"very cold" climate regions.

Average annual home energy costs and usage estimates are for all end uses, including space heating, domestic hot water, lighting and appliances. Costs are estimated using January 2013 energy prices and include reductions from the PCE program.



## How to Interpret the Profile: Data Sources, Definitions & Clarifications

4

**Data Source:**  
2007-2011  
American  
Community  
Survey.

"Value" is determined by responses to the ACS question: "How much do you think this house and lot, apartment, or mobile home (and lot, if owned) would sell for if it were for sale?"

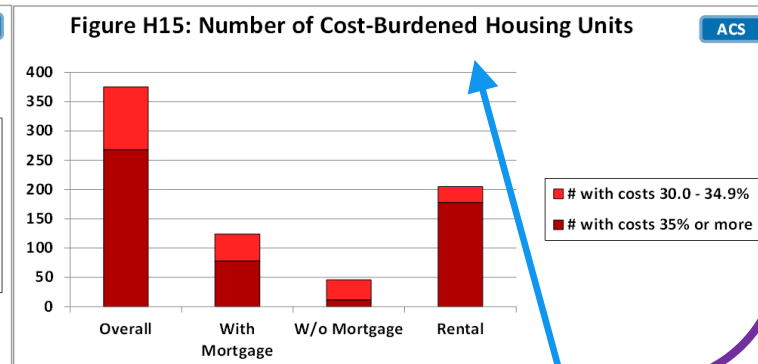
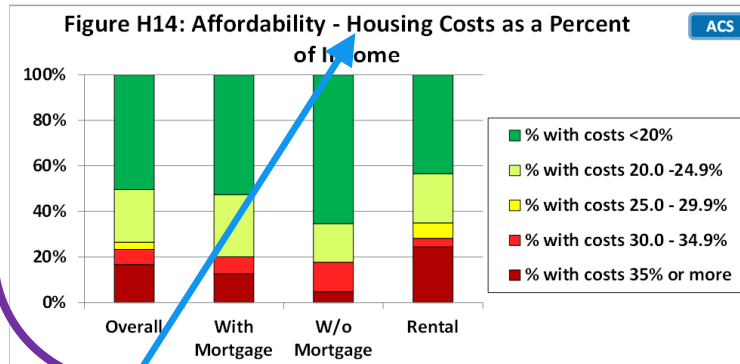
Household income includes all earnings from salaries, stocks, gifts, public assistance, etc.

**Data Source:** Median income comes from 2007-2011 ACS estimates; energy costs come from AHFC's Alaska Retrofit Information System (ARIS).

|  |
|--|
| Owner-occupied House with Mortgage,<br>Median Value      |
| \$226,800  |
| Owner-occupied House without a Mortgage,<br>Median Value |
| \$119,600  |

| Median Annual Household Income |                  |
|--------------------------------|------------------|
| Housing Units                  | Household Income |
| All-occupied                   | \$ 91,302        |
| Renter-occupied                | \$ 70,170        |
| Owner-occupied                 | \$ 107,908       |
| w/ mortgage                    | \$ 111,167       |
| w/o mortgage                   | \$ 70,400        |

| Median Household Expenses                     |             |           |
|---|-------------|-----------|
|   | Monthly     | Annual    |
| All-occupied                                  | \$ 1,369    | \$ 16,428 |
| Gross rent                                    | \$ 1,201    | \$ 14,412 |
| Owner-occupied                                | \$ 1,610    | \$ 19,320 |
| Housing units w/ mortgage                     | \$ 1,854    | \$ 22,248 |
| Housing units w/out a mortgage                | \$ 680      | \$ 8,160  |
| <b>Avg % of Median Income Spent on Energy</b> | <b>8.8%</b> |           |



**Rental housing costs:** Contract rent, fuels, utilities.

**Owner housing costs:** Mortgage payments, property taxes, insurance, fuels, utilities, condo fees.

Households are considered "cost burdened" if they spend 30% or more of total household income on housing costs. Households spending more than this amount on housing costs may have difficulty affording basic necessities such as food, transportation, and medical care.

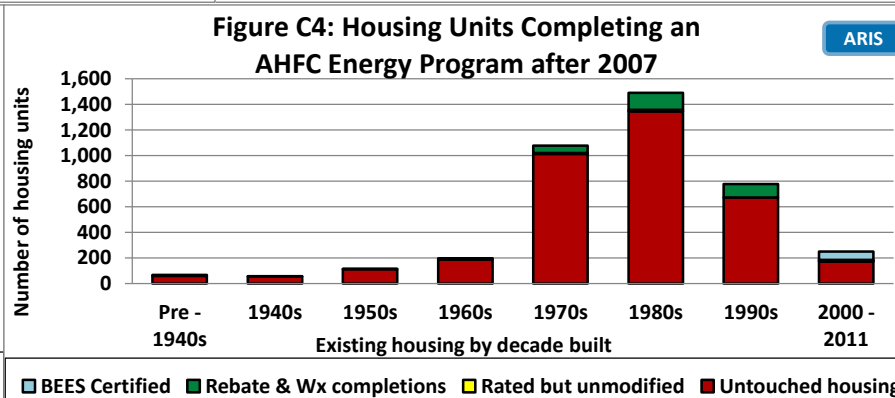
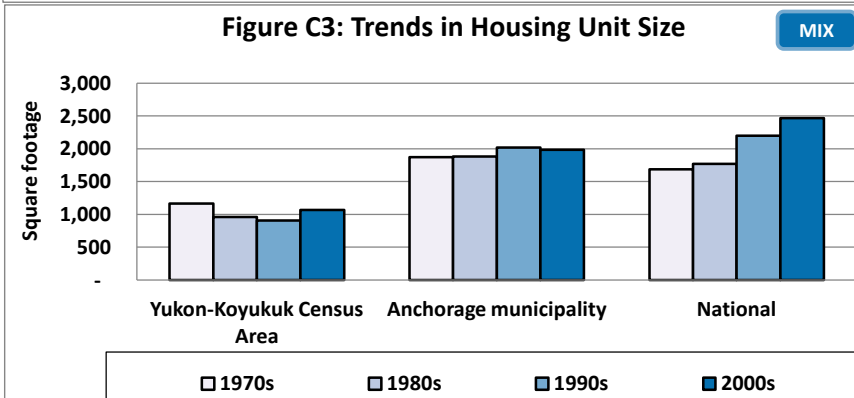
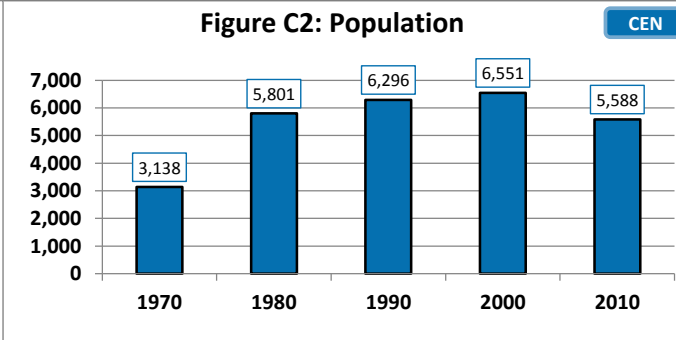
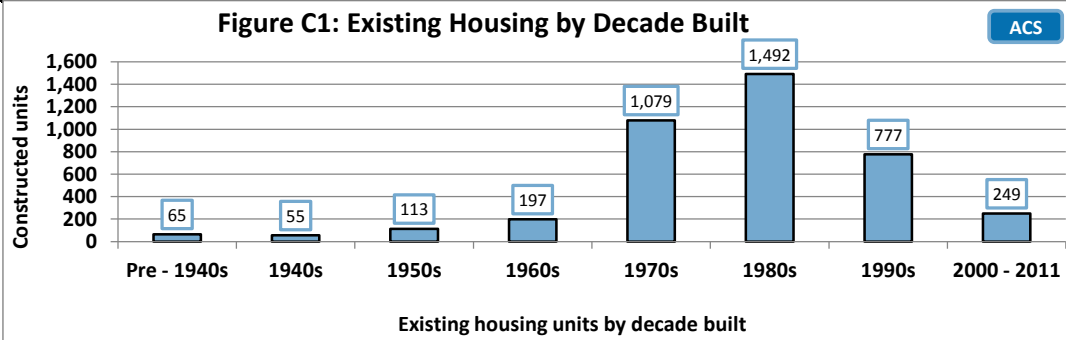
**Census Area Profile for:** Yukon-Koyukuk Census Area

**ANCSA Region:** Doyon

**Regional Housing Authority:** Interior Regional Housing Authority

**BEES Climate Zone (Heating Degree Day Range):** Zone 8 (12,600 - 16,800 HDD)

**COMMUNITY - Yukon-Koyukuk Census Area**



| Houses Lacking Complete Plumbing or Kitchen Facilities | Households |         |
|--|------------|---------|
|  | Number     | Percent |
| Lack complete plumbing                                 | 814        | 40%     |
| Lack complete kitchen                                  | 694        | 34%     |

|                                    |         |
|------------------------------------|---------|
| Avg Annual Energy Cost with PCE    | \$5,892 |
| Avg Annual Energy Cost without PCE | \$7,025 |

| Weatherization Retrofits (funding increased 2008) |       |
|---|-------|
| Date Range  | Units |
| 2008 -2011  | 303   |
| 2003-2007   | 15    |
| 1990-2002   | 189   |

| Estimated Total Annual Community Space Heating Fuel Use |           |           |
|---|-----------|-----------|
| Fuel Oil  | 1,125,454 | (gallons) |
| Natural Gas   | -         | (ccf)     |
| Electricity   | 1,137,095 | (kWh)     |
| Wood  | 6,175     | (cords)   |
| Propane   | -         | (gallons) |
| Coal  | -         | (tons)    |

| Housing Need Indicators | Number of Units | % Occupied Housing |
|-------------------------|-----------------|--------------------|
| Overcrowded             | 292             | 14%                |
| Housing cost burdened   | 455             | 22%                |
| 1 Star Homes            | 332             | 16%                |

| Housing Stock Estimates         | Number of Units |
|---------------------------------|-----------------|
| All Housing                     | 4,027           |
| All Occupied Housing            | 2,041           |
| All Vacant housing              | 1,986           |
| Vacant Housing for Sale or Rent | 134             |

OVERCROWDING & VENTILATION - Yukon-Koyukuk Census Area

Figure C5: Overcrowded Units

ACS

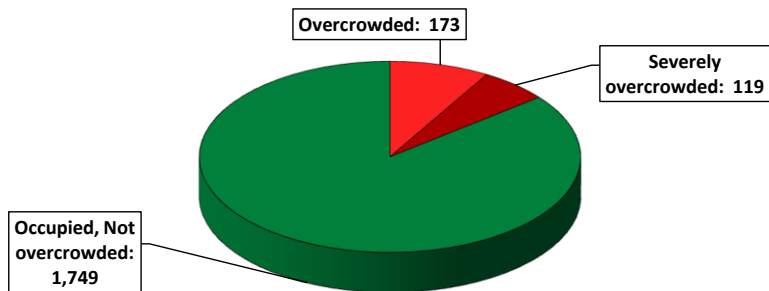


Figure C6: Housing Occupancy

MIX

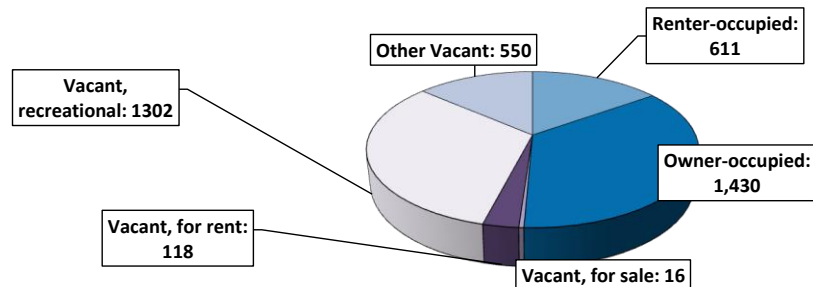


Figure C7: Average Air-Tightness of Current Homes by Decade Built

ARIS

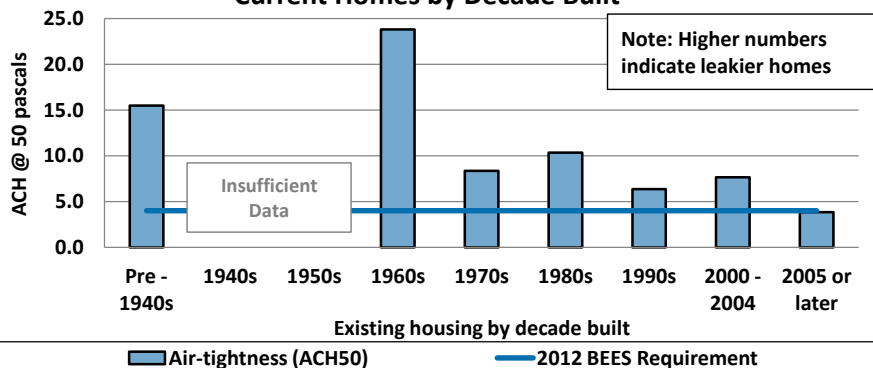


Figure C8: Existing Ventilation Type by Decade Built

ARIS

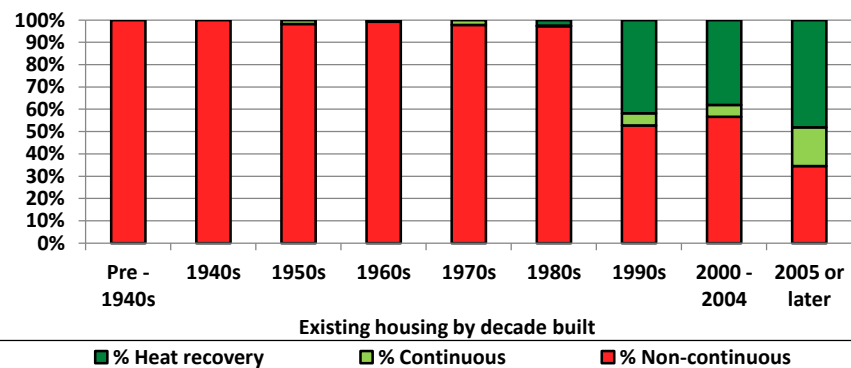


Figure C9: Percent of Housing Stock at High Risk of Moisture and Air Quality Problems

ARIS

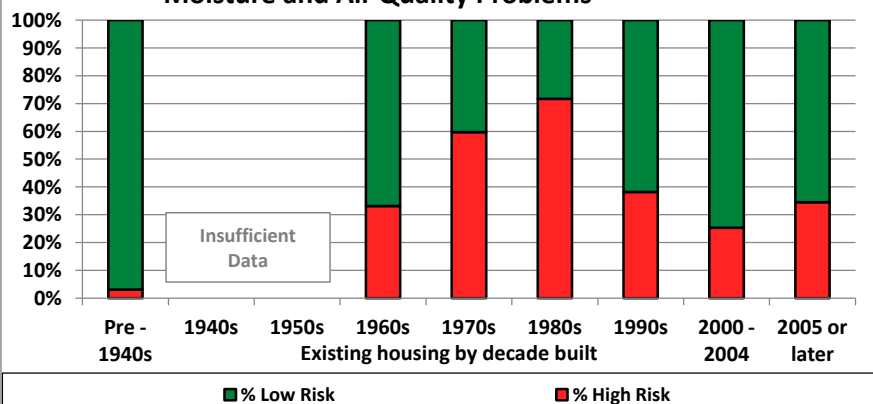
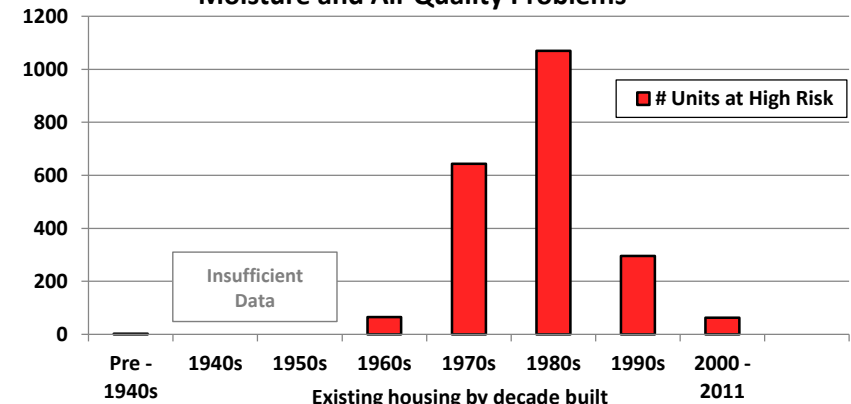


Figure C10: Quantity of Housing Stock at High Risk of Moisture and Air Quality Problems

ARIS



| ENERGY - Yukon-Koyukuk Census Area   |                     |                         |                          |              |                                    |                                       |  |     |            |                       |                    |                         |
|--|---------------------|-------------------------|--------------------------|--------------|------------------------------------|---------------------------------------|--|-----|------------|-----------------------|--------------------|-------------------------|
| Current Yukon-Koyukuk Census Area Housing Energy Characteristics By Decade Built |                     |                         |                          |              |                                    |                                       |  |     |            |                       |                    |                         |
| Current Residential Units by Year Built  | # of AkWarm Records | Avg Energy Rating Stars | Avg Energy Rating Points | Avg Sq. Feet | Avg. Annual Energy Cost (with PCE) | Avg. Annual Energy Use (million BTUs) | Avg Ann Energy by End Use (million Btus) |     |            | Avg. EUI (kBtUs / SF) | Avg. ECI (\$ / SF) | Avg. Home Heating Index |
|  |                     |                         |                          |              |                                    |                                       | Space Heating                            | DHW | Appliances |                       |                    |                         |
| OVERALL  | 432                 | 2-star plus             | 66.0                     | 1,042        | \$5,892                            | 167                                   | 127                                      | 15  | 25         | 165                   | \$5.87             | 9.0                     |
| Pre- 1940  | 7                   | 1-star plus             | 49.9                     | 1,252        | \$7,540                            | 383                                   | 341                                      | 14  | 28         | 292                   | \$5.89             | 17.9                    |
| 1940- 49   | 1                   | NR                      | NR                       | NR           | NR                                 | NR                                    | NR                                       | NR  | NR         | NR                    | NR                 | NR                      |
| 1950- 59   | 3                   | NR                      | NR                       | NR           | NR                                 | NR                                    | NR                                       | NR  | NR         | NR                    | NR                 | NR                      |
| 1960- 69   | 12                  | 2-star plus             | 64.2                     | 1,205        | \$7,085                            | 222                                   | 174                                      | 22  | 26         | 169                   | \$6.09             | 9.6                     |
| 1970- 79   | 71                  | 2-star plus             | 62.5                     | 1,167        | \$7,485                            | 198                                   | 159                                      | 16  | 23         | 189                   | \$6.96             | 10.9                    |
| 1980- 89   | 149                 | 2-star plus             | 64.6                     | 959          | \$4,876                            | 142                                   | 107                                      | 11  | 24         | 158                   | \$5.49             | 8.6                     |
| 1990- 99   | 107                 | 3-star plus             | 75.1                     | 905          | \$4,878                            | 121                                   | 84                                       | 14  | 23         | 137                   | \$5.47             | 6.7                     |
| 2000- 2004   | 33                  | 3-star                  | 70.2                     | 1,068        | \$5,737                            | 175                                   | 132                                      | 16  | 27         | 157                   | \$5.36             | 8.5                     |
| 2005 or later  | 50                  | 4-star                  | 80.7                     | 979          | \$4,467                            | 99                                    | 60                                       | 17  | 21         | 112                   | \$5.03             | 5.0                     |

Figure C11: Current Average Energy Use Intensity and Average Square Footage by Decade Built

ARIS

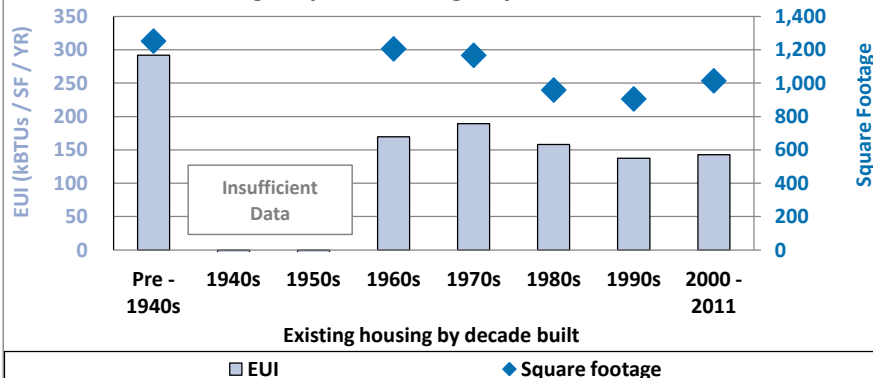
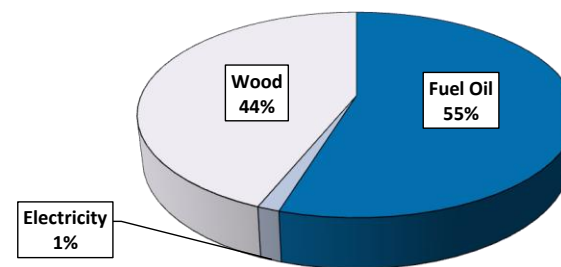


Figure C12: Percent of Total Residential Space Heating Energy by Fuel Type

ARIS

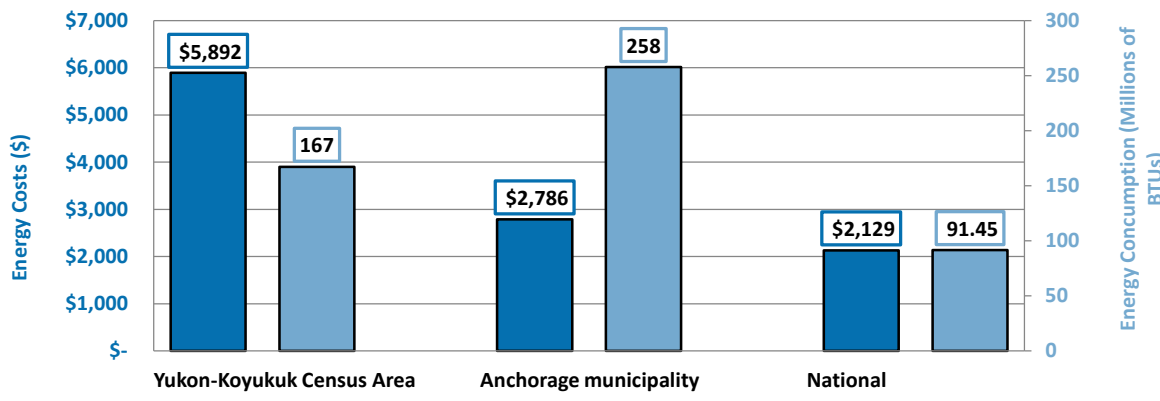


| Current Yukon-Koyukuk Census Area Housing Envelope Characteristics By Decade Built |                     |        |           |                    |                    |                     |                  |                     |        |               |          |
|--|---------------------|--------|-----------|--------------------|--------------------|---------------------|------------------|---------------------|--------|---------------|----------|
| Current Residential Units by Year Built  | # of AkWarm Records | ACH 50 | Ceiling R | Above Grade Wall R | Below Grade Wall R | Above Grade Floor R | On Grade Floor R | Below Grade Floor R | Door U | Garage Door U | Window U |
| OVERALL  | 432                 | 9.9    | 29        | 15                 | 9                  | 26                  | 3                | 3                   | 0.29   | 0.18          | 0.47     |
| Pre- 1940  | 7                   | 15.5   | 31        | 9                  | NR                 | NR                  | NR               | NR                  | 0.24   | NR            | 0.54     |
| 1940- 49   | 1                   | NR     | NR        | NR                 | NR                 | NR                  | NR               | NR                  | NR     | NR            | NR       |
| 1950- 59   | 3                   | NR     | NR        | NR                 | NR                 | NR                  | NR               | NR                  | NR     | NR            | NR       |
| 1960- 69   | 12                  | 23.8   | 30        | 13                 | NR                 | 17                  | NR               | NR                  | 0.38   | NR            | 0.47     |
| 1970- 79   | 71                  | 8.4    | 26        | 14                 | 4                  | 18                  | 3                | 2                   | 0.29   | 0.20          | 0.51     |
| 1980- 89   | 149                 | 10.3   | 27        | 16                 | 10                 | 30                  | 3                | 2                   | 0.28   | NR            | 0.47     |
| 1990- 99   | 107                 | 6.4    | 37        | 20                 | 23                 | 32                  | NR               | 4                   | 0.32   | NR            | 0.46     |
| 2000- 2004   | 33                  | 7.6    | 36        | 15                 | NR                 | 21                  | 3                | NR                  | 0.28   | 0.16          | 0.44     |
| 2005 or later  | 50                  | 3.8    | 42        | 20                 | 18                 | 38                  | NR               | 7                   | 0.20   | NR            | 0.29     |

|                            |     |    |    |    |    |    |    |      |      |      |
|----------------------------|-----|----|----|----|----|----|----|------|------|------|
| BEES 2009 - Climate Zone 8 | 7.0 | 38 | 30 | 15 | 38 | 15 | 15 | 0.22 | 0.22 | 0.22 |
| BEES 2012 - Climate Zone 8 | 4.0 | 48 | 30 | 15 | 38 | 15 | 15 | 0.22 | 0.22 | 0.22 |

AFFORDABILITY - Yukon-Koyukuk Census Area

Figure C13: Average Annual Home Energy Cost and Use



| Housing Information | Avg Household Size (# of people) |
|---------------------|----------------------------------|
| All-occupied        | 2.7                              |
| Owner-occupied      | 2.7                              |
| Renter-occupied     | 2.8                              |

| Median Value of Owner-occupied House with Mortgage |
|--|
| \$146,700  |

| Median Value of Owner-occupied House without a Mortgage |
|---|
| \$90,000  |

| Median Annual Household Income |                  |
|--------------------------------|------------------|
| Housing Units                  | Household Income |
| All-occupied                   | \$ 35,335        |
| Renter-occupied                | \$ 30,529        |
| Owner-occupied                 | \$ 39,022        |
| w/ mortgage                    | \$ 65,000        |
| w/o mortgage                   | \$ 30,625        |

| Median Housing Costs           |          |           |
|--------------------------------|----------|-----------|
|                                | Monthly  | Annual    |
| All-occupied                   | \$ 483   | \$ 5,796  |
| Gross rent                     | \$ 654   | \$ 7,848  |
| Owner-occupied                 | \$ 443   | \$ 5,316  |
| Housing units w/ mortgage      | \$ 1,159 | \$ 13,908 |
| Housing units w/out a mortgage | \$ 369   | \$ 4,428  |

Avg % of Median Income Spent on Energy: **16.7%**

Figure C14: Affordability - Housing Costs as a Percent of Income

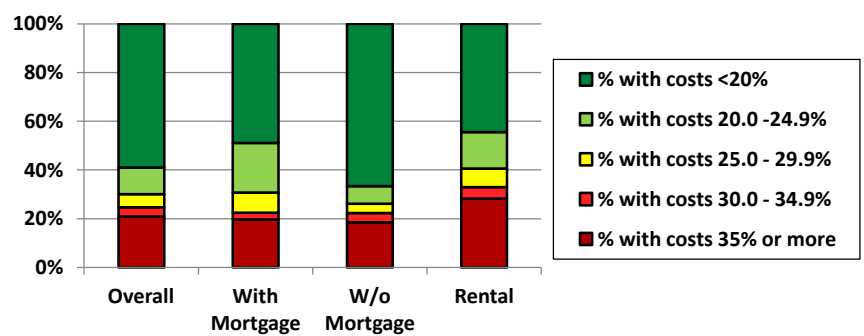
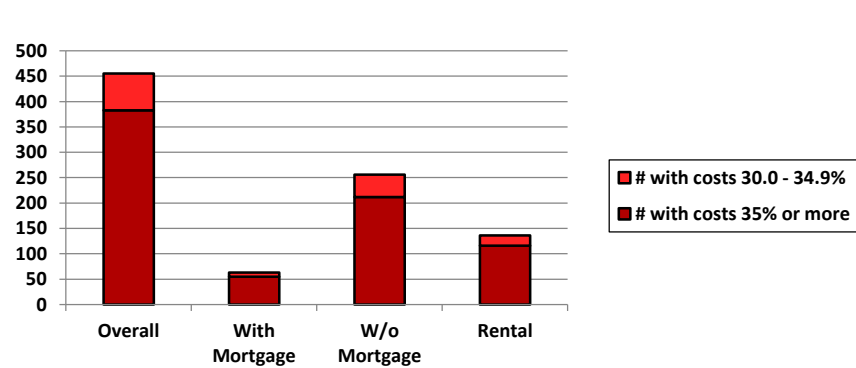


Figure C15: Number of Cost-Burdened Housing Units

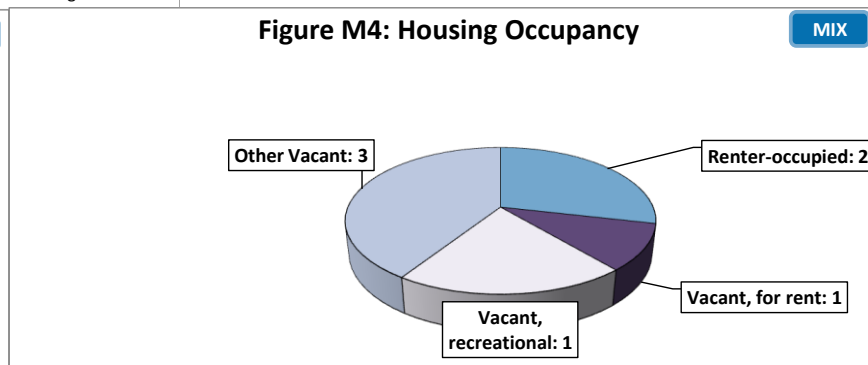
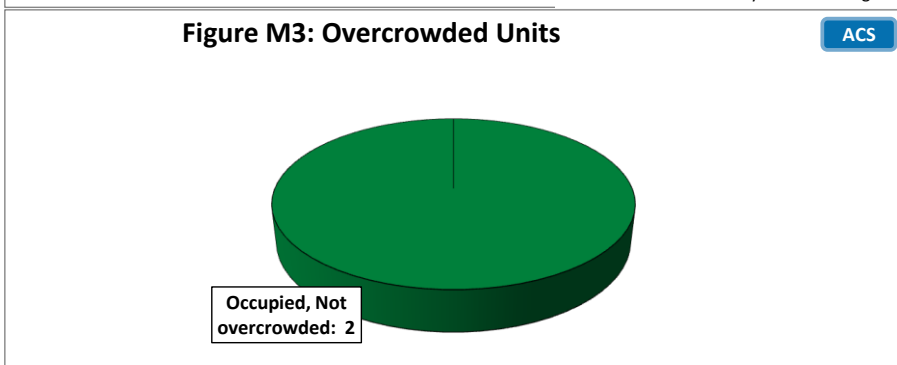
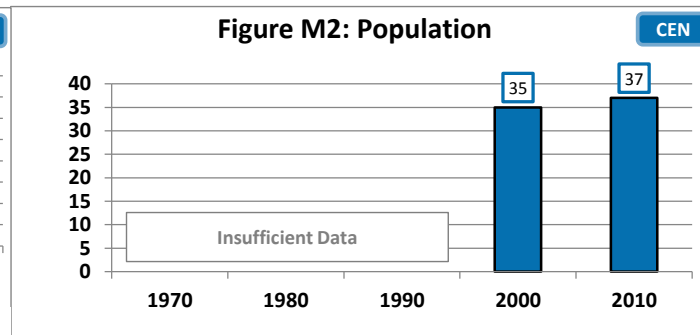
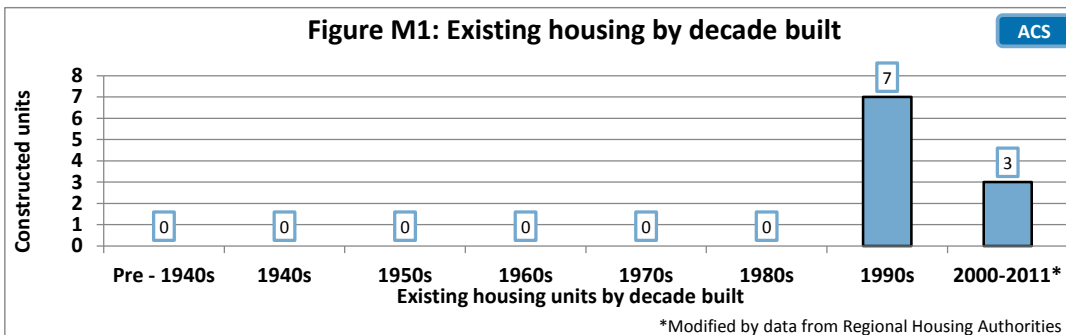


**Community Profile for:** Alatna CDP

**ANCSA Region:** Doyon

**Regional Housing Authority:** Interior Regional Housing Authority

**BEES Climate Zone (Heating Degree Days):** Zone 8 (16,625 HDD)



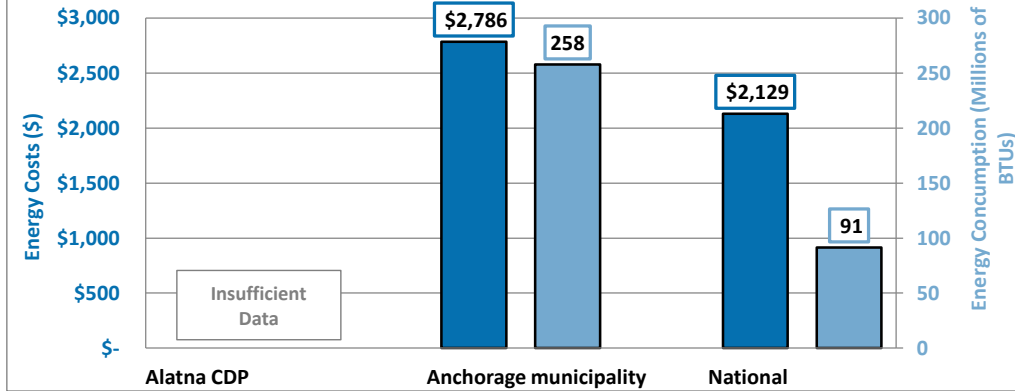
| Residential Unit Categories | Number of records | Avg Energy Rating Stars | Avg Energy Rating Points | Avg Sq. Feet | Avg. Ann Energy Cost w/ PCE | Avg. Ann Energy Use (million BTUs) | Avg. EUI (kBtus/SF) | Avg. ECI | Avg. Home Heating Index | % Tight Homes, No Ventilation |
|-----------------------------|-------------------|-------------------------|--------------------------|--------------|-----------------------------|------------------------------------|---------------------|----------|-------------------------|-------------------------------|
| Pre-retrofit units          | 0                 | NR                      | NR                       | NR           | NR                          | NR                                 | NR                  | NR       | NR                      | NR                            |
| Retrofit units              | 0                 | NR                      | NR                       | NR           | NR                          | NR                                 | NR                  | NR       | NR                      | NR                            |
| New construction            | 3                 | 5-star plus             | 93.3                     | 1,285        | \$ 4,961                    | 75                                 | 59                  | \$3.88   | 2.0                     | 0%                            |

| Residential Unit Categories | Number of Records | ACH 50 | Ceiling R | Above Grade Wall R | Below Grade Wall R | Above Grade Floor R | On Grade Floor R | Below Grade Floor R | Door U | Garage Door U | Window U |
|-----------------------------|-------------------|--------|-----------|--------------------|--------------------|---------------------|------------------|---------------------|--------|---------------|----------|
| Pre-retrofit units          | 0                 | NR     | NR        | NR                 | NR                 | NR                  | NR               | NR                  | NR     | NR            | NR       |
| Retrofit units              | 0                 | NR     | NR        | NR                 | NR                 | NR                  | NR               | NR                  | NR     | NR            | NR       |
| New construction            | 3                 | 2.3    | 40        | 33                 | NR                 | 44                  | NR               | NR                  | 0.19   | NR            | 0.28     |

|           |     |    |    |    |    |    |    |      |      |      |
|-----------|-----|----|----|----|----|----|----|------|------|------|
| BEES 2009 | 7.0 | 38 | 30 | 15 | 38 | 15 | 15 | 0.22 | 0.22 | 0.22 |
| BEES 2012 | 4.0 | 48 | 30 | 15 | 38 | 15 | 15 | 0.22 | 0.22 | 0.22 |

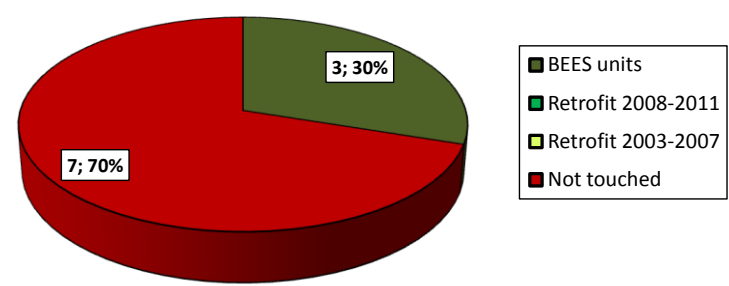
**Figure M5: Average Annual Home Energy Costs and Use**

MIX



**Figure M6: Housing Units Completing an AHFC Energy Program**

ARIS



**AFFORDABILITY - Alatna CDP**

| Owner occupied House with Mortgage, Median Value      |
|---|
| NR  |
| Owner-occupied House without a Mortgage, Median Value |
| NR  |

| Median Annual Household Income |                  |
|--------------------------------|------------------|
| Housing Units                  | Household Income |
| All-occupied                   | NR               |
| Renter-occupied                | NR               |
| Owner-occupied                 | NR               |
| w/ mortgage                    | NR               |
| w/o mortgage                   | NR               |

| Median Housing Costs           |         |        |
|--------------------------------|---------|--------|
|                                | Monthly | Annual |
| All-occupied                   | NR      | NR     |
| Gross rent                     | NR      | NR     |
| Owner-occupied                 | NR      | NR     |
| Housing units w/ mortgage      | NR      | NR     |
| Housing units w/out a mortgage | NR      | NR     |

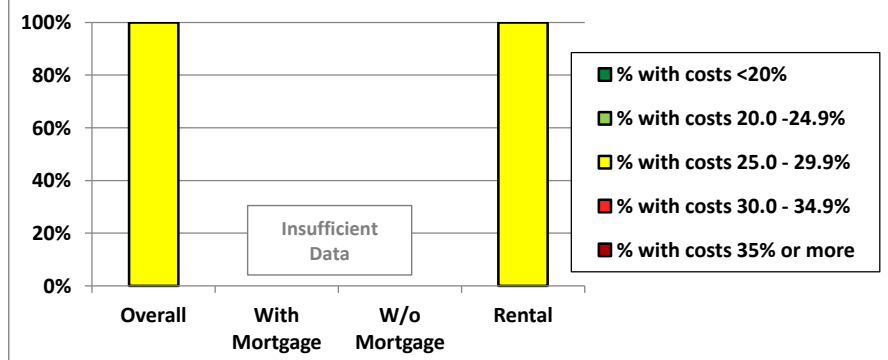
| Estimated Energy Prices as of January 2013 |         |
|--|---------|
| #1 Fuel oil cost (\$ / gallon)             | \$ 7.00 |
| Electricity with PCE (\$/kWh)              | \$ 0.20 |
| Electricity without PCE (\$/kWh)           | \$ 0.85 |

| Average Annual Energy Cost |    |
|----------------------------|----|
| With PCE                   | NR |
| Without PCE                | NR |

| Housing Stock Estimates      | Number of Units |
|------------------------------|-----------------|
| All Housing                  | 7               |
| All Occupied Housing         | 2               |
| All Vacant housing           | 5               |
| Vacant Housing for Sale/Rent | 1               |

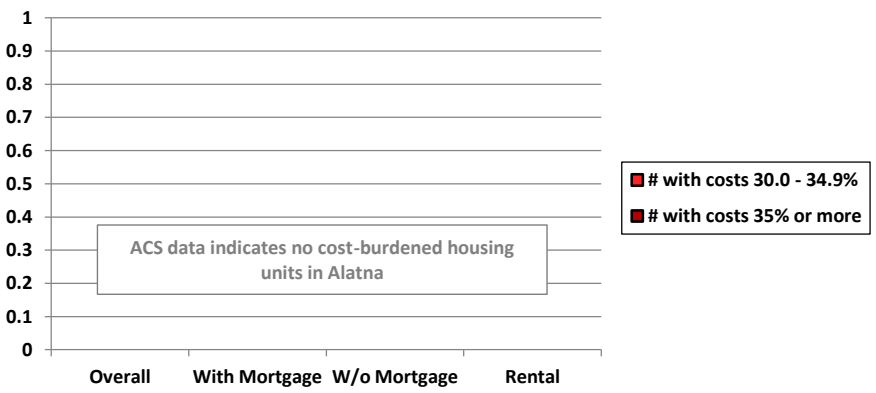
**Figure M7: Affordability - Housing Costs as a Percent of Income**

ACS



**Figure M8: Number of Cost-Burdened Housing Units**

ACS

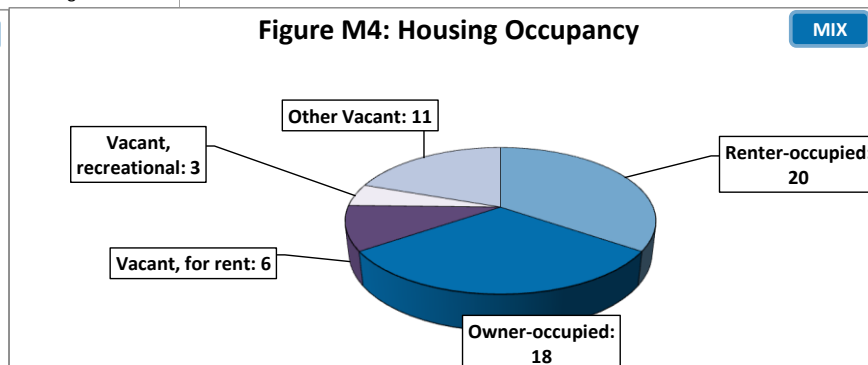
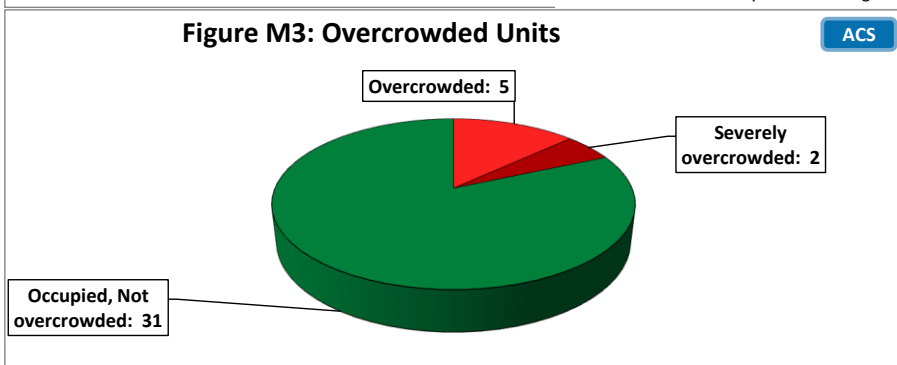
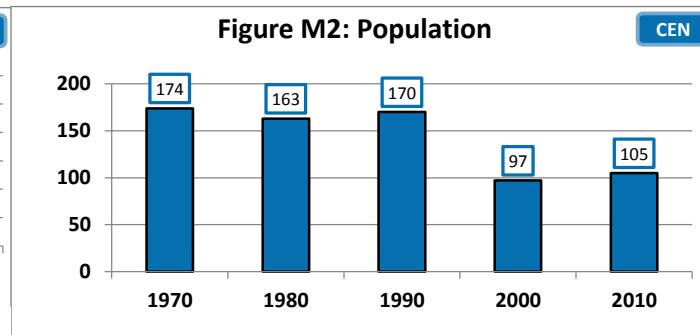
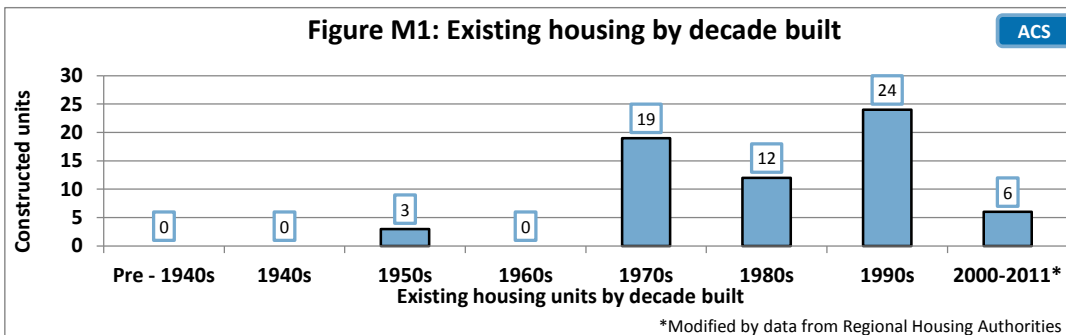


**Community Profile for:** Allakaket city

**ANCSA Region:** Doyon

**Regional Housing Authority:** Interior Regional Housing Authority

**BEES Climate Zone (Heating Degree Days):** Zone 8 (16,625 HDD)



| Residential Unit Categories | Number of records | Avg Energy Rating Stars | Avg Energy Rating Points | Avg Sq. Feet | Avg. Ann Energy Cost | Avg. Ann Energy Use (million BTUs) | Avg. EUI (kBtus/SF) | Avg. ECI | Avg. Home Heating Index | % Tight Homes, No Ventilation |
|-----------------------------|-------------------|-------------------------|--------------------------|--------------|----------------------|------------------------------------|---------------------|----------|-------------------------|-------------------------------|
| Pre-retrofit units          | 0                 | NR                      | NR                       | NR           | NR                   | NR                                 | NR                  | NR       | NR                      | NR                            |
| Retrofit units              | 0                 | NR                      | NR                       | NR           | NR                   | NR                                 | NR                  | NR       | NR                      | NR                            |
| New construction            | 6                 | 5-star                  | 91.1                     | 1,023        | \$ 4,731             | 75                                 | 67                  | \$4.16   | 2.4                     | 0%                            |

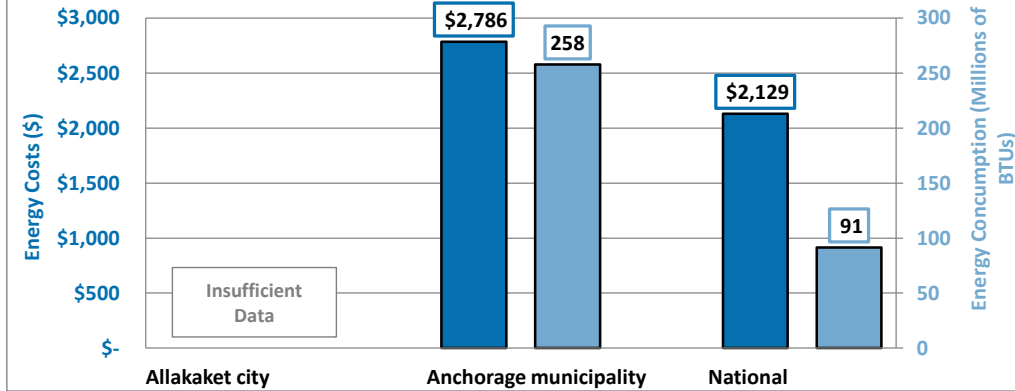
| Residential Unit Categories | Number of Records | ACH 50 | Ceiling R | Above Grade Wall R | Below Grade Wall R | Above Grade Floor R | On Grade Floor R | Below Grade Floor R | Door U | Garage Door U | Window U |
|-----------------------------|-------------------|--------|-----------|--------------------|--------------------|---------------------|------------------|---------------------|--------|---------------|----------|
| Pre-retrofit units          | 0                 | NR     | NR        | NR                 | NR                 | NR                  | NR               | NR                  | NR     | NR            | NR       |
| Retrofit units              | 0                 | NR     | NR        | NR                 | NR                 | NR                  | NR               | NR                  | NR     | NR            | NR       |
| New construction            | 6                 | 2.3    | 40        | 25                 | NR                 | 35                  | NR               | NR                  | 0.19   | NR            | 0.24     |

|           |     |    |    |    |    |    |    |      |      |      |
|-----------|-----|----|----|----|----|----|----|------|------|------|
| BEES 2009 | 7.0 | 38 | 30 | 15 | 38 | 15 | 15 | 0.22 | 0.22 | 0.22 |
| BEES 2012 | 4.0 | 48 | 30 | 15 | 38 | 15 | 15 | 0.22 | 0.22 | 0.22 |



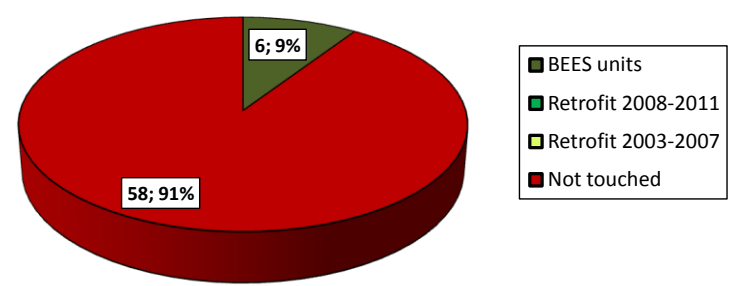
**Figure M5: Average Annual Home Energy Costs and Use**

MIX



**Figure M6: Housing Units Completing an AHFC Energy Program**

ARIS



**AFFORDABILITY - Allakaket city**

| Owner occupied House with Mortgage, Median Value      |
|---|
| NR  |
| Owner-occupied House without a Mortgage, Median Value |
| \$90,000  |

| Median Annual Household Income |                  |
|--------------------------------|------------------|
| Housing Units                  | Household Income |
| All-occupied                   | \$ 18,929        |
| Renter-occupied                | \$ 20,000        |
| Owner-occupied                 | \$ 18,500        |
| w/ mortgage                    | NR               |
| w/o mortgage                   | \$ 18,500        |

| Median Housing Costs           |         |          |
|--------------------------------|---------|----------|
|                                | Monthly | Annual   |
| All-occupied                   | \$ 558  | \$ 6,696 |
| Gross rent                     | \$ 463  | \$ 5,556 |
| Owner-occupied                 | \$ 575  | \$ 6,900 |
| Housing units w/ mortgage      | NR      | NR       |
| Housing units w/out a mortgage | \$ 575  | \$ 6,900 |

| Estimated Energy Prices as of January 2013 |         |
|--|---------|
| #1 Fuel oil cost (\$ / gallon)             | \$ 7.00 |
| Electricity with PCE (\$/kWh)              | \$ 0.20 |
| Electricity without PCE (\$/kWh)           | \$ 0.85 |

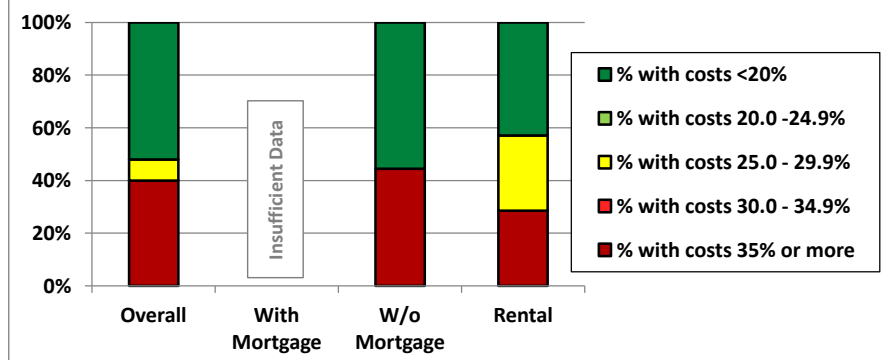
| Average Annual Energy Cost |        |
|----------------------------|--------|
| With PCE                   | NO PCE |
| Without PCE                | \$893  |

| Housing Stock Estimates      | Number of Units |
|------------------------------|-----------------|
| All Housing                  | 58              |
| All Occupied Housing         | 38              |
| All Vacant housing           | 20              |
| Vacant Housing for Sale/Rent | 6               |

|                        |             |
|------------------------|-------------|
| Avg % Income on Energy | <b>4.7%</b> |
|------------------------|-------------|

**Figure M7: Affordability - Housing Costs as a Percent of Income**

ACS



**Figure M8: Number of Cost-Burdened Housing Units**

ACS

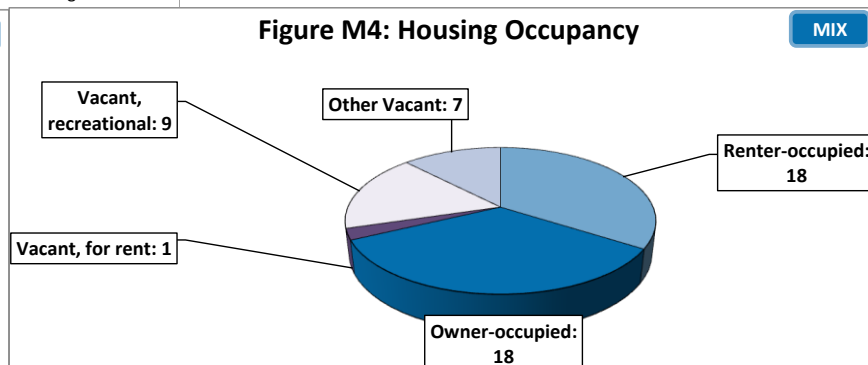
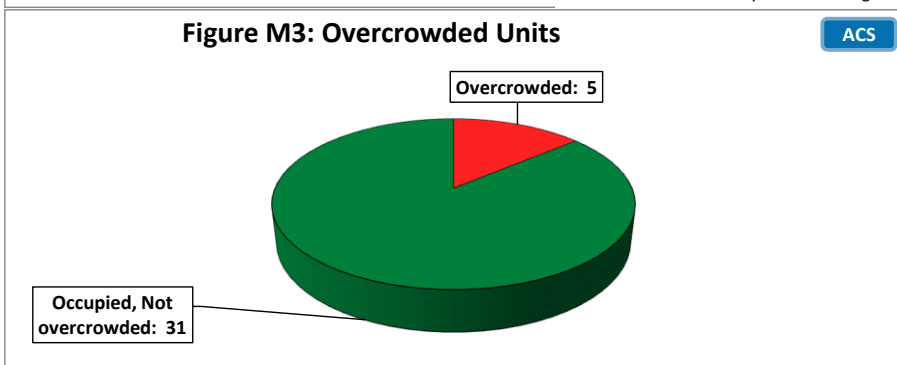
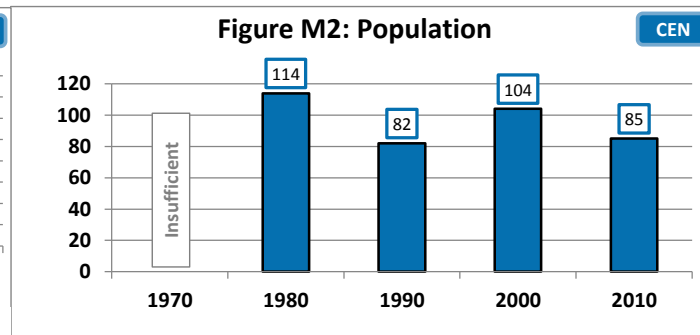
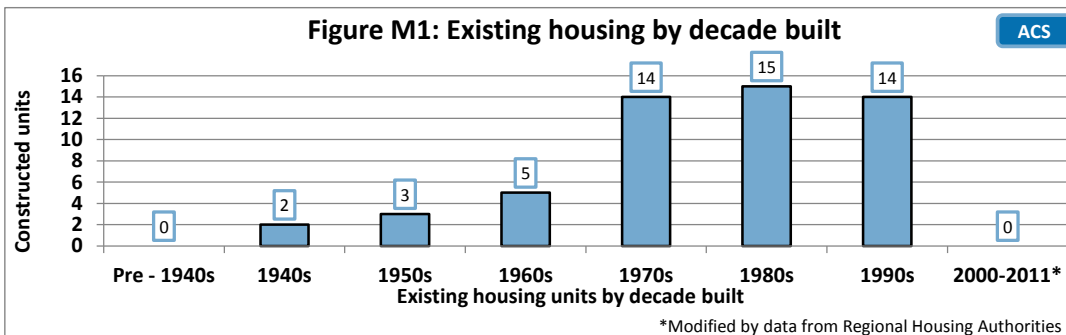


**Community Profile for:** Anvik city

**ANCSA Region:** Doyon

**Regional Housing Authority:** Interior Regional Housing Authority

**BEES Climate Zone (Heating Degree Days):** Zone 8 (13,462 HDD)



#### Anvik city Housing Energy Characteristics

| Residential Unit Categories | Number of records | Avg Energy Rating Stars | Avg Energy Rating Points | Avg Sq. Feet | Avg. Ann Energy Cost w/ PCE | Avg. Ann Energy Use (million BTUs) | Avg. EUI (kBtus/SF) | Avg. ECI | Avg. Home Heating Index | % Tight Homes, No Ventilation |
|-----------------------------|-------------------|-------------------------|--------------------------|--------------|-----------------------------|------------------------------------|---------------------|----------|-------------------------|-------------------------------|
| Pre-retrofit units          | 5                 | 2-star plus             | 65.1                     | 1,065        | \$ 7,487                    | 175                                | 165                 | \$7.16   | 9.8                     | 50%                           |
| Retrofit units              | 9                 | 3-star plus             | 76.0                     | 777          | \$ 2,906                    | 71                                 | 103                 | \$3.66   | 4.9                     | 22%                           |
| New construction            | 0                 | NR                      | NR                       | NR           | NR                          | NR                                 | NR                  | NR       | NR                      | NR                            |

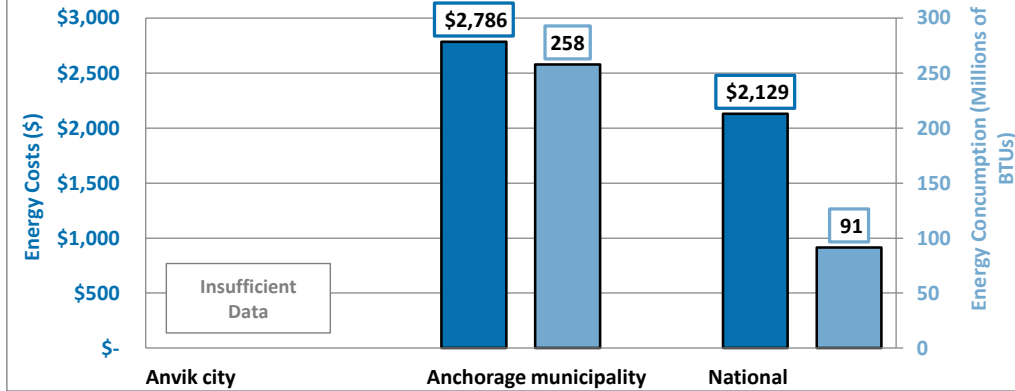
#### Anvik city Housing Envelope Characteristics

| Residential Unit Categories | Number of Records | ACH 50 | Ceiling R | Above Grade Wall R | Below Grade Wall R | Above Grade Floor R | On Grade Floor R | Below Grade Floor R | Door U | Garage Door U | Window U |
|-----------------------------|-------------------|--------|-----------|--------------------|--------------------|---------------------|------------------|---------------------|--------|---------------|----------|
| Pre-retrofit units          | 5                 | 8.1    | NR        | NR                 | NR                 | NR                  | NR               | NR                  | NR     | NR            | NR       |
| Retrofit units              | 9                 | 7.5    | 41        | 16                 | NR                 | 40                  | NR               | NR                  | 0.25   | NR            | 0.33     |
| New construction            | 0                 | NR     | NR        | NR                 | NR                 | NR                  | NR               | NR                  | NR     | NR            | NR       |

|           |     |    |    |    |    |    |    |      |      |      |
|-----------|-----|----|----|----|----|----|----|------|------|------|
| BEES 2009 | 7.0 | 38 | 30 | 15 | 38 | 15 | 15 | 0.22 | 0.22 | 0.22 |
| BEES 2012 | 4.0 | 48 | 30 | 15 | 38 | 15 | 15 | 0.22 | 0.22 | 0.22 |

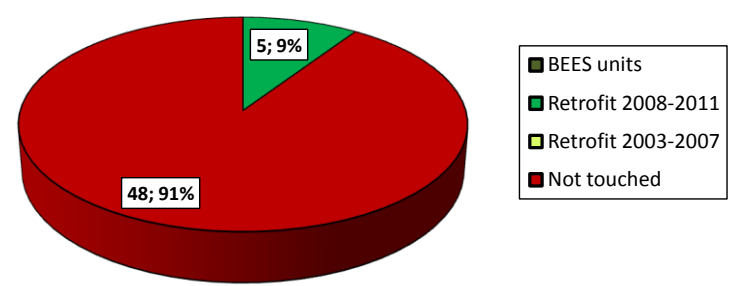
**Figure M5: Average Annual Home Energy Costs and Use**

MIX



**Figure M6: Housing Units Completing an AHFC Energy Program**

ARIS



**AFFORDABILITY - Anvik city**

| Owner occupied House with Mortgage, Median Value      |
|---|
| NR  |
| Owner-occupied House without a Mortgage, Median Value |
| \$55,000  |

| Median Annual Household Income |                  |
|--------------------------------|------------------|
| Housing Units                  | Household Income |
| All-occupied                   | \$ 14,643        |
| Renter-occupied                | \$ 33,333        |
| Owner-occupied                 | \$ 11,429        |
| w/ mortgage                    | NR               |
| w/o mortgage                   | \$ 11,429        |

| Median Housing Costs           |         |          |
|--------------------------------|---------|----------|
|                                | Monthly | Annual   |
| All-occupied                   | \$ 483  | \$ 5,796 |
| Gross rent                     | \$ 583  | \$ 6,996 |
| Owner-occupied                 | \$ 190  | \$ 2,280 |
| Housing units w/ mortgage      | NR      | NR       |
| Housing units w/out a mortgage | \$ 193  | \$ 2,316 |

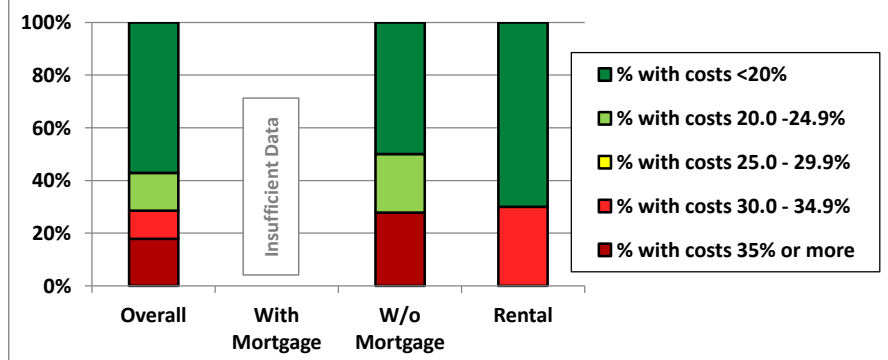
| Estimated Energy Prices as of January 2013 |         |
|--|---------|
| #1 Fuel oil cost (\$ / gallon)             | \$ 5.25 |
| Electricity with PCE (\$/kWh)              | \$ 0.21 |
| Electricity without PCE (\$/kWh)           | \$ 0.58 |

| Average Annual Energy Cost |    |
|----------------------------|----|
| With PCE                   | NR |
| Without PCE                | NR |

| Housing Stock Estimates      | Number of Units |
|------------------------------|-----------------|
| All Housing                  | 53              |
| All Occupied Housing         | 36              |
| All Vacant housing           | 17              |
| Vacant Housing for Sale/Rent | 1               |

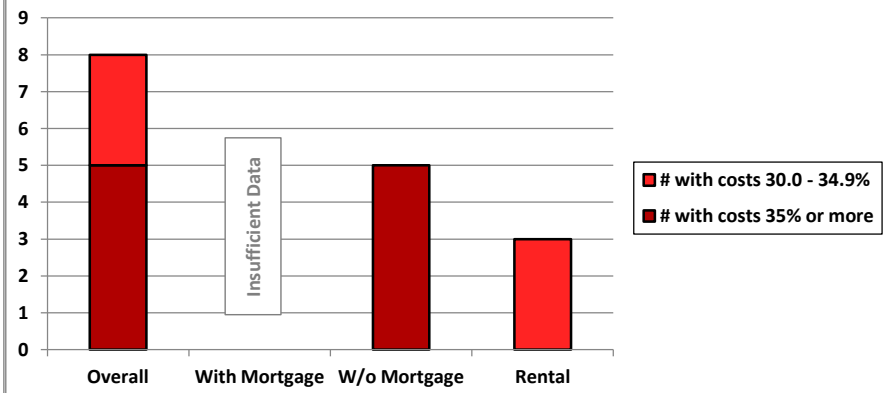
**Figure M7: Affordability - Housing Costs as a Percent of Income**

ACS



**Figure M8: Number of Cost-Burdened Housing Units**

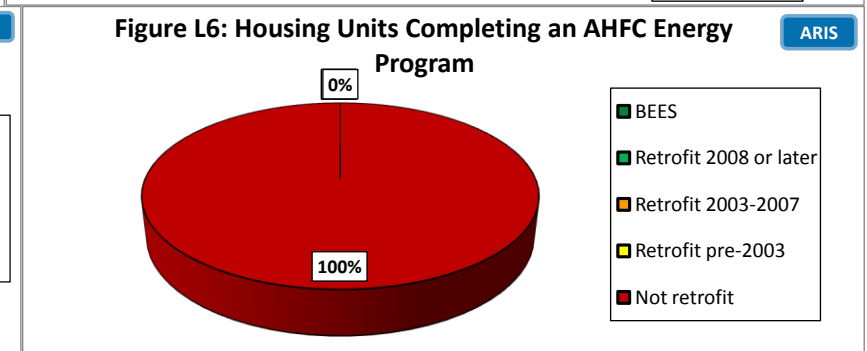
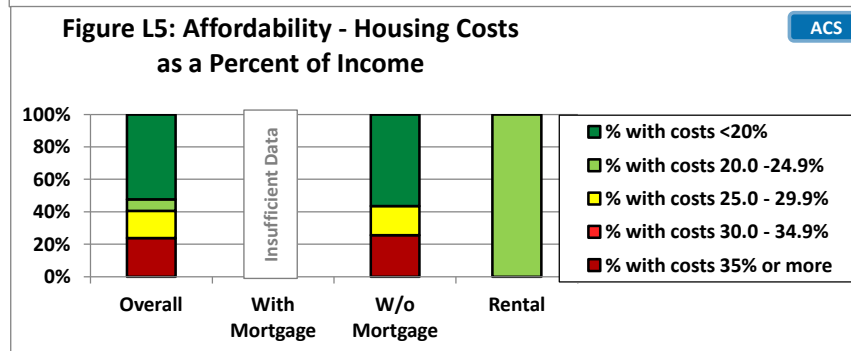
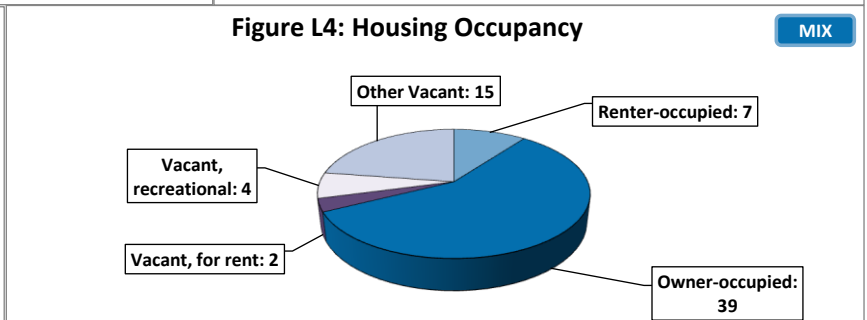
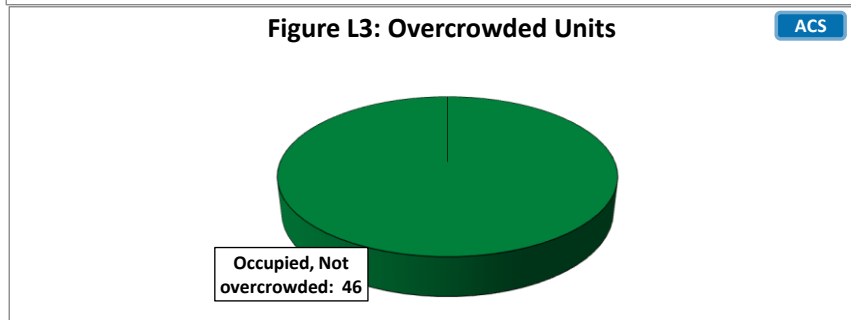
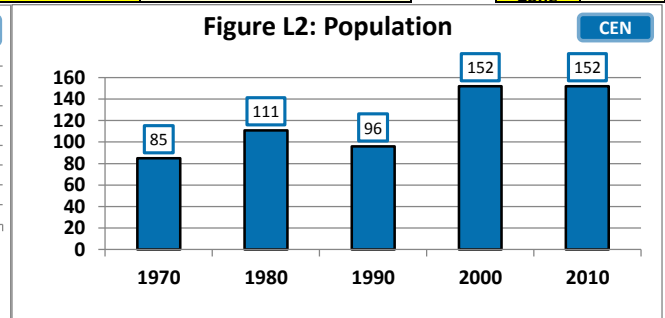
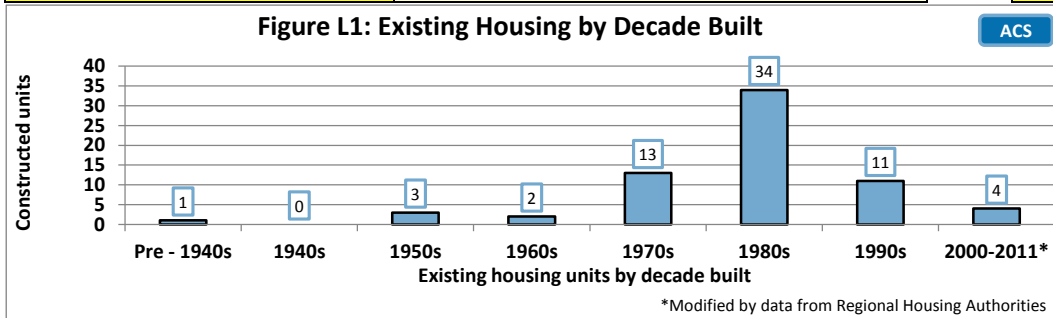
ACS



**Community Profile for:** Arctic Village CDP

**ANCSA Region:** Doyon

**Climate Zone:** 8



| Owner-occupied House with Mortgage, Median Value |
|--|
| NR   |

| Owner-occupied House without a Mortgage, Median Value |
|---|
| \$104,200   |

| Estimated Energy Prices as of January 2013 |          |
|--|----------|
| #1 Fuel oil cost (\$ / gallon)             | \$ 10.00 |
| Electricity with PCE (\$/kWh)              | No PCE   |
| Electricity without PCE (\$/kWh)           | \$ 0.75  |

| Median Annual Household Income |                  |
|--------------------------------|------------------|
| Housing Units                  | Household Income |
| All-occupied                   | \$ 27,000        |
| Renter-occupied                | \$ 17,083        |
| Owner-occupied                 | \$ 27,250        |
| w/ mortgage                    | NR               |
| w/o mortgage                   | \$ 27,250        |

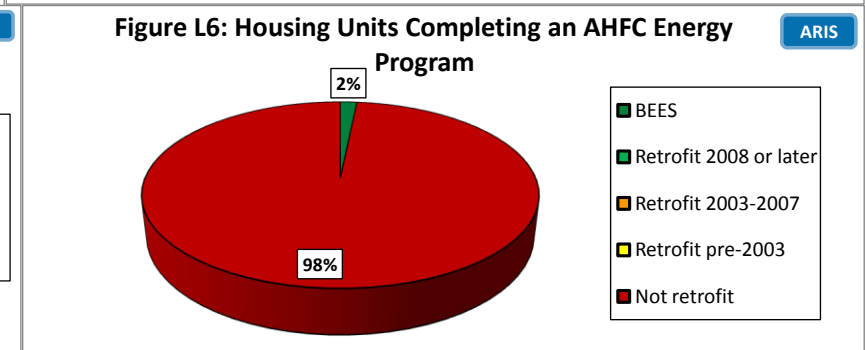
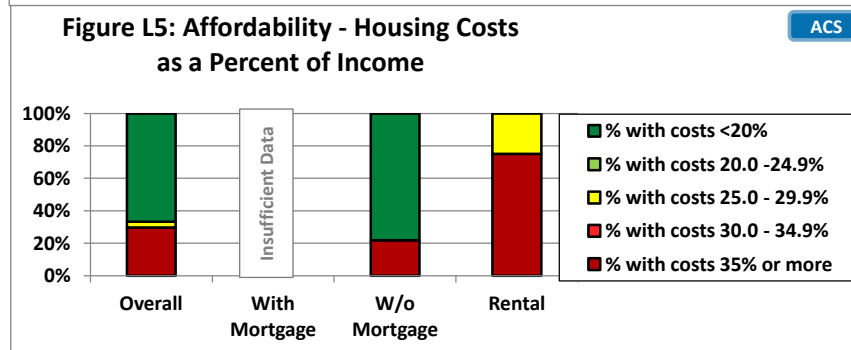
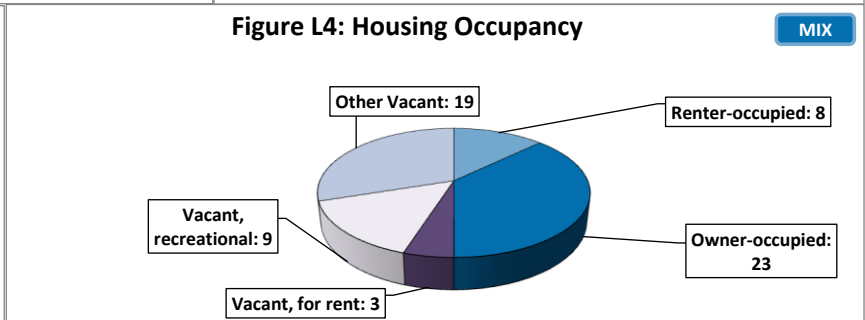
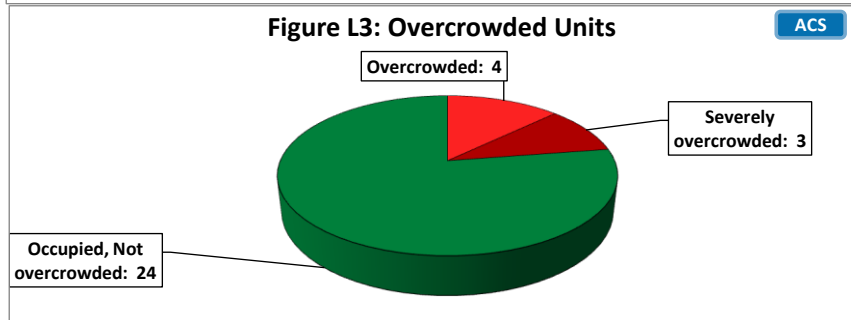
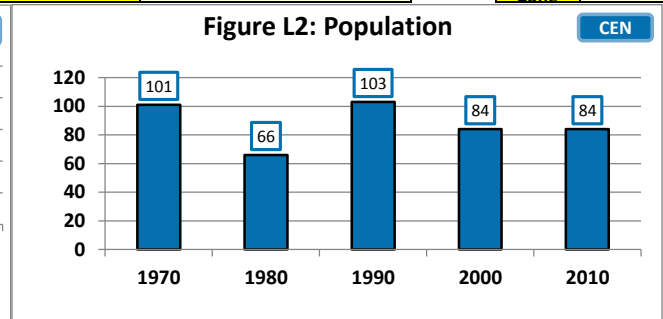
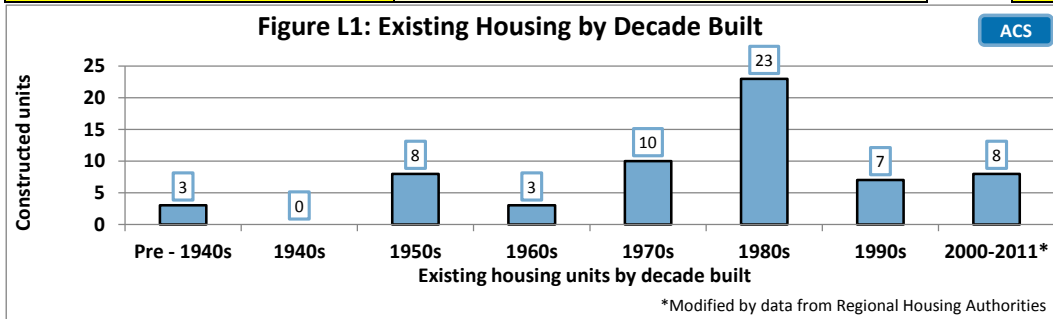
| Housing Stock Estimates |                 |
|-------------------------|-----------------|
|                         | Number of Units |
| All Housing             | 68              |
| All Occupied Housing    | 46              |
| All Vacant housing      | 22              |

| Median Housing Costs           |         |          |
|--------------------------------|---------|----------|
|                                | Monthly | Annual   |
| All-occupied                   | \$ 505  | \$ 6,060 |
| Gross rent                     | NR      | NR       |
| Owner-occupied                 | \$ 494  | \$ 5,928 |
| Housing units w/ mortgage      | NR      | NR       |
| Housing units w/out a mortgage | \$ 494  | \$ 5,928 |

**Community Profile for:** Beaver CDP

**ANCSA Region:** Doyon

**Climate Zone:** 8



| Owner-occupied House with Mortgage, Median Value |
|--|
| NR   |

| Owner-occupied House without a Mortgage, Median Value |
|---|
| \$195,800   |

| Estimated Energy Prices as of January 2013 |         |
|--|---------|
| #1 Fuel oil cost (\$ / gallon)             | \$ 3.74 |
| Electricity with PCE (\$/kWh)              | \$ 0.05 |
| Electricity without PCE (\$/kWh)           | \$ 0.56 |

| Median Annual Household Income |                  |
|--------------------------------|------------------|
| Housing Units                  | Household Income |
| All-occupied                   | \$ 20,938        |
| Renter-occupied                | \$ 18,750        |
| Owner-occupied                 | \$ 20,938        |
| w/ mortgage                    | NR               |
| w/o mortgage                   | \$ 20,938        |

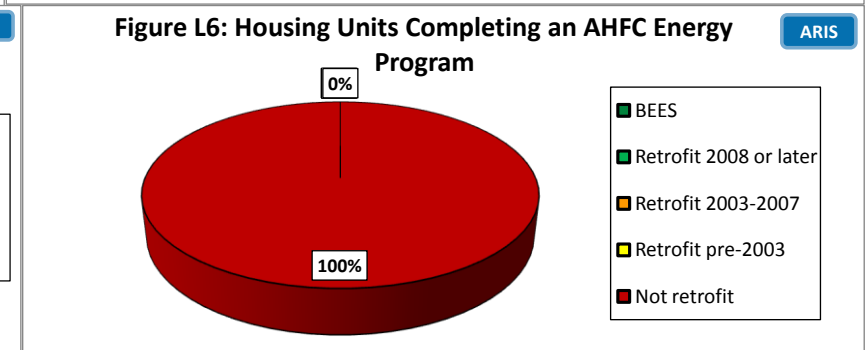
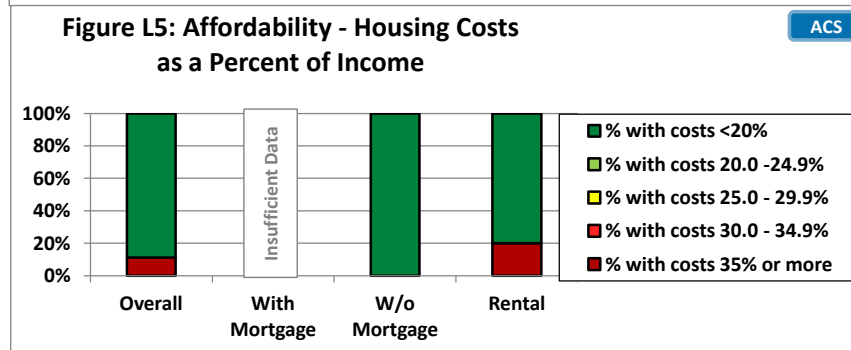
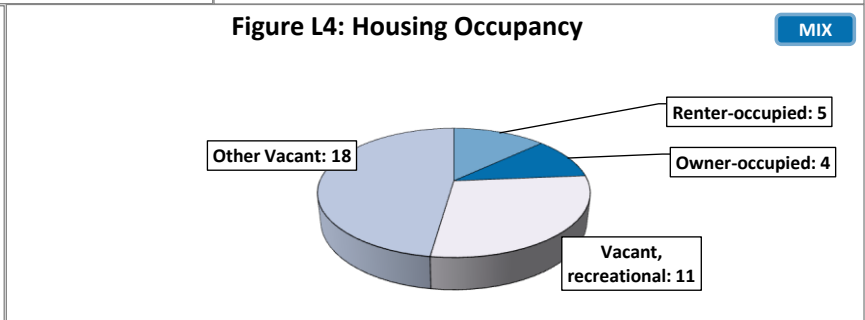
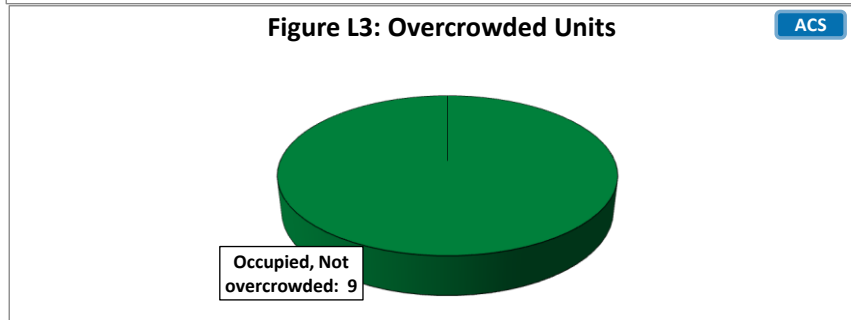
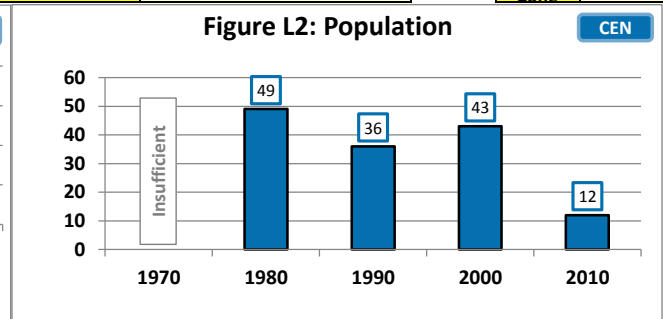
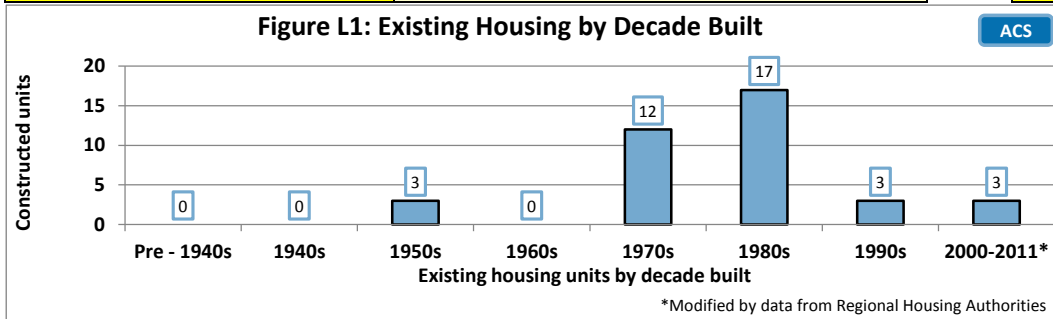
| Housing Stock Estimates |                 |
|-------------------------|-----------------|
| Housing Stock Estimates | Number of Units |
| All Housing             | 62              |
| All Occupied Housing    | 31              |
| All Vacant housing      | 31              |

| Median Housing Costs           |         |          |
|--------------------------------|---------|----------|
|                                | Monthly | Annual   |
| All-occupied                   | \$ 319  | \$ 3,828 |
| Gross rent                     | \$ 433  | \$ 5,196 |
| Owner-occupied                 | \$ 283  | \$ 3,396 |
| Housing units w/ mortgage      | NR      | NR       |
| Housing units w/out a mortgage | \$ 292  | \$ 3,504 |

**Community Profile for:** Bettles city

**ANCSA Region:** Doyon

**Climate Zone:** 8



| Owner-occupied House with Mortgage, Median Value |
|--|
| NR   |

| Owner-occupied House without a Mortgage, Median Value |
|---|
| NR  |

| Estimated Energy Prices as of January 2013 |         |
|--|---------|
| #1 Fuel oil cost (\$ / gallon)             | \$ 7.45 |
| Electricity with PCE (\$/kWh)              | \$ 0.19 |
| Electricity without PCE (\$/kWh)           | \$ 0.66 |

| Median Annual Household Income |                  |
|--------------------------------|------------------|
| Housing Units                  | Household Income |
| All-occupied                   | \$ 92,188        |
| Renter-occupied                | \$ 90,938        |
| Owner-occupied                 | NR               |
| w/ mortgage                    | NR               |
| w/o mortgage                   | NR               |

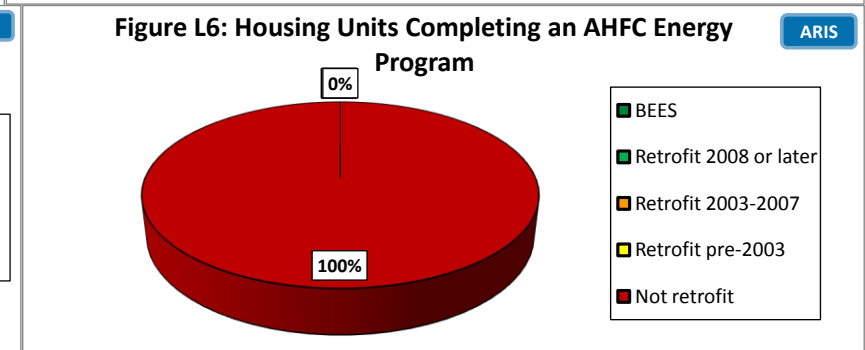
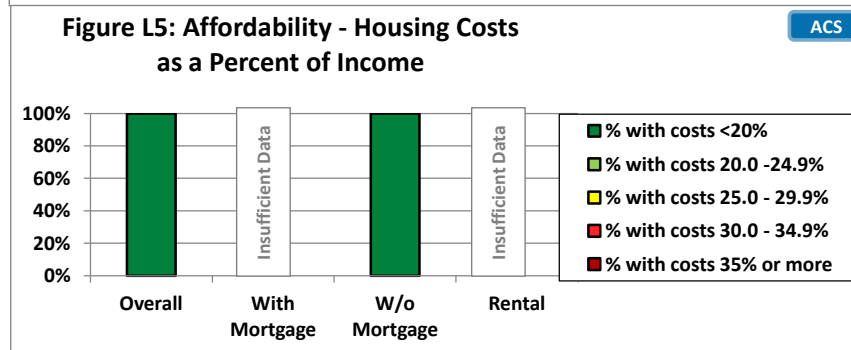
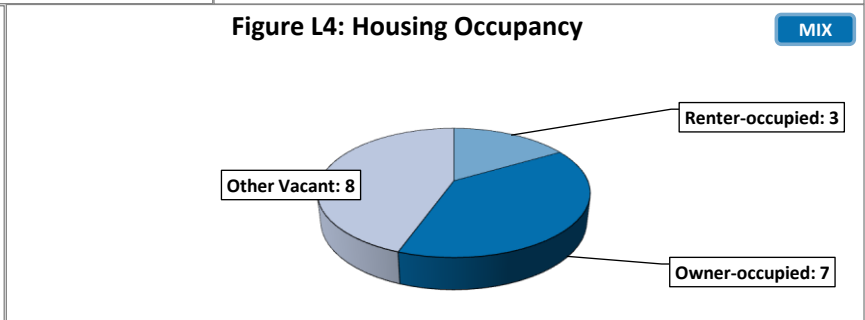
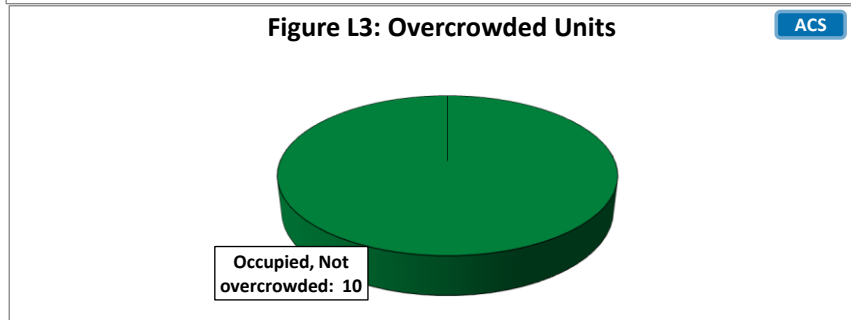
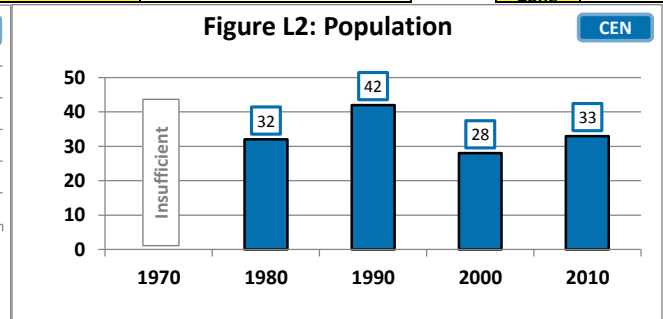
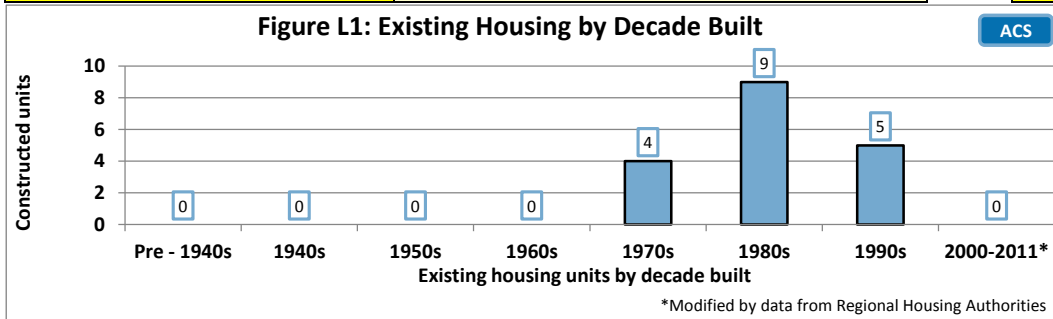
| Housing Stock Estimates |                 |
|-------------------------|-----------------|
|                         | Number of Units |
| All Housing             | 38              |
| All Occupied Housing    | 9               |
| All Vacant housing      | 29              |

| Median Housing Costs           |         |           |
|--------------------------------|---------|-----------|
|                                | Monthly | Annual    |
| All-occupied                   | \$ 913  | \$ 10,956 |
| Gross rent                     | \$ 963  | \$ 11,556 |
| Owner-occupied                 | NR      | NR        |
| Housing units w/ mortgage      | NR      | NR        |
| Housing units w/out a mortgage | NR      | NR        |

**Community Profile for:** Birch Creek CDP

**ANCSA Region:** Doyon

**Climate Zone:** 8



| Owner-occupied House with Mortgage, Median Value |
|--|
| NR   |

| Owner-occupied House without a Mortgage, Median Value |
|---|
| \$531,300   |

| Estimated Energy Prices as of January 2013 |         |
|--|---------|
| #1 Fuel oil cost (\$ / gallon)             | \$ 4.33 |
| Electricity with PCE (\$/kWh)              | No PCE  |
| Electricity without PCE (\$/kWh)           | \$ 0.60 |

| Median Annual Household Income |                  |
|--------------------------------|------------------|
| Housing Units                  | Household Income |
| All-occupied                   | \$ 23,750        |
| Renter-occupied                | NR               |
| Owner-occupied                 | \$ 24,688        |
| w/ mortgage                    | NR               |
| w/o mortgage                   | \$ 24,688        |

| Housing Stock Estimates |                 |
|-------------------------|-----------------|
| Housing Stock Estimates | Number of Units |
| All Housing             | 18              |
| All Occupied Housing    | 10              |
| All Vacant housing      | 8               |

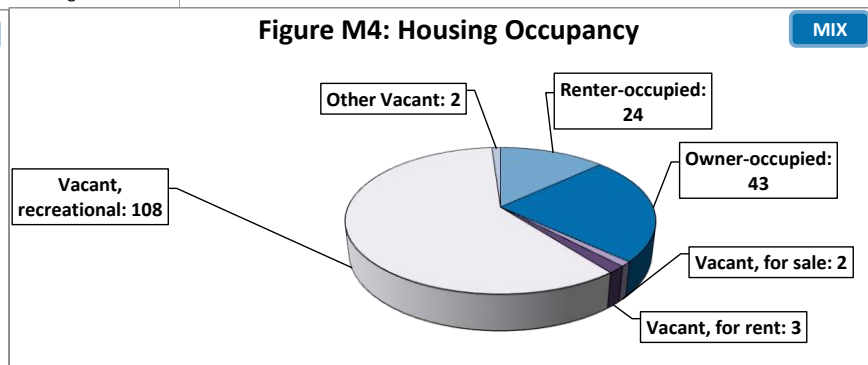
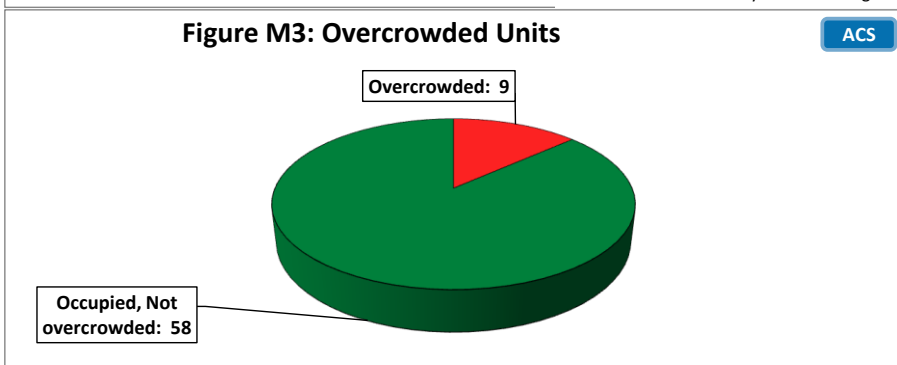
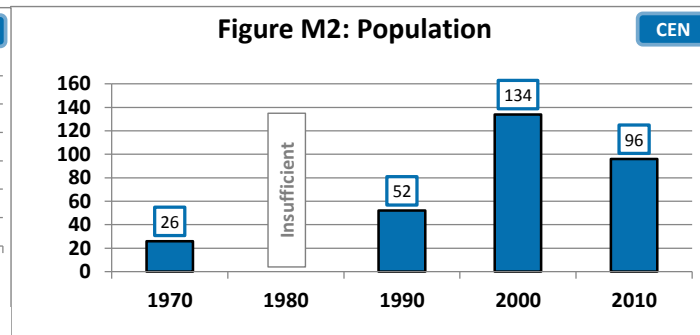
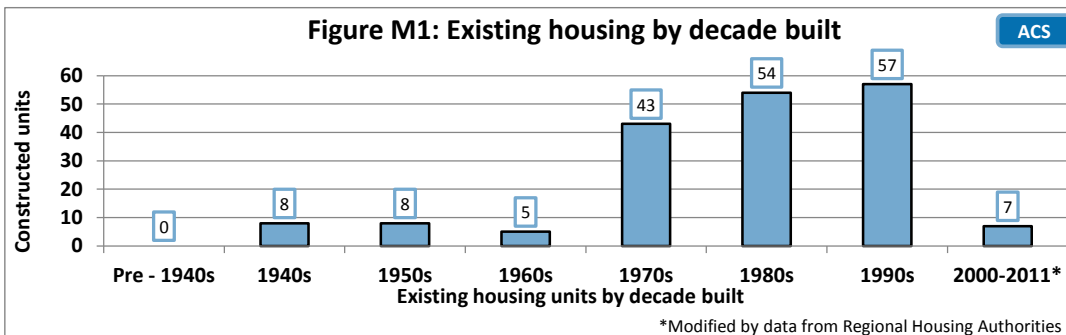
| Median Housing Costs           |         |          |
|--------------------------------|---------|----------|
|                                | Monthly | Annual   |
| All-occupied                   | \$ 294  | \$ 3,528 |
| Gross rent                     | NR      | NR       |
| Owner-occupied                 | \$ 288  | \$ 3,456 |
| Housing units w/ mortgage      | NR      | NR       |
| Housing units w/out a mortgage | \$ 294  | \$ 3,528 |

**Community Profile for:** Central CDP

**ANCSA Region:** Doyon

**Regional Housing Authority:** Interior Regional Housing Authority

**BEES Climate Zone (Heating Degree Days):** Zone 8 (16,315 HDD)



#### Central CDP Housing Energy Characteristics

| Residential Unit Categories | Number of records | Avg Energy Rating Stars | Avg Energy Rating Points | Avg Sq. Feet | Avg. Ann Energy Cost | Avg. Ann Energy Use (million BTUs) | Avg. EUI (kBtus/SF) | Avg. ECI | Avg. Home Heating Index | % Tight Homes, No Ventilation |
|-----------------------------|-------------------|-------------------------|--------------------------|--------------|----------------------|------------------------------------|---------------------|----------|-------------------------|-------------------------------|
| Pre-retrofit units          | 5                 | 3-star                  | 68.7                     | 1,699        | \$ 8,472             | 288                                | 160                 | \$5.12   | 8.7                     | 100%                          |
| Retrofit units              | 5                 | 3-star plus             | 74.6                     | 1,699        | \$ 7,442             | 258                                | 143                 | \$4.52   | 7.5                     | 0%                            |
| New construction            | 0                 | NR                      | NR                       | NR           | NR                   | NR                                 | NR                  | NR       | NR                      | NR                            |

#### Central CDP Housing Envelope Characteristics

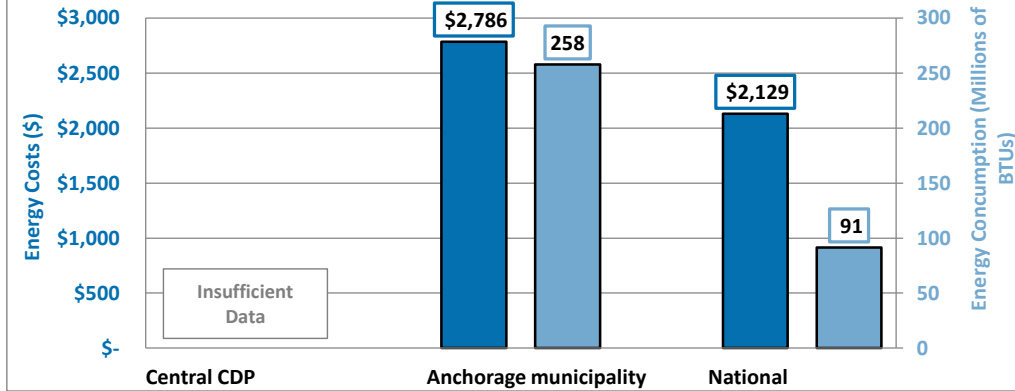
| Residential Unit Categories | Number of Records | ACH 50 | Ceiling R | Above Grade Wall R | Below Grade Wall R | Above Grade Floor R | On Grade Floor R | Below Grade Floor R | Door U | Garage Door U | Window U |
|-----------------------------|-------------------|--------|-----------|--------------------|--------------------|---------------------|------------------|---------------------|--------|---------------|----------|
| Pre-retrofit units          | 5                 | 5.8    | 28        | 13                 | NR                 | NR                  | NR               | NR                  | 0.26   | NR            | 0.51     |
| Retrofit units              | 5                 | 5.0    | 31        | 14                 | NR                 | NR                  | NR               | NR                  | 0.26   | NR            | 0.51     |
| New construction            | 0                 | NR     | NR        | NR                 | NR                 | NR                  | NR               | NR                  | NR     | NR            | NR       |

|           |     |    |    |    |    |    |    |      |      |      |
|-----------|-----|----|----|----|----|----|----|------|------|------|
| BEES 2009 | 7.0 | 38 | 30 | 15 | 38 | 15 | 15 | 0.22 | 0.22 | 0.22 |
| BEES 2012 | 4.0 | 48 | 30 | 15 | 38 | 15 | 15 | 0.22 | 0.22 | 0.22 |



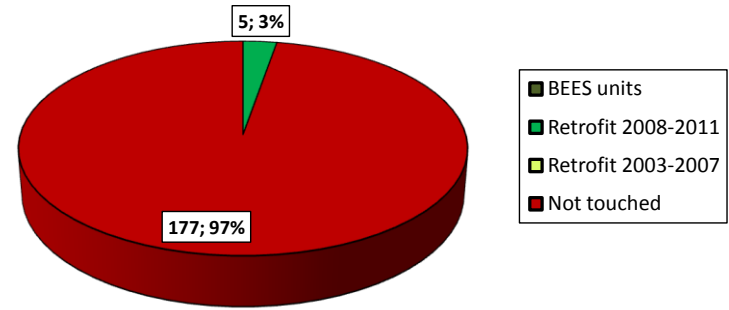
**Figure M5: Average Annual Home Energy Costs and Use**

MIX



**Figure M6: Housing Units Completing an AHFC Energy Program**

ARIS



**AFFORDABILITY - Central CDP**

| Owner occupied House with Mortgage, Median Value |
|--|
| NR   |

| Median Annual Household Income |                  |
|--------------------------------|------------------|
| Housing Units                  | Household Income |
| All-occupied                   | \$ 31,750        |
| Renter-occupied                | \$ 27,500        |
| Owner-occupied                 | \$ 31,750        |
| w/ mortgage                    | NR               |
| w/o mortgage                   | \$ 30,750        |

| Median Housing Costs           |         |          |
|--------------------------------|---------|----------|
|                                | Monthly | Annual   |
| All-occupied                   | \$ 318  | \$ 3,816 |
| Gross rent                     | \$ 675  | \$ 8,100 |
| Owner-occupied                 | \$ 183  | \$ 2,196 |
| Housing units w/ mortgage      | NR      | NR       |
| Housing units w/out a mortgage | \$ 185  | \$ 2,220 |

| Owner-occupied House without a Mortgage, Median Value |  |
|---|--|
| \$64,600  |  |

| Average Annual Energy Cost |          |
|----------------------------|----------|
| With PCE                   | NO PCE   |
| Without PCE                | \$11,766 |

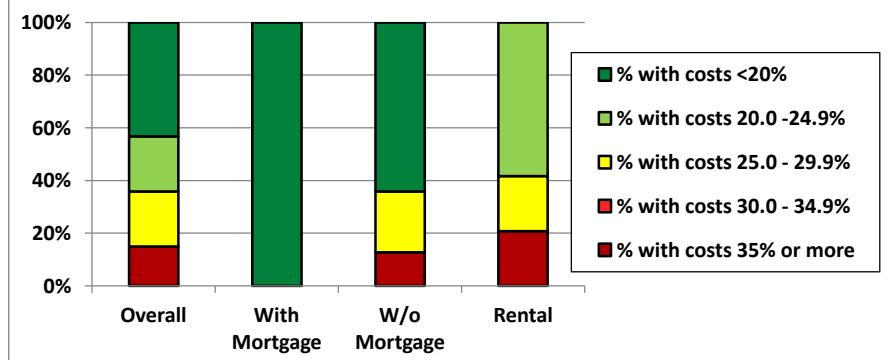
| Housing Stock Estimates      | Number of Units |
|------------------------------|-----------------|
| All Housing                  | 182             |
| All Occupied Housing         | 67              |
| All Vacant housing           | 115             |
| Vacant Housing for Sale/Rent | 5               |

| Estimated Energy Prices as of January 2013 |         |
|--|---------|
| #1 Fuel oil cost (\$ / gallon)             | \$ 3.93 |
| Electricity with PCE (\$/kWh)              | \$ 0.32 |
| Electricity without PCE (\$/kWh)           | \$ 0.91 |

|                        |              |
|------------------------|--------------|
| Avg % Income on Energy | <b>37.1%</b> |
|------------------------|--------------|

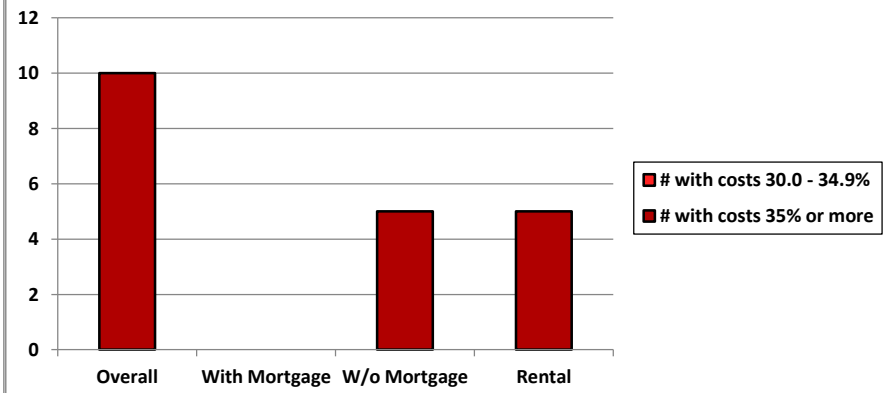
**Figure M7: Affordability - Housing Costs as a Percent of Income**

ACS

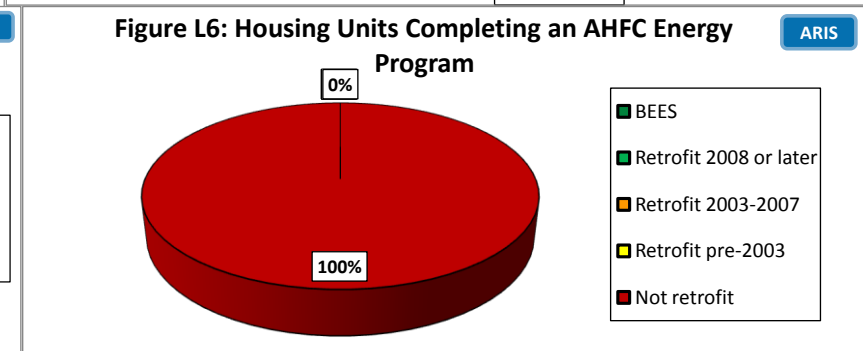
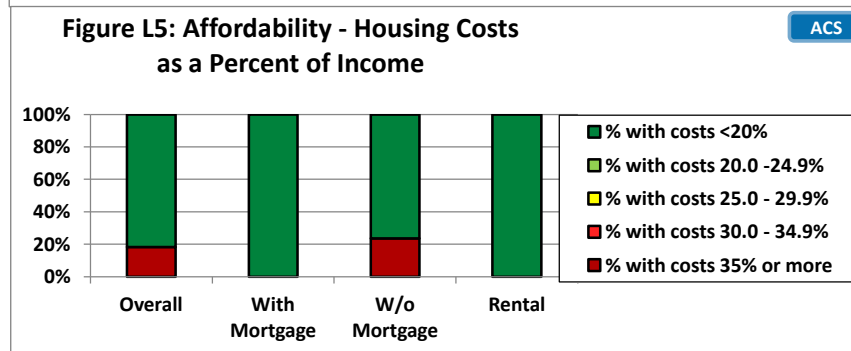
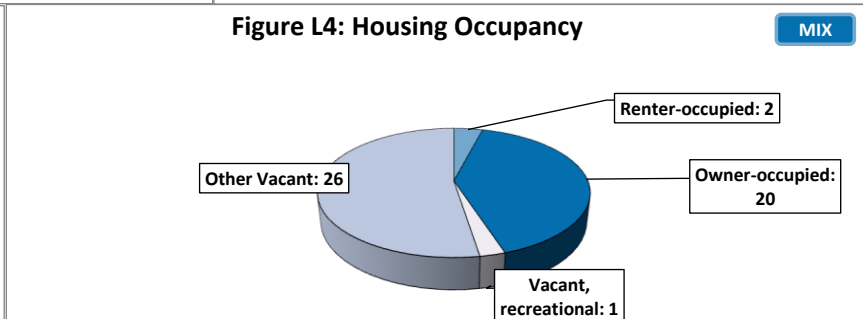
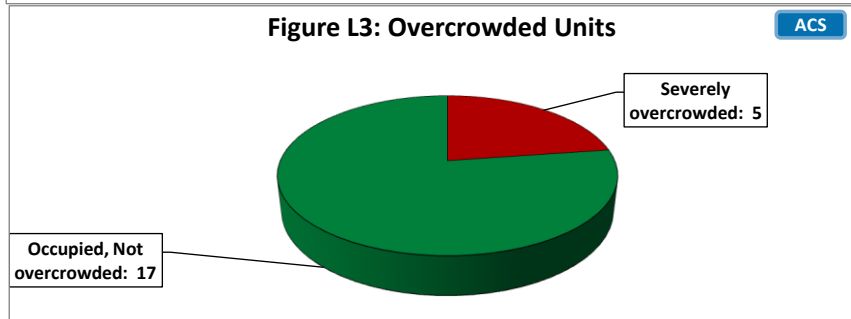
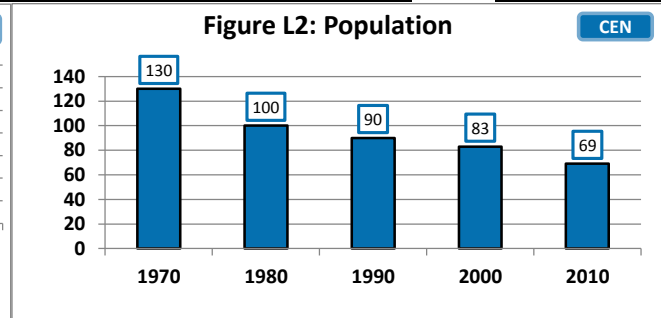
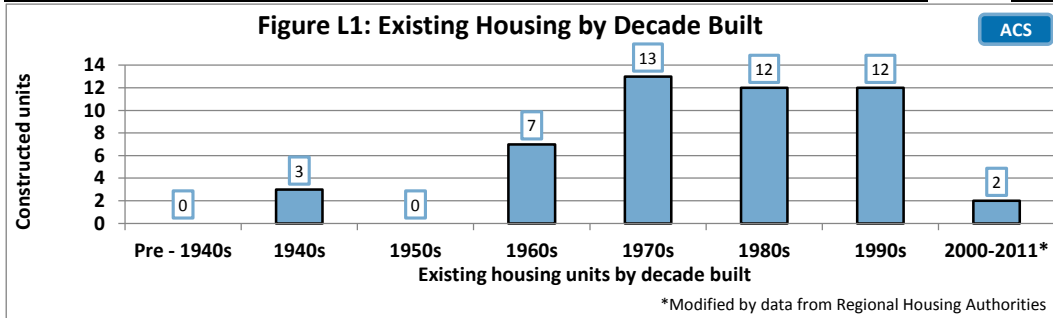


**Figure M8: Number of Cost-Burdened Housing Units**

ACS



|                               |                 |                     |       |                     |   |
|-------------------------------|-----------------|---------------------|-------|---------------------|---|
| <b>Community Profile for:</b> | Chalkyitsik CDP | <b>ANCSA Region</b> | Doyon | <b>Climate Zone</b> | 8 |
|-------------------------------|-----------------|---------------------|-------|---------------------|---|



| Owner-occupied House with Mortgage, Median Value |
|--|
| NR   |

| Owner-occupied House without a Mortgage, Median Value |
|---|
| \$65,000  |

| Estimated Energy Prices as of January 2013 |         |
|--|---------|
| #1 Fuel oil cost (\$ / gallon)             | \$ 6.75 |
| Electricity with PCE (\$/kWh)              | \$ 0.49 |
| Electricity without PCE (\$/kWh)           | \$ 0.95 |

| Median Annual Household Income |                  |
|--------------------------------|------------------|
| Housing Units                  | Household Income |
| All-occupied                   | \$ 34,000        |
| Renter-occupied                | NR               |
| Owner-occupied                 | \$ 34,167        |
| w/ mortgage                    | NR               |
| w/o mortgage                   | \$ 32,917        |

| Housing Stock Estimates |                 |
|-------------------------|-----------------|
| Housing Stock Estimates | Number of Units |
| All Housing             | 49              |
| All Occupied Housing    | 22              |
| All Vacant housing      | 27              |

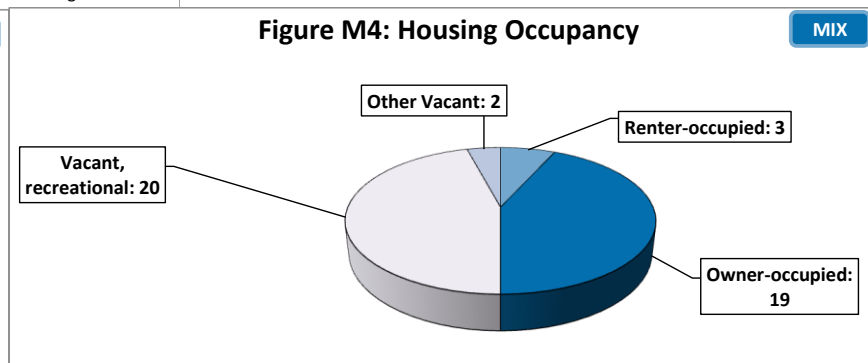
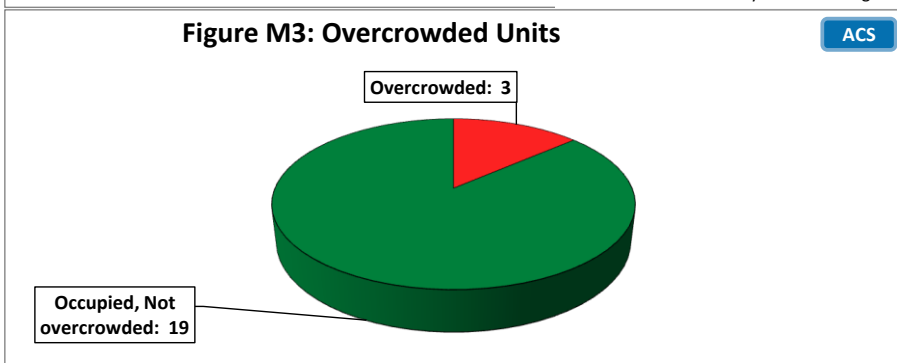
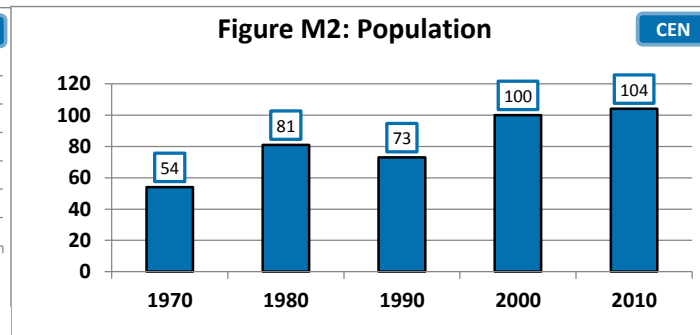
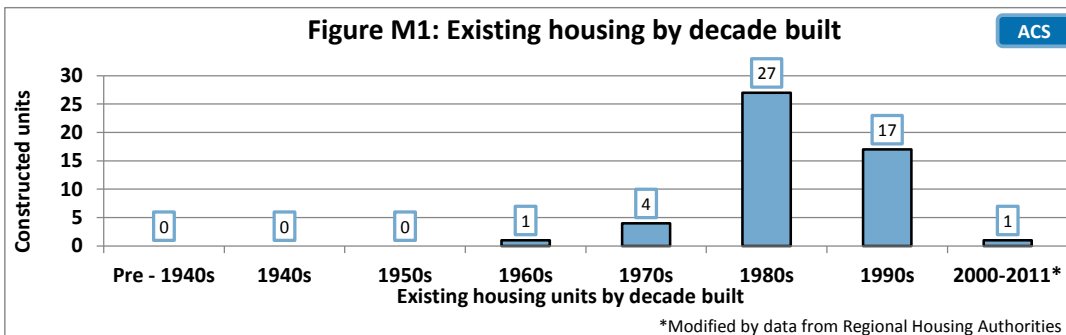
| Median Housing Costs           |         |          |
|--------------------------------|---------|----------|
|                                | Monthly | Annual   |
| All-occupied                   | \$ 325  | \$ 3,900 |
| Gross rent                     | NR      | NR       |
| Owner-occupied                 | \$ 363  | \$ 4,356 |
| Housing units w/ mortgage      | NR      | NR       |
| Housing units w/out a mortgage | \$ 317  | \$ 3,804 |

**Community Profile for:** Circle CDP

**ANCSA Region** Doyon

**Regional Housing Authority** Interior Regional Housing Authority

**BEES Climate Zone (Heating Degree Days)** Zone 8 (16,349 HDD)



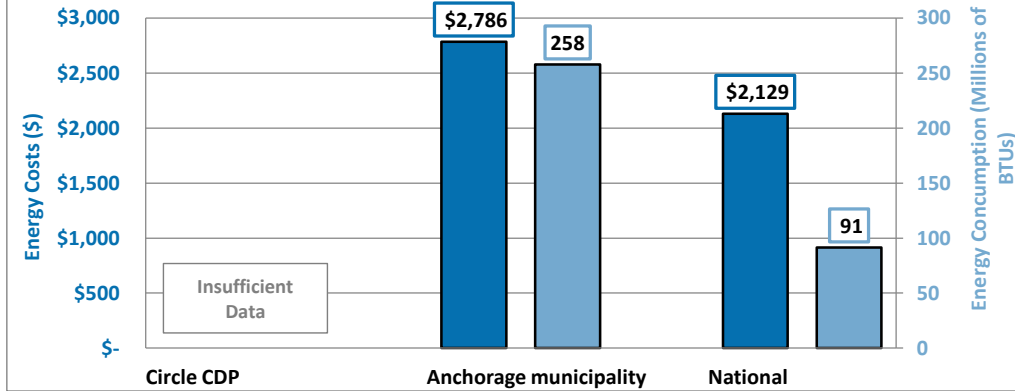
| Circle CDP Housing Energy Characteristics |                   |                         |                          |              |                      |                                    |                     |          |                         |                               |  |
|---|-------------------|-------------------------|--------------------------|--------------|----------------------|------------------------------------|---------------------|----------|-------------------------|-------------------------------|--|
| Residential Unit Categories               | Number of records | Avg Energy Rating Stars | Avg Energy Rating Points | Avg Sq. Feet | Avg. Ann Energy Cost | Avg. Ann Energy Use (million BTUs) | Avg. EUI (kBtus/SF) | Avg. ECI | Avg. Home Heating Index | % Tight Homes, No Ventilation |  |
| Pre-retrofit units                        | 17                | 4-star                  | 79.2                     | 760          | \$ 1,555             | 100                                | 131                 | \$2.05   | 6.7                     | 0%                            |  |
| Retrofit units                            | 17                | 4-star                  | 78.2                     | 692          | \$ 1,614             | 111                                | 160                 | \$2.33   | 8.4                     | 0%                            |  |
| New construction                          | 1                 | NR                      | NR                       | NR           | NR                   | NR                                 | NR                  | NR       | NR                      | NR                            |  |

| Circle CDP Housing Envelope Characteristics |                   |        |           |                    |                    |                     |                  |                     |        |               |          |
|---|-------------------|--------|-----------|--------------------|--------------------|---------------------|------------------|---------------------|--------|---------------|----------|
| Residential Unit Categories                 | Number of Records | ACH 50 | Ceiling R | Above Grade Wall R | Below Grade Wall R | Above Grade Floor R | On Grade Floor R | Below Grade Floor R | Door U | Garage Door U | Window U |
| Pre-retrofit units                          | 17                | 10.5   | NR        | NR                 | NR                 | NR                  | NR               | NR                  | NR     | NR            | NR       |
| Retrofit units                              | 17                | 9.8    | NR        | NR                 | NR                 | NR                  | NR               | NR                  | NR     | NR            | NR       |
| New construction                            | 1                 | NR     | NR        | NR                 | NR                 | NR                  | NR               | NR                  | NR     | NR            | NR       |

|           |     |    |    |    |    |    |    |      |      |      |
|-----------|-----|----|----|----|----|----|----|------|------|------|
| BEES 2009 | 7.0 | 38 | 30 | 15 | 38 | 15 | 15 | 0.22 | 0.22 | 0.22 |
| BEES 2012 | 4.0 | 48 | 30 | 15 | 38 | 15 | 15 | 0.22 | 0.22 | 0.22 |

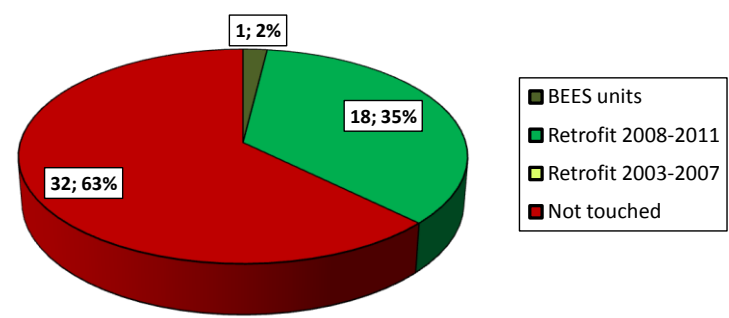
**Figure M5: Average Annual Home Energy Costs and Use**

MIX



**Figure M6: Housing Units Completing an AHFC Energy Program**

ARIS



**AFFORDABILITY - Circle CDP**

| Owner occupied House with Mortgage, Median Value      |
|---|
| NR  |
| Owner-occupied House without a Mortgage, Median Value |
| \$101,800   |

| Median Annual Household Income |                  |
|--------------------------------|------------------|
| Housing Units                  | Household Income |
| All-occupied                   | \$ 17,500        |
| Renter-occupied                | NR               |
| Owner-occupied                 | \$ 20,417        |
| w/ mortgage                    | NR               |
| w/o mortgage                   | \$ 20,417        |

| Median Housing Costs           |         |          |
|--------------------------------|---------|----------|
|                                | Monthly | Annual   |
| All-occupied                   | \$ 221  | \$ 2,652 |
| Gross rent                     | NR      | NR       |
| Owner-occupied                 | \$ 230  | \$ 2,760 |
| Housing units w/ mortgage      | NR      | NR       |
| Housing units w/out a mortgage | \$ 219  | \$ 2,628 |

| Estimated Energy Prices as of January 2013 |         |
|--|---------|
| #1 Fuel oil cost (\$ / gallon)             | \$ 5.50 |
| Electricity with PCE (\$/kWh)              | \$ 0.20 |
| Electricity without PCE (\$/kWh)           | \$ 0.72 |

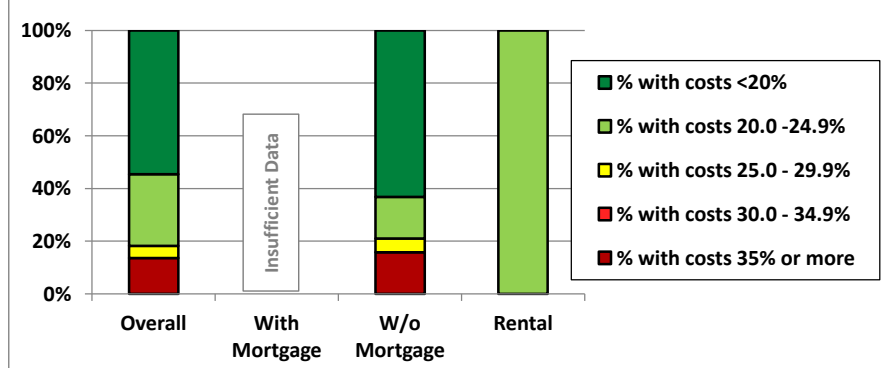
| Average Annual Energy Cost |         |
|----------------------------|---------|
| With PCE                   | NO PCE  |
| Without PCE                | \$4,082 |

| Housing Stock Estimates      | Number of Units |
|------------------------------|-----------------|
| All Housing                  | 44              |
| All Occupied Housing         | 22              |
| All Vacant housing           | 22              |
| Vacant Housing for Sale/Rent | 0               |

|                        |              |
|------------------------|--------------|
| Avg % Income on Energy | <b>23.3%</b> |
|------------------------|--------------|

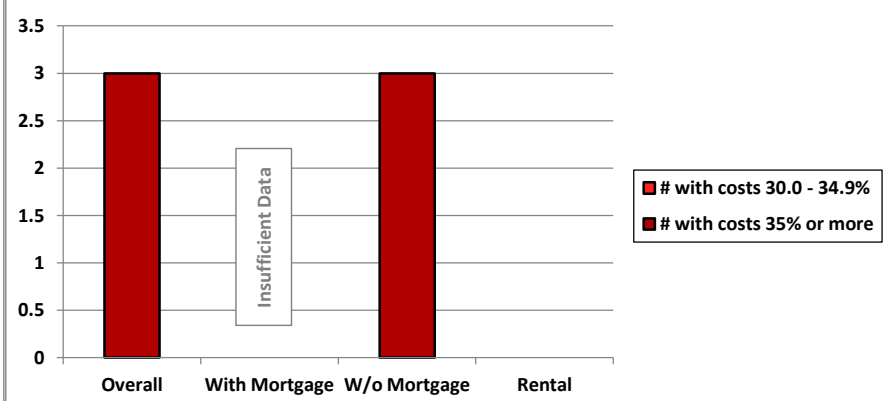
**Figure M7: Affordability - Housing Costs as a Percent of Income**

ACS



**Figure M8: Number of Cost-Burdened Housing Units**

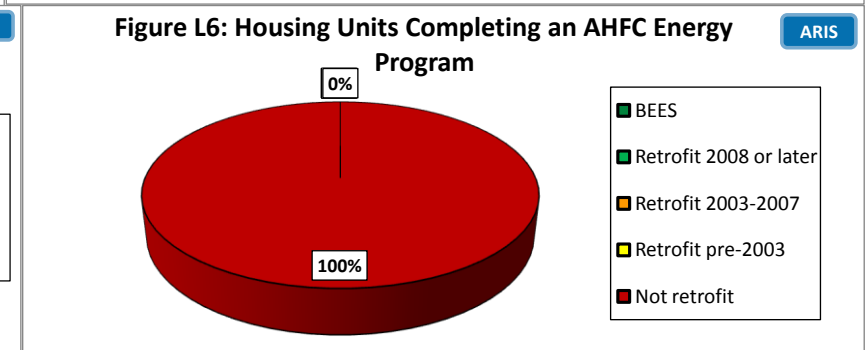
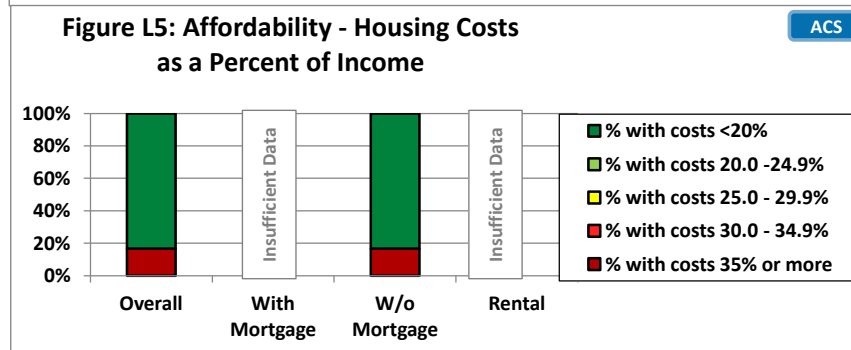
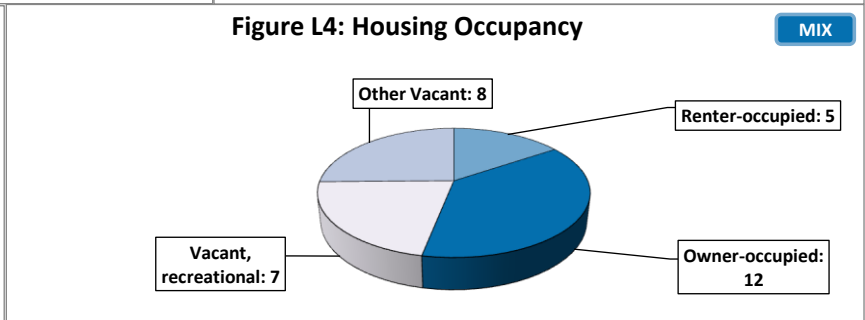
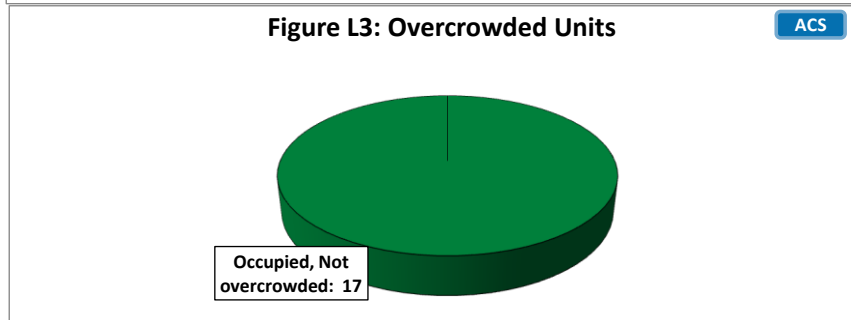
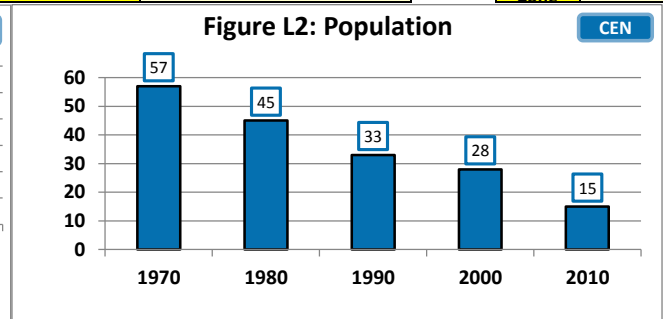
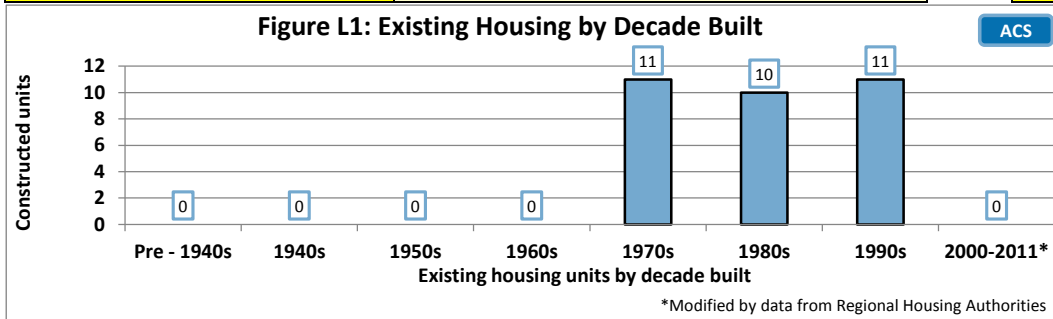
ACS



**Community Profile for:** Evansville CDP

**ANCSA Region:** Doyon

**Climate Zone:** 8



| Owner-occupied House with Mortgage, Median Value |
|--|
| NR   |

| Owner-occupied House without a Mortgage, Median Value |
|---|
| \$52,500  |

| Estimated Energy Prices as of January 2013 |         |
|--|---------|
| #1 Fuel oil cost (\$ / gallon)             | \$ 7.45 |
| Electricity with PCE (\$/kWh)              | \$ 0.19 |
| Electricity without PCE (\$/kWh)           | \$ 0.66 |

| Median Annual Household Income |                  |
|--------------------------------|------------------|
| Housing Units                  | Household Income |
| All-occupied                   | \$ 51,250        |
| Renter-occupied                | \$ 28,438        |
| Owner-occupied w/ mortgage     | \$ 93,333        |
| w/ mortgage                    | NR               |
| w/o mortgage                   | \$ 93,333        |

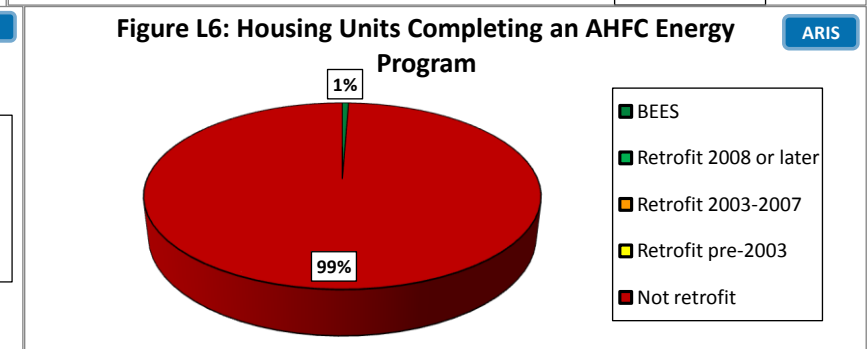
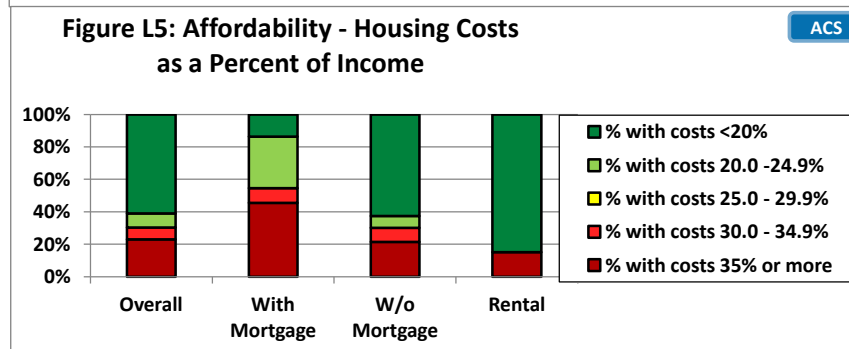
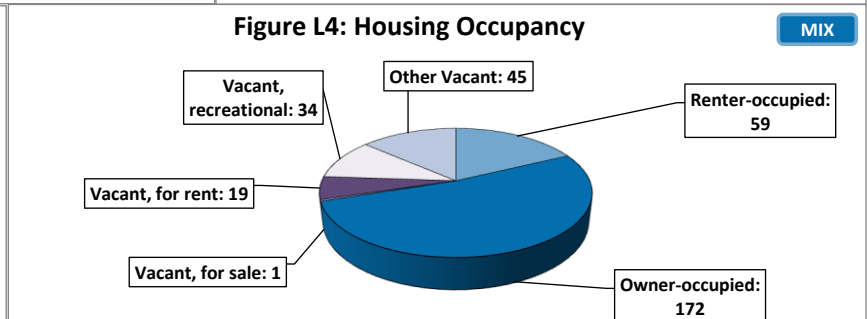
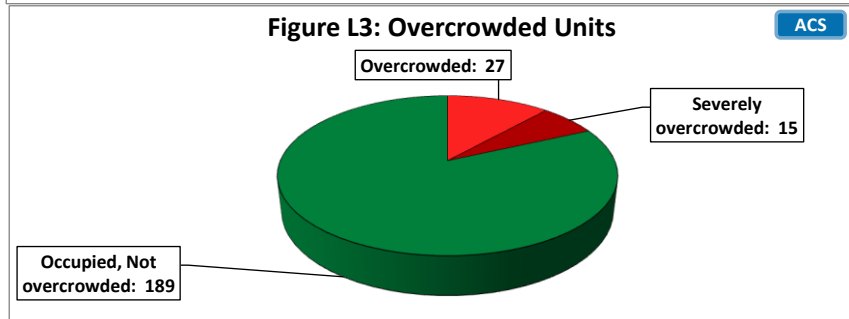
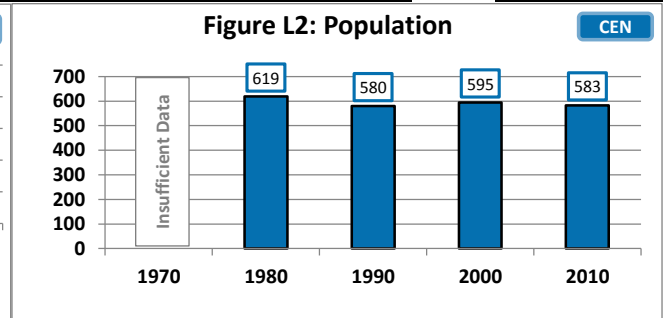
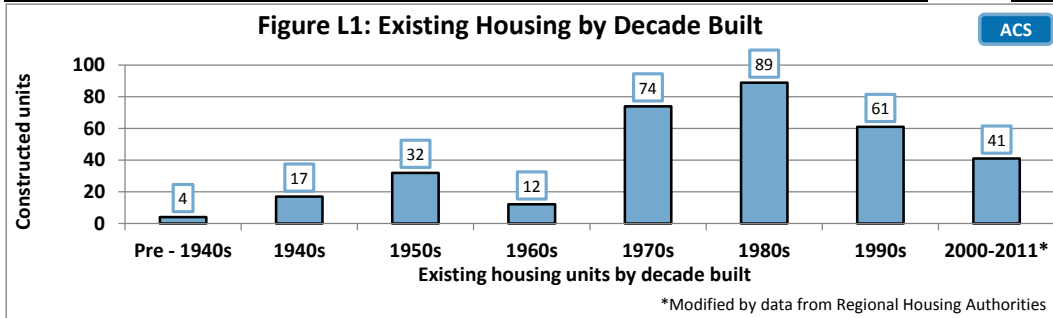
| Housing Stock Estimates |                 |
|-------------------------|-----------------|
|                         | Number of Units |
| All Housing             | 32              |
| All Occupied Housing    | 17              |
| All Vacant housing      | 15              |

| Median Housing Costs           |         |          |
|--------------------------------|---------|----------|
|                                | Monthly | Annual   |
| All-occupied                   | \$ 333  | \$ 3,996 |
| Gross rent                     | NR      | NR       |
| Owner-occupied                 | \$ 367  | \$ 4,404 |
| Housing units w/ mortgage      | NR      | NR       |
| Housing units w/out a mortgage | \$ 333  | \$ 3,996 |

**Community Profile for:** Fort Yukon city

**ANCSA Region:** Doyon

**Climate Zone:** 8



| Owner-occupied House with Mortgage, Median Value |
|--|
| \$205,000  |

| Owner-occupied House without a Mortgage, Median Value |
|---|
| \$106,800   |

| Estimated Energy Prices as of January 2013 |         |
|--|---------|
| #1 Fuel oil cost (\$ / gallon)             | \$ 5.70 |
| Electricity with PCE (\$/kWh)              | \$ 0.16 |
| Electricity without PCE (\$/kWh)           | \$ 0.55 |

| Median Annual Household Income |                  |
|--------------------------------|------------------|
| Housing Units                  | Household Income |
| All-occupied                   | \$ 31,750        |
| Renter-occupied                | \$ 32,250        |
| Owner-occupied                 | \$ 28,750        |
| w/ mortgage                    | \$ 21,250        |
| w/o mortgage                   | \$ 33,750        |

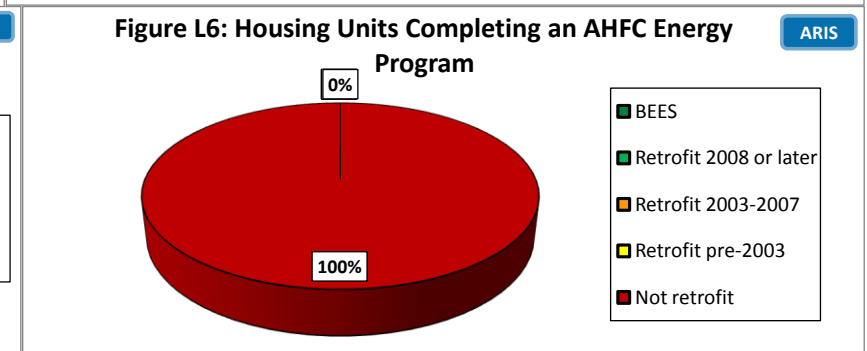
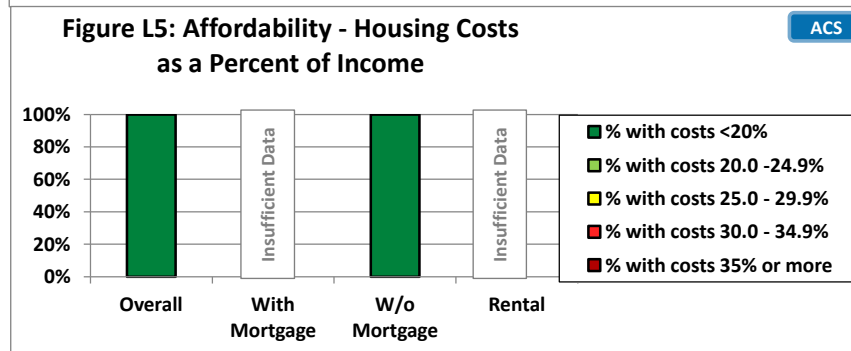
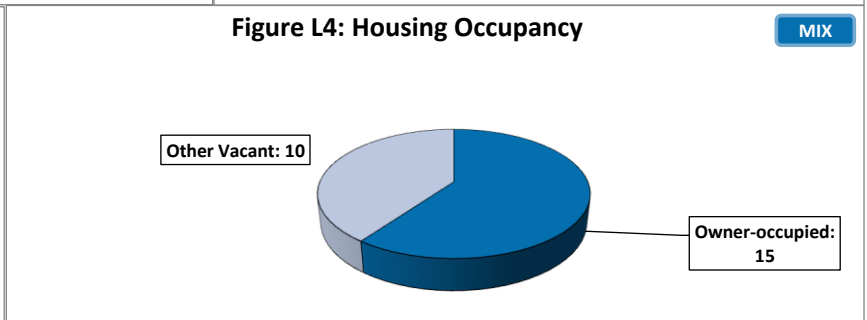
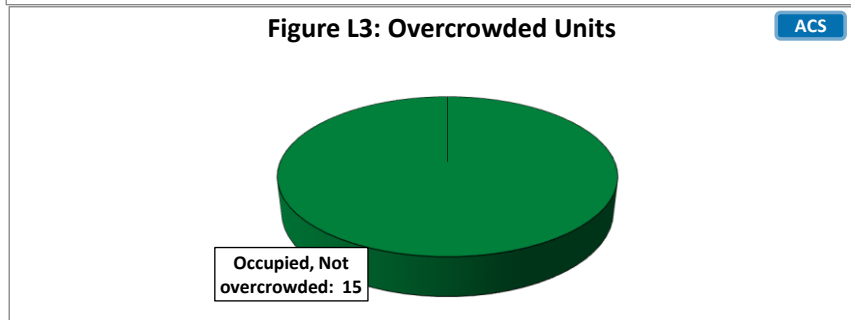
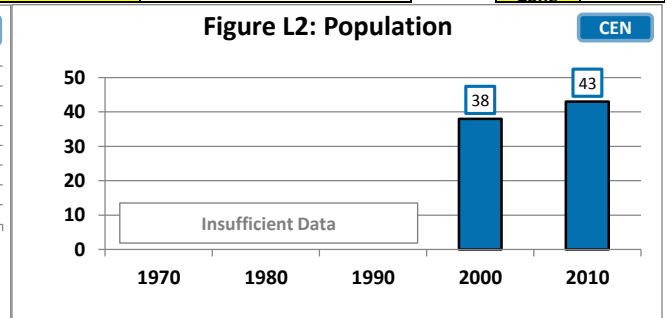
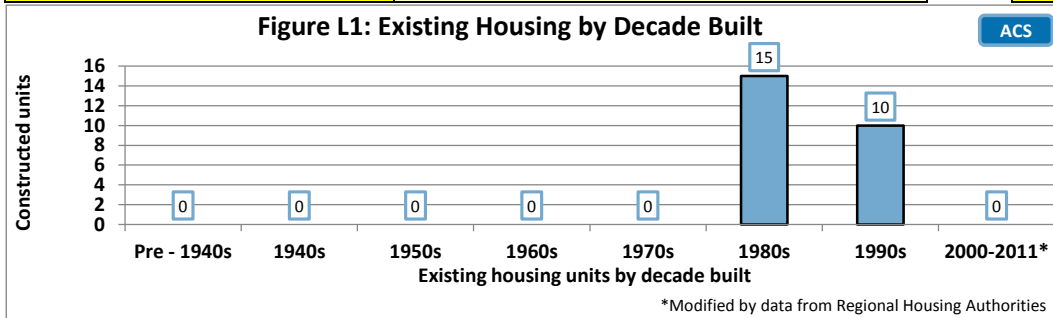
| Median Housing Costs           |          |           |
|--------------------------------|----------|-----------|
|                                | Monthly  | Annual    |
| All-occupied                   | \$ 461   | \$ 5,532  |
| Gross rent                     | \$ 496   | \$ 5,952  |
| Owner-occupied                 | \$ 465   | \$ 5,580  |
| Housing units w/ mortgage      | \$ 1,167 | \$ 14,004 |
| Housing units w/out a mortgage | \$ 417   | \$ 5,004  |

| Housing Stock Estimates | Number of Units |
|-------------------------|-----------------|
| All Housing             | 330             |
| All Occupied Housing    | 231             |
| All Vacant housing      | 99              |

**Community Profile for:** Four Mile Road CDP

**ANCSA Region:** Doyon

**Climate Zone:** 8



| Owner-occupied House with Mortgage, Median Value |
|--|
| NR   |

| Owner-occupied House without a Mortgage, Median Value |
|---|
| \$137,500   |

| Estimated Energy Prices as of January 2013 |         |
|--|---------|
| #1 Fuel oil cost (\$ / gallon)             | No Data |
| Electricity with PCE (\$/kWh)              | No Data |
| Electricity without PCE (\$/kWh)           | No Data |

| Median Annual Household Income |                  |
|--------------------------------|------------------|
| Housing Units                  | Household Income |
| All-occupied                   | \$ 36,250        |
| Renter-occupied                | NR               |
| Owner-occupied                 | \$ 36,250        |
| w/ mortgage                    | NR               |
| w/o mortgage                   | \$ 36,250        |

| Housing Stock Estimates |                 |
|-------------------------|-----------------|
| Housing Stock Estimates | Number of Units |
| All Housing             | 25              |
| All Occupied Housing    | 15              |
| All Vacant housing      | 10              |

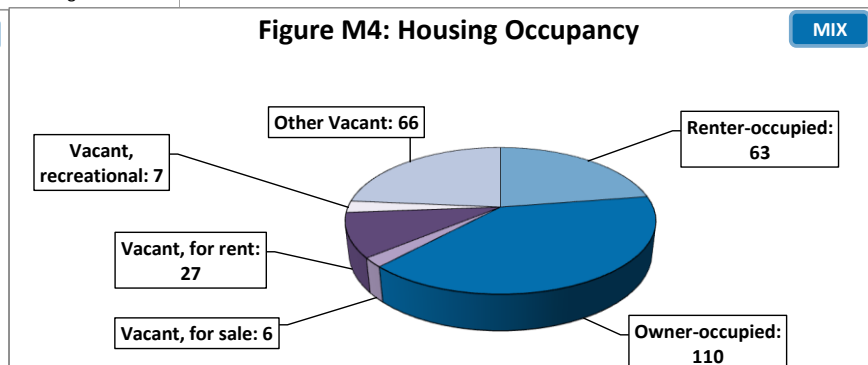
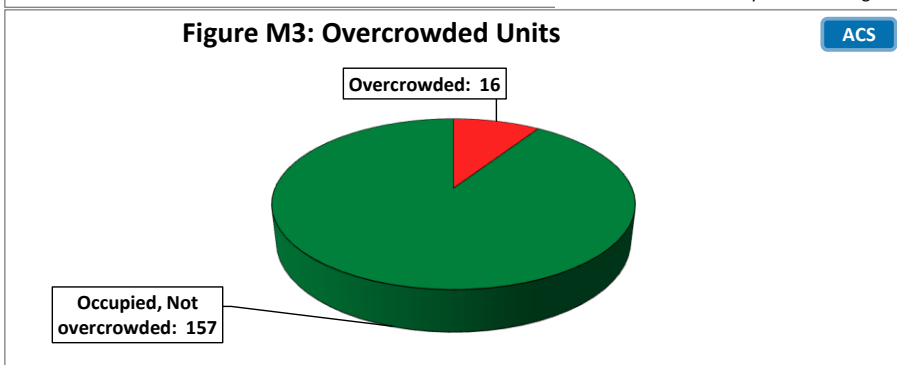
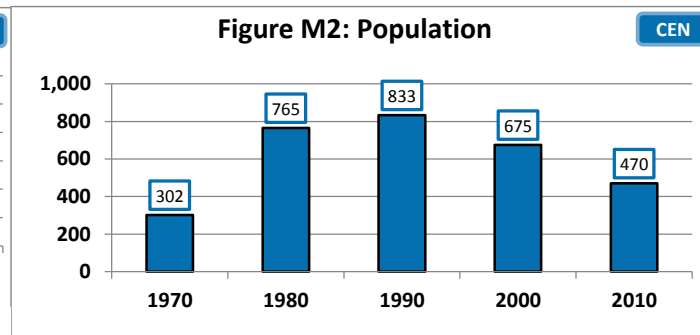
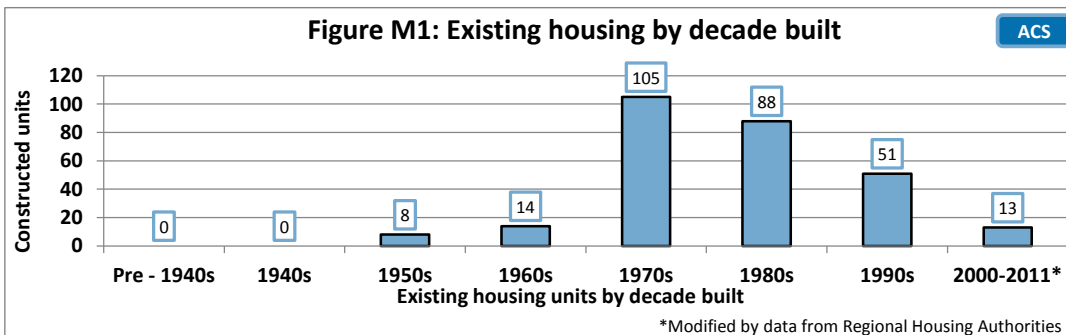
| Median Housing Costs           |         |          |
|--------------------------------|---------|----------|
|                                | Monthly | Annual   |
| All-occupied                   | \$ 225  | \$ 2,700 |
| Gross rent                     | NR      | NR       |
| Owner-occupied                 | \$ 250  | \$ 3,000 |
| Housing units w/ mortgage      | NR      | NR       |
| Housing units w/out a mortgage | \$ 225  | \$ 2,700 |

**Community Profile for:** Galena city

**ANCSA Region** Doyon

**Regional Housing Authority** Interior Regional Housing Authority

**BEES Climate Zone (Heating Degree Days)** Zone 8 (14,847 HDD)



#### Galena city Housing Energy Characteristics

| Residential Unit Categories | Number of records | Avg Energy Rating Stars | Avg Energy Rating Points | Avg Sq. Feet | Avg. Ann Energy Cost | Avg. Ann Energy Use (million BTUs) | Avg. EUI (kBtus/SF) | Avg. ECI | Avg. Home Heating Index | % Tight Homes, No Ventilation |
|-----------------------------|-------------------|-------------------------|--------------------------|--------------|----------------------|------------------------------------|---------------------|----------|-------------------------|-------------------------------|
| Pre-retrofit units          | 0                 | NR                      | NR                       | NR           | NR                   | NR                                 | NR                  | NR       | NR                      | NR                            |
| Retrofit units              | 0                 | NR                      | NR                       | NR           | NR                   | NR                                 | NR                  | NR       | NR                      | NR                            |
| New construction            | 5                 | 5-star                  | 88.4                     | 1,172        | \$ 5,454             | 101                                | 86                  | \$4.75   | 3.0                     | 20%                           |

#### Galena city Housing Envelope Characteristics

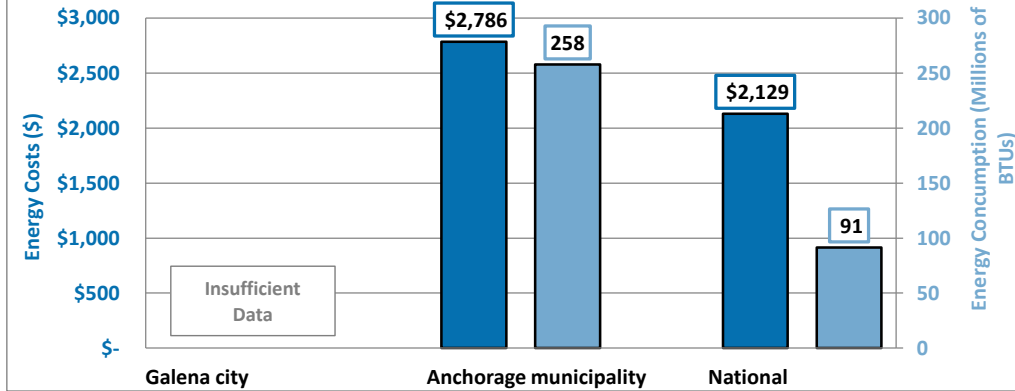
| Residential Unit Categories | Number of Records | ACH 50 | Ceiling R | Above Grade Wall R | Below Grade Wall R | Above Grade Floor R | On Grade Floor R | Below Grade Floor R | Door U | Garage Door U | Window U |
|-----------------------------|-------------------|--------|-----------|--------------------|--------------------|---------------------|------------------|---------------------|--------|---------------|----------|
| Pre-retrofit units          | 0                 | NR     | NR        | NR                 | NR                 | NR                  | NR               | NR                  | NR     | NR            | NR       |
| Retrofit units              | 0                 | NR     | NR        | NR                 | NR                 | NR                  | NR               | NR                  | NR     | NR            | NR       |
| New construction            | 5                 | 2.4    | 38        | 24                 | NR                 | 40                  | NR               | NR                  | 0.20   | NR            | 0.35     |

|           |     |    |    |    |    |    |    |      |      |      |
|-----------|-----|----|----|----|----|----|----|------|------|------|
| BEES 2009 | 7.0 | 38 | 30 | 15 | 38 | 15 | 15 | 0.22 | 0.22 | 0.22 |
| BEES 2012 | 4.0 | 48 | 30 | 15 | 38 | 15 | 15 | 0.22 | 0.22 | 0.22 |



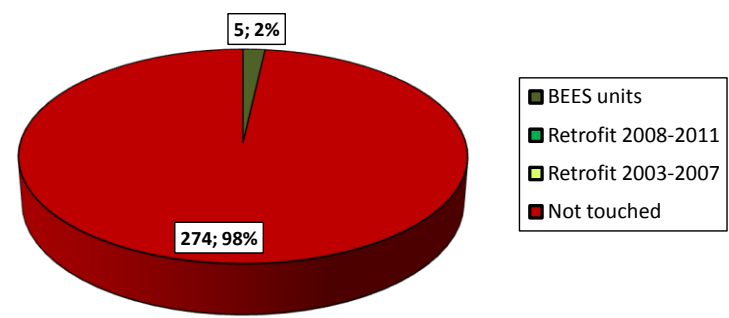
**Figure M5: Average Annual Home Energy Costs and Use**

MIX



**Figure M6: Housing Units Completing an AHFC Energy Program**

ARIS



**AFFORDABILITY - Galena city**

|  |
|--|
| <b>Owner occupied House with Mortgage, Median Value</b>      |
| \$167,700  |
| <b>Owner-occupied House without a Mortgage, Median Value</b> |
| \$119,300  |

| Median Annual Household Income |                  |
|--------------------------------|------------------|
| Housing Units                  | Household Income |
| All-occupied                   | \$ 62,917        |
| Renter-occupied                | \$ 47,188        |
| Owner-occupied                 | \$ 71,875        |
| w/ mortgage                    | \$ 125,625       |
| w/o mortgage                   | \$ 53,125        |

| Median Housing Costs           |          |           |
|--------------------------------|----------|-----------|
|                                | Monthly  | Annual    |
| All-occupied                   | \$ 875   | \$ 10,500 |
| Gross rent                     | \$ 975   | \$ 11,700 |
| Owner-occupied                 | \$ 678   | \$ 8,136  |
| Housing units w/ mortgage      | \$ 1,721 | \$ 20,652 |
| Housing units w/out a mortgage | \$ 463   | \$ 5,556  |

| Estimated Energy Prices as of January 2013 |         |
|--|---------|
| #1 Fuel oil cost (\$ / gallon)             | \$ 5.39 |
| Electricity with PCE (\$/kWh)              | \$ 0.24 |
| Electricity without PCE (\$/kWh)           | \$ 0.56 |

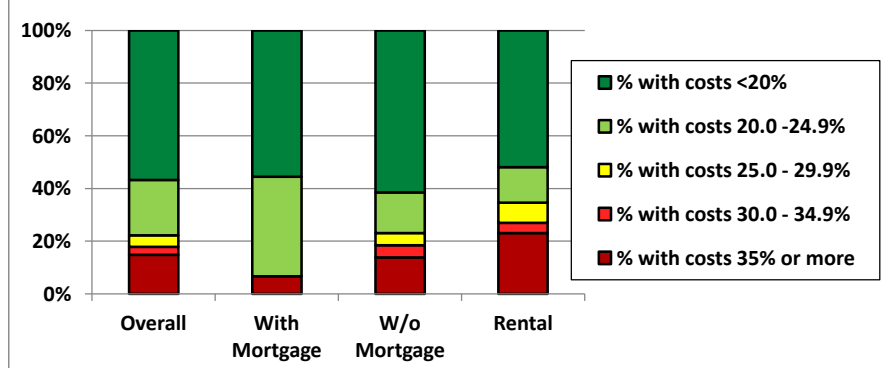
| Average Annual Energy Cost |        |
|----------------------------|--------|
| With PCE                   | NO PCE |
| Without PCE                | \$133  |

| Housing Stock Estimates      | Number of Units |
|------------------------------|-----------------|
| All Housing                  | 279             |
| All Occupied Housing         | 173             |
| All Vacant housing           | 106             |
| Vacant Housing for Sale/Rent | 33              |

|                               |             |
|-------------------------------|-------------|
| <b>Avg % Income on Energy</b> | <b>0.2%</b> |
|-------------------------------|-------------|

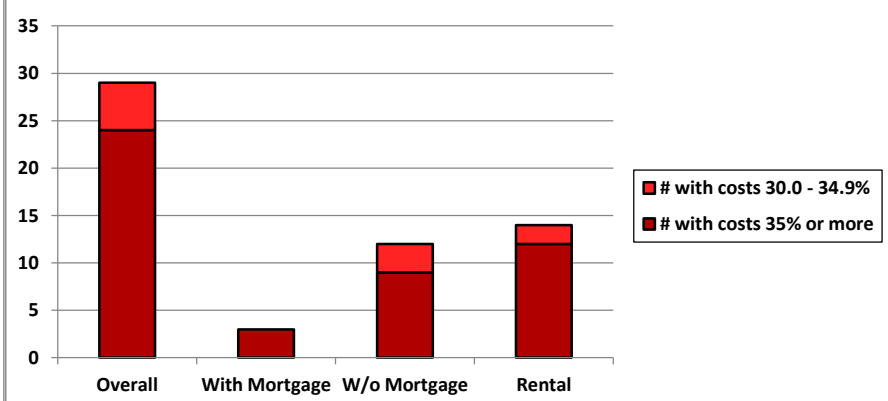
**Figure M7: Affordability - Housing Costs as a Percent of Income**

ACS



**Figure M8: Number of Cost-Burdened Housing Units**

ACS

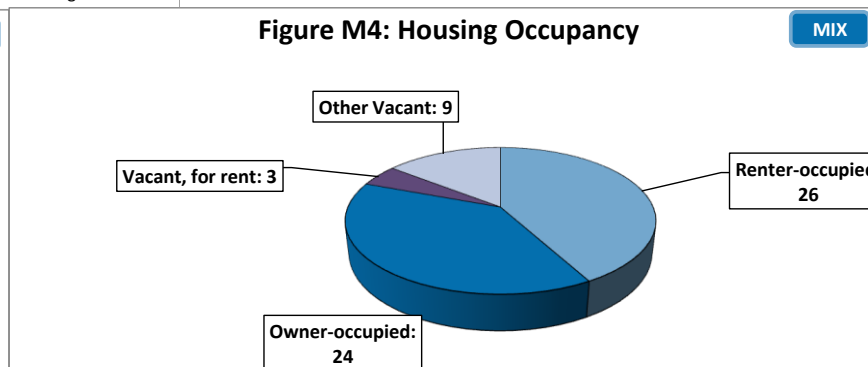
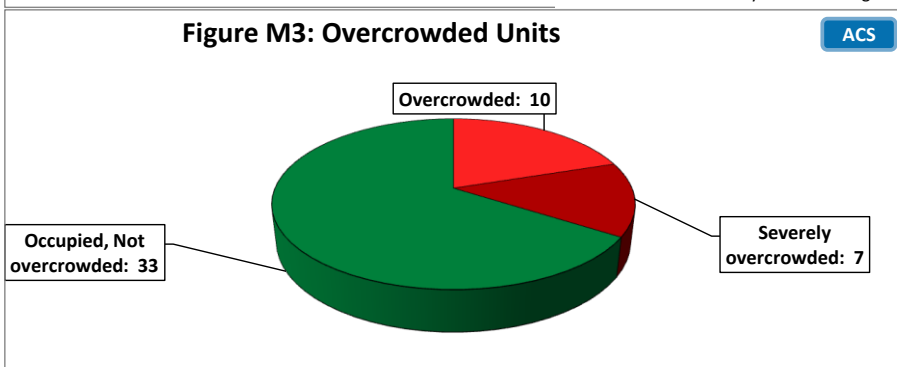
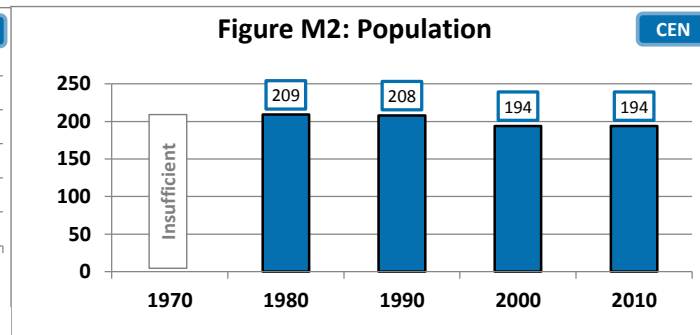
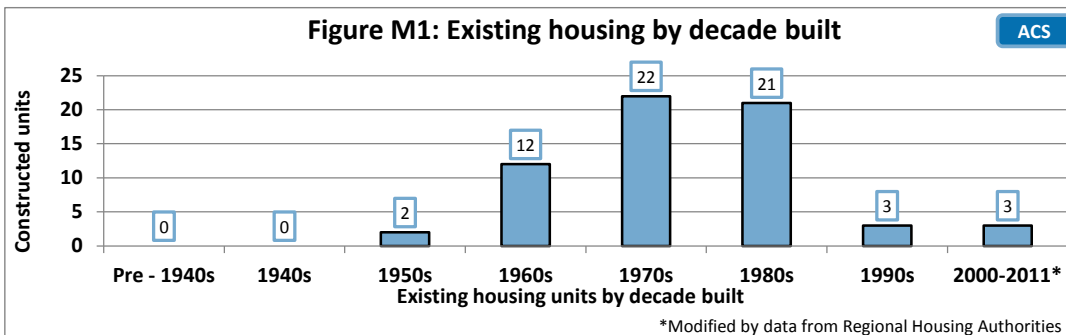


**Community Profile for:** Grayling city

**ANCSA Region** Doyon

**Regional Housing Authority** Interior Regional Housing Authority

**BEES Climate Zone (Heating Degree Days)** Zone 8 (13,462 HDD)



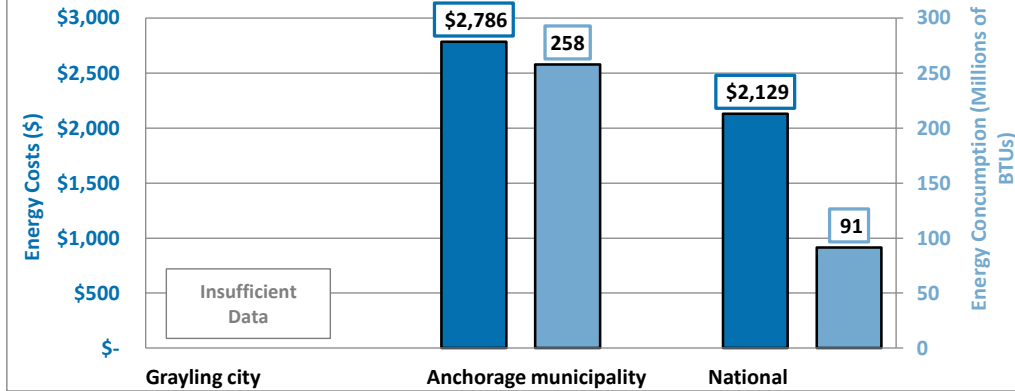
| Residential Unit Categories | Number of records | Avg Energy Rating Stars | Avg Energy Rating Points | Avg Sq. Feet | Avg. Ann Energy Cost | Avg. Ann Energy Use (million BTUs) | Avg. EUI (kBtus/SF) | Avg. ECI | Avg. Home Heating Index | % Tight Homes, No Ventilation |
|-----------------------------|-------------------|-------------------------|--------------------------|--------------|----------------------|------------------------------------|---------------------|----------|-------------------------|-------------------------------|
| Pre-retrofit units          | 0                 | NR                      | NR                       | NR           | NR                   | NR                                 | NR                  | NR       | NR                      | NR                            |
| Retrofit units              | 0                 | NR                      | NR                       | NR           | NR                   | NR                                 | NR                  | NR       | NR                      | NR                            |
| New construction            | 3                 | 5-star plus             | 92.4                     | 1,107        | \$ 3,772             | 86                                 | 78                  | \$3.40   | 2.7                     | 0%                            |

| Residential Unit Categories | Number of Records | ACH 50 | Ceiling R | Above Grade Wall R | Below Grade Wall R | Above Grade Floor R | On Grade Floor R | Below Grade Floor R | Door U | Garage Door U | Window U |
|-----------------------------|-------------------|--------|-----------|--------------------|--------------------|---------------------|------------------|---------------------|--------|---------------|----------|
| Pre-retrofit units          | 0                 | NR     | NR        | NR                 | NR                 | NR                  | NR               | NR                  | NR     | NR            | NR       |
| Retrofit units              | 0                 | NR     | NR        | NR                 | NR                 | NR                  | NR               | NR                  | NR     | NR            | NR       |
| New construction            | 3                 | 4.2    | 40        | 34                 | NR                 | 41                  | NR               | NR                  | 0.19   | NR            | 0.21     |

|           |     |    |    |    |    |    |    |      |      |      |
|-----------|-----|----|----|----|----|----|----|------|------|------|
| BEES 2009 | 7.0 | 38 | 30 | 15 | 38 | 15 | 15 | 0.22 | 0.22 | 0.22 |
| BEES 2012 | 4.0 | 48 | 30 | 15 | 38 | 15 | 15 | 0.22 | 0.22 | 0.22 |

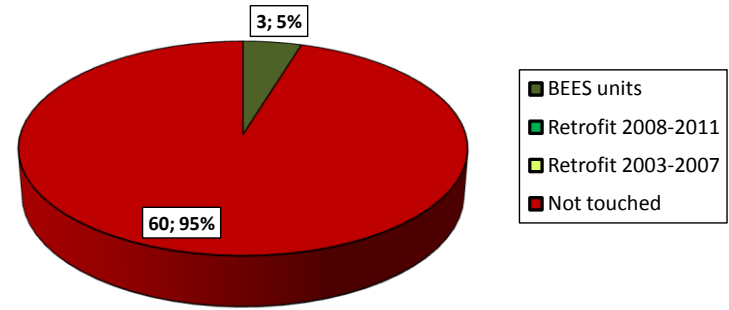
**Figure M5: Average Annual Home Energy Costs and Use**

MIX



**Figure M6: Housing Units Completing an AHFC Energy Program**

ARIS



**AFFORDABILITY - Grayling city**

|  |          |
|--|----------|
| <b>Owner occupied House with Mortgage, Median Value</b>      | \$85,000 |
| <b>Owner-occupied House without a Mortgage, Median Value</b> | \$58,300 |

| Median Annual Household Income |                  |
|--------------------------------|------------------|
| Housing Units                  | Household Income |
| All-occupied                   | \$ 27,500        |
| Renter-occupied                | \$ 33,333        |
| Owner-occupied                 | \$ 23,750        |
| w/ mortgage                    | NR               |
| w/o mortgage                   | \$ 24,375        |

| Median Housing Costs           |         |           |
|--------------------------------|---------|-----------|
|                                | Monthly | Annual    |
| All-occupied                   | \$ 525  | \$ 6,300  |
| Gross rent                     | \$ 940  | \$ 11,280 |
| Owner-occupied                 | \$ 375  | \$ 4,500  |
| Housing units w/ mortgage      | NR      | NR        |
| Housing units w/out a mortgage | \$ 375  | \$ 4,500  |

| Estimated Energy Prices as of January 2013 |         |
|--|---------|
| #1 Fuel oil cost (\$ / gallon)             | \$ 5.00 |
| Electricity with PCE (\$/kWh)              | \$ 0.21 |
| Electricity without PCE (\$/kWh)           | \$ 0.55 |

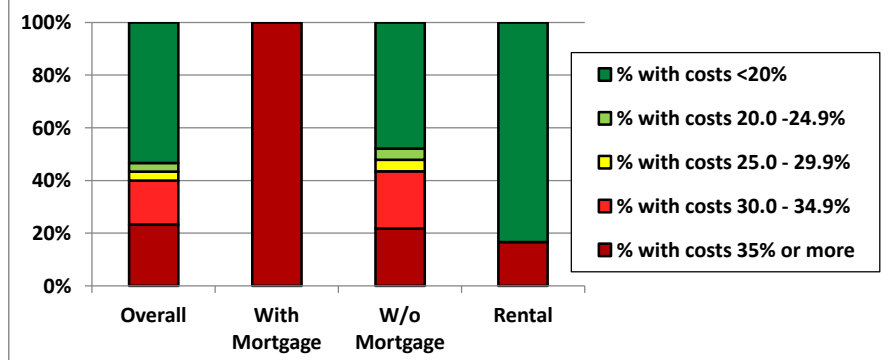
| Average Annual Energy Cost |        |
|----------------------------|--------|
| With PCE                   | NO PCE |
| Without PCE                | \$281  |

| Housing Stock Estimates      | Number of Units |
|------------------------------|-----------------|
| All Housing                  | 62              |
| All Occupied Housing         | 50              |
| All Vacant housing           | 12              |
| Vacant Housing for Sale/Rent | 3               |

|                               |             |
|-------------------------------|-------------|
| <b>Avg % Income on Energy</b> | <b>1.0%</b> |
|-------------------------------|-------------|

**Figure M7: Affordability - Housing Costs as a Percent of Income**

ACS



**Figure M8: Number of Cost-Burdened Housing Units**

ACS

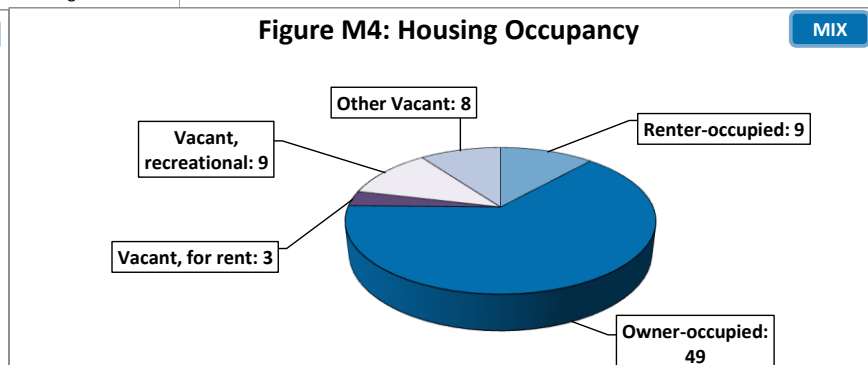
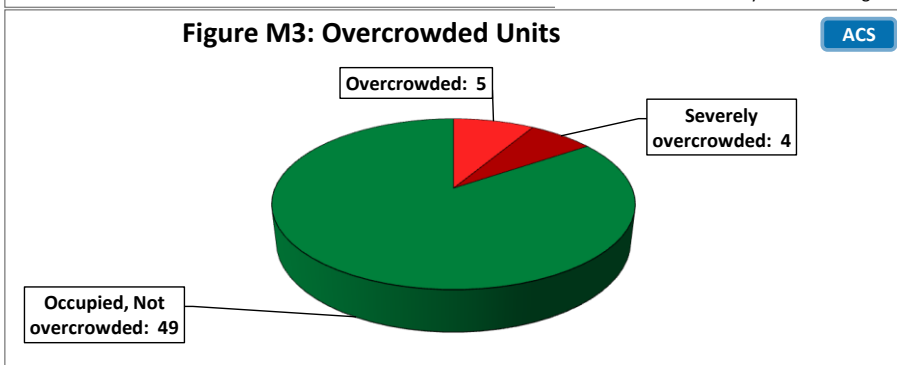
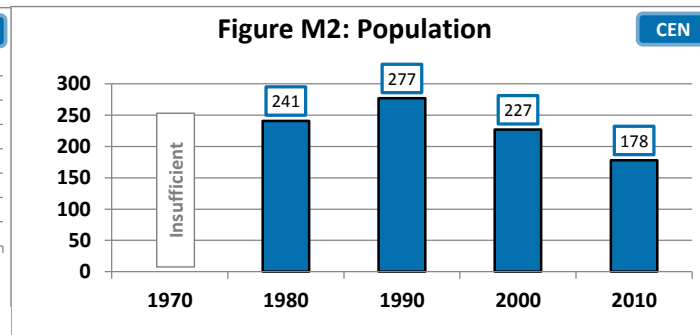
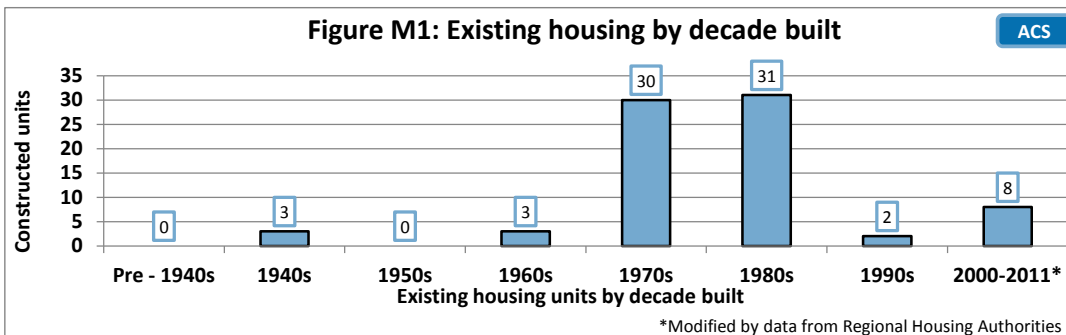


**Community Profile for:** Holy Cross city

**ANCSA Region:** Doyon

**Regional Housing Authority:** Interior Regional Housing Authority

**BEES Climate Zone (Heating Degree Days):** Zone 8 (13,462 HDD)



#### Holy Cross city Housing Energy Characteristics

| Residential Unit Categories | Number of records | Avg Energy Rating Stars | Avg Energy Rating Points | Avg Sq. Feet | Avg. Ann Energy Cost w/ PCE | Avg. Ann Energy Use (million BTUs) | Avg. EUI (kBtus/SF) | Avg. ECI | Avg. Home Heating Index | % Tight Homes, No Ventilation |
|-----------------------------|-------------------|-------------------------|--------------------------|--------------|-----------------------------|------------------------------------|---------------------|----------|-------------------------|-------------------------------|
| Pre-retrofit units          | 29                | 1-star plus             | 49.7                     | 726          | \$ 3,273                    | 189                                | 264                 | \$4.33   | 18.5                    | 75%                           |
| Retrofit units              | 29                | 3-star plus             | 77.1                     | 802          | \$ 3,450                    | 87                                 | 114                 | \$4.76   | 6.0                     | 67%                           |
| New construction            | 2                 | NR                      | NR                       | NR           | NR                          | NR                                 | NR                  | NR       | NR                      | NR                            |

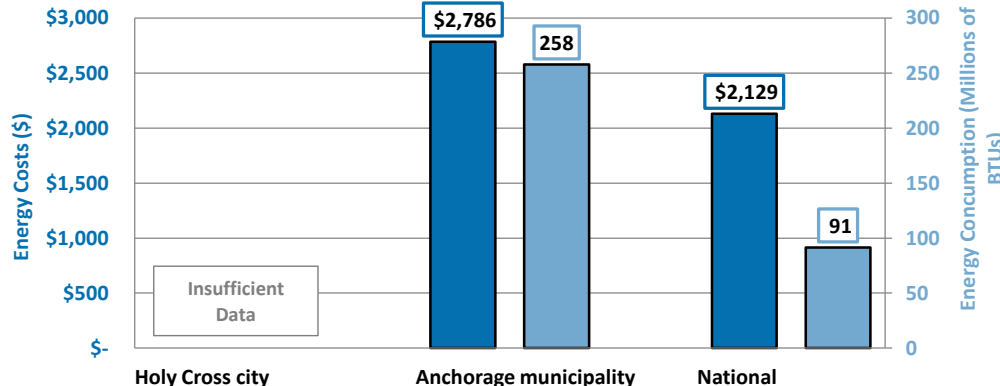
#### Holy Cross city Housing Envelope Characteristics

| Residential Unit Categories | Number of Records | ACH 50 | Ceiling R | Above Grade Wall R | Below Grade Wall R | Above Grade Floor R | On Grade Floor R | Below Grade Floor R | Door U | Garage Door U | Window U |
|-----------------------------|-------------------|--------|-----------|--------------------|--------------------|---------------------|------------------|---------------------|--------|---------------|----------|
| Pre-retrofit units          | 29                | 8.8    | 30        | 16                 | NR                 | 30                  | NR               | NR                  | 0.19   | NR            | 0.39     |
| Retrofit units              | 29                | 8.3    | 35        | 18                 | NR                 | 33                  | NR               | NR                  | 0.22   | NR            | 0.40     |
| New construction            | 2                 | NR     | NR        | NR                 | NR                 | NR                  | NR               | NR                  | NR     | NR            | NR       |

|           |     |    |    |    |    |    |    |      |      |      |
|-----------|-----|----|----|----|----|----|----|------|------|------|
| BEES 2009 | 7.0 | 38 | 30 | 15 | 38 | 15 | 15 | 0.22 | 0.22 | 0.22 |
| BEES 2012 | 4.0 | 48 | 30 | 15 | 38 | 15 | 15 | 0.22 | 0.22 | 0.22 |

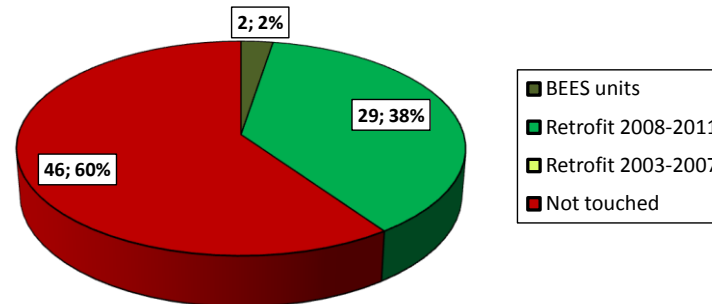
**Figure M5: Average Annual Home Energy Costs and Use**

MIX



**Figure M6: Housing Units Completing an AHFC Energy Program**

ARIS



**AFFORDABILITY - Holy Cross city**

| Owner occupied House with Mortgage, Median Value |
|--|
| \$58,000   |

| Owner-occupied House without a Mortgage, Median Value |
|---|
| \$93,800  |

| Estimated Energy Prices as of January 2013 |         |
|--|---------|
| #1 Fuel oil cost (\$ / gallon)             | \$ 6.87 |
| Electricity with PCE (\$/kWh)              | \$ 0.21 |
| Electricity without PCE (\$/kWh)           | \$ 0.53 |

| Median Annual Household Income |                  |
|--------------------------------|------------------|
| Housing Units                  | Household Income |
| All-occupied                   | \$ 35,500        |
| Renter-occupied                | \$ 16,250        |
| Owner-occupied                 | \$ 37,917        |
| w/ mortgage                    | \$ 37,000        |
| w/o mortgage                   | \$ 43,750        |

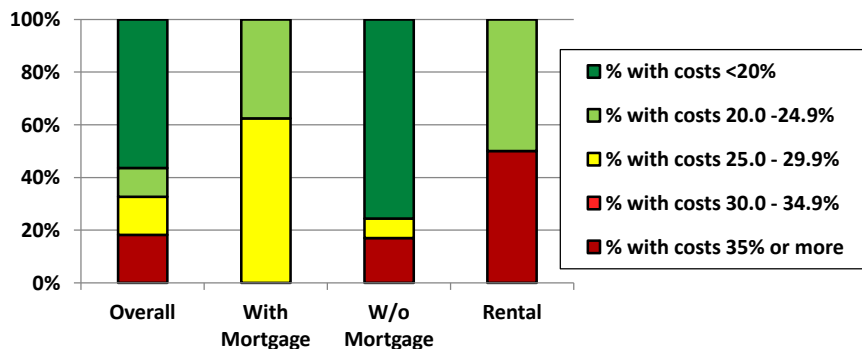
| Average Annual Energy Cost |    |
|----------------------------|----|
| With PCE                   | NR |
| Without PCE                | NR |

| Median Housing Costs           |         |          |
|--------------------------------|---------|----------|
|                                | Monthly | Annual   |
| All-occupied                   | \$ 454  | \$ 5,448 |
| Gross rent                     | \$ 450  | \$ 5,400 |
| Owner-occupied                 | \$ 421  | \$ 5,052 |
| Housing units w/ mortgage      | \$ 820  | \$ 9,840 |
| Housing units w/out a mortgage | \$ 279  | \$ 3,348 |

| Housing Stock Estimates      | Number of Units |
|------------------------------|-----------------|
| All Housing                  | 77              |
| All Occupied Housing         | 58              |
| All Vacant housing           | 19              |
| Vacant Housing for Sale/Rent | 3               |

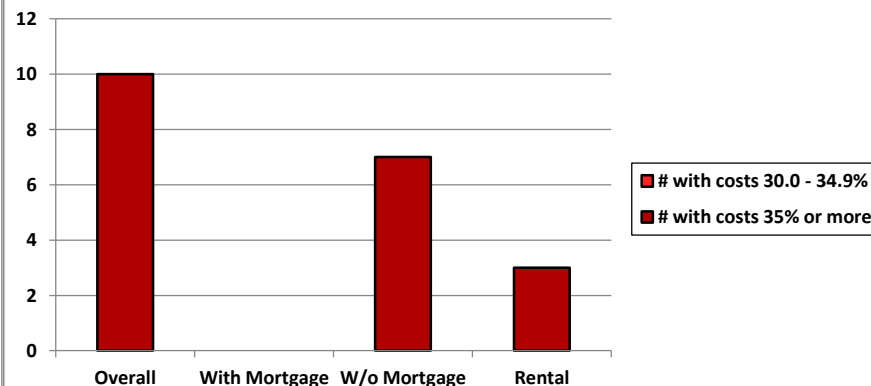
**Figure M7: Affordability - Housing Costs as a Percent of Income**

ACS



**Figure M8: Number of Cost-Burdened Housing Units**

ACS

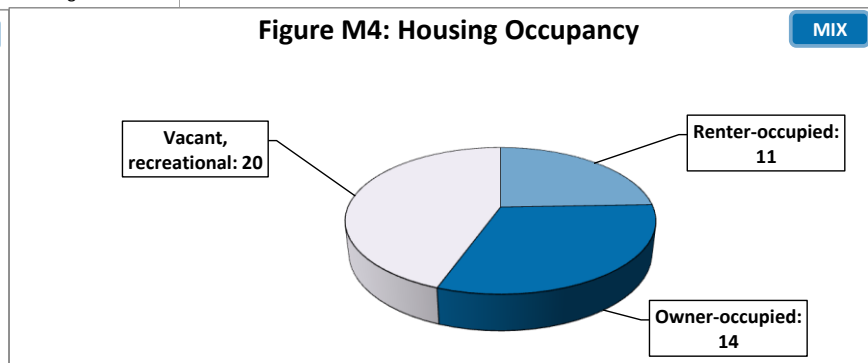
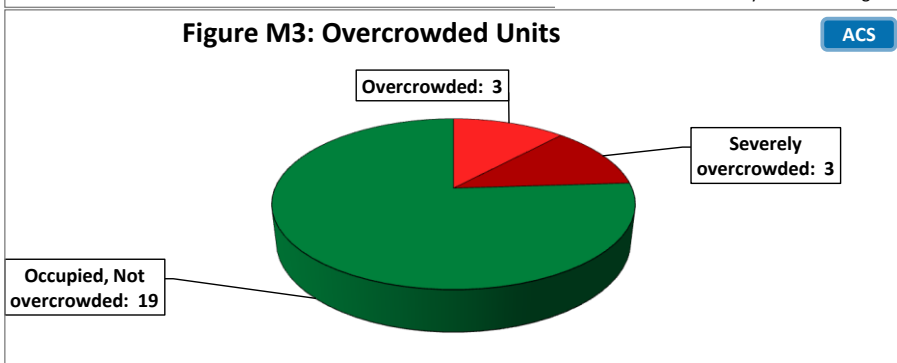
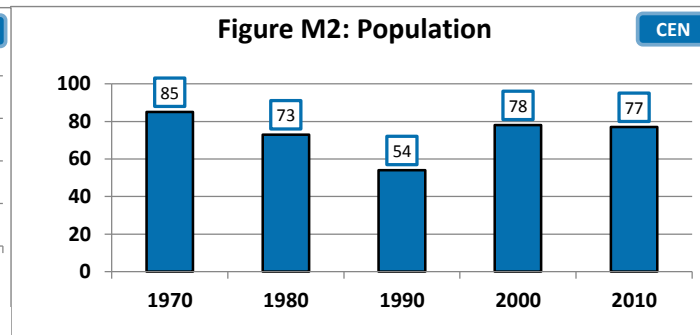
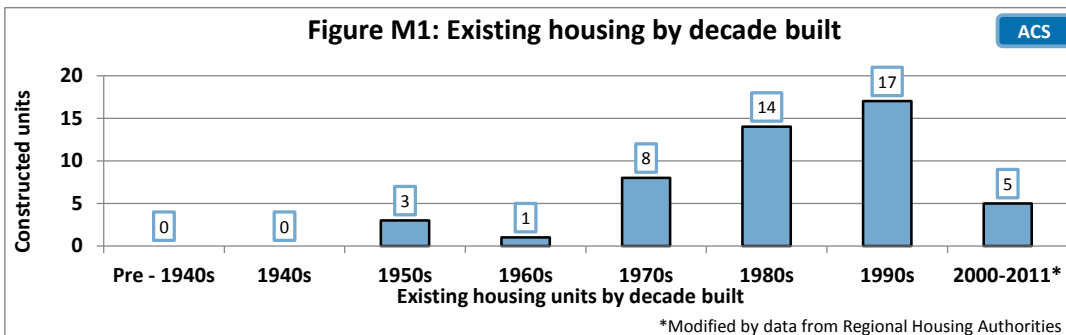


**Community Profile for:** Hughes city

**ANCSA Region:** Doyon

**Regional Housing Authority:** Interior Regional Housing Authority

**BEES Climate Zone (Heating Degree Days):** Zone 8 (14,942 HDD)



#### Hughes city Housing Energy Characteristics

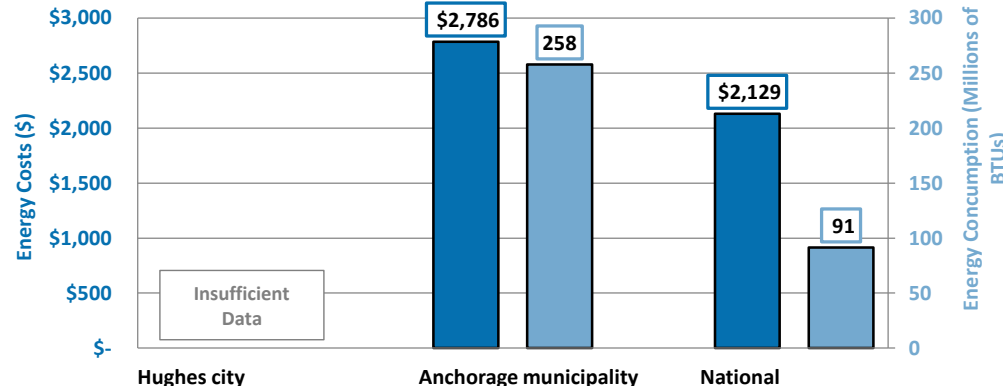
| Residential Unit Categories | Number of records | Avg Energy Rating Stars | Avg Energy Rating Points | Avg Sq. Feet | Avg. Ann Energy Cost w/ PCE | Avg. Ann Energy Use (million BTUs) | Avg. EUI (kBtus/SF) | Avg. ECI | Avg. Home Heating Index | % Tight Homes, No Ventilation |
|-----------------------------|-------------------|-------------------------|--------------------------|--------------|-----------------------------|------------------------------------|---------------------|----------|-------------------------|-------------------------------|
| Pre-retrofit units          | 10                | 3-star                  | 70.8                     | 1,039        | \$ 7,113                    | 159                                | 154                 | \$6.99   | 8.1                     | 80%                           |
| Retrofit units              | 9                 | 4-star                  | 82.8                     | 882          | \$ 3,861                    | 91                                 | 112                 | \$4.63   | 5.4                     | 80%                           |
| New construction            | 5                 | 5-star                  | 90.7                     | 998          | \$ 6,318                    | 89                                 | 92                  | \$6.84   | 2.9                     | 0%                            |

#### Hughes city Housing Envelope Characteristics

| Residential Unit Categories | Number of Records | ACH 50 | Ceiling R | Above Grade Wall R | Below Grade Wall R | Above Grade Floor R | On Grade Floor R | Below Grade Floor R | Door U | Garage Door U | Window U |
|-----------------------------|-------------------|--------|-----------|--------------------|--------------------|---------------------|------------------|---------------------|--------|---------------|----------|
| Pre-retrofit units          | 10                | 7.3    | 26        | 19                 | NR                 | 34                  | NR               | NR                  | 0.30   | NR            | 0.50     |
| Retrofit units              | 9                 | 5.8    | 34        | 19                 | NR                 | 32                  | NR               | NR                  | 0.19   | NR            | 0.40     |
| New construction            | 5                 | 3.0    | 39        | 24                 | NR                 | 39                  | NR               | NR                  | 0.23   | NR            | 0.21     |
|                             |                   | NR     | NR        | NR                 | NR                 | NR                  | NR               | NR                  | NR     | NR            | NR       |
| BEES 2009                   |                   | 7.0    | 38        | 30                 | 15                 | 38                  | 15               | 15                  | 0.22   | 0.22          | 0.22     |
| BEES 2012                   |                   | 4.0    | 48        | 30                 | 15                 | 38                  | 15               | 15                  | 0.22   | 0.22          | 0.22     |

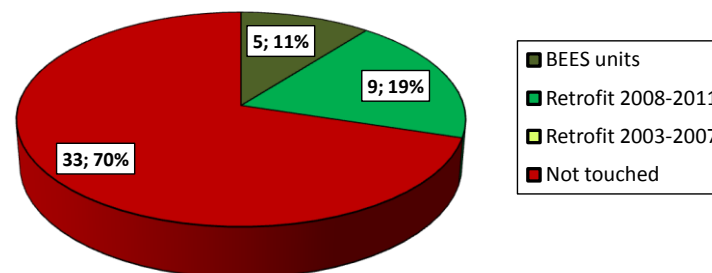
**Figure M5: Average Annual Home Energy Costs and Use**

MIX



**Figure M6: Housing Units Completing an AHFC Energy Program**

ARIS



**AFFORDABILITY - Hughes city**

| Owner occupied House with Mortgage, Median Value |
|--|
| \$625,000  |

| Owner-occupied House without a Mortgage, Median Value |
|---|
| \$85,000  |

| Estimated Energy Prices as of January 2013 |         |
|--|---------|
| #1 Fuel oil cost (\$ / gallon)             | \$ 9.00 |
| Electricity with PCE (\$/kWh)              | \$ 0.14 |
| Electricity without PCE (\$/kWh)           | \$ 0.71 |

| Median Annual Household Income |                  |
|--------------------------------|------------------|
| Housing Units                  | Household Income |
| All-occupied                   | \$ 39,583        |
| Renter-occupied                | \$ 37,917        |
| Owner-occupied                 | \$ 61,667        |
| w/ mortgage                    | NR               |
| w/o mortgage                   | \$ 60,833        |

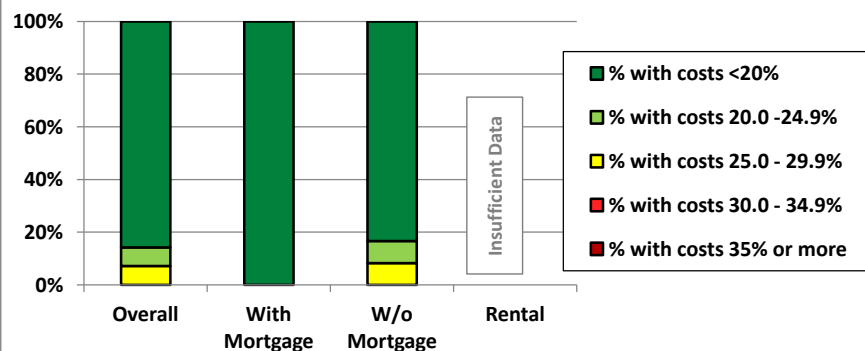
| Average Annual Energy Cost |    |
|----------------------------|----|
| With PCE                   | NR |
| Without PCE                | NR |

| Median Housing Costs           |         |          |
|--------------------------------|---------|----------|
|                                | Monthly | Annual   |
| All-occupied                   | \$ 525  | \$ 6,300 |
| Gross rent                     | NR      | NR       |
| Owner-occupied                 | \$ 550  | \$ 6,600 |
| Housing units w/ mortgage      | NR      | NR       |
| Housing units w/out a mortgage | \$ 500  | \$ 6,000 |

| Housing Stock Estimates      | Number of Units |
|------------------------------|-----------------|
| All Housing                  | 45              |
| All Occupied Housing         | 25              |
| All Vacant housing           | 20              |
| Vacant Housing for Sale/Rent | 0               |

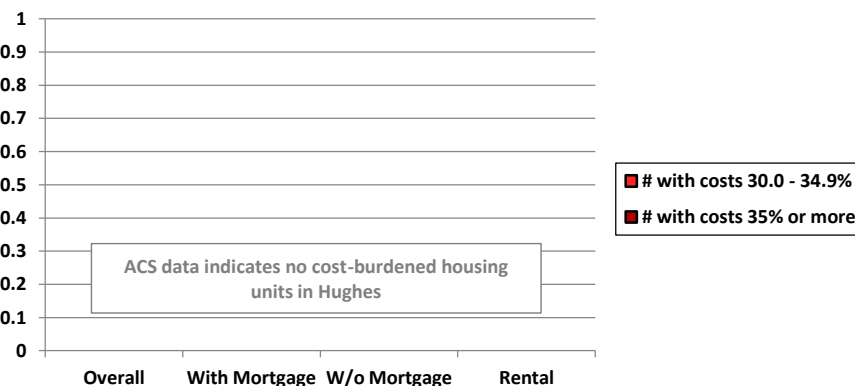
**Figure M7: Affordability - Housing Costs as a Percent of Income**

ACS



**Figure M8: Number of Cost-Burdened Housing Units**

ACS



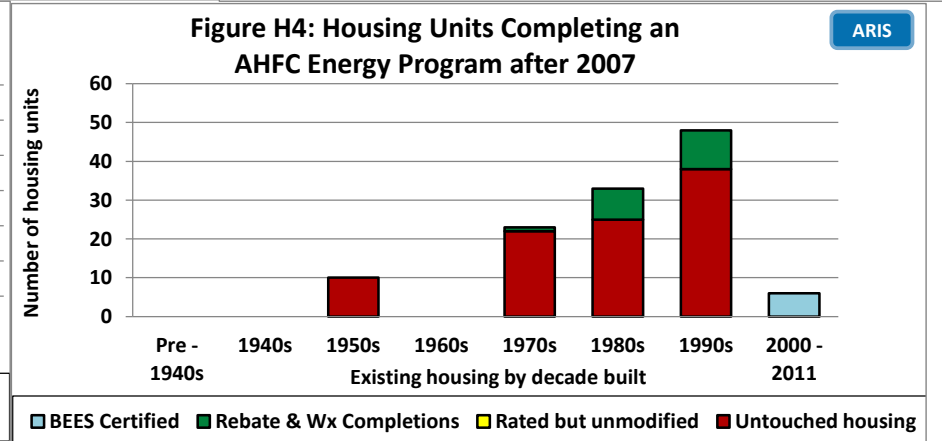
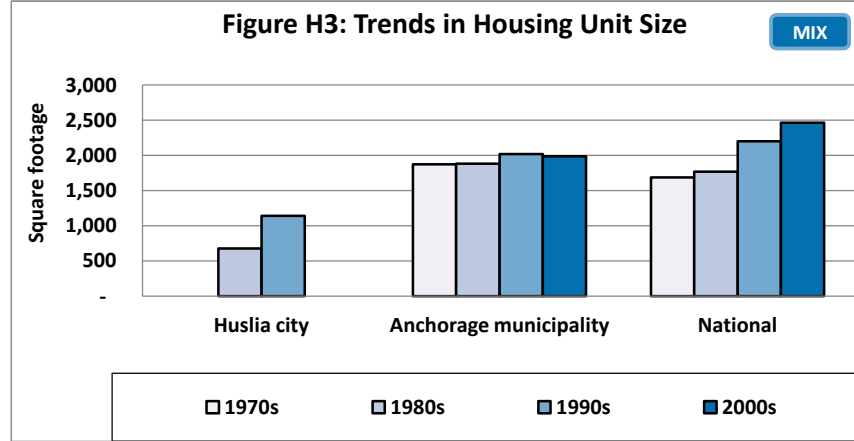
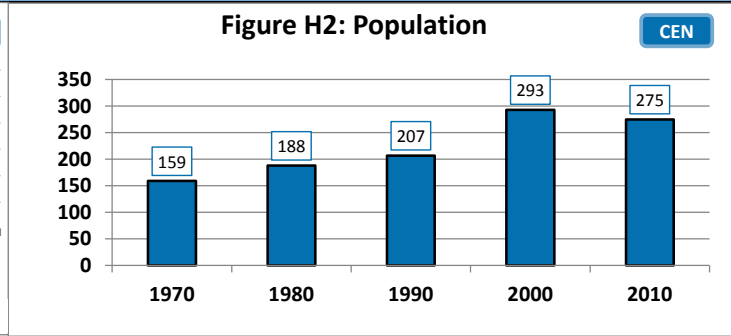
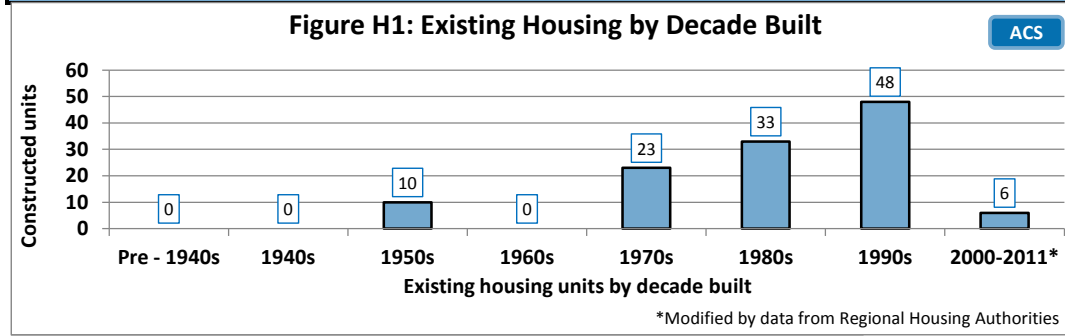
**Community Profile for:** Huslia city

**ANCSA Region:** Doyon

**Regional Housing Authority:** Interior Regional Housing Authority

**BEES Climate Zone (Heating Degree Days):** Zone 8 (14,942 HDD)

**COMMUNITY - Huslia city**



| Houses Lacking Complete Plumbing or Kitchen Facilities | Households |         |
|--|------------|---------|
|  | Number     | Percent |
| Lack complete plumbing                                 | 21         | 24%     |
| Lack complete kitchen                                  | 16         | 18%     |

|                                    |         |
|------------------------------------|---------|
| Avg Annual Energy Cost with PCE    | \$5,790 |
| Avg Annual Energy Cost without PCE | \$7,564 |

| Weatherization Program Retrofits (funding increased in 2008) |       |
|--|-------|
| Date Range   | Units |
| 2008-2011  | 19    |
| 2003-2007  | NR    |
| 1990-2002  | NR    |

| Estimated Total Annual Community Space Heating Fuel Use |        |           |
|---|--------|-----------|
| Fuel Oil  | 36,616 | (gallons) |
| Nat Gas   | -      | (ccf)     |
| Electricity   | 22,137 | (kWh)     |
| Wood  | 113    | (cords)   |
| Propane   | -      | (gallons) |
| Coal  | -      | (tons)    |

| Estimated Energy Prices as of January 2013 |        |
|--|--------|
| #1 Fuel oil cost (\$ / gallon)             | \$6.00 |
| Electricity with PCE (\$/kWh)              | \$0.21 |
| Electricity cost without PCE (\$/kWh)      | \$0.52 |

| Housing Stock Estimates         | Number of Units |
|---------------------------------|-----------------|
| All Housing                     | 118             |
| All Occupied Housing            | 88              |
| All Vacant housing              | 30              |
| Vacant Housing for Sale or Rent | 6               |



OVERCROWDING & VENTILATION - Huslia city

Figure H5: Overcrowded Units

ACS

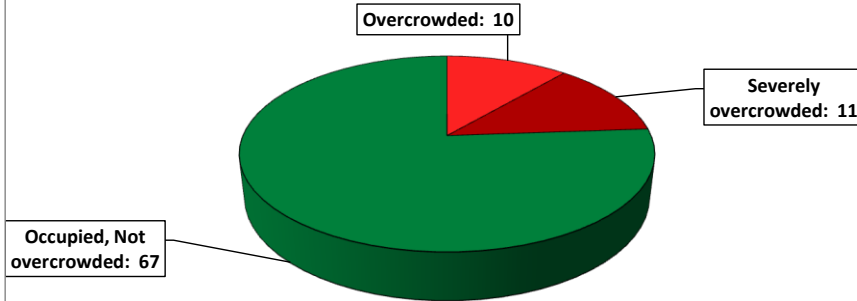


Figure H6: Housing Occupancy

MIX

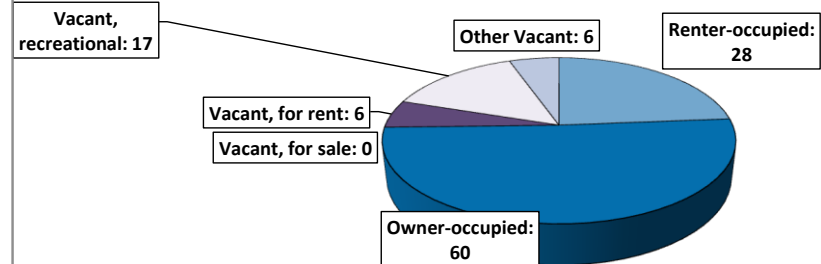


Figure H7: Average Air-Tightness of Current Homes by Decade Built

ARIS

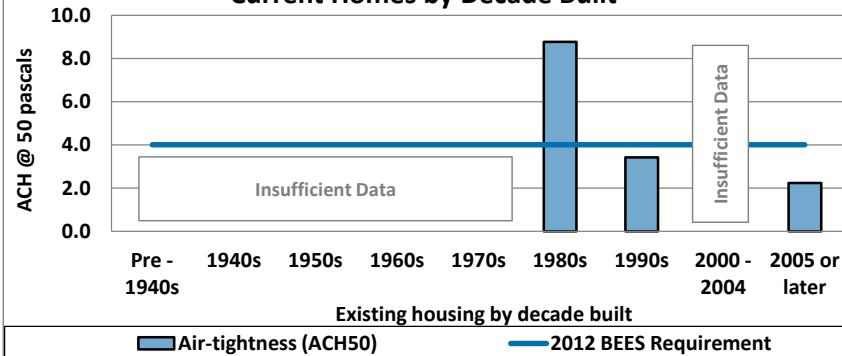


Figure H8: Existing Ventilation Type by Decade Built

ARIS

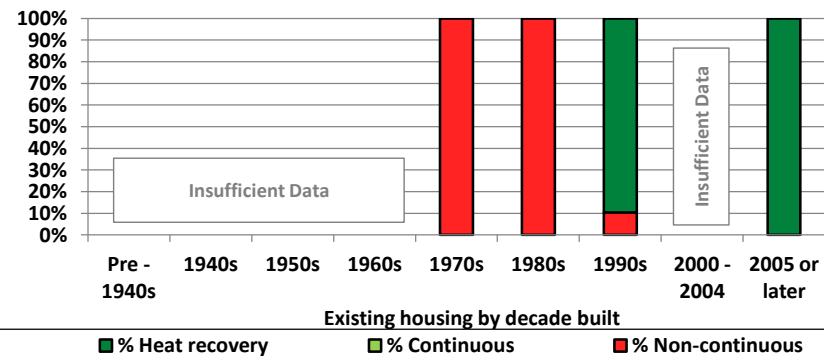


Figure H9: Percent of Housing Stock at High Risk of Moisture and Air Quality Problems

ARIS

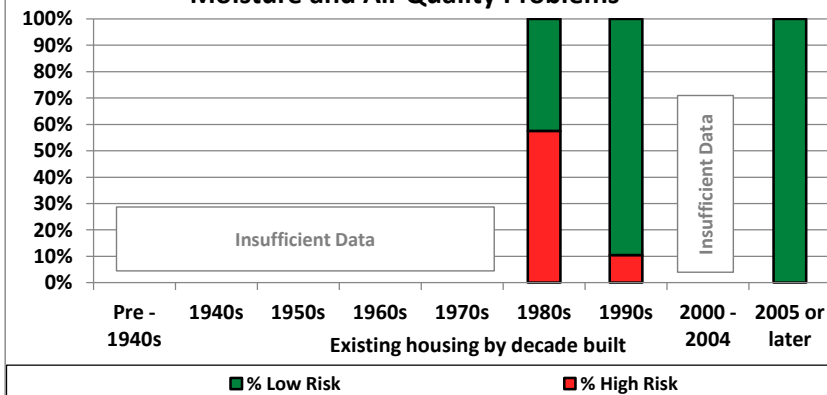
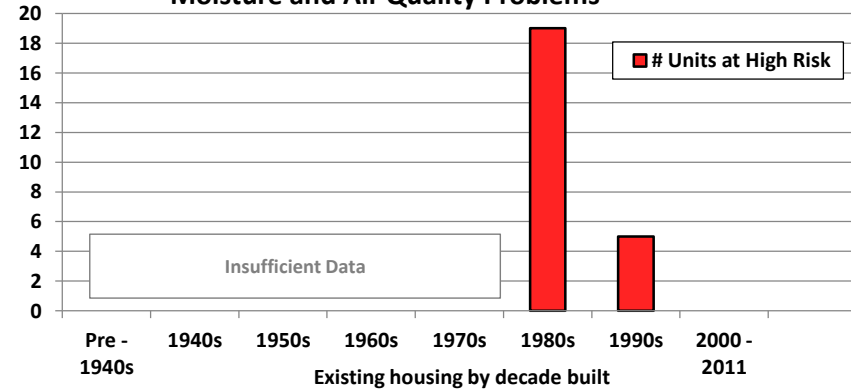


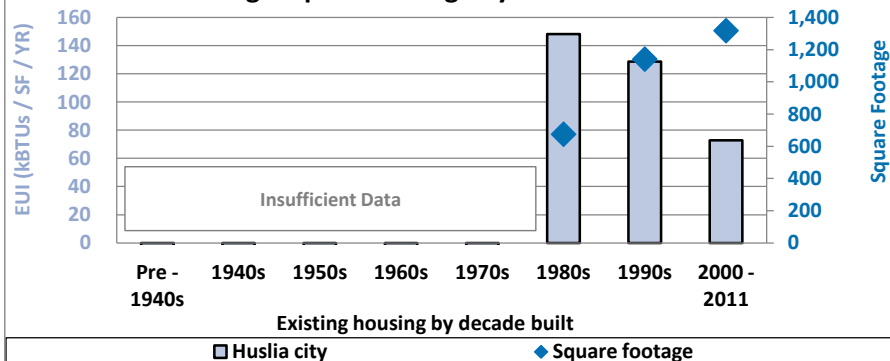
Figure H10: Quantity of Housing Stock at High Risk of Moisture and Air Quality Problems

ARIS

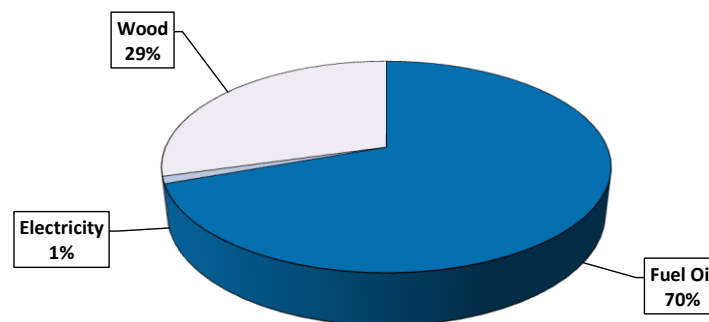


| ENERGY - Huslia city   |                   |                         |                          |              |                                    |                                       |  |     |            |                     |                    |                         |
|--|-------------------|-------------------------|--------------------------|--------------|------------------------------------|---------------------------------------|--|-----|------------|---------------------|--------------------|-------------------------|
| Current Huslia city Housing Energy Characteristics By Decade Built |                   |                         |                          |              |                                    |                                       |  |     |            |                     |                    |                         |
| Current Residential Units by Year Built                            | Number of Records | Avg Energy Rating Stars | Avg Energy Rating Points | Avg Sq. Feet | Avg. Annual Energy Cost (with PCE) | Avg. Annual Energy Use (million BTUs) | Avg Ann Energy by End Use (million Btus) |     |            | Avg. EUI (kBtus/SF) | Avg. ECI (\$ / SF) | Avg. Home Heating Index |
|  |                   |                         |                          |              |                                    |                                       | Space Heating                            | DHW | Appliances |                     |                    |                         |
| OVERALL  | 25                | 3-star plus             | 77.3                     | 966          | \$ 5,790                           | 122                                   | 79                                       | 22  | 21         | 132                 | \$ 6.20            | 5.8                     |
| Pre- 1940  | 0                 | NR                      | NR                       | NR           | NR                                 | NR                                    | NR                                       | NR  | NR         | NR                  | NR                 | NR                      |
| 1940- 49   | 0                 | NR                      | NR                       | NR           | NR                                 | NR                                    | NR                                       | NR  | NR         | NR                  | NR                 | NR                      |
| 1950- 59   | 0                 | NR                      | NR                       | NR           | NR                                 | NR                                    | NR                                       | NR  | NR         | NR                  | NR                 | NR                      |
| 1960- 69   | 0                 | NR                      | NR                       | NR           | NR                                 | NR                                    | NR                                       | NR  | NR         | NR                  | NR                 | NR                      |
| 1970- 79   | 1                 | NR                      | NR                       | NR           | NR                                 | NR                                    | NR                                       | NR  | NR         | NR                  | NR                 | NR                      |
| 1980- 89   | 8                 | 3-star                  | 68.6                     | 675          | \$ 4,633                           | 99                                    | 70                                       | 10  | 19         | 148                 | \$ 6.92            | 7.0                     |
| 1990- 99   | 10                | 4-star plus             | 85.5                     | 1,141        | \$ 6,770                           | 146                                   | 88                                       | 36  | 22         | 129                 | \$ 5.94            | 5.3                     |
| 2000- 2004   | 0                 | NR                      | NR                       | NR           | NR                                 | NR                                    | NR                                       | NR  | NR         | NR                  | NR                 | NR                      |
| 2005 or later  | 6                 | 5-star plus             | 92.6                     | 1,318        | \$ 4,980                           | 96                                    | 43                                       | 29  | 24         | 73                  | \$ 3.78            | 2.2                     |

**Figure H11: Current Average Energy Use Intensity and Average Square Footage by Decade Built**



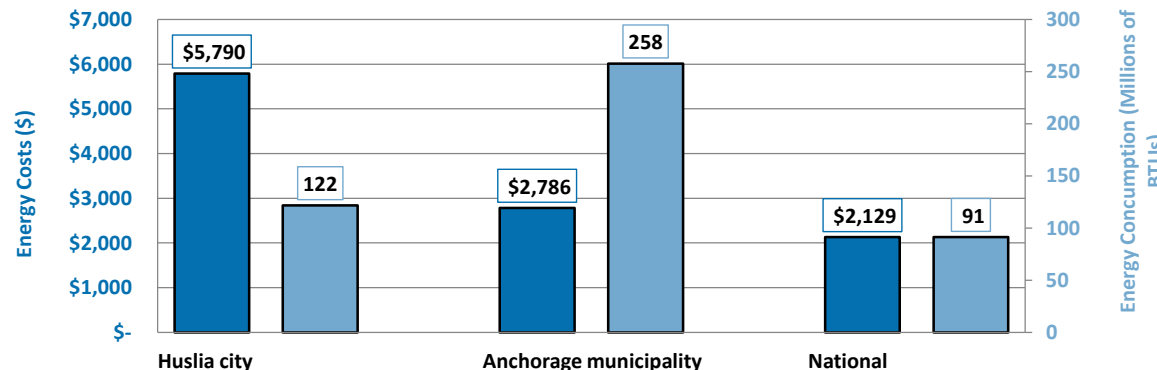
**Figure H12: Percent of Total Residential Space Heating Energy by Fuel Type**



| Current Huslia city Housing Envelope Characteristics By Decade Built |                   |        |           |                    |                    |                     |                  |                     |        |               |          |
|--|-------------------|--------|-----------|--------------------|--------------------|---------------------|------------------|---------------------|--------|---------------|----------|
| Current Residential Units by Year Built                              | Number of Records | ACH 50 | Ceiling R | Above Grade Wall R | Below Grade Wall R | Above Grade Floor R | On Grade Floor R | Below Grade Floor R | Door U | Garage Door U | Window U |
| OVERALL  | 25                | 5.8    | 35        | 18                 | 27                 | 36                  | NR               | 4                   | 0.31   | NR            | 0.50     |
| Pre- 1940  | 0                 | NR     | NR        | NR                 | NR                 | NR                  | NR               | NR                  | NR     | NR            | NR       |
| 1940- 49   | 0                 | NR     | NR        | NR                 | NR                 | NR                  | NR               | NR                  | NR     | NR            | NR       |
| 1950- 59   | 0                 | NR     | NR        | NR                 | NR                 | NR                  | NR               | NR                  | NR     | NR            | NR       |
| 1960- 69   | 0                 | NR     | NR        | NR                 | NR                 | NR                  | NR               | NR                  | NR     | NR            | NR       |
| 1970- 79   | 1                 | NR     | NR        | NR                 | NR                 | NR                  | NR               | NR                  | NR     | NR            | NR       |
| 1980- 89   | 8                 | 8.8    | 30        | 13                 | NR                 | 36                  | NR               | NR                  | 0.31   | NR            | 0.57     |
| 1990- 99   | 10                | 3.4    | 47        | 27                 | 27                 | NR                  | NR               | 4                   | 0.19   | NR            | 0.43     |
| 2000- 2004   | 0                 | NR     | NR        | NR                 | NR                 | NR                  | NR               | NR                  | NR     | NR            | NR       |
| 2005 or later  | 6                 | 2.2    | 40        | 31                 | NR                 | 40                  | NR               | NR                  | 0.19   | NR            | 0.21     |
| BEES 2009 - Climate Zone 8   |                   | 7.0    | 38        | 30                 | 15                 | 38                  | 15               | 15                  | 0.22   | 0.22          | 0.22     |
| BEES 2012 - Climate Zone 8   |                   | 4.0    | 48        | 30                 | 15                 | 38                  | 15               | 15                  | 0.22   | 0.22          | 0.22     |

AFFORDABILITY - Huslia city

Figure H13: Average Annual Home Energy Costs and Use



| Housing Information | Avg Household Size (# of people) |
|---------------------|----------------------------------|
| All-occupied        | 3.1                              |
| Owner-occupied      | 2.7                              |
| renter-occupied     | 3.9                              |

| Owner-occupied House with Mortgage, Median Value |
|--|
| \$170,800  |

| Owner-occupied House without a Mortgage, Median Value |
|---|
| \$124,100   |

| Median Annual Household Income |                  |
|--------------------------------|------------------|
| Housing Units                  | Household Income |
| All-occupied                   | \$ 24,167        |
| Renter-occupied                | \$ 18,750        |
| Owner-occupied                 | \$ 30,000        |
| w/ mortgage                    | \$ 48,750        |
| w/o mortgage                   | \$ 23,125        |

|                                | Median Housing Costs |          |
|--------------------------------|----------------------|----------|
|                                | Monthly              | Annual   |
| All-occupied                   | \$ 481               | \$ 5,772 |
| Gross rent                     | \$ 742               | \$ 8,904 |
| Owner-occupied                 | \$ 438               | \$ 5,256 |
| Housing units w/ mortgage      | \$ 750               | \$ 9,000 |
| Housing units w/out a mortgage | \$ 392               | \$ 4,704 |

|  |              |
|--|--------------|
| Avg % of Median Income Spent on Energy | <b>24.0%</b> |
|--|--------------|

Figure H14: Affordability - Housing Costs as a Percent of Income

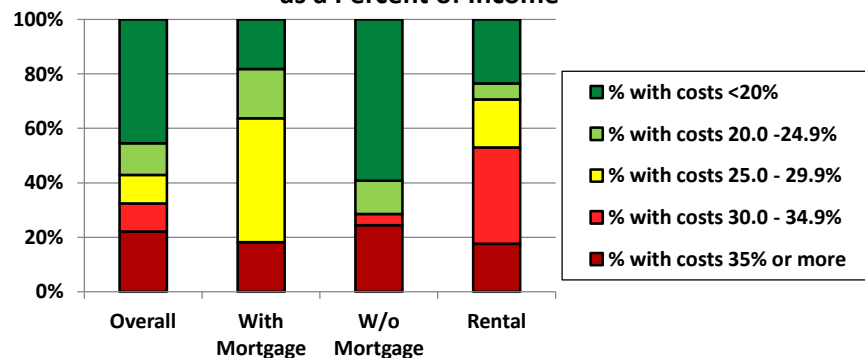
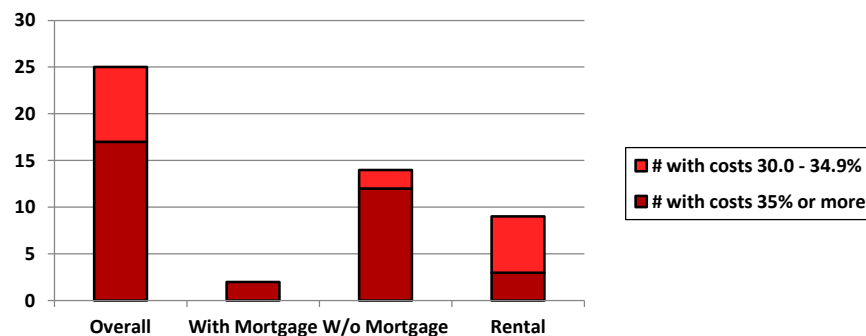


Figure H15: Number of Cost-Burdened Housing Units

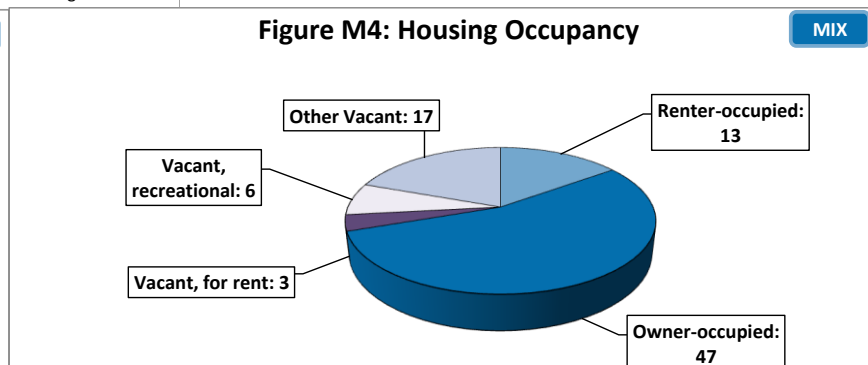
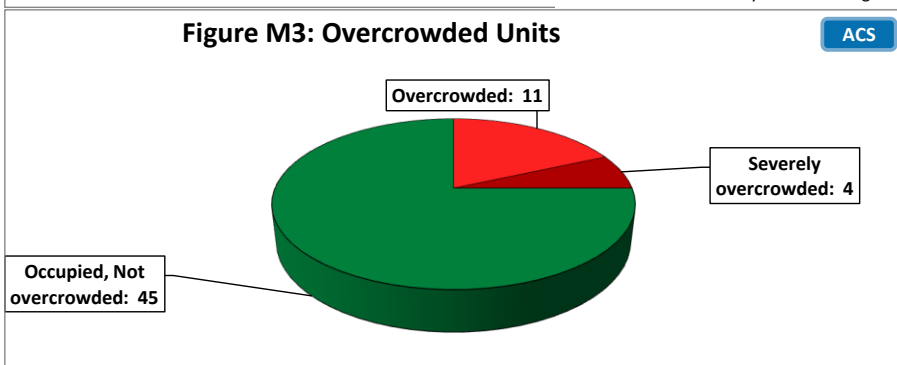
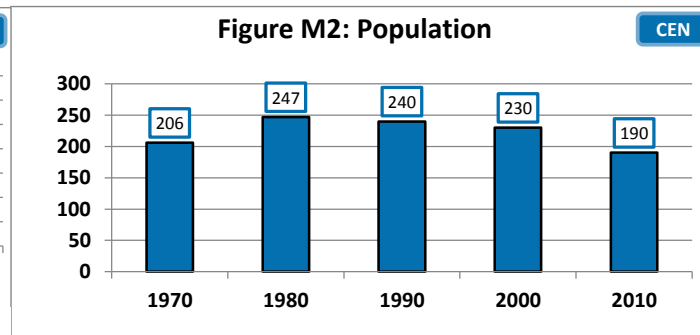
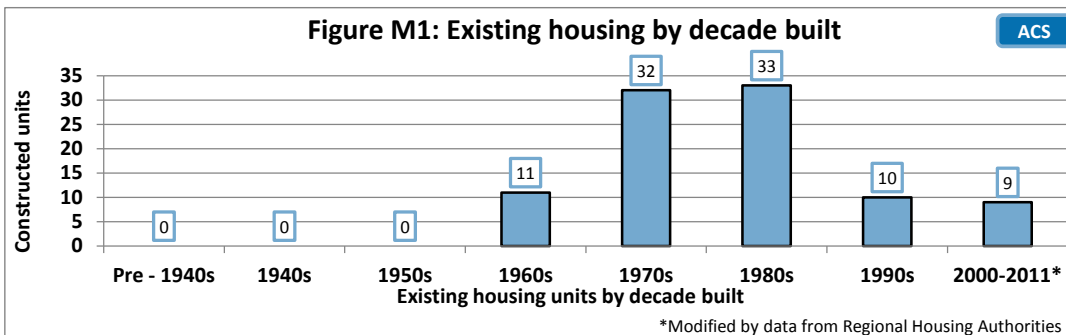


**Community Profile for:** Kaltag city

**ANCSA Region:** Doyon

**Regional Housing Authority:** Interior Regional Housing Authority

**BEES Climate Zone (Heating Degree Days):** Zone 8 (14,847 HDD)



#### Kaltag city Housing Energy Characteristics

| Residential Unit Categories | Number of records | Avg Energy Rating Stars | Avg Energy Rating Points | Avg Sq. Feet | Avg. Ann Energy Cost | Avg. Ann Energy Use (million BTUs) | Avg. EUI (kBtus/SF) | Avg. ECI | Avg. Home Heating Index | % Tight Homes, No Ventilation |
|-----------------------------|-------------------|-------------------------|--------------------------|--------------|----------------------|------------------------------------|---------------------|----------|-------------------------|-------------------------------|
| Pre-retrofit units          | 50                | 1-star                  | 24.5                     | 482          | \$ 4,333             | 143                                | 297                 | \$9.01   | 16.1                    | 0%                            |
| Retrofit units              | 49                | 4-star                  | 80.6                     | 988          | \$ 4,139             | 154                                | 155                 | \$4.19   | 7.3                     | 100%                          |
| New construction            | 6                 | 5-star plus             | 93.2                     | 1,264        | \$ 4,420             | 87                                 | 69                  | \$3.51   | 2.0                     | 0%                            |

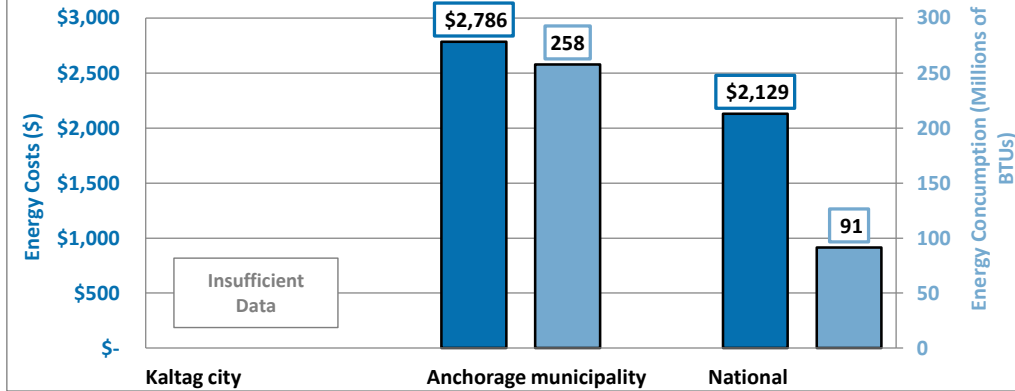
#### Kaltag city Housing Envelope Characteristics

| Residential Unit Categories | Number of Records | ACH 50 | Ceiling R | Above Grade Wall R | Below Grade Wall R | Above Grade Floor R | On Grade Floor R | Below Grade Floor R | Door U | Garage Door U | Window U |
|-----------------------------|-------------------|--------|-----------|--------------------|--------------------|---------------------|------------------|---------------------|--------|---------------|----------|
| Pre-retrofit units          | 50                | 42.7   | NR        | NR                 | NR                 | NR                  | NR               | NR                  | NR     | NR            | NR       |
| Retrofit units              | 49                | 2.5    | NR        | NR                 | NR                 | NR                  | NR               | NR                  | NR     | NR            | NR       |
| New construction            | 6                 | 2.4    | 51        | 28                 | NR                 | 39                  | NR               | NR                  | 0.19   | NR            | 0.32     |
|                             |                   | NR     | NR        | NR                 | NR                 | NR                  | NR               | NR                  | NR     | NR            | NR       |

|           |     |    |    |    |    |    |    |      |      |      |
|-----------|-----|----|----|----|----|----|----|------|------|------|
| BEES 2009 | 7.0 | 38 | 30 | 15 | 38 | 15 | 15 | 0.22 | 0.22 | 0.22 |
| BEES 2012 | 4.0 | 48 | 30 | 15 | 38 | 15 | 15 | 0.22 | 0.22 | 0.22 |

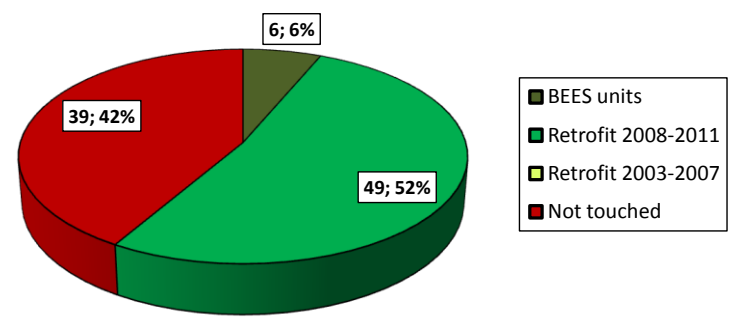
**Figure M5: Average Annual Home Energy Costs and Use**

MIX



**Figure M6: Housing Units Completing an AHFC Energy Program**

ARIS



**AFFORDABILITY - Kaltag city**

| Owner occupied House with Mortgage, Median Value      |
|---|
| NR  |
| Owner-occupied House without a Mortgage, Median Value |
| \$116,700   |

| Median Annual Household Income |                  |
|--------------------------------|------------------|
| Housing Units                  | Household Income |
| All-occupied                   | \$ 23,000        |
| Renter-occupied                | \$ 46,250        |
| Owner-occupied                 | \$ 17,125        |
| w/ mortgage                    | NR               |
| w/o mortgage                   | \$ 16,750        |

| Median Housing Costs           |         |          |
|--------------------------------|---------|----------|
|                                | Monthly | Annual   |
| All-occupied                   | \$ 430  | \$ 5,160 |
| Gross rent                     | \$ 681  | \$ 8,172 |
| Owner-occupied                 | \$ 422  | \$ 5,064 |
| Housing units w/ mortgage      | NR      | NR       |
| Housing units w/out a mortgage | \$ 413  | \$ 4,956 |

| Estimated Energy Prices as of January 2013 |         |
|--|---------|
| #1 Fuel oil cost (\$ / gallon)             | \$ 5.75 |
| Electricity with PCE (\$/kWh)              | \$ 0.21 |
| Electricity without PCE (\$/kWh)           | \$ 0.52 |

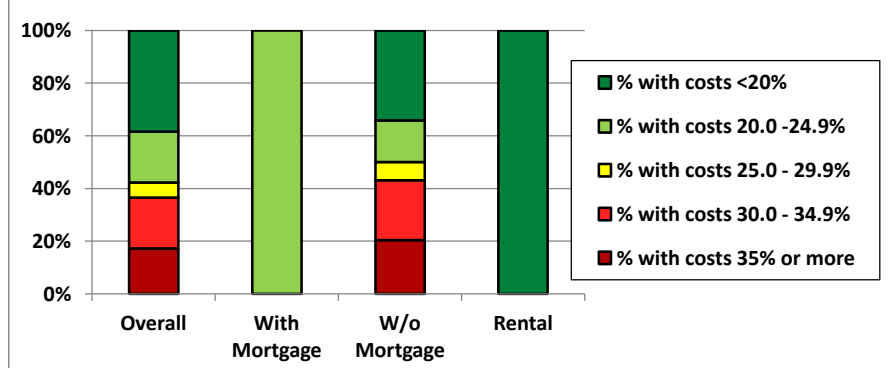
| Average Annual Energy Cost |         |
|----------------------------|---------|
| With PCE                   | NO PCE  |
| Without PCE                | \$5,451 |

| Housing Stock Estimates      | Number of Units |
|------------------------------|-----------------|
| All Housing                  | 86              |
| All Occupied Housing         | 60              |
| All Vacant housing           | 26              |
| Vacant Housing for Sale/Rent | 3               |

|                        |              |
|------------------------|--------------|
| Avg % Income on Energy | <b>23.7%</b> |
|------------------------|--------------|

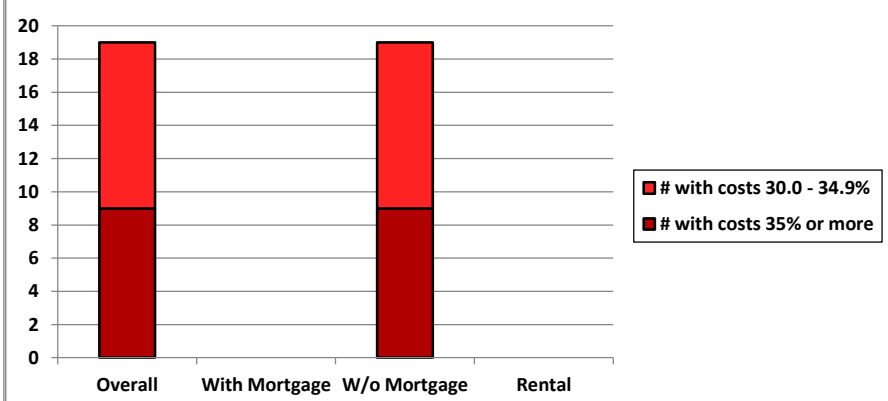
**Figure M7: Affordability - Housing Costs as a Percent of Income**

ACS



**Figure M8: Number of Cost-Burdened Housing Units**

ACS

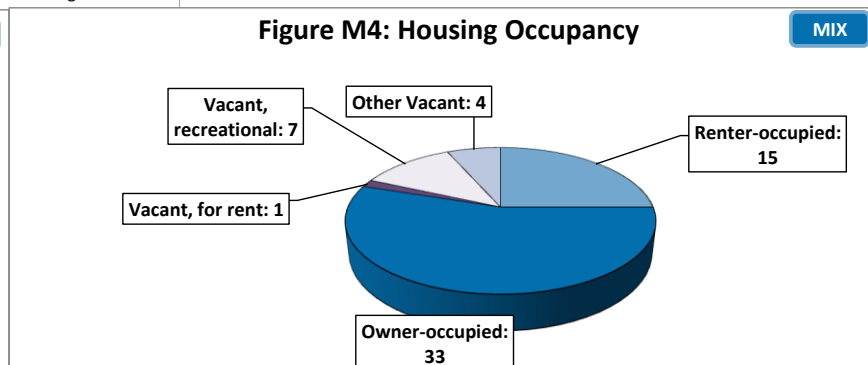
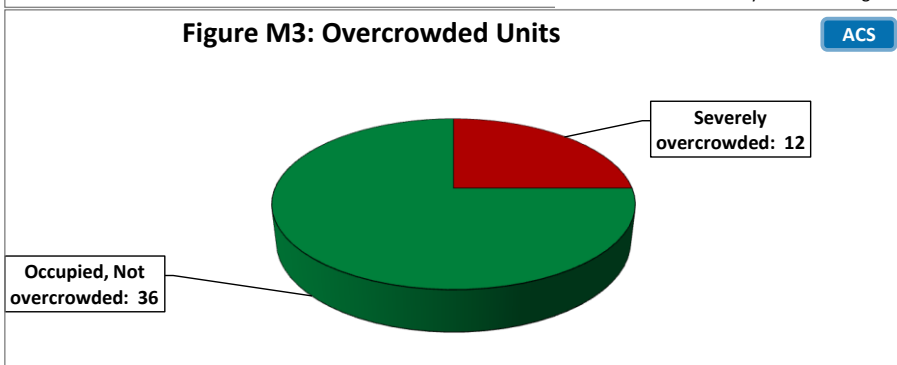
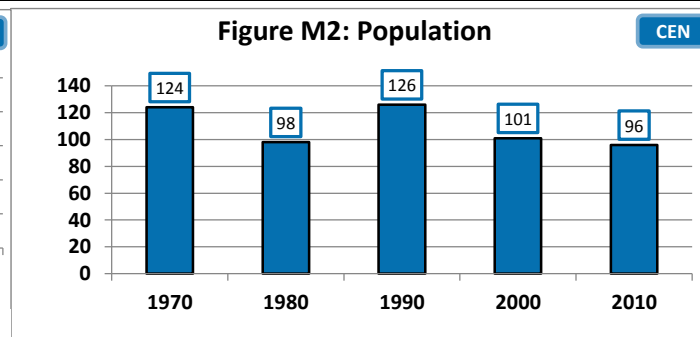
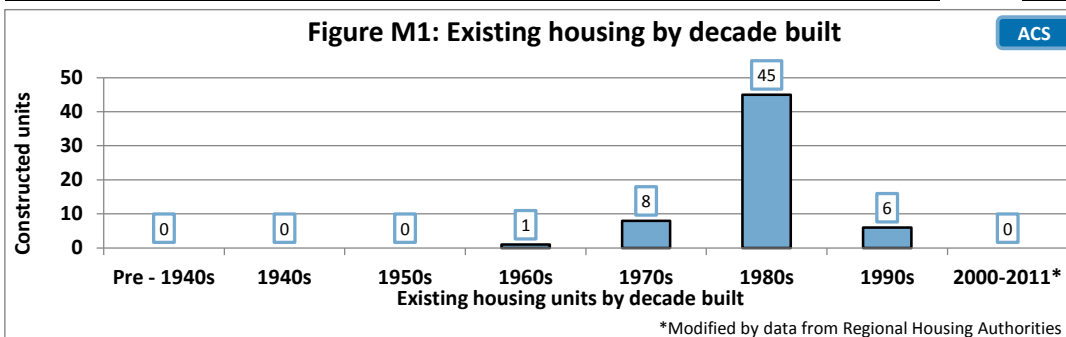


**Community Profile for:** Koyukuk city

**ANCSA Region:** Doyon

**Regional Housing Authority:** Interior Regional Housing Authority

**BEES Climate Zone (Heating Degree Days):** Zone 8 (14,847 HDD)



#### Koyukuk city Housing Energy Characteristics

| Residential Unit Categories | Number of records | Avg Energy Rating Stars | Avg Energy Rating Points | Avg Sq. Feet | Avg. Ann Energy Cost | Avg. Ann Energy Use (million BTUs) | Avg. EUI (kBtus/SF) | Avg. ECI | Avg. Home Heating Index | % Tight Homes, No Ventilation |
|-----------------------------|-------------------|-------------------------|--------------------------|--------------|----------------------|------------------------------------|---------------------|----------|-------------------------|-------------------------------|
| Pre-retrofit units          | 3                 | 3-star                  | 70.9                     | 643          | \$ 2,683             | 107                                | 153                 | \$4.20   | 8.8                     | 33%                           |
| Retrofit units              | 10                | 3-star plus             | 76.5                     | 521          | \$ 1,558             | 40                                 | 79                  | \$3.00   | 3.7                     | 67%                           |
| New construction            | 0                 | NR                      | NR                       | NR           | NR                   | NR                                 | NR                  | NR       | NR                      | NR                            |

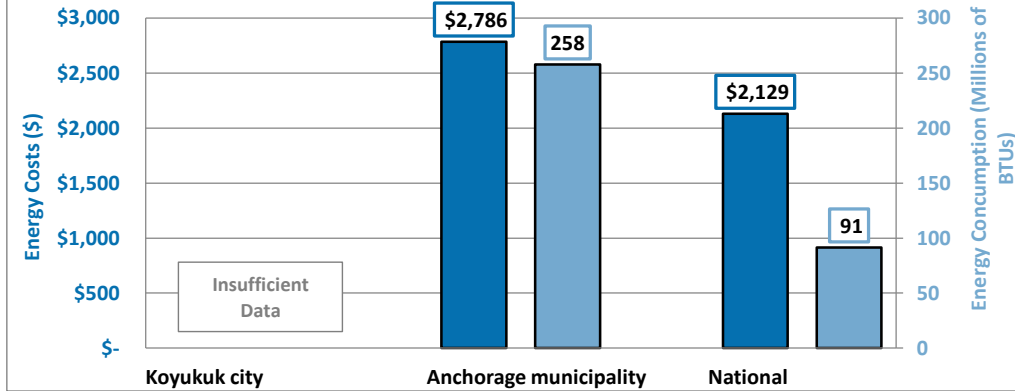
#### Koyukuk city Housing Envelope Characteristics

| Residential Unit Categories | Number of Records | ACH 50 | Ceiling R | Above Grade Wall R | Below Grade Wall R | Above Grade Floor R | On Grade Floor R | Below Grade Floor R | Door U | Garage Door U | Window U |
|-----------------------------|-------------------|--------|-----------|--------------------|--------------------|---------------------|------------------|---------------------|--------|---------------|----------|
| Pre-retrofit units          | 3                 | 36.8   | 46        | 21                 | NR                 | 37                  | NR               | NR                  | 0.23   | NR            | 0.31     |
| Retrofit units              | 10                | 6.8    | 46        | 18                 | NR                 | 39                  | NR               | NR                  | 0.19   | NR            | 0.29     |
| New construction            | 0                 | NR     | NR        | NR                 | NR                 | NR                  | NR               | NR                  | NR     | NR            | NR       |

|           |     |    |    |    |    |    |    |      |      |      |
|-----------|-----|----|----|----|----|----|----|------|------|------|
| BEES 2009 | 7.0 | 38 | 30 | 15 | 38 | 15 | 15 | 0.22 | 0.22 | 0.22 |
| BEES 2012 | 4.0 | 48 | 30 | 15 | 38 | 15 | 15 | 0.22 | 0.22 | 0.22 |

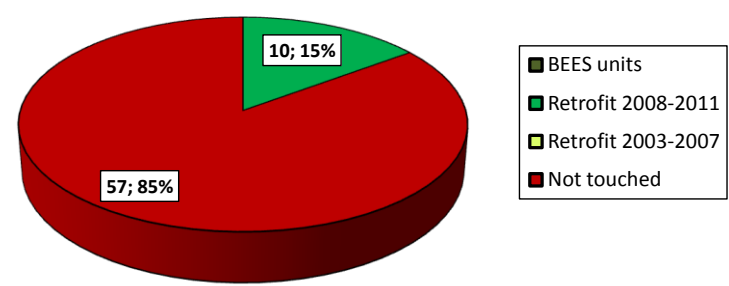
**Figure M5: Average Annual Home Energy Costs and Use**

MIX



**Figure M6: Housing Units Completing an AHFC Energy Program**

ARIS



**AFFORDABILITY - Koyukuk city**

| Owner occupied House with Mortgage, Median Value      |
|---|
| NR  |
| Owner-occupied House without a Mortgage, Median Value |
| \$59,200  |

| Median Annual Household Income |                  |
|--------------------------------|------------------|
| Housing Units                  | Household Income |
| All-occupied                   | \$ 19,286        |
| Renter-occupied                | \$ 52,750        |
| Owner-occupied                 | \$ 18,036        |
| w/ mortgage                    | NR               |
| w/o mortgage                   | \$ 18,036        |

| Median Housing Costs           |         |          |
|--------------------------------|---------|----------|
|                                | Monthly | Annual   |
| All-occupied                   | \$ 231  | \$ 2,772 |
| Gross rent                     | \$ 725  | \$ 8,700 |
| Owner-occupied                 | \$ 194  | \$ 2,328 |
| Housing units w/ mortgage      | NR      | NR       |
| Housing units w/out a mortgage | \$ 175  | \$ 2,100 |

| Estimated Energy Prices as of January 2013 |         |
|--|---------|
| #1 Fuel oil cost (\$ / gallon)             | \$ 6.00 |
| Electricity with PCE (\$/kWh)              | \$ 0.18 |
| Electricity without PCE (\$/kWh)           | \$ 0.45 |

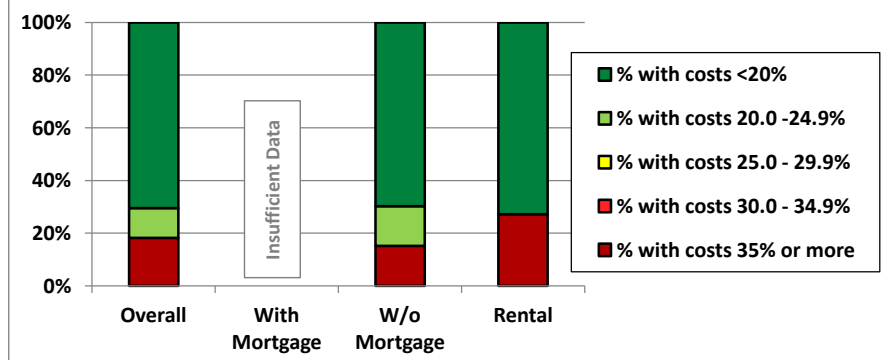
| Average Annual Energy Cost |         |
|----------------------------|---------|
| With PCE                   | NO PCE  |
| Without PCE                | \$3,284 |

| Housing Stock Estimates      | Number of Units |
|------------------------------|-----------------|
| All Housing                  | 60              |
| All Occupied Housing         | 48              |
| All Vacant housing           | 12              |
| Vacant Housing for Sale/Rent | 1               |

|                        |              |
|------------------------|--------------|
| Avg % Income on Energy | <b>17.0%</b> |
|------------------------|--------------|

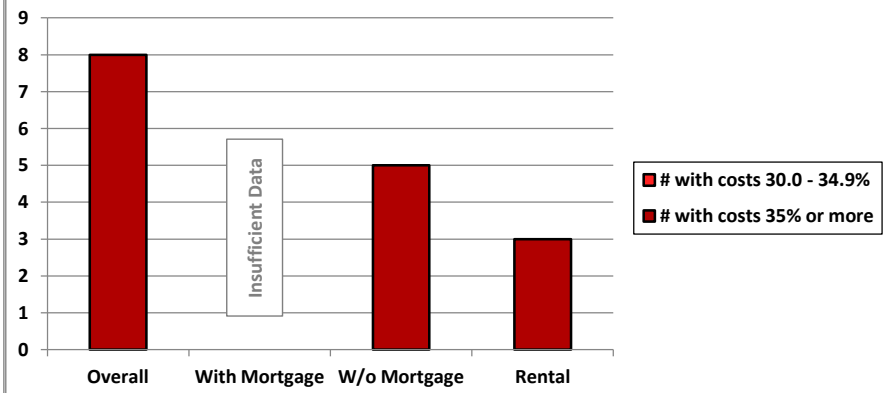
**Figure M7: Affordability - Housing Costs as a Percent of Income**

ACS

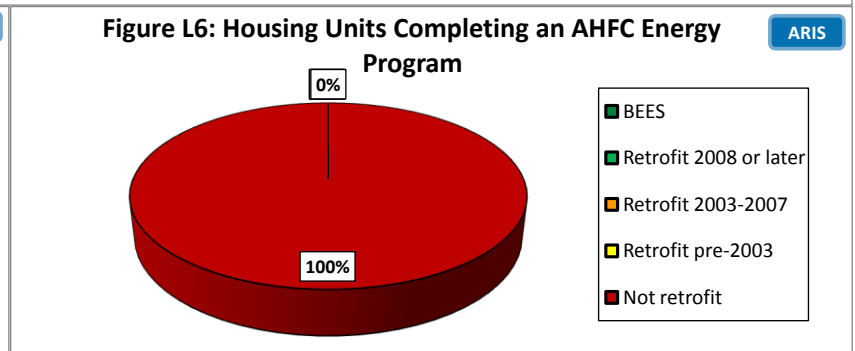
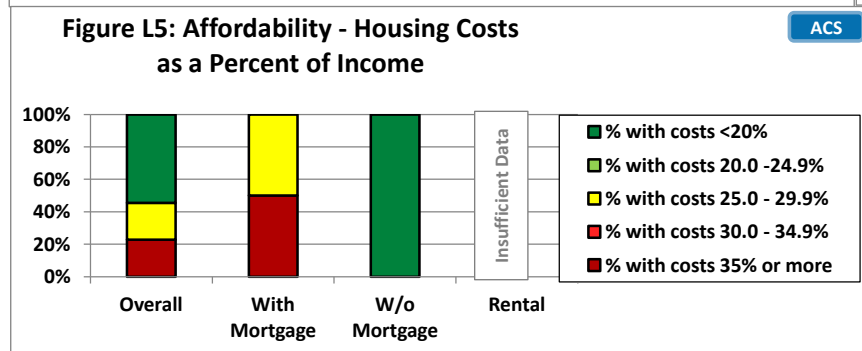
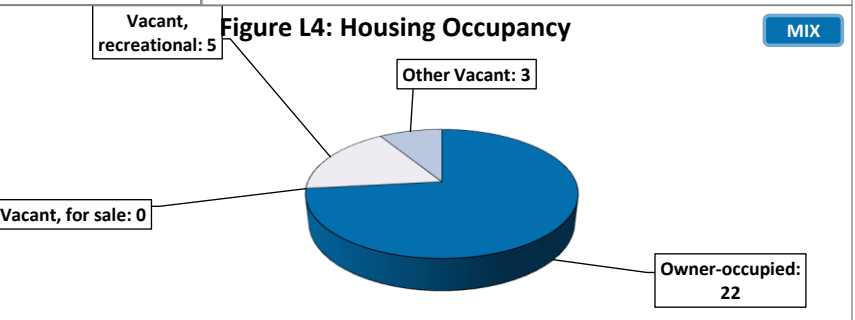
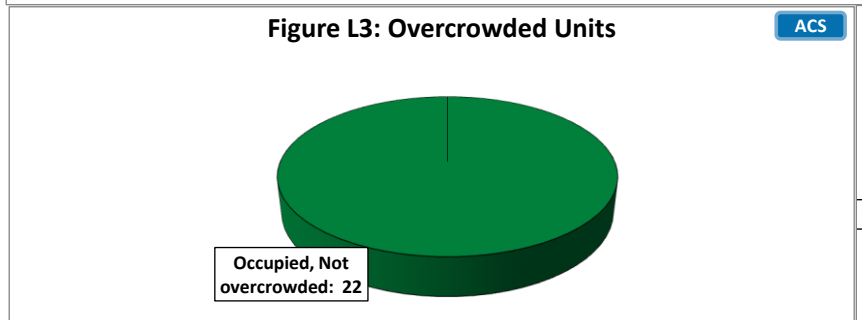
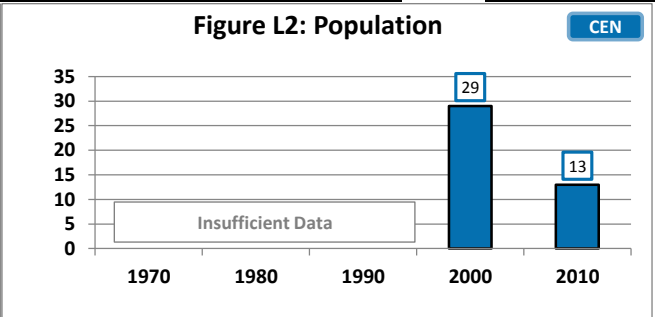
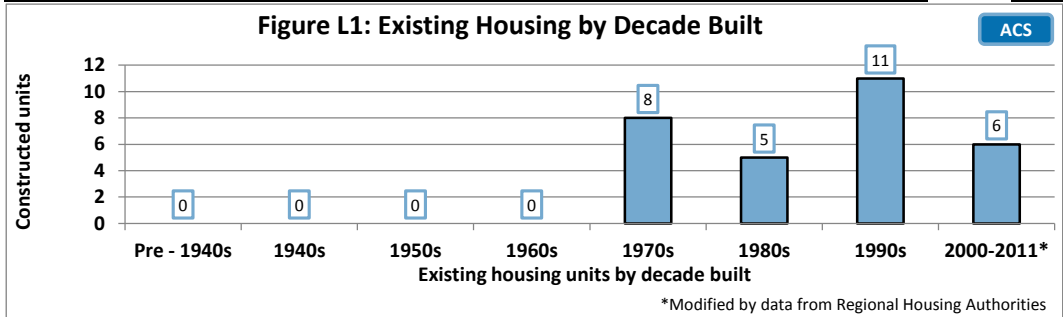


**Figure M8: Number of Cost-Burdened Housing Units**

ACS



Community Profile for: **Livengood CDP** ANCSA Region: **Doyon** Climate Zone: **8**



| Owner-occupied House with Mortgage, Median Value |
|--|
| \$150,000  |

| Owner-occupied House without a Mortgage, Median Value |
|---|
| \$180,000   |

| Median Annual Household Income |                  |
|--------------------------------|------------------|
| Housing Units                  | Household Income |
| All-occupied                   | \$ 35,000        |
| Renter-occupied                | NR               |
| Owner-occupied                 | \$ 35,000        |
| w/ mortgage                    | \$ 35,000        |
| w/o mortgage                   | \$ 37,500        |

| Median Housing Costs           |         |           |
|--------------------------------|---------|-----------|
|                                | Monthly | Annual    |
| All-occupied                   | \$ 770  | \$ 9,240  |
| Gross rent                     | NR      | NR        |
| Owner-occupied                 | \$ 740  | \$ 8,880  |
| Housing units w/ mortgage      | \$ 900  | \$ 10,800 |
| Housing units w/out a mortgage | NR      | NR        |

| Estimated Energy Prices as of January 2013 |         |
|--|---------|
| #1 Fuel oil cost (\$ / gallon)             | No Data |
| Electricity with PCE (\$/kWh)              | No Data |
| Electricity without PCE (\$/kWh)           | No Data |

| Housing Stock Estimates | Number of Units |
|-------------------------|-----------------|
| All Housing             | 30              |
| All Occupied Housing    | 22              |
| All Vacant housing      | 8               |

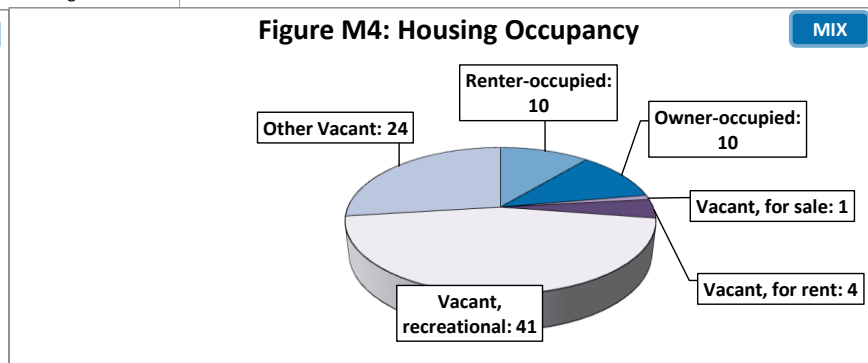
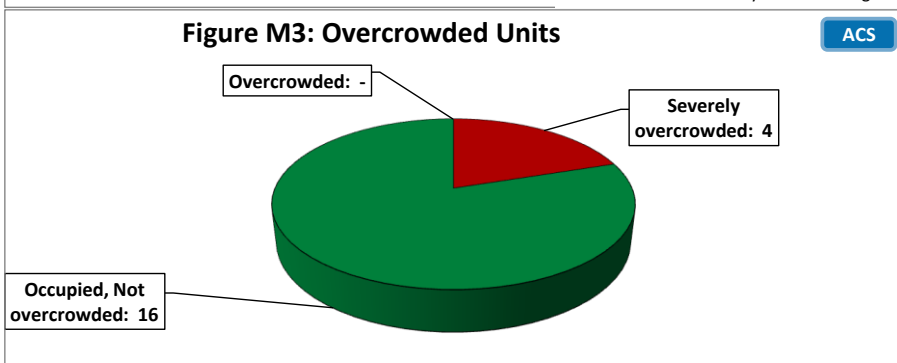
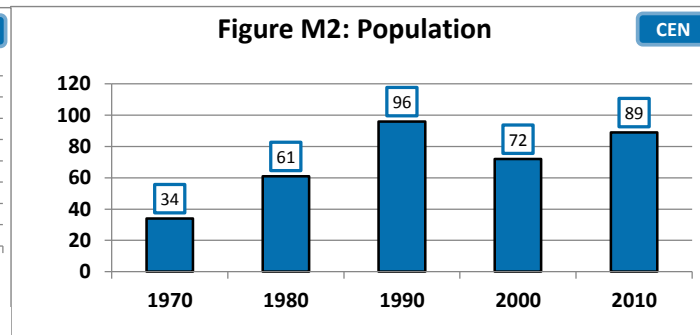
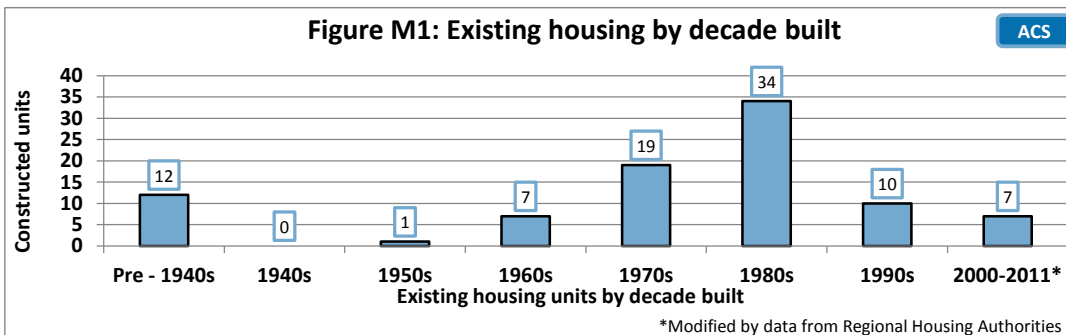


**Community Profile for:** Manley Hot Springs CDP

**ANCSA Region:** Doyon

**Regional Housing Authority:** Interior Regional Housing Authority

**BEES Climate Zone (Heating Degree Days):** Zone 8 (14,593 HDD)



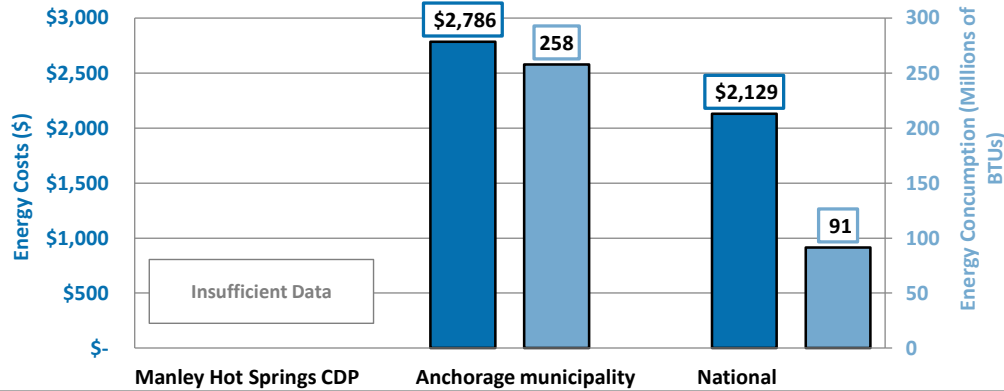
| Manley Hot Springs CDP Housing Energy Characteristics |                   |                         |                          |              |                      |                                    |                     |          |                         |                               |  |
|---|-------------------|-------------------------|--------------------------|--------------|----------------------|------------------------------------|---------------------|----------|-------------------------|-------------------------------|--|
| Residential Unit Categories                           | Number of records | Avg Energy Rating Stars | Avg Energy Rating Points | Avg Sq. Feet | Avg. Ann Energy Cost | Avg. Ann Energy Use (million BTUs) | Avg. EUI (kBtus/SF) | Avg. ECI | Avg. Home Heating Index | % Tight Homes, No Ventilation |  |
| Pre-retrofit units                                    | 4                 | 2-star                  | 59.4                     | 732          | \$ 6,533             | 170                                | 242                 | \$9.96   | 13.9                    | 0%                            |  |
| Retrofit units  | 9                 | 4-star                  | 80.1                     | 1,025        | \$ 6,484             | 125                                | 127                 | \$7.09   | 7.1                     | 89%                           |  |
| New construction                                      | 2                 | NR                      | NR                       | NR           | NR                   | NR                                 | NR                  | NR       | NR                      | NR                            |  |

| Manley Hot Springs CDP Housing Envelope Characteristics |                   |        |           |                    |                    |                     |                  |                     |        |               |          |
|---|-------------------|--------|-----------|--------------------|--------------------|---------------------|------------------|---------------------|--------|---------------|----------|
| Residential Unit Categories                             | Number of Records | ACH 50 | Ceiling R | Above Grade Wall R | Below Grade Wall R | Above Grade Floor R | On Grade Floor R | Below Grade Floor R | Door U | Garage Door U | Window U |
| Pre-retrofit units                                      | 4                 | 15.0   | 35        | 13                 | NR                 | 31                  | NR               | NR                  | 0.30   | NR            | 0.43     |
| Retrofit units  | 9                 | 5.0    | 36        | 17                 | NR                 | 28                  | NR               | NR                  | 0.25   | NR            | 0.39     |
| New construction  | 2                 | NR     | NR        | NR                 | NR                 | NR                  | NR               | NR                  | NR     | NR            | NR       |

|           |     |    |    |    |    |    |    |      |      |      |
|-----------|-----|----|----|----|----|----|----|------|------|------|
| BEES 2009 | 7.0 | 38 | 30 | 15 | 38 | 15 | 15 | 0.22 | 0.22 | 0.22 |
| BEES 2012 | 4.0 | 48 | 30 | 15 | 38 | 15 | 15 | 0.22 | 0.22 | 0.22 |

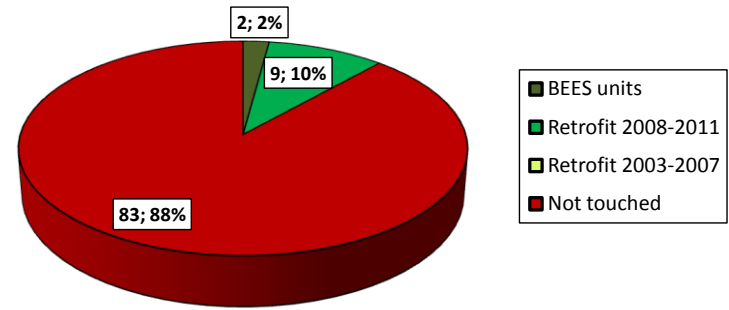
**Figure M5: Average Annual Home Energy Costs and Use**

MIX



**Figure M6: Housing Units Completing an AHFC Energy Program**

ARIS



**AFFORDABILITY - Manley Hot Springs CDP**

| Owner occupied House with Mortgage, Median Value      |
|---|
| NR  |
| Owner-occupied House without a Mortgage, Median Value |
| \$76,700  |

| Median Annual Household Income |                  |
|--------------------------------|------------------|
| Housing Units                  | Household Income |
| All-occupied                   | \$ 29,167        |
| Renter-occupied                | \$ 11,786        |
| Owner-occupied                 | \$ 101,667       |
| w/ mortgage                    | NR               |
| w/o mortgage                   | \$ 101,667       |

| Median Housing Costs           |         |          |
|--------------------------------|---------|----------|
|                                | Monthly | Annual   |
| All-occupied                   | \$ 342  | \$ 4,104 |
| Gross rent                     | \$ 100  | \$ 1,200 |
| Owner-occupied                 | \$ 360  | \$ 4,320 |
| Housing units w/ mortgage      | NR      | NR       |
| Housing units w/out a mortgage | \$ 350  | \$ 4,200 |

| Estimated Energy Prices as of January 2013 |         |
|--|---------|
| #1 Fuel oil cost (\$ / gallon)             | \$ 4.55 |
| Electricity with PCE (\$/kWh)              | \$ 0.83 |
| Electricity without PCE (\$/kWh)           | \$ 1.04 |

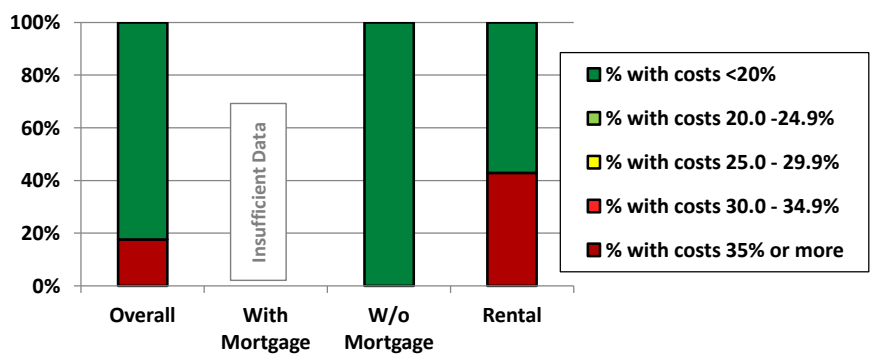
| Average Annual Energy Cost |         |
|----------------------------|---------|
| With PCE                   | NO PCE  |
| Without PCE                | \$7,463 |

| Housing Stock Estimates      | Number of Units |
|------------------------------|-----------------|
| All Housing                  | 90              |
| All Occupied Housing         | 20              |
| All Vacant housing           | 70              |
| Vacant Housing for Sale/Rent | 5               |

|                        |              |
|------------------------|--------------|
| Avg % Income on Energy | <b>25.6%</b> |
|------------------------|--------------|

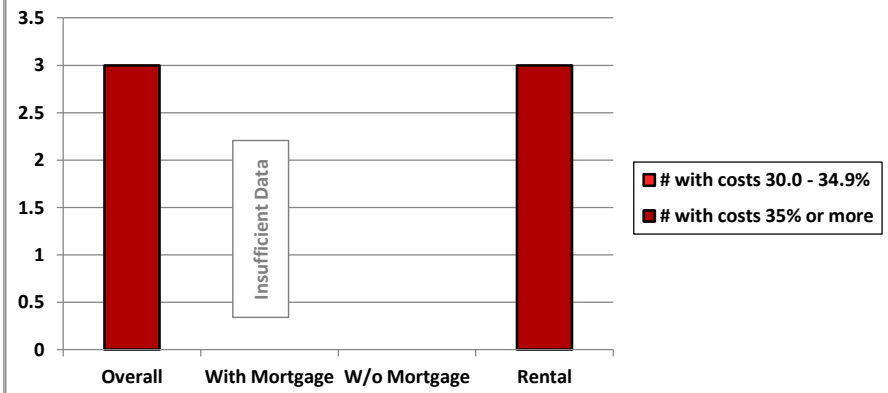
**Figure M7: Affordability - Housing Costs as a Percent of Income**

ACS



**Figure M8: Number of Cost-Burdened Housing Units**

ACS

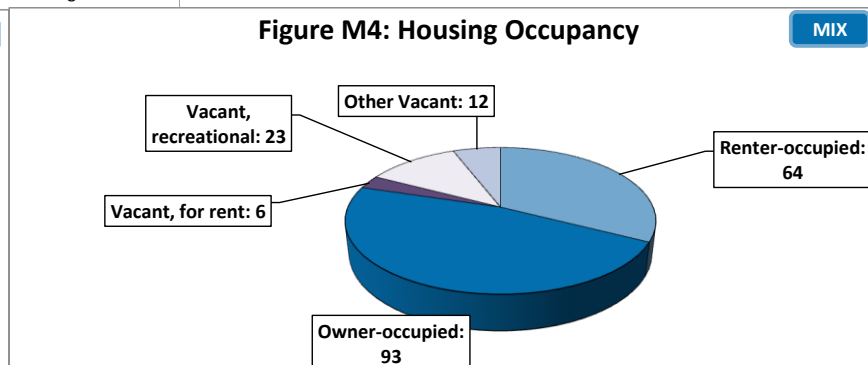
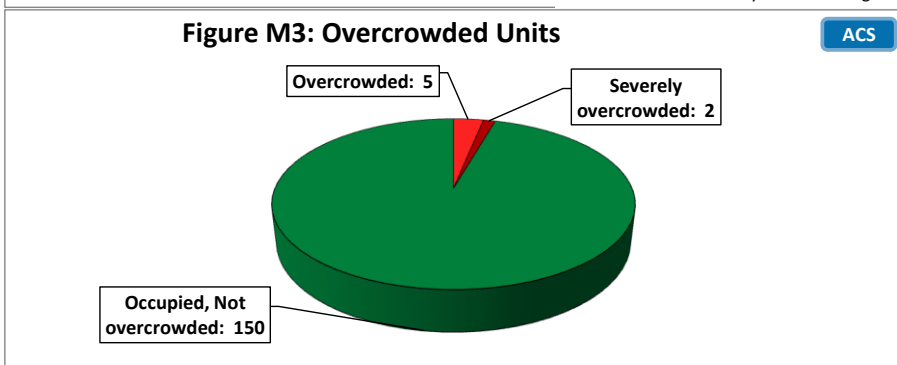
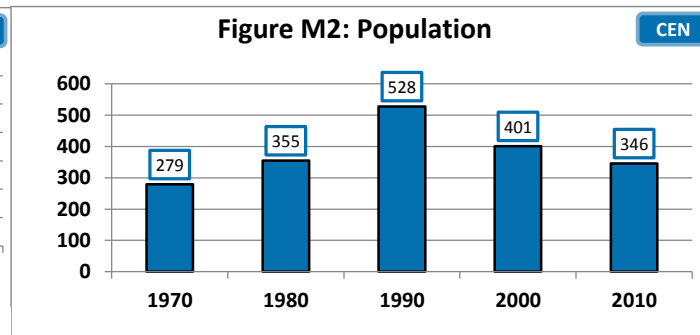
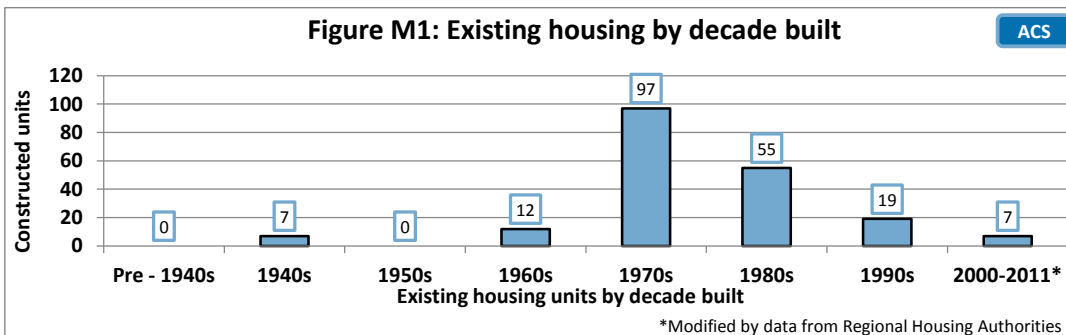


**Community Profile for:** McGrath city

**ANCSA Region** Doyon

**Regional Housing Authority** Interior Regional Housing Authority

**BEES Climate Zone (Heating Degree Days)** Zone 8 (14,574 HDD)



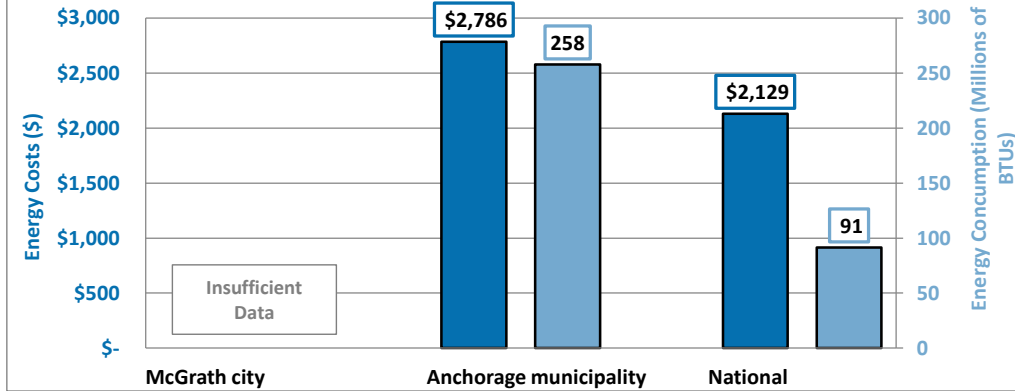
| McGrath city Housing Energy Characteristics |                   |                         |                          |              |                      |                                    |                     |          |                         |                               |
|---|-------------------|-------------------------|--------------------------|--------------|----------------------|------------------------------------|---------------------|----------|-------------------------|-------------------------------|
| Residential Unit Categories                 | Number of records | Avg Energy Rating Stars | Avg Energy Rating Points | Avg Sq. Feet | Avg. Ann Energy Cost | Avg. Ann Energy Use (million BTUs) | Avg. EUI (kBtus/SF) | Avg. ECI | Avg. Home Heating Index | % Tight Homes, No Ventilation |
| Pre-retrofit units                          | 12                | 3-star                  | 71.8                     | 1,435        | \$ 9,015             | 196                                | 132                 | \$6.73   | 6.4                     | 40%                           |
| Retrofit units                              | 0                 | NR                      | NR                       | NR           | NR                   | NR                                 | NR                  | NR       | NR                      | NR                            |
| New construction                            | 1                 | NR                      | NR                       | NR           | NR                   | NR                                 | NR                  | NR       | NR                      | NR                            |

| McGrath city Housing Envelope Characteristics |                   |        |           |                    |                    |                     |                  |                     |        |               |          |
|---|-------------------|--------|-----------|--------------------|--------------------|---------------------|------------------|---------------------|--------|---------------|----------|
| Residential Unit Categories                   | Number of Records | ACH 50 | Ceiling R | Above Grade Wall R | Below Grade Wall R | Above Grade Floor R | On Grade Floor R | Below Grade Floor R | Door U | Garage Door U | Window U |
| Pre-retrofit units                            | 12                | 7.6    | 25        | 15                 | NR                 | 26                  | NR               | NR                  | 0.25   | NR            | 0.46     |
| Retrofit units                                | 0                 | NR     | NR        | NR                 | NR                 | NR                  | NR               | NR                  | NR     | NR            | NR       |
| New construction                              | 1                 | NR     | NR        | NR                 | NR                 | NR                  | NR               | NR                  | NR     | NR            | NR       |

|           |     |    |    |    |    |    |    |      |      |      |
|-----------|-----|----|----|----|----|----|----|------|------|------|
| BEES 2009 | 7.0 | 38 | 30 | 15 | 38 | 15 | 15 | 0.22 | 0.22 | 0.22 |
| BEES 2012 | 4.0 | 48 | 30 | 15 | 38 | 15 | 15 | 0.22 | 0.22 | 0.22 |

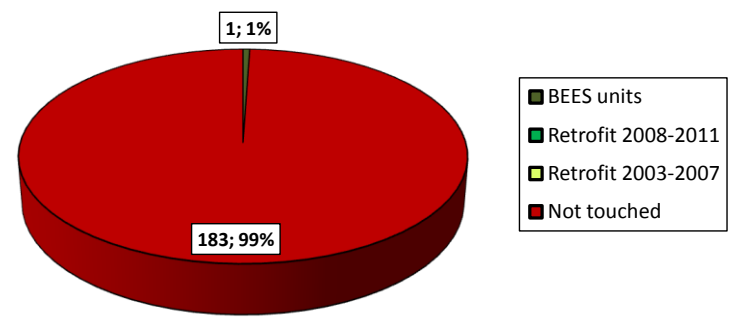
**Figure M5: Average Annual Home Energy Costs and Use**

MIX



**Figure M6: Housing Units Completing an AHFC Energy Program**

ARIS



**AFFORDABILITY - McGrath city**

|  |
|--|
| <b>Owner occupied House with Mortgage, Median Value</b>      |
| \$86,300   |
| <b>Owner-occupied House without a Mortgage, Median Value</b> |
| \$100,000  |

| Median Annual Household Income |                  |
|--------------------------------|------------------|
| Housing Units                  | Household Income |
| All-occupied                   | \$ 69,821        |
| Renter-occupied                | \$ 75,000        |
| Owner-occupied                 | \$ 67,250        |
| w/ mortgage                    | \$ 76,250        |
| w/o mortgage                   | \$ 64,500        |

| Median Housing Costs           |          |           |
|--------------------------------|----------|-----------|
|                                | Monthly  | Annual    |
| All-occupied                   | \$ 796   | \$ 9,552  |
| Gross rent                     | \$ 827   | \$ 9,924  |
| Owner-occupied                 | \$ 588   | \$ 7,056  |
| Housing units w/ mortgage      | \$ 1,069 | \$ 12,828 |
| Housing units w/out a mortgage | \$ 467   | \$ 5,604  |

| Estimated Energy Prices as of January 2013 |         |
|--|---------|
| #1 Fuel oil cost (\$ / gallon)             | \$ 7.47 |
| Electricity with PCE (\$/kWh)              | \$ 0.28 |
| Electricity without PCE (\$/kWh)           | \$ 0.59 |

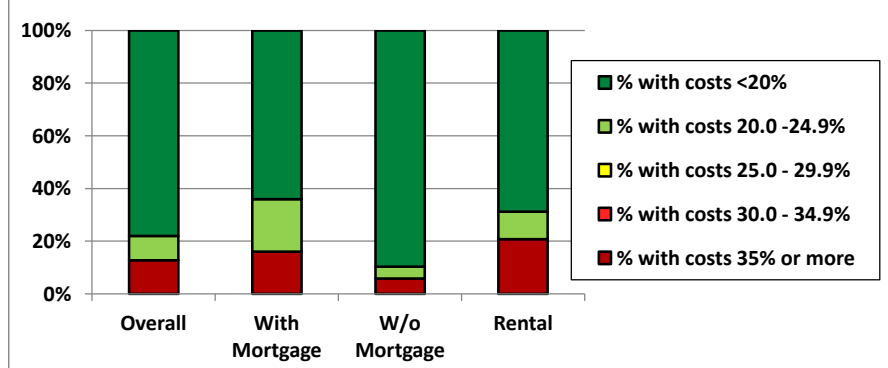
| Average Annual Energy Cost |          |
|----------------------------|----------|
| With PCE                   | NO PCE   |
| Without PCE                | \$10,813 |

| Housing Stock Estimates      | Number of Units |
|------------------------------|-----------------|
| All Housing                  | 197             |
| All Occupied Housing         | 157             |
| All Vacant housing           | 40              |
| Vacant Housing for Sale/Rent | 6               |

|                               |              |
|-------------------------------|--------------|
| <b>Avg % Income on Energy</b> | <b>15.5%</b> |
|-------------------------------|--------------|

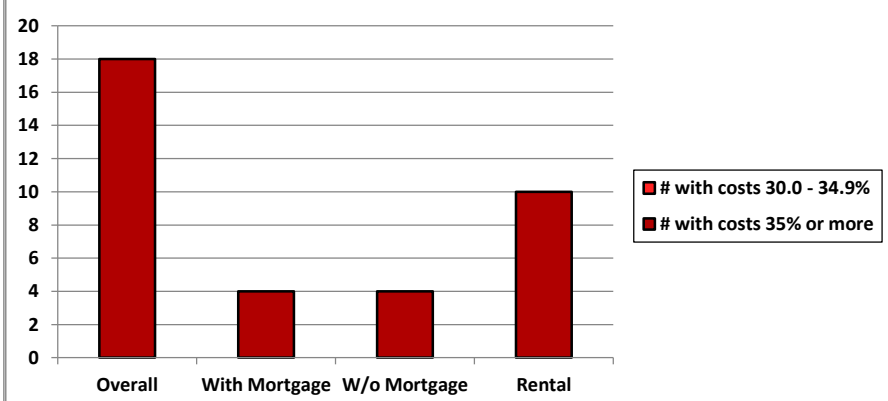
**Figure M7: Affordability - Housing Costs as a Percent of Income**

ACS



**Figure M8: Number of Cost-Burdened Housing Units**

ACS

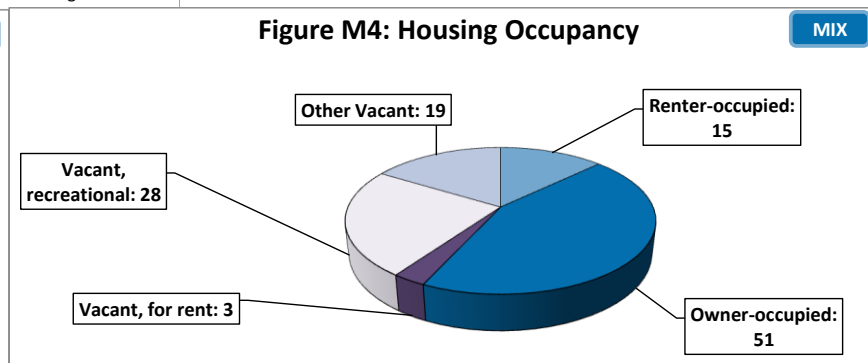
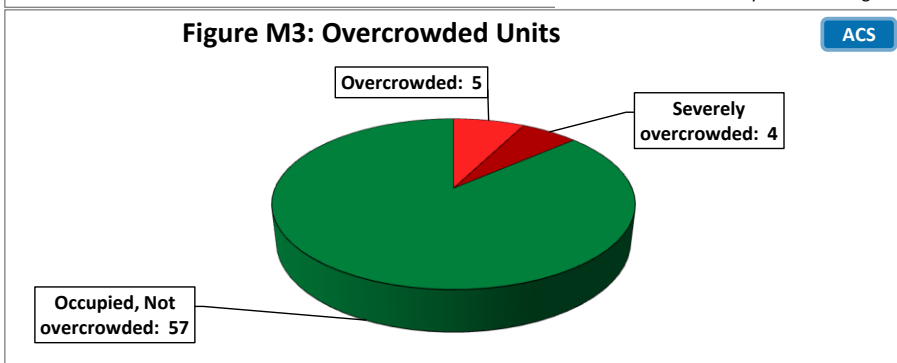
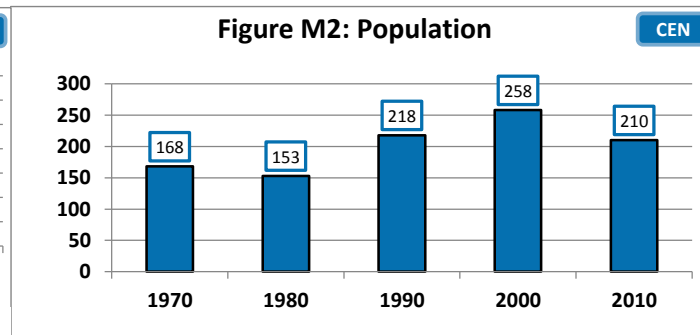
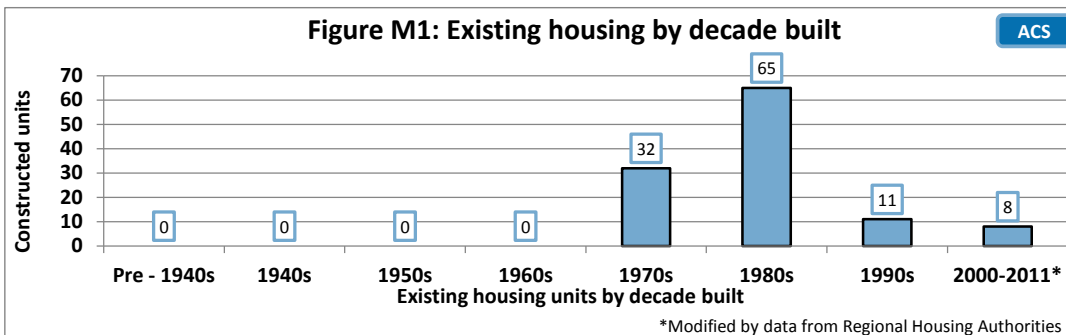


**Community Profile for:** Minto CDP

**ANCSA Region:** Doyon

**Regional Housing Authority:** Interior Regional Housing Authority

**BEES Climate Zone (Heating Degree Days):** Zone 8 (15,528 HDD)



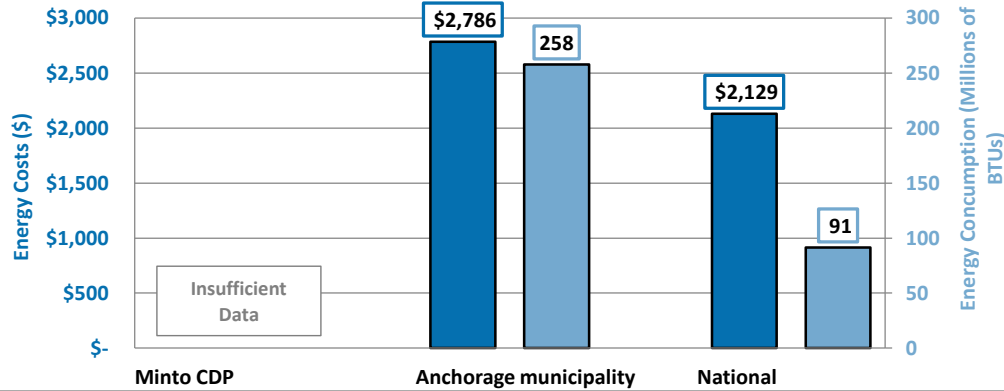
| Minto CDP Housing Energy Characteristics |                   |                         |                          |              |                      |                                    |                     |          |                         |                               |
|--|-------------------|-------------------------|--------------------------|--------------|----------------------|------------------------------------|---------------------|----------|-------------------------|-------------------------------|
| Residential Unit Categories              | Number of records | Avg Energy Rating Stars | Avg Energy Rating Points | Avg Sq. Feet | Avg. Ann Energy Cost | Avg. Ann Energy Use (million BTUs) | Avg. EUI (kBtus/SF) | Avg. ECI | Avg. Home Heating Index | % Tight Homes, No Ventilation |
| Pre-retrofit units                       | 23                | 4-star                  | 79.1                     | 1,040        | \$ 3,084             | 98                                 | 94                  | \$2.97   | 5.4                     | 100%                          |
| Retrofit units                           | 23                | 3-star plus             | 76.6                     | 976          | \$ 3,739             | 107                                | 115                 | \$4.08   | 5.8                     | 56%                           |
| New construction                         | 1                 | NR                      | NR                       | NR           | NR                   | NR                                 | NR                  | NR       | NR                      | NR                            |

| Minto CDP Housing Envelope Characteristics |                   |        |           |                    |                    |                     |                  |                     |        |               |          |
|--|-------------------|--------|-----------|--------------------|--------------------|---------------------|------------------|---------------------|--------|---------------|----------|
| Residential Unit Categories                | Number of Records | ACH 50 | Ceiling R | Above Grade Wall R | Below Grade Wall R | Above Grade Floor R | On Grade Floor R | Below Grade Floor R | Door U | Garage Door U | Window U |
| Pre-retrofit units                         | 23                | 8.8    | NR        | NR                 | NR                 | NR                  | NR               | NR                  | NR     | NR            | NR       |
| Retrofit units                             | 23                | 8.7    | 49        | 11                 | NR                 | 42                  | NR               | NR                  | 0.21   | NR            | 0.35     |
| New construction                           | 1                 | NR     | NR        | NR                 | NR                 | NR                  | NR               | NR                  | NR     | NR            | NR       |

|           |     |    |    |    |    |    |    |      |      |      |
|-----------|-----|----|----|----|----|----|----|------|------|------|
| BEES 2009 | 7.0 | 38 | 30 | 15 | 38 | 15 | 15 | 0.22 | 0.22 | 0.22 |
| BEES 2012 | 4.0 | 48 | 30 | 15 | 38 | 15 | 15 | 0.22 | 0.22 | 0.22 |

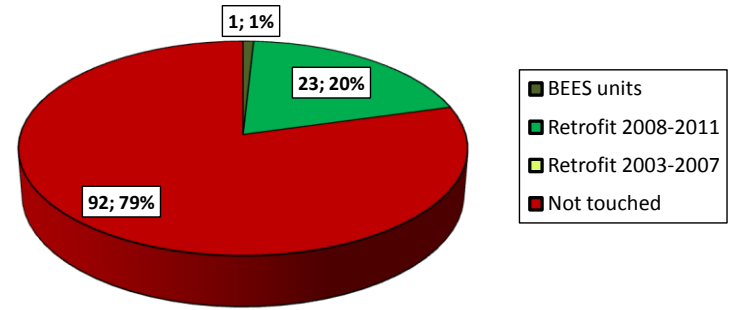
**Figure M5: Average Annual Home Energy Costs and Use**

MIX



**Figure M6: Housing Units Completing an AHFC Energy Program**

ARIS



**AFFORDABILITY - Minto CDP**

| Owner occupied House with Mortgage, Median Value      |
|---|
| NR  |
| Owner-occupied House without a Mortgage, Median Value |
| \$60,500  |

| Median Annual Household Income |                  |
|--------------------------------|------------------|
| Housing Units                  | Household Income |
| All-occupied                   | \$ 23,333        |
| Renter-occupied                | \$ 19,250        |
| Owner-occupied                 | \$ 24,583        |
| w/ mortgage                    | \$ 56,250        |
| w/o mortgage                   | \$ 19,688        |

| Median Housing Costs           |         |          |
|--------------------------------|---------|----------|
|                                | Monthly | Annual   |
| All-occupied                   | \$ 448  | \$ 5,376 |
| Gross rent                     | \$ 600  | \$ 7,200 |
| Owner-occupied                 | \$ 439  | \$ 5,268 |
| Housing units w/ mortgage      | NR      | NR       |
| Housing units w/out a mortgage | \$ 418  | \$ 5,016 |

| Estimated Energy Prices as of January 2013 |         |
|--|---------|
| #1 Fuel oil cost (\$ / gallon)             | \$ 5.05 |
| Electricity with PCE (\$/kWh)              | \$ 0.21 |
| Electricity without PCE (\$/kWh)           | \$ 0.57 |

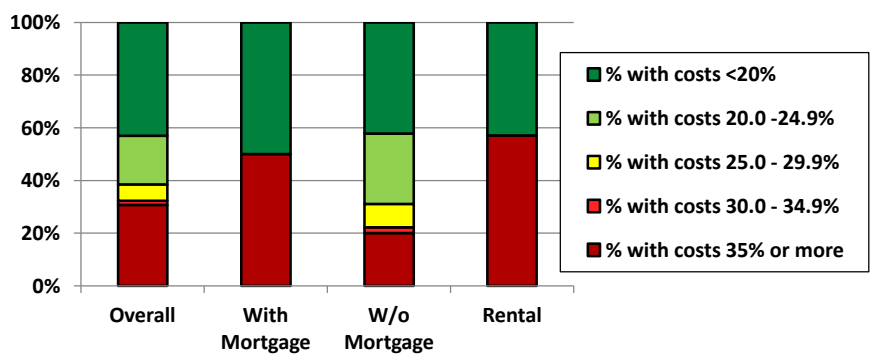
| Average Annual Energy Cost |         |
|----------------------------|---------|
| With PCE                   | NO PCE  |
| Without PCE                | \$3,440 |

| Housing Stock Estimates      | Number of Units |
|------------------------------|-----------------|
| All Housing                  | 116             |
| All Occupied Housing         | 66              |
| All Vacant housing           | 50              |
| Vacant Housing for Sale/Rent | 3               |

|                        |              |
|------------------------|--------------|
| Avg % Income on Energy | <b>14.7%</b> |
|------------------------|--------------|

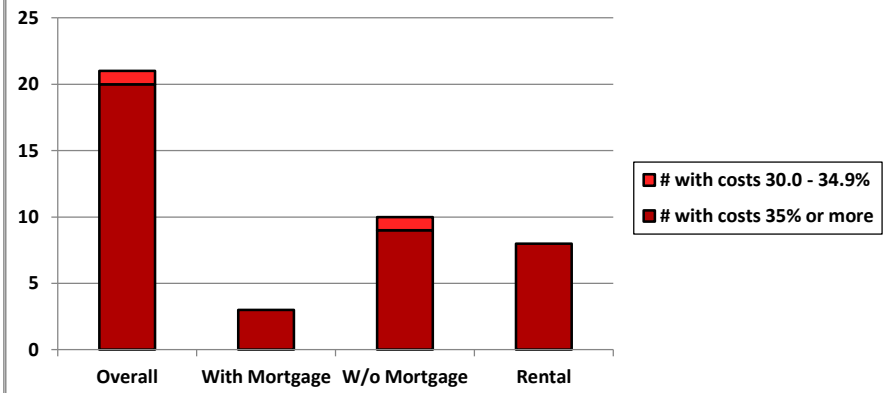
**Figure M7: Affordability - Housing Costs as a Percent of Income**

ACS



**Figure M8: Number of Cost-Burdened Housing Units**

ACS



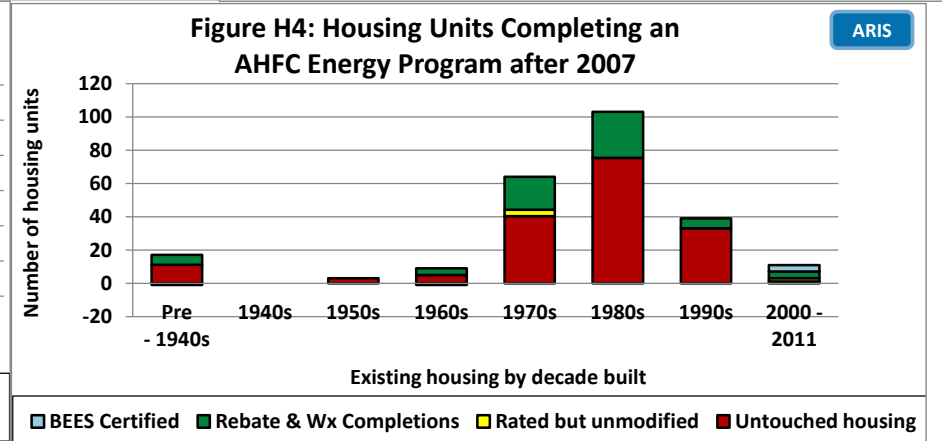
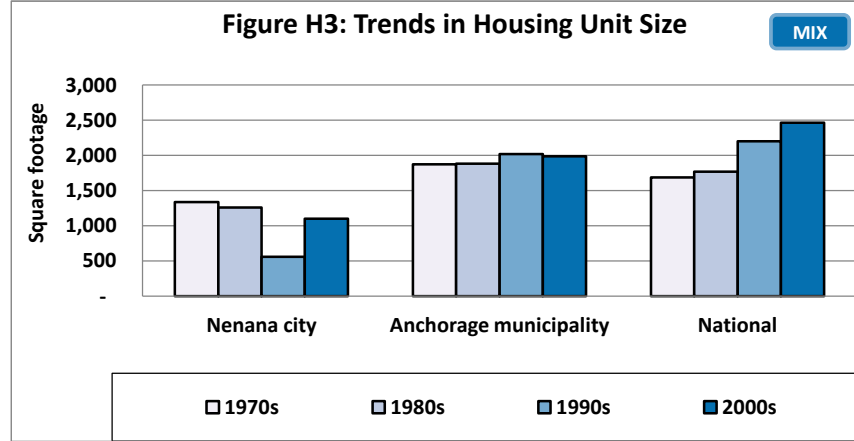
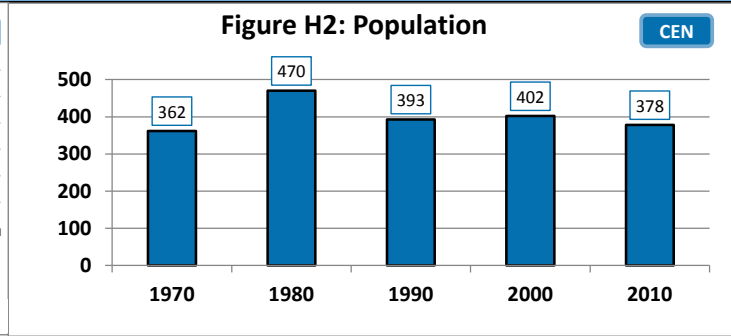
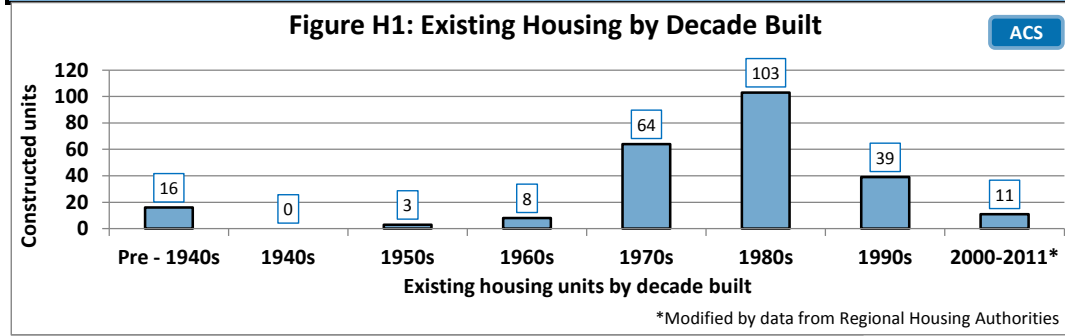
**Community Profile for:** Nenana city

**ANCSA Region:** Doyon

**Regional Housing Authority:** Interior Regional Housing Authority

**BEES Climate Zone (Heating Degree Days):** Zone 8 (14,539 HDD)

**COMMUNITY - Nenana city**



| Houses Lacking Complete Plumbing or Kitchen Facilities | Households |         |
|--|------------|---------|
|  | Number     | Percent |
| Lack complete plumbing                                 | 15         | 9%      |
| Lack complete kitchen                                  | 2          | 1%      |

|                                    |         |
|------------------------------------|---------|
| Avg Annual Energy Cost with PCE    | NO PCE  |
| Avg Annual Energy Cost without PCE | \$5,734 |

| Weatherization Program Retrofits (funding increased in 2008) |       |
|--|-------|
| Date Range   | Units |
| 2008-2011  | 53    |
| 2003-2007  | 15    |
| 1990-2002  | 62    |

| Estimated Total Annual Community Space Heating Fuel Use |         |           |
|---|---------|-----------|
| Fuel Oil  | 113,559 | (gallons) |
| Nat Gas   | -       | (ccf)     |
| Electricity   | 212,191 | (kWh)     |
| Wood  | 659     | (cords)   |
| Propane   | -       | (gallons) |
| Coal  | -       | (tons)    |

| Estimated Energy Prices as of January 2013 |        |
|--|--------|
| #1 Fuel oil cost (\$ / gallon)             | \$4.28 |
| Electricity with PCE (\$/kWh)              | No PCE |
| Electricity cost without PCE (\$/kWh)      | \$0.20 |

| Housing Stock Estimates         | Number of Units |
|---------------------------------|-----------------|
| All Housing                     | 244             |
| All Occupied Housing            | 175             |
| All Vacant housing              | 69              |
| Vacant Housing for Sale or Rent | 9               |

OVERCROWDING & VENTILATION - Nenana city

Figure H5: Overcrowded Units

ACS

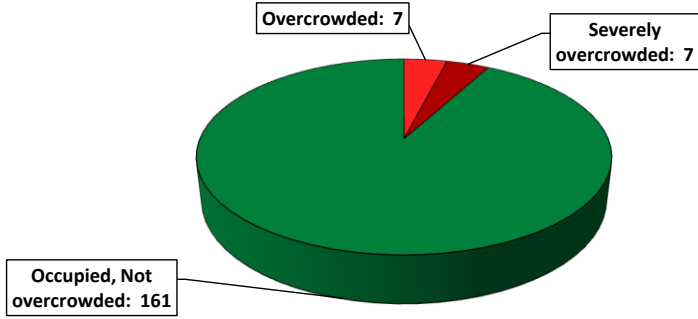


Figure H6: Housing Occupancy

MIX

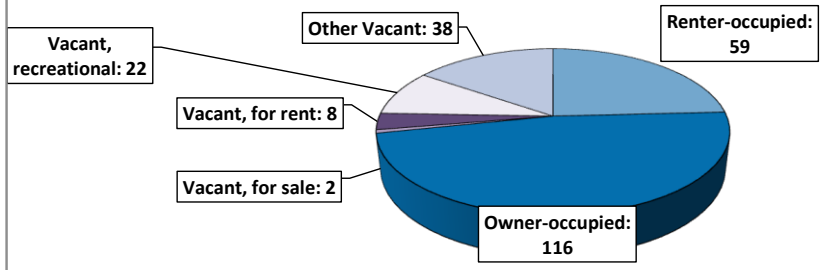


Figure H7: Average Air-Tightness of Current Homes by Decade Built

ARIS

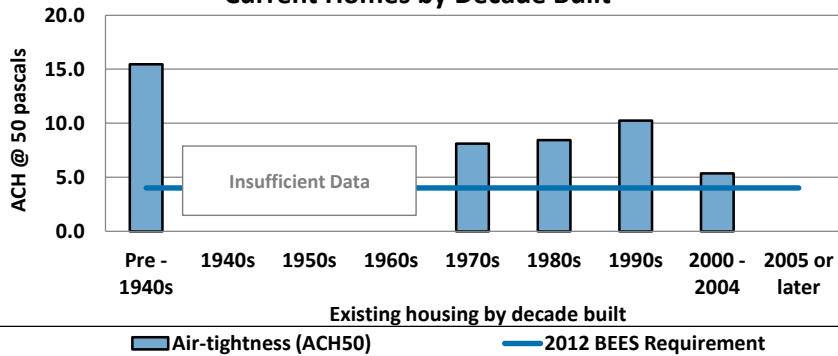


Figure H8: Existing Ventilation Type by Decade Built

ARIS

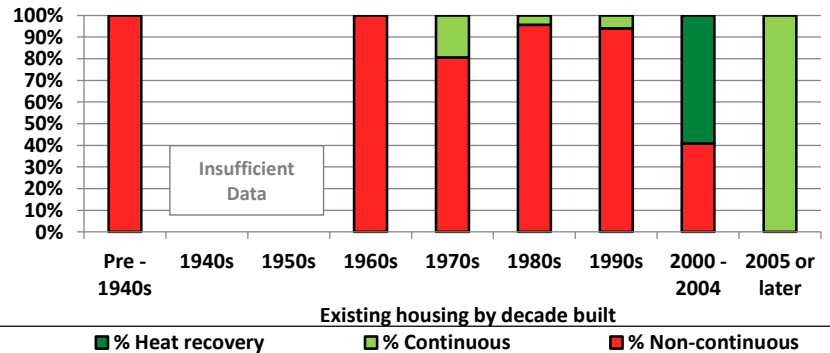


Figure H9: Percent of Housing Stock at High Risk of Moisture and Air Quality Problems

ARIS

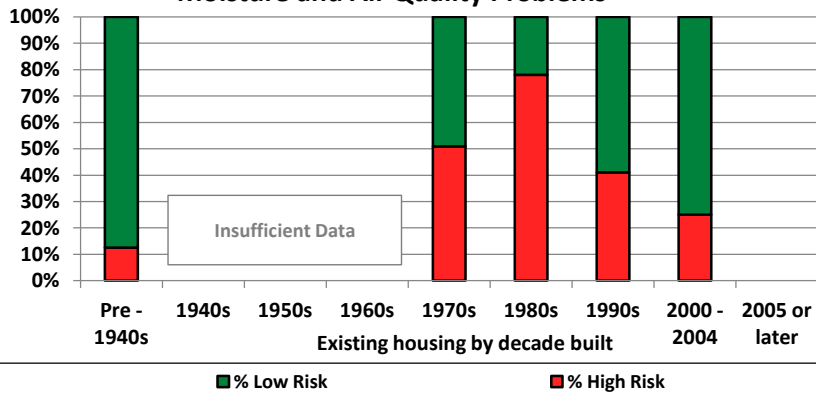
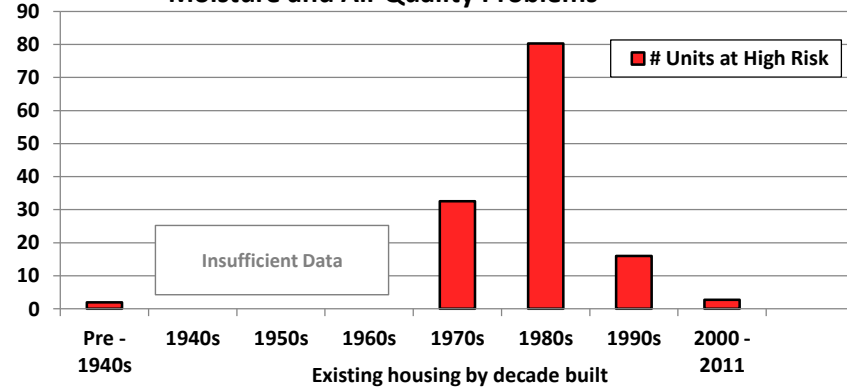


Figure H10: Quantity of Housing Stock at High Risk of Moisture and Air Quality Problems

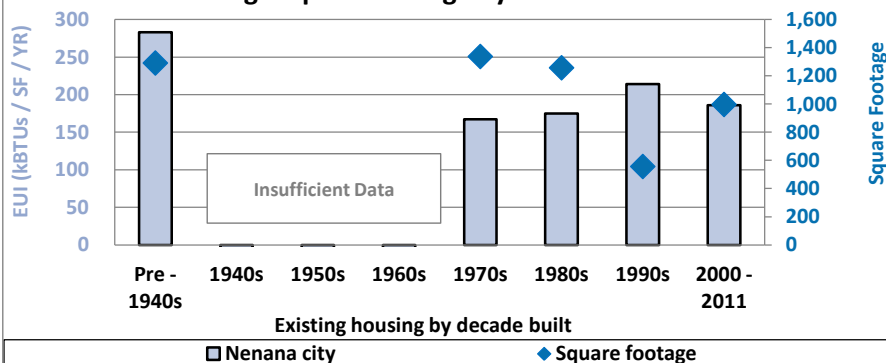
ARIS



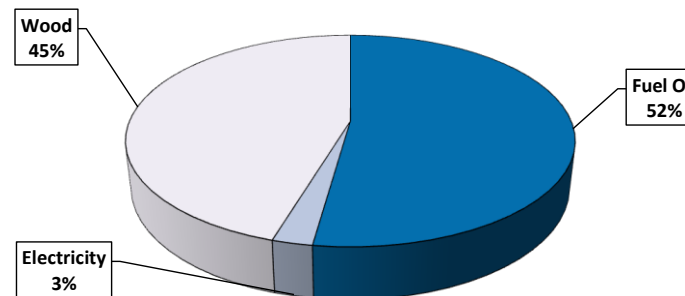


| ENERGY - Nenana city   |                   |                         |                          |              |                         |                                       |  |     |            |                     |                    |                         |
|--|-------------------|-------------------------|--------------------------|--------------|-------------------------|---------------------------------------|--|-----|------------|---------------------|--------------------|-------------------------|
| Current Nenana city Housing Energy Characteristics By Decade Built |                   |                         |                          |              |                         |                                       |  |     |            |                     |                    |                         |
| Current Residential Units by Year Built                            | Number of Records | Avg Energy Rating Stars | Avg Energy Rating Points | Avg Sq. Feet | Avg. Annual Energy Cost | Avg. Annual Energy Use (million BTUs) | Avg Ann Energy by End Use (million Btus) |     |            | Avg. EUI (kBtus/SF) | Avg. ECI (\$ / SF) | Avg. Home Heating Index |
|  |                   |                         |                          |              |                         |                                       | Space Heating                            | DHW | Appliances |                     |                    |                         |
| OVERALL  | 89                | 2-star                  | 59.4                     | 1,152        | \$ 5,734                | 201                                   | 158                                      | 14  | 29         | 186                 | \$ 5.62            | 10.5                    |
| Pre- 1940  | 7                 | 2-star                  | 52.1                     | 1,291        | \$ 7,931                | 392                                   | 350                                      | 14  | 28         | 283                 | \$ 5.85            | 17.4                    |
| 1940- 49   | 0                 | NR                      | NR                       | NR           | NR                      | NR                                    | NR                                       | NR  | NR         | NR                  | NR                 | NR                      |
| 1950- 59   | 0                 | NR                      | NR                       | NR           | NR                      | NR                                    | NR                                       | NR  | NR         | NR                  | NR                 | NR                      |
| 1960- 69   | 5                 | NR                      | NR                       | NR           | NR                      | NR                                    | NR                                       | NR  | NR         | NR                  | NR                 | NR                      |
| 1970- 79   | 28                | 2-star plus             | 64.6                     | 1,337        | \$ 7,461                | 209                                   | 167                                      | 14  | 28         | 167                 | \$ 6.16            | 9.3                     |
| 1980- 89   | 32                | 2-star plus             | 65.5                     | 1,257        | \$ 5,624                | 196                                   | 151                                      | 17  | 27         | 175                 | \$ 4.98            | 9.7                     |
| 1990- 99   | 6                 | 1-star                  | 33.5                     | 556          | \$ 2,458                | 135                                   | 106                                      | 0   | 29         | 214                 | \$ 5.59            | 12.3                    |
| 2000- 2004   | 8                 | 3-star                  | 71.4                     | 1,100        | \$ 5,132                | 185                                   | 137                                      | 20  | 28         | 186                 | \$ 5.35            | 10.2                    |
| 2005 or later  | 4                 | 3-star plus             | 76.3                     | 788          | NR                      | 142                                   | 102                                      | 20  | 20         | 185                 | \$ 5.80            | 9.5                     |

**Figure H11: Current Average Energy Use Intensity and Average Square Footage by Decade Built**



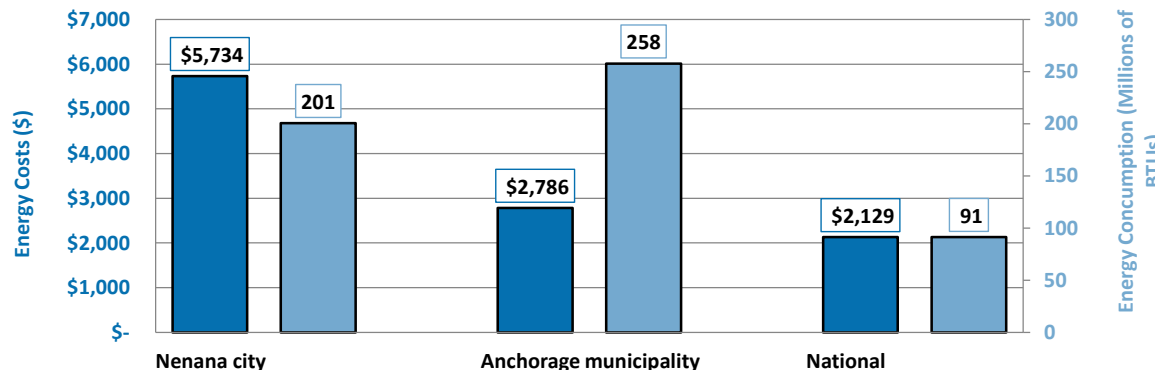
**Figure H12: Percent of Total Residential Space Heating Energy by Fuel Type**



| Current Nenana city Housing Envelope Characteristics By Decade Built |                   |        |           |                    |                    |                     |                  |                     |        |               |          |
|--|-------------------|--------|-----------|--------------------|--------------------|---------------------|------------------|---------------------|--------|---------------|----------|
| Current Residential Units by Year Built                              | Number of Records | ACH 50 | Ceiling R | Above Grade Wall R | Below Grade Wall R | Above Grade Floor R | On Grade Floor R | Below Grade Floor R | Door U | Garage Door U | Window U |
| OVERALL  | 89                | 11.3   | 28        | 14                 | 6                  | 21                  | 3                | 3                   | 0.32   | 0.20          | 0.49     |
| Pre- 1940  | 7                 | 15.5   | 29        | 9                  | NR                 | NR                  | NR               | NR                  | 0.23   | NR            | 0.52     |
| 1940- 49   | 0                 | NR     | NR        | NR                 | NR                 | NR                  | NR               | NR                  | NR     | NR            | NR       |
| 1950- 59   | 0                 | NR     | NR        | NR                 | NR                 | NR                  | NR               | NR                  | NR     | NR            | NR       |
| 1960- 69   | 5                 | NR     | NR        | NR                 | NR                 | NR                  | NR               | NR                  | NR     | NR            | NR       |
| 1970- 79   | 28                | 8.1    | 30        | 13                 | 6                  | NR                  | 3                | 3                   | 0.29   | 0.20          | 0.53     |
| 1980- 89   | 32                | 8.4    | 27        | 17                 | 7                  | 23                  | 3                | 3                   | 0.31   | NR            | 0.46     |
| 1990- 99   | 6                 | 10.2   | 23        | 11                 | NR                 | 13                  | NR               | NR                  | 0.32   | NR            | 0.48     |
| 2000- 2004   | 8                 | 5.3    | 46        | 15                 | NR                 | NR                  | 3                | NR                  | 0.29   | NR            | 0.41     |
| 2005 or later  | 4                 | NR     | NR        | NR                 | NR                 | NR                  | NR               | NR                  | NR     | NR            | NR       |
| BEES 2009 - Climate Zone 8   |                   | 7.0    | 38        | 30                 | 15                 | 38                  | 15               | 15                  | 0.22   | 0.22          | 0.22     |
| BEES 2012 - Climate Zone 8   |                   | 4.0    | 48        | 30                 | 15                 | 38                  | 15               | 15                  | 0.22   | 0.22          | 0.22     |

AFFORDABILITY - Nenana city

Figure H13: Average Annual Home Energy Costs and Use



| Housing Information | Avg Household Size (# of people) |
|---------------------|----------------------------------|
| All-occupied        | 2.6                              |
| Owner-occupied      | 2.8                              |
| renter-occupied     | 2.2                              |

| Owner-occupied House with Mortgage, Median Value |
|--|
| \$123,400  |

| Owner-occupied House without a Mortgage, Median Value |
|---|
| \$58,700  |

| Median Annual Household Income |                  |
|--------------------------------|------------------|
| Housing Units                  | Household Income |
| All-occupied                   | \$ 52,250        |
| Renter-occupied                | \$ 23,281        |
| Owner-occupied                 | \$ 61,364        |
| w/ mortgage                    | \$ 92,917        |
| w/o mortgage                   | \$ 60,208        |

| Median Housing Costs           |          |           |
|--------------------------------|----------|-----------|
|                                | Monthly  | Annual    |
| All-occupied                   | \$ 621   | \$ 7,452  |
| Gross rent                     | \$ 506   | \$ 6,072  |
| Owner-occupied                 | \$ 700   | \$ 8,400  |
| Housing units w/ mortgage      | \$ 1,264 | \$ 15,168 |
| Housing units w/out a mortgage | \$ 404   | \$ 4,848  |

|  |              |
|--|--------------|
| Avg % of Median Income Spent on Energy | <b>11.0%</b> |
|--|--------------|

Figure H14: Affordability - Housing Costs as a Percent of Income

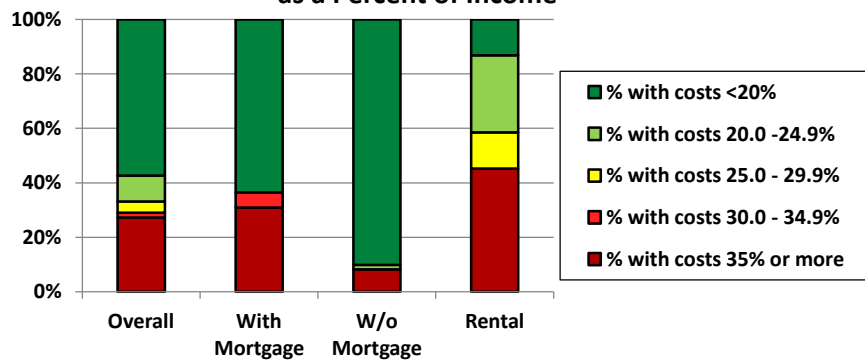
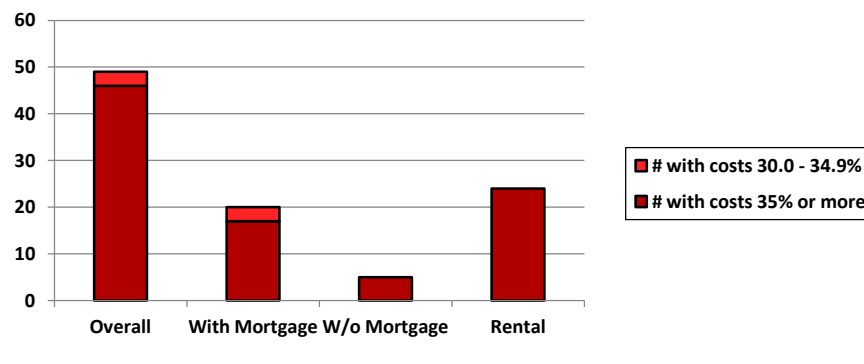
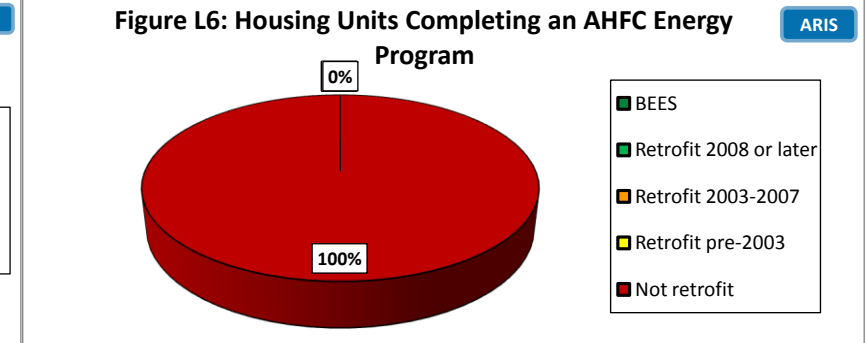
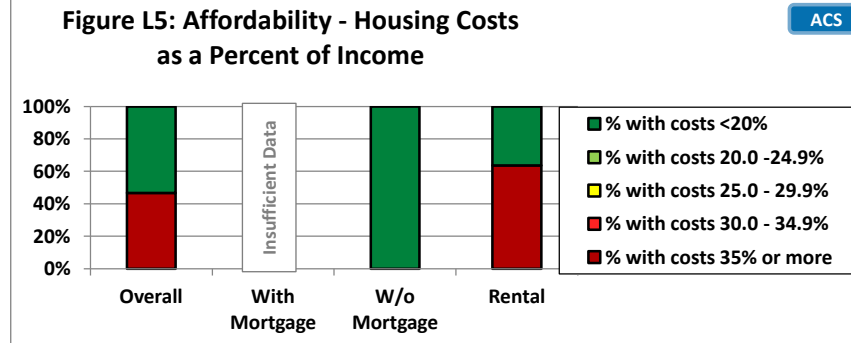
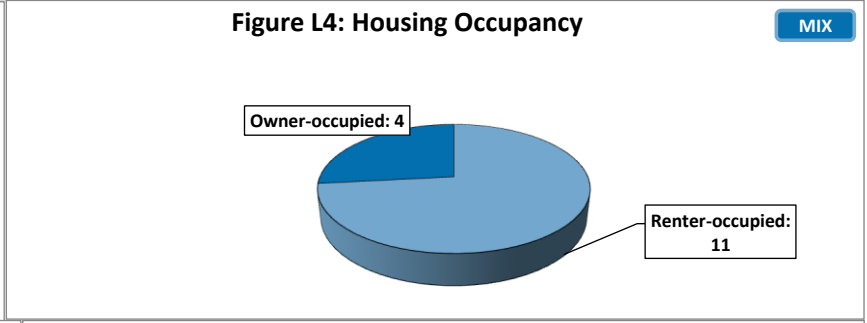
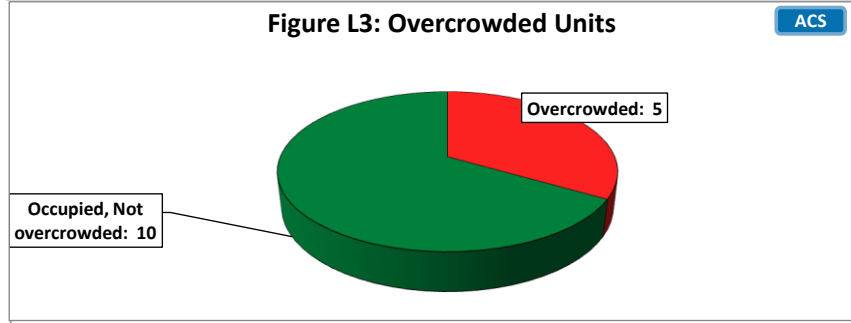
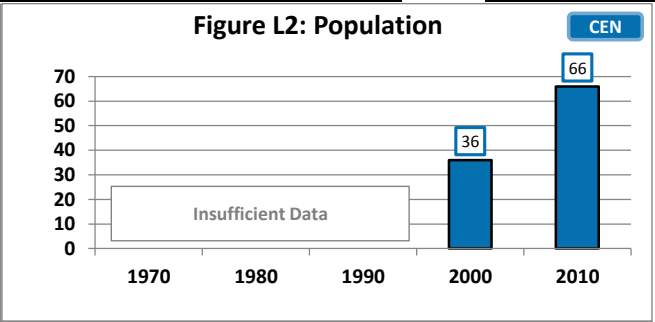
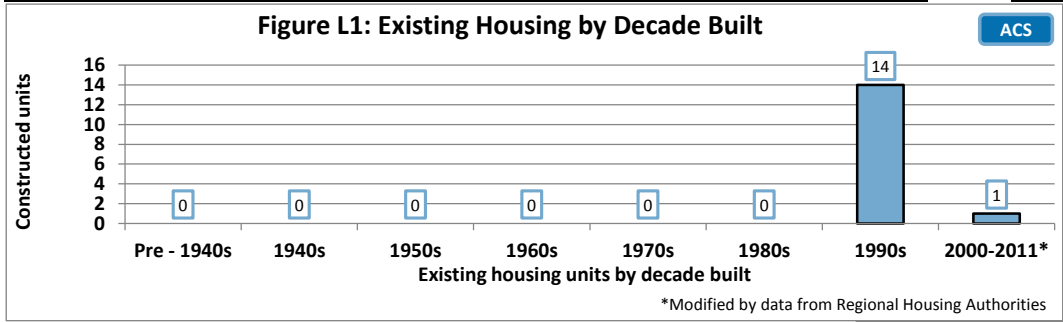


Figure H15: Number of Cost-Burdened Housing Units



Community Profile for: **New Allakaket CDP** ANCSA Region: **Doyon** Climate Zone: **8**



| Owner-occupied House with Mortgage, Median Value |
|--|
| NR   |

| Owner-occupied House without a Mortgage, Median Value |
|---|
| NR  |

| Estimated Energy Prices as of January 2013 |         |
|--|---------|
| #1 Fuel oil cost (\$ / gallon)             | No Data |
| Electricity with PCE (\$/kWh)              | No Data |
| Electricity without PCE (\$/kWh)           | No Data |

| Median Annual Household Income |                  |
|--------------------------------|------------------|
| Housing Units                  | Household Income |
| All-occupied                   | \$ 51,250        |
| Renter-occupied                | \$ 8,750         |
| Owner-occupied w/ mortgage     | NR               |
| Owner-occupied w/o mortgage    | \$ 63,333        |

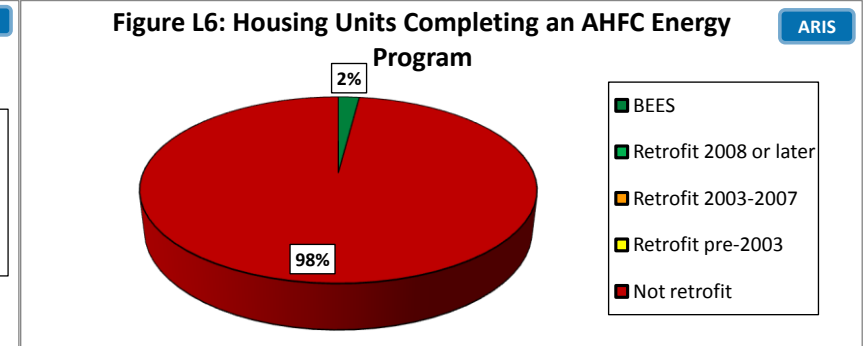
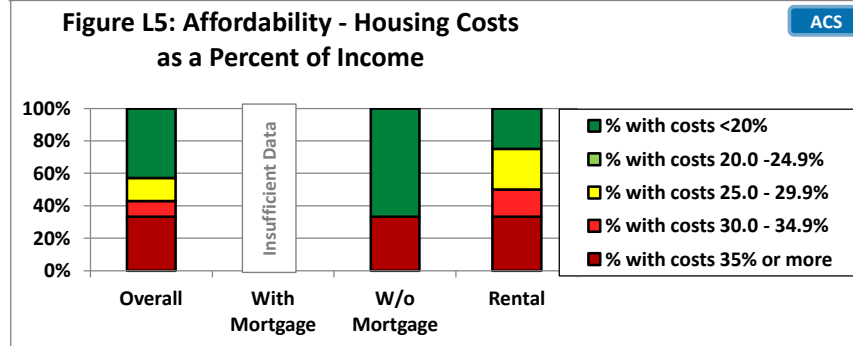
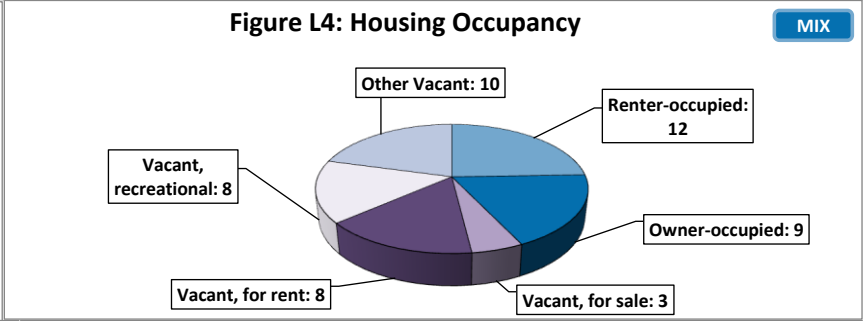
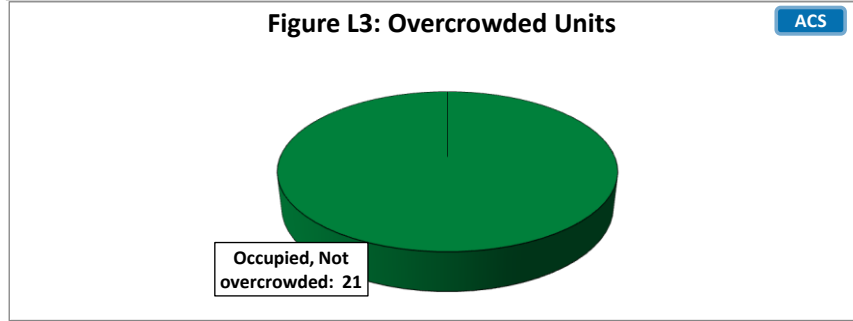
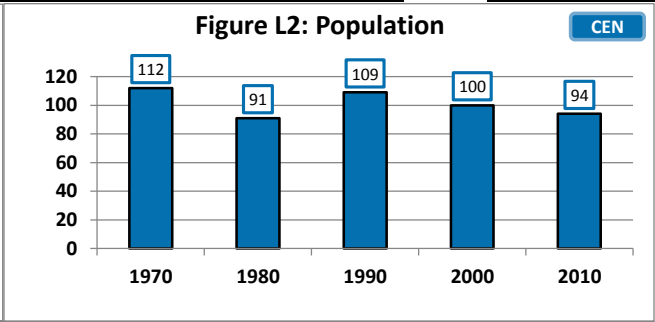
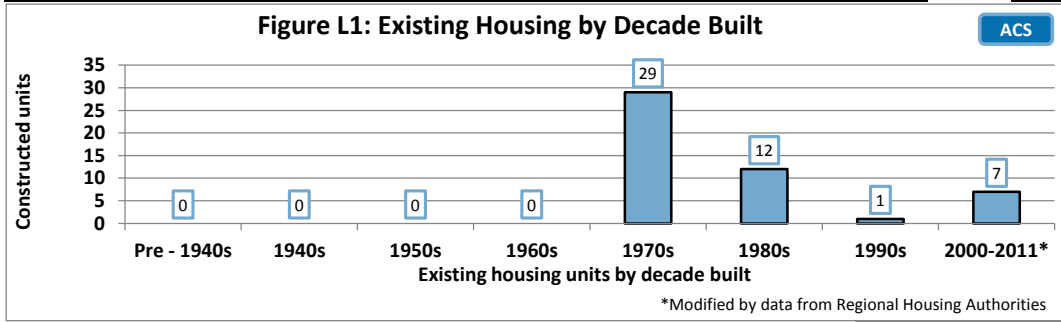
| Housing Stock Estimates |                 |
|-------------------------|-----------------|
| Housing Stock Estimates | Number of Units |
| All Housing             | 15              |
| All Occupied Housing    | 15              |
| All Vacant housing      | 0               |

| Median Housing Costs           |         |          |
|--------------------------------|---------|----------|
|                                | Monthly | Annual   |
| All-occupied                   | \$ 485  | \$ 5,820 |
| Gross rent                     | \$ 495  | \$ 5,940 |
| Owner-occupied                 | \$ 367  | \$ 4,404 |
| Housing units w/ mortgage      | NR      | NR       |
| Housing units w/out a mortgage | \$ 383  | \$ 4,596 |

**Community Profile for:** Nikolai city

**ANCSA Region:** Doyon

**Climate Zone:** 8



| Owner-occupied House with Mortgage, Median Value |
|--|
| NR   |

| Owner-occupied House without a Mortgage, Median Value |
|---|
| \$58,300  |

| Estimated Energy Prices as of January 2013 |         |
|--|---------|
| #1 Fuel oil cost (\$ / gallon)             | \$ 7.50 |
| Electricity with PCE (\$/kWh)              | \$ 0.25 |
| Electricity without PCE (\$/kWh)           | \$ 0.80 |

| Median Annual Household Income |                  |
|--------------------------------|------------------|
| Housing Units                  | Household Income |
| All-occupied                   | \$ 17,708        |
| Renter-occupied                | \$ 11,667        |
| Owner-occupied                 | \$ 18,125        |
| w/ mortgage                    | NR               |
| w/o mortgage                   | \$ 18,125        |

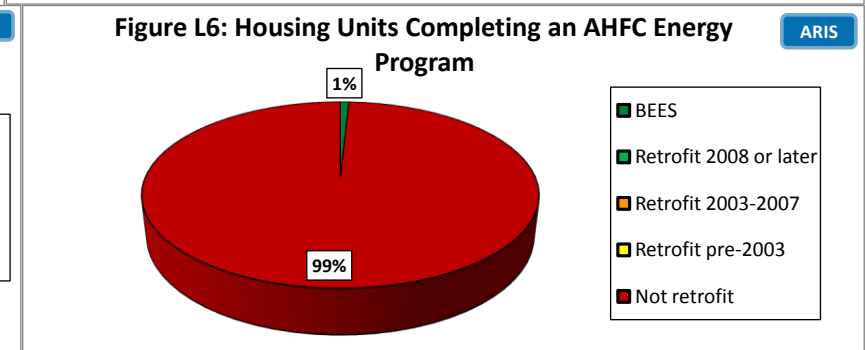
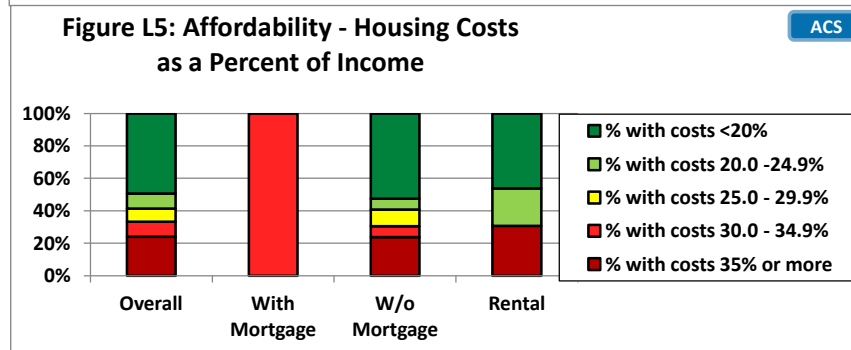
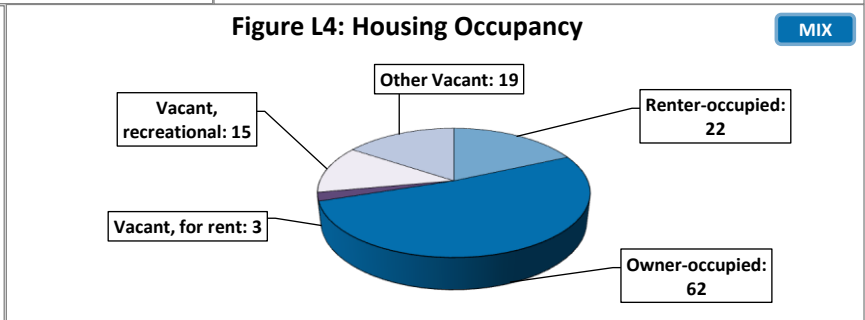
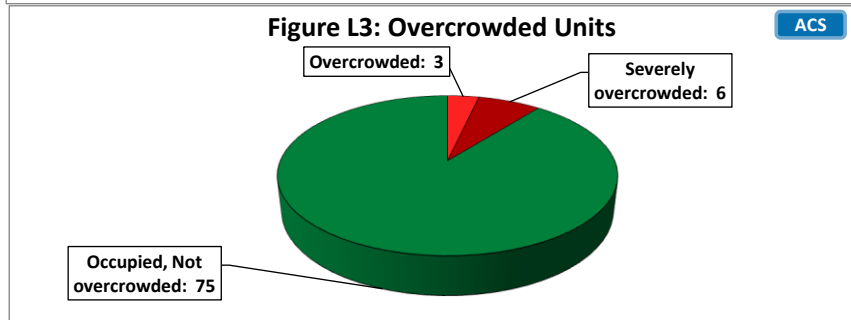
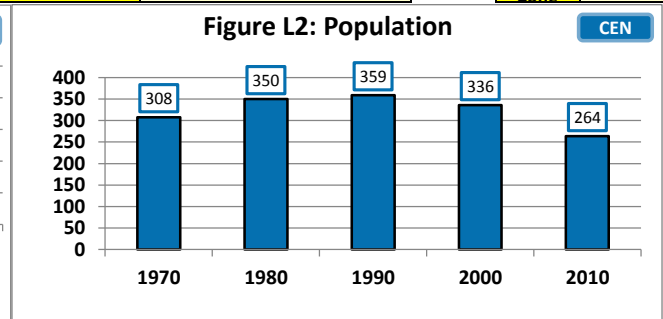
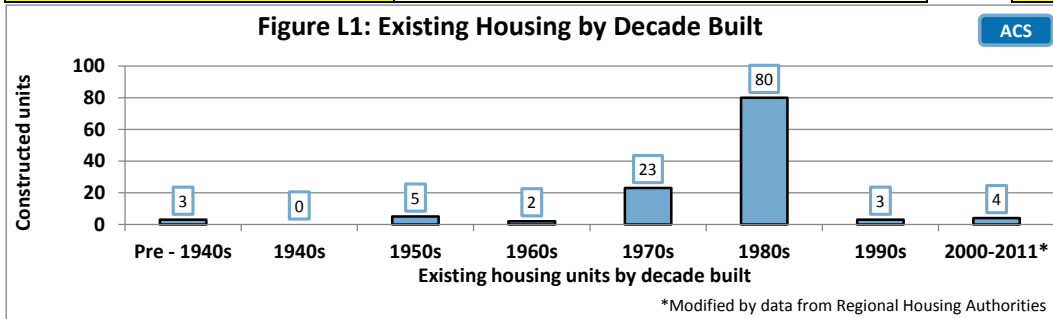
| Housing Stock Estimates |                 |
|-------------------------|-----------------|
| Housing Stock Estimates | Number of Units |
| All Housing             | 49              |
| All Occupied Housing    | 21              |
| All Vacant housing      | 28              |

| Median Housing Costs           |         |          |
|--------------------------------|---------|----------|
|                                | Monthly | Annual   |
| All-occupied                   | \$ 225  | \$ 2,700 |
| Gross rent                     | \$ 313  | \$ 3,756 |
| Owner-occupied                 | NR      | NR       |
| Housing units w/ mortgage      | NR      | NR       |
| Housing units w/out a mortgage | \$ 100  | \$ 1,200 |

**Community Profile for:** Nulato city

**ANCSA Region:** Doyon

**Climate Zone:** 8



| Owner-occupied House with Mortgage, Median Value |
|--|
| NR   |

| Owner-occupied House without a Mortgage, Median Value |
|---|
| \$97,500  |

| Estimated Energy Prices as of January 2013 |         |
|--|---------|
| #1 Fuel oil cost (\$ / gallon)             | \$ 5.70 |
| Electricity with PCE (\$/kWh)              | \$ 0.21 |
| Electricity without PCE (\$/kWh)           | \$ 0.52 |

| Median Annual Household Income |                  |
|--------------------------------|------------------|
| Housing Units                  | Household Income |
| All-occupied                   | \$ 30,833        |
| Renter-occupied                | \$ 36,250        |
| Owner-occupied w/ mortgage     | NR               |
| Owner-occupied w/o mortgage    | \$ 24,821        |

| Housing Stock Estimates |                 |
|-------------------------|-----------------|
| Housing Stock Estimates | Number of Units |
| All Housing             | 120             |
| All Occupied Housing    | 84              |
| All Vacant housing      | 36              |

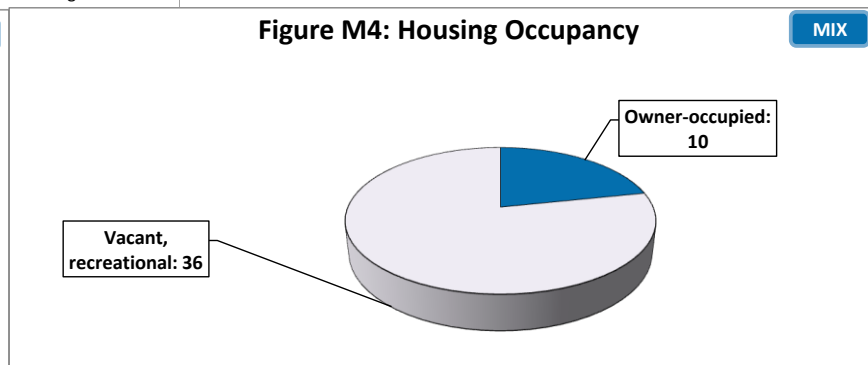
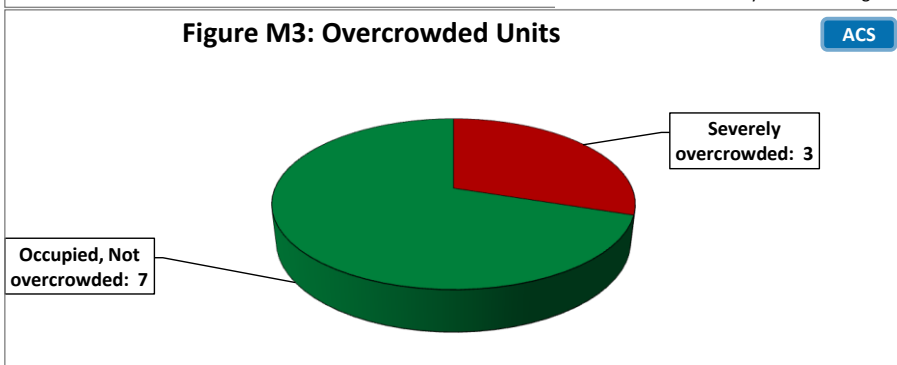
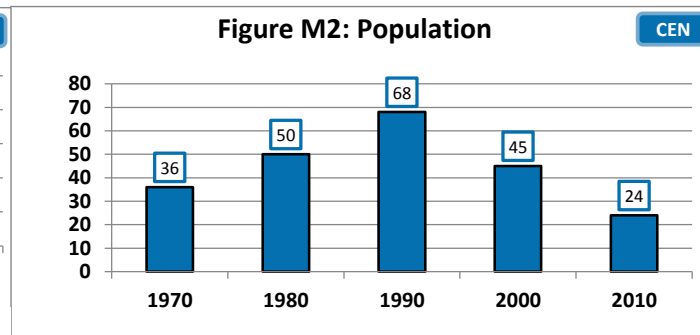
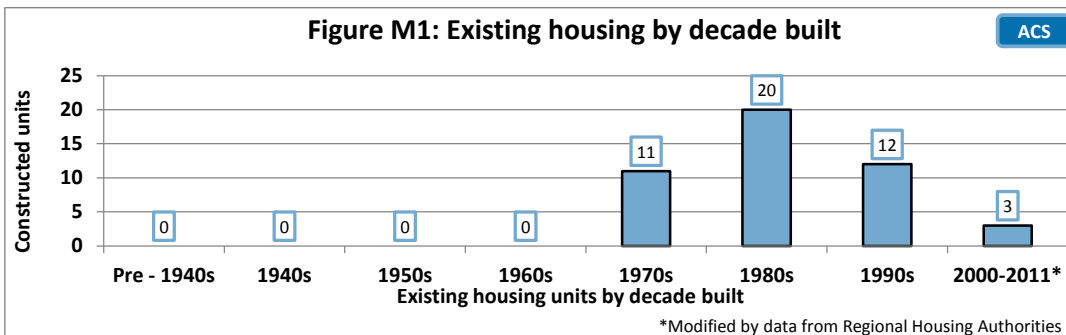
| Median Housing Costs           |         |          |
|--------------------------------|---------|----------|
|                                | Monthly | Annual   |
| All-occupied                   | \$ 526  | \$ 6,312 |
| Gross rent                     | \$ 608  | \$ 7,296 |
| Owner-occupied                 | \$ 532  | \$ 6,384 |
| Housing units w/ mortgage      | NR      | NR       |
| Housing units w/out a mortgage | \$ 525  | \$ 6,300 |

**Community Profile for:** Rampart CDP

**ANCSA Region:** Doyon

**Regional Housing Authority:** Interior Regional Housing Authority

**BEES Climate Zone (Heating Degree Days):** Zone 8 (15,528 HDD)



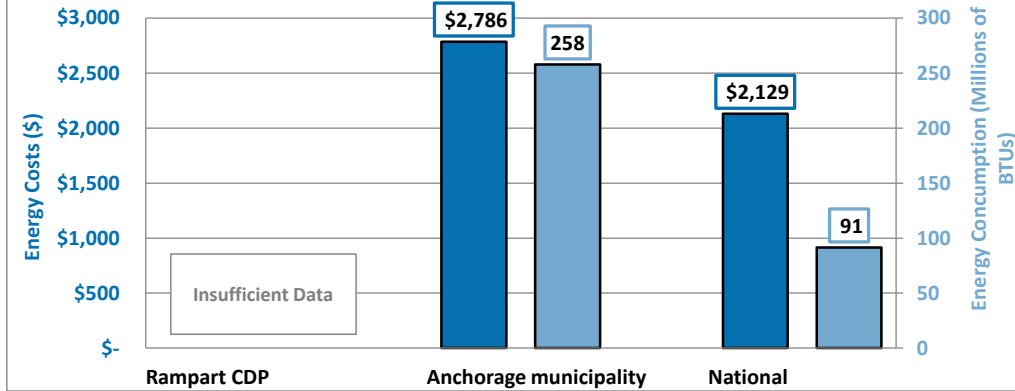
| Rampart CDP Housing Energy Characteristics |                   |                         |                          |              |                      |                                    |                     |          |                         |                               |
|--|-------------------|-------------------------|--------------------------|--------------|----------------------|------------------------------------|---------------------|----------|-------------------------|-------------------------------|
| Residential Unit Categories                | Number of records | Avg Energy Rating Stars | Avg Energy Rating Points | Avg Sq. Feet | Avg. Ann Energy Cost | Avg. Ann Energy Use (million BTUs) | Avg. EUI (kBtus/SF) | Avg. ECI | Avg. Home Heating Index | % Tight Homes, No Ventilation |
| Pre-retrofit units                         | 1                 | NR                      | NR                       | NR           | NR                   | NR                                 | NR                  | NR       | NR                      | NR                            |
| Retrofit units                             | 1                 | NR                      | NR                       | NR           | NR                   | NR                                 | NR                  | NR       | NR                      | NR                            |
| New construction                           | 0                 | NR                      | NR                       | NR           | NR                   | NR                                 | NR                  | NR       | NR                      | NR                            |

| Rampart CDP Housing Envelope Characteristics |                   |        |           |                    |                    |                     |                  |                     |        |               |          |
|--|-------------------|--------|-----------|--------------------|--------------------|---------------------|------------------|---------------------|--------|---------------|----------|
| Residential Unit Categories                  | Number of Records | ACH 50 | Ceiling R | Above Grade Wall R | Below Grade Wall R | Above Grade Floor R | On Grade Floor R | Below Grade Floor R | Door U | Garage Door U | Window U |
| Pre-retrofit units                           | 1                 | NR     | NR        | NR                 | NR                 | NR                  | NR               | NR                  | NR     | NR            | NR       |
| Retrofit units                               | 1                 | NR     | NR        | NR                 | NR                 | NR                  | NR               | NR                  | NR     | NR            | NR       |
| New construction                             | 0                 | NR     | NR        | NR                 | NR                 | NR                  | NR               | NR                  | NR     | NR            | NR       |

|           |     |    |    |    |    |    |    |      |      |      |
|-----------|-----|----|----|----|----|----|----|------|------|------|
| BEES 2009 | 7.0 | 38 | 30 | 15 | 38 | 15 | 15 | 0.22 | 0.22 | 0.22 |
| BEES 2012 | 4.0 | 48 | 30 | 15 | 38 | 15 | 15 | 0.22 | 0.22 | 0.22 |

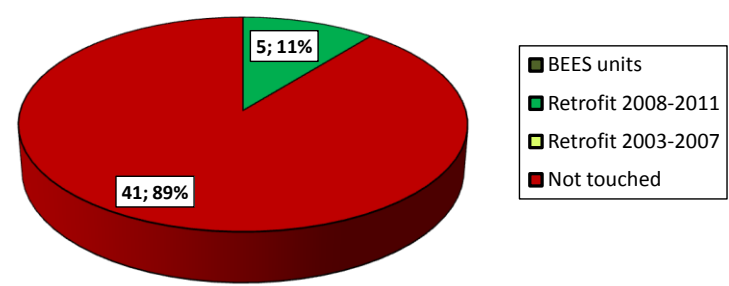
**Figure M5: Average Annual Home Energy Costs and Use**

MIX



**Figure M6: Housing Units Completing an AHFC Energy Program**

ARIS



**AFFORDABILITY - Rampart CDP**

| Owner occupied House with Mortgage, Median Value      |
|---|
| NR  |
| Owner-occupied House without a Mortgage, Median Value |
| \$48,300  |

| Median Annual Household Income |                  |
|--------------------------------|------------------|
| Housing Units                  | Household Income |
| All-occupied                   | \$ 36,667        |
| Renter-occupied                | NR               |
| Owner-occupied                 | \$ 36,667        |
| w/ mortgage                    | NR               |
| w/o mortgage                   | \$ 36,667        |

| Median Housing Costs           |         |          |
|--------------------------------|---------|----------|
|                                | Monthly | Annual   |
| All-occupied                   | \$ 317  | \$ 3,804 |
| Gross rent                     | NR      | NR       |
| Owner-occupied                 | \$ 333  | \$ 3,996 |
| Housing units w/ mortgage      | NR      | NR       |
| Housing units w/out a mortgage | \$ 317  | \$ 3,804 |

| Estimated Energy Prices as of January 2013 |         |
|--|---------|
| #1 Fuel oil cost (\$ / gallon)             | \$ 5.61 |
| Electricity with PCE (\$/kWh)              | No PCE  |
| Electricity without PCE (\$/kWh)           | \$ 1.00 |

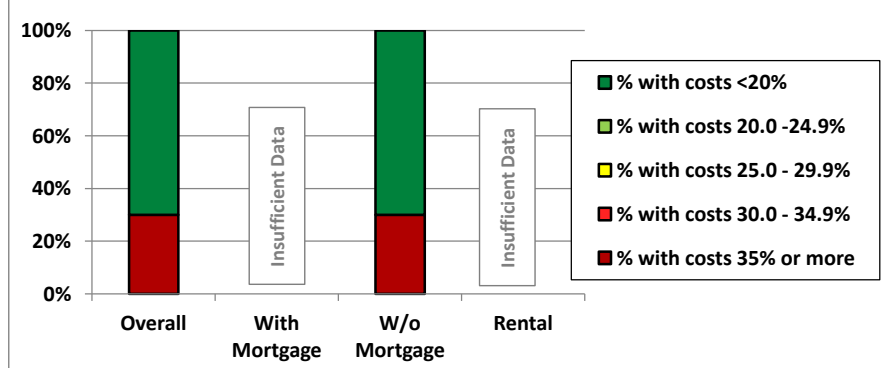
| Average Annual Energy Cost |        |
|----------------------------|--------|
| With PCE                   | NO PCE |
| Without PCE                | \$0    |

| Housing Stock Estimates      | Number of Units |
|------------------------------|-----------------|
| All Housing                  | 46              |
| All Occupied Housing         | 10              |
| All Vacant housing           | 36              |
| Vacant Housing for Sale/Rent | 0               |

|                        |      |
|------------------------|------|
| Avg % Income on Energy | 0.0% |
|------------------------|------|

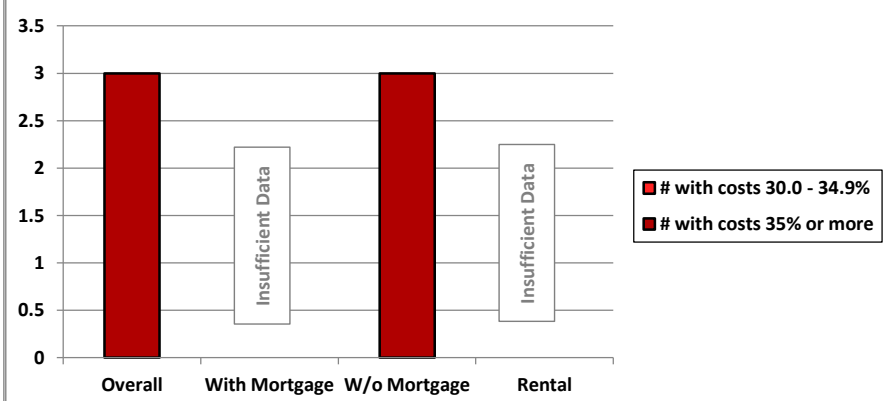
**Figure M7: Affordability - Housing Costs as a Percent of Income**

ACS



**Figure M8: Number of Cost-Burdened Housing Units**

ACS

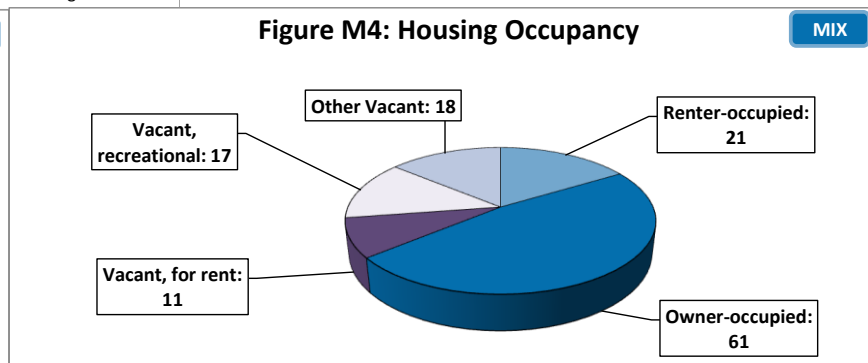
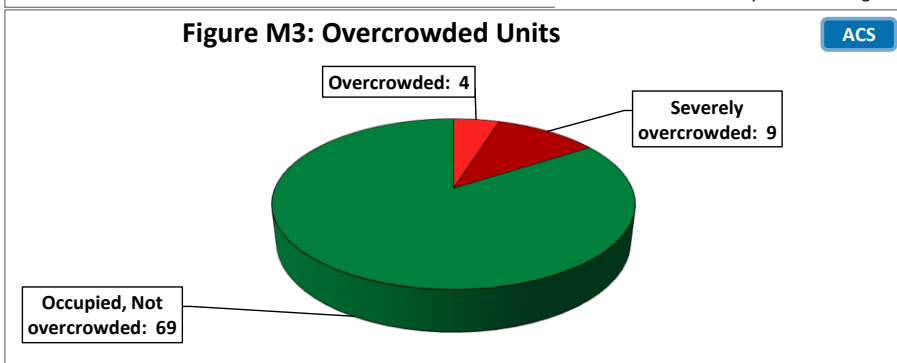
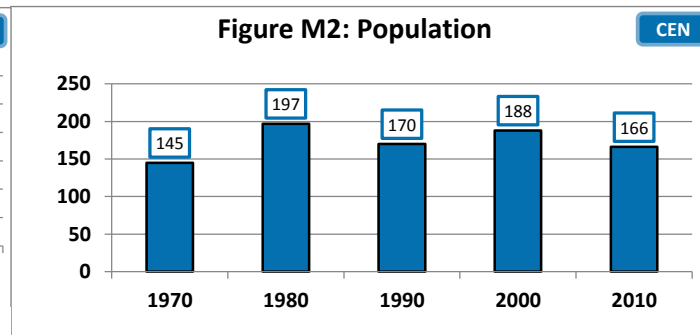
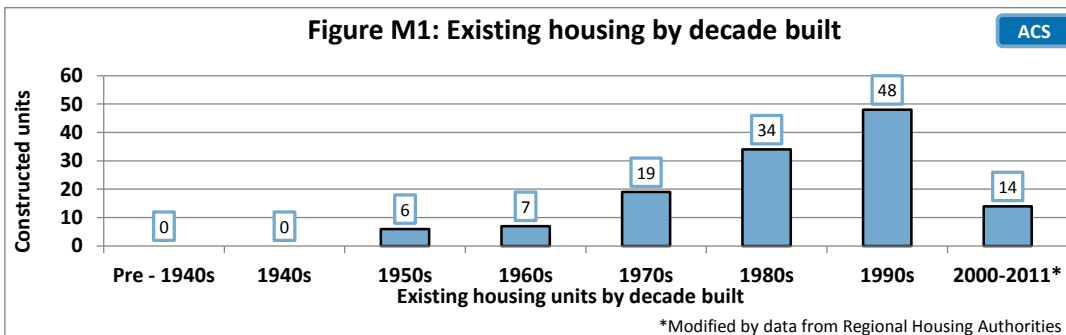


**Community Profile for:** Ruby city

**ANCSA Region** Doyon

**Regional Housing Authority** Interior Regional Housing Authority

**BEES Climate Zone (Heating Degree Days)** Zone 8 (13,858 HDD)



| Residential Unit Categories | Number of records | Avg Energy Rating Stars | Avg Energy Rating Points | Avg Sq. Feet | Avg. Ann Energy Cost | Avg. Ann Energy Use (million BTUs) | Avg. EUI (kBtus/SF) | Avg. ECI | Avg. Home Heating Index | % Tight Homes, No Ventilation |
|-----------------------------|-------------------|-------------------------|--------------------------|--------------|----------------------|------------------------------------|---------------------|----------|-------------------------|-------------------------------|
| Pre-retrofit units          | 17                | 2-star                  | 58.4                     | 384          | \$ 4,100             | 62                                 | 162                 | \$10.68  | 8.3                     | 100%                          |
| Retrofit units              | 17                | 4-star plus             | 87.1                     | 1,360        | \$ 6,445             | 115                                | 85                  | \$4.74   | 3.3                     | 0%                            |
| New construction            | 5                 | 5-star plus             | 92.4                     | 1,312        | \$ 6,086             | 91                                 | 70                  | \$4.64   | 2.1                     | 0%                            |

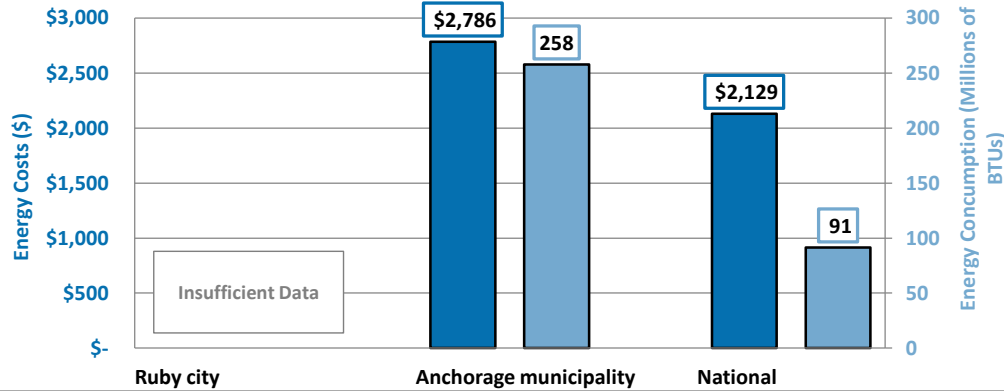
| Residential Unit Categories | Number of Records | ACH 50 | Ceiling R | Above Grade Wall R | Below Grade Wall R | Above Grade Floor R | On Grade Floor R | Below Grade Floor R | Door U | Garage Door U | Window U |
|-----------------------------|-------------------|--------|-----------|--------------------|--------------------|---------------------|------------------|---------------------|--------|---------------|----------|
| Pre-retrofit units          | 17                | 4.5    | NR        | NR                 | NR                 | NR                  | NR               | NR                  | NR     | NR            | NR       |
| Retrofit units              | 17                | 5.3    | NR        | NR                 | NR                 | NR                  | NR               | NR                  | NR     | NR            | NR       |
| New construction            | 5                 | 2.4    | 53        | 31                 | NR                 | 36                  | NR               | NR                  | 0.19   | NR            | 0.32     |
|                             |                   | NR     | NR        | NR                 | NR                 | NR                  | NR               | NR                  | NR     | NR            | NR       |

|           |     |    |    |    |    |    |    |      |      |      |
|-----------|-----|----|----|----|----|----|----|------|------|------|
| BEES 2009 | 7.0 | 38 | 30 | 15 | 38 | 15 | 15 | 0.22 | 0.22 | 0.22 |
| BEES 2012 | 4.0 | 48 | 30 | 15 | 38 | 15 | 15 | 0.22 | 0.22 | 0.22 |



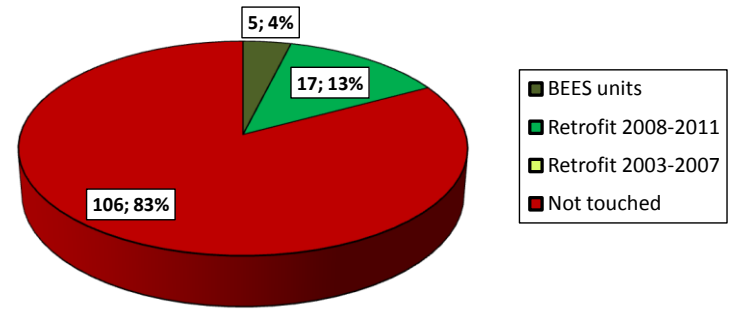
**Figure M5: Average Annual Home Energy Costs and Use**

MIX



**Figure M6: Housing Units Completing an AHFC Energy Program**

ARIS



**AFFORDABILITY - Ruby city**

| Owner occupied House with Mortgage, Median Value      |
|---|
| \$152,500   |
| Owner-occupied House without a Mortgage, Median Value |
| \$102,100   |

| Median Annual Household Income |                  |
|--------------------------------|------------------|
| Housing Units                  | Household Income |
| All-occupied                   | \$ 25,000        |
| Renter-occupied                | \$ 18,125        |
| Owner-occupied                 | \$ 28,750        |
| w/ mortgage                    | \$ 29,583        |
| w/o mortgage                   | \$ 22,083        |

| Median Housing Costs           |         |          |
|--------------------------------|---------|----------|
|                                | Monthly | Annual   |
| All-occupied                   | \$ 496  | \$ 5,952 |
| Gross rent                     | \$ 525  | \$ 6,300 |
| Owner-occupied                 | \$ 484  | \$ 5,808 |
| Housing units w/ mortgage      | \$ 675  | \$ 8,100 |
| Housing units w/out a mortgage | \$ 443  | \$ 5,316 |

| Estimated Energy Prices as of January 2013 |         |
|--|---------|
| #1 Fuel oil cost (\$ / gallon)             | \$ 5.30 |
| Electricity with PCE (\$/kWh)              | \$ 0.43 |
| Electricity without PCE (\$/kWh)           | \$ 0.84 |

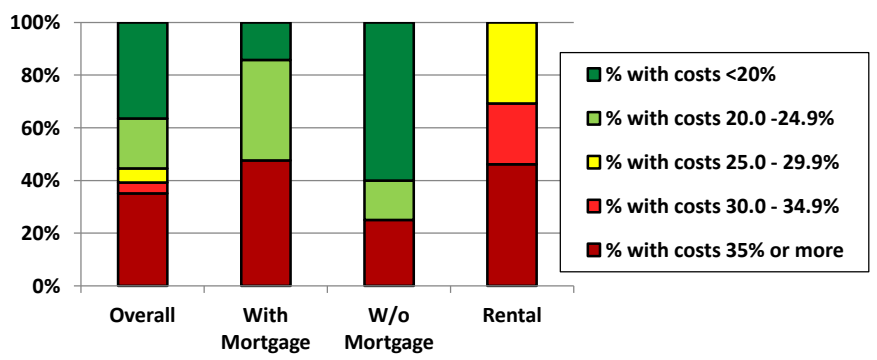
| Average Annual Energy Cost |         |
|----------------------------|---------|
| With PCE                   | NO PCE  |
| Without PCE                | \$6,806 |

| Housing Stock Estimates      | Number of Units |
|------------------------------|-----------------|
| All Housing                  | 128             |
| All Occupied Housing         | 82              |
| All Vacant housing           | 46              |
| Vacant Housing for Sale/Rent | 11              |

|                        |       |
|------------------------|-------|
| Avg % Income on Energy | 27.2% |
|------------------------|-------|

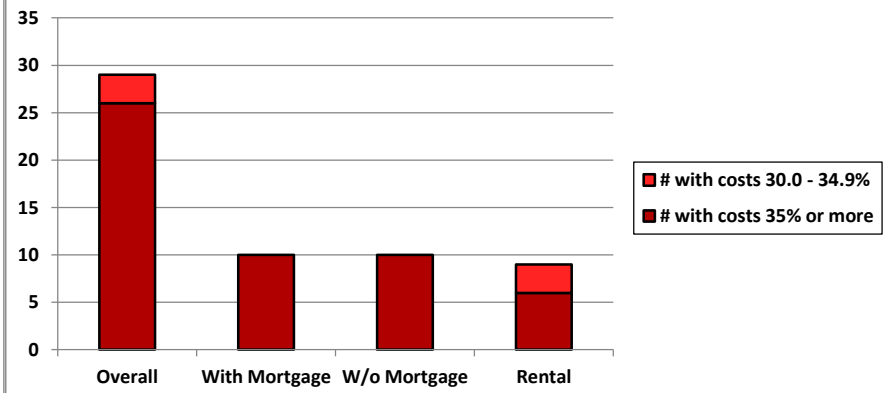
**Figure M7: Affordability - Housing Costs as a Percent of Income**

ACS



**Figure M8: Number of Cost-Burdened Housing Units**

ACS

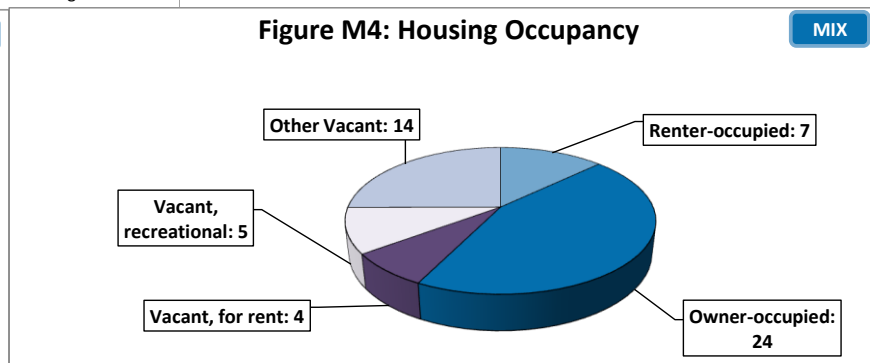
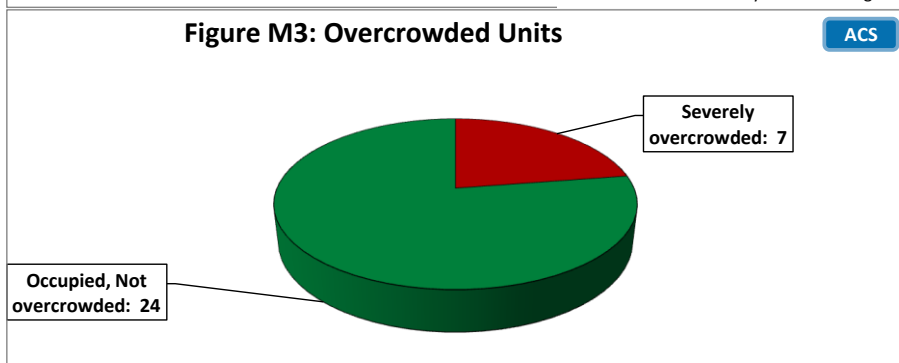
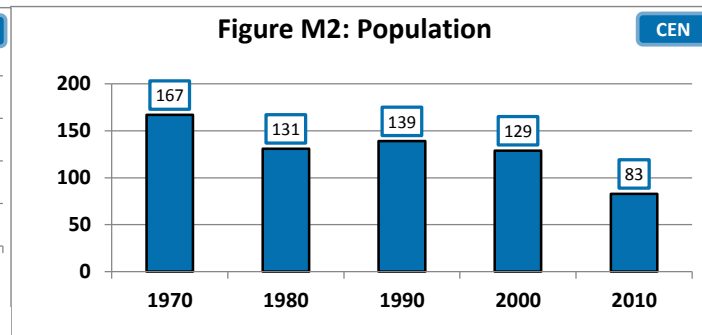
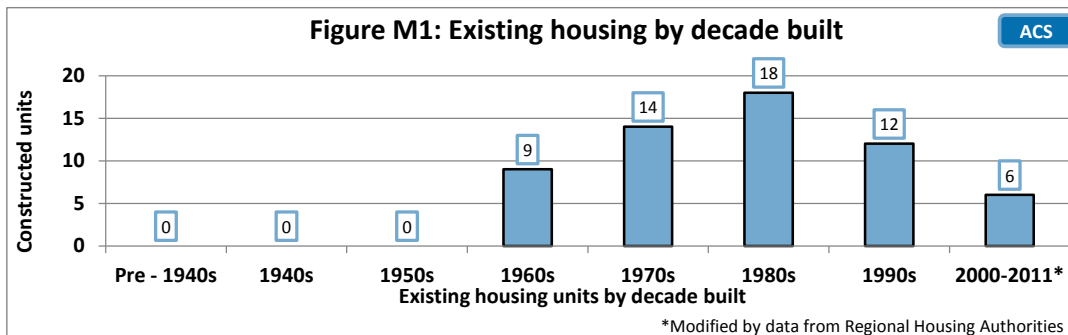


**Community Profile for:** Shageluk city

**ANCSA Region** Doyon

**Regional Housing Authority** Interior Regional Housing Authority

**BEES Climate Zone (Heating Degree Days)** Zone 8 (13,462 HDD)



#### Shageluk city Housing Energy Characteristics

| Residential Unit Categories | Number of records | Avg Energy Rating Stars | Avg Energy Rating Points | Avg Sq. Feet | Avg. Ann Energy Cost w/ PCE | Avg. Ann Energy Use (million BTUs) | Avg. EUI (kBtus/SF) | Avg. ECI | Avg. Home Heating Index | % Tight Homes, No Ventilation |
|-----------------------------|-------------------|-------------------------|--------------------------|--------------|-----------------------------|------------------------------------|---------------------|----------|-------------------------|-------------------------------|
| Pre-retrofit units          | 5                 | 3-star                  | 71.7                     | 840          | \$ 3,907                    | 126                                | 147                 | \$4.64   | 9.1                     | 40%                           |
| Retrofit units              | 5                 | 4-star                  | 82.1                     | 912          | \$ 2,584                    | 63                                 | 69                  | \$2.83   | 3.7                     | 0%                            |
| New construction            | 6                 | 5-star                  | 91.2                     | 1,073        | \$ 2,600                    | 71                                 | 67                  | \$2.48   | 3.0                     | 0%                            |

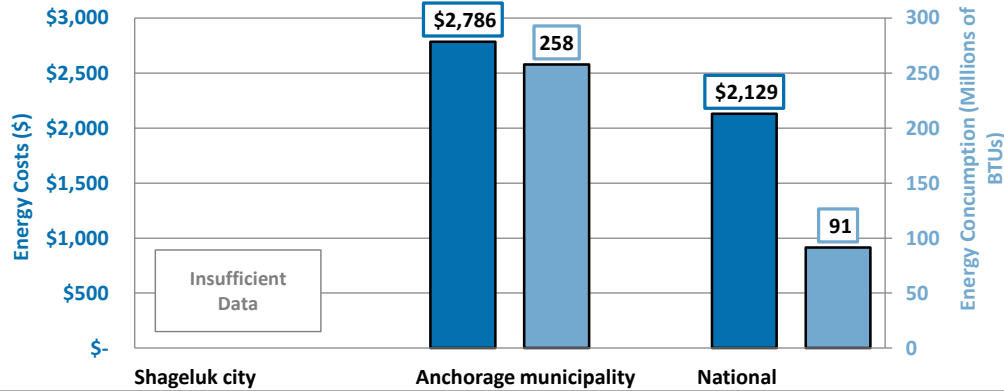
#### Shageluk city Housing Envelope Characteristics

| Residential Unit Categories | Number of Records | ACH 50 | Ceiling R | Above Grade Wall R | Below Grade Wall R | Above Grade Floor R | On Grade Floor R | Below Grade Floor R | Door U | Garage Door U | Window U |
|-----------------------------|-------------------|--------|-----------|--------------------|--------------------|---------------------|------------------|---------------------|--------|---------------|----------|
| Pre-retrofit units          | 5                 | 9.2    | 40        | 12                 | NR                 | 35                  | NR               | NR                  | 0.23   | NR            | 0.39     |
| Retrofit units              | 5                 | 5.1    | NR        | NR                 | NR                 | NR                  | NR               | NR                  | NR     | NR            | NR       |
| New construction            | 6                 | 2.8    | 40        | 27                 | NR                 | 33                  | NR               | NR                  | 0.19   | NR            | 0.35     |

|           |     |    |    |    |    |    |    |      |      |      |
|-----------|-----|----|----|----|----|----|----|------|------|------|
| BEES 2009 | 7.0 | 38 | 30 | 15 | 38 | 15 | 15 | 0.22 | 0.22 | 0.22 |
| BEES 2012 | 4.0 | 48 | 30 | 15 | 38 | 15 | 15 | 0.22 | 0.22 | 0.22 |

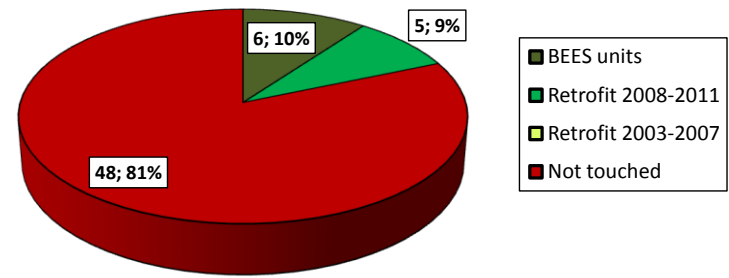
**Figure M5: Average Annual Home Energy Costs and Use**

MIX



**Figure M6: Housing Units Completing an AHFC Energy Program**

ARIS



**AFFORDABILITY - Shageluk city**

|  |
|--|
| <b>Owner occupied House with Mortgage, Median Value</b>      |
| NR   |
| <b>Owner-occupied House without a Mortgage, Median Value</b> |
| \$66,700   |

| Median Annual Household Income |                  |
|--------------------------------|------------------|
| Housing Units                  | Household Income |
| All-occupied                   | \$ 31,250        |
| Renter-occupied                | NR               |
| Owner-occupied                 | \$ 30,000        |
| w/ mortgage                    | NR               |
| w/o mortgage                   | \$ 30,000        |

| Median Housing Costs           |         |          |
|--------------------------------|---------|----------|
|                                | Monthly | Annual   |
| All-occupied                   | \$ 304  | \$ 3,648 |
| Gross rent                     | \$ 356  | \$ 4,272 |
| Owner-occupied                 | \$ 300  | \$ 3,600 |
| Housing units w/ mortgage      | NR      | NR       |
| Housing units w/out a mortgage | \$ 275  | \$ 3,300 |

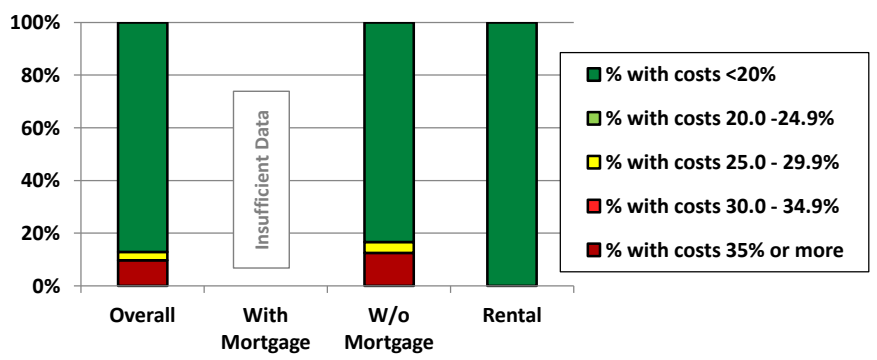
| Estimated Energy Prices as of January 2013 |         |
|--|---------|
| #1 Fuel oil cost (\$ / gallon)             | \$ 5.00 |
| Electricity with PCE (\$/kWh)              | \$ 0.21 |
| Electricity without PCE (\$/kWh)           | \$ 0.57 |

| Average Annual Energy Cost |    |
|----------------------------|----|
| With PCE                   | NR |
| Without PCE                | NR |

| Housing Stock Estimates      | Number of Units |
|------------------------------|-----------------|
| All Housing                  | 54              |
| All Occupied Housing         | 31              |
| All Vacant housing           | 23              |
| Vacant Housing for Sale/Rent | 4               |

**Figure M7: Affordability - Housing Costs as a Percent of Income**

ACS



**Figure M8: Number of Cost-Burdened Housing Units**

ACS

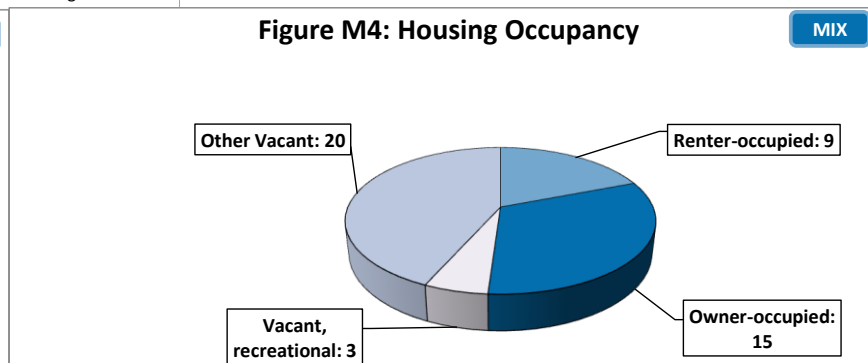
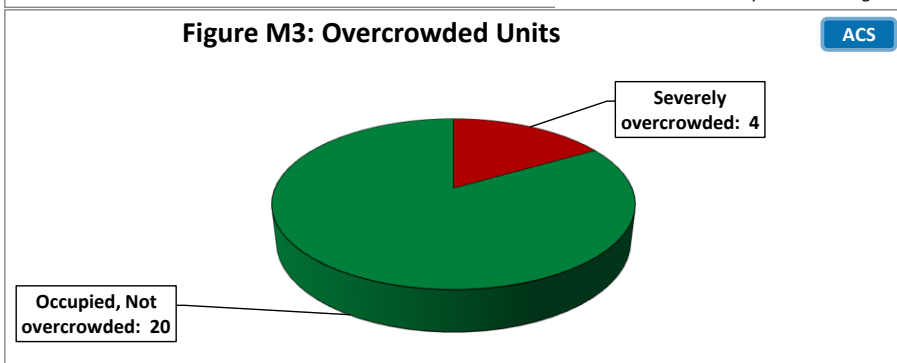
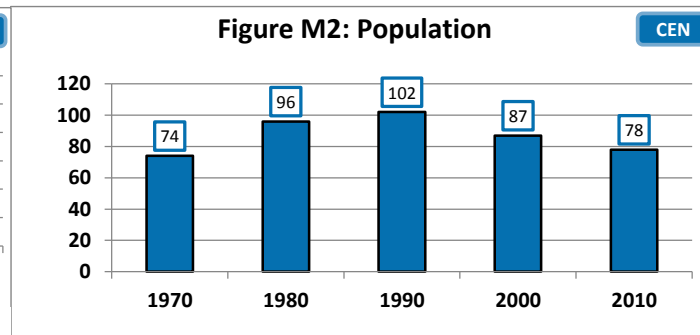
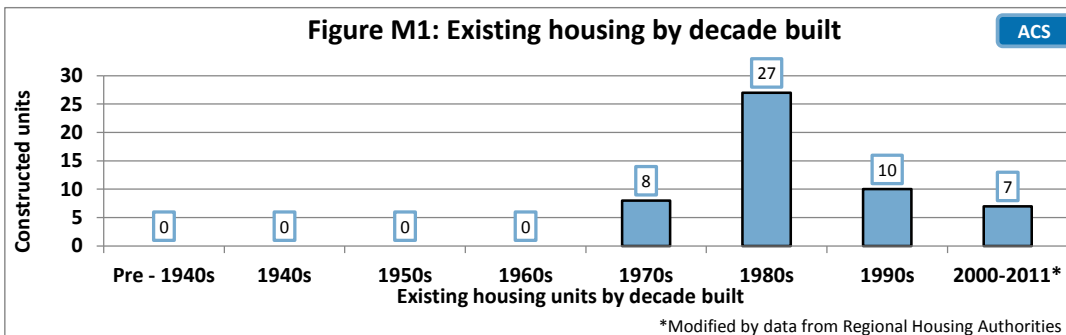


**Community Profile for:** Stevens Village CDP

**ANCSA Region** Doyon

**Regional Housing Authority** Interior Regional Housing Authority

**BEES Climate Zone (Heating Degree Days)** Zone 8 (15,528 HDD)



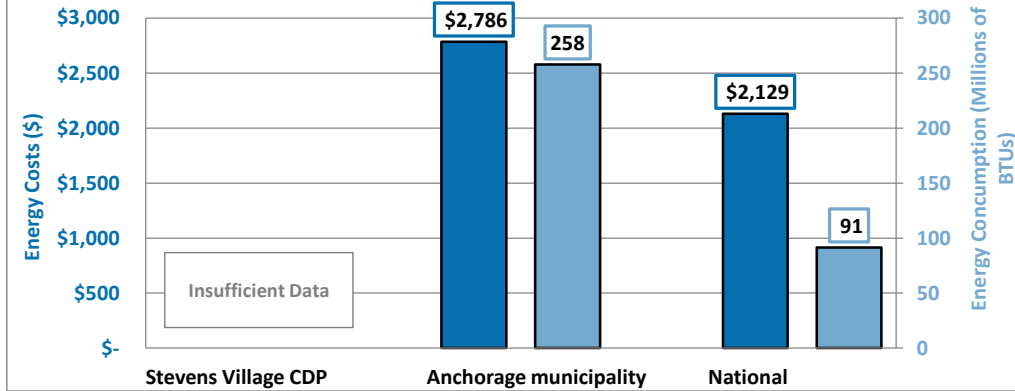
| Residential Unit Categories | Number of records | Avg Energy Rating Stars | Avg Energy Rating Points | Avg Sq. Feet | Avg. Ann Energy Cost | Avg. Ann Energy Use (million BTUs) | Avg. EUI (kBtus/SF) | Avg. ECI | Avg. Home Heating Index | % Tight Homes, No Ventilation |
|-----------------------------|-------------------|-------------------------|--------------------------|--------------|----------------------|------------------------------------|---------------------|----------|-------------------------|-------------------------------|
| Pre-retrofit units          | 24                | 2-star                  | 57.3                     | 400          | \$ 2,853             | 89                                 | 222                 | \$7.13   | 12.4                    | 0%                            |
| Retrofit units              | 24                | 5-star                  | 88.3                     | 1,360        | \$ 4,328             | 102                                | 75                  | \$3.18   | 3.9                     | 0%                            |
| New construction            | 0                 | NR                      | NR                       | NR           | NR                   | NR                                 | NR                  | NR       | NR                      | NR                            |

| Residential Unit Categories | Number of Records | ACH 50 | Ceiling R | Above Grade Wall R | Below Grade Wall R | Above Grade Floor R | On Grade Floor R | Below Grade Floor R | Door U | Garage Door U | Window U |
|-----------------------------|-------------------|--------|-----------|--------------------|--------------------|---------------------|------------------|---------------------|--------|---------------|----------|
| Pre-retrofit units          | 24                | 21.5   | NR        | NR                 | NR                 | NR                  | NR               | NR                  | NR     | NR            | NR       |
| Retrofit units              | 24                | 5.7    | NR        | NR                 | NR                 | NR                  | NR               | NR                  | NR     | NR            | NR       |
| New construction            | 0                 | NR     | NR        | NR                 | NR                 | NR                  | NR               | NR                  | NR     | NR            | NR       |

|           |     |    |    |    |    |    |    |      |      |      |
|-----------|-----|----|----|----|----|----|----|------|------|------|
| BEES 2009 | 7.0 | 38 | 30 | 15 | 38 | 15 | 15 | 0.22 | 0.22 | 0.22 |
| BEES 2012 | 4.0 | 48 | 30 | 15 | 38 | 15 | 15 | 0.22 | 0.22 | 0.22 |

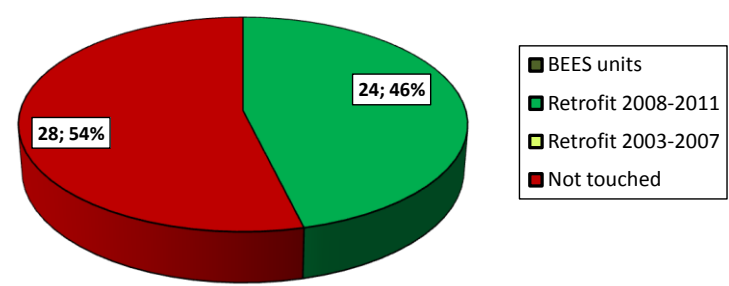
**Figure M5: Average Annual Home Energy Costs and Use**

MIX



**Figure M6: Housing Units Completing an AHFC Energy Program**

ARIS



**AFFORDABILITY - Stevens Village CDP**

| Owner occupied House with Mortgage, Median Value      |
|---|
| NR  |
| Owner-occupied House without a Mortgage, Median Value |
| \$58,800  |

| Median Annual Household Income |                  |
|--------------------------------|------------------|
| Housing Units                  | Household Income |
| All-occupied                   | \$ 18,750        |
| Renter-occupied                | \$ 19,688        |
| Owner-occupied                 | \$ 17,813        |
| w/ mortgage                    | NR               |
| w/o mortgage                   | \$ 17,813        |

| Median Housing Costs           |         |          |
|--------------------------------|---------|----------|
|                                | Monthly | Annual   |
| All-occupied                   | \$ 404  | \$ 4,848 |
| Gross rent                     | NR      | NR       |
| Owner-occupied                 | \$ 175  | \$ 2,100 |
| Housing units w/ mortgage      | NR      | NR       |
| Housing units w/out a mortgage | \$ 188  | \$ 2,256 |

| Estimated Energy Prices as of January 2013 |         |
|--|---------|
| #1 Fuel oil cost (\$ / gallon)             | \$ 6.76 |
| Electricity with PCE (\$/kWh)              | \$ 0.62 |
| Electricity without PCE (\$/kWh)           | \$ 1.07 |

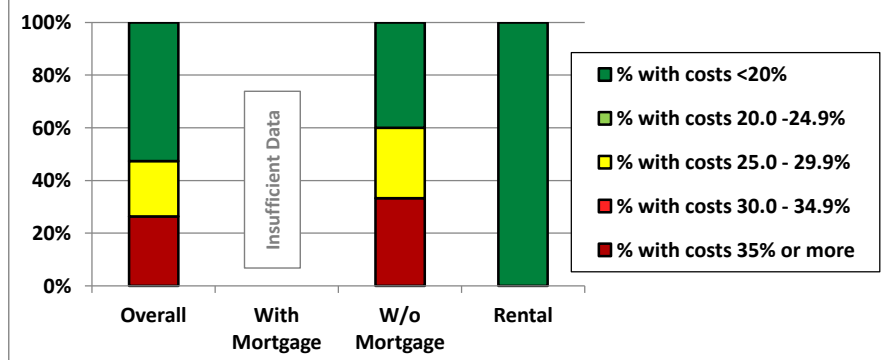
| Average Annual Energy Cost |         |
|----------------------------|---------|
| With PCE                   | NO PCE  |
| Without PCE                | \$5,683 |

| Housing Stock Estimates      | Number of Units |
|------------------------------|-----------------|
| All Housing                  | 47              |
| All Occupied Housing         | 24              |
| All Vacant housing           | 23              |
| Vacant Housing for Sale/Rent | 0               |

Avg % Income on Energy **30.3%**

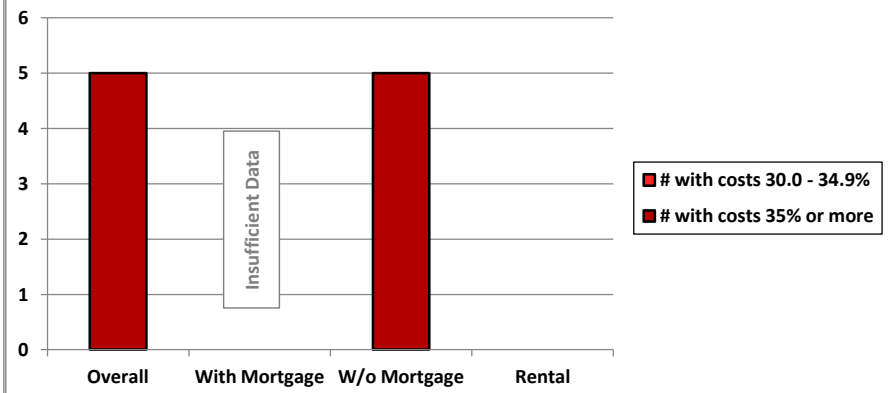
**Figure M7: Affordability - Housing Costs as a Percent of Income**

ACS



**Figure M8: Number of Cost-Burdened Housing Units**

ACS

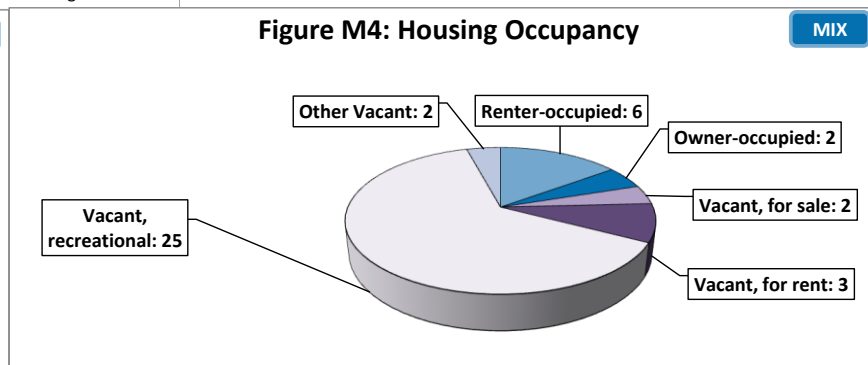
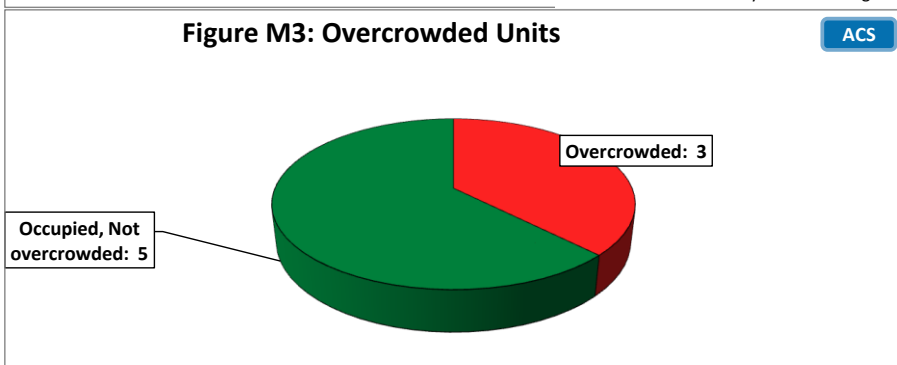
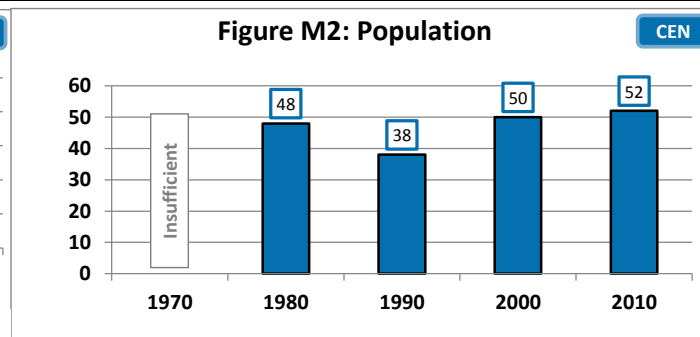
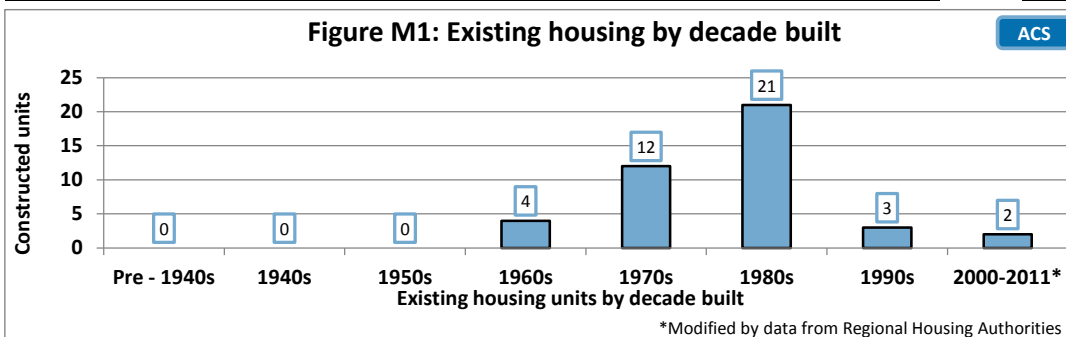


**Community Profile for:** Takotna CDP

**ANCSA Region:** Doyon

**Regional Housing Authority:** Interior Regional Housing Authority

**BEES Climate Zone (Heating Degree Days):** Zone 8 (14,424 HDD)



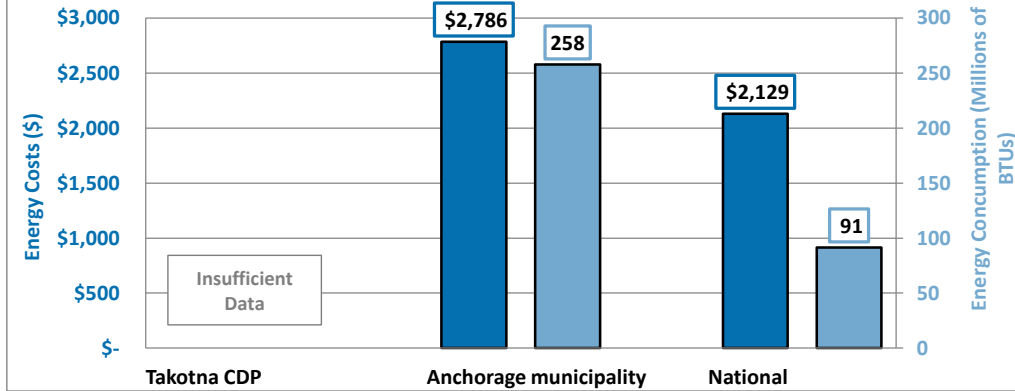
| Residential Unit Categories | Number of records | Avg Energy Rating Stars | Avg Energy Rating Points | Avg Sq. Feet | Avg. Ann Energy Cost | Avg. Ann Energy Use (million BTUs) | Avg. EUI (kBtus/SF) | Avg. ECI | Avg. Home Heating Index | % Tight Homes, No Ventilation |
|-----------------------------|-------------------|-------------------------|--------------------------|--------------|----------------------|------------------------------------|---------------------|----------|-------------------------|-------------------------------|
| Pre-retrofit units          | 3                 | 4-star                  | 79.1                     | 1,856        | \$ 11,044            | 284                                | 141                 | \$5.85   | 7.8                     | 33%                           |
| Retrofit units              | 0                 | NR                      | NR                       | NR           | NR                   | NR                                 | NR                  | NR       | NR                      | NR                            |
| New construction            | 1                 | NR                      | NR                       | NR           | NR                   | NR                                 | NR                  | NR       | NR                      | NR                            |

| Residential Unit Categories | Number of Records | ACH 50 | Ceiling R | Above Grade Wall R | Below Grade Wall R | Above Grade Floor R | On Grade Floor R | Below Grade Floor R | Door U | Garage Door U | Window U |
|-----------------------------|-------------------|--------|-----------|--------------------|--------------------|---------------------|------------------|---------------------|--------|---------------|----------|
| Pre-retrofit units          | 3                 | 8.1    | 26        | 15                 | NR                 | NR                  | NR               | NR                  | 0.26   | NR            | 0.40     |
| Retrofit units              | 0                 | NR     | NR        | NR                 | NR                 | NR                  | NR               | NR                  | NR     | NR            | NR       |
| New construction            | 1                 | NR     | NR        | NR                 | NR                 | NR                  | NR               | NR                  | NR     | NR            | NR       |

|           |     |    |    |    |    |    |    |      |      |      |
|-----------|-----|----|----|----|----|----|----|------|------|------|
| BEES 2009 | 7.0 | 38 | 30 | 15 | 38 | 15 | 15 | 0.22 | 0.22 | 0.22 |
| BEES 2012 | 4.0 | 48 | 30 | 15 | 38 | 15 | 15 | 0.22 | 0.22 | 0.22 |

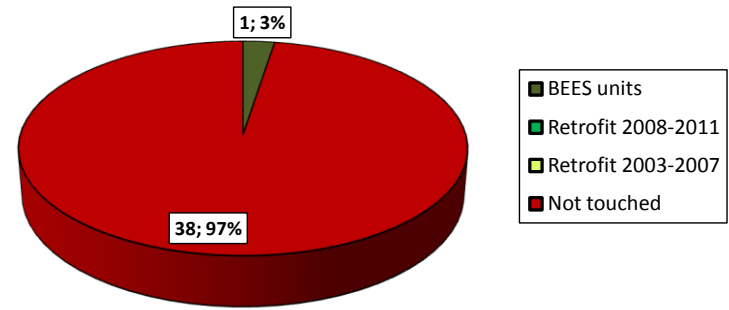
**Figure M5: Average Annual Home Energy Costs and Use**

MIX



**Figure M6: Housing Units Completing an AHFC Energy Program**

ARIS



**AFFORDABILITY - Takotna CDP**

| Owner occupied House with Mortgage, Median Value |
|--|
| NR   |

| Owner-occupied House without a Mortgage, Median Value |
|---|
| NR  |

| Median Annual Household Income |                  |
|--------------------------------|------------------|
| Housing Units                  | Household Income |
| All-occupied                   | \$ 60,833        |
| Renter-occupied                | \$ 37,500        |
| Owner-occupied                 | NR               |
| w/ mortgage                    | NR               |
| w/o mortgage                   | NR               |

| Median Housing Costs           |         |          |
|--------------------------------|---------|----------|
|                                | Monthly | Annual   |
| All-occupied                   | \$ 533  | \$ 6,396 |
| Gross rent                     | \$ 725  | \$ 8,700 |
| Owner-occupied                 | NR      | NR       |
| Housing units w/ mortgage      | NR      | NR       |
| Housing units w/out a mortgage | NR      | NR       |

| Estimated Energy Prices as of January 2013 |         |
|--|---------|
| #1 Fuel oil cost (\$ / gallon)             | \$ 5.71 |
| Electricity with PCE (\$/kWh)              | \$ 0.45 |
| Electricity without PCE (\$/kWh)           | \$ 1.02 |

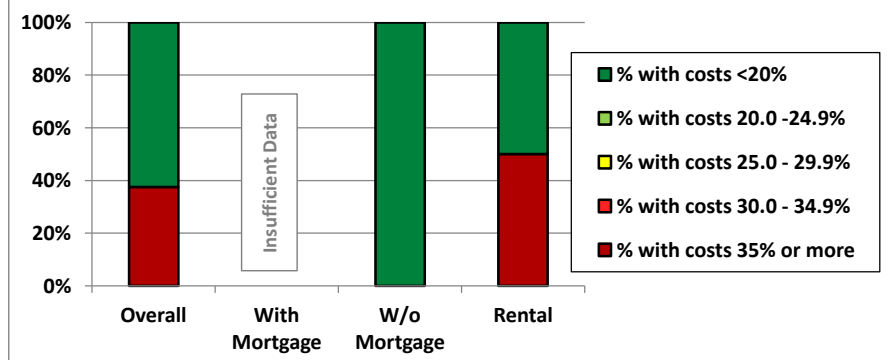
| Average Annual Energy Cost |          |
|----------------------------|----------|
| With PCE                   | NO PCE   |
| Without PCE                | \$14,076 |

| Housing Stock Estimates      | Number of Units |
|------------------------------|-----------------|
| All Housing                  | 40              |
| All Occupied Housing         | 8               |
| All Vacant housing           | 32              |
| Vacant Housing for Sale/Rent | 5               |

|                        |              |
|------------------------|--------------|
| Avg % Income on Energy | <b>23.1%</b> |
|------------------------|--------------|

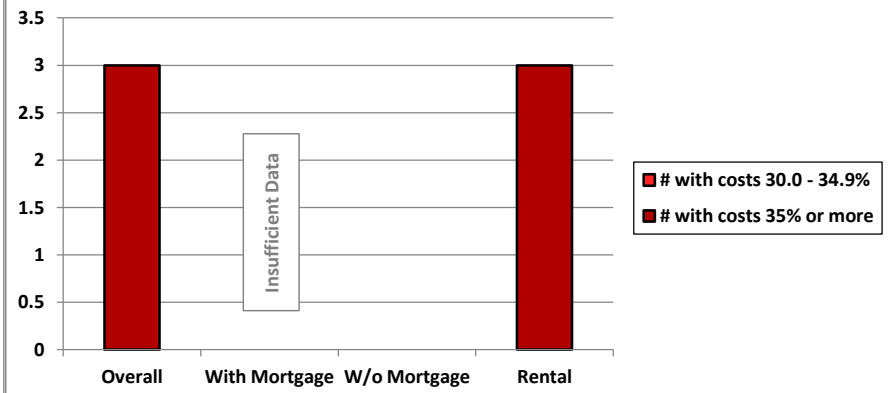
**Figure M7: Affordability - Housing Costs as a Percent of Income**

ACS



**Figure M8: Number of Cost-Burdened Housing Units**

ACS

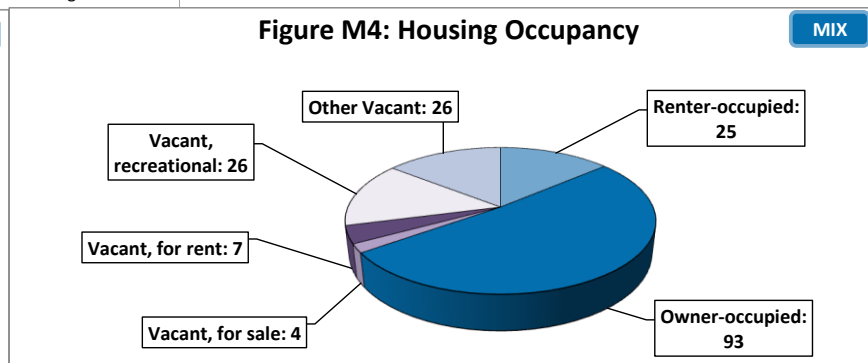
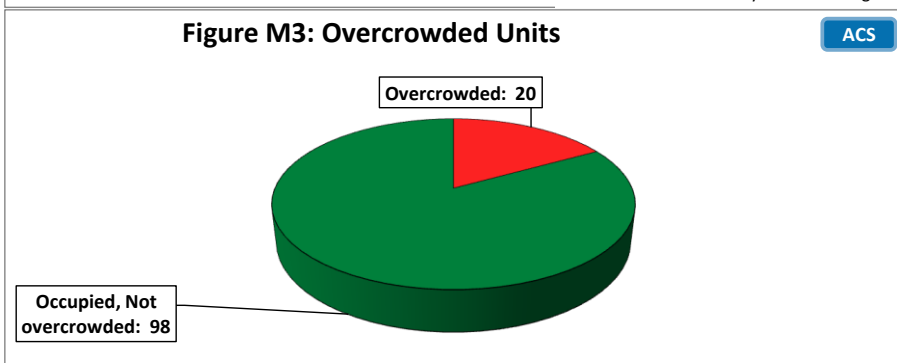
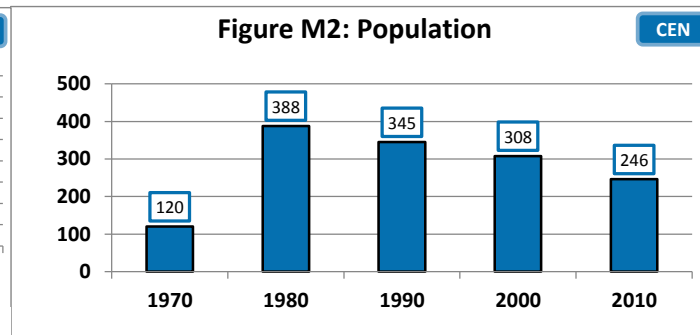
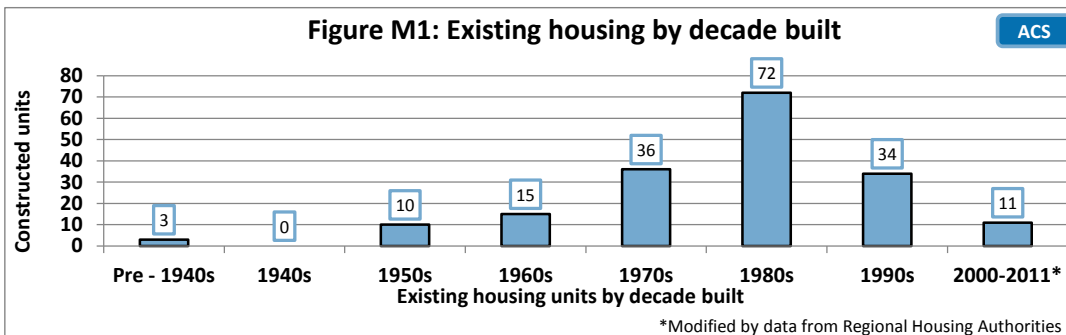


**Community Profile for:** Tanana city

**ANCSA Region:** Doyon

**Regional Housing Authority:** Interior Regional Housing Authority

**BEES Climate Zone (Heating Degree Days):** Zone 8 (15,024 HDD)



#### Tanana city Housing Energy Characteristics

| Residential Unit Categories | Number of records | Avg Energy Rating Stars | Avg Energy Rating Points | Avg Sq. Feet | Avg. Ann Energy Cost | Avg. Ann Energy Use (million BTUs) | Avg. EUI (kBtus/SF) | Avg. ECI | Avg. Home Heating Index | % Tight Homes, No Ventilation |
|-----------------------------|-------------------|-------------------------|--------------------------|--------------|----------------------|------------------------------------|---------------------|----------|-------------------------|-------------------------------|
| Pre-retrofit units          | 2                 | NR                      | NR                       | NR           | NR                   | NR                                 | NR                  | NR       | NR                      | NR                            |
| Retrofit units              | 1                 | NR                      | NR                       | NR           | NR                   | NR                                 | NR                  | NR       | NR                      | NR                            |
| New construction            | 3                 | 5-star plus             | 93.0                     | 1,050        | \$ 6,275             | 111                                | 75                  | \$4.25   | 2.7                     | 0%                            |

#### Tanana city Housing Envelope Characteristics

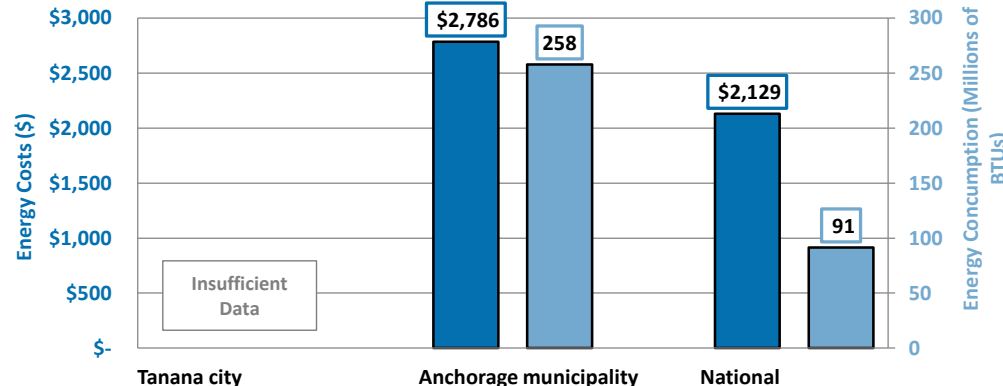
| Residential Unit Categories | Number of Records | ACH 50 | Ceiling R | Above Grade Wall R | Below Grade Wall R | Above Grade Floor R | On Grade Floor R | Below Grade Floor R | Door U | Garage Door U | Window U |
|-----------------------------|-------------------|--------|-----------|--------------------|--------------------|---------------------|------------------|---------------------|--------|---------------|----------|
| Pre-retrofit units          | 2                 | NR     | NR        | NR                 | NR                 | NR                  | NR               | NR                  | NR     | NR            | NR       |
| Retrofit units              | 1                 | NR     | NR        | NR                 | NR                 | NR                  | NR               | NR                  | NR     | NR            | NR       |
| New construction            | 3                 | 1.0    | NR        | NR                 | NR                 | NR                  | NR               | NR                  | NR     | NR            | NR       |

|           |     |    |    |    |    |    |    |      |      |      |
|-----------|-----|----|----|----|----|----|----|------|------|------|
| BEES 2009 | 7.0 | 38 | 30 | 15 | 38 | 15 | 15 | 0.22 | 0.22 | 0.22 |
| BEES 2012 | 4.0 | 48 | 30 | 15 | 38 | 15 | 15 | 0.22 | 0.22 | 0.22 |



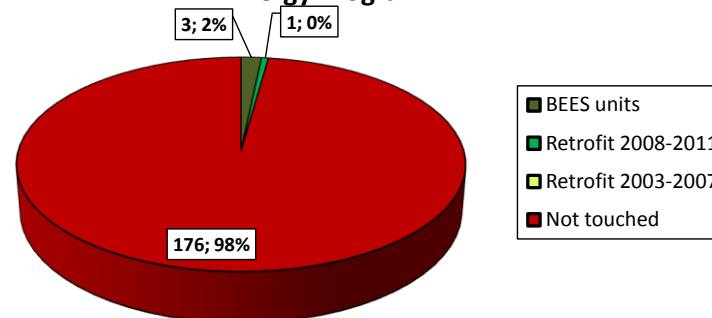
**Figure M5: Average Annual Home Energy Costs and Use**

MIX



**Figure M6: Housing Units Completing an AHFC Energy Program**

ARIS



**AFFORDABILITY - Tanana city**

| Owner occupied House with Mortgage, Median Value |
|--|
| \$184,700  |

| Owner-occupied House without a Mortgage, Median Value |
|---|
| \$63,800  |

| Estimated Energy Prices as of January 2013 |         |
|--|---------|
| #1 Fuel oil cost (\$ / gallon)             | \$ 5.61 |
| Electricity with PCE (\$/kWh)              | \$ 0.31 |
| Electricity without PCE (\$/kWh)           | \$ 0.69 |

| Median Annual Household Income |                  |
|--------------------------------|------------------|
| Housing Units                  | Household Income |
| All-occupied                   | \$ 47,143        |
| Renter-occupied                | \$ 59,583        |
| Owner-occupied                 | \$ 46,250        |
| w/ mortgage                    | \$ 47,292        |
| w/o mortgage                   | \$ 35,000        |

| Average Annual Energy Cost |         |
|----------------------------|---------|
| With PCE                   | NO PCE  |
| Without PCE                | \$6,053 |

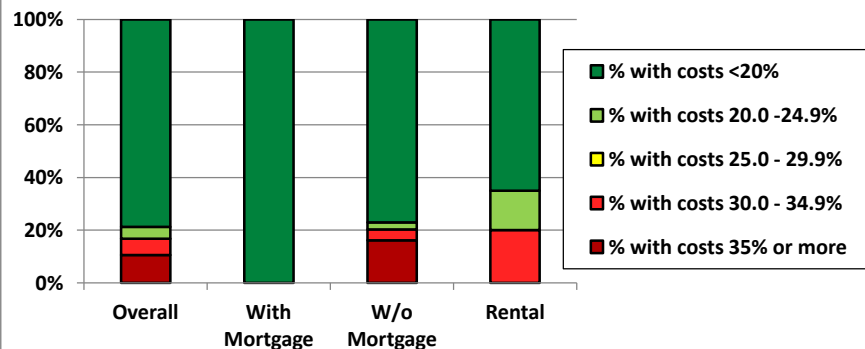
|                        |              |
|------------------------|--------------|
| Avg % Income on Energy | <b>12.8%</b> |
|------------------------|--------------|

| Median Housing Costs           |         |          |
|--------------------------------|---------|----------|
|                                | Monthly | Annual   |
| All-occupied                   | \$ 501  | \$ 6,012 |
| Gross rent                     | \$ 610  | \$ 7,320 |
| Owner-occupied                 | \$ 488  | \$ 5,856 |
| Housing units w/ mortgage      | \$ 595  | \$ 7,140 |
| Housing units w/out a mortgage | \$ 313  | \$ 3,756 |

| Housing Stock Estimates      | Number of Units |
|------------------------------|-----------------|
| All Housing                  | 181             |
| All Occupied Housing         | 118             |
| All Vacant housing           | 63              |
| Vacant Housing for Sale/Rent | 11              |

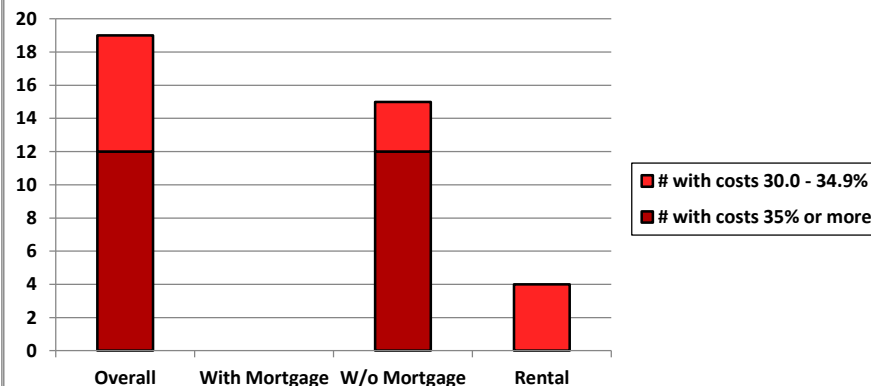
**Figure M7: Affordability - Housing Costs as a Percent of Income**

ACS



**Figure M8: Number of Cost-Burdened Housing Units**

ACS

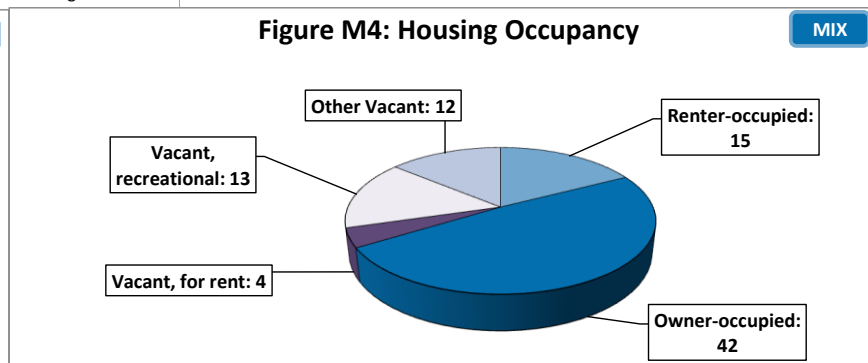
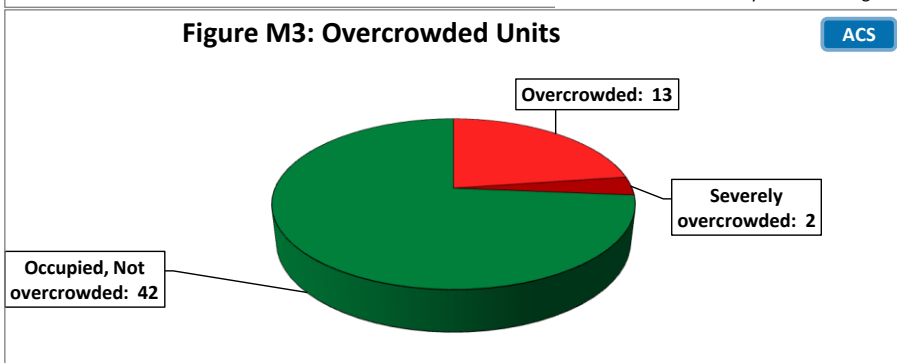
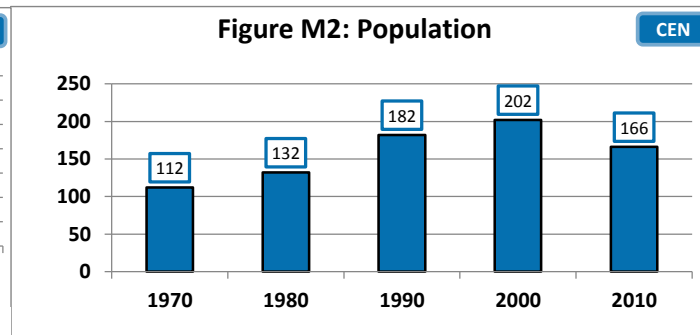
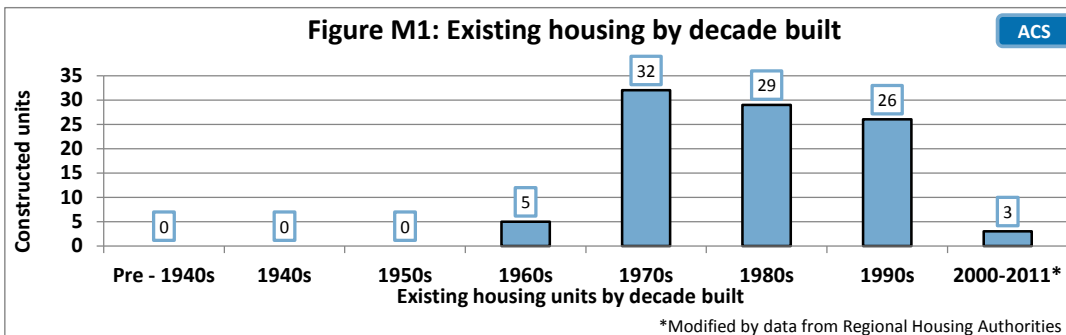


**Community Profile for:** Venetie CDP

**ANCSA Region:** Doyon

**Regional Housing Authority:** Interior Regional Housing Authority

**BEES Climate Zone (Heating Degree Days):** Zone 8 (16,465 HDD)



#### Venetie CDP Housing Energy Characteristics

| Residential Unit Categories | Number of records | Avg Energy Rating Stars | Avg Energy Rating Points | Avg Sq. Feet | Avg. Ann Energy Cost | Avg. Ann Energy Use (million BTUs) | Avg. EUI (kBtus/SF) | Avg. ECI | Avg. Home Heating Index | % Tight Homes, No Ventilation |
|-----------------------------|-------------------|-------------------------|--------------------------|--------------|----------------------|------------------------------------|---------------------|----------|-------------------------|-------------------------------|
| Pre-retrofit units          | 40                | 4-star                  | 80.6                     | 529          | \$ 2,442             | 64                                 | 120                 | \$4.62   | 5.3                     | 100%                          |
| Retrofit units              | 40                | 3-star plus             | 74.7                     | 811          | \$ 2,988             | 113                                | 167                 | \$4.29   | 8.5                     | 92%                           |
| New construction            | 0                 | NR                      | NR                       | NR           | NR                   | NR                                 | NR                  | NR       | NR                      | NR                            |

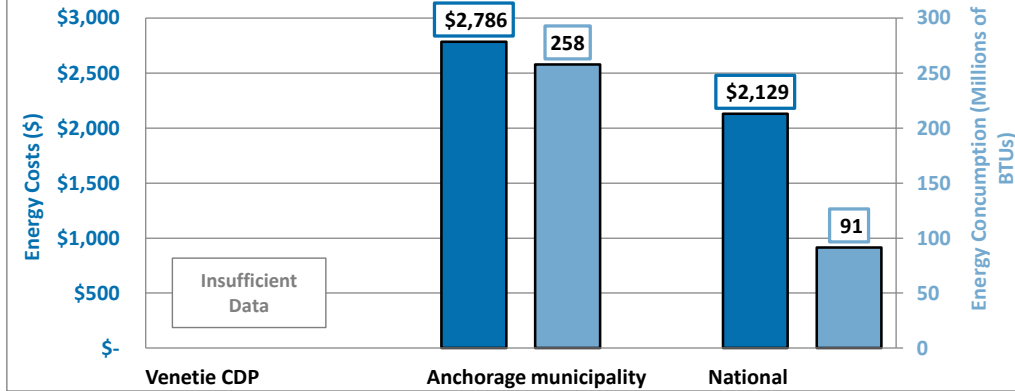
#### Venetie CDP Housing Envelope Characteristics

| Residential Unit Categories | Number of Records | ACH 50 | Ceiling R | Above Grade Wall R | Below Grade Wall R | Above Grade Floor R | On Grade Floor R | Below Grade Floor R | Door U | Garage Door U | Window U |
|-----------------------------|-------------------|--------|-----------|--------------------|--------------------|---------------------|------------------|---------------------|--------|---------------|----------|
| Pre-retrofit units          | 40                | 7.1    | NR        | NR                 | NR                 | NR                  | NR               | NR                  | NR     | NR            | NR       |
| Retrofit units              | 40                | 6.8    | 34        | 14                 | NR                 | 35                  | NR               | NR                  | 0.22   | NR            | 0.36     |
| New construction            | 0                 | NR     | NR        | NR                 | NR                 | NR                  | NR               | NR                  | NR     | NR            | NR       |

|           |     |    |    |    |    |    |    |      |      |      |
|-----------|-----|----|----|----|----|----|----|------|------|------|
| BEES 2009 | 7.0 | 38 | 30 | 15 | 38 | 15 | 15 | 0.22 | 0.22 | 0.22 |
| BEES 2012 | 4.0 | 48 | 30 | 15 | 38 | 15 | 15 | 0.22 | 0.22 | 0.22 |

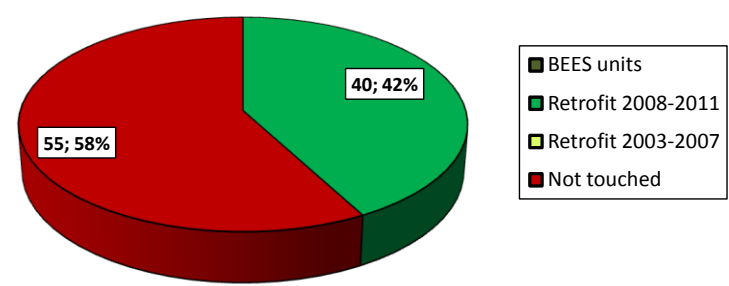
**Figure M5: Average Annual Home Energy Costs and Use**

MIX



**Figure M6: Housing Units Completing an AHFC Energy Program**

ARIS



**AFFORDABILITY - Venetie CDP**

| Owner occupied House with Mortgage, Median Value      |
|---|
| NR  |
| Owner-occupied House without a Mortgage, Median Value |
| \$112,500   |

| Median Annual Household Income |                  |
|--------------------------------|------------------|
| Housing Units                  | Household Income |
| All-occupied                   | \$ 9,904         |
| Renter-occupied                | \$ 21,875        |
| Owner-occupied                 | \$ 9,615         |
| w/ mortgage                    | NR               |
| w/o mortgage                   | \$ 9,615         |

| Median Housing Costs           |         |          |
|--------------------------------|---------|----------|
|                                | Monthly | Annual   |
| All-occupied                   | \$ 232  | \$ 2,784 |
| Gross rent                     | NR      | NR       |
| Owner-occupied                 | \$ 258  | \$ 3,096 |
| Housing units w/ mortgage      | NR      | NR       |
| Housing units w/out a mortgage | \$ 232  | \$ 2,784 |

| Estimated Energy Prices as of January 2013 |         |
|--|---------|
| #1 Fuel oil cost (\$ / gallon)             | \$ 8.50 |
| Electricity with PCE (\$/kWh)              | No PCE  |
| Electricity without PCE (\$/kWh)           | \$ 0.51 |

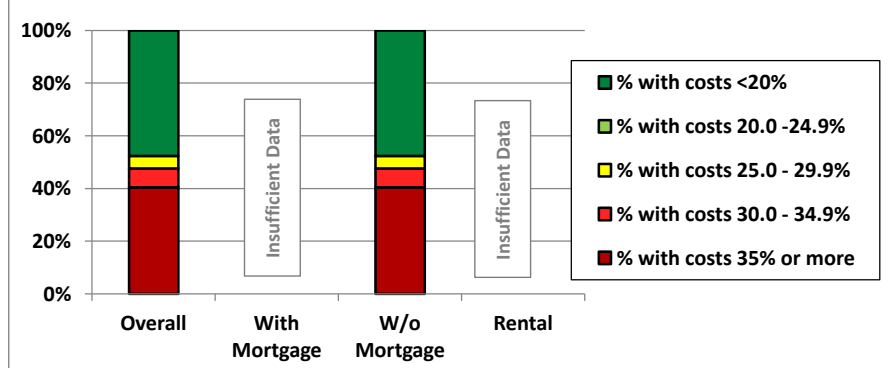
| Average Annual Energy Cost |         |
|----------------------------|---------|
| With PCE                   | NO PCE  |
| Without PCE                | \$2,696 |

| Housing Stock Estimates      | Number of Units |
|------------------------------|-----------------|
| All Housing                  | 86              |
| All Occupied Housing         | 57              |
| All Vacant housing           | 29              |
| Vacant Housing for Sale/Rent | 4               |

|                        |              |
|------------------------|--------------|
| Avg % Income on Energy | <b>27.2%</b> |
|------------------------|--------------|

**Figure M7: Affordability - Housing Costs as a Percent of Income**

ACS



**Figure M8: Number of Cost-Burdened Housing Units**

ACS

