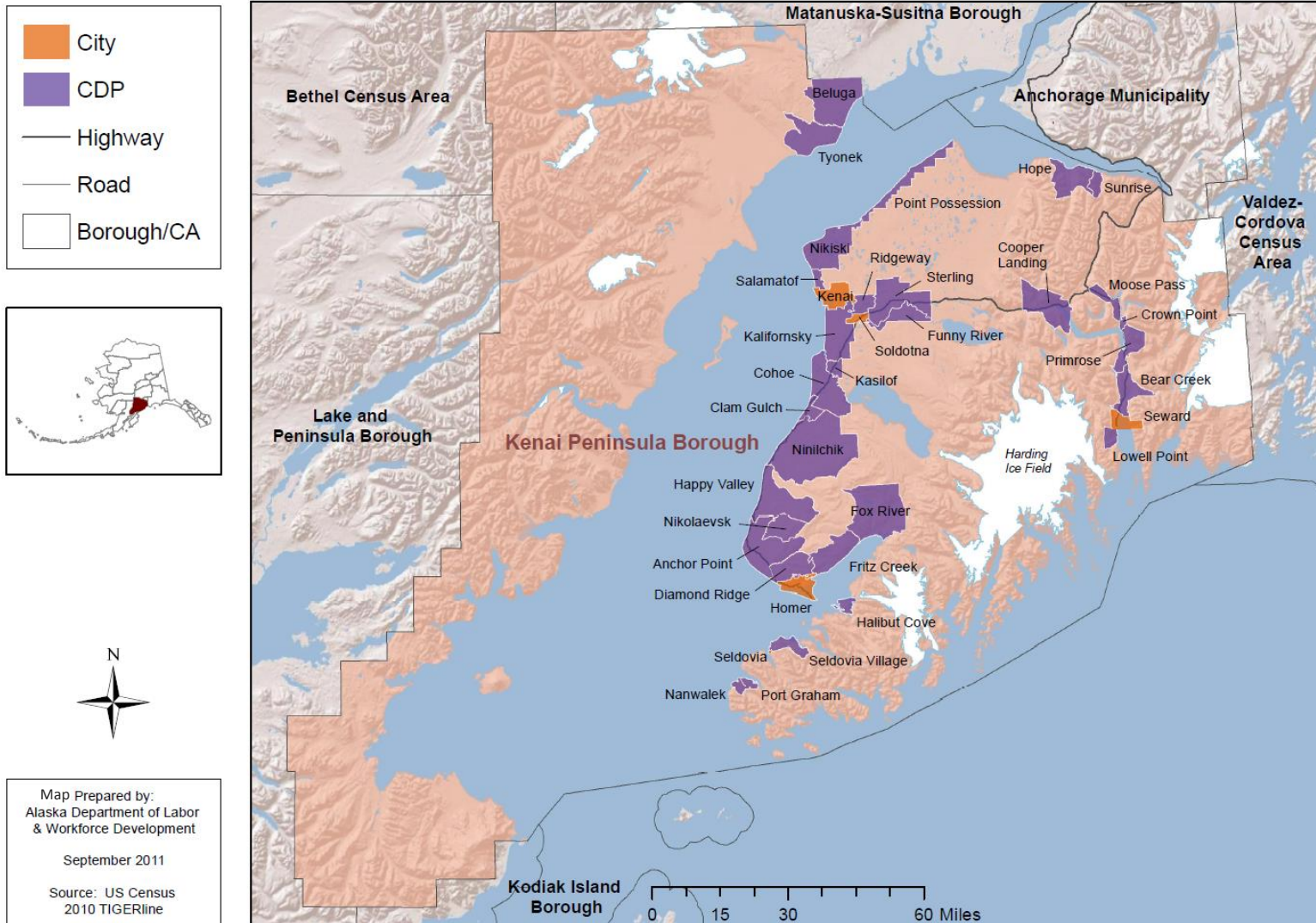


# Kenai Peninsula Borough



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## ***Kenai Peninsula Borough Dashboard***

**Population:** The Alaska Department of Labor and Workforce Development's current (2012) population estimate for the Kenai Peninsula Borough is 56,756—an increase of 14% from 2000.

**Housing Units:** There are currently 30,137 housing units in the Kenai Peninsula Borough. Of these, 22,390 are occupied, 975 are for sale or rent, and the remaining 6,772 are seasonal or otherwise vacant units (Profile Figure C6).

**Energy:** The average home in the Kenai Peninsula Borough is 1,892 square feet and uses 131,000 BTUs of energy per square foot annually, 4% less than the statewide average of 137,000 BTUs per square foot per year.

**Energy Costs:** Using AKWarm estimates, average annual energy cost for homes in the Kenai Peninsula Borough is \$4,510, which is approximately 1.6 times more than the cost in Anchorage, and 2.1 times more than the national average (Profile Figure C13).

**Energy Programs:** Approximately 18% of the occupied housing in the Kenai Peninsula Borough 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 2-stars, compared to a current average rating of 4-stars 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 before 1940 are 2.8 times leakier than those built since 2000 (Profile Figure C7).

**Ventilation:** An estimated 14,206 occupied housing units (or 63%) in the Kenai Peninsula Borough 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:** 4% of occupied units are estimated to be either overcrowded (3%) or severely overcrowded (1%). This is roughly similar to the national average, and makes the Kenai Peninsula Borough the 22nd most overcrowded census area in the state.

**Affordability:** On average, approximately 29% of households in the Kenai Peninsula Borough 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 8% of census median area income for occupied housing.

## Kenai Peninsula Borough Summary

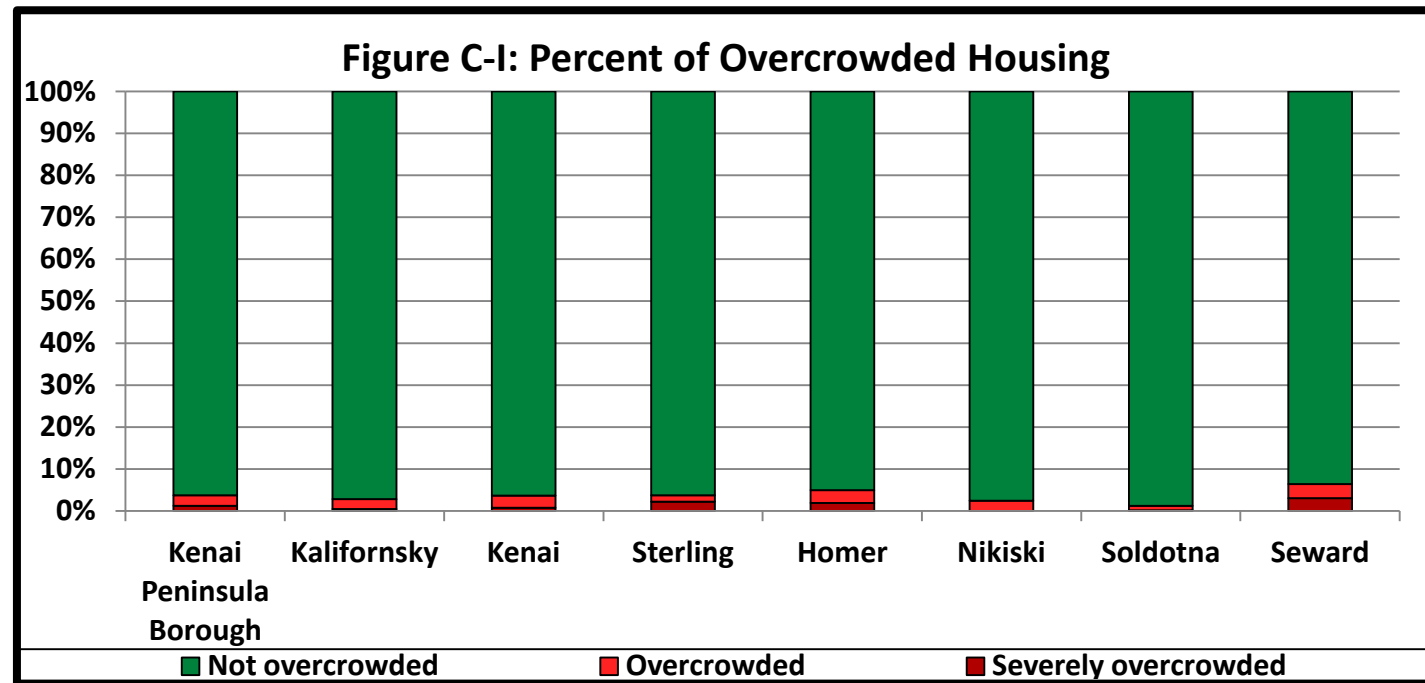
### Community

The Kenai Peninsula Borough census area lies on the coast of southcentral Alaska and is bisected by Cook Inlet. Communities in the census area lie on the coast or along the banks of the Kenai River. The census area lies in the Cook Inlet Native Corporation ANCSA region. Average home sizes in the communities of the Kenai Peninsula range from 1,036 square feet in Nanwalek to 2,228 square feet in Nikiski. Average home size in the census area as a whole has stayed relatively constant since the 1970s.

### Overcrowding

Four percent of housing units in the Kenai Peninsula are classified as either overcrowded or severely overcrowded (Figure C-1). There is little variation in overcrowding in the six most populous communities, with less than 5% overcrowding in each (Figure C-1). The least overcrowded community in the entire census area is Ninilchik, where an estimated zero households are overcrowded. The highest overcrowding rate is found in the community of Nanwalek at 43%.

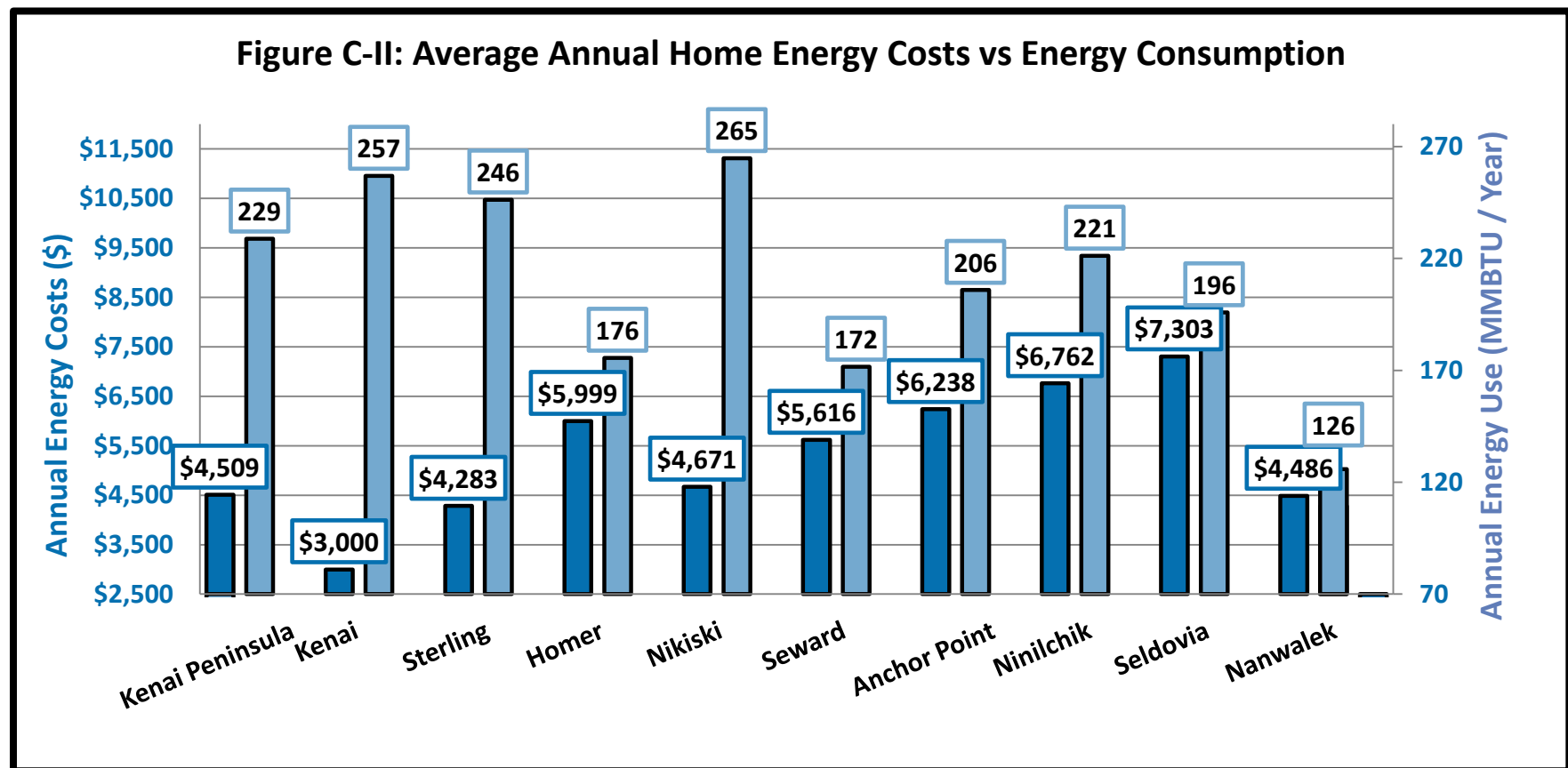
Approximately 3% of housing in the Kenai Peninsula is available for sale or rent. The lowest percentage of available housing is found in Clam Gulch, where only 1% of homes are available for sale or rent. The highest percentage, 8%, of available housing is found in Seldovia. Additionally, 22% of housing units in the census area are



considered vacant because they have seasonal, recreational, or “other” non-year round purposes.

## Energy

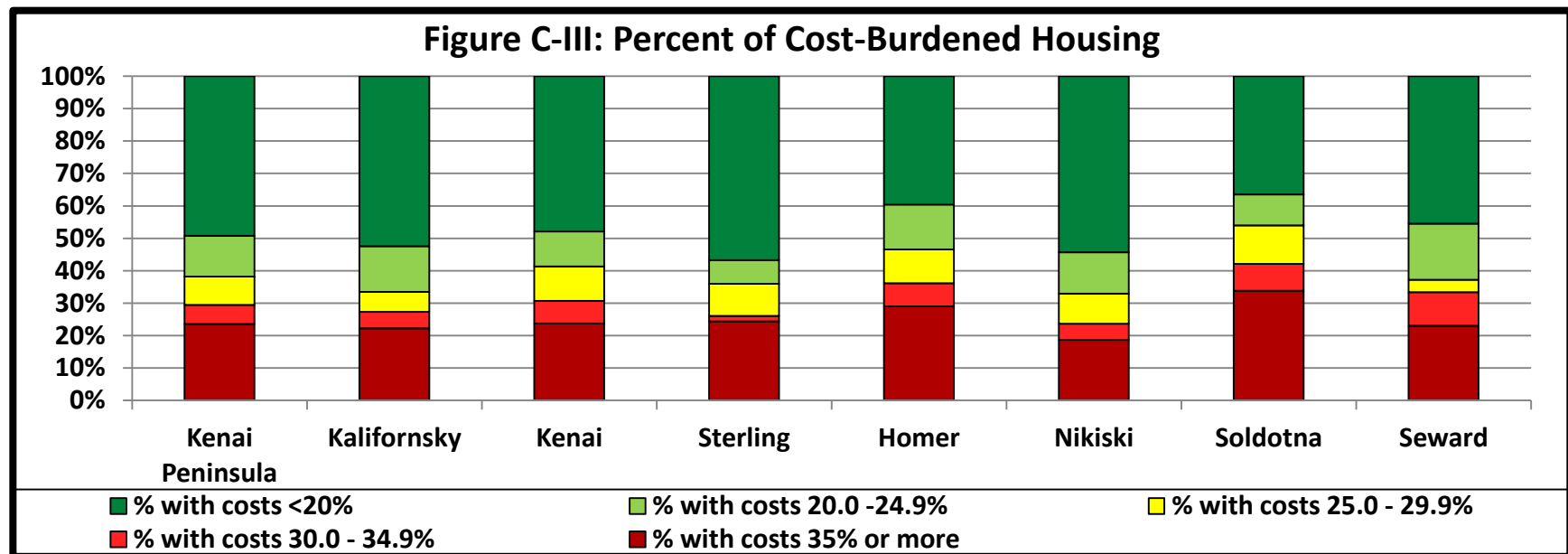
On average, homes in the Kenai Peninsula use 229 million BTUs of energy each year, for an average cost of \$4,509. The energy costs and energy use for many communities in the census area are shown in Figure C-II. The lowest average costs are found in Tyonek, where residents pay \$2,598 each year. However, the lowest annual average energy use is found in Nanwalek, which may be due to several factors: homes are just over half the size of the census area average, 44% of homes have participated in an energy program, and the average home heating index is the lowest in the borough. The highest home heating index, 12.1 BTUs/ft<sup>2</sup>/HDD, is found in the community of Moose Pass, but residents of Seldovia pay the highest average energy costs of the census area. With an average annual energy cost of \$7,303, residents of Seldovia spend more than twice as much as residents in Kenai.



In the census area as a whole, approximately 19% of housing units have participated in the Home Energy Rebate, Weatherization, or a BEES program since 2003. However, participation rates among communities vary greatly, with the six most populous communities' participation rates ranging from 0 to 71%. Approximately half the homes built in the Kenai Peninsula since 2000 have either an HRV or a continuous mechanical ventilation system. On the other hand, more than 70% of the housing built in the 1970s and 1980s is relatively air-tight and lacking a ventilation system. These homes are at a higher risk for moisture- and indoor air quality-related issues.

### Affordability

According to ACS estimates<sup>1</sup>, affordability in Kenai Peninsula communities ranges from an estimated zero cost-burdened households in Moose Creek to 57% of households paying more than 30% of their income on housing costs in Hope. Considering only the six most populous communities, rates of cost-burdened housing vary from 24% to 42% (Figure C-III). The wide range of affordability in the census area may be due to the large difference between median income levels. The lowest median income of \$19,167 is found in Port Graham. The highest median income of \$116,147 is found in Cooper Landing. In the six most populous communities, median household incomes range from \$41,989 to \$73,840.



<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, "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.

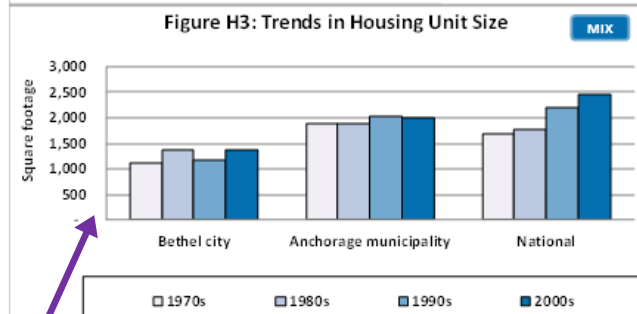
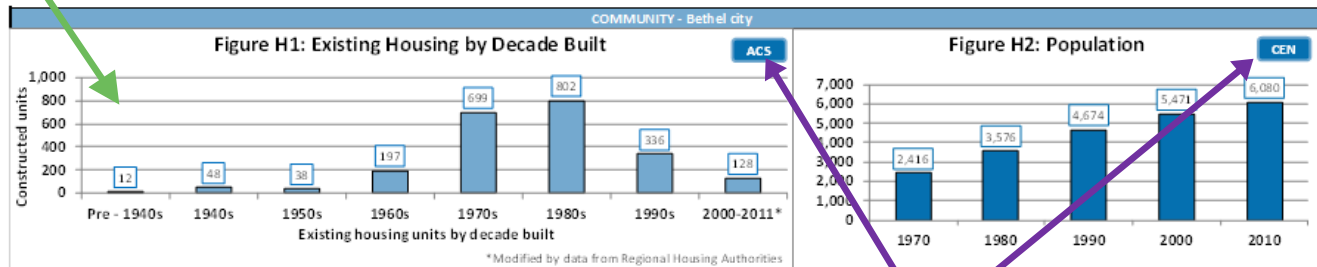
# How to Interpret the Profile: Data Sources, Definitions & Clarifications

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:**

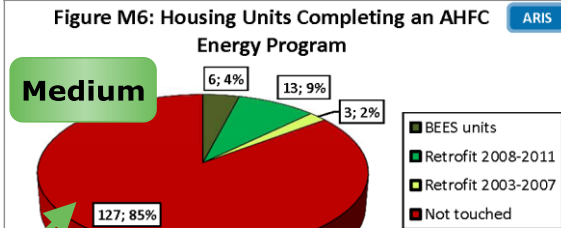
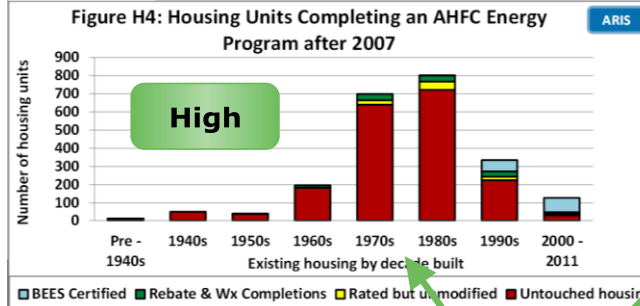
- 2011 American Community Survey 5 year estimates (ACS) **ACS**
- Alaska Retrofit Information System energy audits **ARIS**
- 2010 Decennial Census **CEN**
- Mixed data source; see individual graphs for details. **MIX**

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.

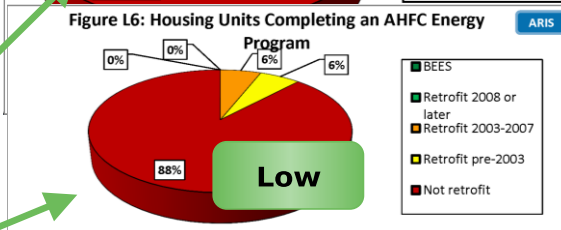
# How to Interpret the Profile: Data Sources, Definitions & Clarifications

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	

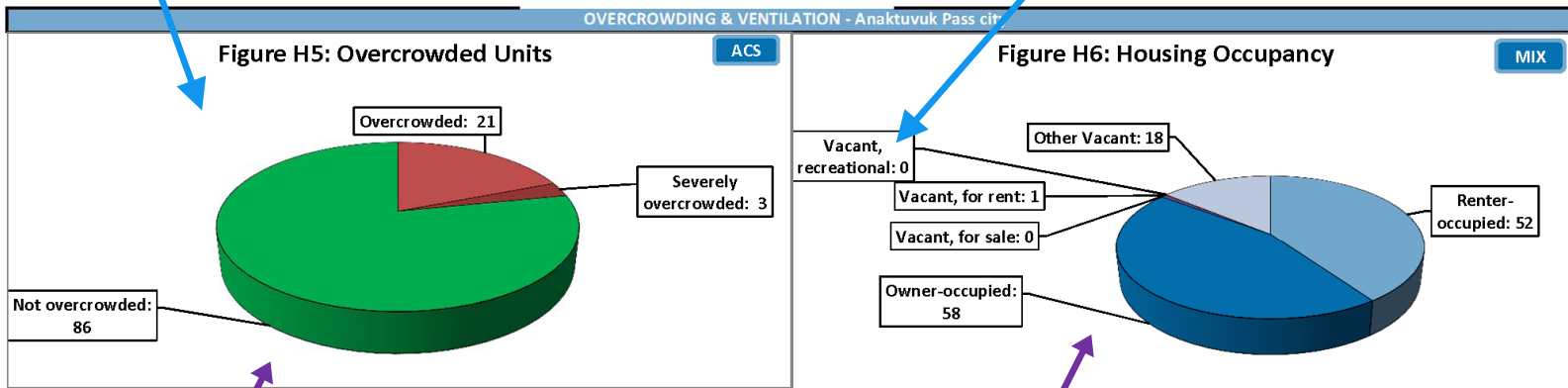
Units weatherized before 2008 are eligible to participate in the program again. (Data source: Alaska Housing Finance Corporation).

## 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.

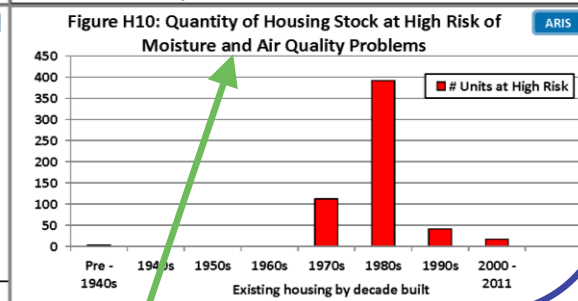
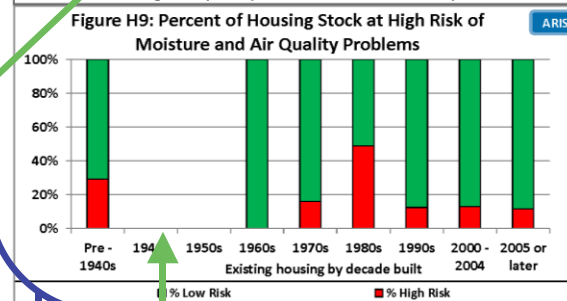
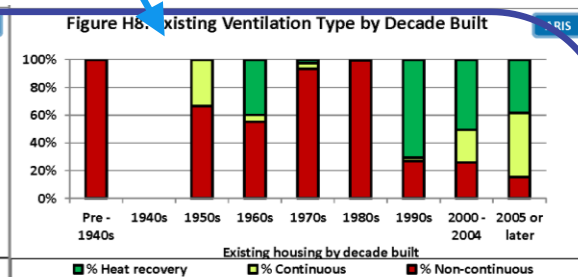
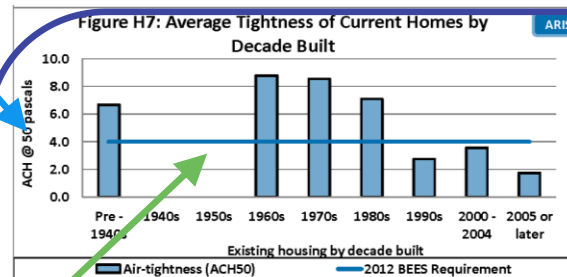
**Continuous:** Mechanical ventilation without heat recovery operated with automatic controls.

**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.

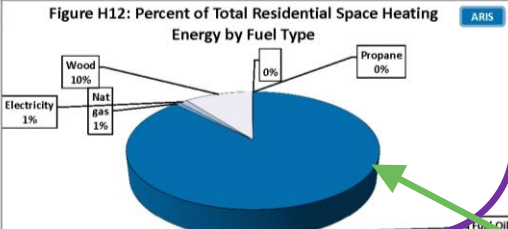
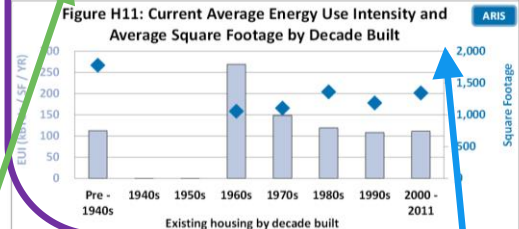
**Space Heating, DHW, Appliances:**  
Estimated annual energy for the end uses of: Space Heating, Domestic Hot Water, and all other energy including lights, appliances, and electronics.

**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

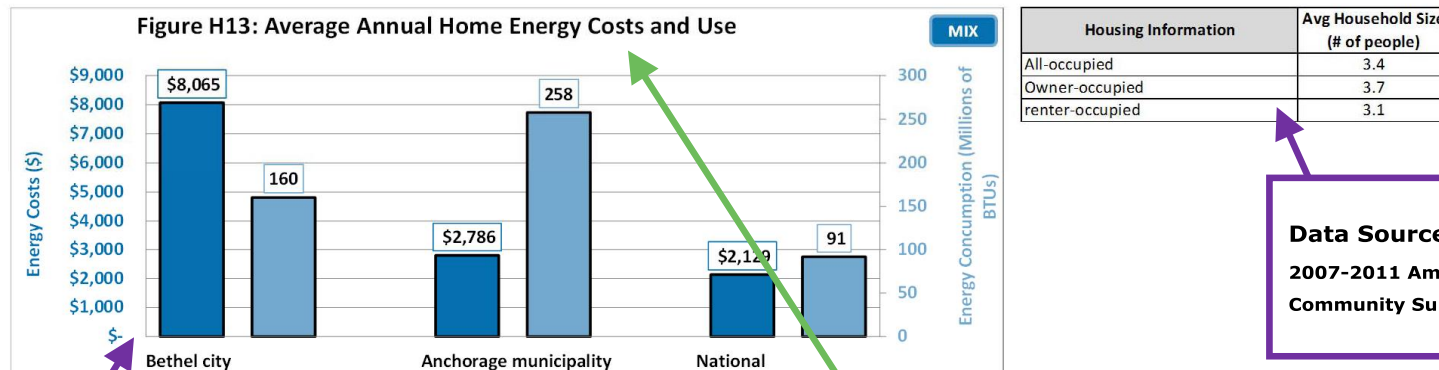
Communities are categorized in this report by the amount of ARIS data available, and reporting is more extensive for locations with more data. Data quantities are defined as--

**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).

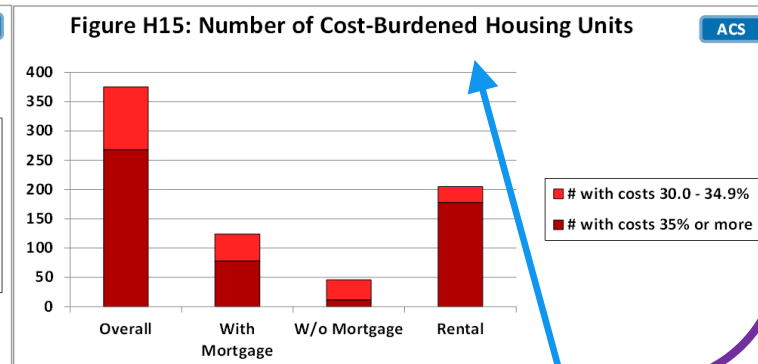
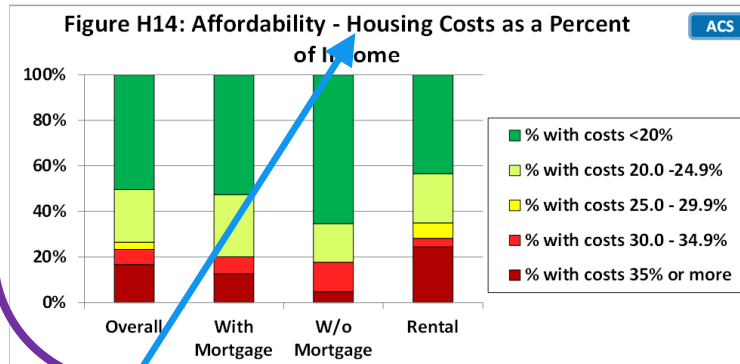
Owner-occupied House with Mortgage, Median Value
\$226,800
Owner-occupied House without a Mortgage, Median Value
\$119,600

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

Avg % of Median Income Spent on Energy	8.8%
--	------



**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.

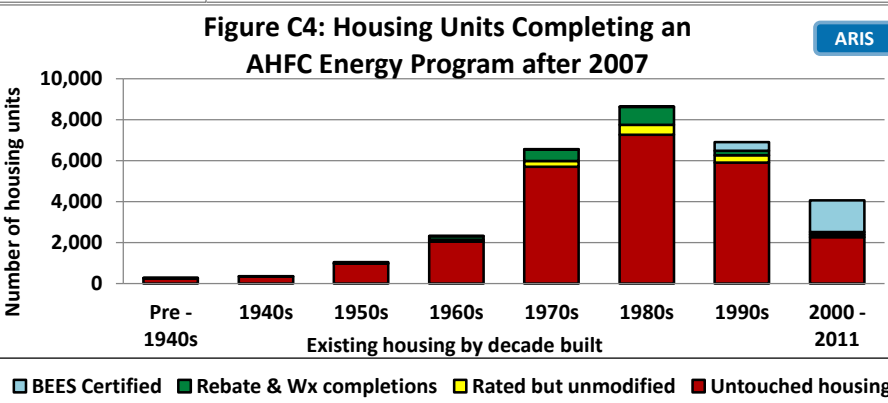
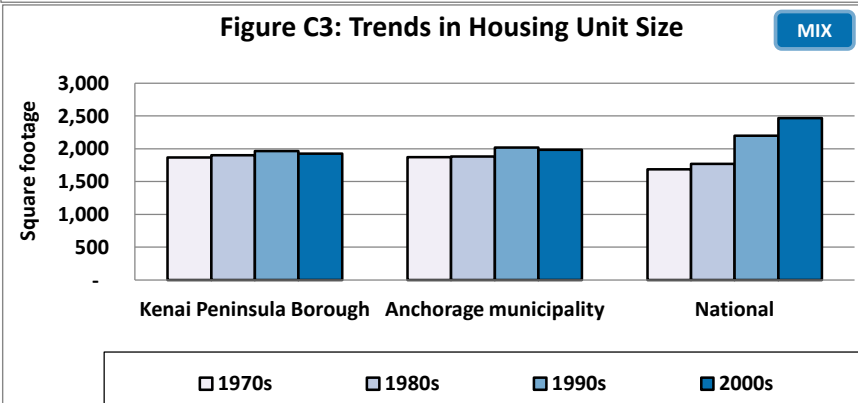
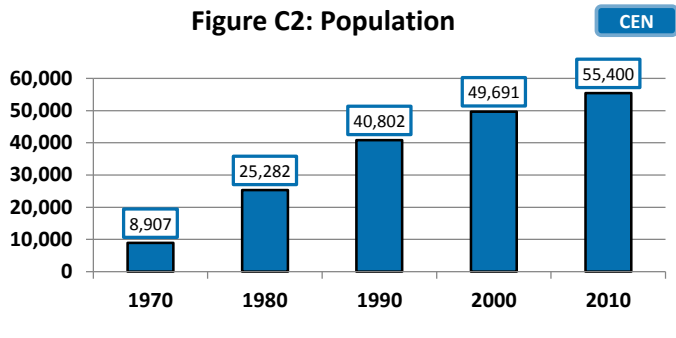
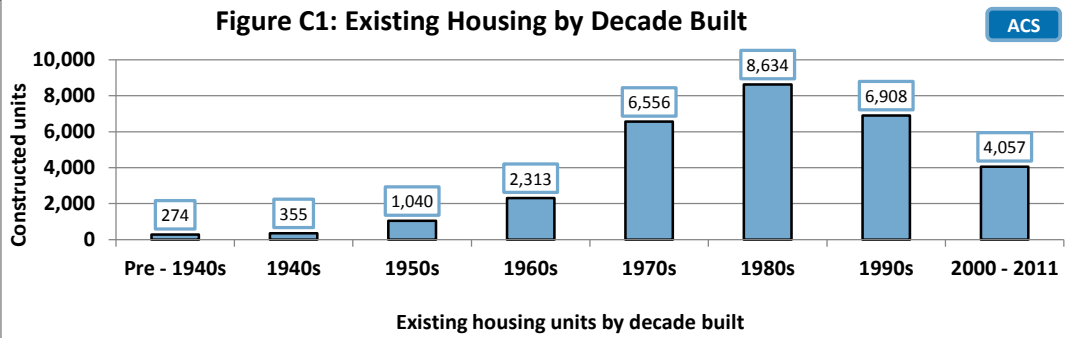
**Census Area Profile for:** Kenai Peninsula Borough

**ANCSA Region:** Cook Inlet Regional (CIRI)

**Regional Housing Authority:** Cook Inlet Housing Authority

**BEES Climate Zone (Heating Degree Day Range):** Zone 7 (9,000 - 12,600 HDD)

**COMMUNITY - Kenai Peninsula Borough**



Houses Lacking Complete Plumbing or Kitchen Facilities	Households	
	Number	Percent
Lack complete plumbing	1,500	7%
Lack complete kitchen	1,343	6%

Avg Annual Energy Cost with PCE	NO PCE
Avg Annual Energy Cost without PCE	\$4,509

Weatherization Retrofits (funding increased 2008)	
Date Range	Units
2008 - 2011	660
2003 - 2007	254
1990 - 2002	908

Estimated Total Annual Community Space Heating Fuel Use		
Fuel Oil	7,947,985	(gallons)
Natural Gas	21,554,824	(ccf)
Electricity	30,611,605	(kWh)
Wood	22,620	(cords)
Propane	1,185,380	(gallons)
Coal	510	(tons)

Housing Need Indicators	Number of Units	% Occupied Housing
Overcrowded	828	4%
Housing cost burdened	6,348	28%
1 Star Homes	1,474	7%

Housing Stock Estimates	Number of Units
All Housing	30,137
All Occupied Housing	22,390
All Vacant housing	7,747
Vacant Housing for Sale or Rent	975

OVERCROWDING & VENTILATION - Kenai Peninsula Borough

Figure C5: Overcrowded Units

ACS

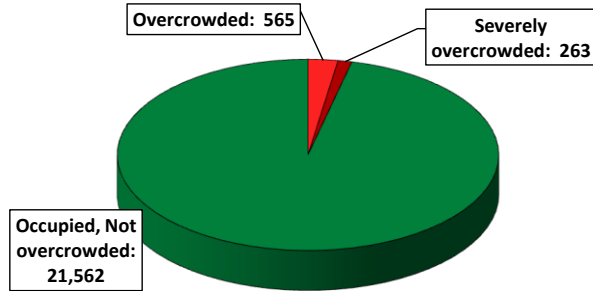


Figure C6: Housing Occupancy

MIX

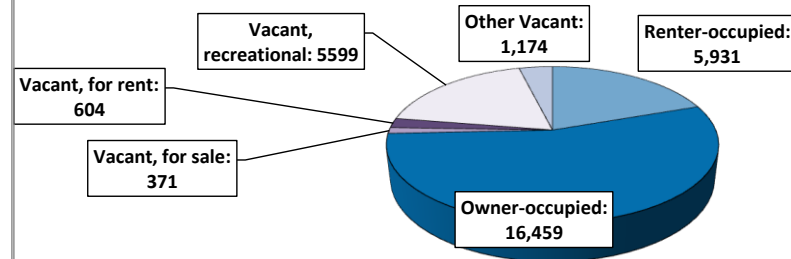


Figure C7: Average Air-Tightness of Current Homes by Decade Built

ARIS

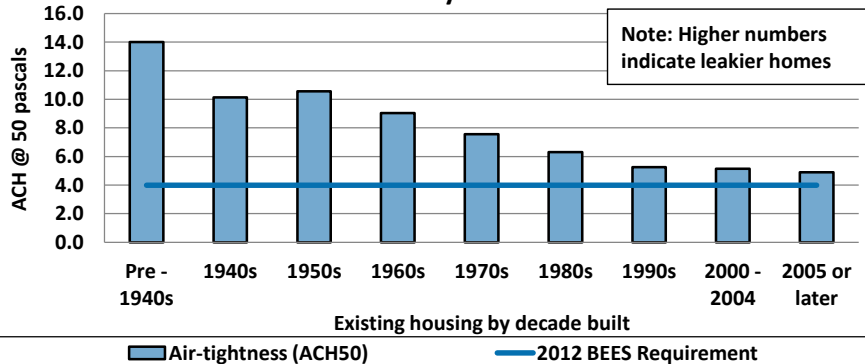


Figure C8: Existing Ventilation Type by Decade Built

ARIS

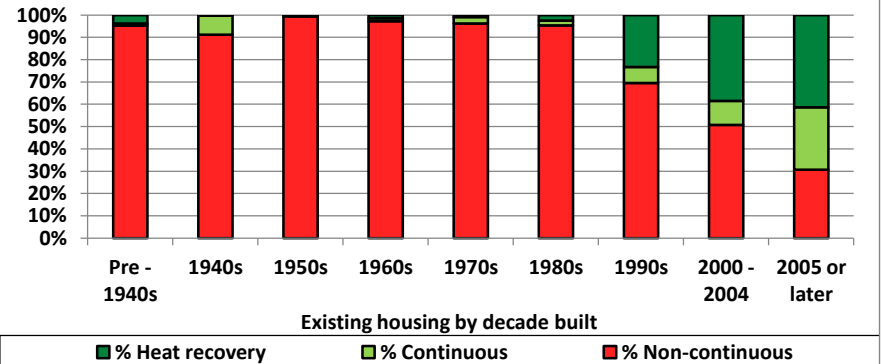


Figure C9: Percent of Housing Stock at High Risk of Moisture and Air Quality Problems

ARIS

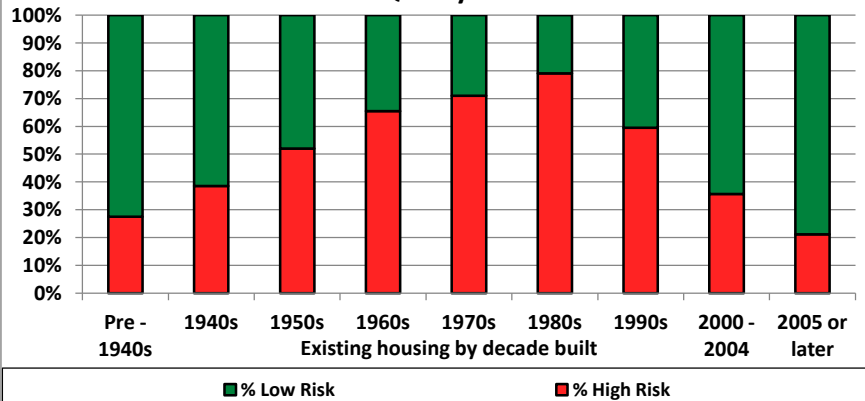
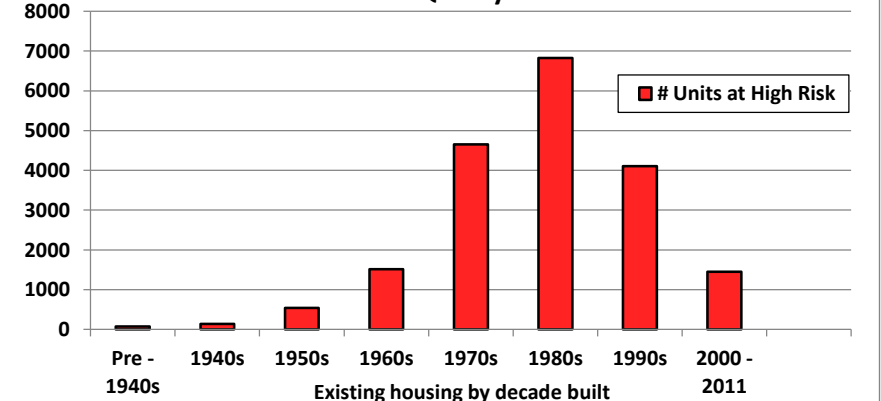


Figure C10: Quantity of Housing Stock at High Risk of Moisture and Air Quality Problems

ARIS



ENERGY - Kenai Peninsula Borough												
Current Kenai Peninsula Borough 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	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	6,774	3-star	71.7	1,892	\$4,509	229	164	30	32	131	\$2.63	8.9
Pre- 1940	44	2-star	52.9	1,891	\$7,348	257	205	24	29	150	\$4.46	12.2
1940- 49	32	2-star plus	62.9	1,979	\$5,686	196	144	21	31	108	\$3.35	8.3
1950- 59	130	2-star	53.2	1,689	\$6,023	242	186	25	32	154	\$4.21	11.8
1960- 69	449	2-star plus	60.2	1,823	\$4,155	271	210	30	31	160	\$2.54	11.4
1970- 79	1,432	2-star plus	66.5	1,870	\$4,534	256	194	30	31	144	\$2.59	9.9
1980- 89	2,225	3-star	72.0	1,900	\$4,523	236	174	30	32	128	\$2.59	8.7
1990- 99	1,231	4-star	78.3	1,967	\$4,460	209	137	29	30	120	\$2.61	7.8
2000- 2004	1,026	4-star	80.5	1,924	\$4,283	187	124	30	33	109	\$2.61	6.9
2005 or later	876	4-star plus	84.3	1,742	\$3,486	154	96	27	31	100	\$2.34	6.0

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

ARIS

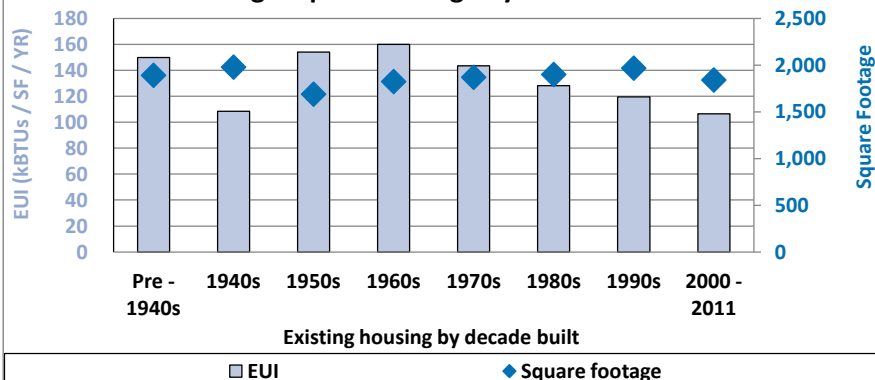
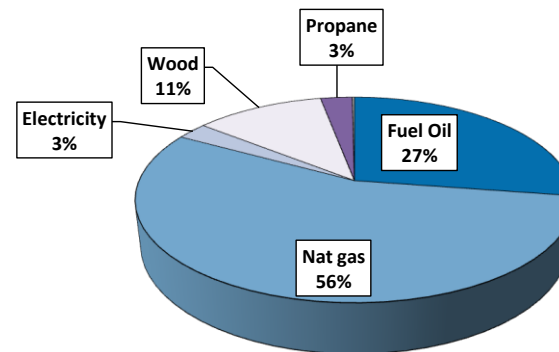


Figure C12: Percent of Total Residential Space Heating Energy by Fuel Type

ARIS

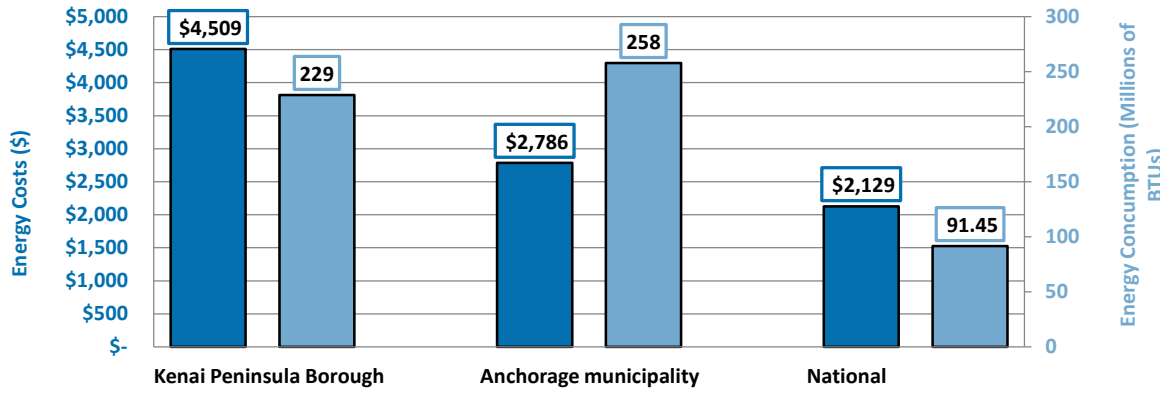


Current Kenai Peninsula Borough Housing Envelope Characteristics By Decade Built											
Current Residential Units by Year Built	# of AkWarm Records	ACH 50	Ceiling R	Above Grade Wall R	Below Grade Wall R	Above Grade Floor R	On Grade Floor R	Below Grade Floor R	Door U	Garage Door U	Window U
OVERALL	6,774	6.7	26	14	6	19	3	3	0.34	0.28	0.50
Pre- 1940	44	14.0	12	9	3	17	3	3	0.46	NR	0.58
1940- 49	32	10.1	17	12	6	17	2	2	0.37	NR	0.57
1950- 59	130	10.6	17	10	3	13	3	2	0.45	0.39	0.61
1960- 69	449	9.0	21	11	3	17	2	2	0.43	0.32	0.58
1970- 79	1,432	7.6	23	12	6	18	3	3	0.36	0.32	0.54
1980- 89	2,225	6.3	28	15	6	20	3	3	0.35	0.30	0.51
1990- 99	1,231	5.2	33	16	8	23	3	3	0.27	0.20	0.41
2000- 2004	1,026	5.1	34	16	12	18	4	3	0.30	0.19	0.39
2005 or later	876	4.9	38	16	16	26	5	3	0.27	0.19	0.35

BEES 2009 - Climate Zone 7	7.0	38	21	15	38	15	15	15	0.33	0.33	0.33
BEES 2012 - Climate Zone 7	4.0	43	25	15	38	15	15	15	0.30	0.30	0.30

AFFORDABILITY - Kenai Peninsula Borough

Figure C13: Average Annual Home Energy Cost and Use



Housing Information	Avg Household Size (# of people)
All-occupied	2.4
Owner-occupied	2.5
Renter-occupied	2.1

Median Value of Owner-occupied House with Mortgage
\$214,700

Median Value of Owner-occupied House without a Mortgage
\$166,600

Median Annual Household Income	
Housing Units	Household Income
All-occupied	\$ 59,256
Renter-occupied	\$ 33,400
Owner-occupied	\$ 69,697
w/ mortgage	\$ 80,459
w/o mortgage	\$ 50,833

Median Housing Costs		
	Monthly	Annual
All-occupied	\$ 950	\$ 11,400
Gross rent	\$ 812	\$ 9,744
Owner-occupied	\$ 1,084	\$ 13,008
Housing units w/ mortgage	\$ 1,463	\$ 17,556
Housing units w/out a mortgage	\$ 405	\$ 4,860

Avg % of Median Income Spent on Energy	7.6%
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Figure C14: Affordability - Housing Costs as a Percent of Income

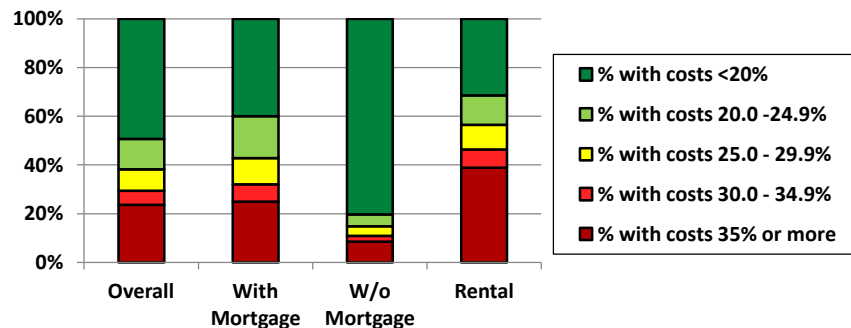
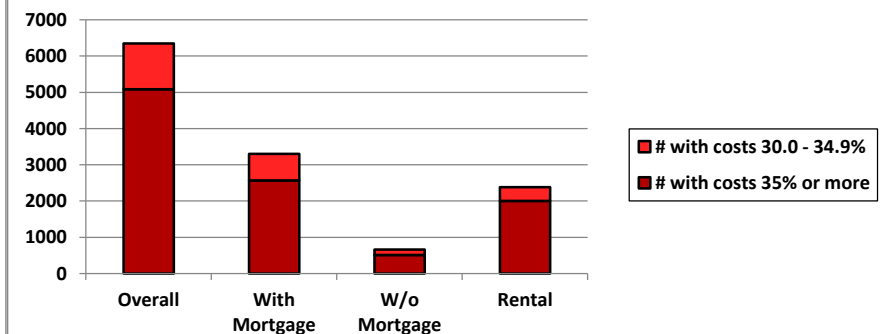


Figure C15: Number of Cost-Burdened Housing Units



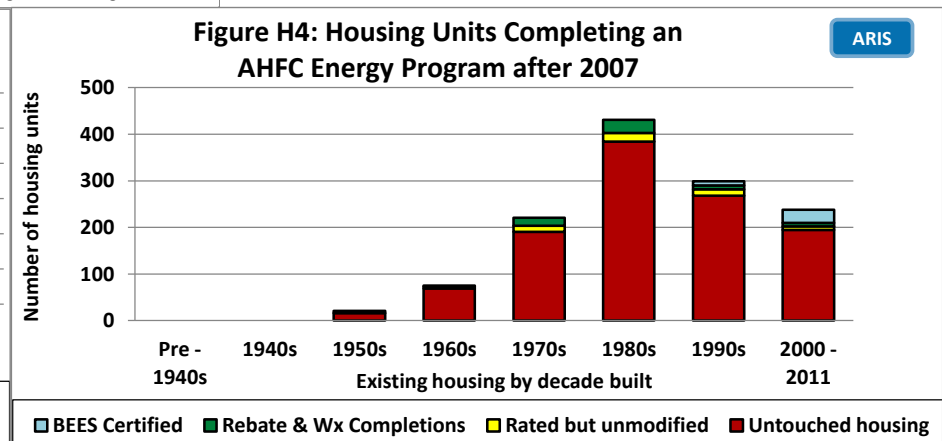
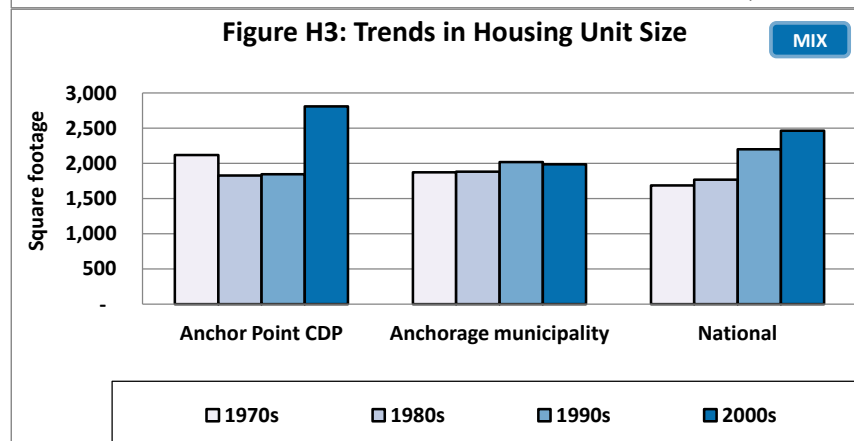
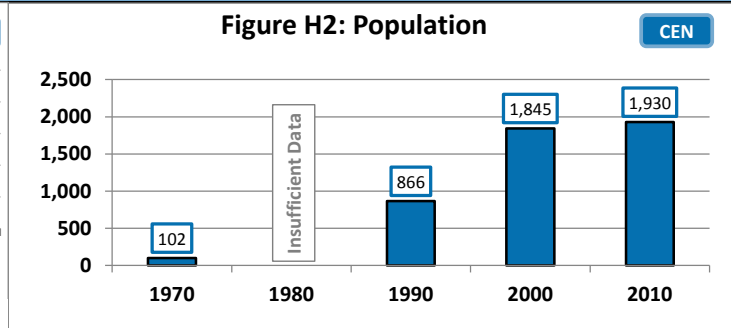
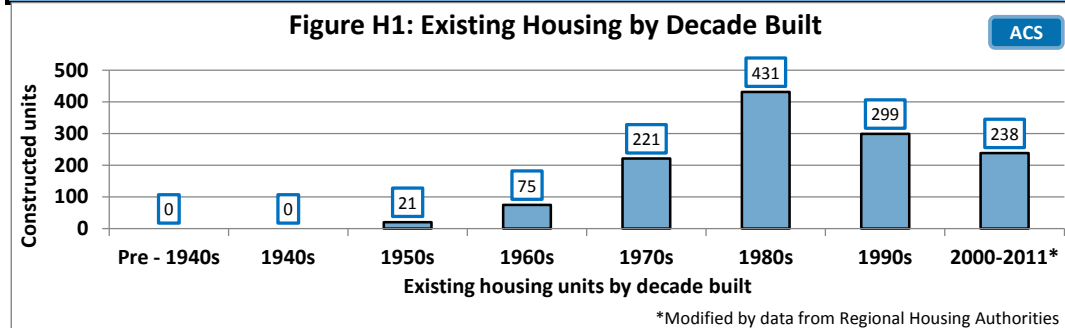
**Community Profile for:** Anchor Point CDP

**ANCSA Region:** Cook Inlet Regional (CIRI)

**Regional Housing Authority:** Cook Inlet Housing Authority

**BEES Climate Zone (Heating Degree Days):** Zone 7 (10,115 HDD)

**COMMUNITY - Anchor Point CDP**



Houses Lacking Complete Plumbing or Kitchen Facilities	Households	
	Number	Percent
Lack complete plumbing	155	16%
Lack complete kitchen	81	8%

Avg Annual Energy Cost with PCE	NO PCE
Avg Annual Energy Cost without PCE	\$6,238

Weatherization Program Retrofits (funding increased in 2008)	
Date Range	Units
2008-2011	19
2003-2007	15
1990-2002	77

Estimated Total Annual Community Space Heating Fuel Use		
Fuel Oil	649,273	(gallons)
Nat Gas	-	(ccf)
Electricity	1,210,235	(kWh)
Wood	2,714	(cords)
Propane	95,664	(gallons)
Coal	13	(tons)

Estimated Energy Prices as of January 2013	
#1 Fuel oil cost (\$ / gallon)	\$3.85
Electricity with PCE (\$/kWh)	No PCE
Electricity cost without PCE (\$/kWh)	\$0.15
Natural gas base rate	\$0.11
Natural gas fuel charge	\$0.57
Natural gas customer charge	\$13.50

Housing Stock Estimates	Number of Units
All Housing	1285
All Occupied Housing	959
All Vacant housing	326
Vacant Housing for Sale or Rent	45

OVERCROWDING & VENTILATION - Anchor Point CDP

Figure H5: Overcrowded Units

ACS

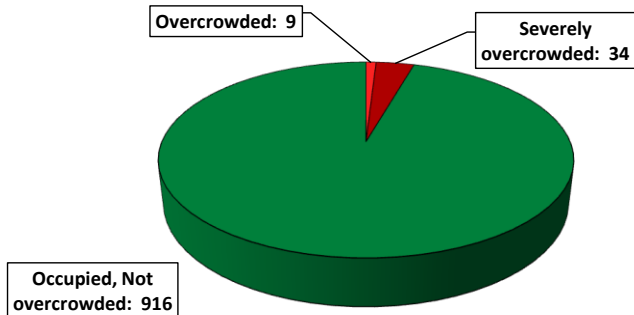


Figure H6: Housing Occupancy

MIX

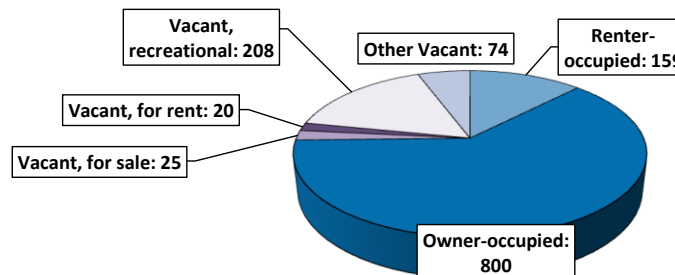


Figure H7: Average Air-Tightness of Current Homes by Decade Built

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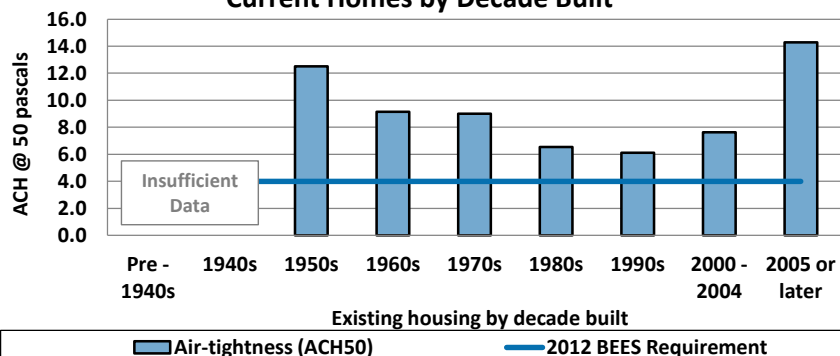


Figure H8: Existing Ventilation Type by Decade Built

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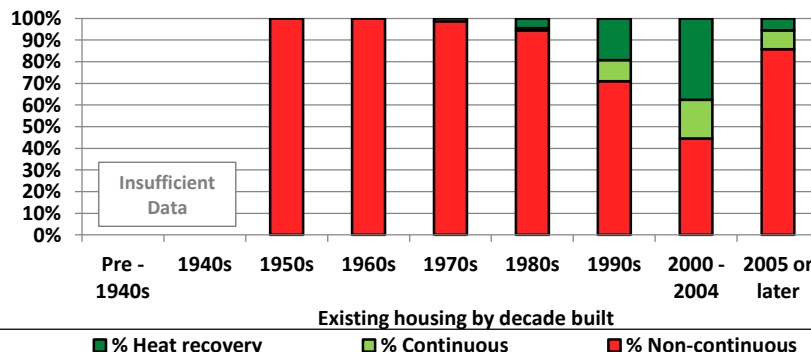


Figure H9: Percent of Housing Stock at High Risk of Moisture and Air Quality Problems

ARIS

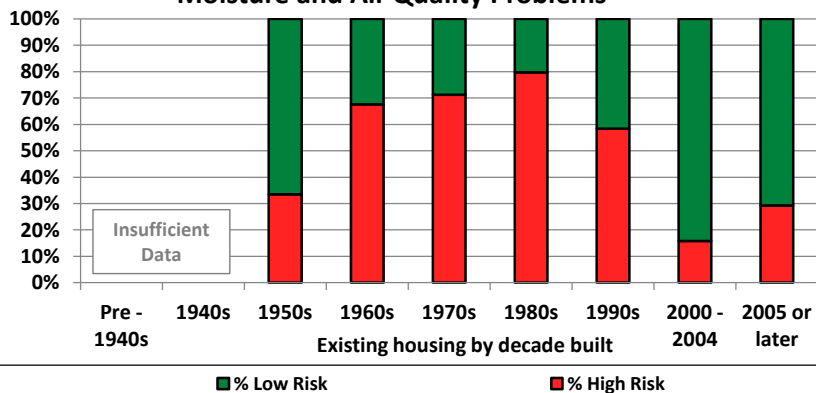
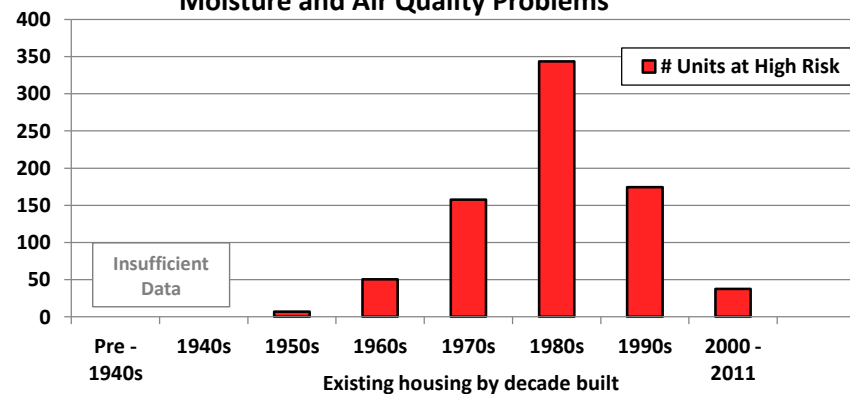


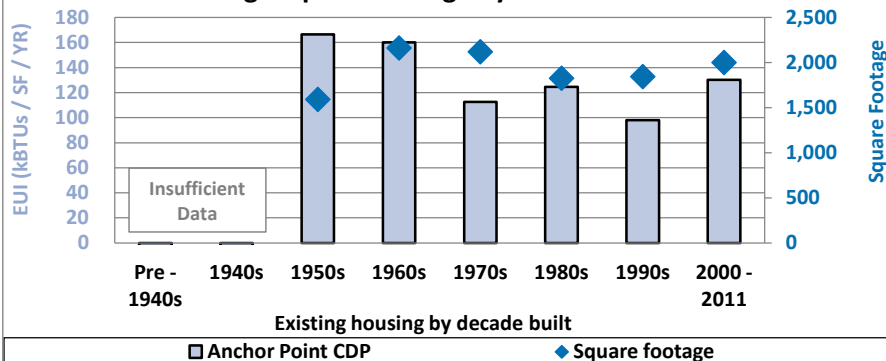
Figure H10: Quantity of Housing Stock at High Risk of Moisture and Air Quality Problems

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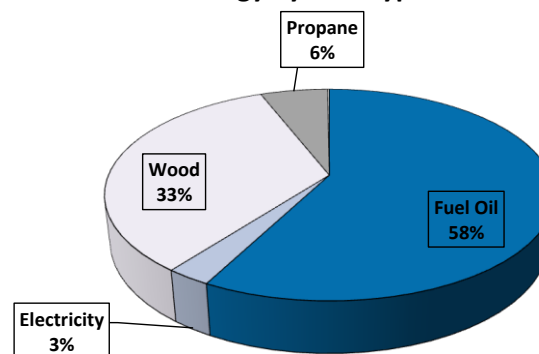


ENERGY - Anchor Point CDP												
Current Anchor Point CDP Housing Energy Characteristics By Decade Built												
Current Residential Units by Year Built	Number of Records	Avg Energy Rating Stars	Avg Energy Rating Points	Avg Sq. Feet	Avg. Annual Energy Cost	Avg. Annual Energy Use (million BTUs)	Avg Ann Energy by End Use (million Btus)			Avg. EUI (kBtus/SF)	Avg. ECI (\$ / SF)	Avg. Home Heating Index
							Space Heating	DHW	Appliances			
OVERALL	214	2-star plus	67.8	1,962	\$ 6,238	206	147	25	33	122	\$ 3.68	9.1
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	10	2-star	50.3	1,591	\$ 6,273	245	201	18	27	167	\$ 4.00	13.7
1960- 69	8	1-star plus	49.2	2,162	\$ 8,095	308	252	26	30	160	\$ 3.75	13.4
1970- 79	48	2-star plus	63.1	2,120	\$ 6,994	226	170	26	30	113	\$ 3.49	8.6
1980- 89	76	3-star	69.9	1,826	\$ 5,772	215	154	27	34	125	\$ 3.50	9.3
1990- 99	40	3-star plus	77.4	1,844	\$ 5,948	176	114	25	32	98	\$ 3.45	6.8
2000- 2004	26	2-star plus	66.3	2,810	\$ 6,902	190	135	20	35	115	\$ 3.28	8.8
2005 or later	25	2-star plus	60.3	1,158	\$ 4,953	143	100	19	24	155	\$ 5.69	11.3

**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**

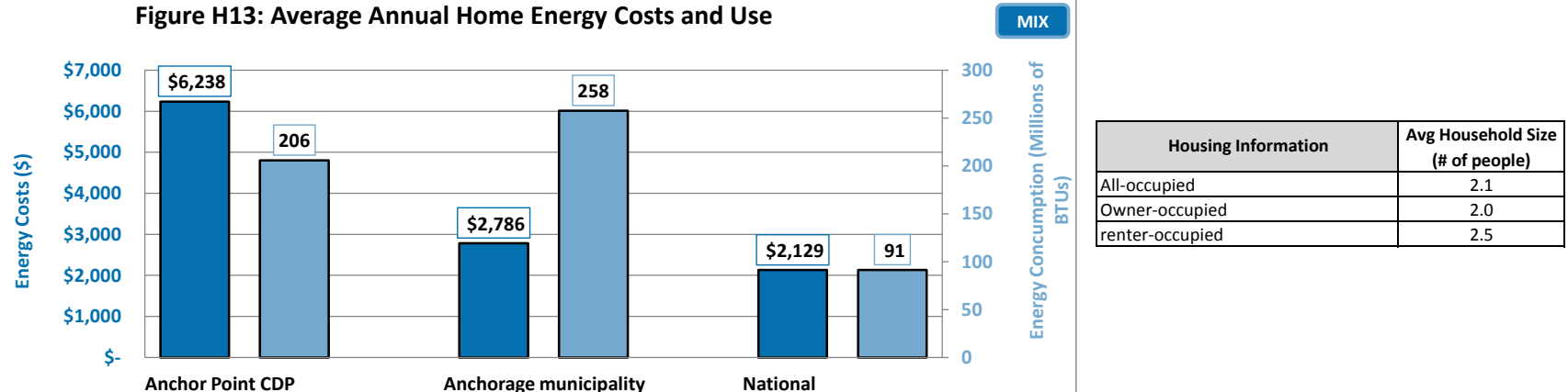


Current Anchor Point CDP Housing Envelope Characteristics By Decade Built											
Current Residential Units by Year Built	Number of Records	ACH 50	Ceiling R	Above Grade Wall R	Below Grade Wall R	Above Grade Floor R	On Grade Floor R	Below Grade Floor R	Door U	Garage Door U	Window U
OVERALL	214	8.0	24	14	7	18	3	3	0.38	0.26	0.53
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	10	12.5	19	9	3	NR	2	2	0.60	NR	0.61
1960- 69	8	9.1	18	13	4	13	NR	2	0.42	NR	0.63
1970- 79	48	9.0	18	13	7	20	3	3	0.42	0.27	0.57
1980- 89	76	6.5	26	14	10	20	3	3	0.38	0.27	0.56
1990- 99	40	6.1	32	16	9	26	4	3	0.28	0.22	0.44
2000- 2004	26	7.6	26	15	18	16	9	3	0.30	0.18	0.42
2005 or later	25	14.3	27	12	5	12	3	4	0.39	0.15	0.46
BEES 2009 - Climate Zone 7		7.0	38	21	15	38	15	15	0.33	0.33	0.33
BEES 2012 - Climate Zone 7		4.0	43	25	15	38	15	15	0.30	0.30	0.30



AFFORDABILITY - Anchor Point CDP

Figure H13: Average Annual Home Energy Costs and Use



Housing Information	Avg Household Size (# of people)
All-occupied	2.1
Owner-occupied	2.0
renter-occupied	2.5

Owner-occupied House with Mortgage, Median Value
\$180,800

Owner-occupied House without a Mortgage, Median Value
\$146,100

Median Annual Household Income	
Housing Units	Household Income
All-occupied	\$ 52,926
Renter-occupied	\$ 43,125
Owner-occupied	\$ 53,438
w/ mortgage	\$ 60,521
w/o mortgage	\$ 40,750

Median Housing Costs		
	Monthly	Annual
All-occupied	\$ 806	\$ 9,672
Gross rent	\$ 813	\$ 9,756
Owner-occupied	\$ 805	\$ 9,660
Housing units w/ mortgage	\$ 1,320	\$ 15,840
Housing units w/out a mortgage	\$ 314	\$ 3,768

Avg % of Median Income Spent on Energy	<b>11.8%</b>
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Figure H14: Affordability - Housing Costs as a Percent of Income

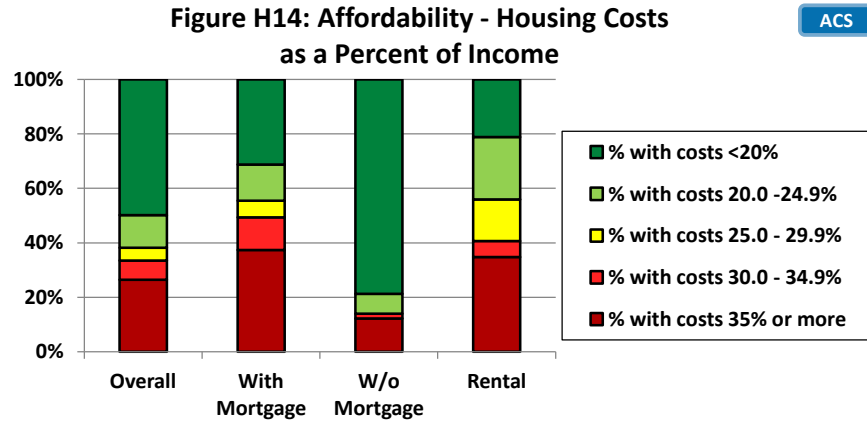
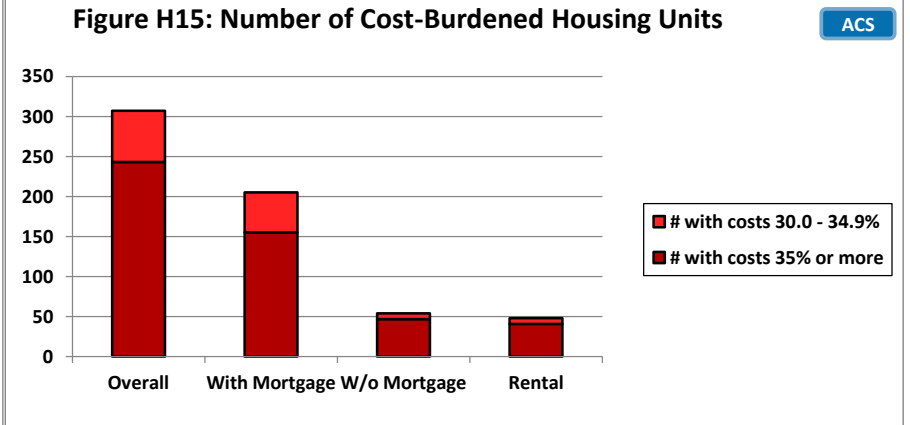


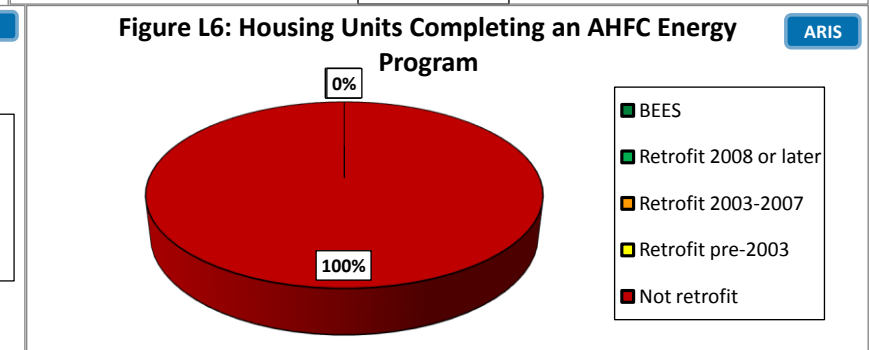
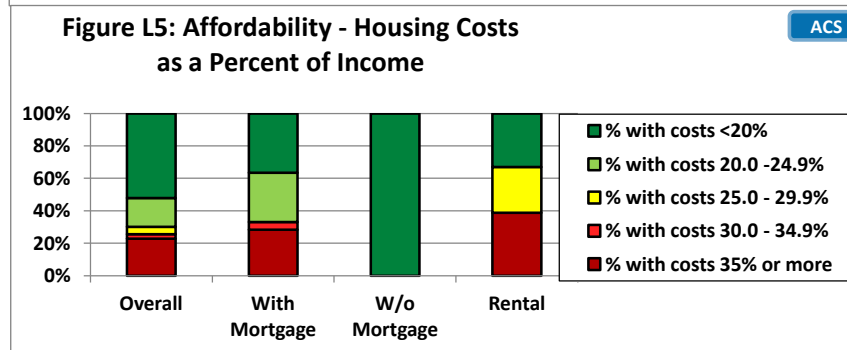
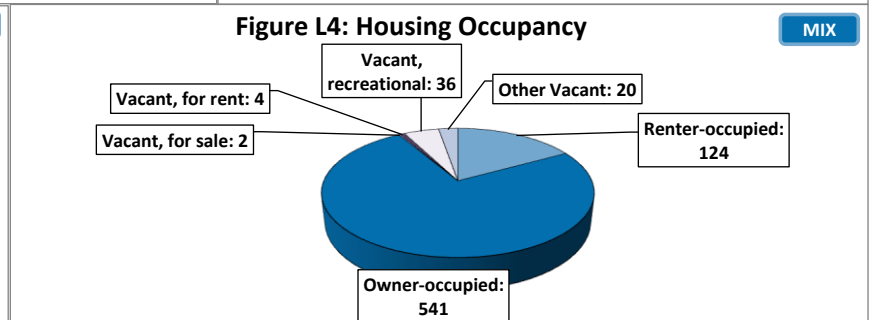
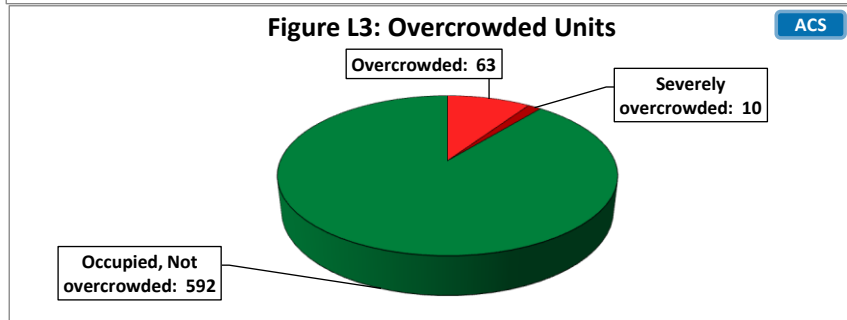
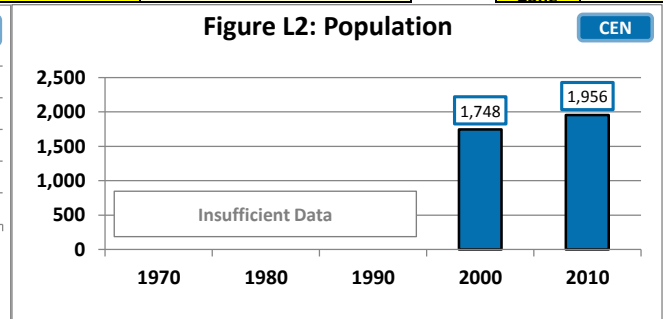
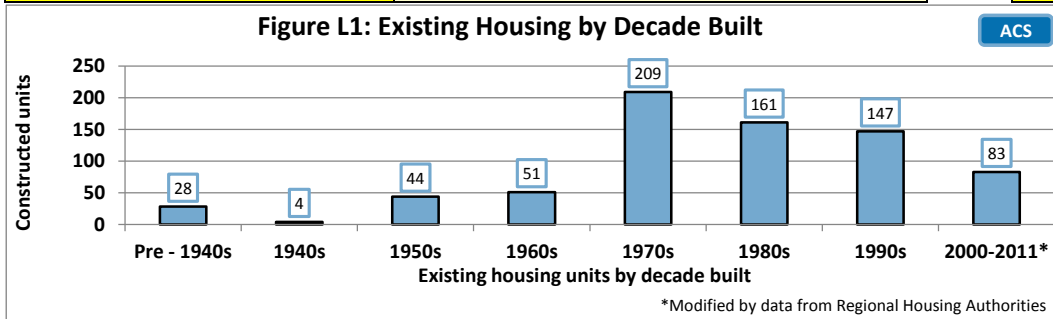
Figure H15: Number of Cost-Burdened Housing Units



**Community Profile for:** Bear Creek CDP

**ANCSA Region:** Chugach Alaska Corp

**Climate Zone:** 7



Owner-occupied House with Mortgage, Median Value
\$199,400

Owner-occupied House without a Mortgage, Median Value
\$71,600

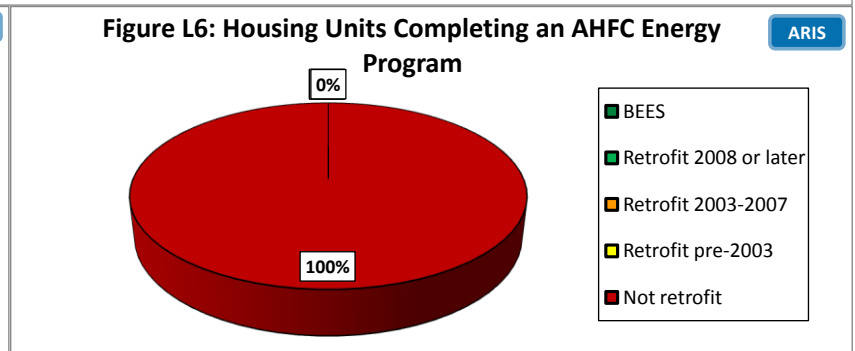
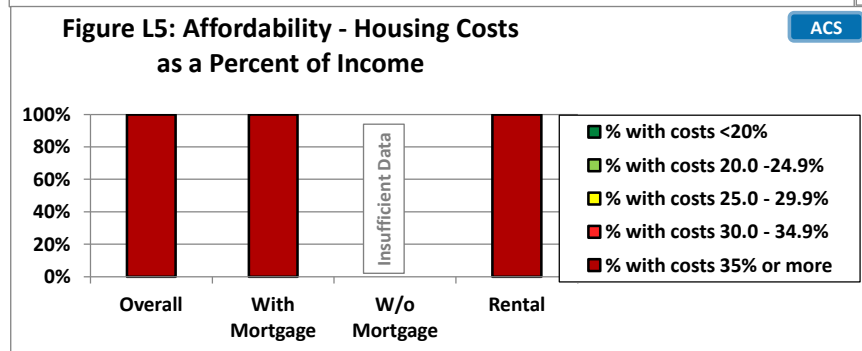
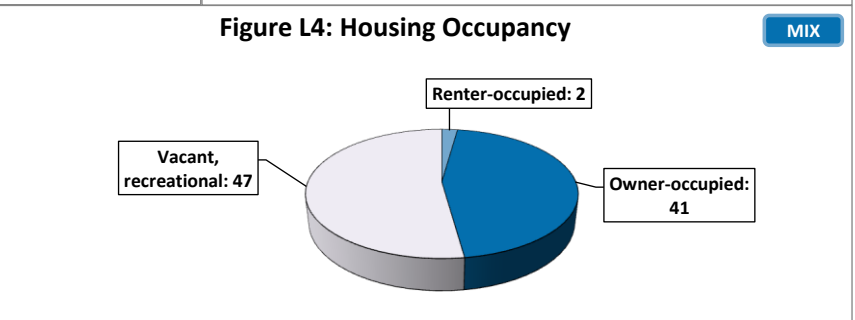
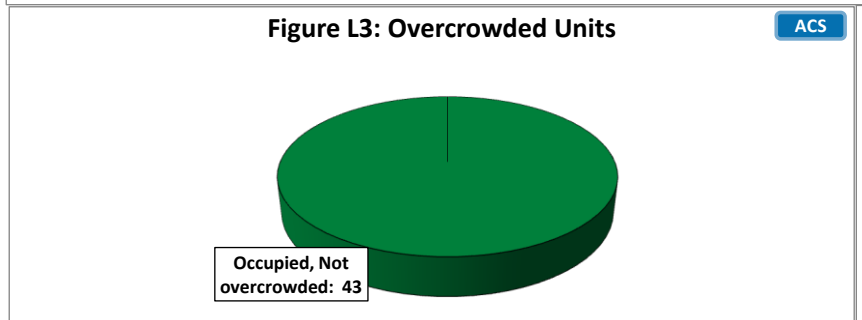
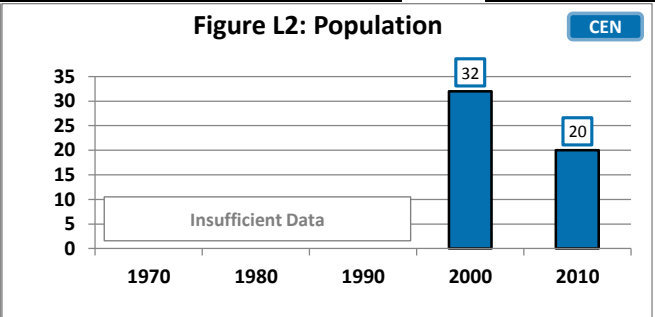
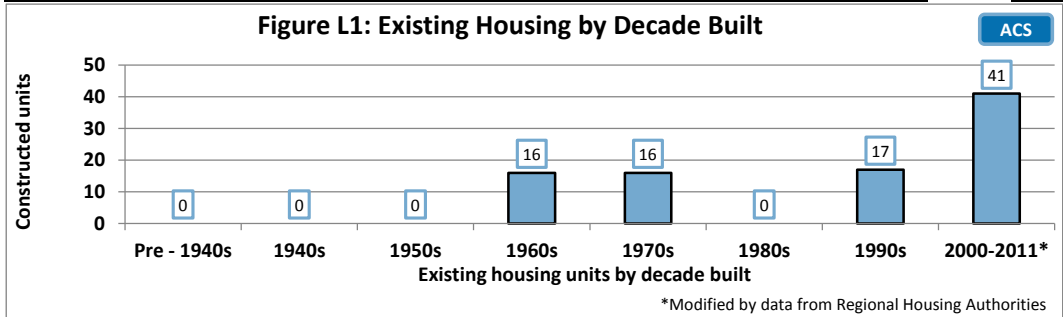
Estimated Energy Prices as of January 2013	
#1 Fuel oil cost (\$ / gallon)	No Data
Electricity with PCE (\$/kWh)	No Data
Electricity without PCE (\$/kWh)	No Data

Median Annual Household Income	
Housing Units	Household Income
All-occupied	\$ 78,420
Renter-occupied	\$ 80,250
Owner-occupied	\$ 78,278
w/ mortgage	\$ 105,792
w/o mortgage	\$ 54,100

Housing Stock Estimates	
Housing Stock Estimates	Number of Units
All Housing	727
All Occupied Housing	665
All Vacant housing	62

Median Housing Costs		
	Monthly	Annual
All-occupied	\$ 1,134	\$ 13,608
Gross rent	\$ 1,086	\$ 13,032
Owner-occupied	\$ 1,171	\$ 14,052
Housing units w/ mortgage	\$ 1,472	\$ 17,664
Housing units w/out a mortgage	\$ 362	\$ 4,344

Community Profile for: **Beluga CDP** ANCSA Region: **Cook Inlet Regional (CIRI)** Climate Zone: **7**



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	\$ 66,189
Renter-occupied	NR
Owner-occupied	NR
w/ mortgage	NR
w/o mortgage	NR

Housing Stock Estimates	
Housing Stock Estimates	Number of Units
All Housing	90
All Occupied Housing	43
All Vacant housing	47

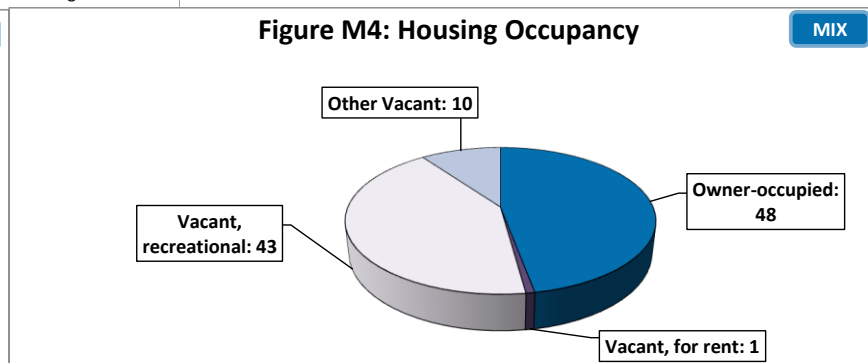
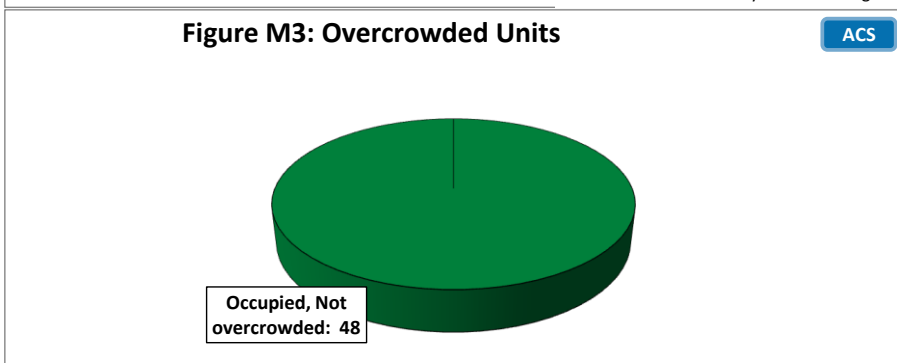
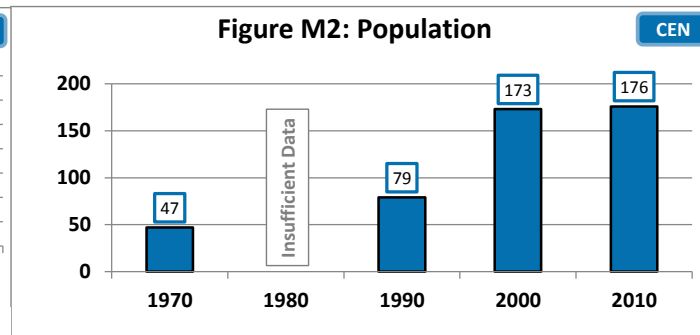
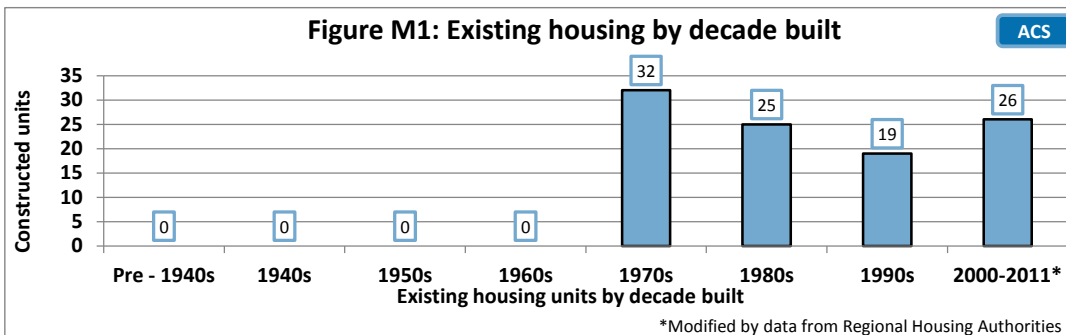
Median Housing Costs		
	Monthly	Annual
All-occupied	\$ 2,238	\$ 26,856
Gross rent	NR	NR
Owner-occupied	NR	NR
Housing units w/ mortgage	NR	NR
Housing units w/out a mortgage	NR	NR

**Community Profile for:** Clam Gulch CDP

**ANCSA Region:** Cook Inlet Regional (CIRI)

**Regional Housing Authority:** Cook Inlet Housing Authority

**BEES Climate Zone (Heating Degree Days):** Zone 7 (11,375 HDD)



#### Clam Gulch 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	19	3-star	72.8	1,888	\$ 5,366	245	164	\$3.31	11.8	53%
Retrofit units	12	4-star	79.7	1,975	\$ 4,997	197	121	\$2.90	8.2	53%
New construction	4	5-star	90.4	1,804	\$ 4,243	135	80	\$2.52	4.2	0%
Overall	35	3-star plus	74.3	1,895	\$ 5,279	235	156	\$3.23	11.1	51%

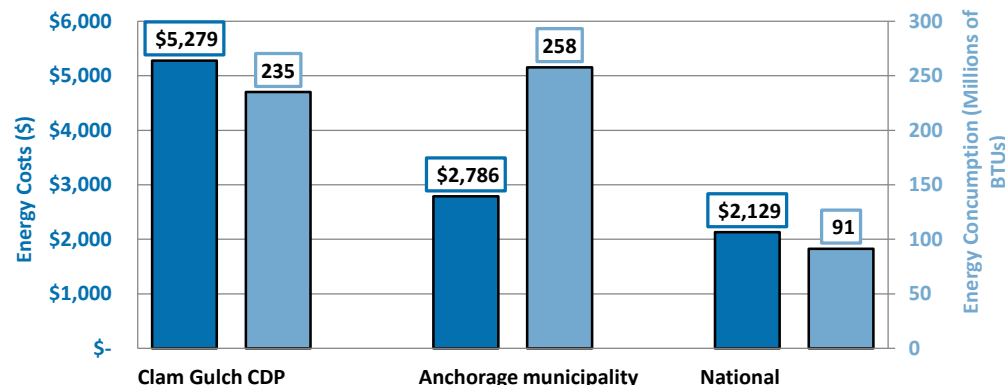
#### Clam Gulch CDP Housing Envelope Characteristics

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	19	6.4	31	14	8	22	3	2	0.37	NR	0.45
Retrofit units	12	5.9	33	13	13	36	4	3	0.36	NR	0.45
New construction	4	2.2	47	18	22	NR	NR	7	0.24	NR	0.35
Overall	35	6.2	32	14	8	24	3	3	0.36	0.18	0.45

BEES 2009	7.0	38	21	15	38	15	15	0.33	0.33	0.33
BEES 2012	4.0	43	25	15	38	15	15	0.30	0.30	0.30

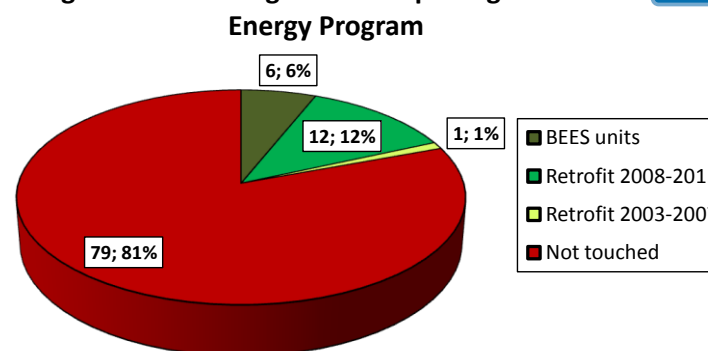
**Figure M5: Average Annual Home Energy Costs and Use**

MIX



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

ARIS



**AFFORDABILITY - Clam Gulch CDP**

Owner occupied House with Mortgage, Median Value
\$218,800

Owner-occupied House without a Mortgage, Median Value
\$212,500

Estimated Energy Prices as of January 2013	
#1 Fuel oil cost (\$ / gallon)	\$ 3.80
Electricity with PCE (\$/kWh)	No PCE
Electricity without PCE (\$/kWh)	\$ 0.15

Median Annual Household Income	
Housing Units	Household Income
All-occupied	\$ 35,909
Renter-occupied	NR
Owner-occupied	\$ 35,909
w/ mortgage	\$ 29,250
w/o mortgage	\$ 36,250

Average Annual Energy Cost	
With PCE	NO PCE
Without PCE	\$5,279

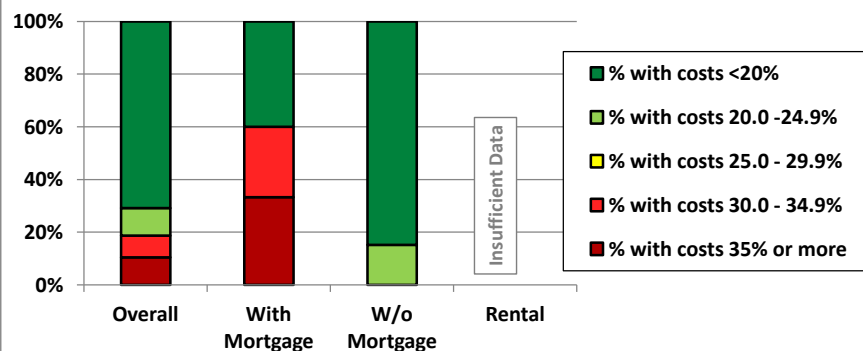
Avg % Median Income spent on Energy	14.7%
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Median Housing Costs		
	Monthly	Annual
All-occupied	\$ 432	\$ 5,184
Gross rent	NR	NR
Owner-occupied	\$ 464	\$ 5,568
Housing units w/ mortgage	\$ 1,146	\$ 13,752
Housing units w/out a mortgage	\$ 396	\$ 4,752

Housing Stock Estimates	Number of Units
All Housing	102
All Occupied Housing	48
All Vacant housing	54
Vacant Housing for Sale/Rent	1

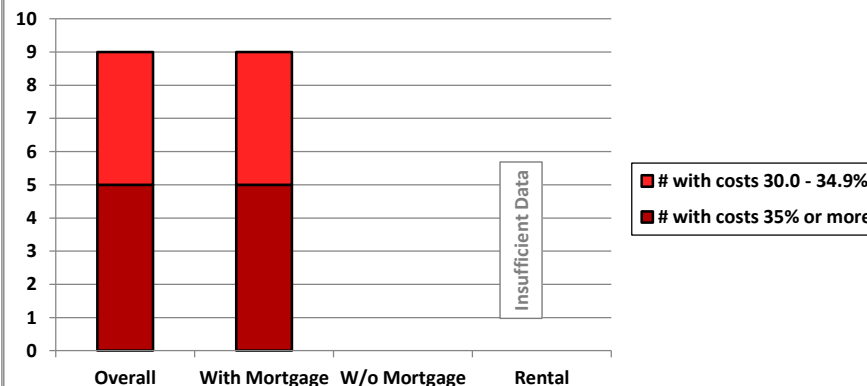
**Figure M7: Affordability - Housing Costs as a Percent of Income**

ACS

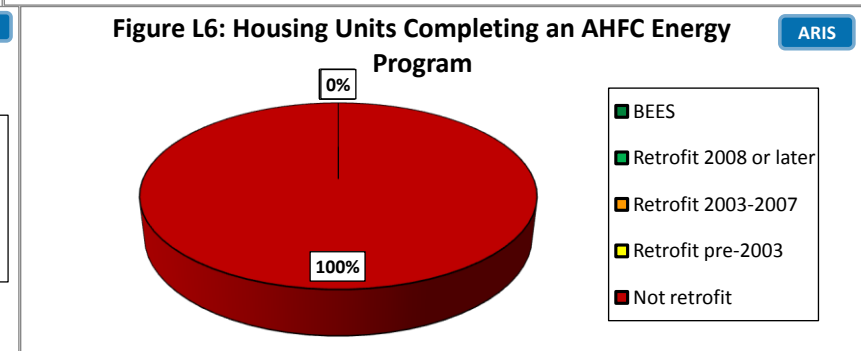
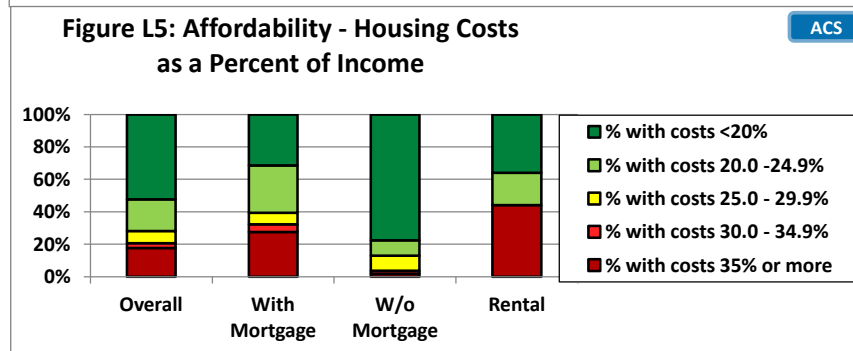
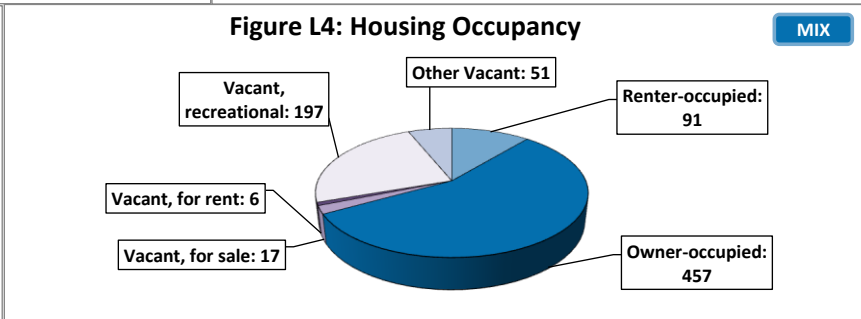
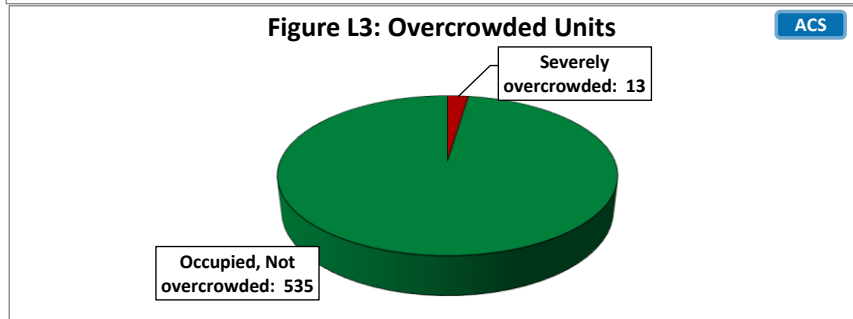
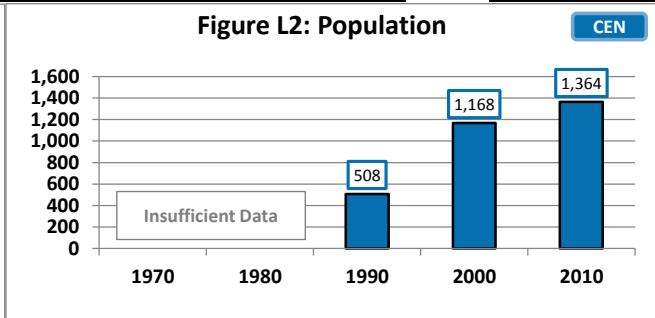
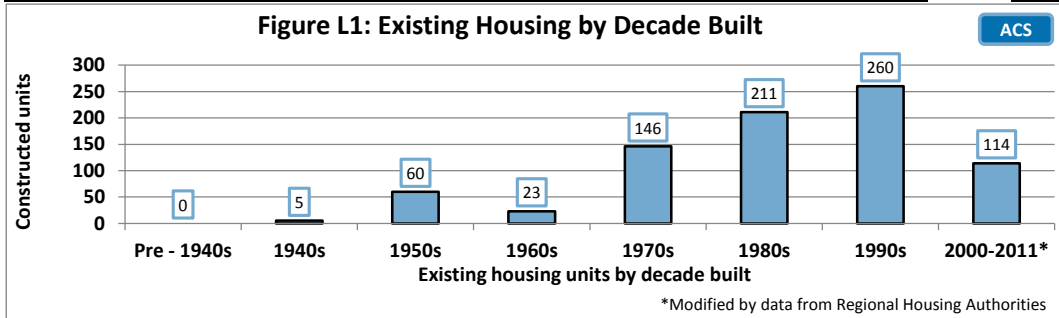


**Figure M8: Number of Cost-Burdened Housing Units**

ACS



<b>Community Profile for:</b>	Cohoe CDP	<b>ANCSA Region</b>	Cook Inlet Regional (CIRI)	<b>Climate Zone</b>	7
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<b>Owner-occupied House with Mortgage, Median Value</b>
\$259,600

<b>Owner-occupied House without a Mortgage, Median Value</b>
\$120,300

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

<b>Median Annual Household Income</b>	
<b>Housing Units</b>	<b>Household Income</b>
All-occupied	\$ 56,389
Renter-occupied	\$ 14,028
Owner-occupied	\$ 64,583
w/ mortgage	\$ 85,597
w/o mortgage	\$ 43,438

<b>Housing Stock Estimates</b>		<b>Number of Units</b>	
All Housing		819	
All Occupied Housing		548	
All Vacant housing		271	

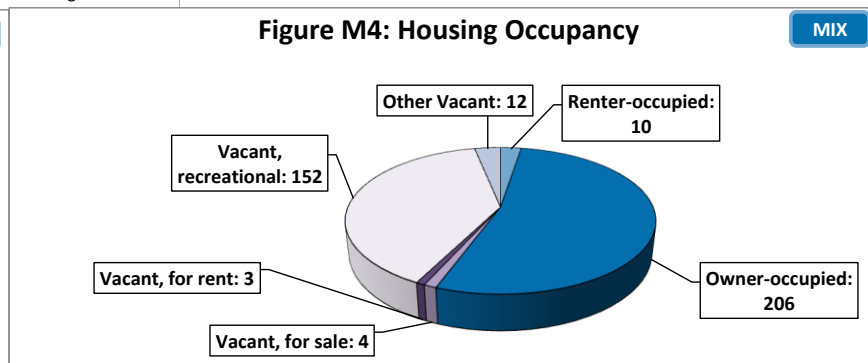
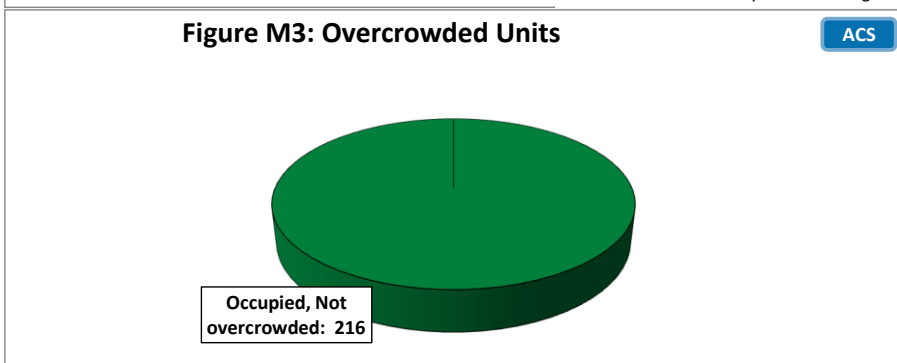
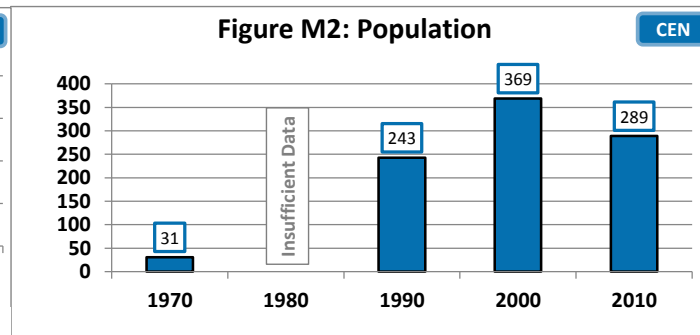
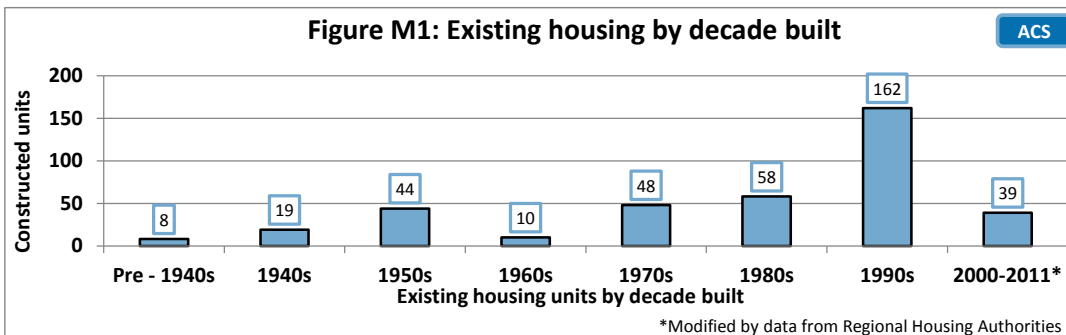
<b>Median Housing Costs</b>		
	<b>Monthly</b>	<b>Annual</b>
All-occupied	\$ 943	\$ 11,316
Gross rent	\$ 1,382	\$ 16,584
Owner-occupied	\$ 894	\$ 10,728
Housing units w/ mortgage	\$ 1,363	\$ 16,356
Housing units w/out a mortgage	\$ 346	\$ 4,152

**Community Profile for:** Cooper Landing CDP

**ANCSA Region:** Cook Inlet Regional (CIRI)

**Regional Housing Authority:** Cook Inlet Housing Authority

**BEES Climate Zone (Heating Degree Days):** Zone 7 (10,527 HDD)



#### Cooper Landing 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	15	2-star plus	67.7	1,859	\$ 5,208	218	137	\$3.34	10.3	71%
Retrofit units	9	4-star	79.3	1,552	\$ 3,511	128	89	\$2.49	5.5	22%
New construction	13	5-star	88.7	1,188	\$ 3,586	109	61	\$1.94	3.5	0%

#### Cooper Landing CDP Housing Envelope Characteristics

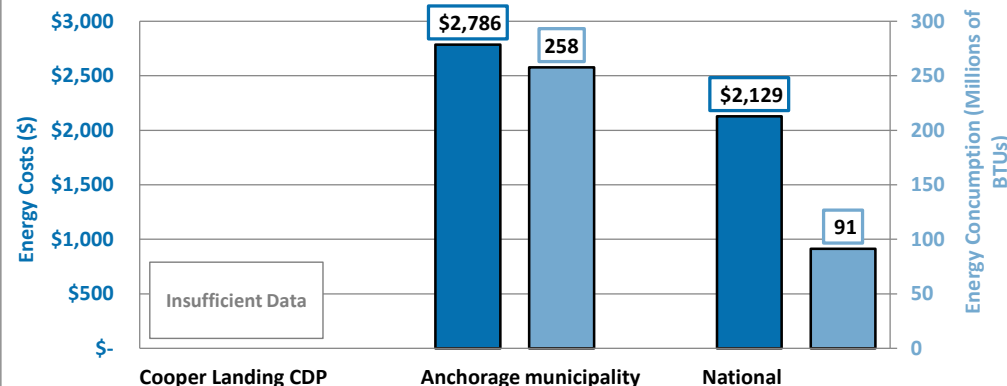
Residential Unit Categories	Number of Records	ACH 50	Ceiling R	Above Grade Wall R	Below Grade Wall R	Above Grade Floor R	On Grade Floor R	Below Grade Floor R	Door U	Garage Door U	Window U
Pre-retrofit units	15	7.1	20	13	5	22	4	3	0.42	0.17	0.52
Retrofit units	9	6.3	35	14	19	NR	NR	5	0.26	NR	0.44
New construction	13	2.3	47	22	22	NR	NR	3	0.18	NR	0.28
		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR

BEES 2009	7.0	38	21	15	38	15	15	0.33	0.33	0.33
BEES 2012	4.0	43	25	15	38	15	15	0.30	0.30	0.30

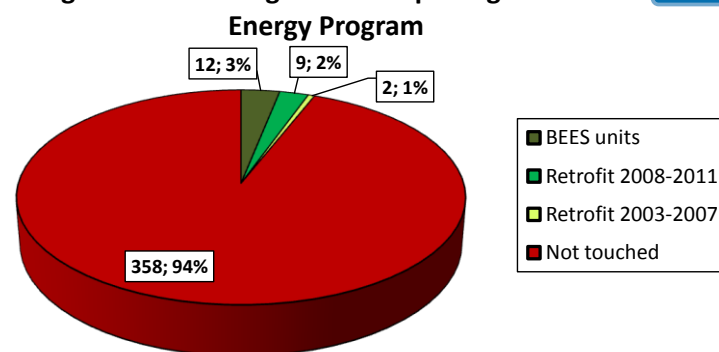
**Figure M5: Average Annual Home Energy Costs and Use**

MIX



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

ARIS



**AFFORDABILITY - Cooper Landing CDP**

Owner occupied House with Mortgage, Median Value
\$343,600

Median Annual Household Income	
Housing Units	Household Income
All-occupied	\$ 116,147
Renter-occupied	NR
Owner-occupied	\$ 116,261
w/ mortgage	\$ 116,456
w/o mortgage	\$ 58,068

Median Housing Costs		
	Monthly	Annual
All-occupied	\$ 1,766	\$ 21,192
Gross rent	NR	NR
Owner-occupied	\$ 1,778	\$ 21,336
Housing units w/ mortgage	\$ 1,818	\$ 21,816
Housing units w/out a mortgage	\$ 311	\$ 3,732

Estimated Energy Prices as of January 2013	
#1 Fuel oil cost (\$ / gallon)	\$ 4.01
Electricity with PCE (\$/kWh)	No PCE
Electricity without PCE (\$/kWh)	\$ 0.08

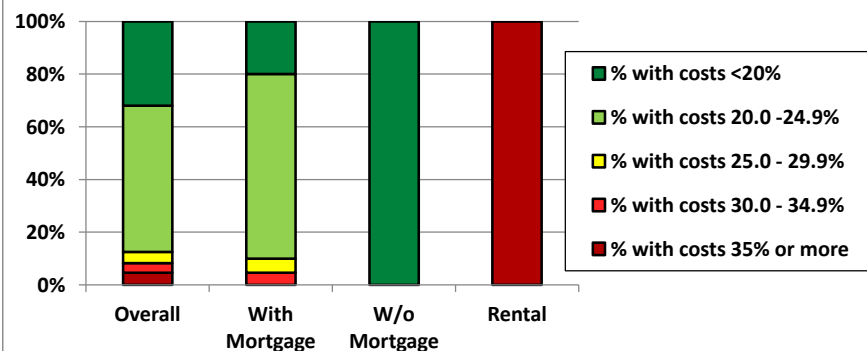
Average Annual Energy Cost	
With PCE	NO PCE
Without PCE	\$5,115

Housing Stock Estimates	Number of Units
All Housing	388
All Occupied Housing	216
All Vacant housing	172
Vacant Housing for Sale/Rent	7

Avg % Median Income spent on Energy	4.4%
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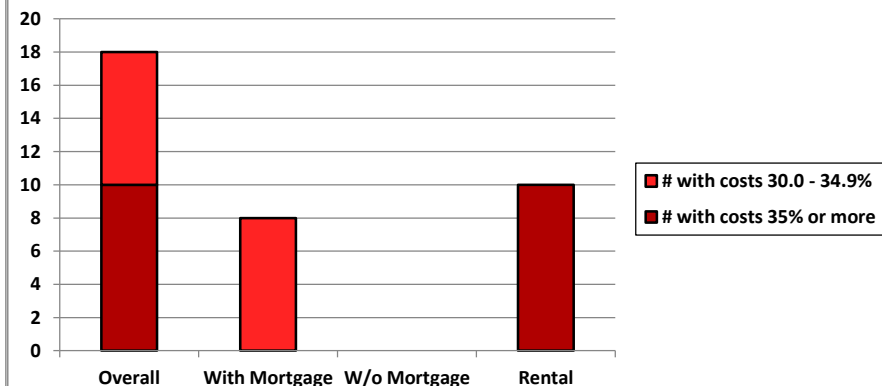
**Figure M7: Affordability - Housing Costs as a Percent of Income**

ACS



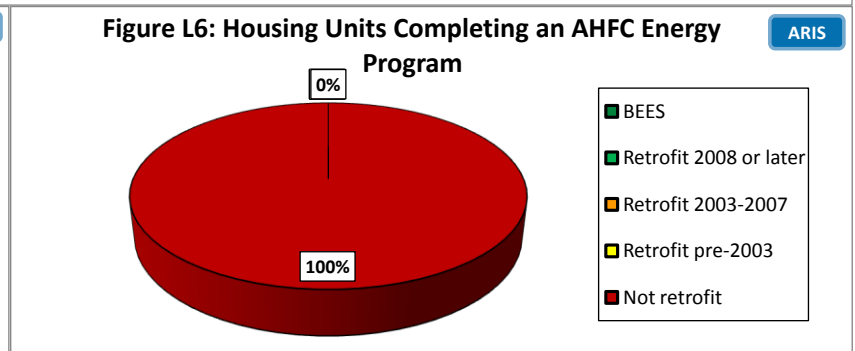
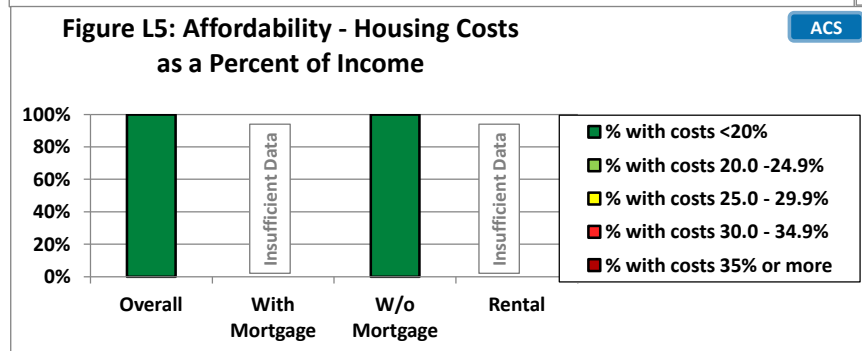
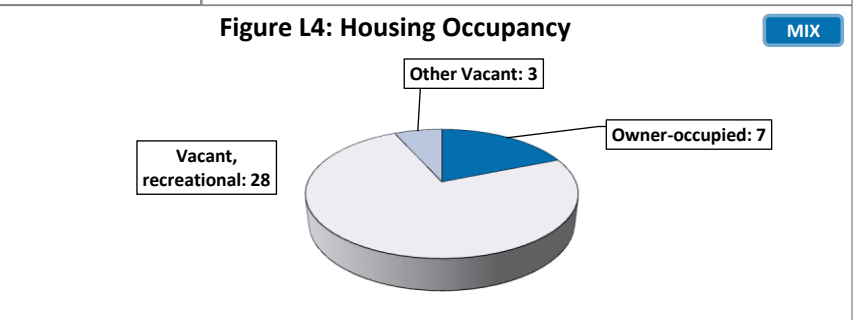
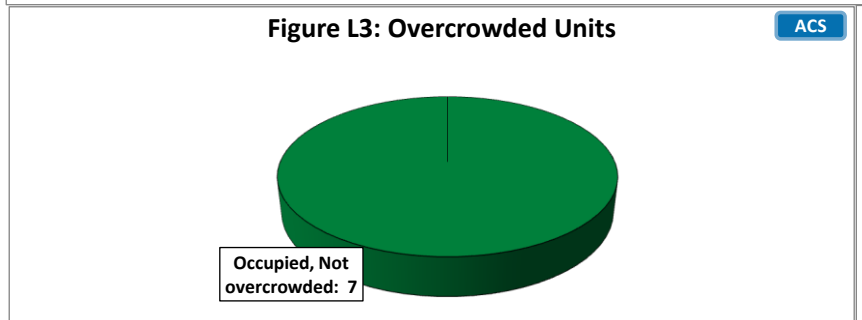
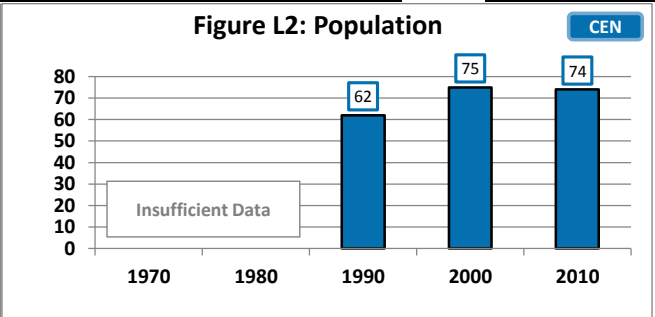
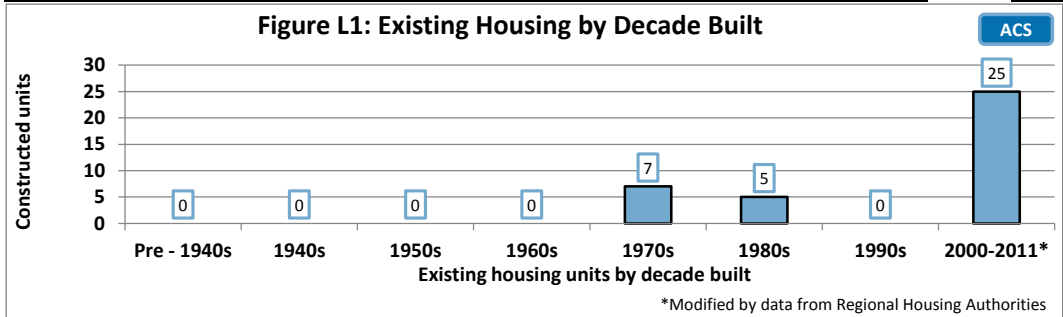
**Figure M8: Number of Cost-Burdened Housing Units**

ACS





Community Profile for: **Crown Point CDP** ANCSA Region: **Cook Inlet Regional (CIRI)** Climate Zone: **7**



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	NR
Renter-occupied	NR
Owner-occupied	NR
w/ mortgage	NR
w/o mortgage	NR

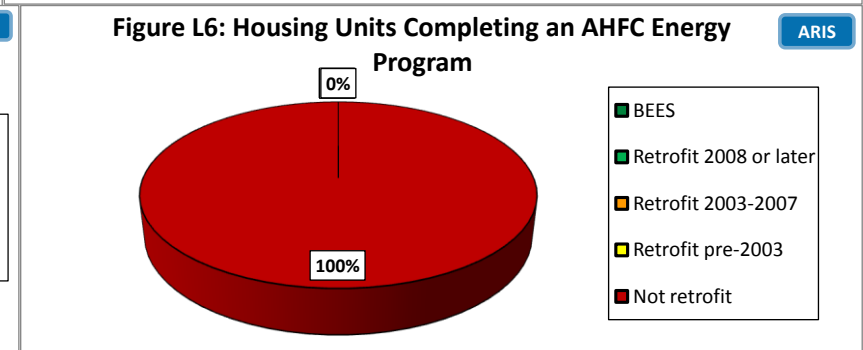
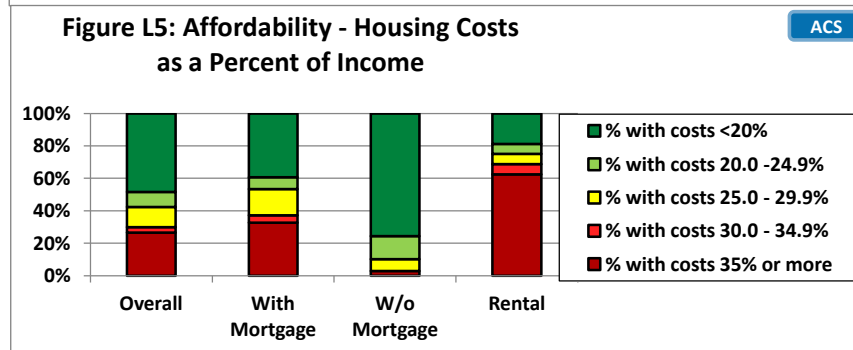
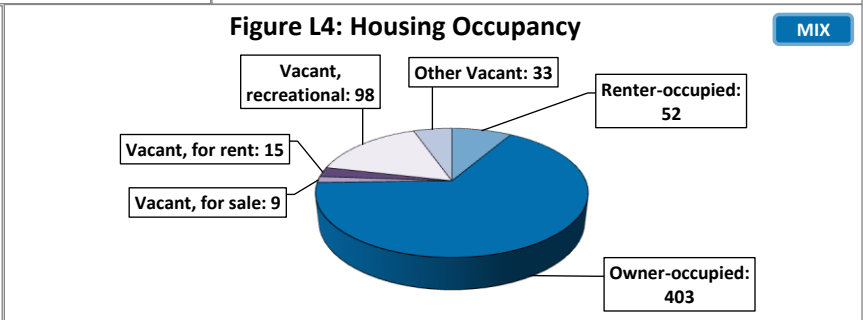
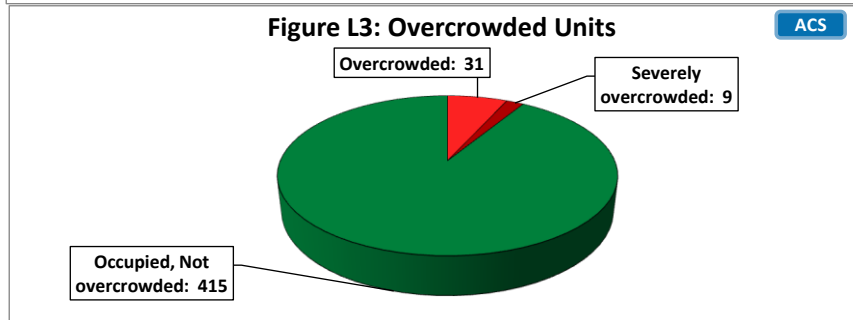
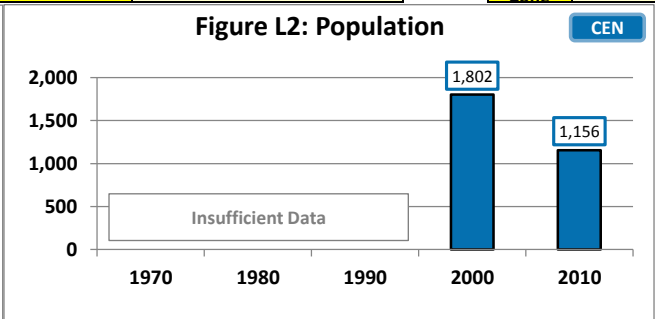
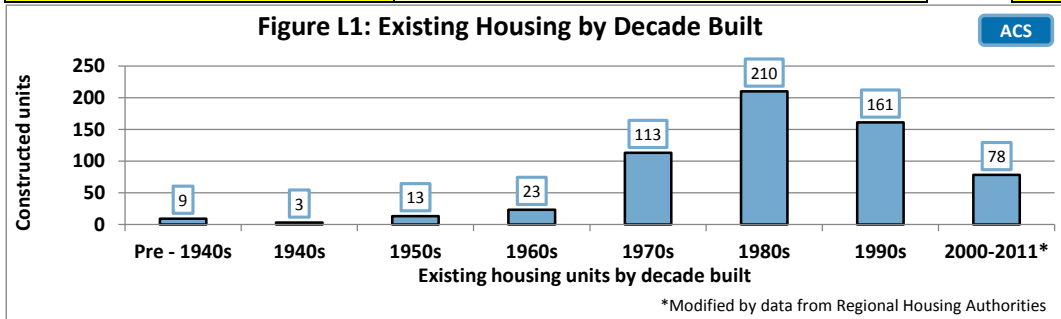
Housing Stock Estimates	
	Number of Units
All Housing	37
All Occupied Housing	7
All Vacant housing	30

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

**Community Profile for:** Diamond Ridge CDP

**ANCSA Region:** Cook Inlet Regional (CIRI)

**Climate Zone:** 7



<b>Owner-occupied House with Mortgage, Median Value</b>	\$257,700
<b>Owner-occupied House without a Mortgage, Median Value</b>	\$191,300

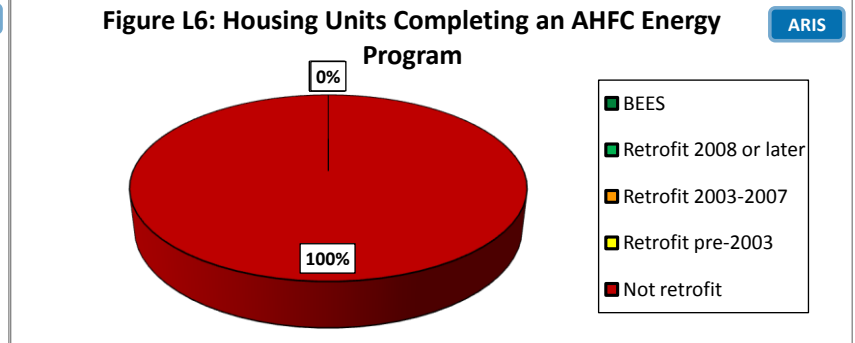
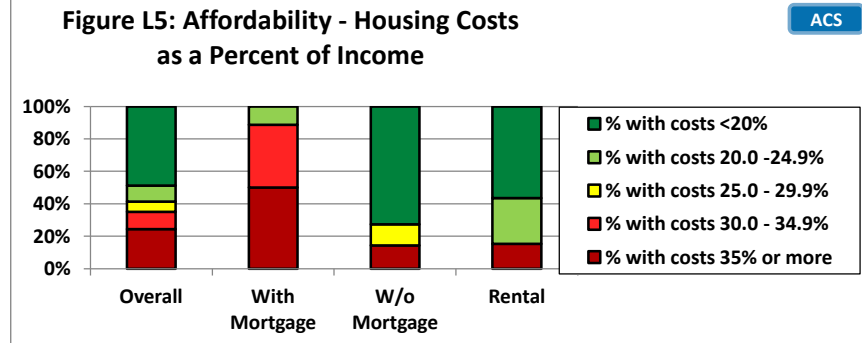
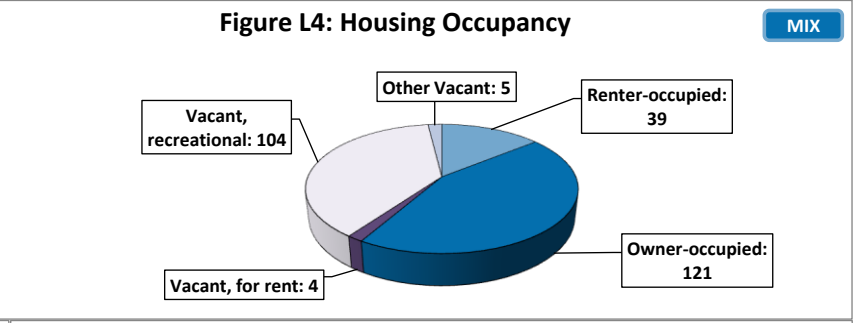
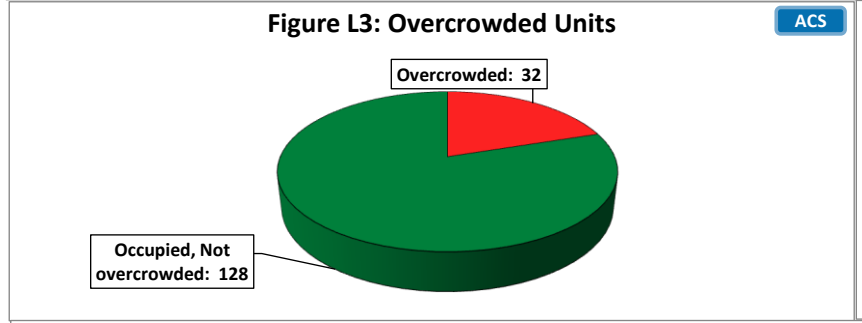
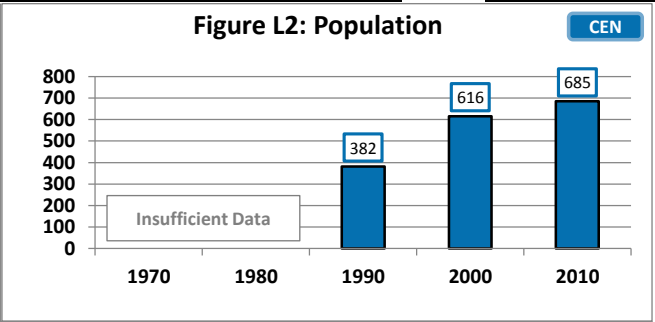
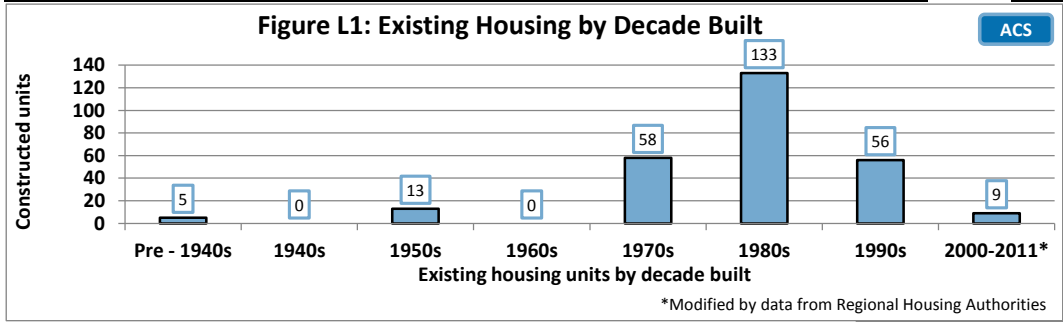
Median Annual Household Income	
Housing Units	Household Income
All-occupied	\$ 59,083
Renter-occupied	\$ 17,045
Owner-occupied w/ mortgage	\$ 83,056
Owner-occupied w/o mortgage	\$ 53,750

Median Housing Costs		
	Monthly	Annual
All-occupied	\$ 1,289	\$ 15,468
Gross rent	\$ 1,281	\$ 15,372
Owner-occupied	\$ 1,290	\$ 15,480
Housing units w/ mortgage	\$ 1,573	\$ 18,876
Housing units w/out a mortgage	\$ 417	\$ 5,004

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	610
All Occupied Housing	455
All Vacant housing	155

<b>Community Profile for:</b>	Fox River CDP	<b>ANCSA Region</b>	Cook Inlet Regional (CIRI)	<b>Climate Zone</b>	7
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<b>Owner-occupied House with Mortgage, Median Value</b>	\$140,000
<b>Owner-occupied House without a Mortgage, Median Value</b>	\$171,300

Median Annual Household Income	
Housing Units	Household Income
All-occupied	\$ 44,167
Renter-occupied	\$ 31,250
Owner-occupied w/ mortgage	\$ 44,167
Owner-occupied w/o mortgage	\$ 51,563

Median Housing Costs		
	Monthly	Annual
All-occupied	\$ 571	\$ 6,852
Gross rent	\$ 495	\$ 5,940
Owner-occupied	\$ 566	\$ 6,792
Housing units w/ mortgage	\$ 1,472	\$ 17,664
Housing units w/out a mortgage	\$ 391	\$ 4,692

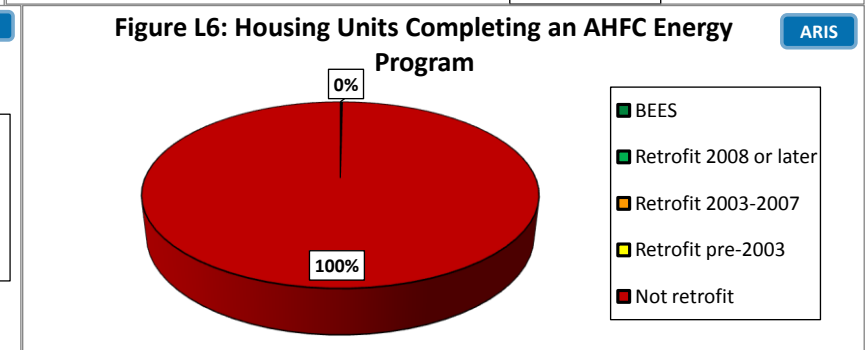
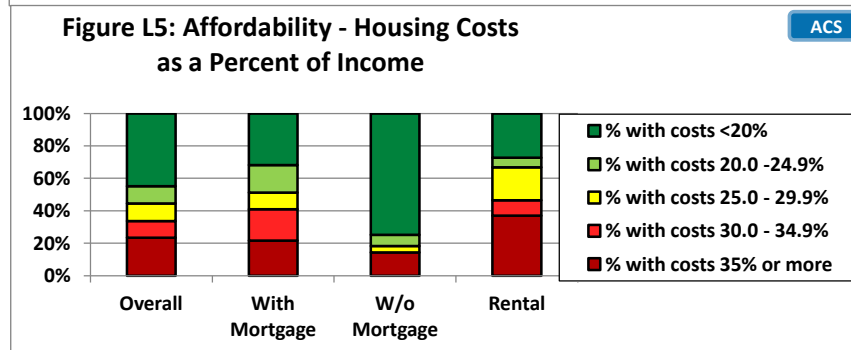
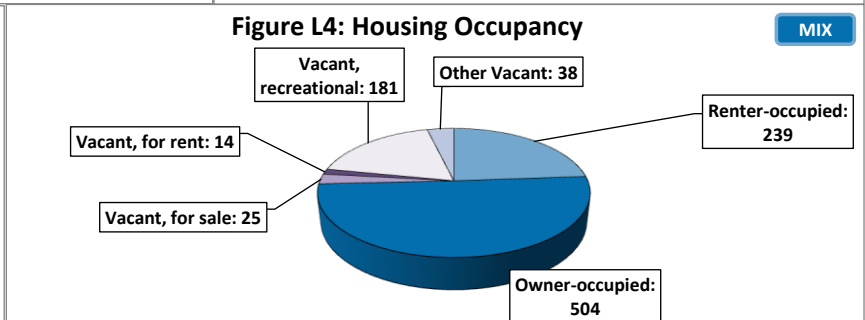
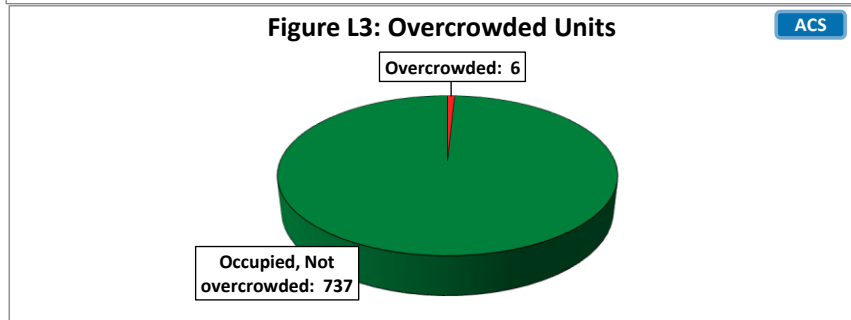
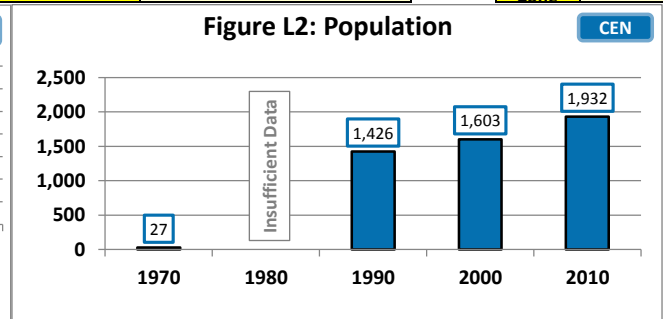
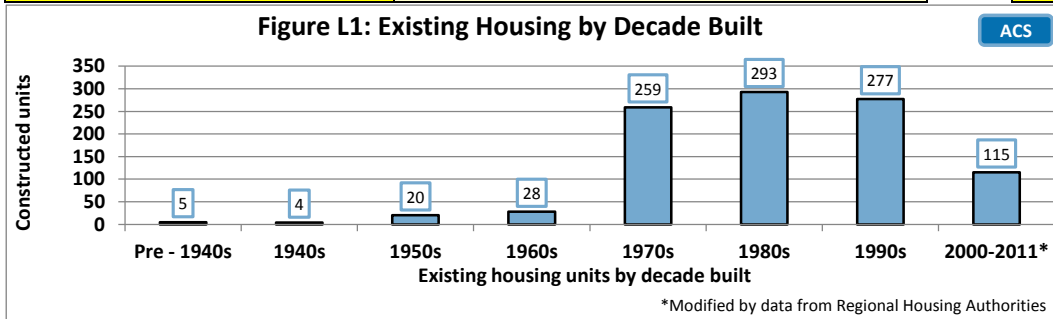
Estimated Energy Prices as of January 2013	
#1 Fuel oil cost (\$ / gallon)	No Data
Electricity with PCE (\$/kWh)	No Data
Electricity without PCE (\$/kWh)	No Data

Housing Stock Estimates	Number of Units
All Housing	274
All Occupied Housing	160
All Vacant housing	114

Community Profile for: Fritz Creek CDP

ANCSA Region: Cook Inlet Regional (CIRI)

Climate Zone: 7



Owner-occupied House with Mortgage, Median Value	\$239,600
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Owner-occupied House without a Mortgage, Median Value	\$219,800
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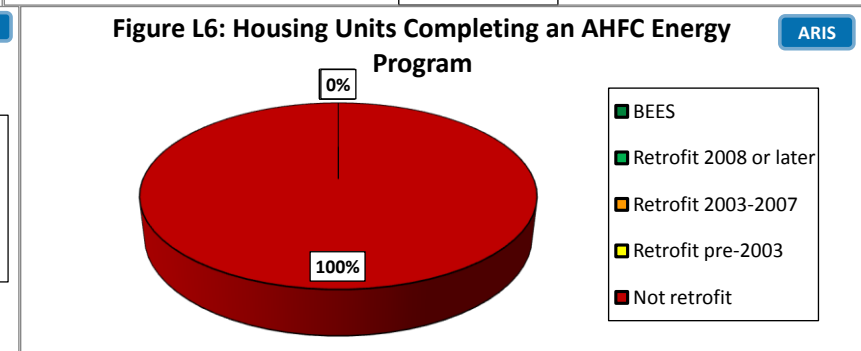
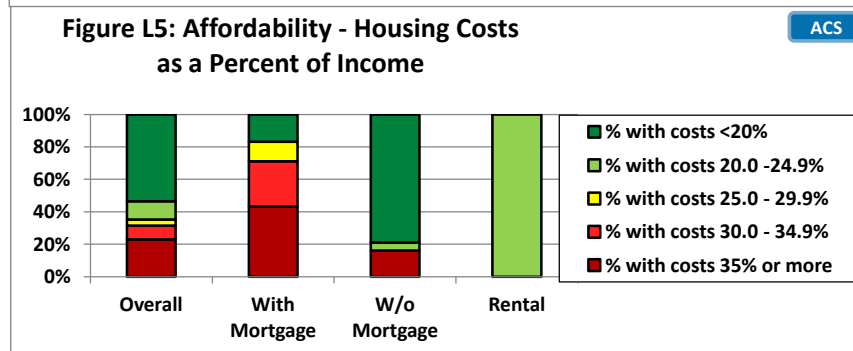
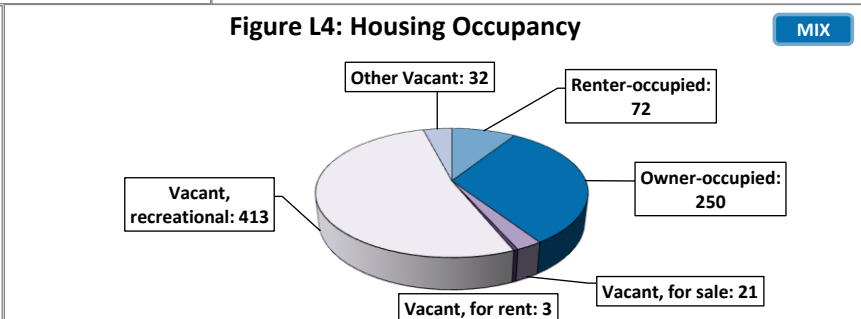
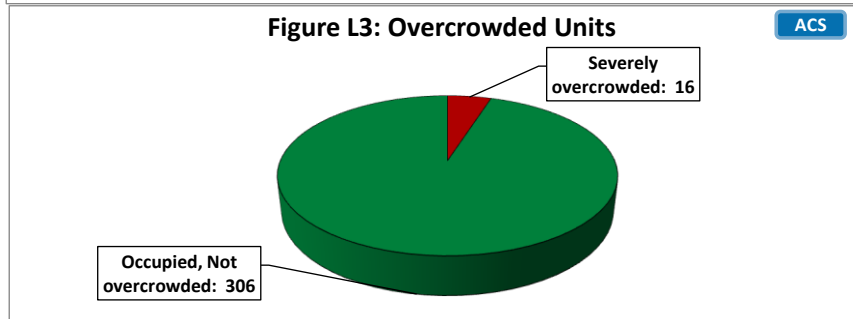
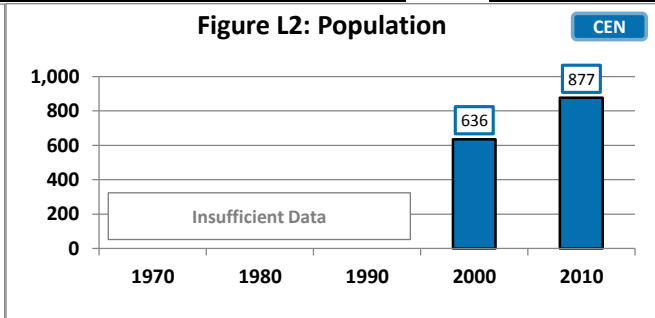
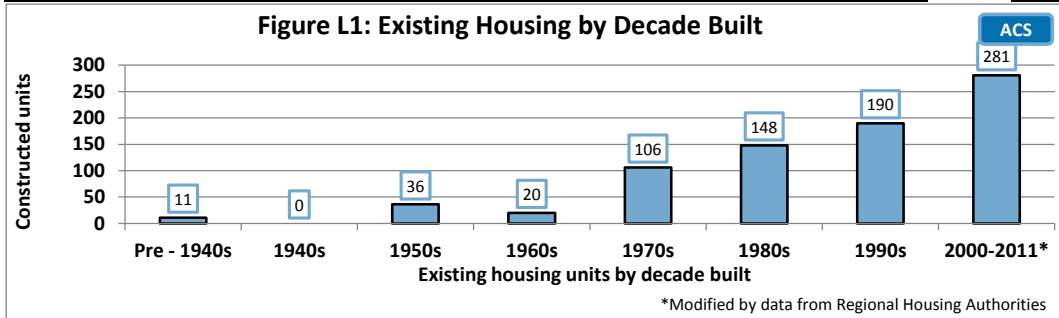
Estimated Energy Prices as of January 2013	
#1 Fuel oil cost (\$ / gallon)	No Data
Electricity with PCE (\$/kWh)	No Data
Electricity without PCE (\$/kWh)	No Data

Median Annual Household Income	
Housing Units	Household Income
All-occupied	\$ 51,979
Renter-occupied	\$ 30,859
Owner-occupied	\$ 66,759
w/ mortgage	\$ 76,875
w/o mortgage	\$ 62,717

Housing Stock Estimates	
Housing Stock Estimates	Number of Units
All Housing	1001
All Occupied Housing	743
All Vacant housing	258

Median Housing Costs		
	Monthly	Annual
All-occupied	\$ 840	\$ 10,080
Gross rent	\$ 865	\$ 10,380
Owner-occupied	\$ 821	\$ 9,852
Housing units w/ mortgage	\$ 1,438	\$ 17,256
Housing units w/out a mortgage	\$ 395	\$ 4,740

**Community Profile for:** Funny River CDP      **ANCSA Region:** Cook Inlet Regional (CIRI)      **Climate Zone:** 7



Owner-occupied House with Mortgage, Median Value
\$255,000

Owner-occupied House without a Mortgage, Median Value
\$205,500

Median Annual Household Income	
Housing Units	Household Income
All-occupied	\$ 47,419
Renter-occupied	\$ 23,700
Owner-occupied w/ mortgage	\$ 65,054
Owner-occupied w/o mortgage	\$ 47,379

Median Housing Costs		
	Monthly	Annual
All-occupied	\$ 683	\$ 8,196
Gross rent	NR	NR
Owner-occupied	\$ 455	\$ 5,460
Housing units w/ mortgage	\$ 1,603	\$ 19,236
Housing units w/out a mortgage	\$ 321	\$ 3,852

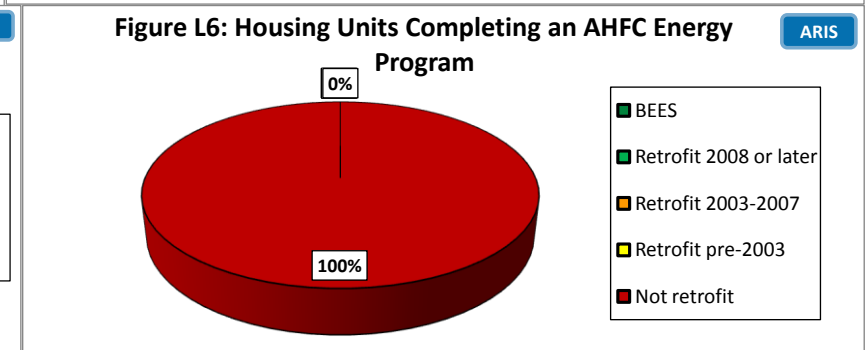
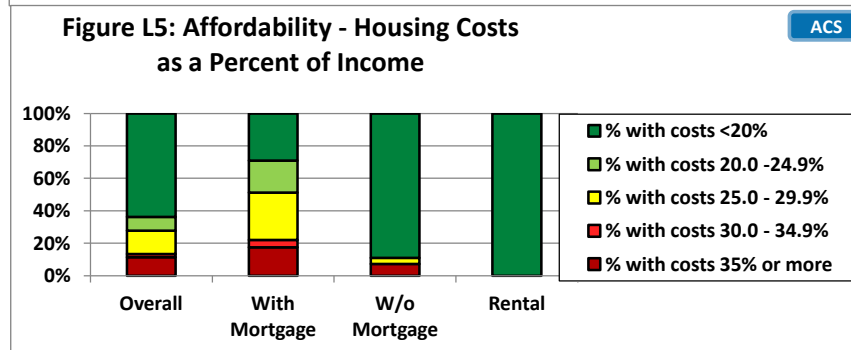
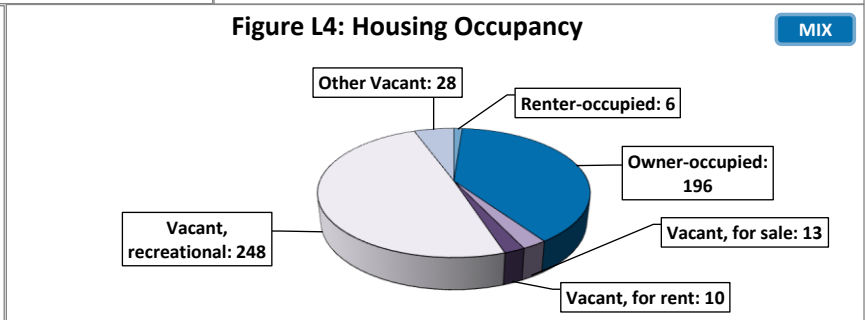
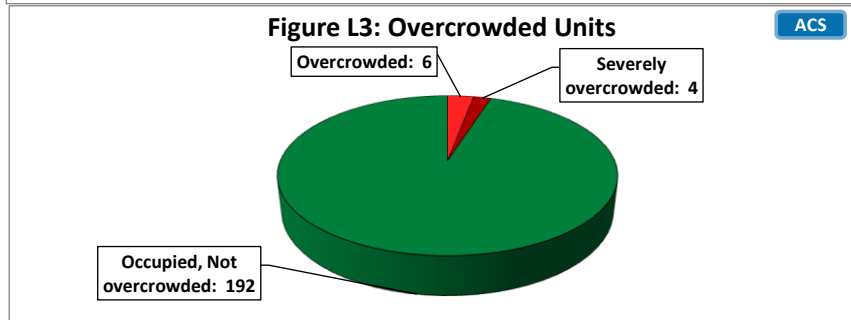
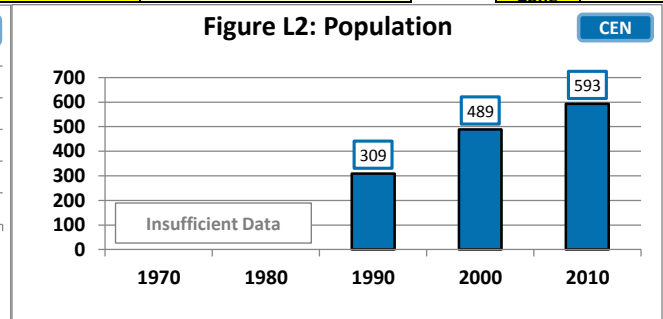
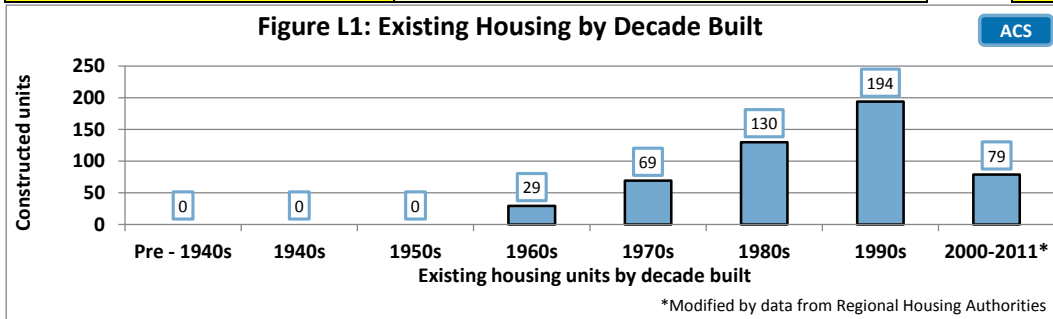
Estimated Energy Prices as of January 2013	
#1 Fuel oil cost (\$ / gallon)	No Data
Electricity with PCE (\$/kWh)	No Data
Electricity without PCE (\$/kWh)	No Data

Housing Stock Estimates	Number of Units
All Housing	792
All Occupied Housing	322
All Vacant housing	470

**Community Profile for:** Happy Valley CDP

**ANCSA Region:** Cook Inlet Regional (CIRI)

**Climate Zone:** 7



Owner-occupied House with Mortgage, Median Value
\$204,200

Owner-occupied House without a Mortgage, Median Value
\$151,300

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	\$ 53,864
Renter-occupied	NR
Owner-occupied	\$ 54,545
w/ mortgage	\$ 60,625
w/o mortgage	\$ 48,333

Housing Stock Estimates	
Housing Stock Estimates	Number of Units
All Housing	501
All Occupied Housing	202
All Vacant housing	299

Median Housing Costs		
	Monthly	Annual
All-occupied	\$ 775	\$ 9,300
Gross rent	NR	NR
Owner-occupied	\$ 820	\$ 9,840
Housing units w/ mortgage	\$ 1,382	\$ 16,584
Housing units w/out a mortgage	\$ 304	\$ 3,648

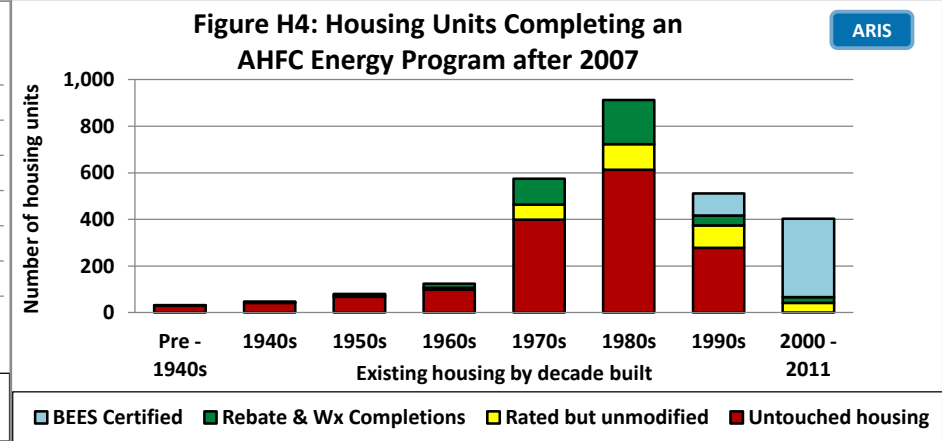
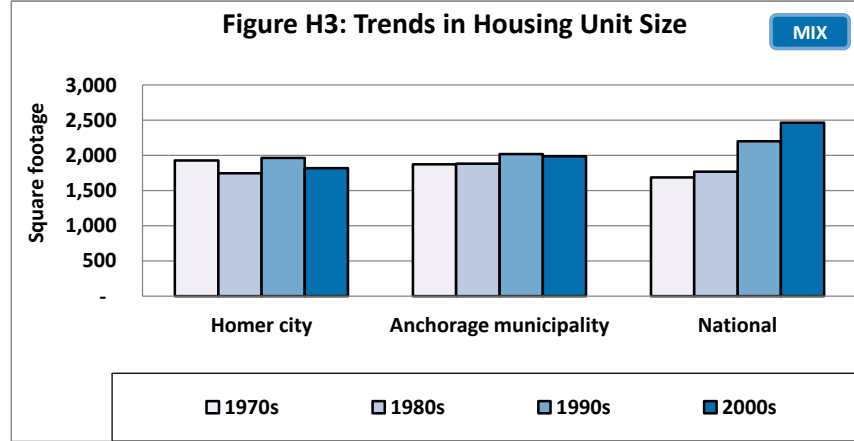
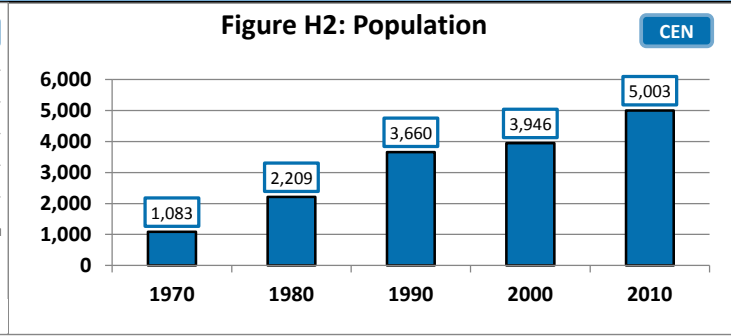
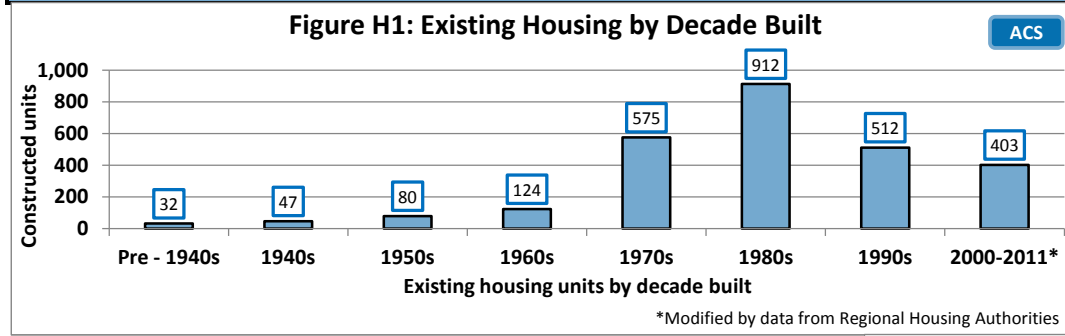
**Community Profile for:** Homer city

**ANCSA Region:** Cook Inlet Regional (CIRI)

**Regional Housing Authority:** Cook Inlet Housing Authority

**BEES Climate Zone (Heating Degree Days):** Zone 7 (10,349 HDD)

**COMMUNITY - Homer city**



Houses Lacking Complete Plumbing or Kitchen Facilities	Households	
	Number	Percent
Lack complete plumbing	113	5%
Lack complete kitchen	126	6%

Avg Annual Energy Cost with PCE	NO PCE
Avg Annual Energy Cost without PCE	\$5,999

Weatherization Program Retrofits (funding increased in 2008)	
Date Range	Units
2008-2011	127
2003-2007	37
1990-2002	174

Estimated Total Annual Community Space Heating Fuel Use		
Fuel Oil	1,344,428	(gallons)
Nat Gas	-	(ccf)
Electricity	4,989,436	(kWh)
Wood	2,498	(cords)
Propane	312,190	(gallons)
Coal	169	(tons)

Estimated Energy Prices as of January 2013	
#1 Fuel oil cost (\$ / gallon)	\$4.12
Electricity with PCE (\$/kWh)	No PCE
Electricity cost without PCE (\$/kWh)	\$0.15

Housing Stock Estimates	Number of Units
All Housing	2684
All Occupied Housing	2172
All Vacant housing	512
Vacant Housing for Sale or Rent	159

OVERCROWDING & VENTILATION - Homer city

Figure H5: Overcrowded Units

ACS

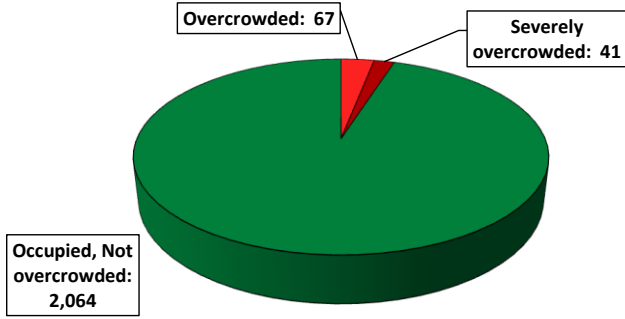


Figure H6: Housing Occupancy

MIX

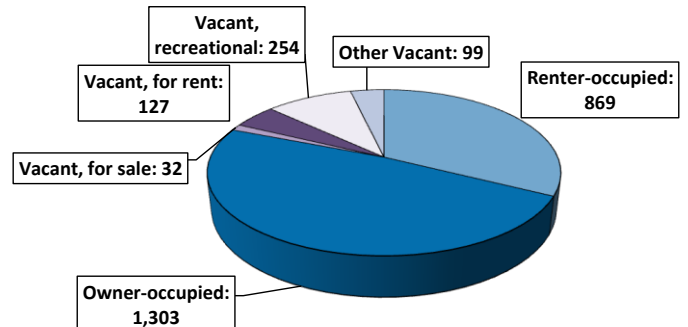


Figure H7: Average Air-Tightness of Current Homes by Decade Built

ARIS

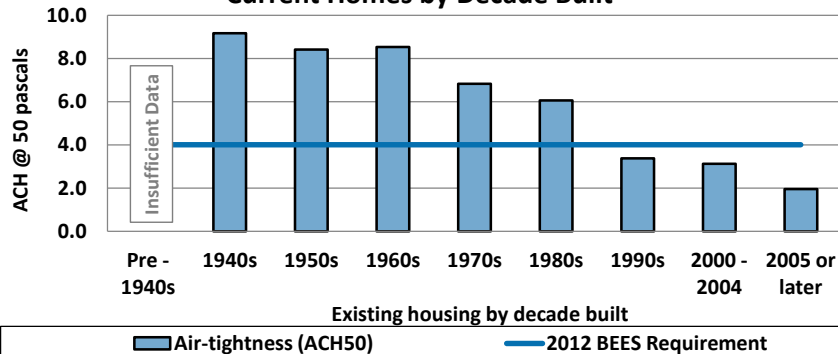


Figure H8: Existing Ventilation Type by Decade Built

ARIS

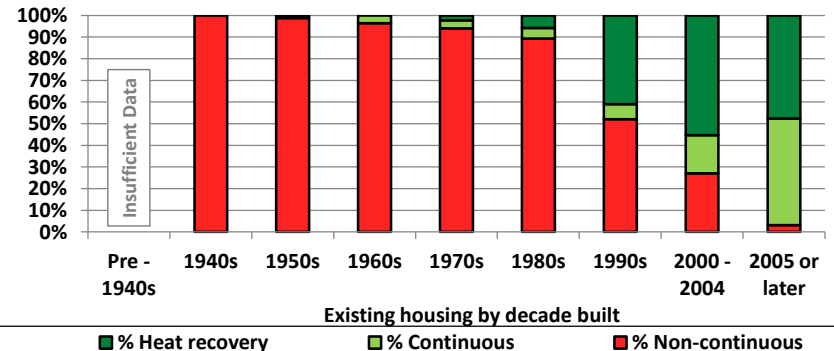


Figure H9: Percent of Housing Stock at High Risk of Moisture and Air Quality Problems

ARIS

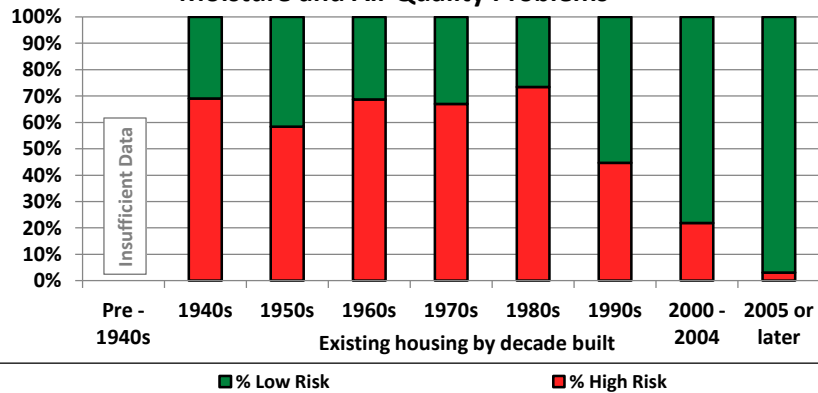
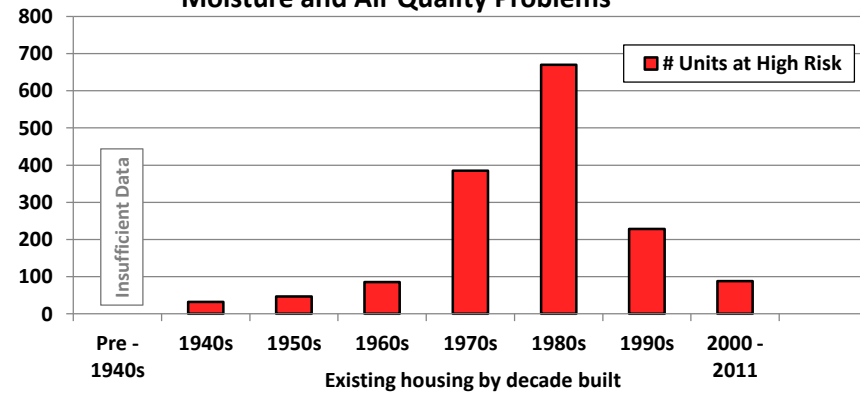


Figure H10: Quantity of Housing Stock at High Risk of Moisture and Air Quality Problems

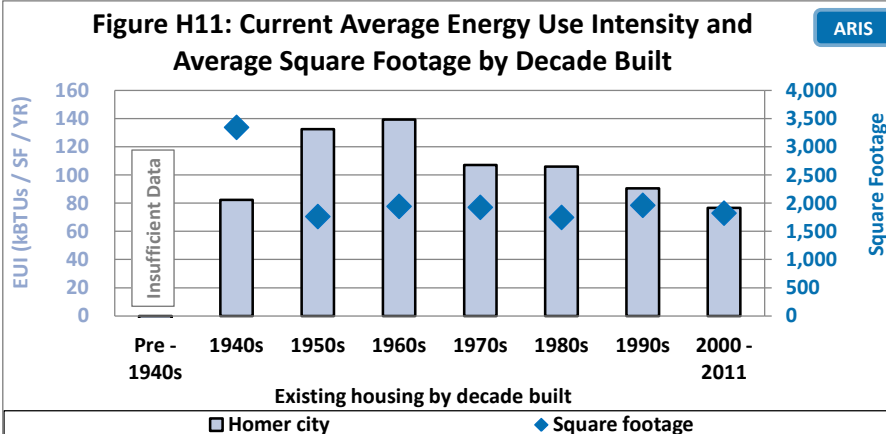
ARIS



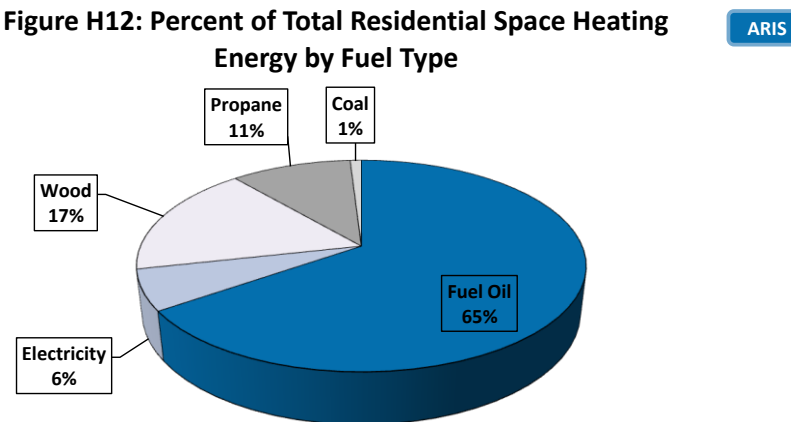


ENERGY - Homer city												
Current Homer city Housing Energy Characteristics By Decade Built												
Current Residential Units by Year Built	Number of Records	Avg Energy Rating Stars	Avg Energy Rating Points	Avg Sq. Feet	Avg. Annual Energy Cost	Avg. Annual Energy Use (million BTUs)	Avg Ann Energy by End Use (million Btus)			Avg. EUI (kBtus/SF)	Avg. ECI (\$ / SF)	Avg. Home Heating Index
							Space Heating	DHW	Appliances			
OVERALL	1,430	3-star plus	74.4	1,879	\$ 5,999	176	116	24	30	100	\$ 3.54	6.8
Pre- 1940	4	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1940- 49	8	3-star	68.5	3,346	\$ 8,836	272	202	31	39	82	\$ 2.58	6.0
1950- 59	20	2-star	55.3	1,763	\$ 6,968	221	163	26	33	132	\$ 4.85	9.4
1960- 69	43	2-star	57.6	1,944	\$ 7,144	245	190	24	31	139	\$ 4.94	10.8
1970- 79	288	2-star plus	67.9	1,927	\$ 6,483	193	141	21	30	107	\$ 3.66	7.7
1980- 89	489	3-star	72.0	1,747	\$ 5,927	174	122	22	29	106	\$ 3.68	7.4
1990- 99	275	4-star	82.5	1,962	\$ 5,601	158	84	20	24	91	\$ 3.39	5.8
2000- 2004	216	4-star plus	87.0	1,817	\$ 5,187	142	82	29	31	84	\$ 3.11	5.0
2005 or later	214	5-star	91.8	1,829	\$ 4,558	117	62	25	29	67	\$ 2.67	3.4

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



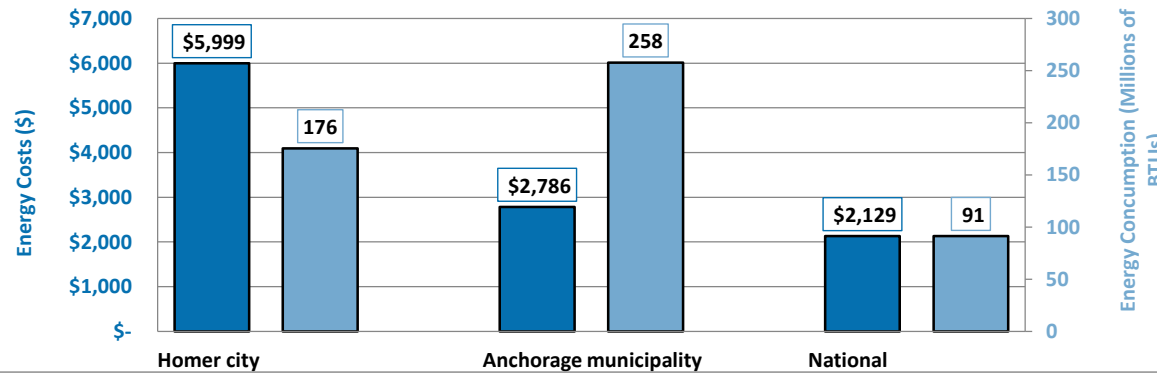
**Figure H12: Percent of Total Residential Space Heating Energy by Fuel Type**



Current Homer 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	1,430	5.5	28	15	9	21	3	3	0.32	0.26	0.49
Pre- 1940	4	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1940- 49	8	9.2	11	12	3	NR	NR	2	0.58	NR	0.57
1950- 59	20	8.4	20	10	5	13	3	2	0.44	NR	0.56
1960- 69	43	8.5	14	9	5	19	3	2	0.42	0.35	0.66
1970- 79	288	6.8	23	13	8	22	3	3	0.33	0.26	0.54
1980- 89	489	6.1	28	15	9	18	3	3	0.35	0.31	0.54
1990- 99	275	3.4	43	21	14	30	5	5	0.24	0.16	0.36
2000- 2004	216	3.1	40	17	16	23	6	4	0.27	0.17	0.37
2005 or later	214	2.0	51	20	22	41	8	4	0.25	0.16	0.32
BEES 2009 - Climate Zone 7		7.0	38	21	15	38	15	15	0.33	0.33	0.33
BEES 2012 - Climate Zone 7		4.0	43	25	15	38	15	15	0.30	0.30	0.30

AFFORDABILITY - Homer city

Figure H13: Average Annual Home Energy Costs and Use



Housing Information	Avg Household Size (# of people)
All-occupied	2.2
Owner-occupied	2.3
renter-occupied	2.1

Owner-occupied House with Mortgage, Median Value
\$265,200

Owner-occupied House without a Mortgage, Median Value
\$235,400

Median Annual Household Income	
Housing Units	Household Income
All-occupied	\$ 55,603
Renter-occupied	\$ 31,595
Owner-occupied	\$ 73,622
w/ mortgage	\$ 79,167
w/o mortgage	\$ 58,625

Median Housing Costs		
	Monthly	Annual
All-occupied	\$ 1,020	\$ 12,240
Gross rent	\$ 874	\$ 10,488
Owner-occupied	\$ 1,321	\$ 15,852
Housing units w/ mortgage	\$ 1,637	\$ 19,644
Housing units w/out a mortgage	\$ 553	\$ 6,636

Avg % of Median Income Spent on Energy	<b>10.8%</b>
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Figure H14: Affordability - Housing Costs as a Percent of Income

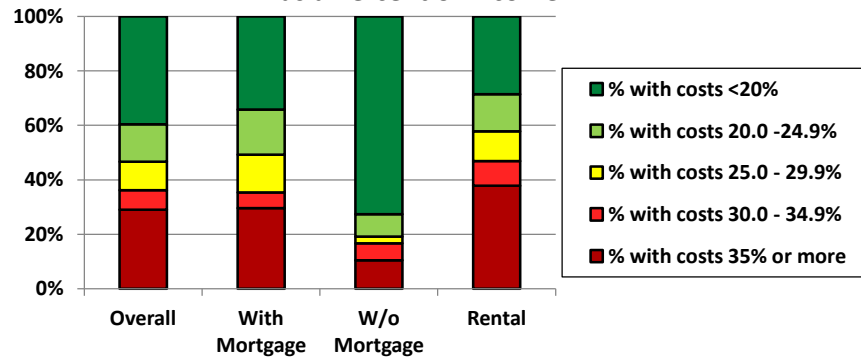
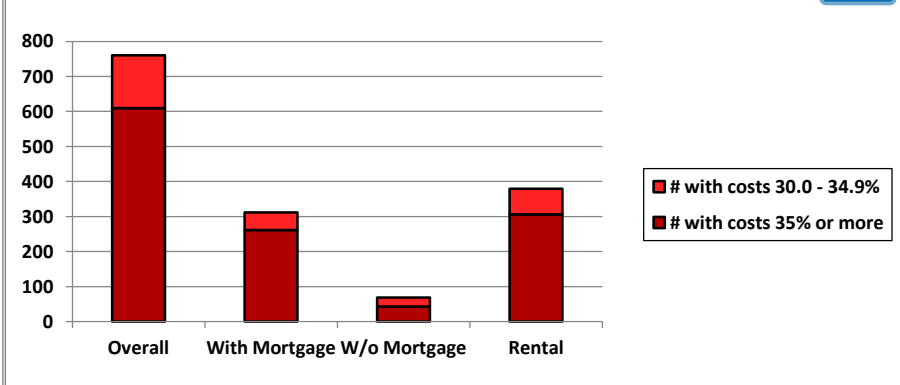


Figure H15: Number of Cost-Burdened Housing Units

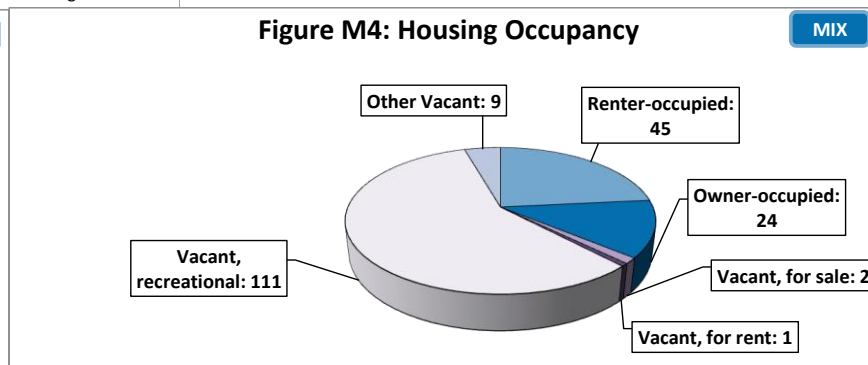
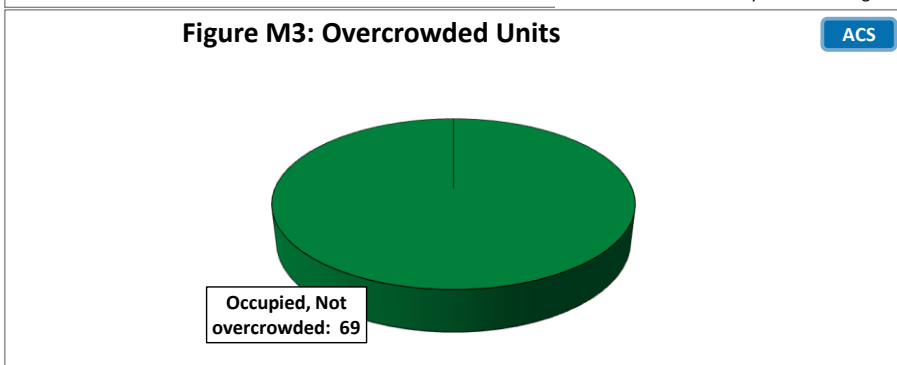
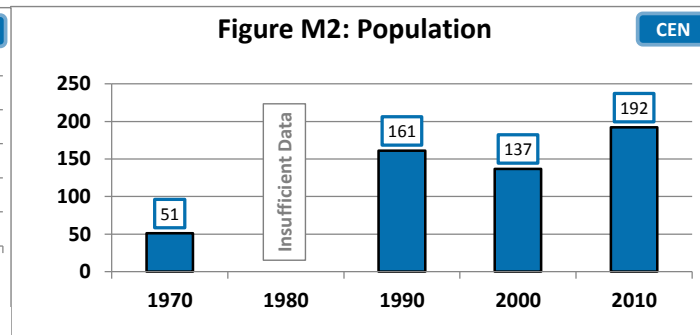
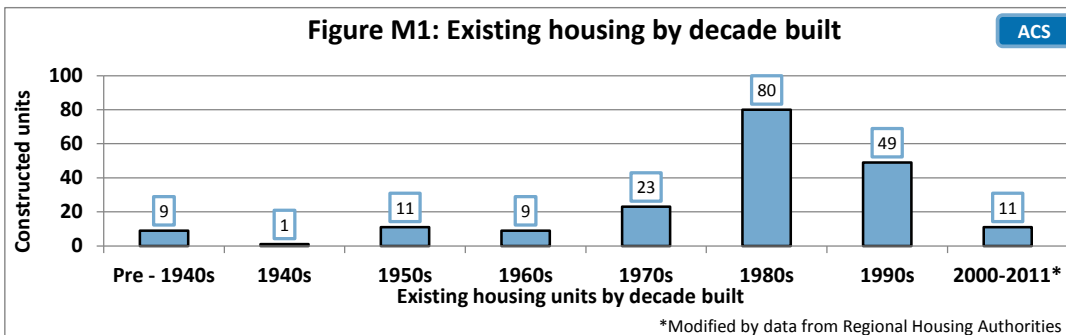


**Community Profile for:** Hope CDP

**ANCSA Region:** Cook Inlet Regional (CIRI)

**Regional Housing Authority:** Cook Inlet Housing Authority

**BEES Climate Zone (Heating Degree Days):** Zone 7 (10,100 HDD)



#### Hope 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	9	2-star plus	64.4	1,820	\$ 4,892	232	165	\$3.04	13.1	56%
Retrofit units	3	2-star	59.4	1,367	\$ 3,542	203	192	\$2.76	15.4	67%
New construction	0	NR	NR	NR	NR	NR	NR	NR	NR	NR

#### Hope CDP Housing Envelope Characteristics

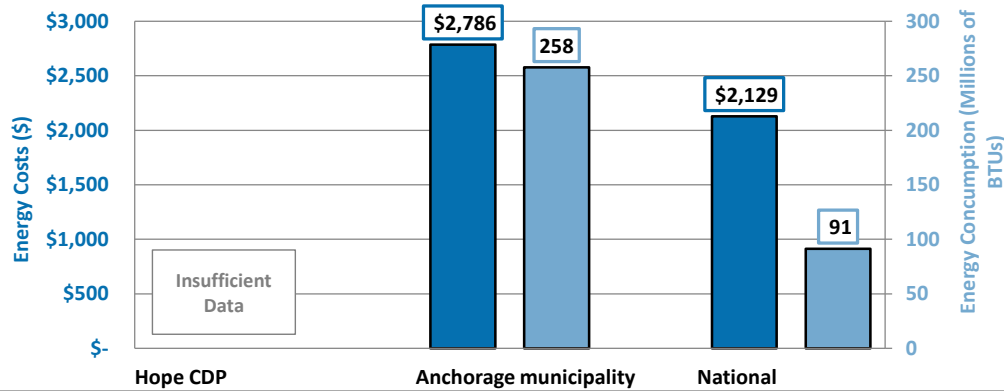
Residential Unit Categories	Number of Records	ACH 50	Ceiling R	Above Grade Wall R	Below Grade Wall R	Above Grade Floor R	On Grade Floor R	Below Grade Floor R	Door U	Garage Door U	Window U
Pre-retrofit units	9	7.4	28	11	10	NR	3	3	0.31	NR	0.51
Retrofit units	3	4.3	36	13	NR	NR	NR	NR	0.22	NR	0.41
New construction	0	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR

BEES 2009	7.0	38	21	15	38	15	15	0.33	0.33	0.33
BEES 2012	4.0	43	25	15	38	15	15	0.30	0.30	0.30

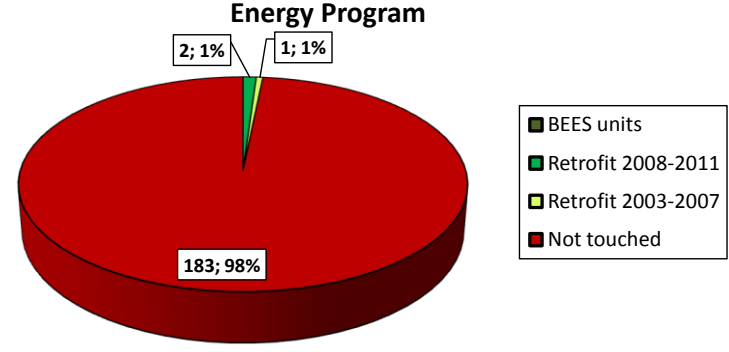
**Figure M5: Average Annual Home Energy Costs and Use**

MIX



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

ARIS



**AFFORDABILITY - Hope CDP**

<b>Owner occupied House with Mortgage, Median Value</b>
\$320,000
<b>Owner-occupied House without a Mortgage, Median Value</b>
NR

Median Annual Household Income	
Housing Units	Household Income
All-occupied	\$ 45,139
Renter-occupied	\$ 9,844
Owner-occupied	\$ 70,500
w/ mortgage	\$ 70,500
w/o mortgage	NR

Median Housing Costs		
	Monthly	Annual
All-occupied	\$ 1,047	\$ 12,564
Gross rent	\$ 1,016	\$ 12,192
Owner-occupied	\$ 2,100	\$ 25,200
Housing units w/ mortgage	\$ 2,100	\$ 25,200
Housing units w/out a mortgage	NR	NR

Estimated Energy Prices as of January 2013	
#1 Fuel oil cost (\$ / gallon)	\$ 4.00
Electricity with PCE (\$/kWh)	No PCE
Electricity without PCE (\$/kWh)	\$ 0.08

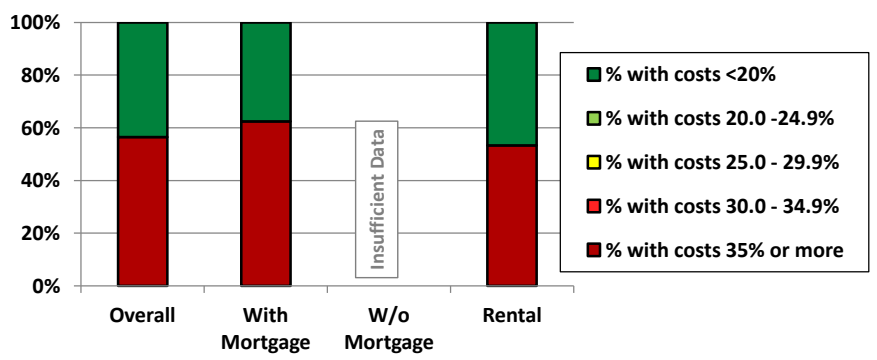
Average Annual Energy Cost	
With PCE	NO PCE
Without PCE	\$4,871

Housing Stock Estimates	Number of Units
All Housing	192
All Occupied Housing	69
All Vacant housing	123
Vacant Housing for Sale/Rent	4

<b>Avg % Median Income spent on Energy</b>	10.8%
--	-------

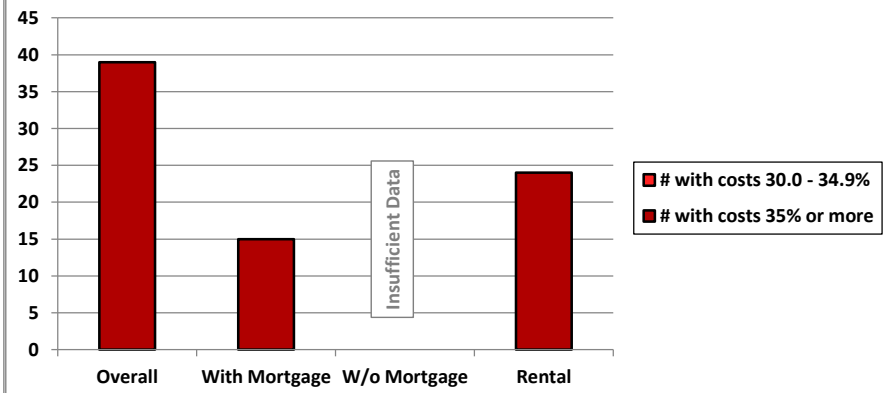
**Figure M7: Affordability - Housing Costs as a Percent of Income**

ACS



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

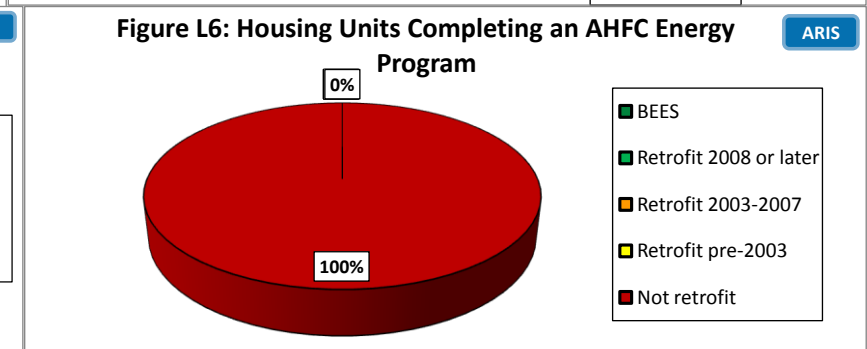
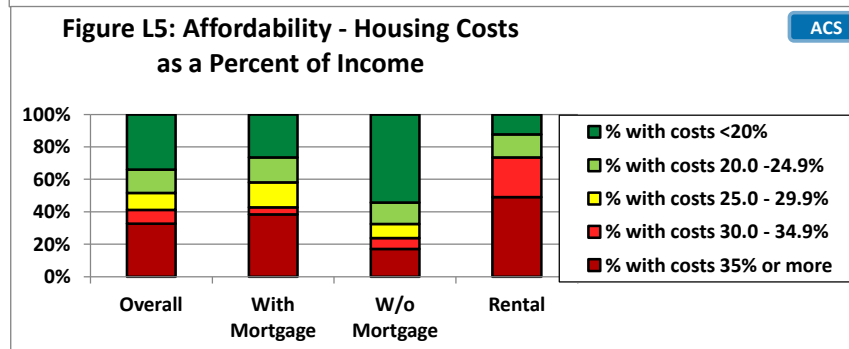
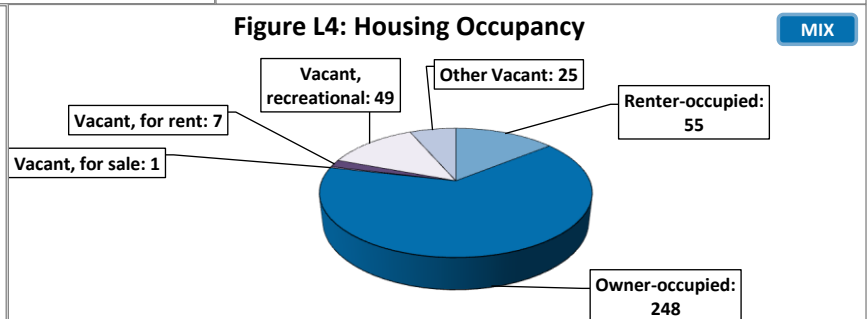
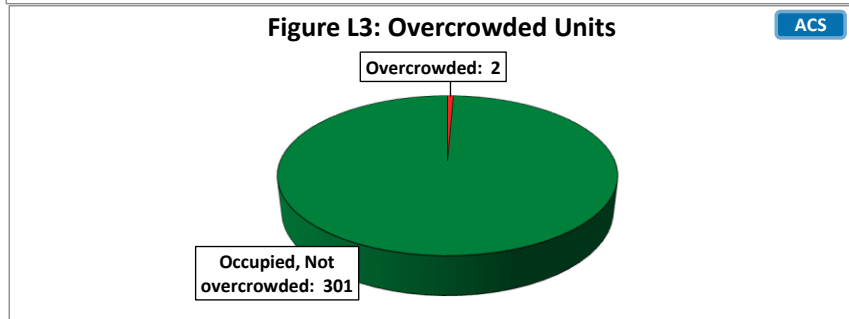
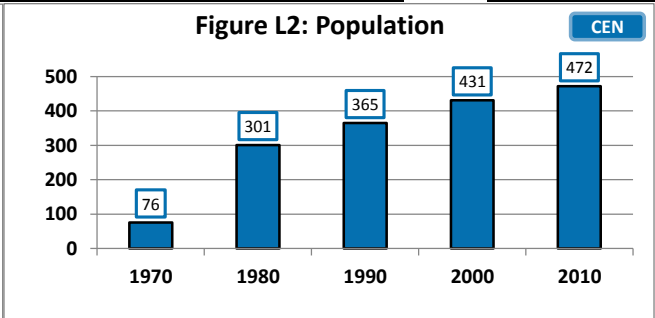
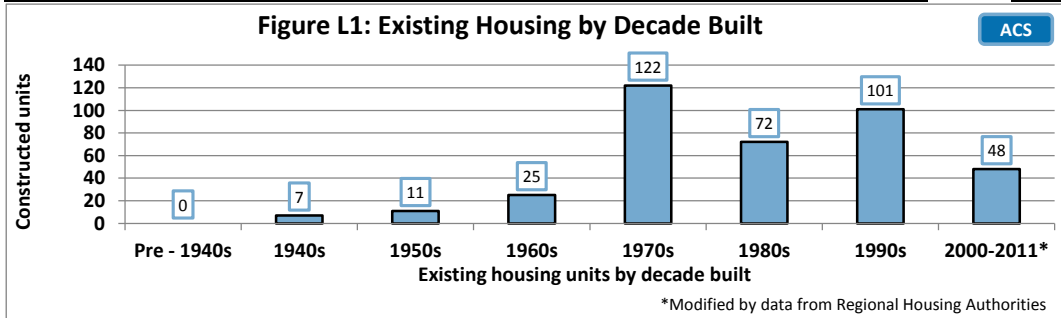
ACS



**Community Profile for:** Kachemak city

**ANCSA Region:** Cook Inlet Regional (CIRI)

**Climate Zone:** 7



Owner-occupied House with Mortgage, Median Value
\$334,400

Owner-occupied House without a Mortgage, Median Value
\$304,200

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	\$ 55,536
Renter-occupied	\$ 28,750
Owner-occupied w/ mortgage	\$ 73,125
w/o mortgage	\$ 39,750

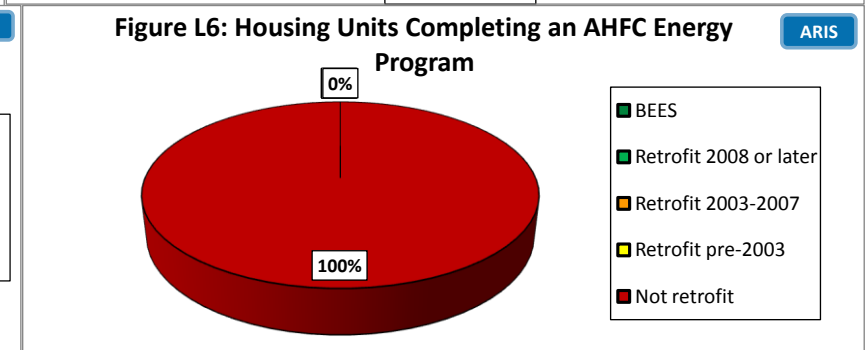
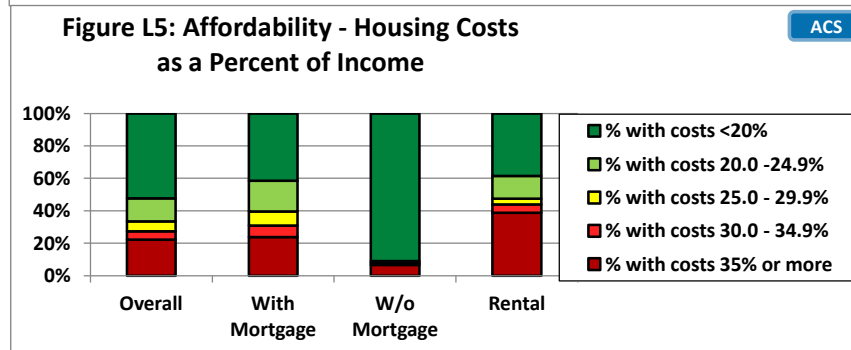
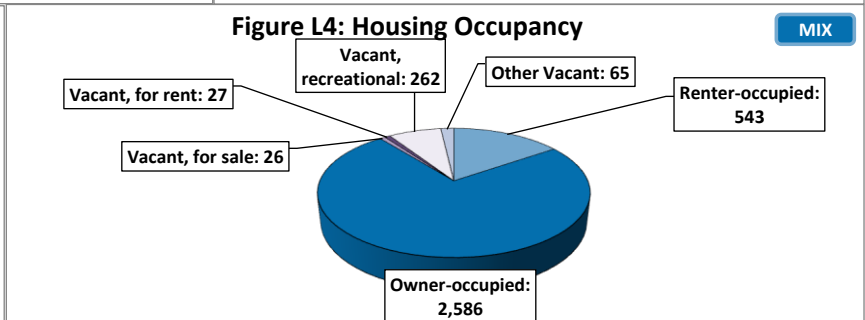
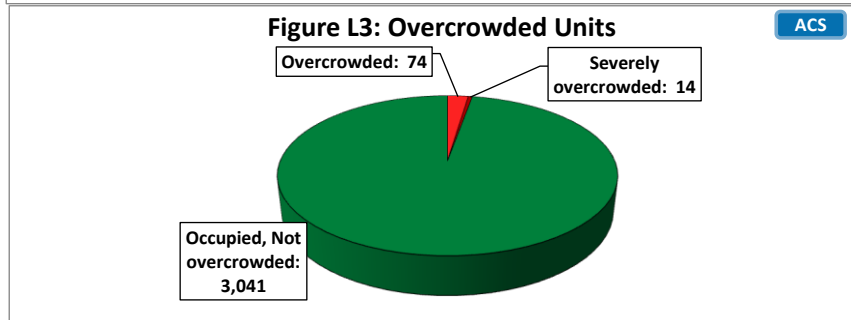
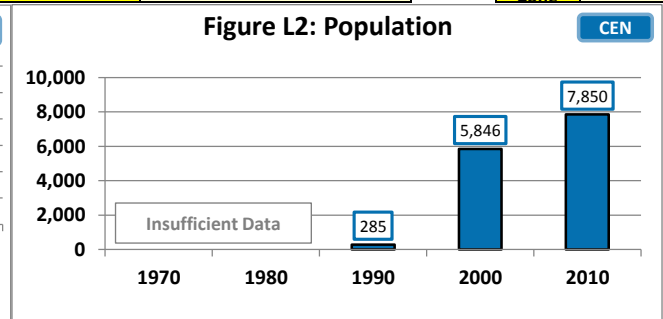
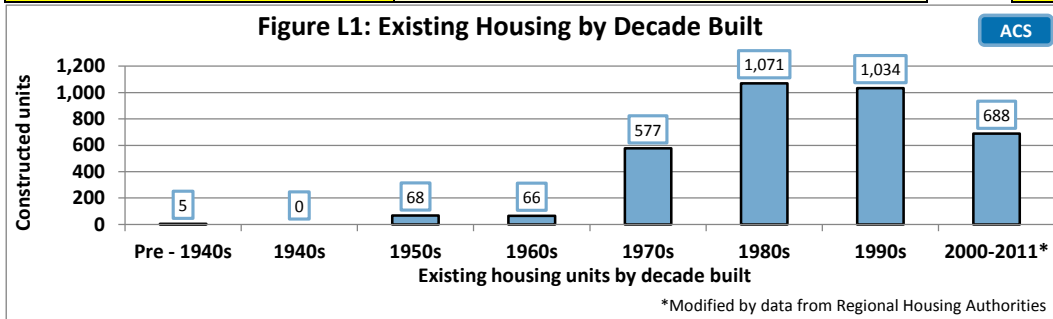
Housing Stock Estimates	
Housing Stock Estimates	Number of Units
All Housing	386
All Occupied Housing	303
All Vacant housing	83

Median Housing Costs		
	Monthly	Annual
All-occupied	\$ 997	\$ 11,964
Gross rent	\$ 796	\$ 9,552
Owner-occupied	\$ 1,113	\$ 13,356
Housing units w/ mortgage	\$ 1,743	\$ 20,916
Housing units w/out a mortgage	\$ 579	\$ 6,948

**Community Profile for:** Kalifornsky CDP

**ANCSA Region:** Cook Inlet Regional (CIRI)

**Climate Zone:** 7



Owner-occupied House with Mortgage, Median Value
\$200,200

Owner-occupied House without a Mortgage, Median Value
\$194,900

Median Annual Household Income	
Housing Units	Household Income
All-occupied	\$ 73,840
Renter-occupied	\$ 45,262
Owner-occupied w/ mortgage	\$ 84,188
Owner-occupied w/o mortgage	\$ 67,337

Median Housing Costs		
	Monthly	Annual
All-occupied	\$ 1,160	\$ 13,920
Gross rent	\$ 731	\$ 8,772
Owner-occupied	\$ 1,284	\$ 15,408
Housing units w/ mortgage	\$ 1,513	\$ 18,156
Housing units w/out a mortgage	\$ 432	\$ 5,184

Estimated Energy Prices as of January 2013	
#1 Fuel oil cost (\$ / gallon)	\$ 2.98
Electricity with PCE (\$/kWh)	No PCE
Electricity without PCE (\$/kWh)	\$ 1.00

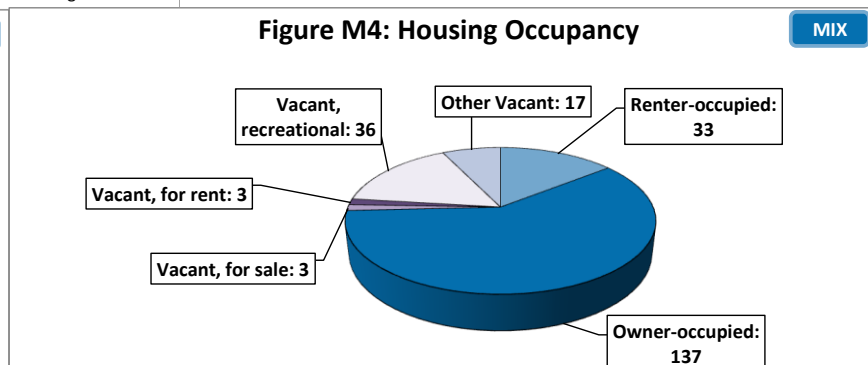
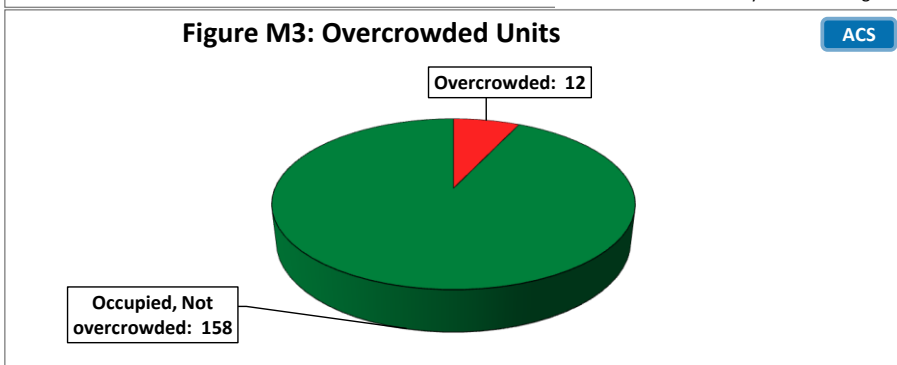
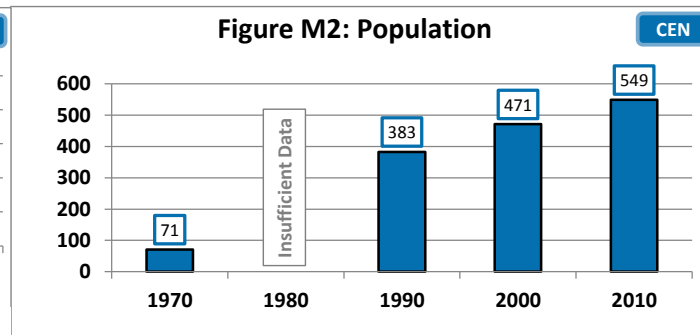
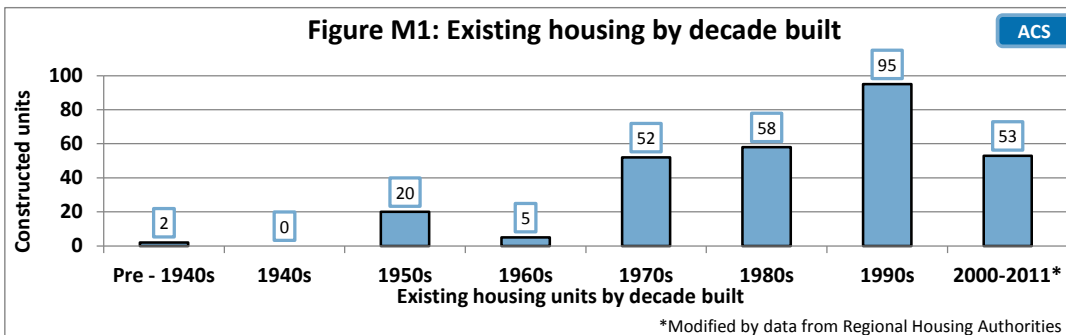
Housing Stock Estimates	Number of Units
All Housing	3509
All Occupied Housing	3129
All Vacant housing	380

**Community Profile for:** Kasilof CDP

**ANCSA Region:** Cook Inlet Regional (CIRI)

**Regional Housing Authority:** Cook Inlet Housing Authority

**BEES Climate Zone (Heating Degree Days):** Zone 7 (11,337 HDD)



#### Kasilof 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	142	3-star	69.0	2,105	\$ 7,326	249	144	\$4.23	10.2	69%
Retrofit units	92	4-star	80.1	2,024	\$ 5,638	184	107	\$3.20	6.9	72%
New construction	44	5-star	90.2	2,261	\$ 5,251	158	77	\$2.57	4.1	2%
Overall	278	3-star plus	77.5	2,103	\$ 6,249	206	116	\$3.50	7.7	57%

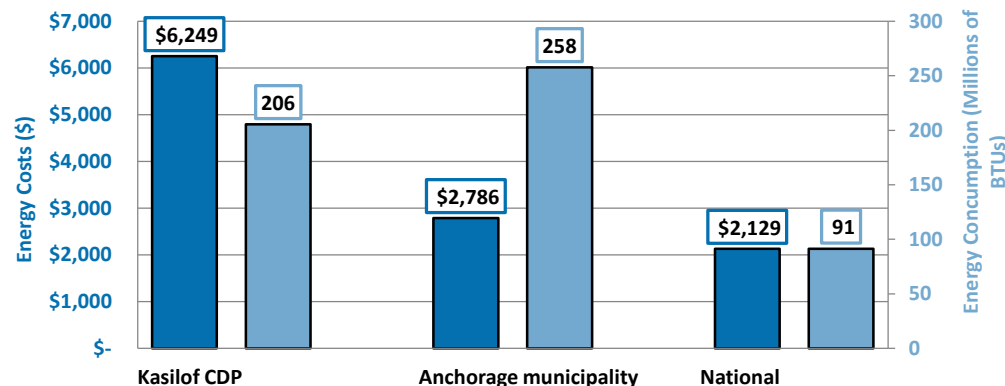
#### Kasilof CDP Housing Envelope Characteristics

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	142	9.1	25	14	6	15	3	3	0.37	0.30	0.51
Retrofit units	92	6.4	32	14	12	21	3	3	0.28	0.26	0.46
New construction	44	2.6	45	17	21	32	6	3	0.22	0.17	0.31
Overall	278	6.8	30	14	9	17	3	3	0.31	0.26	0.45

BEES 2009	7.0	38	21	15	38	15	15	0.33	0.33	0.33
BEES 2012	4.0	43	25	15	38	15	15	0.30	0.30	0.30

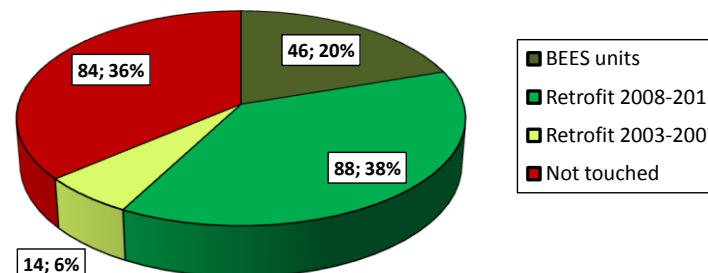
**Figure M5: Average Annual Home Energy Costs and Use**

MIX



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

ARIS



**AFFORDABILITY - Kasilof CDP**

Owner occupied House with Mortgage, Median Value
\$182,100

Owner-occupied House without a Mortgage, Median Value
\$138,500

Estimated Energy Prices as of January 2013	
#1 Fuel oil cost (\$ / gallon)	\$ 3.76
Electricity with PCE (\$/kWh)	No PCE
Electricity without PCE (\$/kWh)	\$ 0.15
Natural gas base rate	\$ 0.11
Natural gas fuel charge	\$ 0.11

Median Annual Household Income	
Housing Units	Household Income
All-occupied	\$ 46,875
Renter-occupied	\$ 68,350
Owner-occupied	\$ 45,104
w/ mortgage	\$ 100,357
w/o mortgage	\$ 40,568

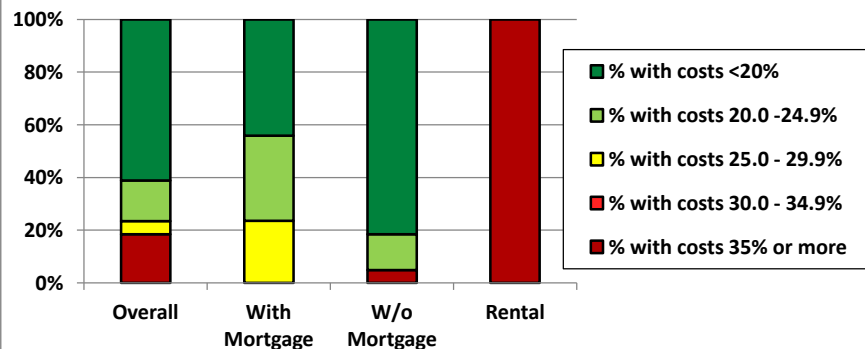
Average Annual Energy Cost	
With PCE	NO PCE
Without PCE	\$6,249
Avg % Median Income spent on Energy: 13.3%	

Median Housing Costs		
	Monthly	Annual
All-occupied	\$ 391	\$ 4,692
Gross rent	2,000+	#VALUE!
Owner-occupied	\$ 351	\$ 4,212
Housing units w/ mortgage	\$ 1,783	\$ 21,396
Housing units w/out a mortgage	\$ 305	\$ 3,660

Housing Stock Estimates	Number of Units
All Housing	229
All Occupied Housing	170
All Vacant housing	59
Vacant Housing for Sale/Rent	6

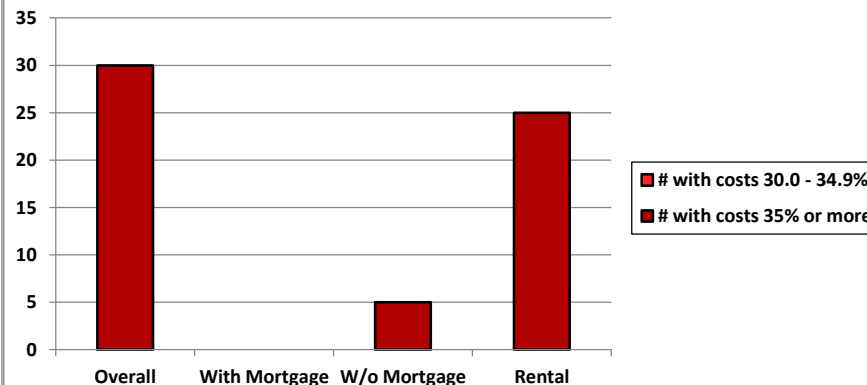
**Figure M7: Affordability - Housing Costs as a Percent of Income**

ACS



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

ACS





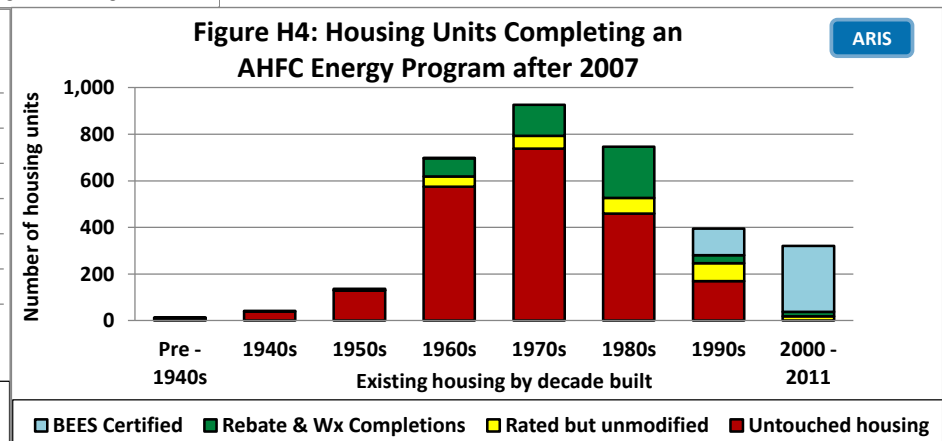
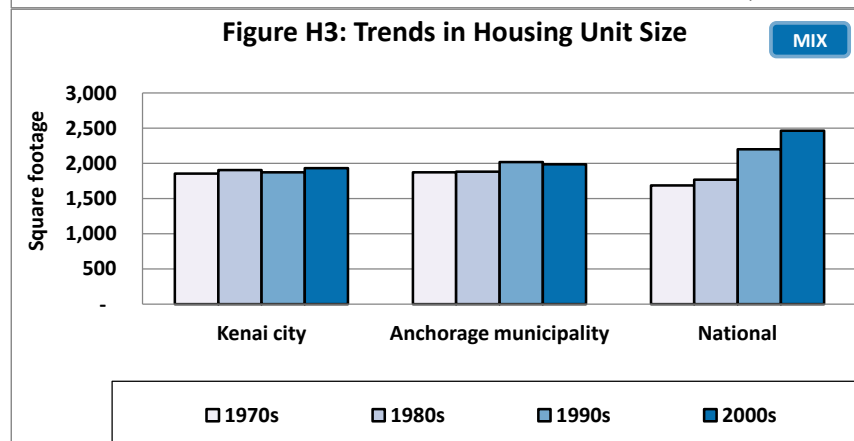
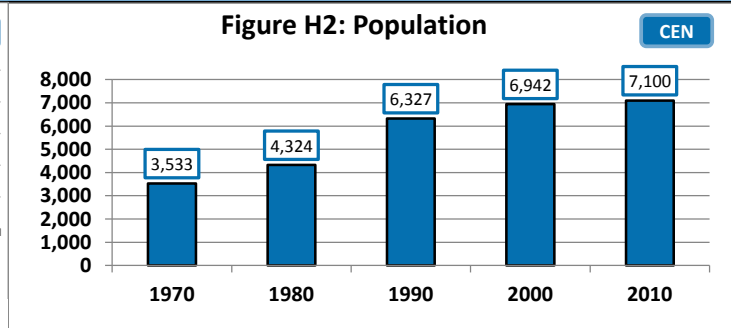
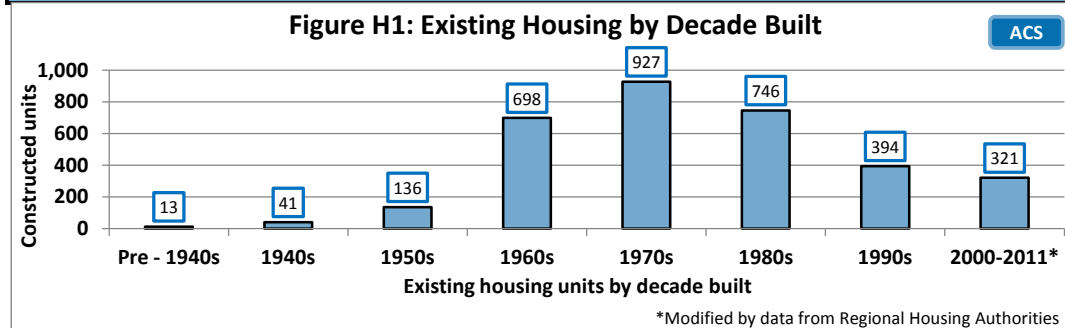
**Community Profile for:** Kenai city

**ANCSA Region:** Cook Inlet Regional (CIRI)

**Regional Housing Authority:** Cook Inlet Housing Authority

**BEES Climate Zone (Heating Degree Days):** Zone 7 (11,395 HDD)

**COMMUNITY - Kenai city**



Houses Lacking Complete Plumbing or Kitchen Facilities	Households	
	Number	Percent
Lack complete plumbing	99	3%
Lack complete kitchen	93	3%

Avg Annual Energy Cost with PCE	NO PCE
Avg Annual Energy Cost without PCE	\$3,000

Weatherization Program Retrofits (funding increased in 2008)	
Date Range	Units
2008-2011	153
2003-2007	69
1990-2002	199

Estimated Total Annual Community Space Heating Fuel Use		
Fuel Oil	84,526	(gallons)
Nat Gas	5,507,736	(ccf)
Electricity	2,298,698	(kWh)
Wood	820	(cords)
Propane	9,967	(gallons)
Coal	-	(tons)

Estimated Energy Prices as of January 2013	
#1 Fuel oil cost (\$ / gallon)	\$3.76
Electricity with PCE (\$/kWh)	No PCE
Electricity cost without PCE (\$/kWh)	\$0.15
Natural gas base rate	\$0.11
Natural gas fuel charge	\$0.57
Natural gas customer charge	\$13.50

Housing Stock Estimates	Number of Units
All Housing	3230
All Occupied Housing	2996
All Vacant housing	234
Vacant Housing for Sale or Rent	104

OVERCROWDING & VENTILATION - Kenai city

Figure H5: Overcrowded Units

ACS

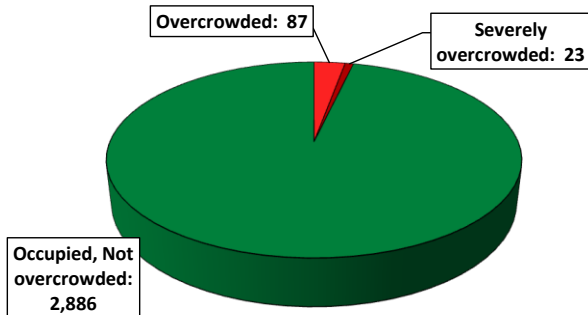


Figure H6: Housing Occupancy

MIX

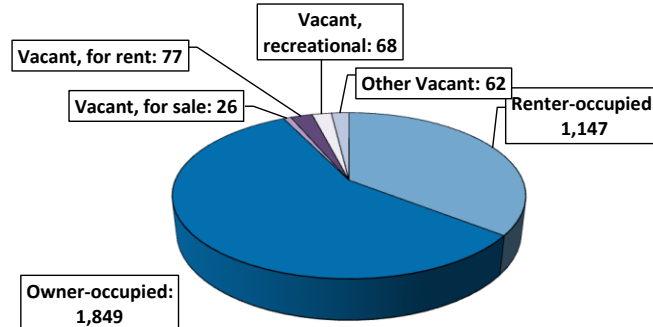


Figure H7: Average Air-Tightness of Current Homes by Decade Built

ARIS

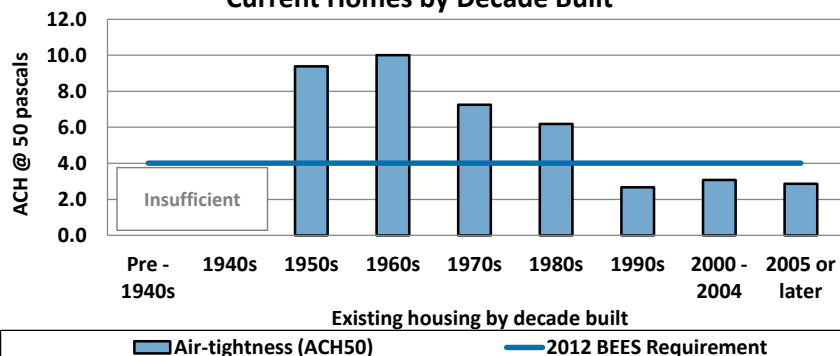


Figure H8: Existing Ventilation Type by Decade Built

ARIS

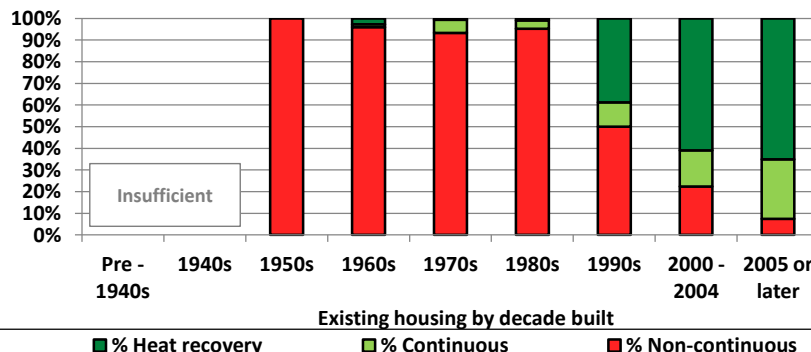


Figure H9: Percent of Housing Stock at High Risk of Moisture and Air Quality Problems

ARIS

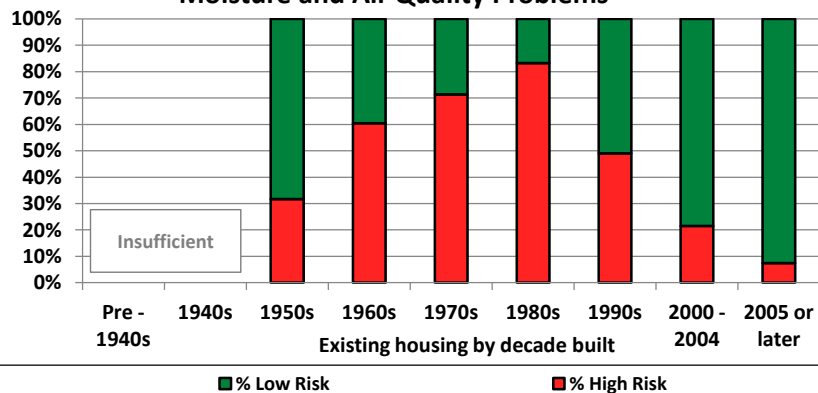
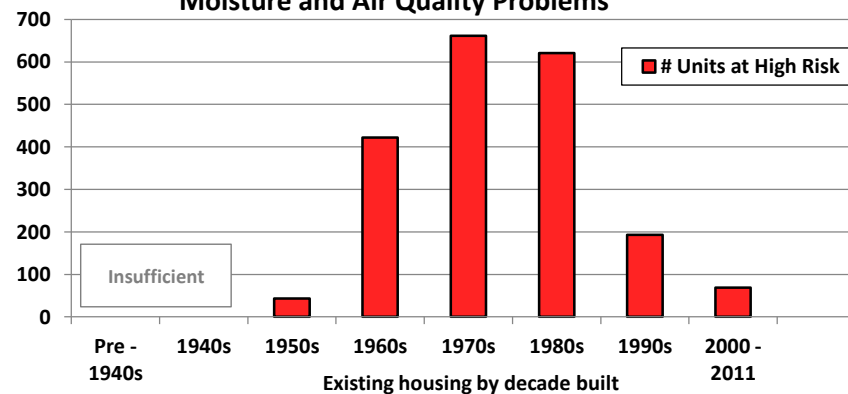


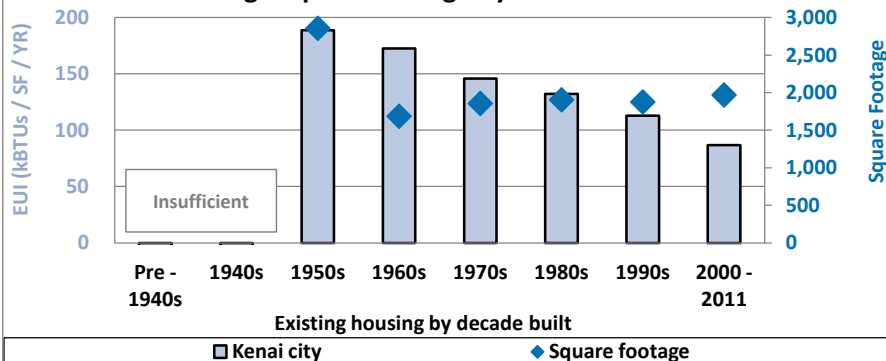
Figure H10: Quantity of Housing Stock at High Risk of Moisture and Air Quality Problems

ARIS

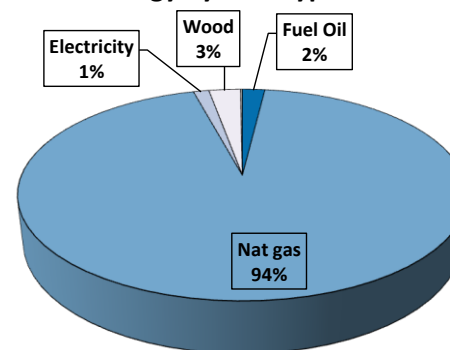


ENERGY - Kenai city												
Current Kenai city Housing Energy Characteristics By Decade Built												
Current Residential Units by Year Built	Number of Records	Avg Energy Rating Stars	Avg Energy Rating Points	Avg Sq. Feet	Avg. Annual Energy Cost	Avg. Annual Energy Use (million BTUs)	Avg Ann Energy by End Use (million Btus)			Avg. EUI (kBtus/SF)	Avg. ECI (\$ / SF)	Avg. Home Heating Index
							Space Heating	DHW	Appliances			
OVERALL	1,496	3-star	71.5	1,892	\$ 3,000	257	182	34	32	135	\$ 1.66	8.8
Pre- 1940	3	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1940- 49	4	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1950- 59	12	1-star plus	45.1	2,855	\$ 5,152	509	433	38	38	189	\$ 1.88	14.2
1960- 69	202	2-star plus	60.3	1,686	\$ 3,012	276	210	35	31	172	\$ 1.97	11.7
1970- 79	325	3-star	69.1	1,856	\$ 3,071	274	207	35	32	146	\$ 1.67	9.8
1980- 89	504	3-star plus	75.2	1,904	\$ 3,043	249	182	34	32	132	\$ 1.64	8.7
1990- 99	261	4-star plus	83.6	1,875	\$ 2,567	199	98	23	21	113	\$ 1.48	6.6
2000- 2004	181	4-star plus	87.5	1,932	\$ 2,400	166	102	33	32	93	\$ 1.36	5.1
2005 or later	159	5-star	90.3	2,010	\$ 2,389	157	93	32	32	79	\$ 1.21	4.1

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



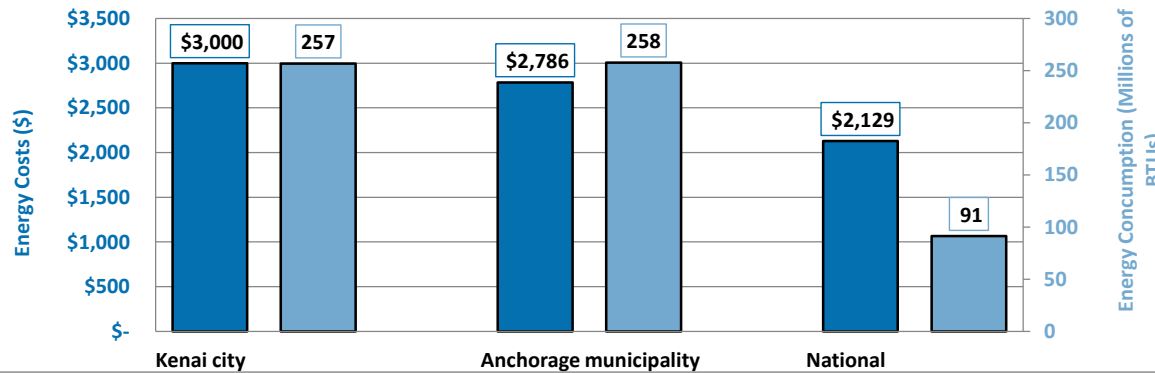
**Figure H12: Percent of Total Residential Space Heating Energy by Fuel Type**



Current Kenai 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	1,496	6.4	27	14	6	20	3	3	0.34	0.28	0.48
Pre- 1940	3	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1940- 49	4	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1950- 59	12	9.4	18	10	2	11	NR	2	0.35	NR	0.56
1960- 69	202	10.0	22	10	3	17	2	2	0.48	0.31	0.59
1970- 79	325	7.2	22	12	6	17	3	3	0.36	0.32	0.53
1980- 89	504	6.2	29	15	6	21	3	3	0.35	0.29	0.48
1990- 99	261	2.7	52	23	12	38	4	4	0.18	0.16	0.28
2000- 2004	181	3.1	43	17	13	27	4	3	0.24	0.19	0.36
2005 or later	159	2.9	50	17	20	40	6	3	0.22	0.17	0.32
BEES 2009 - Climate Zone 7		7.0	38	21	15	38	15	15	0.33	0.33	0.33
BEES 2012 - Climate Zone 7		4.0	43	25	15	38	15	15	0.30	0.30	0.30

AFFORDABILITY - Kenai city

Figure H13: Average Annual Home Energy Costs and Use



Housing Information	Avg Household Size (# of people)
All-occupied	2.4
Owner-occupied	2.5
renter-occupied	2.0

Owner-occupied House with Mortgage, Median Value
\$178,800

Owner-occupied House without a Mortgage, Median Value
\$169,400

Median Annual Household Income	
Housing Units	Household Income
All-occupied	\$ 57,544
Renter-occupied	\$ 37,314
Owner-occupied	\$ 76,436
w/ mortgage	\$ 76,920
w/o mortgage	\$ 61,023

Median Housing Costs		
	Monthly	Annual
All-occupied	\$ 984	\$ 11,808
Gross rent	\$ 783	\$ 9,396
Owner-occupied	\$ 1,215	\$ 14,580
Housing units w/ mortgage	\$ 1,351	\$ 16,212
Housing units w/out a mortgage	\$ 471	\$ 5,652

Avg % of Median Income Spent on Energy
5.2%

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

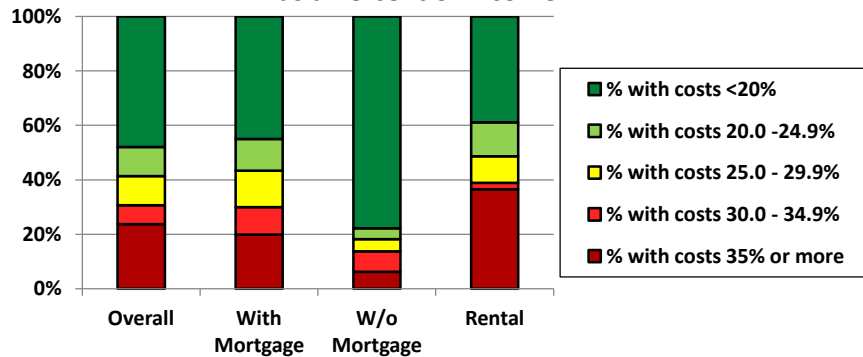
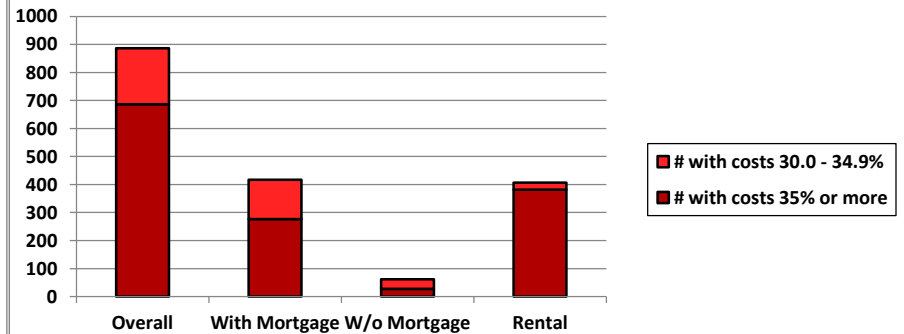


Figure H15: Number of Cost-Burdened Housing Units

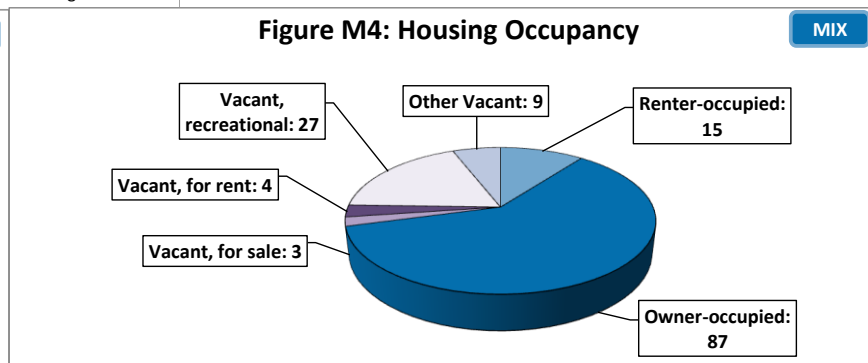
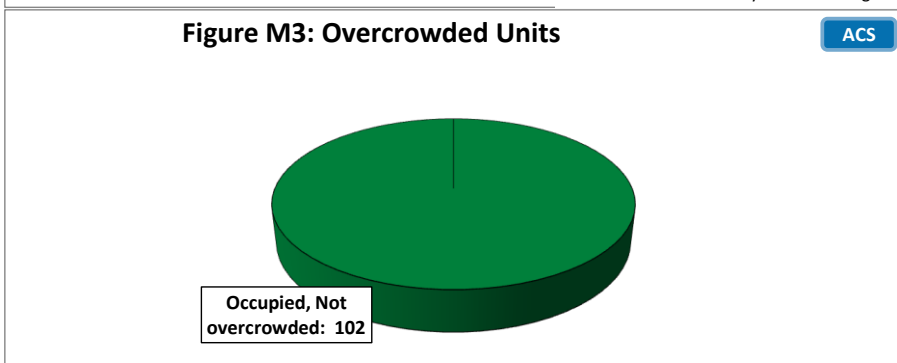
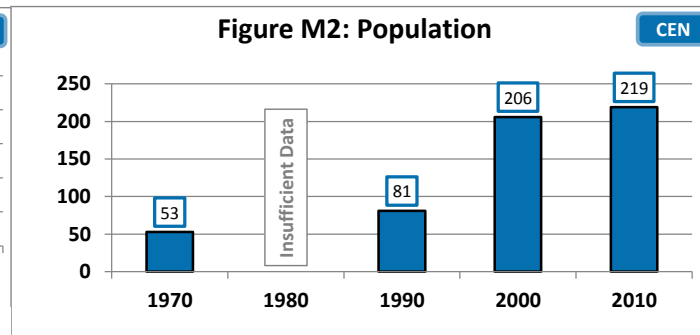
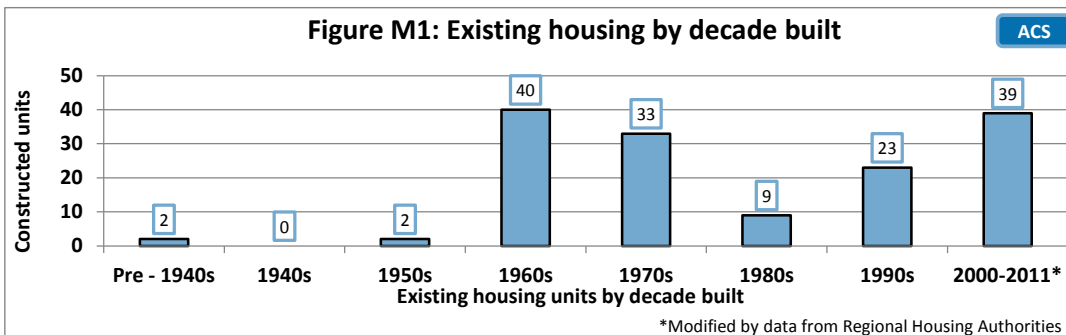


**Community Profile for:** Moose Pass CDP

**ANCSA Region:** Cook Inlet Regional (CIRI)

**Regional Housing Authority:** Cook Inlet Housing Authority

**BEES Climate Zone (Heating Degree Days):** Zone 7 (11,126 HDD)



#### Moose Pass 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	11	2-star	53.2	1,263	\$ 5,169	211	174	\$4.24	12.6	18%
Retrofit units	8	3-star plus	75.3	1,202	\$ 2,970	124	110	\$2.74	6.7	63%
New construction	2	NR	NR	NR	NR	NR	NR	NR	NR	NR
Overall	21	2-star	54.9	1,267	\$ 5,032	206	169	\$4.13	12.1	21%

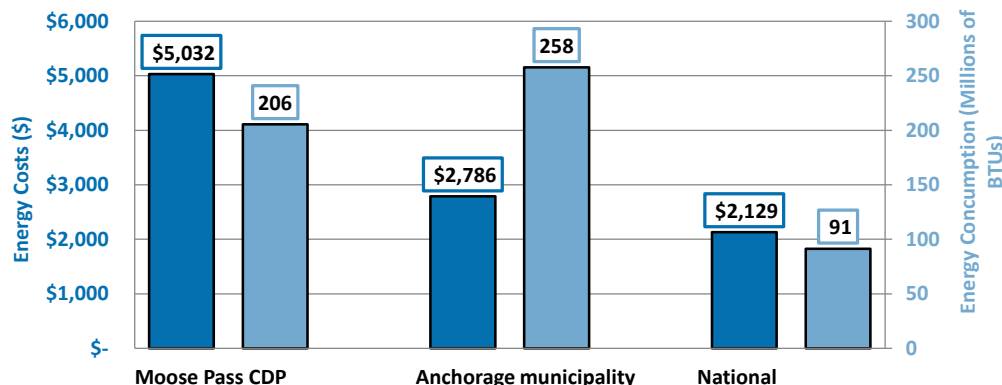
#### Moose Pass CDP Housing Envelope Characteristics

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	11	13.3	12	10	3	25	2	2	0.30	NR	0.61
Retrofit units	8	7.1	27	13	12	35	NR	NR	0.28	NR	0.39
New construction	2	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Overall	21	12.8	12	10	3	25	3	2	0.30	NR	0.59

BEES 2009	7.0	38	21	15	38	15	15	0.33	0.33	0.33
BEES 2012	4.0	43	25	15	38	15	15	0.30	0.30	0.30

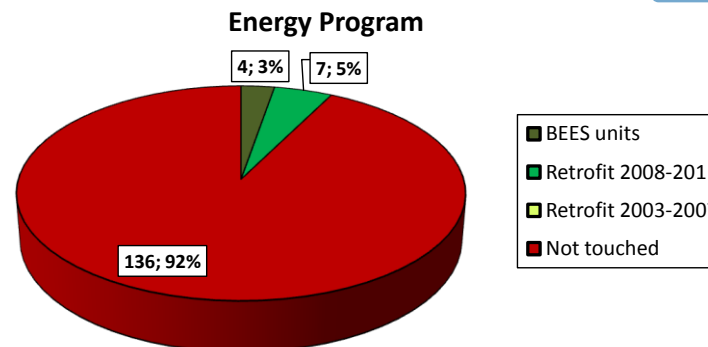
**Figure M5: Average Annual Home Energy Costs and Use**

MIX



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

ARIS



**AFFORDABILITY - Moose Pass CDP**

Owner occupied House with Mortgage, Median Value
\$323,300

Owner-occupied House without a Mortgage, Median Value
\$115,400

Estimated Energy Prices as of January 2013	
#1 Fuel oil cost (\$ / gallon)	\$ 3.83
Electricity with PCE (\$/kWh)	No PCE
Electricity without PCE (\$/kWh)	\$ 0.08

Median Annual Household Income	
Housing Units	Household Income
All-occupied	\$ 72,500
Renter-occupied	NR
Owner-occupied	\$ 71,719
w/ mortgage	\$ 72,240
w/o mortgage	\$ 61,538

Average Annual Energy Cost	
With PCE	NO PCE
Without PCE	\$5,032

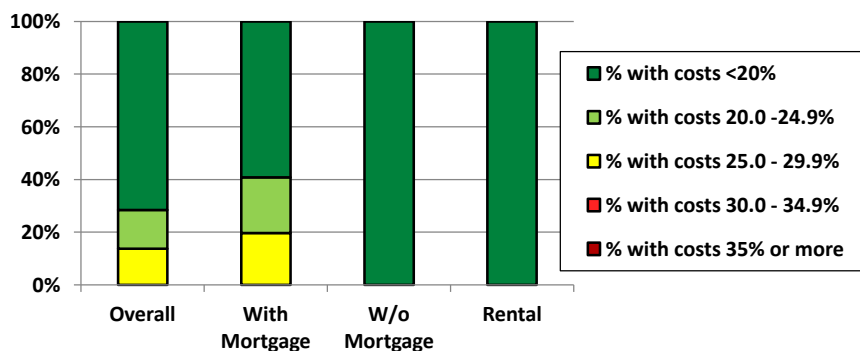
Avg % Median Income spent on Energy	6.9%
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Median Housing Costs		
	Monthly	Annual
All-occupied	\$ 890	\$ 10,680
Gross rent	NR	NR
Owner-occupied	\$ 939	\$ 11,268
Housing units w/ mortgage	\$ 1,045	\$ 12,540
Housing units w/out a mortgage	\$ 319	\$ 3,828

Housing Stock Estimates	Number of Units
All Housing	144
All Occupied Housing	102
All Vacant housing	42
Vacant Housing for Sale/Rent	7

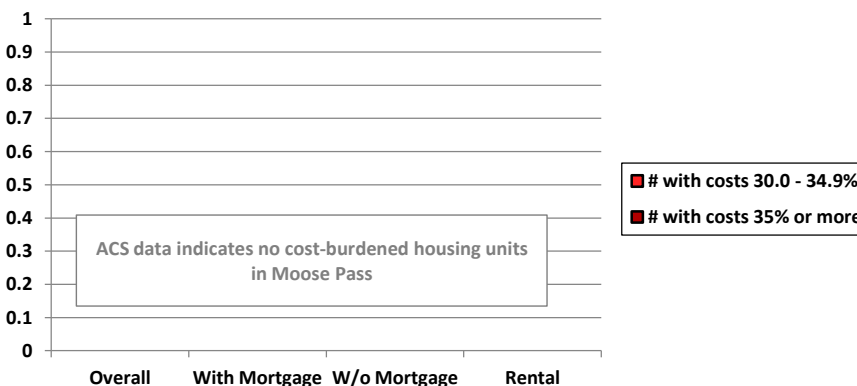
**Figure M7: Affordability - Housing Costs as a Percent of Income**

ACS



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

ACS



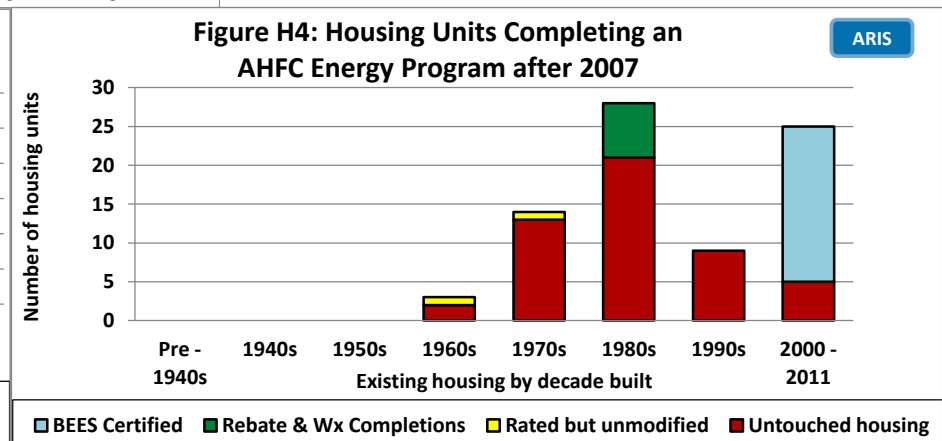
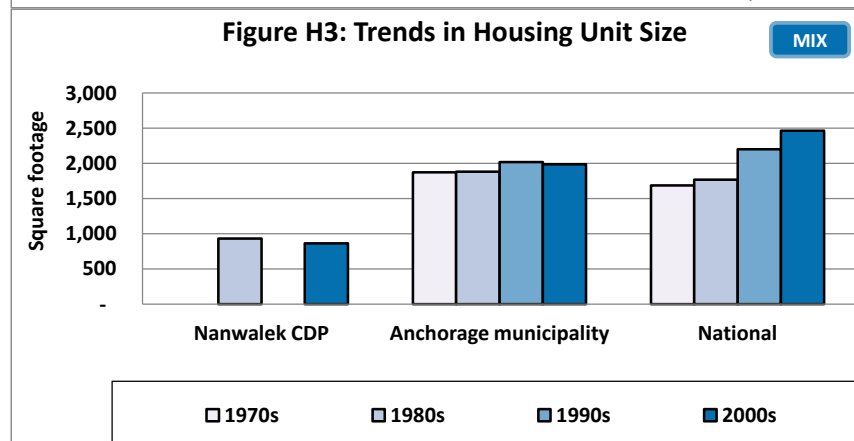
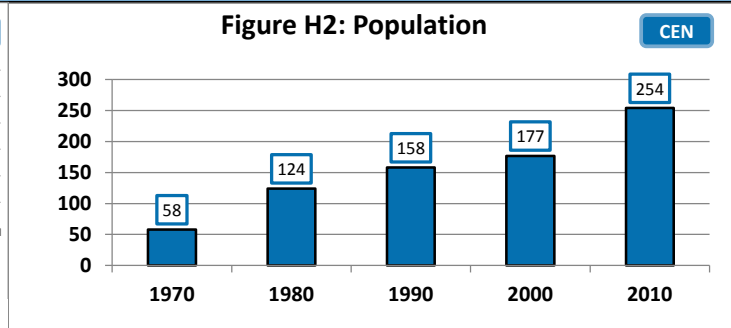
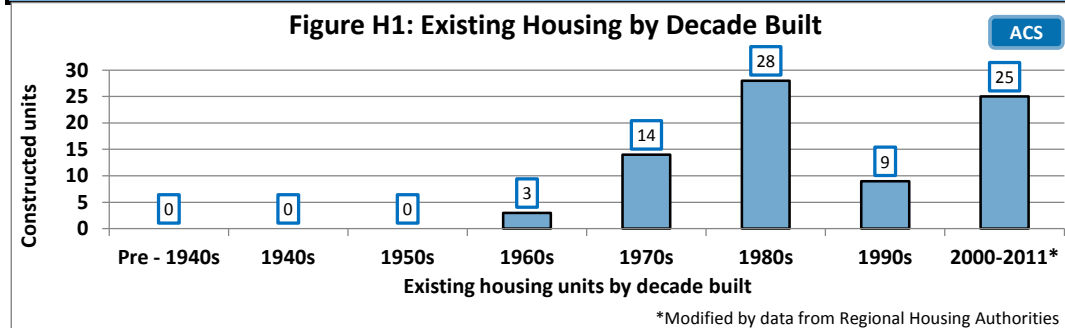
**Community Profile for:** Nanwalek CDP

**ANCSA Region:** Chugach Alaska Corp

**Regional Housing Authority:** North Pacific Rim Housing Authority

**BEES Climate Zone (Heating Degree Days):** Zone 7 (10,136 HDD)

**COMMUNITY - Nanwalek CDP**



Houses Lacking Complete Plumbing or Kitchen Facilities	Households	
	Number	Percent
Lack complete plumbing	0	0%
Lack complete kitchen	0	0%

Avg Annual Energy Cost with PCE	NO PCE
Avg Annual Energy Cost without PCE	\$4,486

Weatherization Program Retrofits (funding increased in 2008)	
Date Range	Units
2008-2011	7
2003-2007	-
1990-2002	3

Estimated Total Annual Community Space Heating Fuel Use		
Fuel Oil	24,331	(gallons)
Nat Gas	-	(ccf)
Electricity	11,914	(kWh)
Wood	54	(cords)
Propane	712	(gallons)
Coal	-	(tons)

Estimated Energy Prices as of January 2013	
#1 Fuel oil cost (\$ / gallon)	\$5.77
Electricity with PCE (\$/kWh)	No PCE
Electricity cost without PCE (\$/kWh)	\$0.15

Housing Stock Estimates	Number of Units
All Housing	79
All Occupied Housing	61
All Vacant housing	18
Vacant Housing for Sale or Rent	2

OVERCROWDING & VENTILATION - Nanwalek CDP

Figure H5: Overcrowded Units

ACS

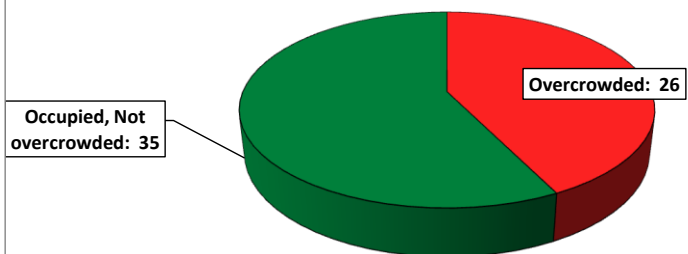


Figure H6: Housing Occupancy

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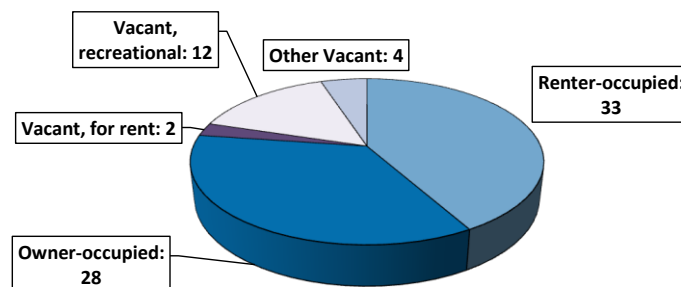


Figure H7: Average Air-Tightness of Current Homes by Decade Built

ARIS

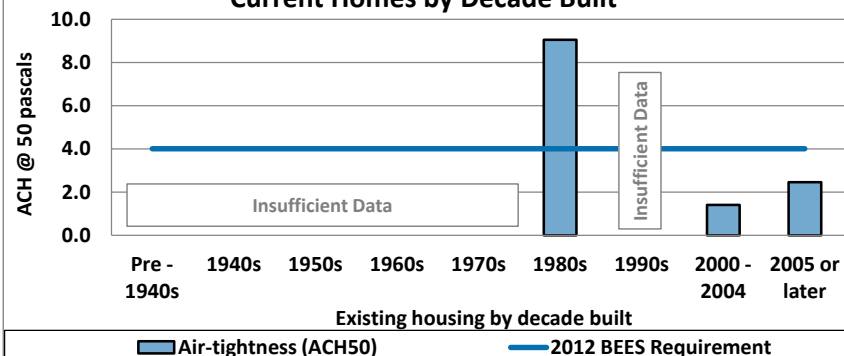


Figure H8: Existing Ventilation Type by Decade Built

ARIS

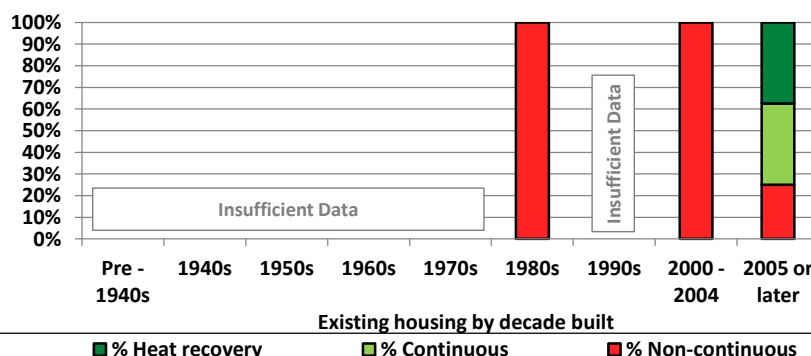


Figure H9: Percent of Housing Stock at High Risk of Moisture and Air Quality Problems

ARIS

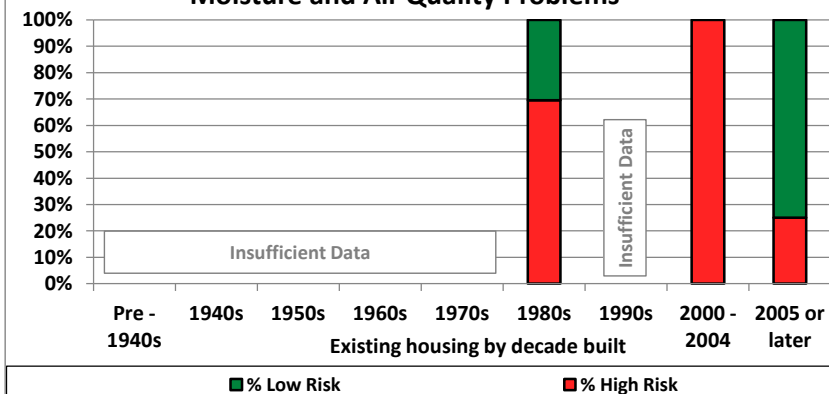
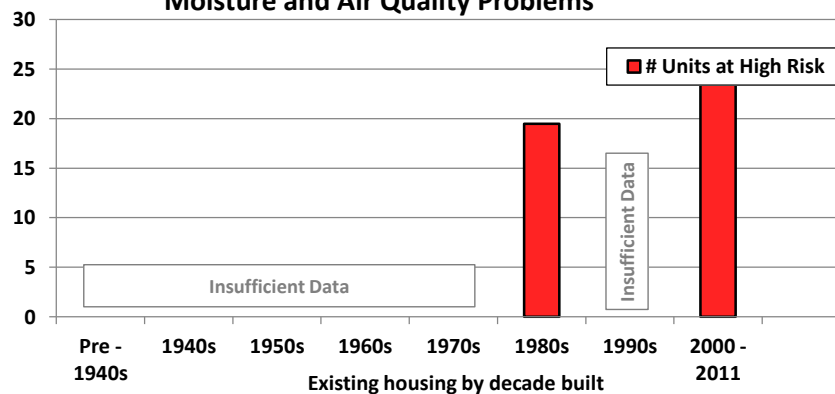


Figure H10: Quantity of Housing Stock at High Risk of Moisture and Air Quality Problems

ARIS





ENERGY - Nanwalek CDP

Current Nanwalek CDP 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	29	3-star plus	74.0	1,036	\$ 4,486	126	73	29	24	118	\$ 4.21	6.8
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	1	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1970- 79	2	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1980- 89	13	3-star	72.7	934	\$ 3,974	115	63	31	22	124	\$ 4.32	6.7
1990- 99	0	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
2000- 2004	12	4-star plus	87.2	863	\$ 3,919	92	48	24	20	103	\$ 4.42	5.3
2005 or later	8	5-star	88.5	1,129	\$ 4,150	89	44	23	21	81	\$ 3.77	4.1

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

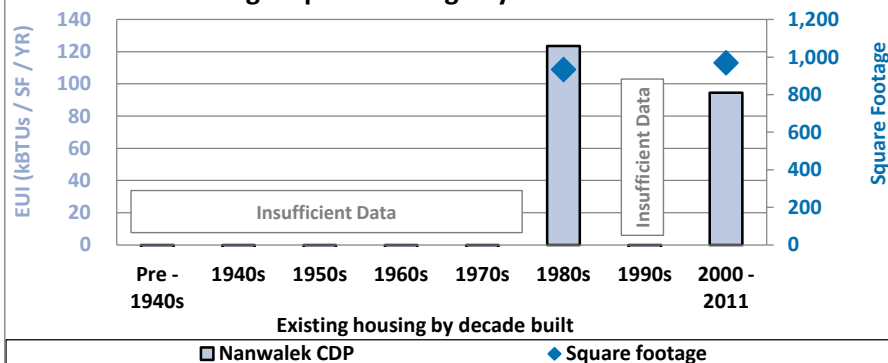
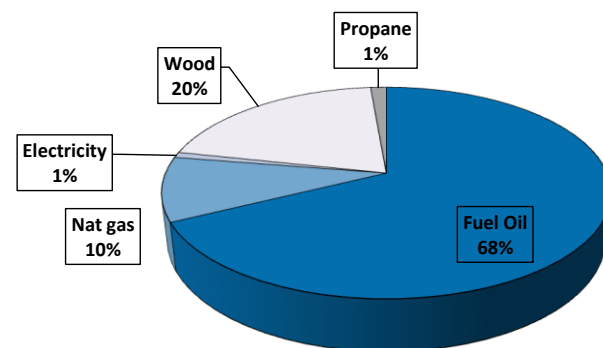


Figure H12: Percent of Total Residential Space Heating Energy by Fuel Type

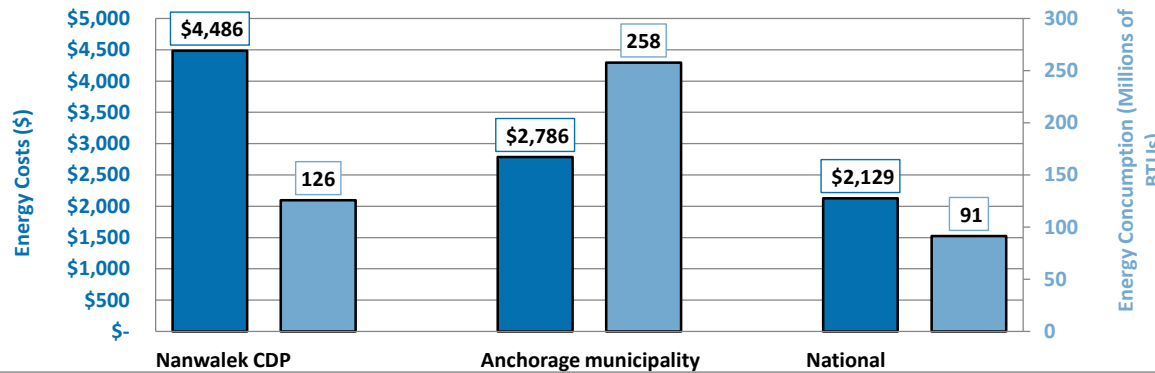


Current Nanwalek CDP Housing Envelope Characteristics By Decade Built

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	29	6.7	34	19	4	24	NR	3	0.26	NR	0.44
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	1	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1970- 79	2	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1980- 89	13	9.0	38	21	NR	41	NR	NR	0.25	NR	0.48
1990- 99	0	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
2000- 2004	12	1.4	40	18	13	NR	NR	2	0.26	NR	0.33
2005 or later	8	2.5	43	18	15	NR	NR	3	0.22	NR	0.29
BEES 2009 - Climate Zone 7		7.0	38	21	15	38	15	15	0.33	0.33	0.33
BEES 2012 - Climate Zone 7		4.0	43	25	15	38	15	15	0.30	0.30	0.30

AFFORDABILITY - Nanwalek CDP

Figure H13: Average Annual Home Energy Costs and Use



Housing Information	Avg Household Size (# of people)
All-occupied	3.8
Owner-occupied	4.4
renter-occupied	3.4

Owner-occupied House with Mortgage, Median Value
NR

Owner-occupied House without a Mortgage, Median Value
\$82,500

Median Annual Household Income	
Housing Units	Household Income
All-occupied	\$ 27,841
Renter-occupied	\$ 21,641
Owner-occupied	\$ 30,833
w/ mortgage	NR
w/o mortgage	\$ 29,531

Median Housing Costs		
	Monthly	Annual
All-occupied	\$ 420	\$ 5,040
Gross rent	\$ 425	\$ 5,100
Owner-occupied	\$ 400	\$ 4,800
Housing units w/ mortgage	NR	NR
Housing units w/out a mortgage	\$ 358	\$ 4,296

Avg % of Median Income Spent on Energy	<b>16.1%</b>
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Figure H14: Affordability - Housing Costs as a Percent of Income

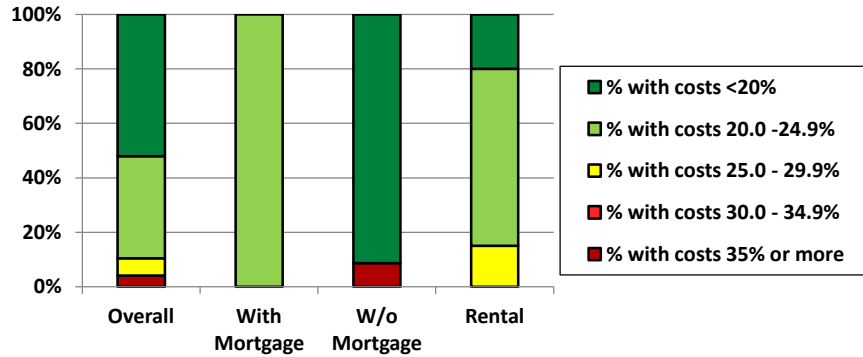
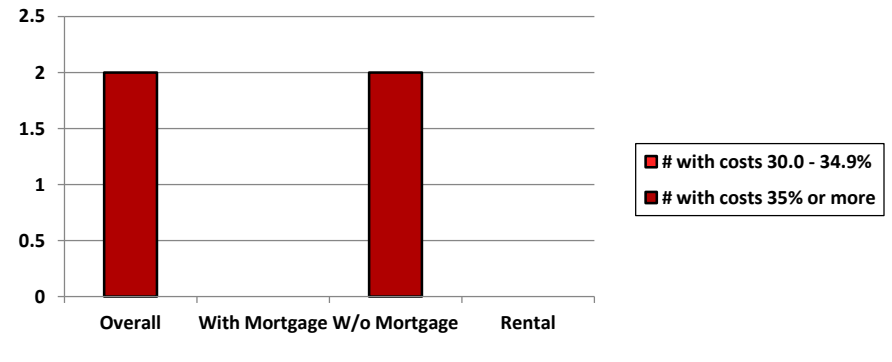


Figure H15: Number of Cost-Burdened Housing Units



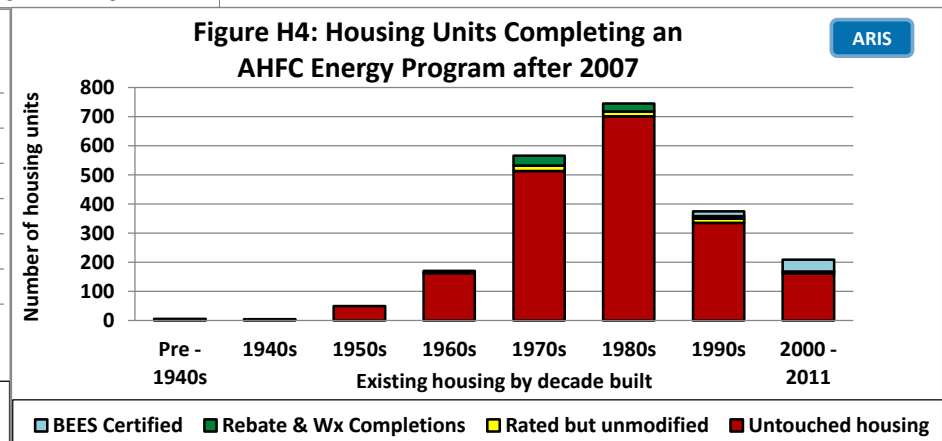
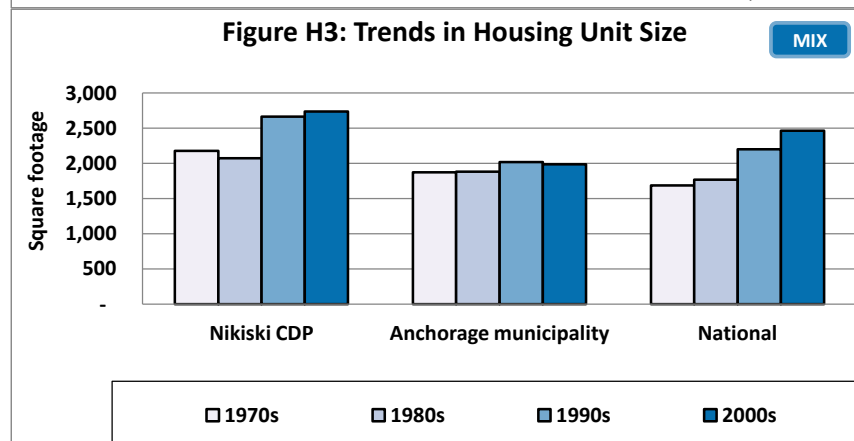
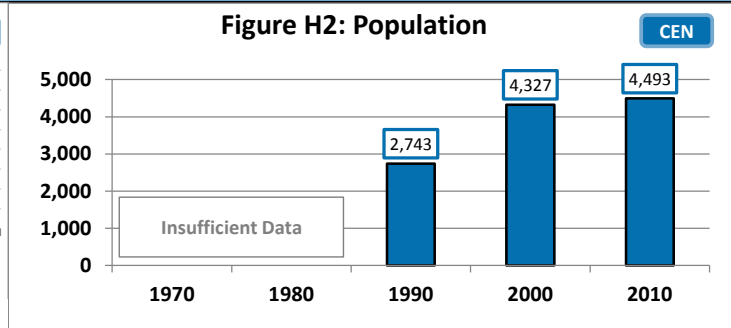
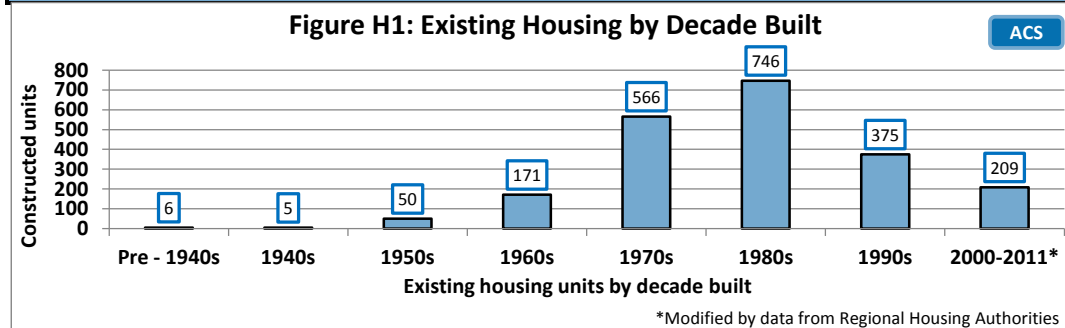
**Community Profile for:** Nikiski CDP

**ANCSA Region:** Cook Inlet Regional (CIRI)

**Regional Housing Authority:** Cook Inlet Housing Authority

**BEES Climate Zone (Heating Degree Days):** Zone 7 (10,899 HDD)

**COMMUNITY - Nikiski CDP**



Houses Lacking Complete Plumbing or Kitchen Facilities	Households	
	Number	Percent
Lack complete plumbing	112	6%
Lack complete kitchen	119	7%

Avg Annual Energy Cost with PCE	NO PCE
Avg Annual Energy Cost without PCE	\$4,671

Weatherization Program Retrofits (funding increased in 2008)	
Date Range	Units
2008-2011	16
2003-2007	21
1990-2002	37

Estimated Total Annual Community Space Heating Fuel Use		
Fuel Oil	718,932	(gallons)
Nat Gas	2,218,894	(ccf)
Electricity	2,465,969	(kWh)
Wood	1,817	(cords)
Propane	119,524	(gallons)
Coal	-	(tons)

Estimated Energy Prices as of January 2013	
#1 Fuel oil cost (\$ / gallon)	\$3.66
Electricity with PCE (\$/kWh)	No PCE
Electricity cost without PCE (\$/kWh)	\$0.15
Natural gas base rate	\$0.11
Natural gas fuel charge	\$0.57
Natural gas customer charge	\$13.50

Housing Stock Estimates	Number of Units
All Housing	2128
All Occupied Housing	1836
All Vacant housing	292
Vacant Housing for Sale or Rent	52

OVERCROWDING & VENTILATION - Nikiski CDP

Figure H5: Overcrowded Units

ACS

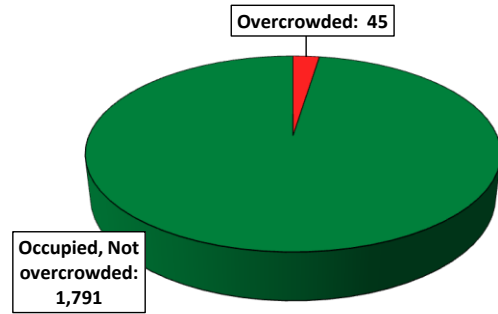


Figure H6: Housing Occupancy

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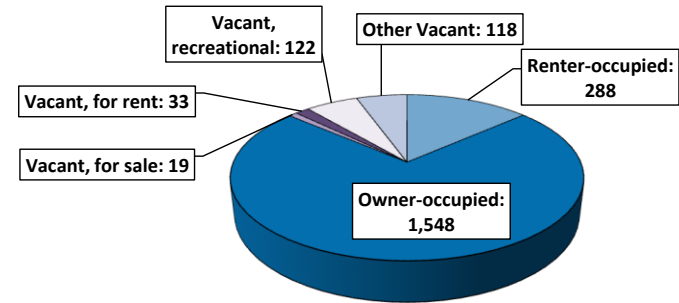


Figure H7: Average Air-Tightness of Current Homes by Decade Built

ARIS

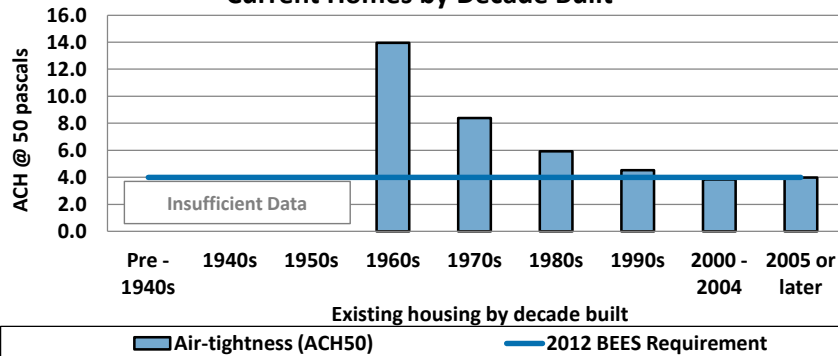


Figure H8: Existing Ventilation Type by Decade Built

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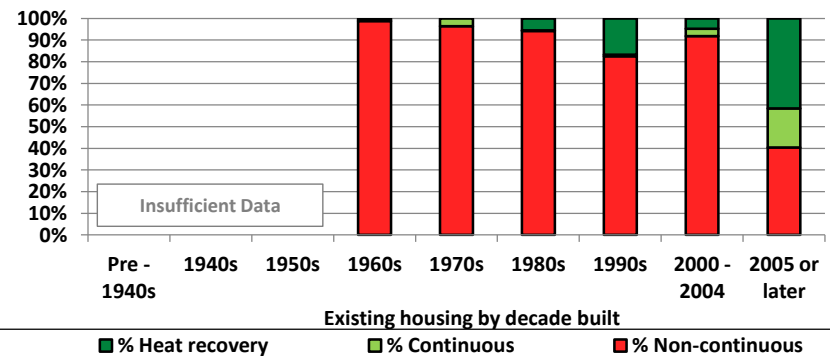


Figure H9: Percent of Housing Stock at High Risk of Moisture and Air Quality Problems

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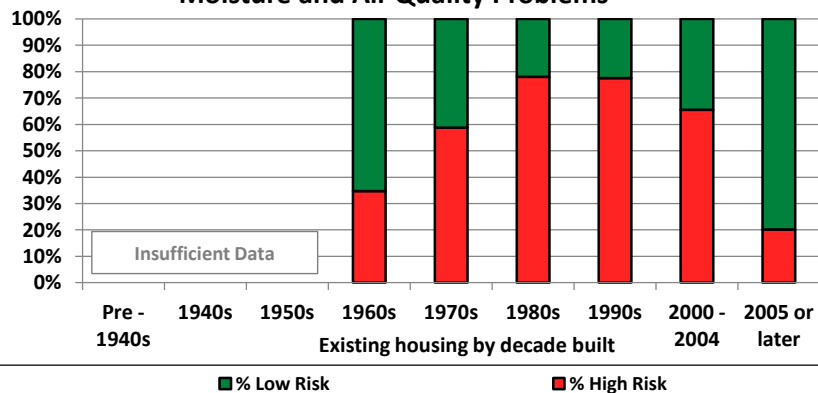
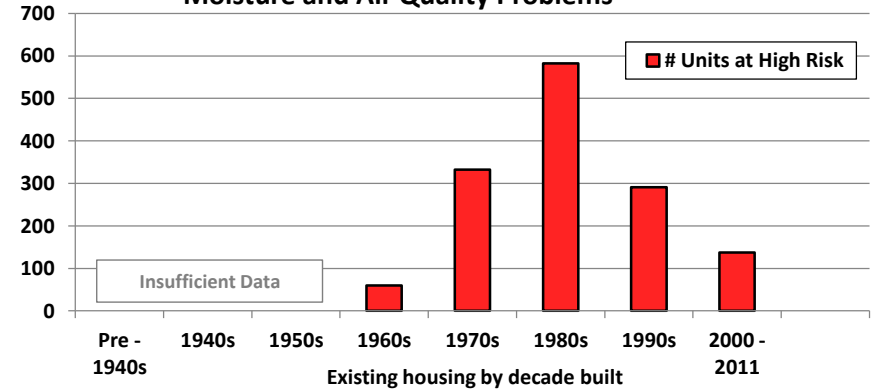


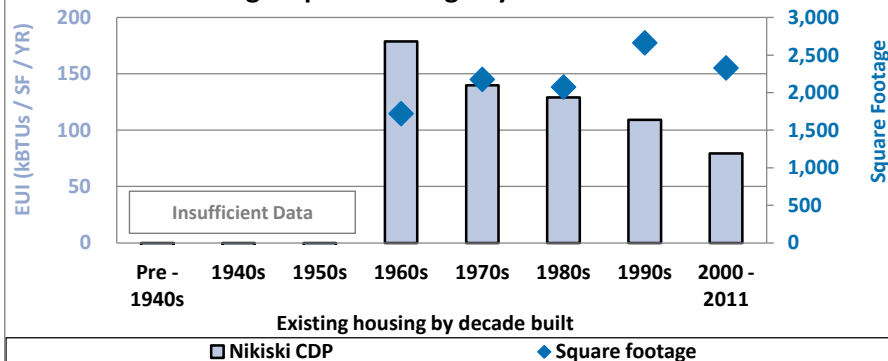
Figure H10: Quantity of Housing Stock at High Risk of Moisture and Air Quality Problems

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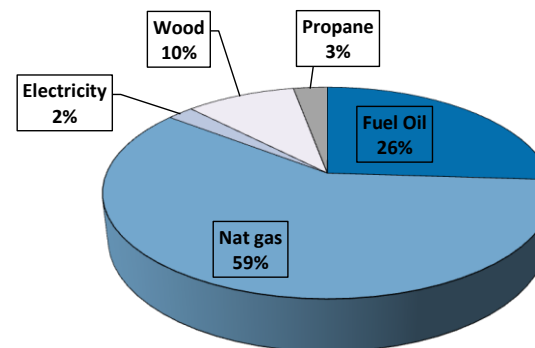


ENERGY - Nikiski CDP												
Current Nikiski CDP Housing Energy Characteristics By Decade Built												
Current Residential Units by Year Built	Number of Records	Avg Energy Rating Stars	Avg Energy Rating Points	Avg Sq. Feet	Avg. Annual Energy Cost	Avg. Annual Energy Use (million BTUs)	Avg Ann Energy by End Use (million Btus)			Avg. EUI (kBtus/SF)	Avg. ECI (\$ / SF)	Avg. Home Heating Index
							Space Heating	DHW	Appliances			
OVERALL	254	3-star	71.2	2,228	\$ 4,671	265	195	34	34	130	\$ 2.25	9.2
Pre- 1940	0	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1940- 49	1	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	13	2-star	51.2	1,720	\$ 5,894	290	229	29	31	179	\$ 3.28	13.1
1970- 79	89	2-star plus	65.3	2,176	\$ 4,560	294	231	31	32	140	\$ 2.22	10.2
1980- 89	71	3-star	72.5	2,074	\$ 4,400	263	199	32	31	129	\$ 2.29	9.1
1990- 99	47	3-star plus	77.9	2,663	\$ 4,980	253	169	37	36	109	\$ 2.09	7.4
2000- 2004	21	4-star plus	87.5	2,740	\$ 4,812	200	119	42	39	74	\$ 1.77	4.1
2005 or later	27	4-star plus	86.2	2,009	\$ 3,435	179	116	30	32	91	\$ 1.71	5.6

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



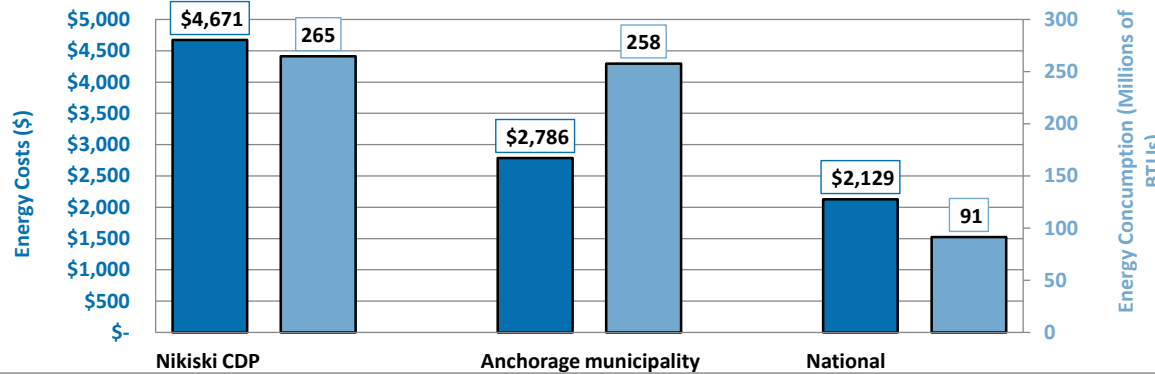
**Figure H12: Percent of Total Residential Space Heating Energy by Fuel Type**



Current Nikiski CDP 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	254	7.1	25	14	5	22	3	3	0.34	0.29	0.50
Pre- 1940	0	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1940- 49	1	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	13	14.0	24	11	3	27	NR	2	0.43	NR	0.64
1970- 79	89	8.4	22	12	5	18	3	2	0.42	0.35	0.56
1980- 89	71	5.9	30	15	5	25	2	2	0.28	0.29	0.47
1990- 99	47	4.5	25	15	15	NR	4	3	0.26	0.17	0.40
2000- 2004	21	3.8	46	20	9	NR	11	4	0.27	0.15	0.36
2005 or later	27	4.0	44	16	19	NR	3	4	0.26	0.16	0.34
BEES 2009 - Climate Zone 7		7.0	38	21	15	38	15	15	0.33	0.33	0.33
BEES 2012 - Climate Zone 7		4.0	43	25	15	38	15	15	0.30	0.30	0.30

AFFORDABILITY - Nikiski CDP

Figure H13: Average Annual Home Energy Costs and Use



Housing Information	Avg Household Size (# of people)
All-occupied	2.4
Owner-occupied	2.4
renter-occupied	2.1

<b>Owner-occupied House with Mortgage, Median Value</b>	\$197,000
<b>Owner-occupied House without a Mortgage, Median Value</b>	\$102,300

Median Annual Household Income	
Housing Units	Household Income
All-occupied	\$ 68,090
Renter-occupied	\$ 60,500
Owner-occupied	\$ 72,639
w/ mortgage	\$ 84,088
w/o mortgage	\$ 41,948

Median Housing Costs		
	Monthly	Annual
All-occupied	\$ 1,003	\$ 12,036
Gross rent	\$ 867	\$ 10,404
Owner-occupied	\$ 1,038	\$ 12,456
Housing units w/ mortgage	\$ 1,381	\$ 16,572
Housing units w/out a mortgage	\$ 404	\$ 4,848

<b>Avg % of Median Income Spent on Energy</b>	<b>6.9%</b>
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Figure H14: Affordability - Housing Costs as a Percent of Income

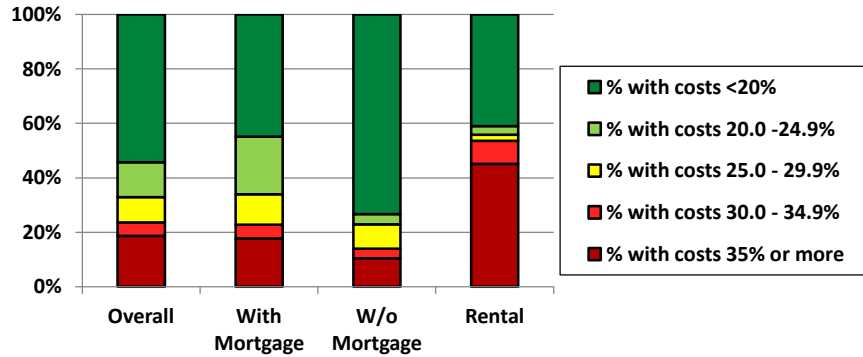
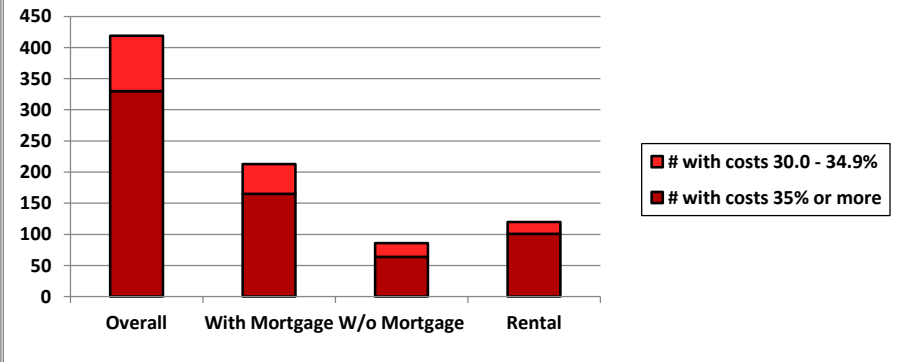


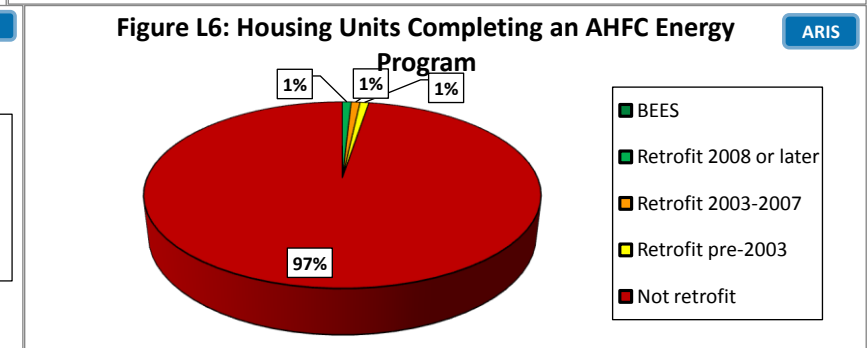
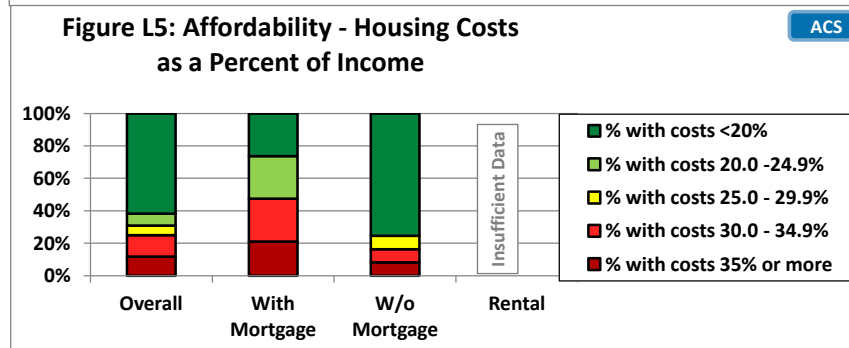
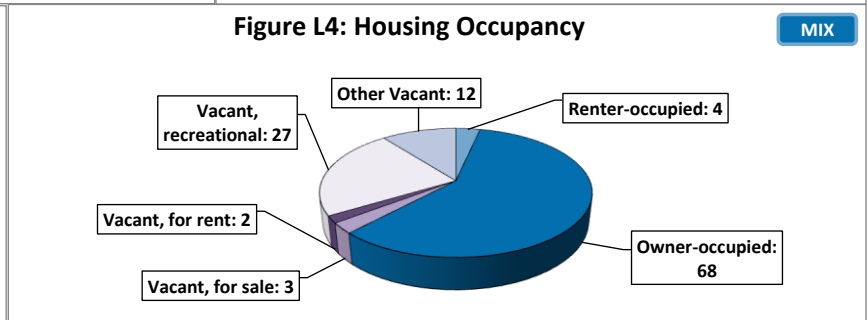
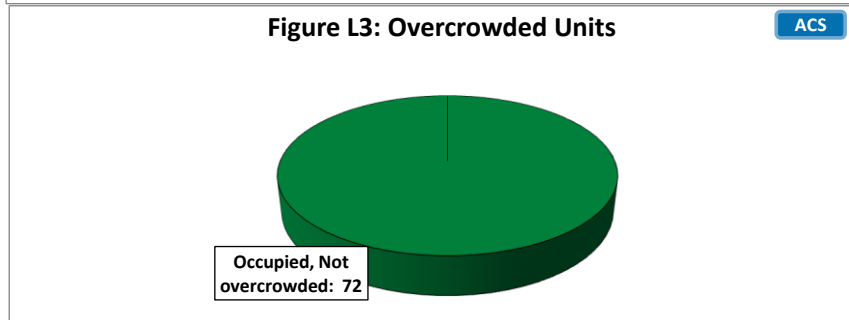
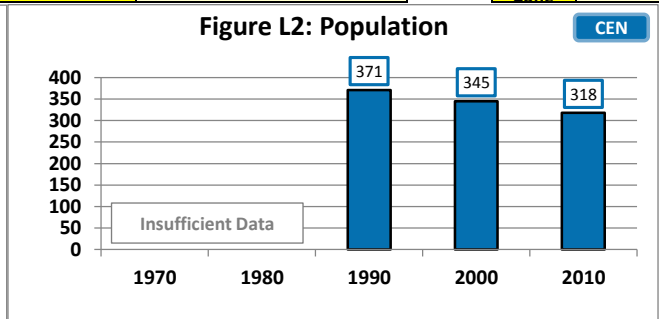
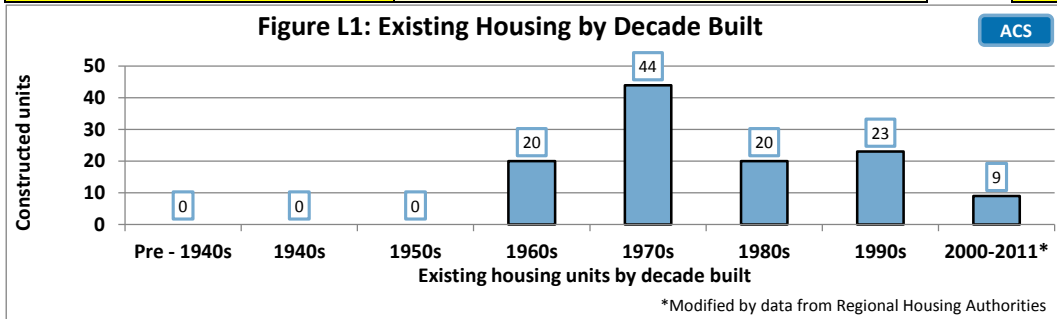
Figure H15: Number of Cost-Burdened Housing Units



**Community Profile for:** Nikolaevsk CDP

**ANCSA Region:** Cook Inlet Regional (CIRI)

**Climate Zone:** 7



Owner-occupied House with Mortgage, Median Value
\$162,500

Owner-occupied House without a Mortgage, Median Value
\$124,000

Estimated Energy Prices as of January 2013	
#1 Fuel oil cost (\$ / gallon)	\$ 3.86
Electricity with PCE (\$/kWh)	No PCE
Electricity without PCE (\$/kWh)	\$ 0.15

Median Annual Household Income	
Housing Units	Household Income
All-occupied	\$ 63,333
Renter-occupied	NR
Owner-occupied	\$ 64,167
w/ mortgage	\$ 67,750
w/o mortgage	\$ 63,958

Housing Stock Estimates	
Housing Stock Estimates	Number of Units
All Housing	116
All Occupied Housing	72
All Vacant housing	44

Median Housing Costs		
	Monthly	Annual
All-occupied	\$ 542	\$ 6,504
Gross rent	NR	NR
Owner-occupied	\$ 563	\$ 6,756
Housing units w/ mortgage	\$ 790	\$ 9,480
Housing units w/out a mortgage	\$ 534	\$ 6,408

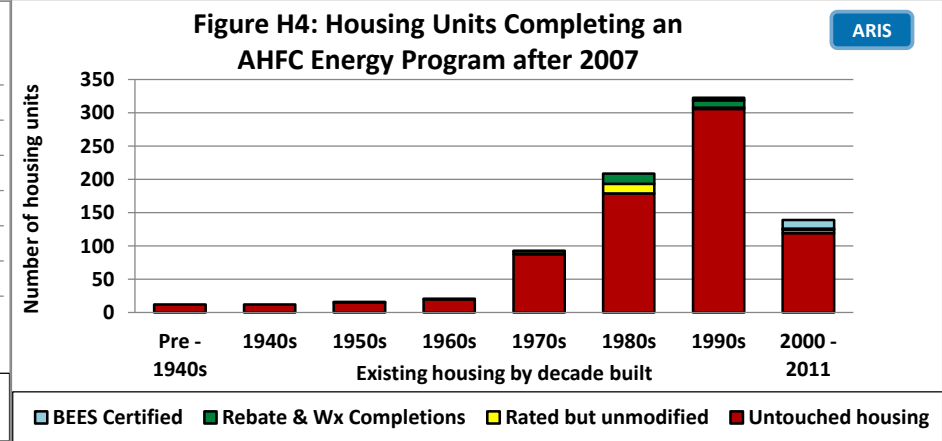
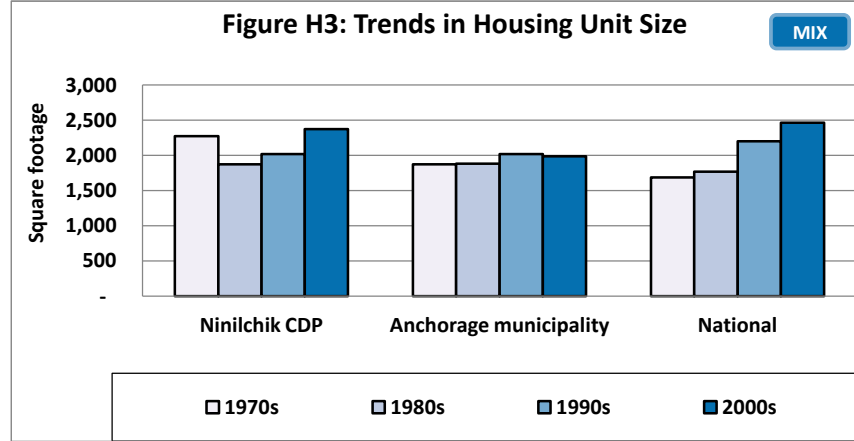
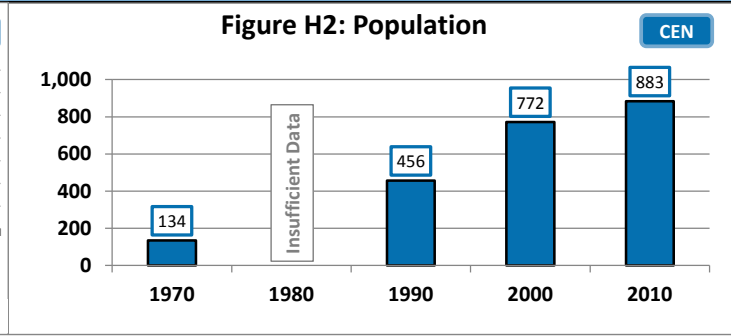
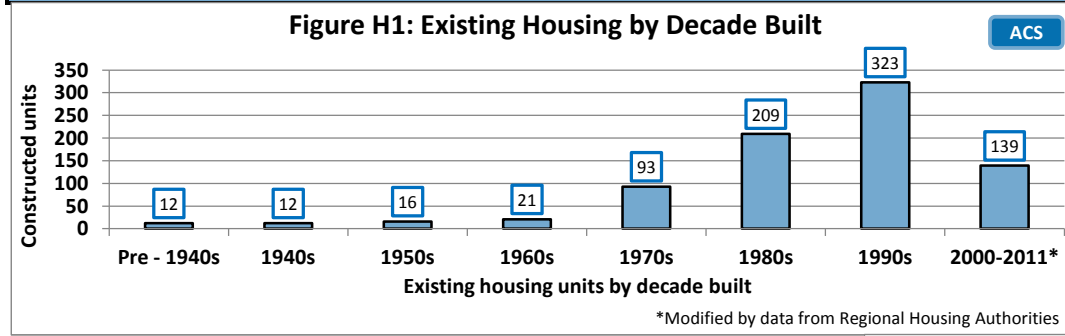
**Community Profile for:** Ninilchik CDP

**ANCSA Region:** Cook Inlet Regional (CIRI)

**Regional Housing Authority:** Cook Inlet Housing Authority

**BEES Climate Zone (Heating Degree Days):** Zone 7 (11,155 HDD)

**COMMUNITY - Ninilchik CDP**



Houses Lacking Complete Plumbing or Kitchen Facilities	Households	
	Number	Percent
Lack complete plumbing	18	8%
Lack complete kitchen	18	8%

Avg Annual Energy Cost with PCE	NO PCE
Avg Annual Energy Cost without PCE	\$6,762

Weatherization Program Retrofits (funding increased in 2008)	
Date Range	Units
2008-2011	12
2003-2007	3
1990-2002	7

Estimated Total Annual Community Space Heating Fuel Use		
Fuel Oil	192,935	(gallons)
Nat Gas	-	(ccf)
Electricity	515,222	(kWh)
Wood	333	(cords)
Propane	36,332	(gallons)
Coal	121	(tons)

Estimated Energy Prices as of January 2013	
#1 Fuel oil cost (\$ / gallon)	\$3.66
Electricity with PCE (\$/kWh)	No PCE
Electricity cost without PCE (\$/kWh)	\$0.15

Housing Stock Estimates	Number of Units
All Housing	825
All Occupied Housing	225
All Vacant housing	600
Vacant Housing for Sale or Rent	23



OVERCROWDING & VENTILATION - Ninilchik CDP

Figure H5: Overcrowded Units

ACS

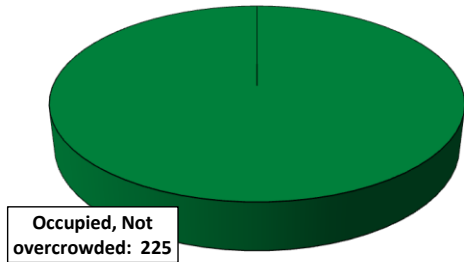


Figure H6: Housing Occupancy

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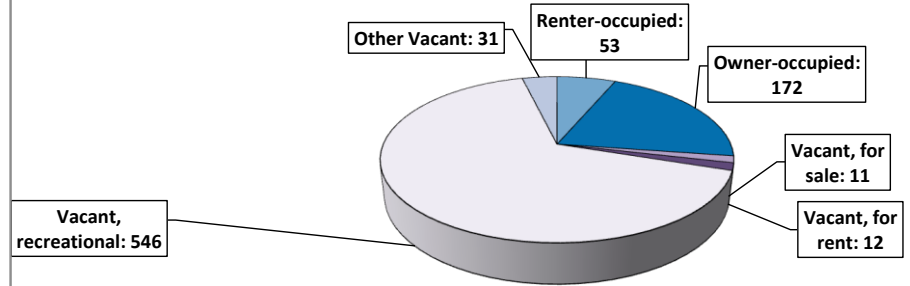


Figure H7: Average Air-Tightness of Current Homes by Decade Built

ARIS

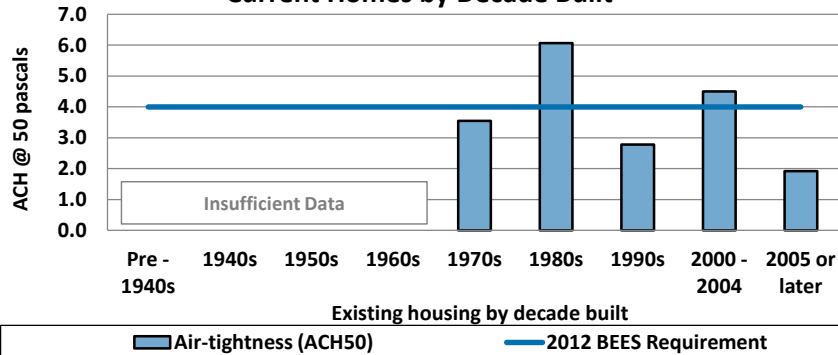


Figure H8: Existing Ventilation Type by Decade Built

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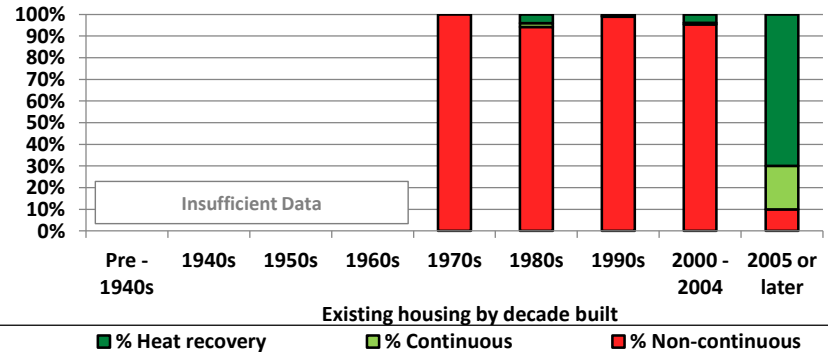


Figure H9: Percent of Housing Stock at High Risk of Moisture and Air Quality Problems

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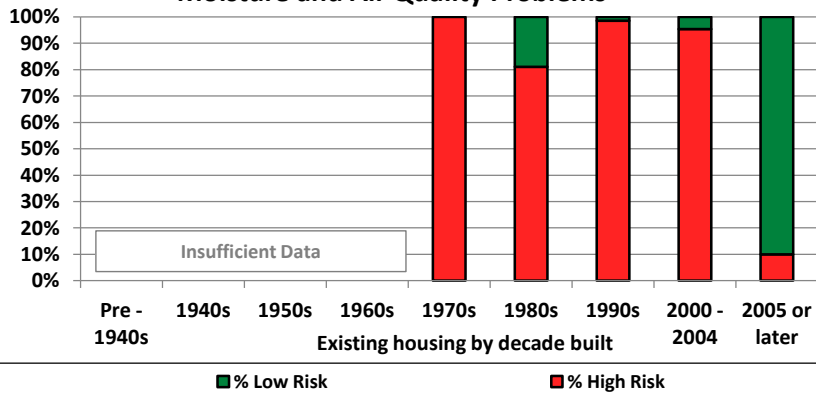
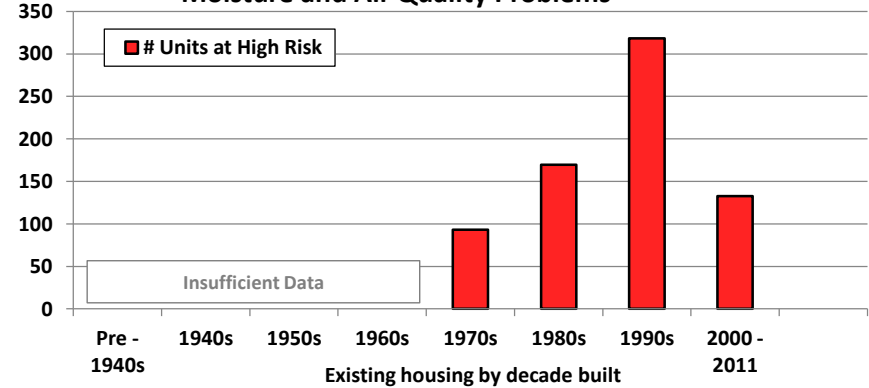


Figure H10: Quantity of Housing Stock at High Risk of Moisture and Air Quality Problems

ARIS



ENERGY - Ninilchik CDP

Current Ninilchik CDP 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	94	3-star plus	73.8	2,077	\$ 6,762	221	168	22	30	110	\$ 3.14	7.5
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	2	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1960- 69	2	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1970- 79	6	2-star plus	67.3	2,275	\$ 8,762	205	146	30	29	91	\$ 3.71	5.8
1980- 89	45	3-star	72.7	1,875	\$ 5,793	195	144	20	31	109	\$ 3.00	7.4
1990- 99	29	3-star plus	75.4	2,018	\$ 6,228	227	175	21	28	113	\$ 3.12	8.0
2000- 2004	11	4-star	81.6	2,372	\$ 8,566	243	186	25	32	109	\$ 3.66	7.6
2005 or later	11	5-star	89.1	1,897	\$ 5,108	144	88	25	31	80	\$ 2.83	4.4

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

ARIS

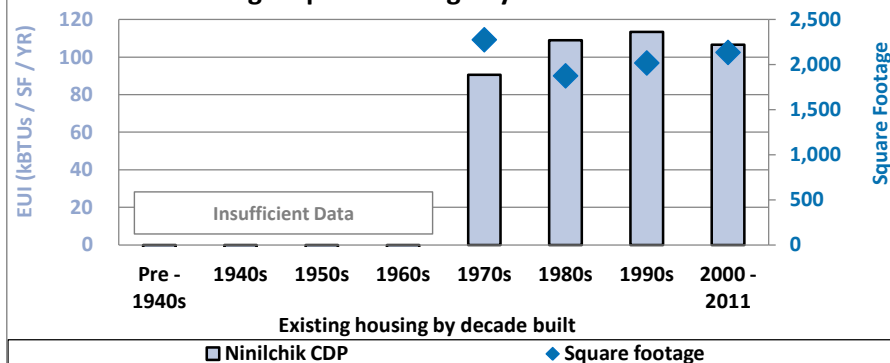
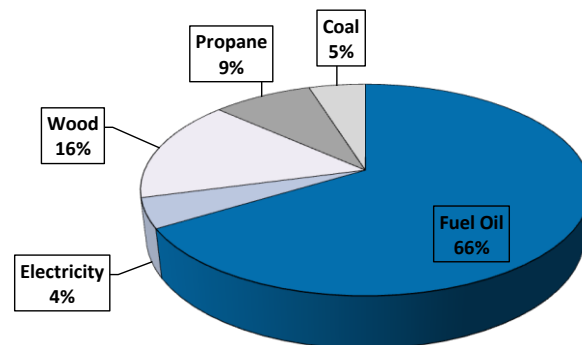


Figure H12: Percent of Total Residential Space Heating Energy by Fuel Type

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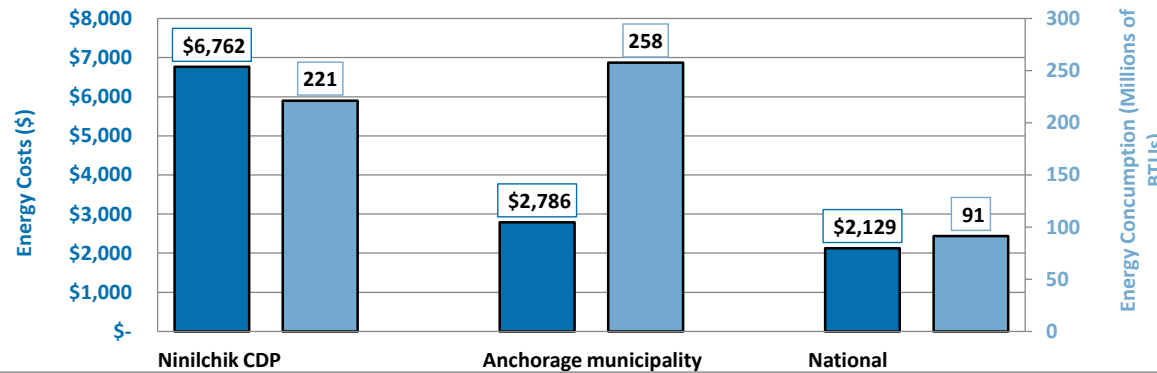


Current Ninilchik CDP Housing Envelope Characteristics By Decade Built

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	94	5.2	31	15	8	20	3	3	0.35	0.32	0.51
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	2	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1960- 69	2	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1970- 79	6	3.5	23	14	NR	NR	NR	NR	0.34	NR	0.54
1980- 89	45	6.1	35	15	8	19	4	3	0.34	0.33	0.51
1990- 99	29	2.8	38	14	18	33	4	3	0.38	0.17	0.49
2000- 2004	11	4.5	28	14	11	NR	3	4	0.38	NR	0.42
2005 or later	11	1.9	44	18	20	NR	7	4	0.25	0.19	0.36
BEES 2009 - Climate Zone 7		7.0	38	21	15	38	15	15	0.33	0.33	0.33
BEES 2012 - Climate Zone 7		4.0	43	25	15	38	15	15	0.30	0.30	0.30

AFFORDABILITY - Ninilchik CDP

Figure H13: Average Annual Home Energy Costs and Use



Housing Information	Avg Household Size (# of people)
All-occupied	2.2
Owner-occupied	2.3
renter-occupied	1.8

Owner-occupied House with Mortgage, Median Value
\$253,800

Owner-occupied House without a Mortgage, Median Value
\$121,600

Median Annual Household Income	
Housing Units	Household Income
All-occupied	\$ 51,250
Renter-occupied	\$ 23,625
Owner-occupied	\$ 55,893
w/ mortgage	\$ 83,750
w/o mortgage	\$ 37,813

Median Housing Costs		
	Monthly	Annual
All-occupied	\$ 554	\$ 6,648
Gross rent	\$ 725	\$ 8,700
Owner-occupied	\$ 537	\$ 6,444
Housing units w/ mortgage	\$ 1,313	\$ 15,756
Housing units w/out a mortgage	\$ 353	\$ 4,236

Avg % of Median Income Spent on Energy	<b>13.2%</b>
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Figure H14: Affordability - Housing Costs as a Percent of Income

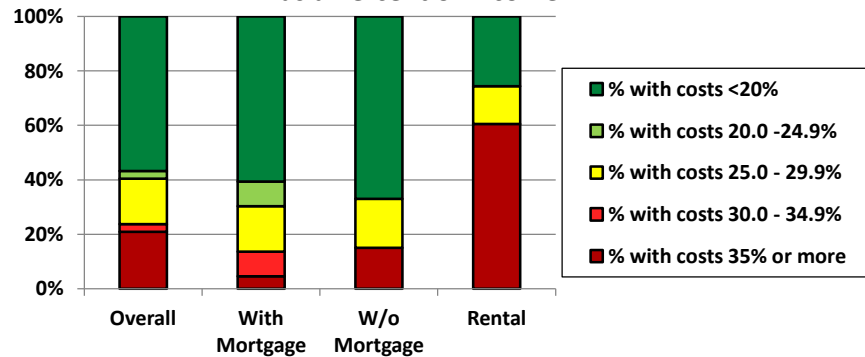
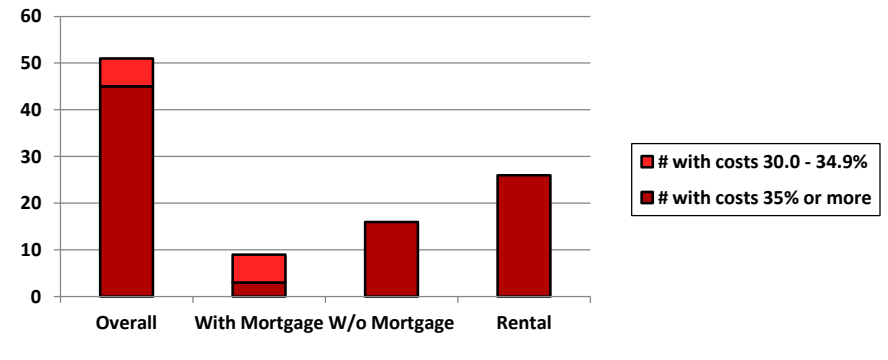


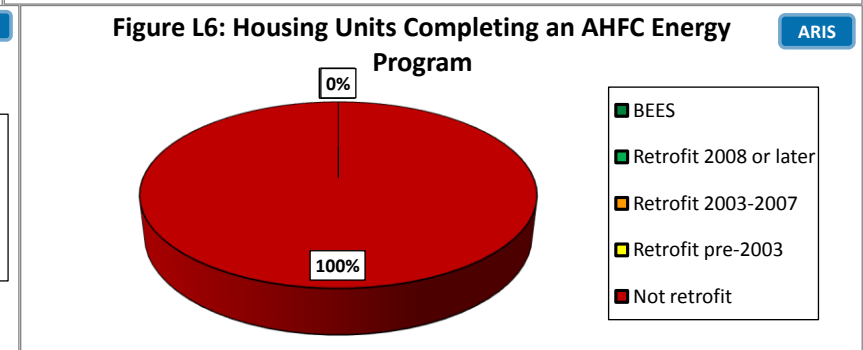
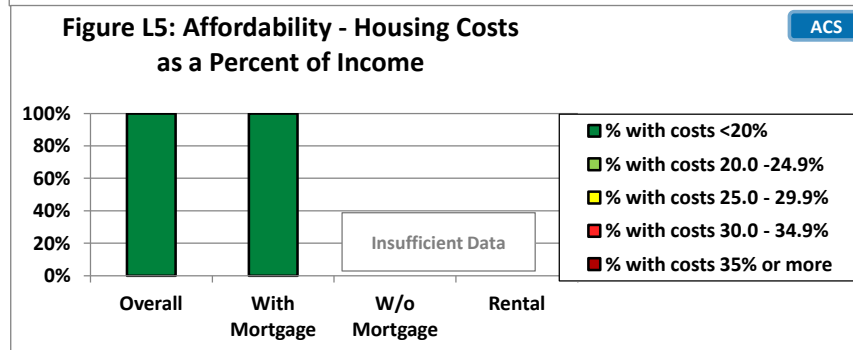
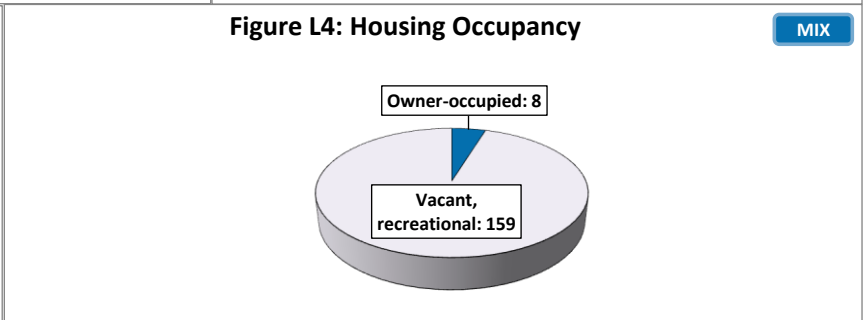
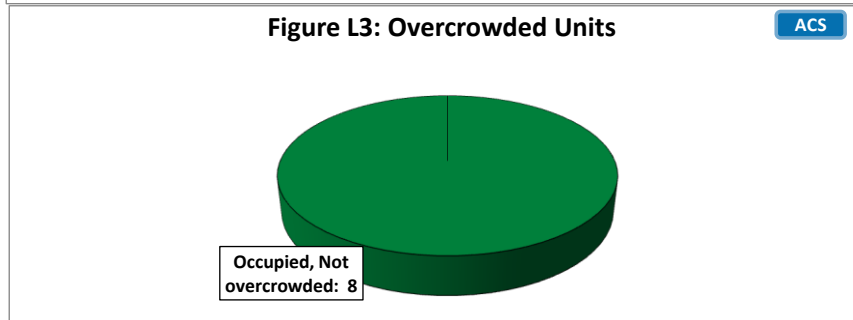
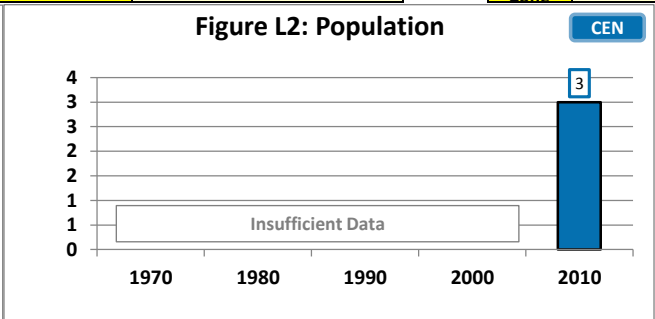
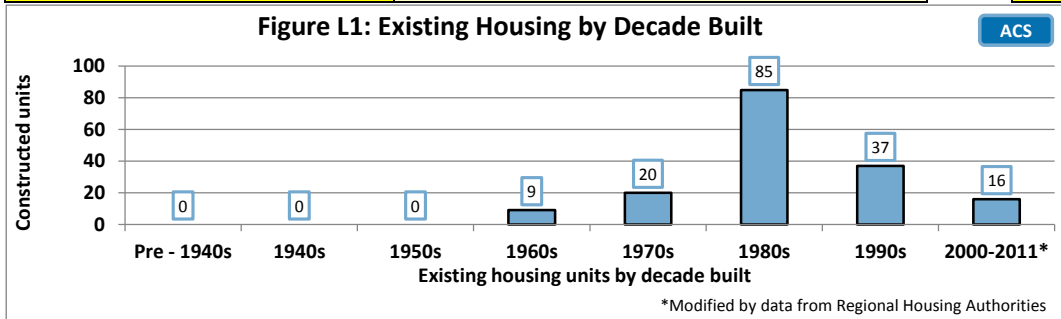
Figure H15: Number of Cost-Burdened Housing Units



**Community Profile for:** Point Possession CDP

**ANCSA Region:** Cook Inlet Regional (CIRI)

**Climate Zone:** 7



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	NR
Renter-occupied	NR
Owner-occupied	NR
w/ mortgage	NR
w/o mortgage	NR

Housing Stock Estimates	
	Number of Units
All Housing	167
All Occupied Housing	8
All Vacant housing	159

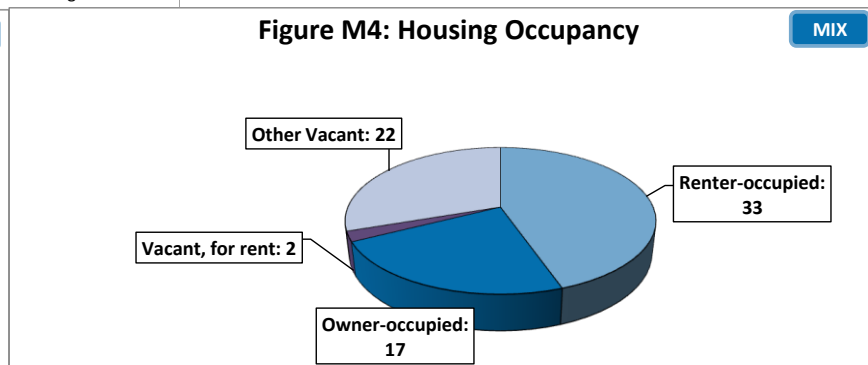
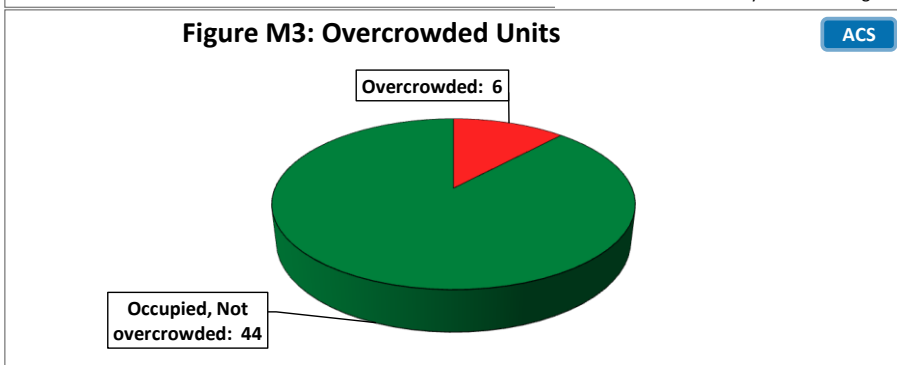
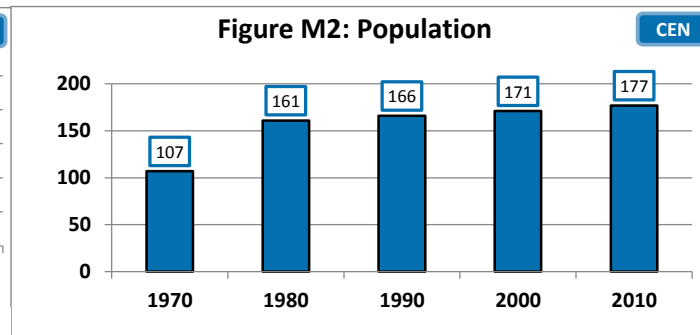
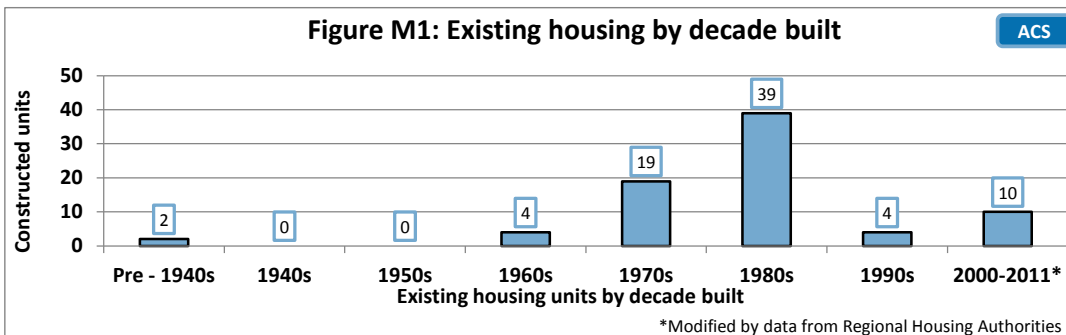
Median Housing Costs		
	Monthly	Annual
All-occupied	NR	NR
Gross rent	NR	NR
Owner-occupied	NR	NR
Housing units w/ mortgage	NR	NR
Housing units w/out a mortgage	NR	NR

**Community Profile for:** Port Graham CDP

**ANCSA Region:** Chugach Alaska Corp

**Regional Housing Authority:** North Pacific Rim Housing Authority

**BEES Climate Zone (Heating Degree Days):** Zone 7 (10,136 HDD)

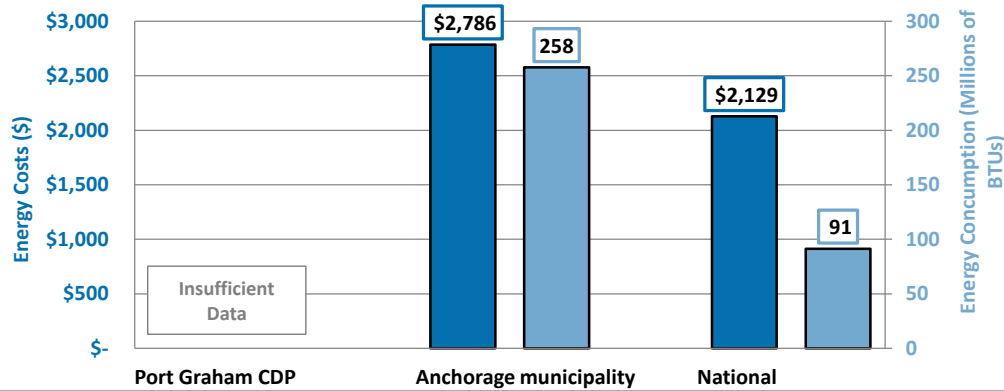


Port Graham CDP Housing Energy Characteristics										
Residential Unit Categories	Number of records	Avg Energy Rating Stars	Avg Energy Rating Points	Avg Sq. Feet	Avg. Ann Energy Cost	Avg. Ann Energy Use (million BTUs)	Avg. EUI (kBtus/SF)	Avg. ECI	Avg. Home Heating Index	% Tight Homes, No Ventilation
Pre-retrofit units	0	NR	NR	NR	NR	NR	NR	NR	NR	NR
Retrofit units	8	4-star plus	84.0	1,362	\$ 4,135	103	79	\$3.20	4.1	50%
New construction	5	4-star plus	84.4	493	\$ 3,185	81	103	\$4.08	4.7	100%

Port Graham 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	0	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Retrofit units	8	3.5	34	14	NR	27	NR	NR	0.20	NR	0.39
New construction	5	1.6	43	17	15	NR	NR	3	0.27	NR	0.39
		NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
BEES 2009		7.0	38	21	15	38	15	15	0.33	0.33	0.33
BEES 2012		4.0	43	25	15	38	15	15	0.30	0.30	0.30

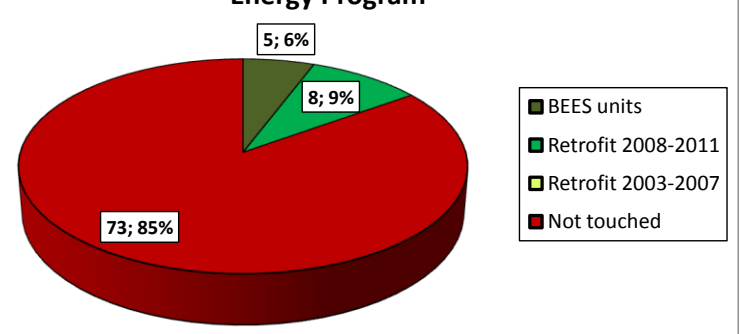
**Figure M5: Average Annual Home Energy Costs and Use**

MIX



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

ARIS

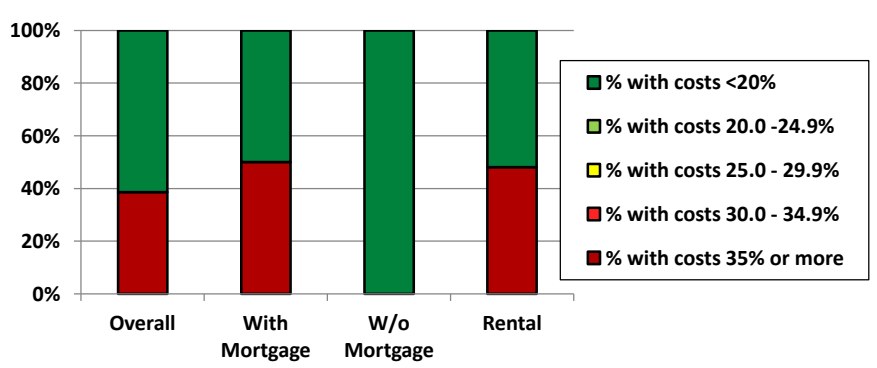


**AFFORDABILITY - Port Graham CDP**

Owner occupied House with Mortgage, Median Value		Median Annual Household Income		Median Housing Costs	
\$100,000		Housing Units	Household Income	Monthly	Annual
		All-occupied	\$ 19,167	\$ 305	\$ 3,660
		Renter-occupied	\$ 9,688	\$ 311	\$ 3,732
		Owner-occupied	\$ 42,083	\$ 293	\$ 3,516
		w/ mortgage	\$ 50,000	\$ 450	\$ 5,400
		w/o mortgage	\$ 42,083	\$ 225	\$ 2,700
Owner-occupied House without a Mortgage, Median Value		Average Annual Energy Cost		Housing Stock Estimates	
\$118,800		With PCE	NO PCE	Number of Units	
		Without PCE	\$662	All Housing	74
				All Occupied Housing	50
				All Vacant housing	24
				Vacant Housing for Sale/Rent	2
Estimated Energy Prices as of January 2013		Avg % Median Income spent on Energy			
#1 Fuel oil cost (\$ / gallon)	\$ 5.20	3.5%			
Electricity with PCE (\$/kWh)	No PCE				
Electricity without PCE (\$/kWh)	\$ 0.15				

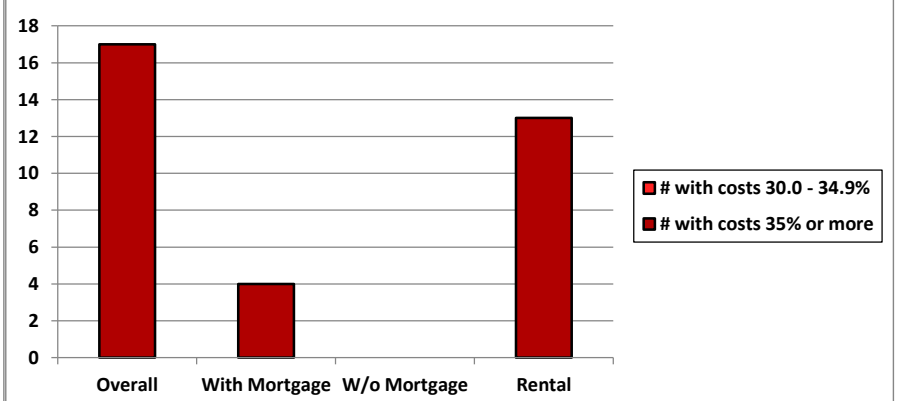
**Figure M7: Affordability - Housing Costs as a Percent of Income**

ACS

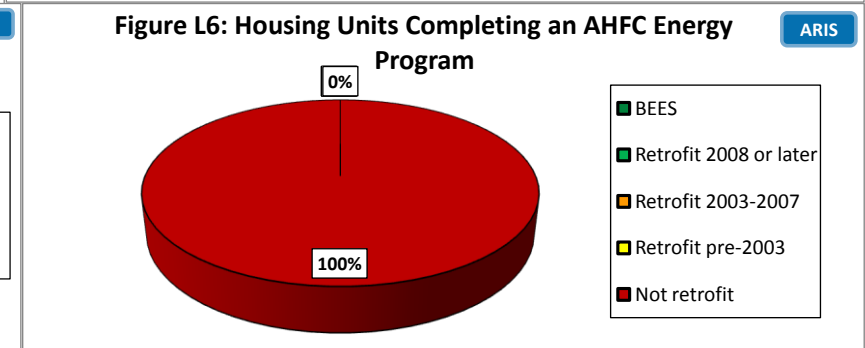
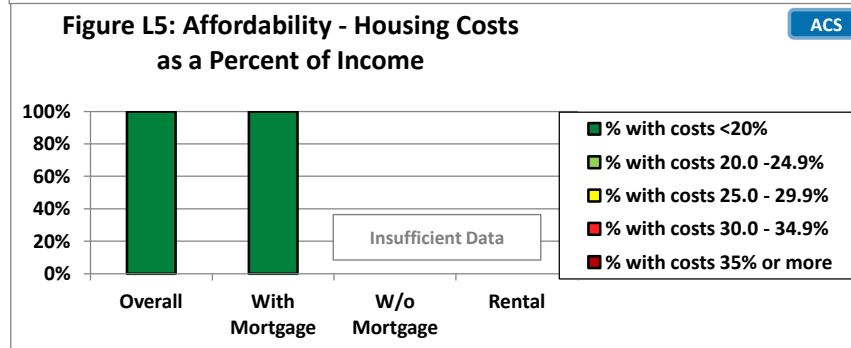
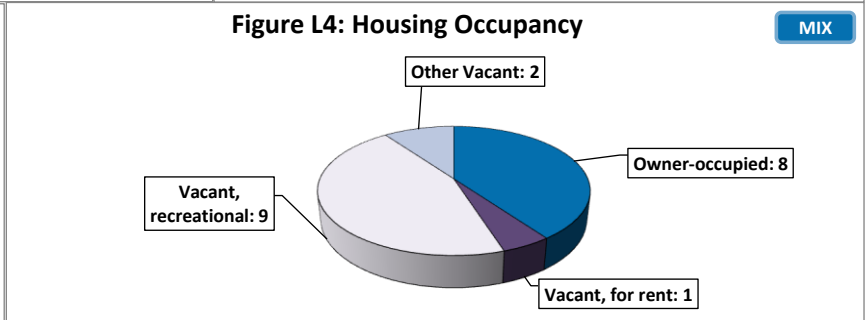
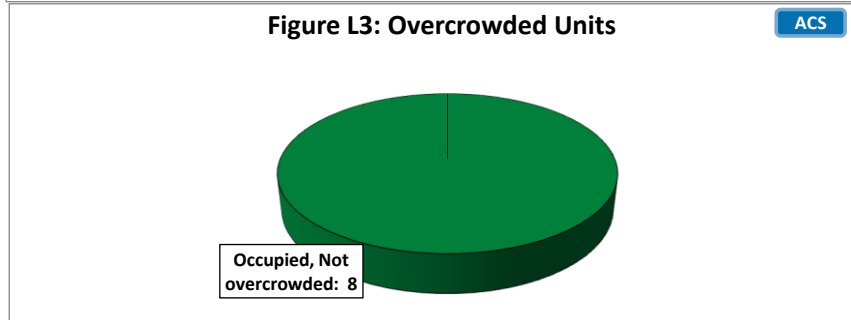
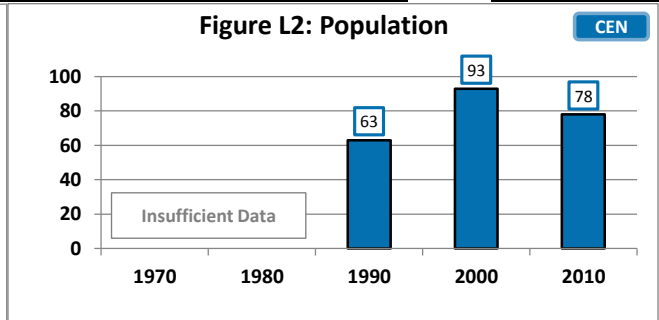
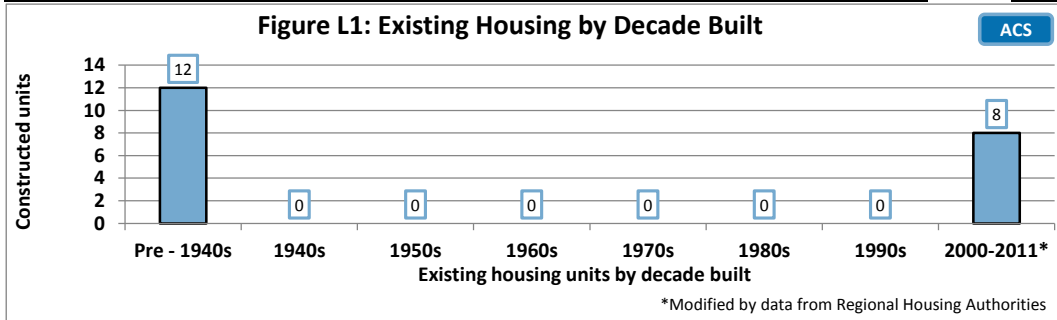


**Figure M8: Number of Cost-Burdened Housing Units**

ACS



<b>Community Profile for:</b>	Primrose CDP	<b>ANCSA Region</b>	Cook Inlet Regional (CIRI)	<b>Climate Zone</b>	7
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Owner-occupied House with Mortgage, Median Value
NR

Owner-occupied House without a Mortgage, Median Value
NR

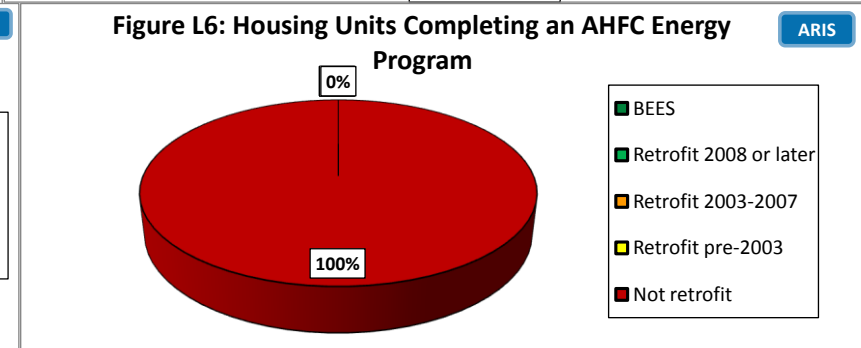
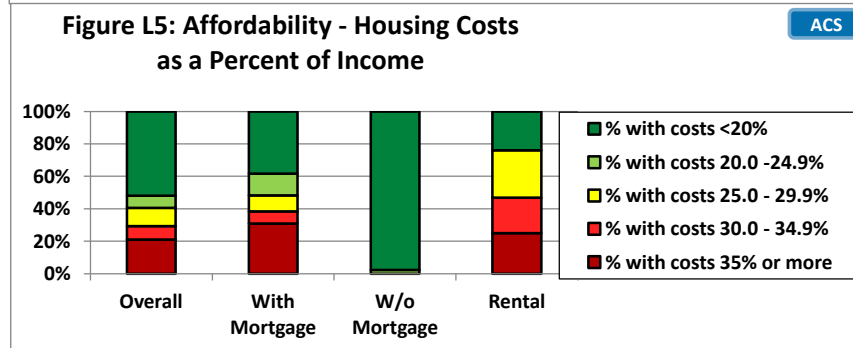
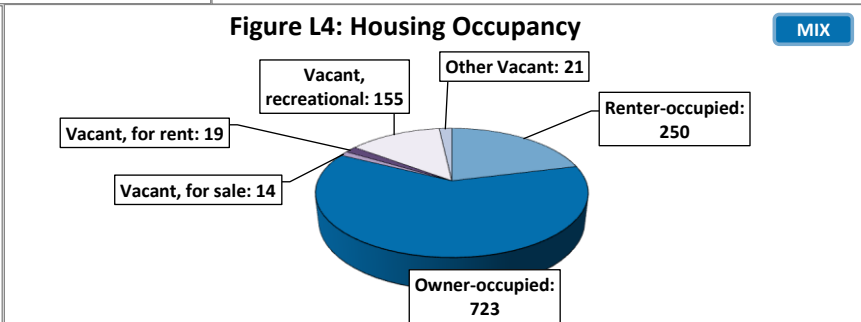
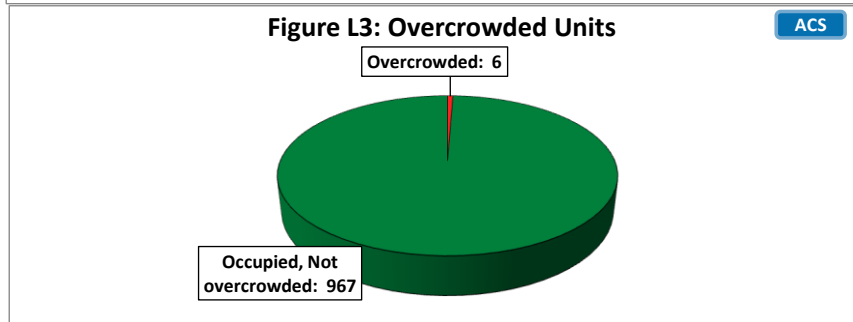
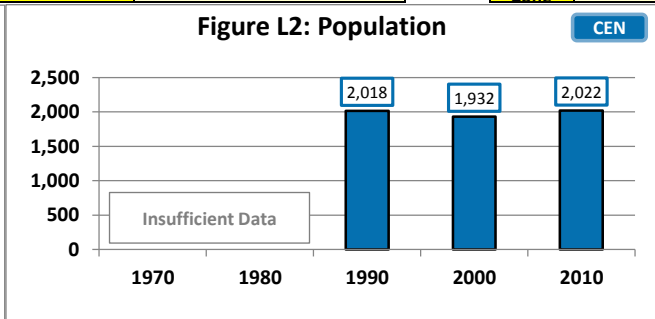
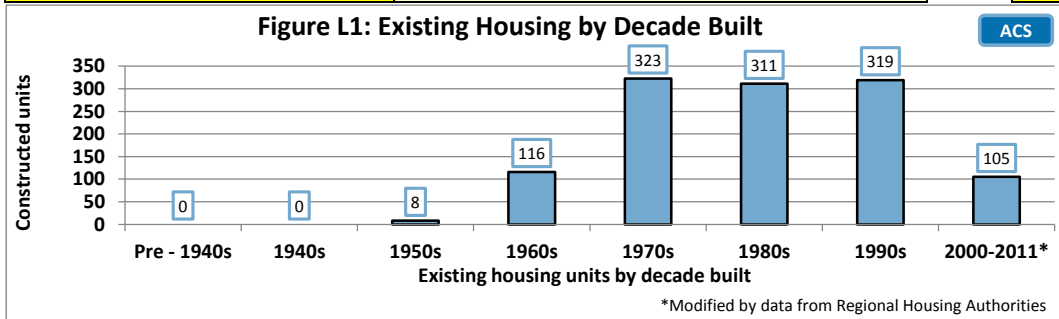
Estimated Energy Prices as of January 2013	
#1 Fuel oil cost (\$ / gallon)	No Data
Electricity with PCE (\$/kWh)	No Data
Electricity without PCE (\$/kWh)	No Data

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

Housing Stock Estimates	Number of Units
All Housing	20
All Occupied Housing	8
All Vacant housing	12

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

**Community Profile for:** Ridgeway CDP      **ANCSA Region:** Cook Inlet Regional (CIRI)      **Climate Zone:** 7



Owner-occupied House with Mortgage, Median Value
\$235,500

Owner-occupied House without a Mortgage, Median Value
\$145,000

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

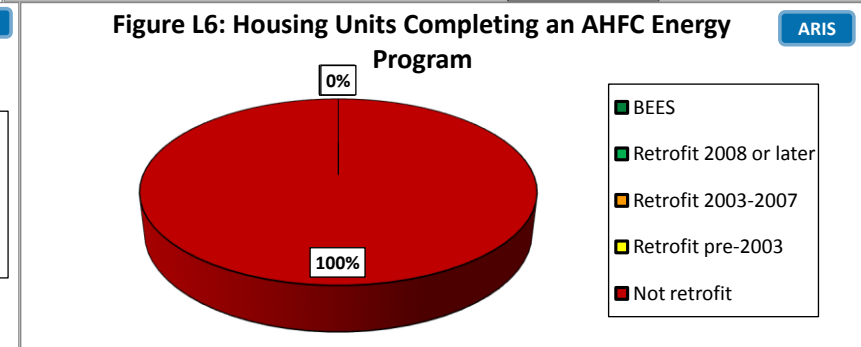
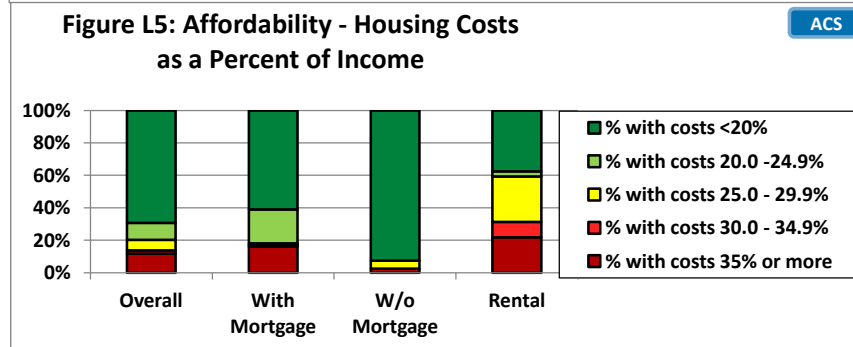
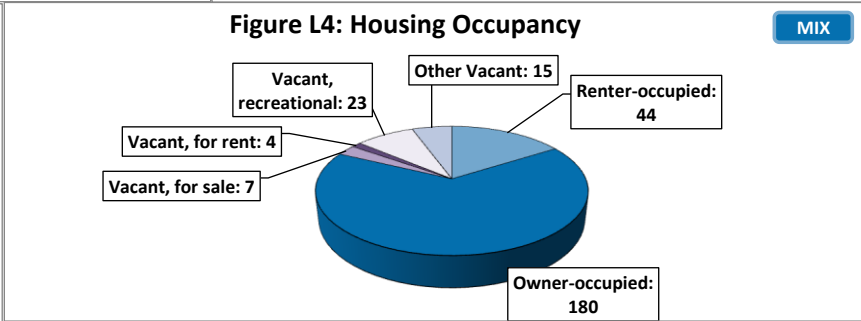
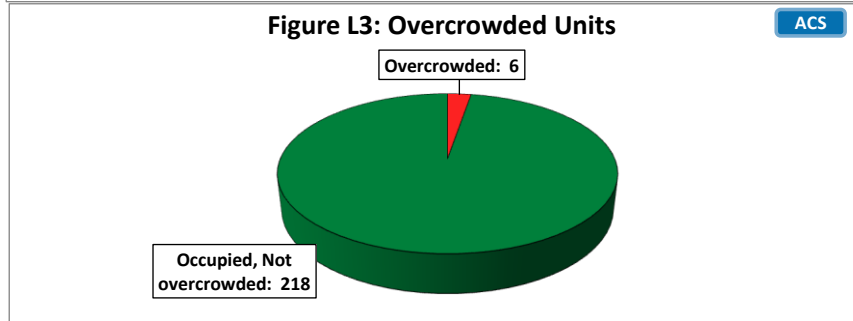
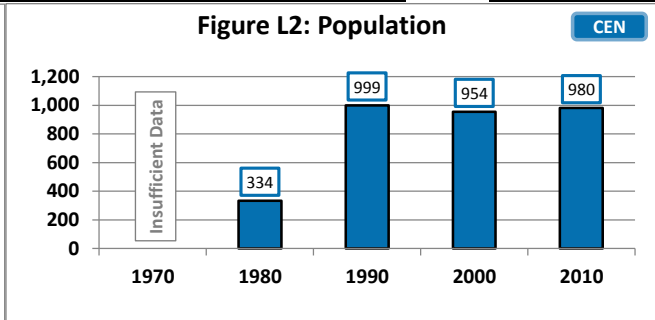
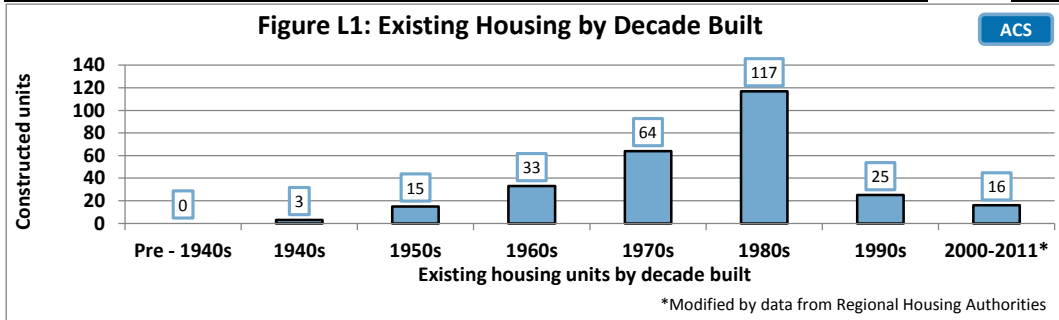
Median Annual Household Income	
Housing Units	Household Income
All-occupied	\$ 52,330
Renter-occupied	\$ 30,500
Owner-occupied w/ mortgage	\$ 75,341
Owner-occupied w/o mortgage	\$ 48,594

Housing Stock Estimates	
Housing Units	Number of Units
All Housing	1182
All Occupied Housing	973
All Vacant housing	209

Median Housing Costs		
	Monthly	Annual
All-occupied	\$ 1,075	\$ 12,900
Gross rent	\$ 826	\$ 9,912
Owner-occupied	\$ 1,191	\$ 14,292
Housing units w/ mortgage	\$ 1,616	\$ 19,392
Housing units w/out a mortgage	\$ 356	\$ 4,272



**Community Profile for:** Salamatof CDP      **ANCSA Region:** Cook Inlet Regional (CIRI)      **Climate Zone:** 7



Owner-occupied House with Mortgage, Median Value
\$182,100

Owner-occupied House without a Mortgage, Median Value
\$179,200

Median Annual Household Income	
Housing Units	Household Income
All-occupied	\$ 78,636
Renter-occupied	\$ 52,857
Owner-occupied	\$ 84,000
w/ mortgage	\$ 101,250
w/o mortgage	\$ 76,250

Median Housing Costs		
	Monthly	Annual
All-occupied	\$ 956	\$ 11,472
Gross rent	\$ 1,150	\$ 13,800
Owner-occupied	\$ 864	\$ 10,368
Housing units w/ mortgage	\$ 1,386	\$ 16,632
Housing units w/out a mortgage	\$ 581	\$ 6,972

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	273
All Occupied Housing	224
All Vacant housing	49

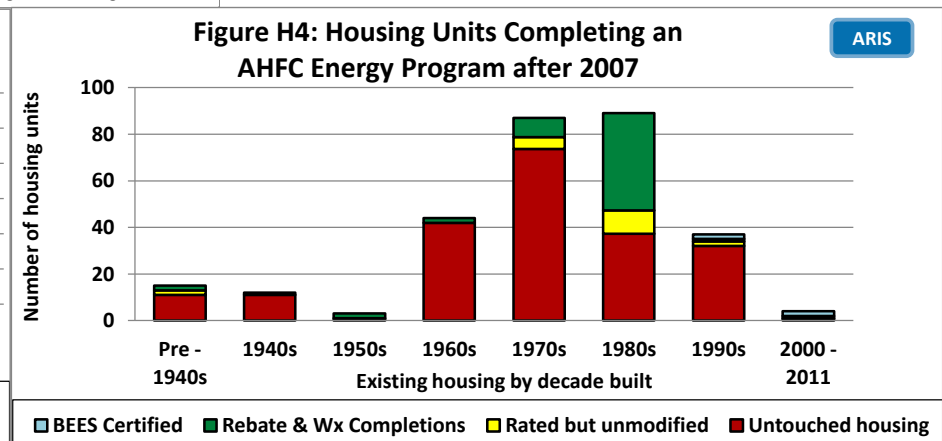
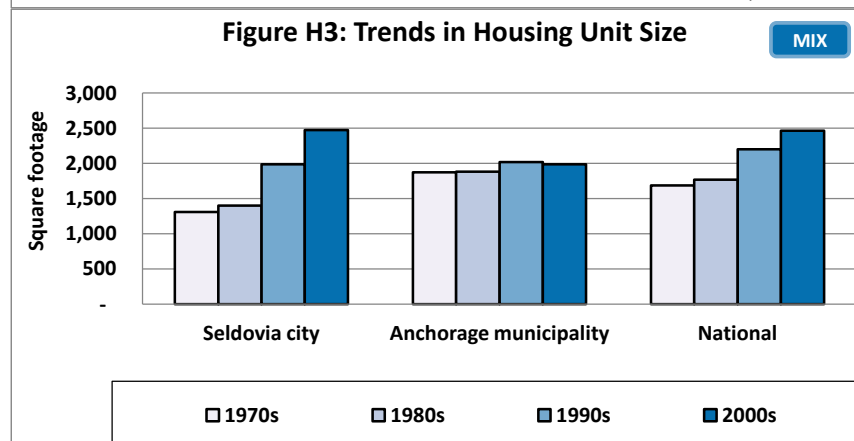
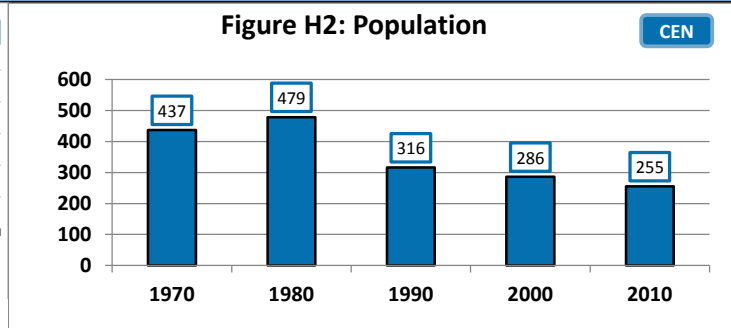
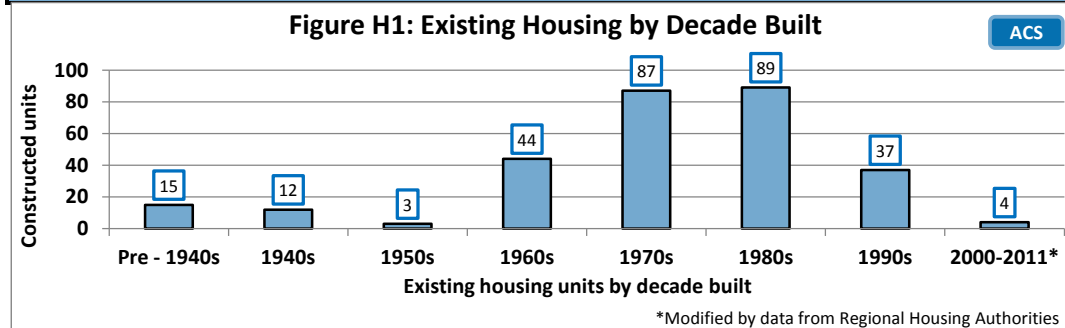
**Community Profile for:** Seldovia city

**ANCSA Region:** Cook Inlet Regional (CIRI)

**Regional Housing Authority:** Cook Inlet Housing Authority

**BEES Climate Zone (Heating Degree Days):** Zone 7 (10,136 HDD)

**COMMUNITY - Seldovia city**



Houses Lacking Complete Plumbing or Kitchen Facilities	Households	
	Number	Percent
Lack complete plumbing	0	0%
Lack complete kitchen	0	0%

Avg Annual Energy Cost with PCE	NO PCE
Avg Annual Energy Cost without PCE	\$7,303

Weatherization Program Retrofits (funding increased in 2008)	
Date Range	Units
2008-2011	44
2003-2007	5
1990-2002	9

Estimated Total Annual Community Space Heating Fuel Use		
Fuel Oil	108,188	(gallons)
Nat Gas	-	(ccf)
Electricity	52,073	(kWh)
Wood	267	(cords)
Propane	718	(gallons)
Coal	-	(tons)

Estimated Energy Prices as of January 2013	
#1 Fuel oil cost (\$ / gallon)	\$5.51
Electricity with PCE (\$/kWh)	No PCE
Electricity cost without PCE (\$/kWh)	\$0.15

Housing Stock Estimates	Number of Units
All Housing	287
All Occupied Housing	131
All Vacant housing	156
Vacant Housing for Sale or Rent	23

OVERCROWDING & VENTILATION - Seldovia city

Figure H5: Overcrowded Units

ACS

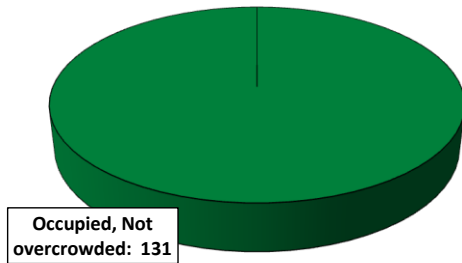


Figure H6: Housing Occupancy

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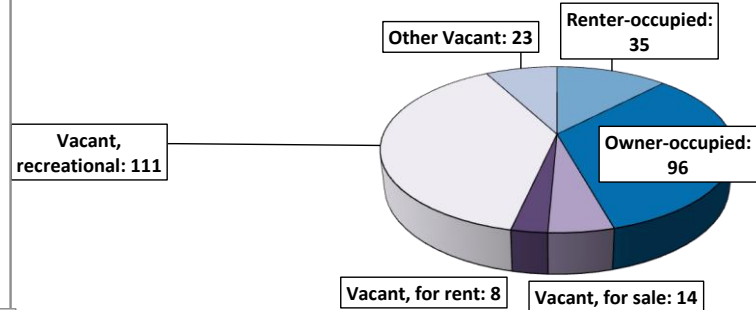


Figure H7: Average Air-Tightness of Current Homes by Decade Built

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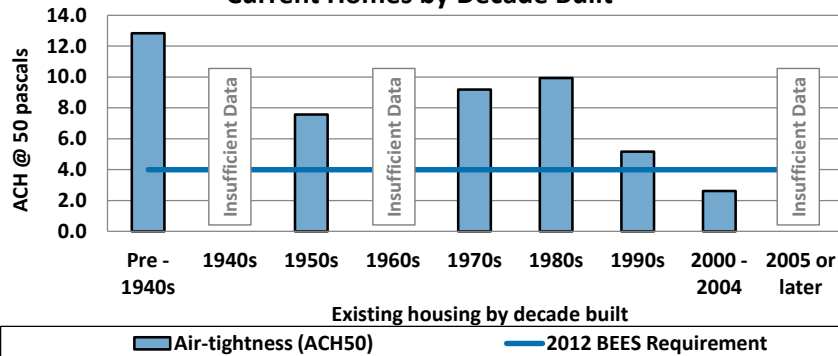


Figure H8: Existing Ventilation Type by Decade Built

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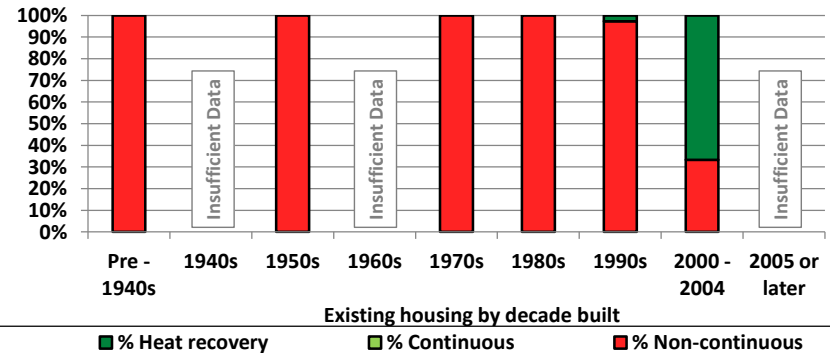


Figure H9: Percent of Housing Stock at High Risk of Moisture and Air Quality Problems

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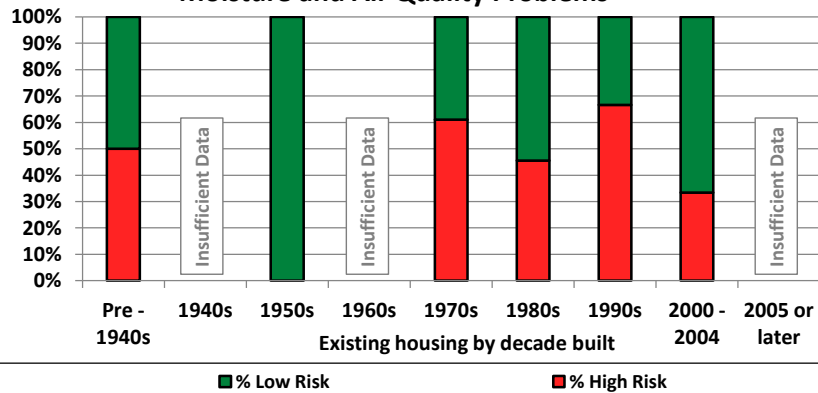
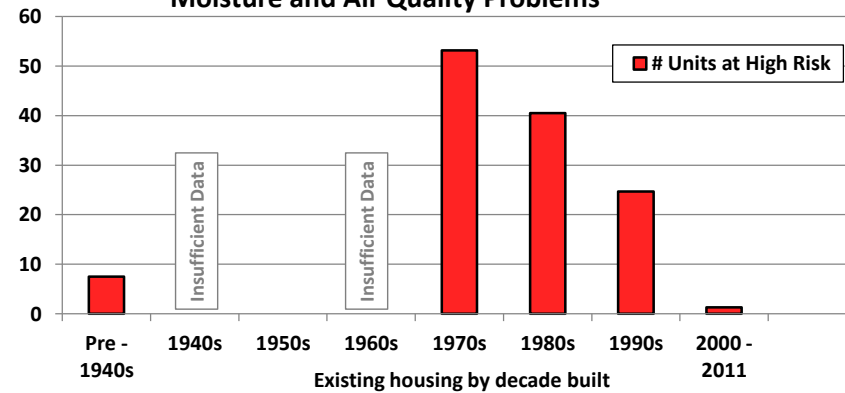


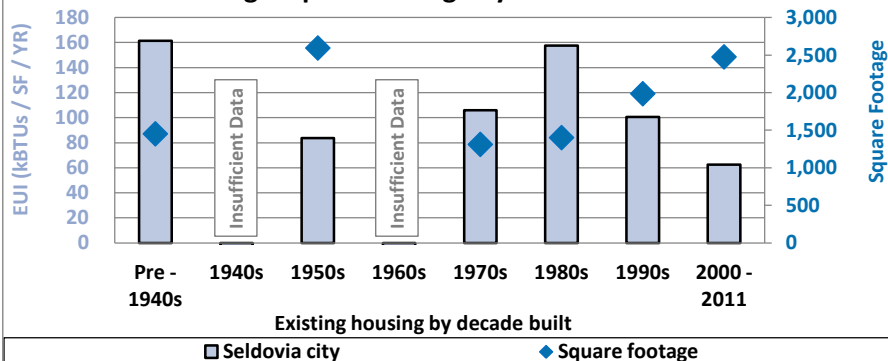
Figure H10: Quantity of Housing Stock at High Risk of Moisture and Air Quality Problems

ARIS

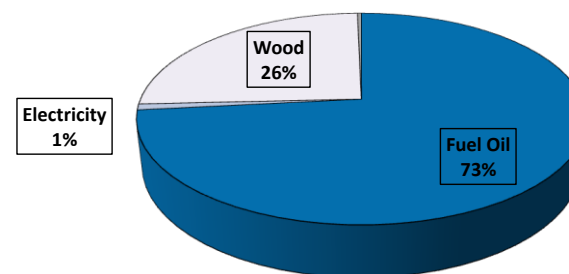


ENERGY - Seldovia city												
Current Seldovia city Housing Energy Characteristics By Decade Built												
Current Residential Units by Year Built	Number of Records	Avg Energy Rating Stars	Avg Energy Rating Points	Avg Sq. Feet	Avg. Annual Energy Cost	Avg. Annual Energy Use (million BTUs)	Avg Ann Energy by End Use (million Btus)			Avg. EUI (kBtus/SF)	Avg. ECI (\$ / SF)	Avg. Home Heating Index
							Space Heating	DHW	Appliances			
OVERALL	98	3-star	69.4	1,579	\$ 7,303	196	144	23	28	129	\$ 4.45	9.7
Pre- 1940	6	2-star	52.1	1,452	\$ 5,652	230	176	28	26	161	\$ 4.32	12.5
1940- 49	1	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1950- 59	5	4-star	80.8	2,594	\$ 9,163	212	168	13	32	84	\$ 3.61	6.5
1960- 69	4	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1970- 79	33	3-star	72.4	1,311	\$ 6,787	140	98	18	25	106	\$ 4.34	7.5
1980- 89	83	2-star plus	62.3	1,401	\$ 6,672	222	175	20	27	158	\$ 5.03	12.5
1990- 99	6	4-star	78.2	1,985	\$ 6,361	185	132	16	27	101	\$ 3.06	7.4
2000- 2004	5	5-star	88.2	2,475	\$ 5,040	142	86	25	31	63	\$ 2.30	3.7
2005 or later	0	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR

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



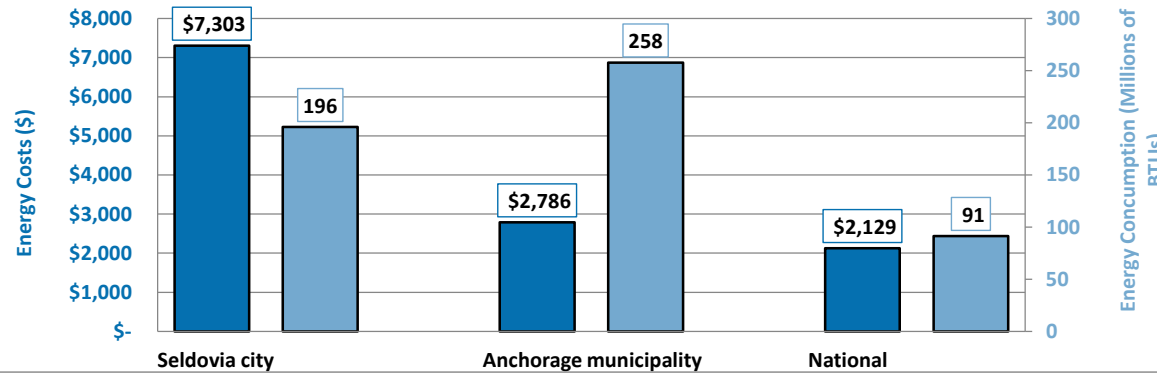
**Figure H12: Percent of Total Residential Space Heating Energy by Fuel Type**



Current Seldovia 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	98	9.2	25	14	7	20	3	3	0.31	0.28	0.49
Pre- 1940	6	12.8	9	11	NR	NR	NR	NR	0.46	NR	0.63
1940- 49	1	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1950- 59	5	7.6	NR	NR	NR	NR	NR	NR	NR	NR	NR
1960- 69	4	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1970- 79	33	9.2	34	14	14	16	NR	2	0.24	NR	0.47
1980- 89	83	9.9	25	15	7	21	3	2	0.35	NR	0.47
1990- 99	6	5.2	39	19	NR	NR	NR	NR	0.24	NR	0.55
2000- 2004	5	2.6	53	21	27	NR	3	NR	0.25	NR	0.35
2005 or later	0	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
BEES 2009 - Climate Zone 7		7.0	38	21	15	38	15	15	0.33	0.33	0.33
BEES 2012 - Climate Zone 7		4.0	43	25	15	38	15	15	0.30	0.30	0.30

AFFORDABILITY - Seldovia city

Figure H13: Average Annual Home Energy Costs and Use



Housing Information	Avg Household Size (# of people)
All-occupied	2.1
Owner-occupied	2.2
renter-occupied	2.0

Owner-occupied House with Mortgage, Median Value
\$183,000

Owner-occupied House without a Mortgage, Median Value
\$214,100

Median Annual Household Income	
Housing Units	Household Income
All-occupied	\$ 50,313
Renter-occupied	\$ 27,083
Owner-occupied	\$ 55,833
w/ mortgage	\$ 68,958
w/o mortgage	\$ 48,750

Median Housing Costs		
	Monthly	Annual
All-occupied	\$ 711	\$ 8,532
Gross rent	\$ 739	\$ 8,868
Owner-occupied	\$ 575	\$ 6,900
Housing units w/ mortgage	\$ 1,125	\$ 13,500
Housing units w/out a mortgage	\$ 372	\$ 4,464

Avg % of Median Income Spent on Energy	<b>14.5%</b>
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Figure H14: Affordability - Housing Costs as a Percent of Income

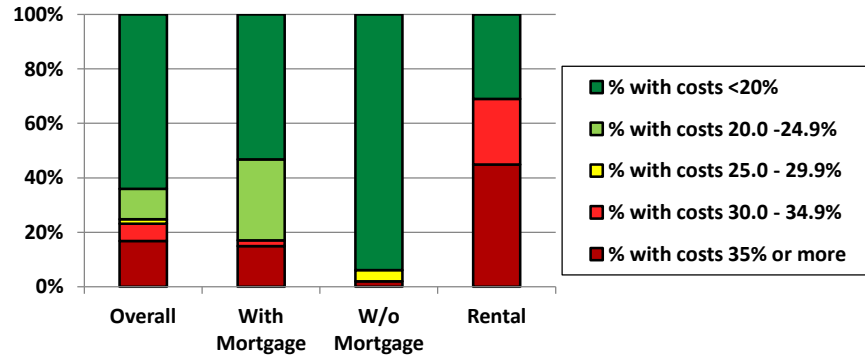
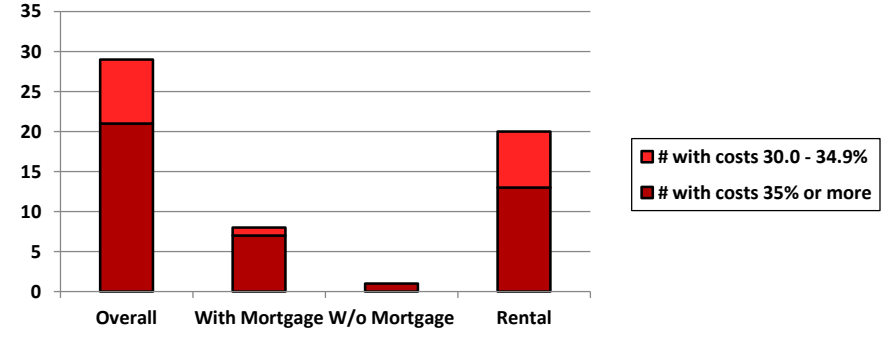
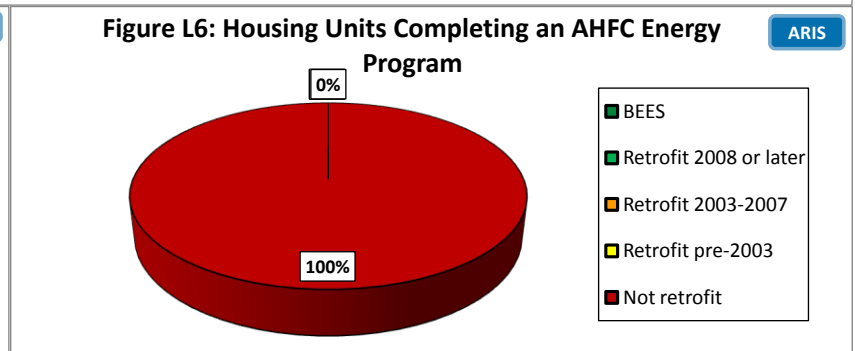
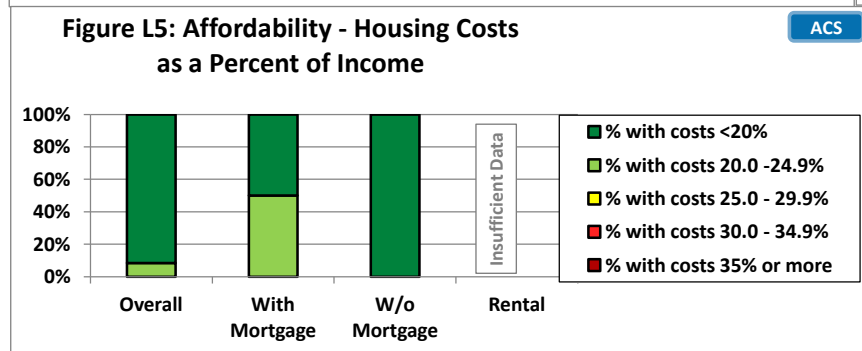
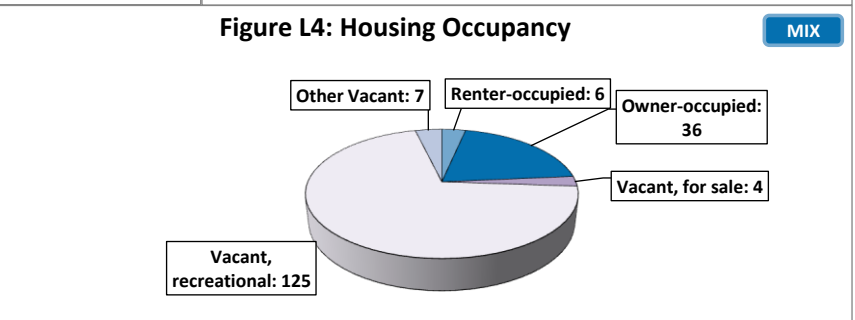
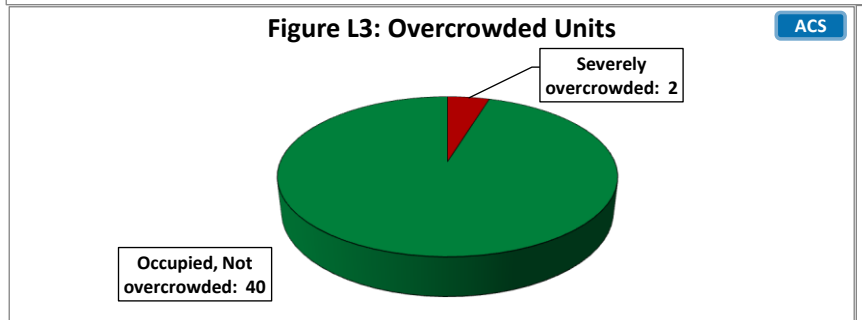
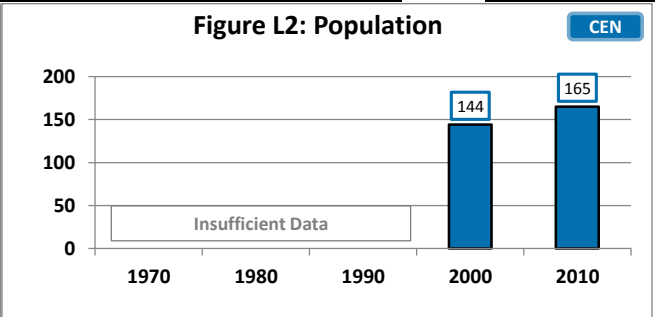
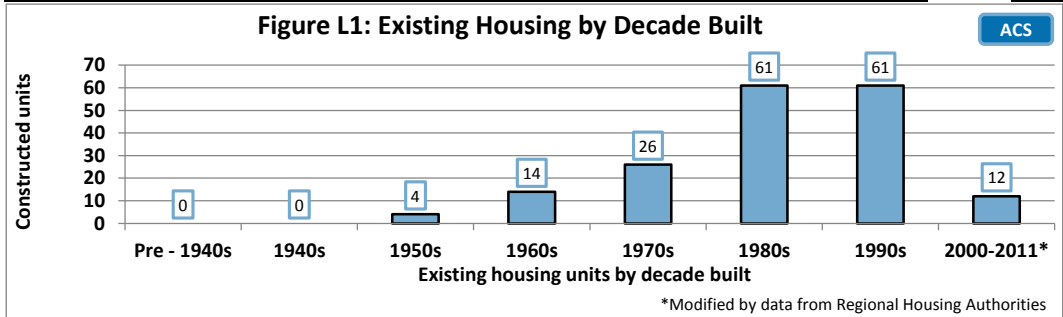


Figure H15: Number of Cost-Burdened Housing Units



**Community Profile for:** Seldovia Village CDP      **ANCSA Region:** Cook Inlet Regional (CIRI)      **Climate Zone:** 7



Owner-occupied House with Mortgage, Median Value
\$187,500

Owner-occupied House without a Mortgage, Median Value
\$200,000

Median Annual Household Income	
Housing Units	Household Income
All-occupied	\$ 49,167
Renter-occupied	\$ 32,500
Owner-occupied	\$ 53,125
w/ mortgage	\$ 47,500
w/o mortgage	\$ 53,125

Median Housing Costs		
	Monthly	Annual
All-occupied	\$ 282	\$ 3,384
Gross rent	NR	NR
Owner-occupied	\$ 271	\$ 3,252
Housing units w/ mortgage	\$ 450	\$ 5,400
Housing units w/out a mortgage	\$ 275	\$ 3,300

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	178
All Occupied Housing	42
All Vacant housing	136

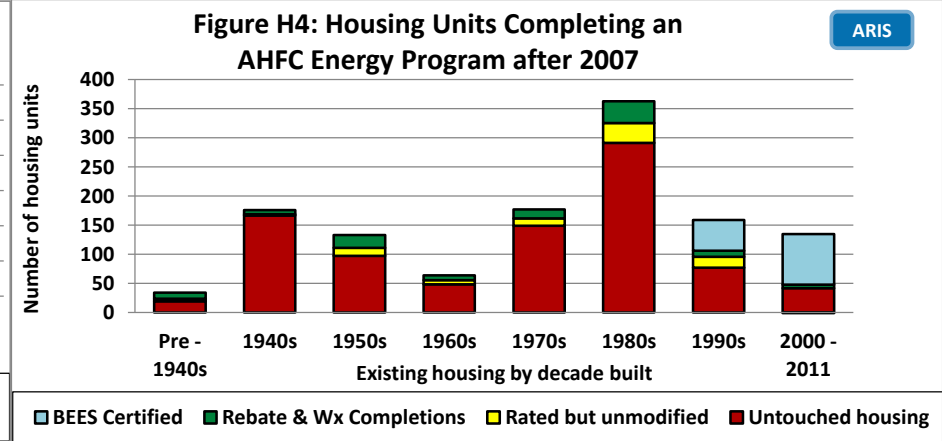
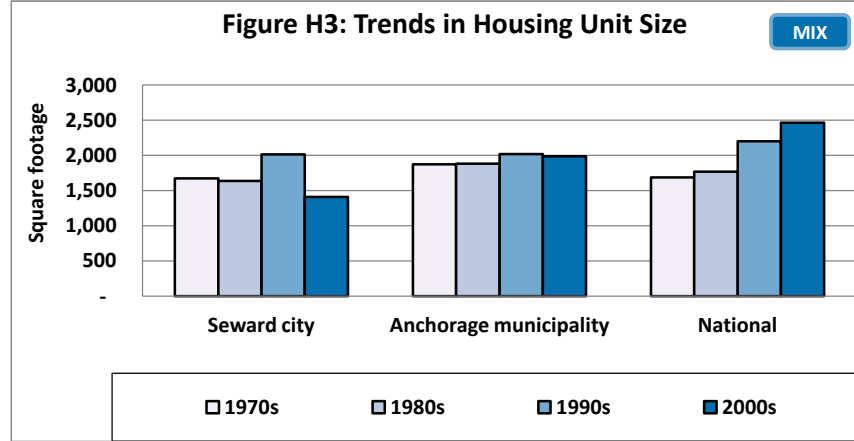
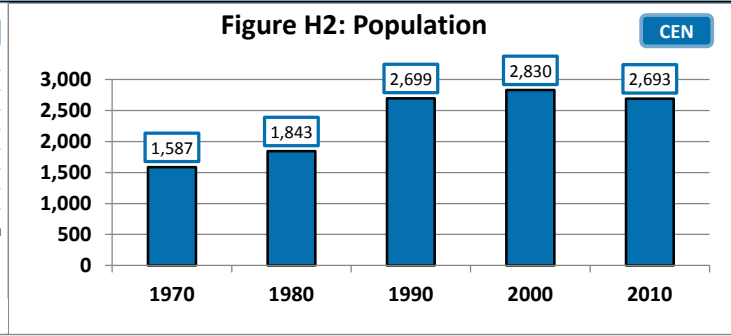
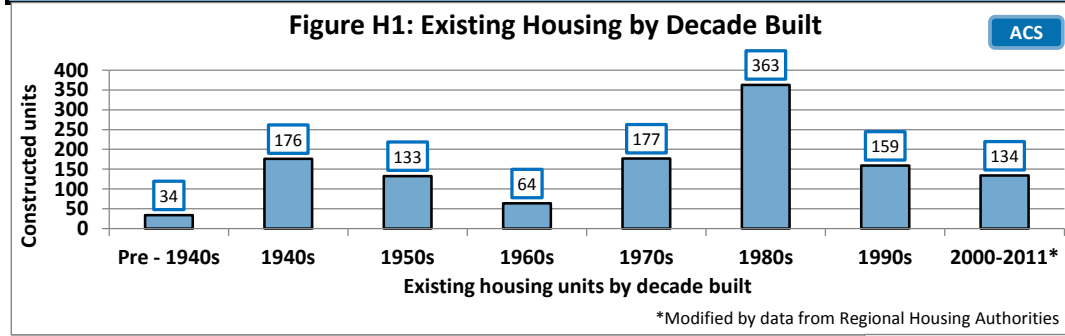
**Community Profile for:** Seward city

**ANCSA Region:** Chugach Alaska Corp

**Regional Housing Authority:** North Pacific Rim Housing Authority

**BEES Climate Zone (Heating Degree Days):** Zone 7 (9,188 HDD)

**COMMUNITY - Seward city**



Houses Lacking Complete Plumbing or Kitchen Facilities	Households	
	Number	Percent
Lack complete plumbing	49	5%
Lack complete kitchen	49	5%

Avg Annual Energy Cost with PCE	NO PCE
Avg Annual Energy Cost without PCE	\$5,616

Weatherization Program Retrofits (funding increased in 2008)	
Date Range	Units
2008-2011	47
2003-2007	6
1990-2002	23

Estimated Total Annual Community Space Heating Fuel Use		
Fuel Oil	705,063	(gallons)
Nat Gas	-	(ccf)
Electricity	1,696,510	(kWh)
Wood	960	(cords)
Propane	51,574	(gallons)
Coal	28	(tons)

Estimated Energy Prices as of January 2013	
#1 Fuel oil cost (\$ / gallon)	\$3.98
Electricity with PCE (\$/kWh)	No PCE
Electricity cost without PCE (\$/kWh)	\$0.15

Housing Stock Estimates	Number of Units
All Housing	1240
All Occupied Housing	999
All Vacant housing	241
Vacant Housing for Sale or Rent	52

OVERCROWDING & VENTILATION - Seward city

Figure H5: Overcrowded Units

ACS

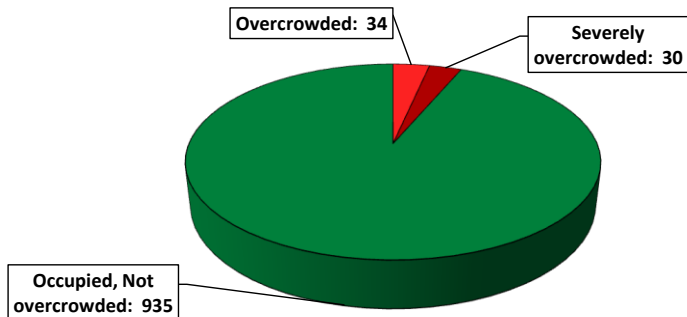


Figure H6: Housing Occupancy

MIX

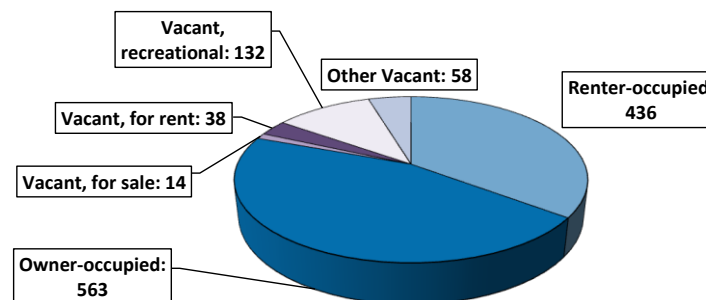


Figure H7: Average Air-Tightness of Current Homes by Decade Built

ARIS

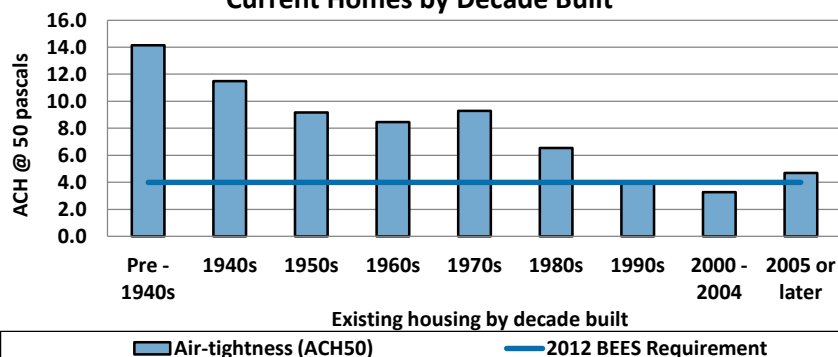


Figure H8: Existing Ventilation Type by Decade Built

ARIS

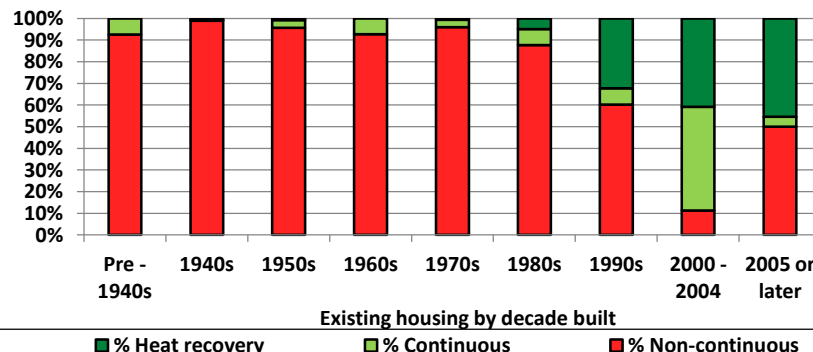


Figure H9: Percent of Housing Stock at High Risk of Moisture and Air Quality Problems

ARIS

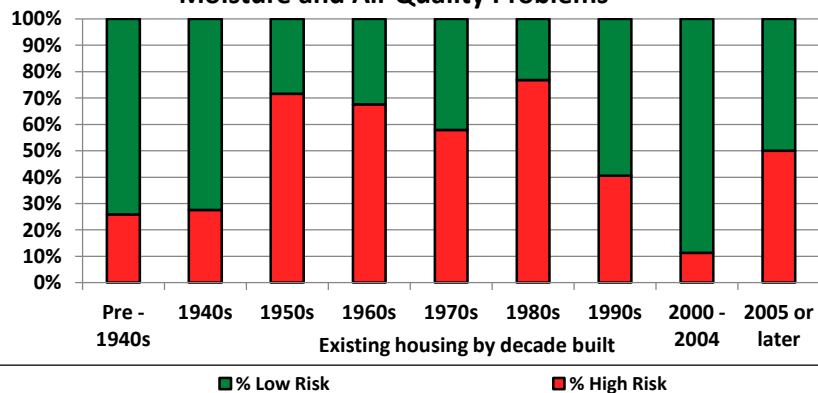
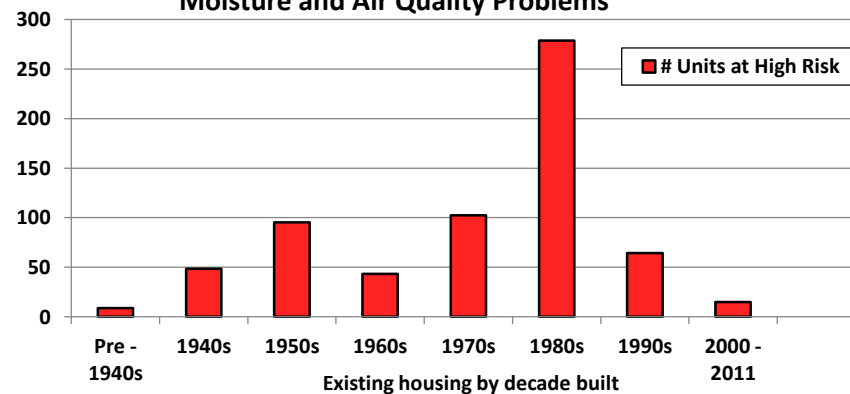


Figure H10: Quantity of Housing Stock at High Risk of Moisture and Air Quality Problems

ARIS





ENERGY - Seward city

Current Seward 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	418	2-star plus	67.1	1,649	\$ 5,616	172	113	23	28	114	\$ 3.77	8.8
Pre- 1940	26	2-star	57.1	2,074	\$ 7,112	225	173	23	30	128	\$ 4.17	10.9
1940- 49	16	2-star	55.6	1,093	\$ 4,726	135	95	15	25	127	\$ 4.46	10.0
1950- 59	58	2-star	60.0	1,495	\$ 6,025	184	133	22	29	132	\$ 4.39	10.4
1960- 69	25	2-star	57.0	1,845	\$ 7,475	240	189	19	32	142	\$ 4.61	12.7
1970- 79	42	2-star	55.8	1,672	\$ 6,551	221	167	25	29	158	\$ 4.71	13.5
1980- 89	110	3-star	68.5	1,635	\$ 5,691	169	117	24	28	107	\$ 3.64	8.2
1990- 99	91	4-star	80.1	2,013	\$ 5,213	156	69	17	19	86	\$ 2.92	5.9
2000- 2004	75	5-star	89.2	1,408	\$ 3,305	93	39	29	25	72	\$ 2.53	3.3
2005 or later	23	4-star plus	87.2	2,217	\$ 5,270	159	93	32	33	64	\$ 2.22	4.1

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

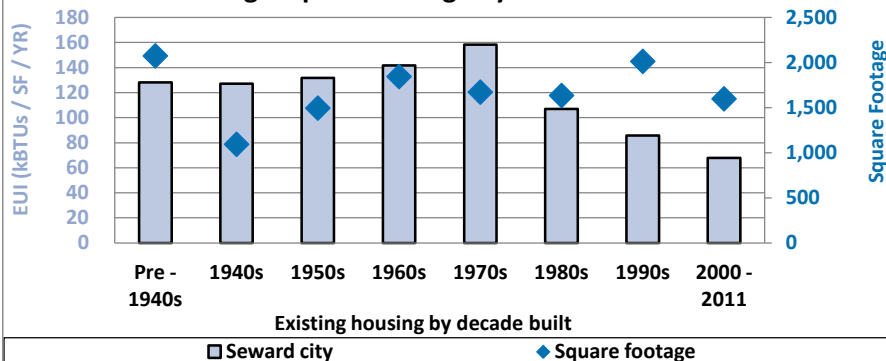
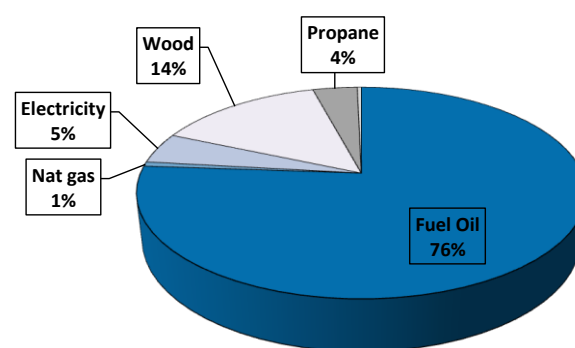


Figure H12: Percent of Total Residential Space Heating Energy by Fuel Type

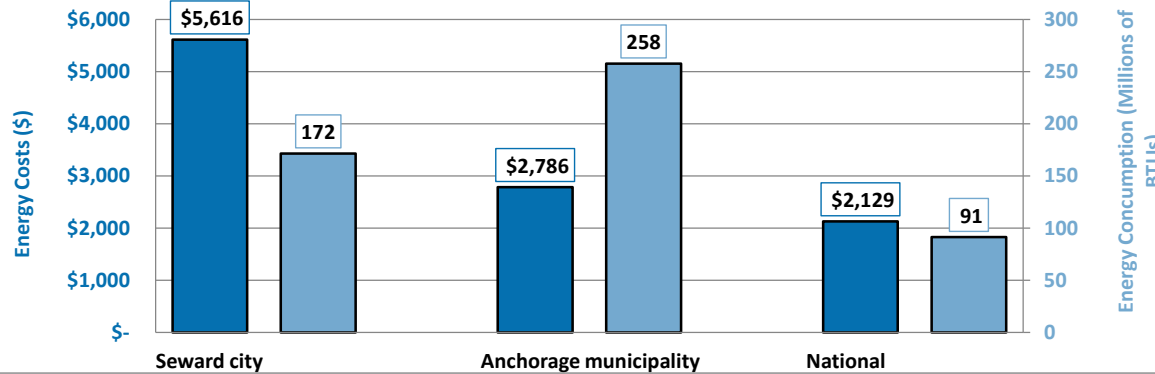


Current Seward city Housing Envelope Characteristics By Decade Built

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	418	7.9	23	13	5	19	3	3	0.37	0.30	0.53
Pre- 1940	26	14.1	18	9	3	15	3	3	0.46	NR	0.54
1940- 49	16	11.5	19	10	7	NR	NR	2	0.34	NR	0.53
1950- 59	58	9.2	18	11	3	11	3	3	0.43	0.35	0.62
1960- 69	25	8.5	15	12	2	NR	3	3	0.40	NR	0.64
1970- 79	42	9.3	21	11	6	24	3	3	0.53	0.39	0.65
1980- 89	110	6.5	28	15	5	20	3	3	0.34	0.31	0.53
1990- 99	91	4.0	51	27	13	50	4	5	0.17	0.13	0.27
2000- 2004	75	3.3	42	18	16	38	6	3	0.23	0.20	0.33
2005 or later	23	4.7	44	15	24	NR	12	3	0.30	0.18	0.31
BEES 2009 - Climate Zone 7		7.0	38	21	15	38	15	15	0.33	0.33	0.33
BEES 2012 - Climate Zone 7		4.0	43	25	15	38	15	15	0.30	0.30	0.30

AFFORDABILITY - Seward city

Figure H13: Average Annual Home Energy Costs and Use



Housing Information	Avg Household Size (# of people)
All-occupied	2.0
Owner-occupied	2.3
renter-occupied	1.7

Owner-occupied House with Mortgage, Median Value
\$224,400

Owner-occupied House without a Mortgage, Median Value
\$134,300

Median Annual Household Income	
Housing Units	Household Income
All-occupied	\$ 45,156
Renter-occupied	\$ 30,909
Owner-occupied	\$ 52,411
w/ mortgage	\$ 129,868
w/o mortgage	\$ 28,125

Median Housing Costs		
	Monthly	Annual
All-occupied	\$ 877	\$ 10,524
Gross rent	\$ 815	\$ 9,780
Owner-occupied	\$ 1,287	\$ 15,444
Housing units w/ mortgage	\$ 1,589	\$ 19,068
Housing units w/out a mortgage	\$ 431	\$ 5,172

Avg % of Median Income Spent on Energy	<b>12.4%</b>
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Figure H14: Affordability - Housing Costs as a Percent of Income

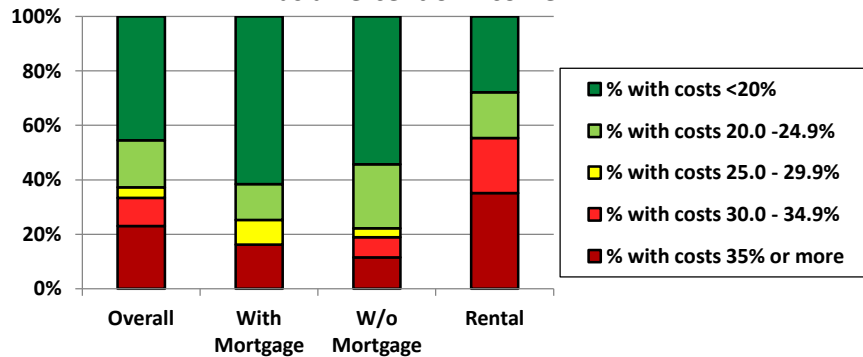
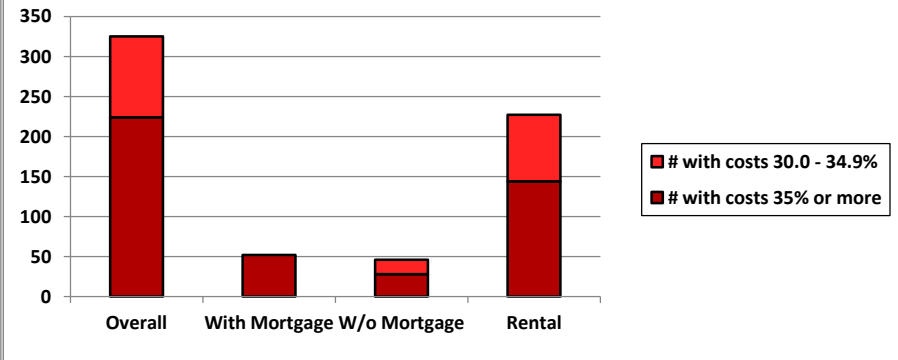


Figure H15: Number of Cost-Burdened Housing Units

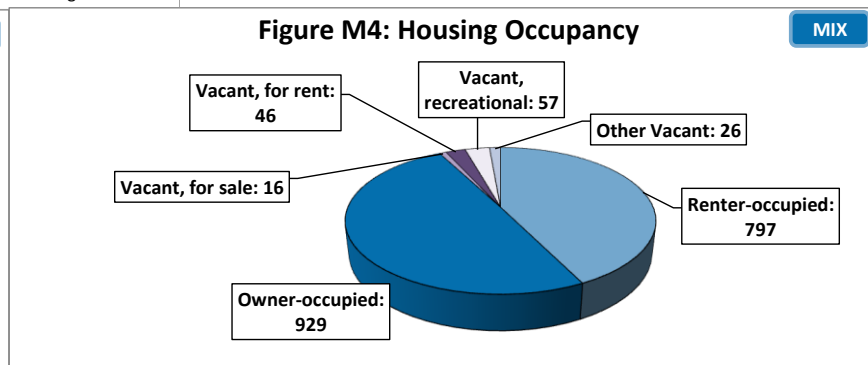
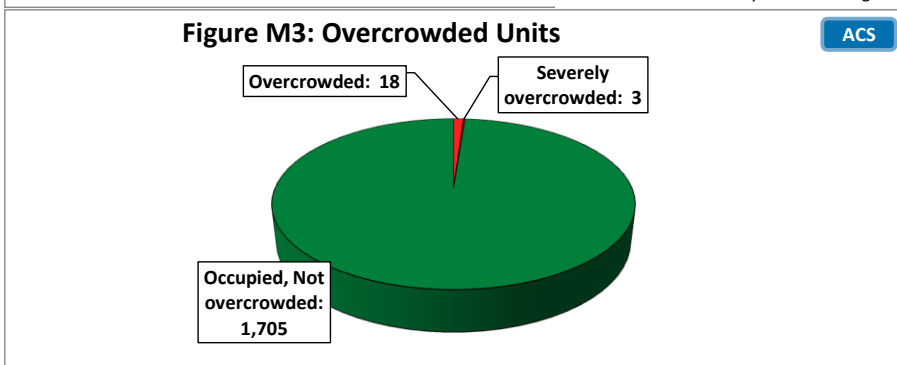
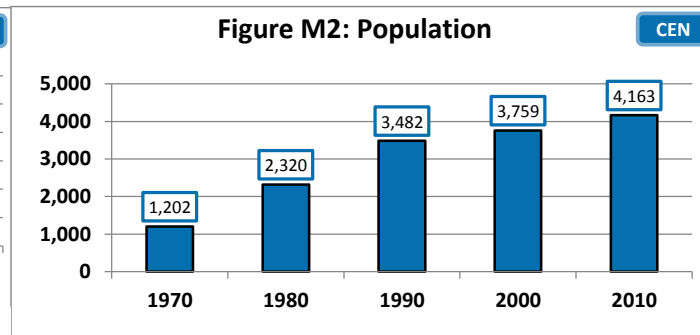
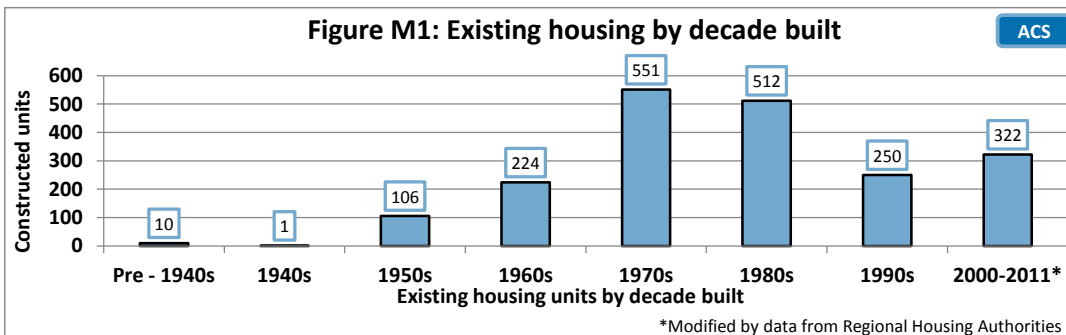


**Community Profile for:** Soldotna city

**ANCSA Region** Cook Inlet Regional (CIRI)

**Regional Housing Authority** Cook Inlet Housing Authority

**BEES Climate Zone (Heating Degree Days)** Zone 7 (11,775 HDD)



#### Soldotna 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	909	3-star	71.0	2,049	\$ 3,549	277	148	\$1.91	9.7	75%
Retrofit units	550	4-star	81.8	1,988	\$ 2,679	194	107	\$1.52	6.5	76%
New construction	685	5-star	89.4	1,837	\$ 2,447	159	94	\$1.44	4.8	8%
Overall	2144	4-star	80.8	1,955	\$ 2,889	210	117	\$1.63	7.0	51%

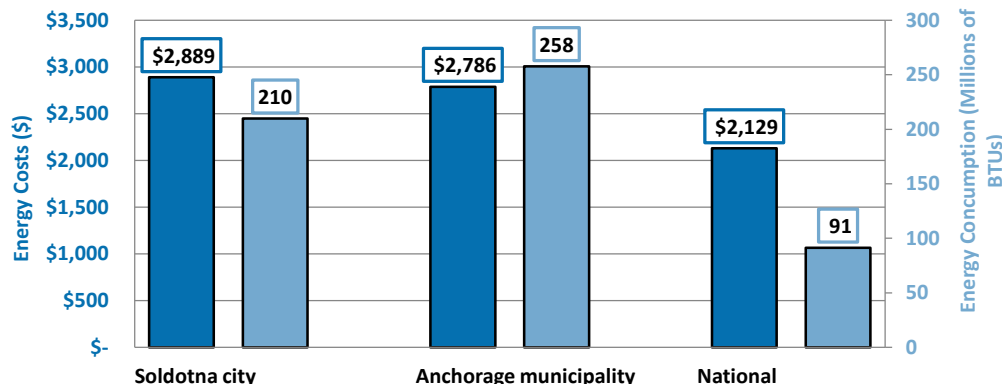
#### Soldotna city Housing Envelope Characteristics

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	909	6.1	27	14	5	20	3	3	0.34	0.27	0.49
Retrofit units	550	5.0	34	14	9	22	3	3	0.29	0.22	0.43
New construction	685	3.0	46	17	19	36	4	3	0.21	0.18	0.32
Overall	2144	4.7	34	15	8	21	3	3	0.28	0.23	0.42

BEES 2009	7.0	38	21	15	38	15	15	0.33	0.33	0.33
BEES 2012	4.0	43	25	15	38	15	15	0.30	0.30	0.30

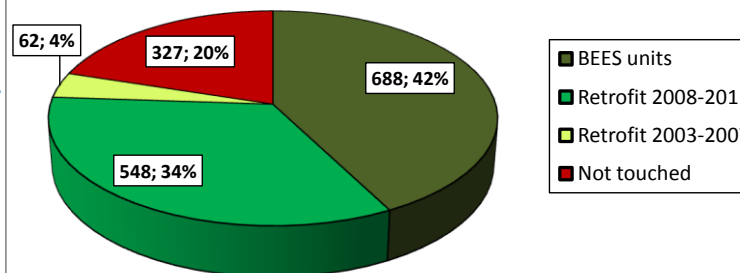
**Figure M5: Average Annual Home Energy Costs and Use**

MIX



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

ARIS



**AFFORDABILITY - Soldotna city**

Owner occupied House with Mortgage, Median Value
\$189,300

Owner-occupied House without a Mortgage, Median Value
\$168,500

Median Annual Household Income	
Housing Units	Household Income
All-occupied	\$ 41,989
Renter-occupied	\$ 27,944
Owner-occupied	\$ 61,563
w/ mortgage	\$ 64,500
w/o mortgage	\$ 59,034

Median Housing Costs		
	Monthly	Annual
All-occupied	\$ 863	\$ 10,356
Gross rent	\$ 808	\$ 9,696
Owner-occupied	\$ 985	\$ 11,820
Housing units w/ mortgage	\$ 1,225	\$ 14,700
Housing units w/out a mortgage	\$ 471	\$ 5,652

Estimated Energy Prices as of January 2013	
#1 Fuel oil cost (\$ / gallon)	\$ 4.03
Electricity with PCE (\$/kWh)	No PCE
Electricity without PCE (\$/kWh)	\$ 0.15
Natural gas base rate	\$ 0.11
Natural gas fuel charge	\$ 0.11

Average Annual Energy Cost	
With PCE	NO PCE
Without PCE	\$2,889

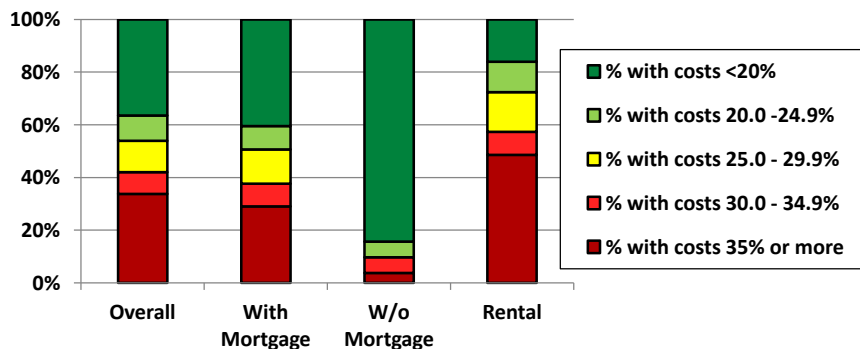
  

Avg % Median Income spent on Energy	6.9%
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Housing Stock Estimates	Number of Units
All Housing	1870
All Occupied Housing	1726
All Vacant housing	144
Vacant Housing for Sale/Rent	62

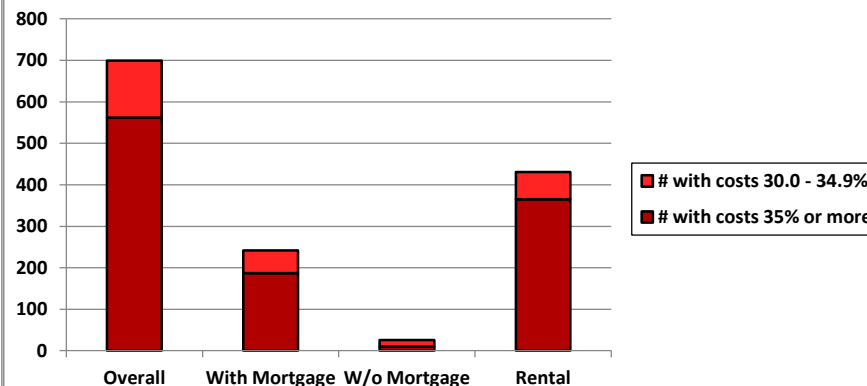
**Figure M7: Affordability - Housing Costs as a Percent of Income**

ACS



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

ACS



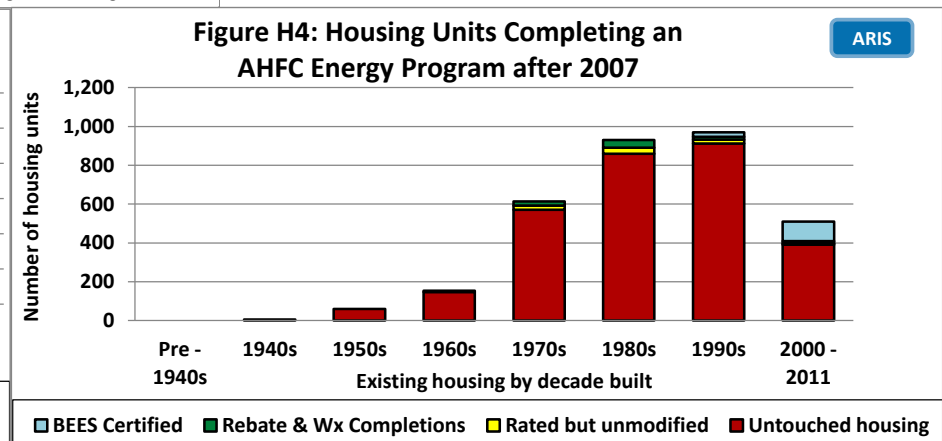
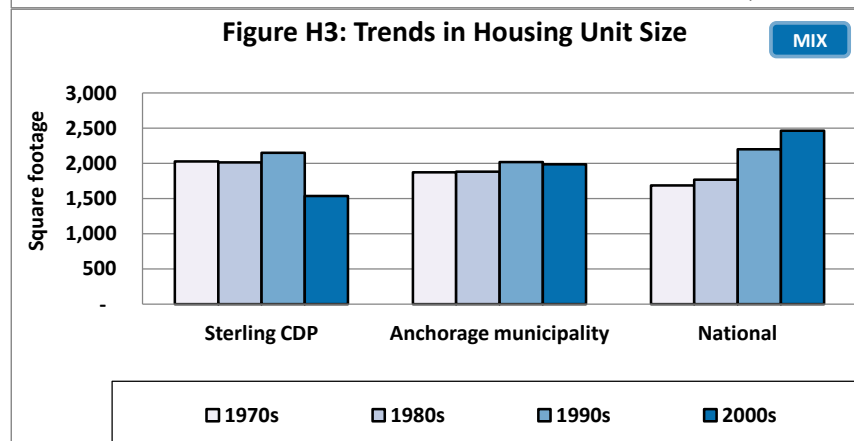
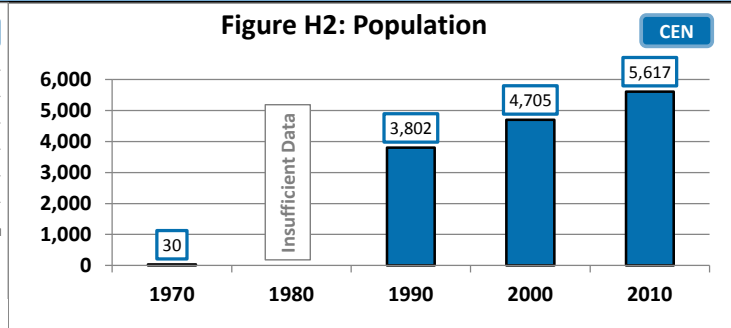
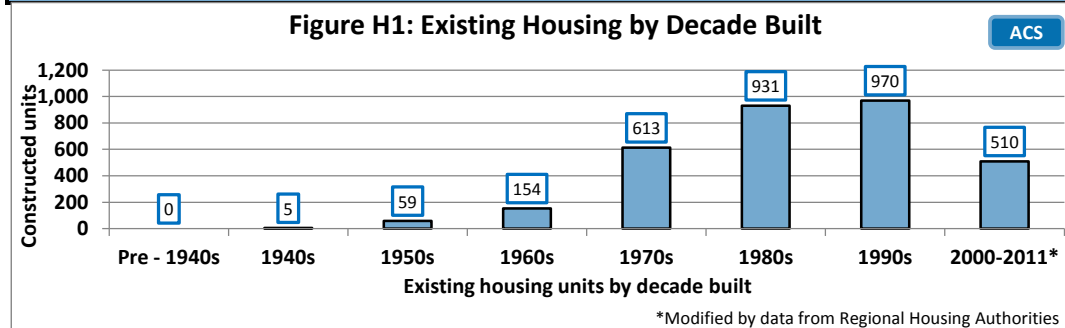
**Community Profile for:** Sterling CDP

**ANCSA Region:** Cook Inlet Regional (CIRI)

**Regional Housing Authority:** Cook Inlet Housing Authority

**BEES Climate Zone (Heating Degree Days):** Zone 7 (12,006 HDD)

**COMMUNITY - Sterling CDP**



Houses Lacking Complete Plumbing or Kitchen Facilities	Households	
	Number	Percent
Lack complete plumbing	120	5%
Lack complete kitchen	104	5%

Avg Annual Energy Cost with PCE	NO PCE
Avg Annual Energy Cost without PCE	\$4,283

Weatherization Program Retrofits (funding increased in 2008)	
Date Range	Units
2008-2011	26
2003-2007	16
1990-2002	58

Estimated Total Annual Community Space Heating Fuel Use		
Fuel Oil	708,899	(gallons)
Nat Gas	2,914,690	(ccf)
Electricity	3,025,603	(kWh)
Wood	1,385	(cords)
Propane	62,909	(gallons)
Coal	-	(tons)

Estimated Energy Prices as of January 2013	
#1 Fuel oil cost (\$ / gallon)	\$3.91
Electricity with PCE (\$/kWh)	No PCE
Electricity cost without PCE (\$/kWh)	\$0.15
Natural gas base rate	\$0.11
Natural gas fuel charge	\$0.57
Natural gas customer charge	\$13.50

Housing Stock Estimates	Number of Units
All Housing	3242
All Occupied Housing	2262
All Vacant housing	980
Vacant Housing for Sale or Rent	93

OVERCROWDING & VENTILATION - Sterling CDP

Figure H5: Overcrowded Units

ACS

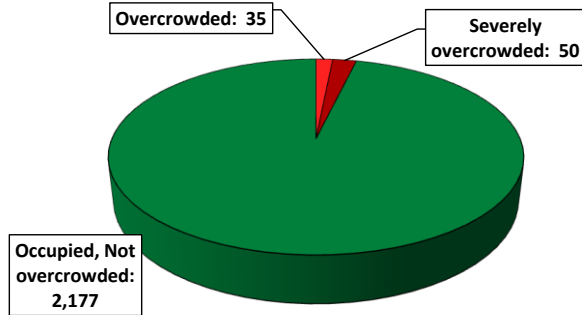


Figure H6: Housing Occupancy

MIX

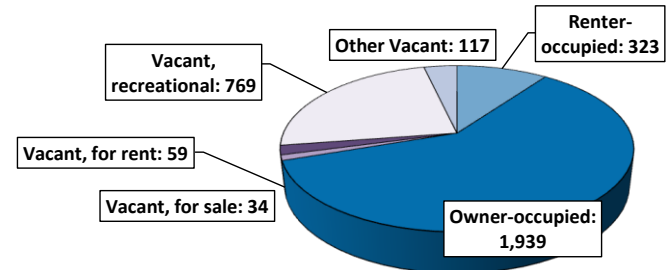


Figure H7: Average Air-Tightness of Current Homes by Decade Built

ARIS

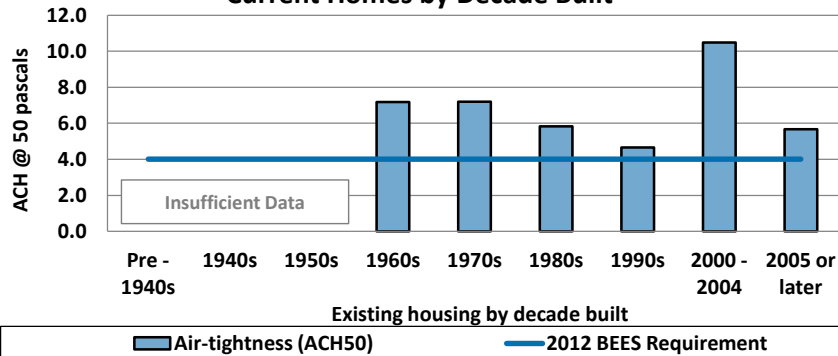


Figure H8: Existing Ventilation Type by Decade Built

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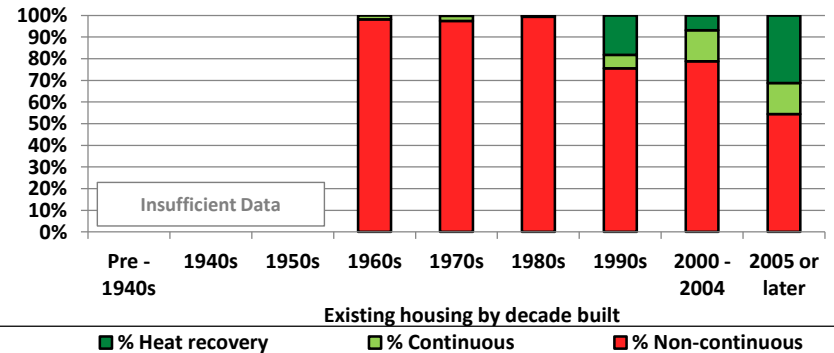


Figure H9: Percent of Housing Stock at High Risk of Moisture and Air Quality Problems

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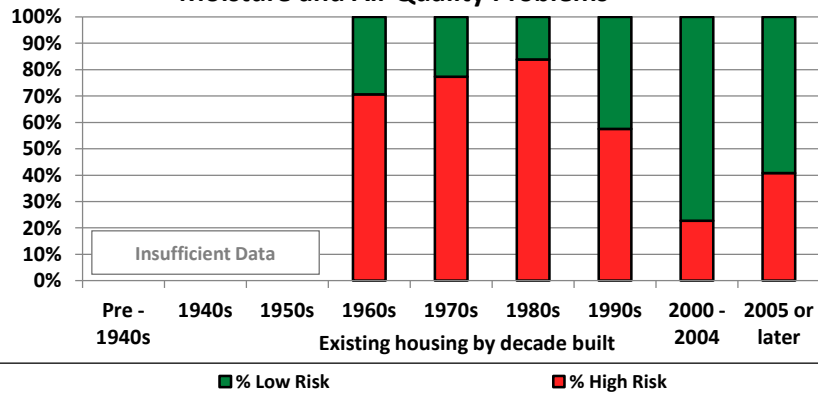
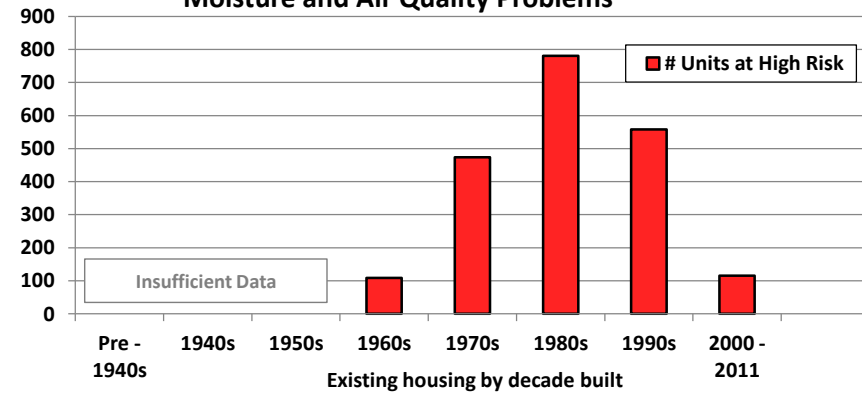


Figure H10: Quantity of Housing Stock at High Risk of Moisture and Air Quality Problems

ARIS



ENERGY - Sterling CDP

Current Sterling CDP 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	363	3-star	71.0	1,972	\$ 4,283	246	183	29	33	140	\$ 2.60	9.0
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	15	2-star plus	61.3	2,073	\$ 4,497	322	268	26	28	159	\$ 2.10	11.1
1970- 79	63	2-star plus	67.5	2,027	\$ 3,986	268	209	29	31	151	\$ 2.31	10.2
1980- 89	111	3-star	71.7	2,013	\$ 4,075	251	186	33	32	131	\$ 2.21	8.2
1990- 99	71	3-star plus	75.6	2,149	\$ 4,404	247	177	31	33	128	\$ 2.57	8.1
2000- 2004	64	2-star plus	64.1	1,537	\$ 5,553	216	164	23	30	174	\$ 5.28	11.7
2005 or later	66	3-star plus	76.3	1,323	\$ 3,135	134	88	16	30	133	\$ 3.31	7.9

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

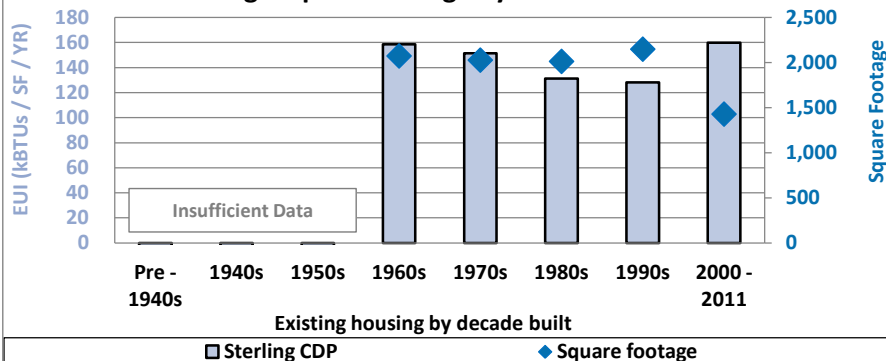
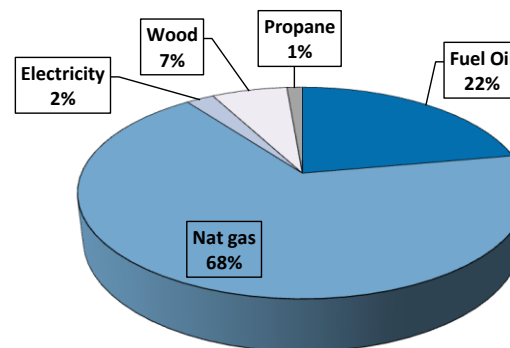


Figure H12: Percent of Total Residential Space Heating Energy by Fuel Type



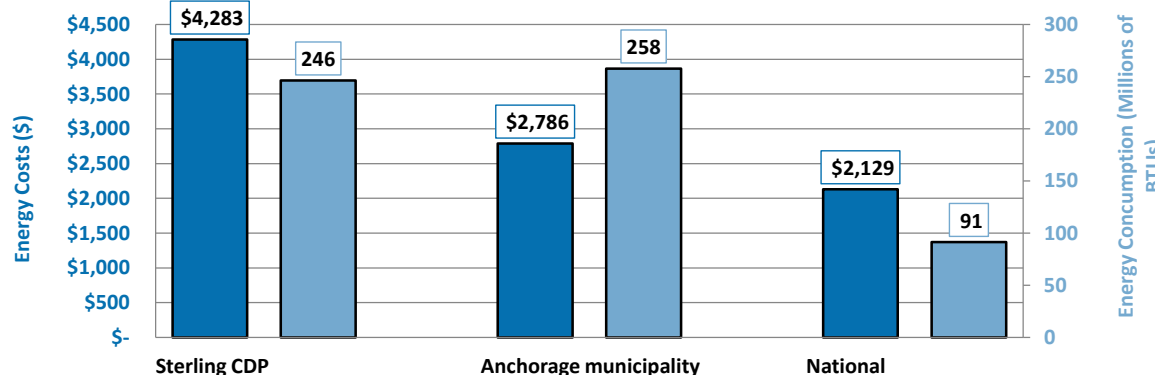
Current Sterling CDP Housing Envelope Characteristics By Decade Built

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	363	6.7	24	14	7	17	3	3	0.34	0.26	0.47
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	15	7.2	13	11	6	NR	2	2	0.39	NR	0.55
1970- 79	63	7.2	20	13	6	19	3	3	0.41	0.32	0.53
1980- 89	111	5.8	27	15	7	16	3	3	0.34	0.30	0.48
1990- 99	71	4.7	31	14	10	19	3	3	0.27	0.21	0.38
2000- 2004	64	10.5	29	13	14	15	5	3	0.32	0.17	0.44
2005 or later	66	5.7	28	13	4	34	3	4	0.26	0.19	0.35

BEES 2009 - Climate Zone 7	7.0	38	21	15	38	15	15	15	0.33	0.33	0.33
BEES 2012 - Climate Zone 7	4.0	43	25	15	38	15	15	15	0.30	0.30	0.30

AFFORDABILITY - Sterling CDP

Figure H13: Average Annual Home Energy Costs and Use



Housing Information	Avg Household Size (# of people)
All-occupied	2.4
Owner-occupied	2.5
renter-occupied	1.9

<b>Owner-occupied House with Mortgage, Median Value</b>	\$233,200
<b>Owner-occupied House without a Mortgage, Median Value</b>	\$215,100

Median Annual Household Income	
Housing Units	Household Income
All-occupied	\$ 68,080
Renter-occupied	\$ 39,063
Owner-occupied	\$ 70,190
w/ mortgage	\$ 97,863
w/o mortgage	\$ 58,409

	Median Housing Costs	
	Monthly	Annual
All-occupied	\$ 879	\$ 10,548
Gross rent	\$ 930	\$ 11,160
Owner-occupied	\$ 865	\$ 10,380
Housing units w/ mortgage	\$ 1,542	\$ 18,504
Housing units w/out a mortgage	\$ 415	\$ 4,980

<b>Avg % of Median Income Spent on Energy</b>	<b>6.3%</b>
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Figure H14: Affordability - Housing Costs as a Percent of Income

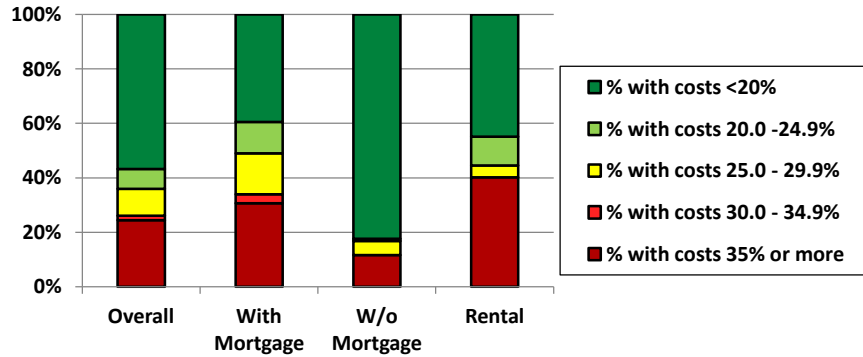
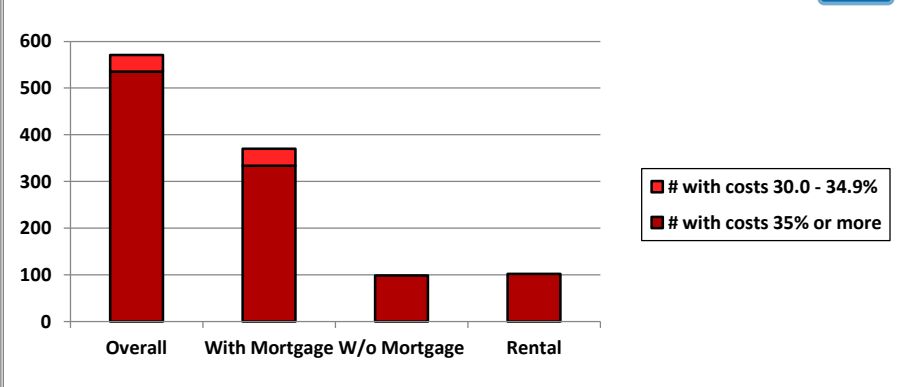


Figure H15: Number of Cost-Burdened Housing Units



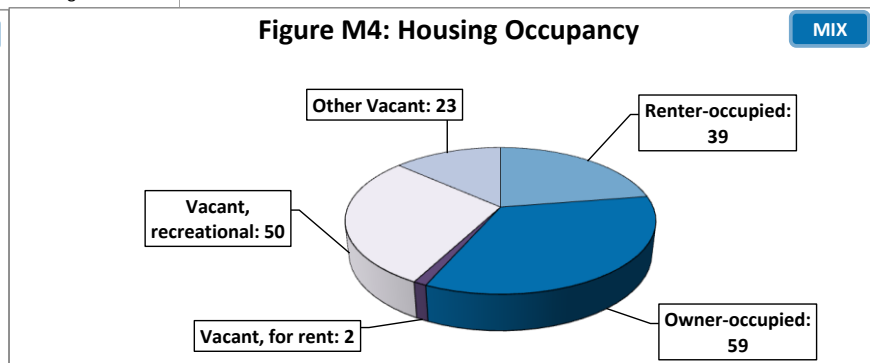
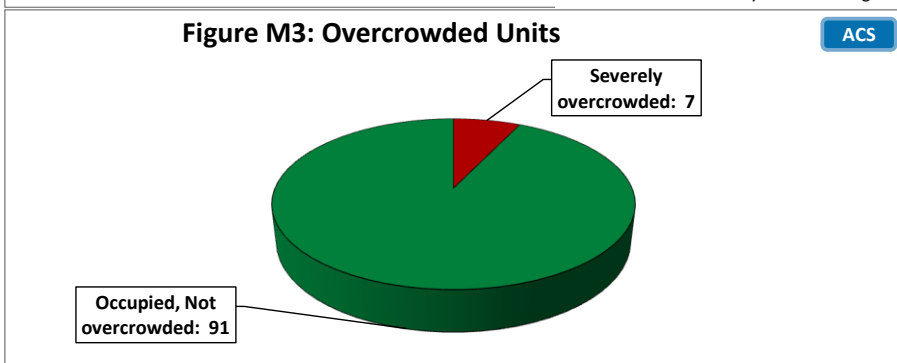
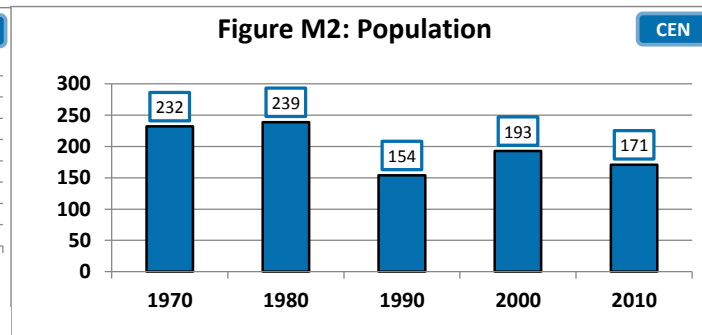
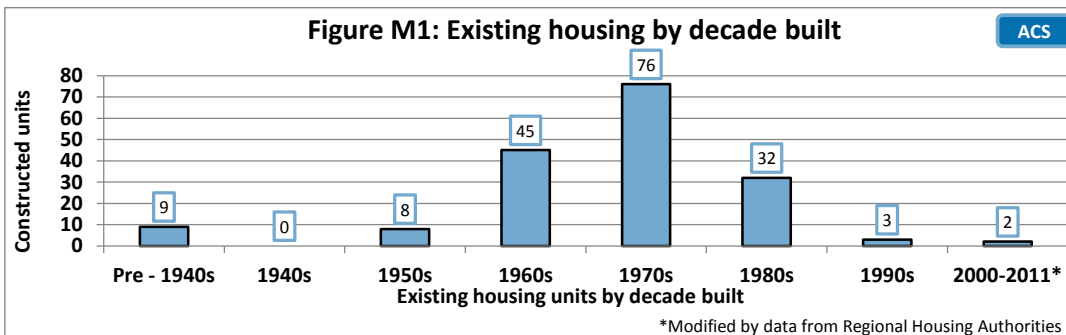


**Community Profile for:** Tyonek CDP

**ANCSA Region:** Cook Inlet Regional (CIRI)

**Regional Housing Authority:** Cook Inlet Housing Authority

**BEES Climate Zone (Heating Degree Days):** Zone 7 (9,742 HDD)



#### Tyonek 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	30	2-star	59.7	1,335	\$ 2,691	188	148	\$2.34	11.2	75%
Retrofit units	29	2-star plus	66.0	1,411	\$ 2,104	166	122	\$1.68	9.3	100%
New construction	2	NR	NR	NR	NR	NR	NR	NR	NR	NR
Overall	61	2-star plus	61.1	1,339	\$ 2,598	183	143	\$2.23	10.8	78%

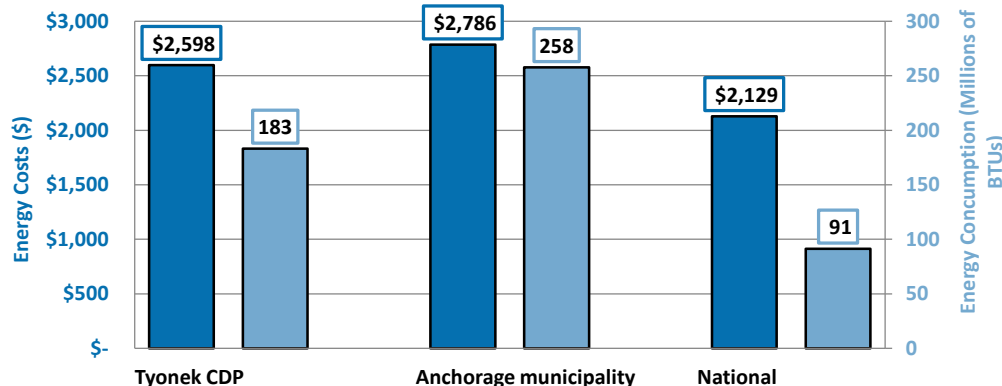
#### Tyonek CDP Housing Envelope Characteristics

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	30	8.5	31	11	2	33	2	2	0.37	NR	0.51
Retrofit units	29	5.5	37	10	2	NR	NR	2	0.21	NR	0.38
New construction	2	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Overall	61	8.2	31	11	2	34	2	2	0.35	NR	0.50

BEES 2009	7.0	38	21	15	38	15	15	0.33	0.33	0.33
BEES 2012	4.0	43	25	15	38	15	15	0.30	0.30	0.30

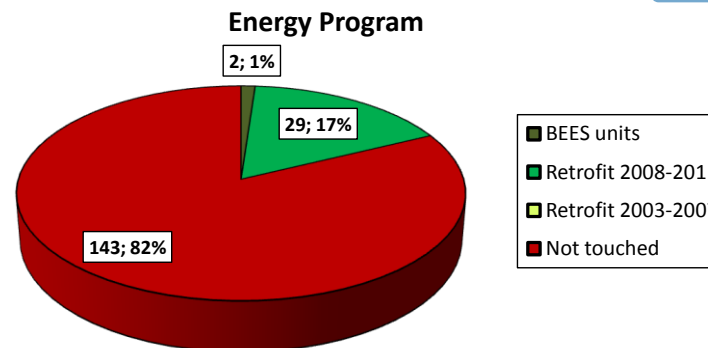
**Figure M5: Average Annual Home Energy Costs and Use**

MIX



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

ARIS



**AFFORDABILITY - Tyonek CDP**

Owner occupied House with Mortgage, Median Value
NR

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

Estimated Energy Prices as of January 2013	
#1 Fuel oil cost (\$ / gallon)	\$ 7.96
Electricity with PCE (\$/kWh)	No PCE
Electricity without PCE (\$/kWh)	\$ 0.08

Median Annual Household Income	
Housing Units	Household Income
All-occupied	\$ 35,000
Renter-occupied	\$ 24,750
Owner-occupied	\$ 47,917
w/ mortgage	NR
w/o mortgage	\$ 28,125

Average Annual Energy Cost	
With PCE	NO PCE
Without PCE	\$2,598

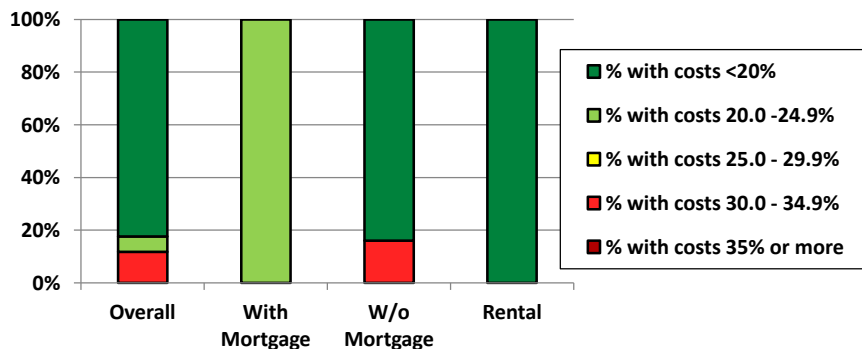
Avg % Median Income spent on Energy	7.4%
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Median Housing Costs		
	Monthly	Annual
All-occupied	\$ 295	\$ 3,540
Gross rent	\$ 339	\$ 4,068
Owner-occupied	\$ 260	\$ 3,120
Housing units w/ mortgage	NR	NR
Housing units w/out a mortgage	\$ 265	\$ 3,180

Housing Stock Estimates	Number of Units
All Housing	173
All Occupied Housing	98
All Vacant housing	75
Vacant Housing for Sale/Rent	2

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

ACS



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

ACS

