Petersburg Census Area

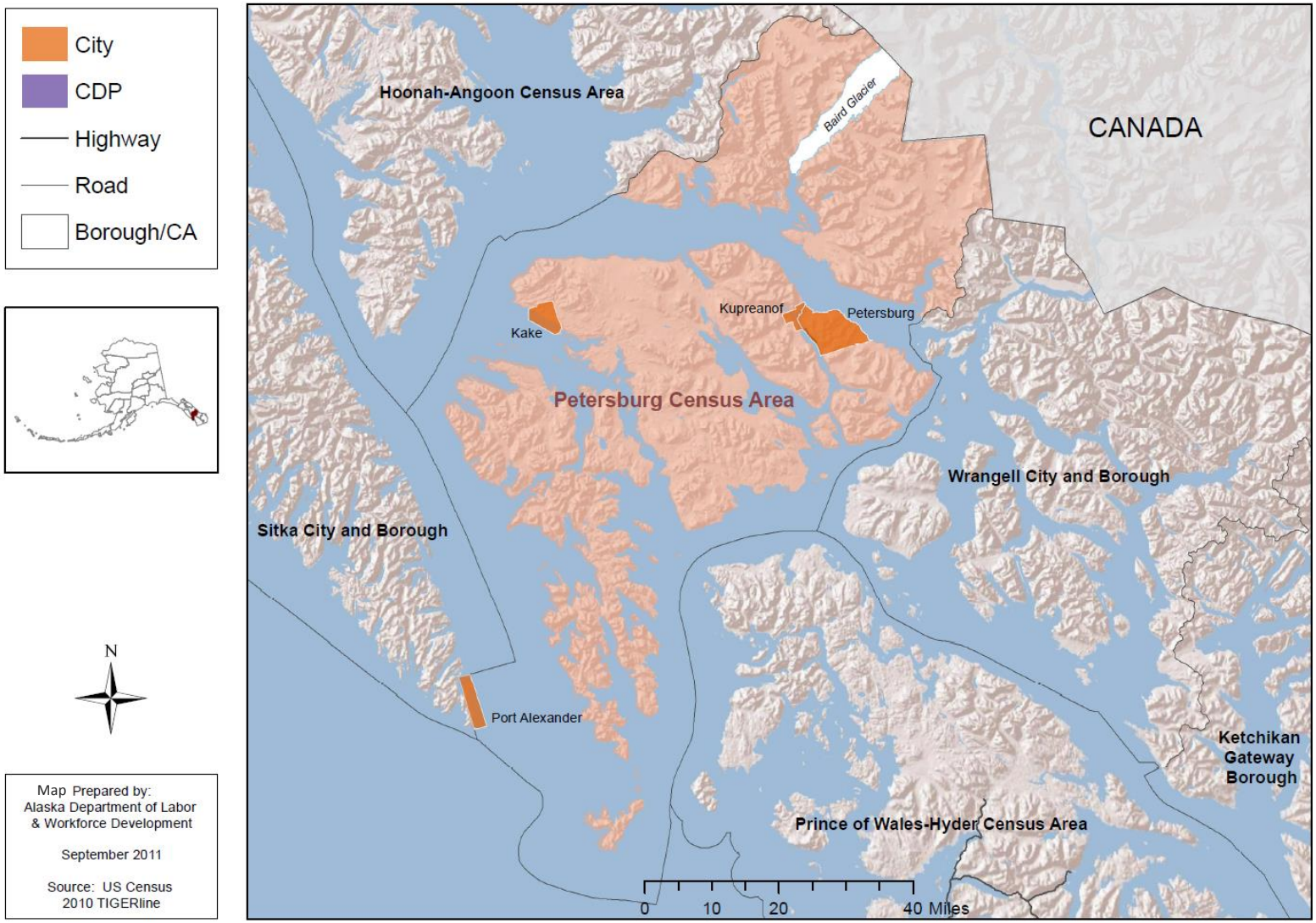


Table of Contents

Petersburg Census Area Dashboard

Population: The Department of Labor and Workforce Development's current (2012) population estimate for the Petersburg Census Area is 3,937 – a decrease of 8% from 2000.

Housing Units: There are currently 2,049 housing units in the Petersburg Census Area. Of these, 1,564 are occupied, 91 are for sale or rent, and the remaining 394 are seasonal or otherwise vacant units (Profile Figure C6).

Energy: The average home in the Petersburg Census Area is 1,753 square feet and uses 112,000 BTUs of energy per square foot annually, 19% 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 Petersburg Census Area is $5,030, which is approximately 1.8 times more than the cost in Anchorage, and 2.4 times more than the national average (Profile Figure C13).

Energy Programs: Approximately 20% of occupied housing in the Petersburg Census Area has completed either the Home Energy Rebate, Weatherization, or BEES programs since 2008, compared to 21% statewide (Profile Figure C12).

Housing Quality: Within current housing stock, newer homes have better energy performance. On average, homes built in the 1950s are currently rated at 1-star, compared to a current average rating of 4-star-plus for houses built after 2000.

Air-tightness: Within current housing stock, newer homes are tighter. On average, homes built in the last decade very nearly meet the 2012 BEES standard of 4 air-changes per hour at 50 pascals (ACH50). In contrast, homes built in the 1960s are 3.3 times leakier than those built since 2000 (Profile Figure C7).

Ventilation: An estimated 612 occupied housing units (or 39%) in the Petersburg Census Area are relatively air-tight and lack a continuous ventilation system. These houses are at higher risk of moisture and indoor air quality-related issues (Profile Figures C9-C10).

Overcrowding: 3% of occupied units are estimated to be either overcrowded (2%) or severely overcrowded (1%). This is roughly similar to the national average, and makes the Petersburg Census Area the 24th most overcrowded census area in the state.

Affordability: On average, approximately 24% of households in the Petersburg Census Area spend more than 30% of total income on housing costs, which include rent, utilities, and energy costs. Based on average AKWarm estimates, annual energy costs constitute approximately 8% of census median area income for occupied housing.

Petersburg Census Area Summary

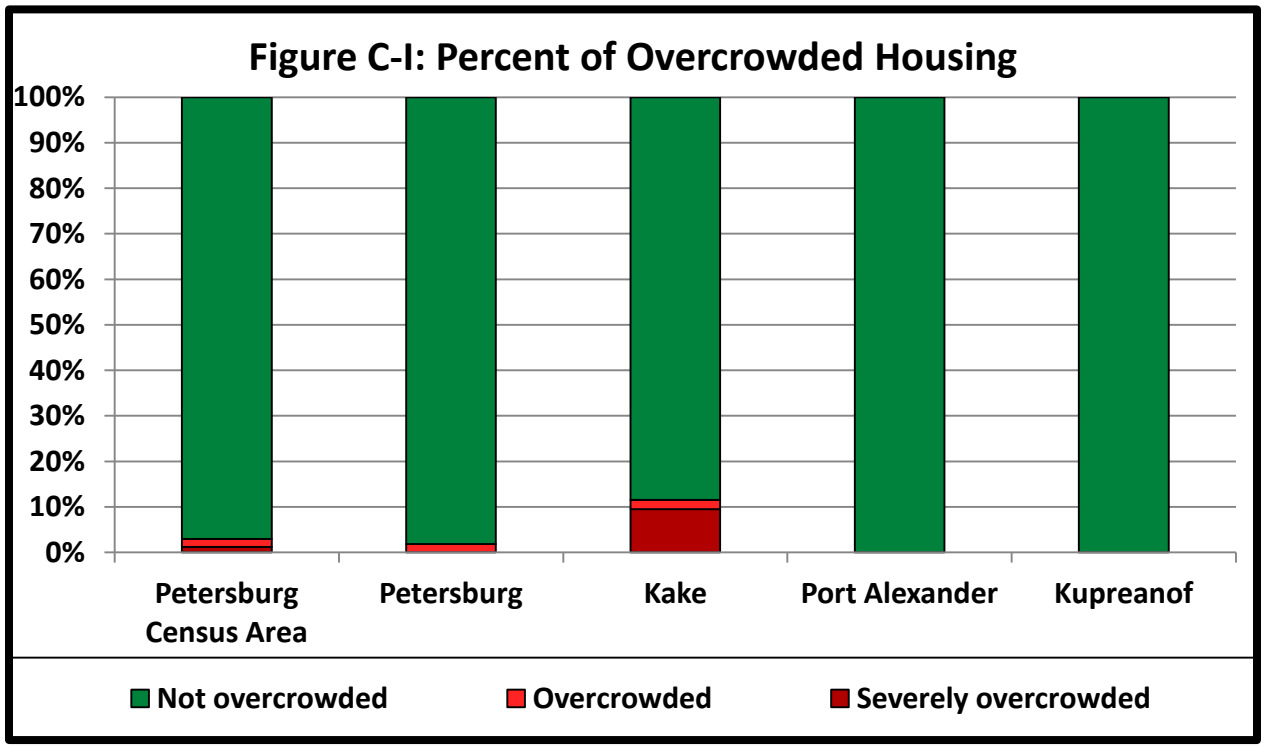
Community

The Petersburg census area is located on the southeast panhandle of Alaska and is in the Sealaska Native Corporation ANCSA region. Average home sizes in the census area range from 1,199 square feet in the community of Kake to 1,816 square feet in the community of Petersburg.

Overcrowding

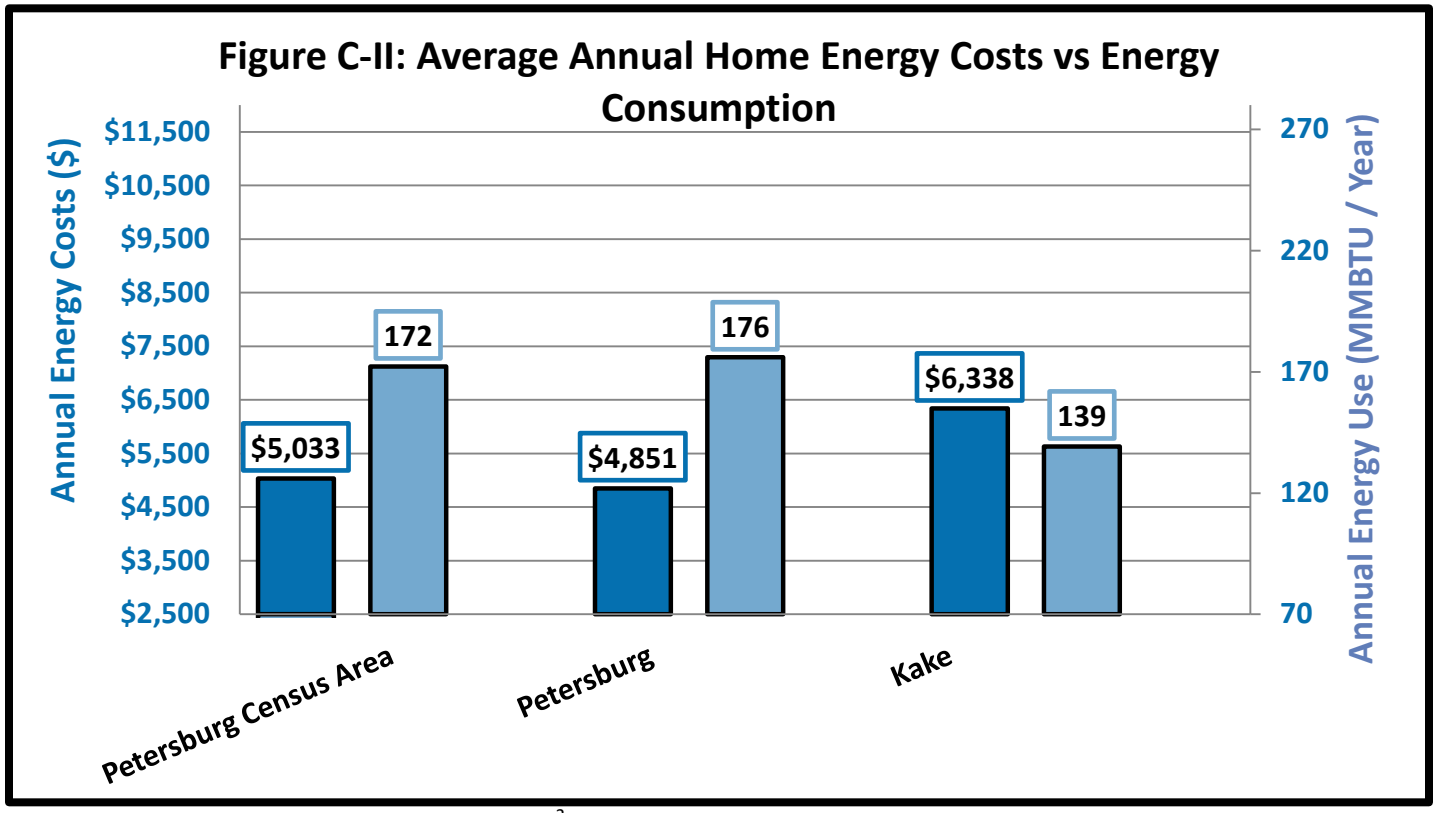
There is relatively little overcrowding in the Petersburg census area, with the exception of Kake, which has severe overcrowding in roughly 12% of households. Some communities have an estimated no overcrowding, including Kupreanof and Port Alexander (Figure C-I).

Approximately 4% of housing units in the census area are available for sale or rent. Kake has the largest percentage of available housing, 9%, and Port Alexander has the lowest percentage of available housing, with approximately zero housing units for sale or rent.



Energy

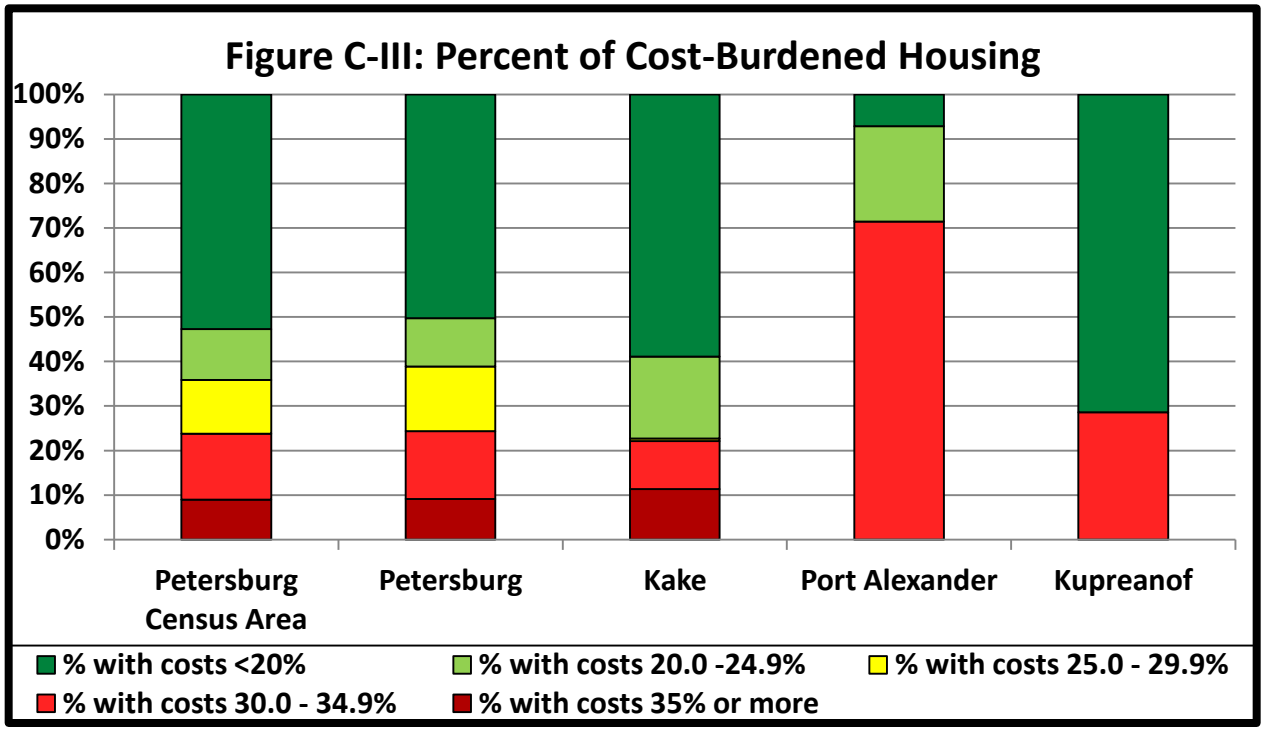
Annual energy use in the Petersburg census area is an average of 172 million BTUs per household (Figure C-II). This results in a census area average energy cost of $5,033 per year. The community of Petersburg has both the highest average home heating index, 9.6 BTUs/ft^2/HDD and the lowest average energy cost, $4,851, of all census area communities with sufficient data. In contrast, the community of Kake has the lowest home heating index, 9.5 BTUs/ ft^2/HDD, and the highest annual energy cost, $6,338. One factor that may influence the higher annual energy costs in Kake is that fuel oil is more costly in Kake than the city of Petersburg.



Throughout the census area, 21% of homes have completed the Home Energy Rebate, Weatherization, or a BEES program since 2003. However, participation rates vary by community. Kupreanof has had an estimated zero households participate in any program, in contrast to Port Alexander, in which half of all households have participated in a program. More than 85% of homes built in the census area since 2005 have a continuous ventilation system or HRV installed.

Affordability

According to ACS estimates[1], between 22% and 71% of households in Petersburg census area communities are cost-burdened, or spend more than 30% of household income on housing costs. The community of Kake is the most affordable community when it comes to housing, with only 22% of households considered cost-burdened. Port Alexander, on the other hand, has the highest percentage of cost-burdened households. Over 70% of households in Port Alexander pay more than 30% of their annual income on housing costs in spite of residents having the highest median household income in the census area at $75,500 (Figure C-III). The lowest median household income, $35,833, is found in the community of Kupreanof.



[1] 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.

Community, Regional, and Statewide Housing Characteristics

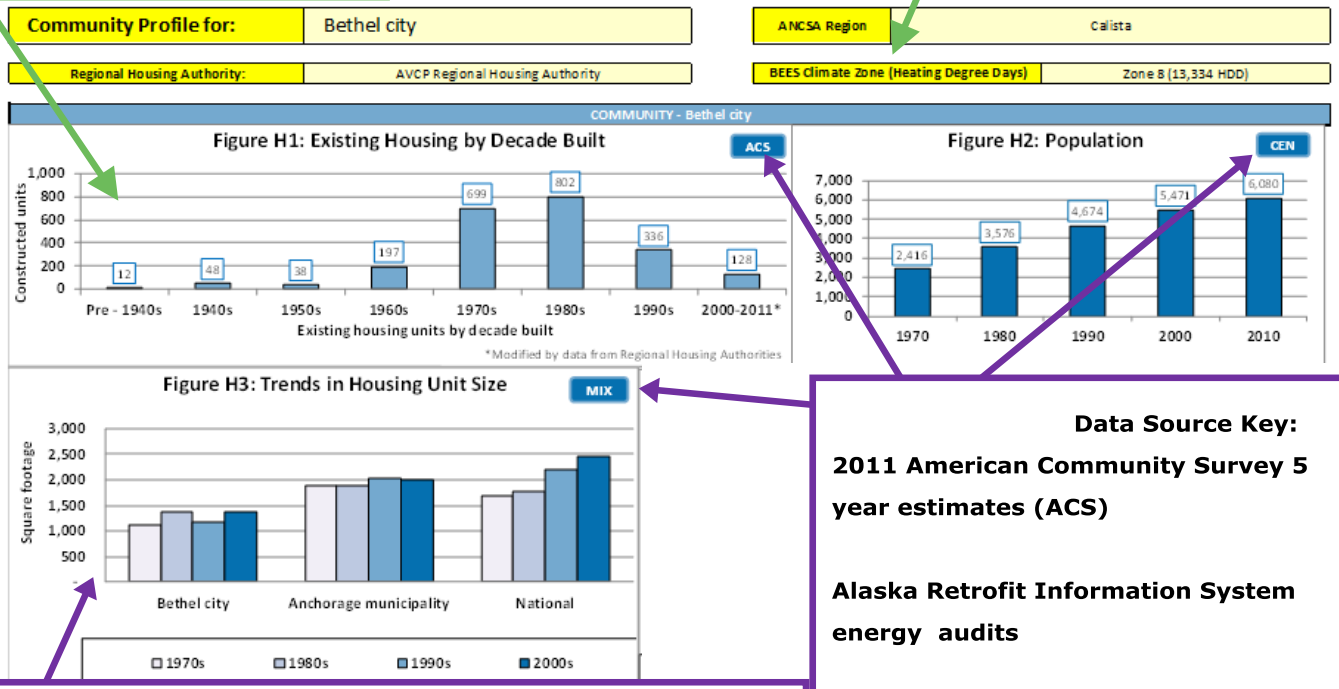
This census area summary only includes the highlights of housing characteristics at the census area level. Detailed data profile with charts and tables for both the census area and for each of the communities within it follow. The 2014 Alaska Housing Assessment provides a significant amount of data and 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.



Data Source Key:

2011 American Community Survey 5 year estimates (ACS) — ACS

Alaska Retrofit Information System energy audits — ARIS

2010 Decennial Census — CEN

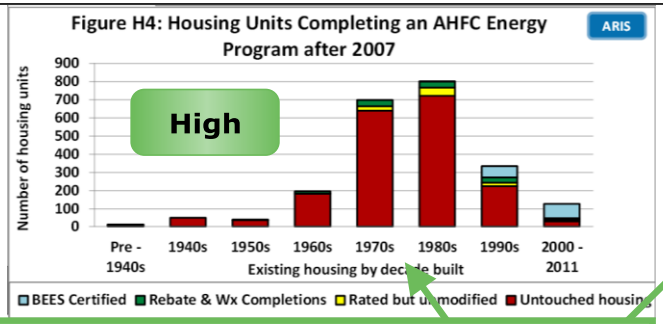
Mixed data source; see individual graphs for details. — MIX

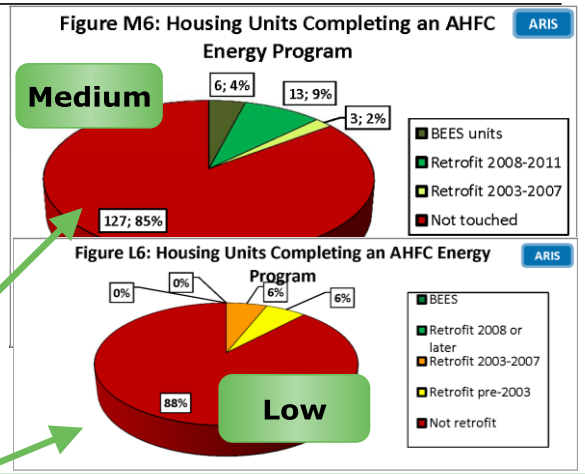
Data Sources: National trends come from the 2009 Residential Energy Consumption Statistics published by the U.S. Energy Information Administration. Anchorage and census area data come from the Alaska Retrofit Information System.

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.

ACS

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

ARIS

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)

ARIS

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

ARIS

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 200	
Date Range	Units
2008-2011	17
2003-2007	-
1990-2002	10

CEN

Housing Stock Estimates	Nu
All Housing	
All Occupied Housing	
A sing	
Vacant Housing for Sale or Rent	

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

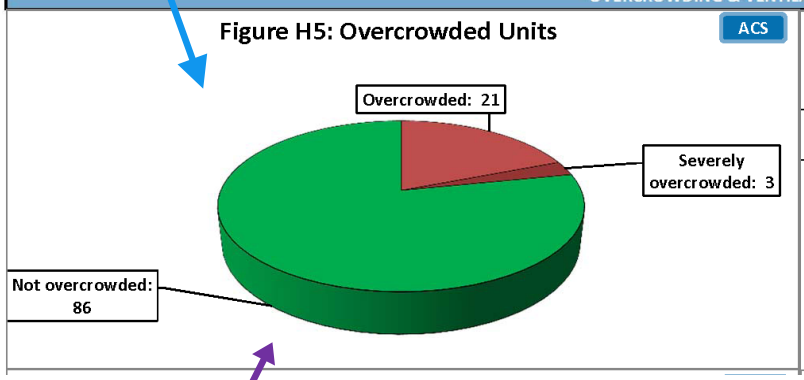
How to Interpret the Profile: Data Sources, Definitions & Clarifications

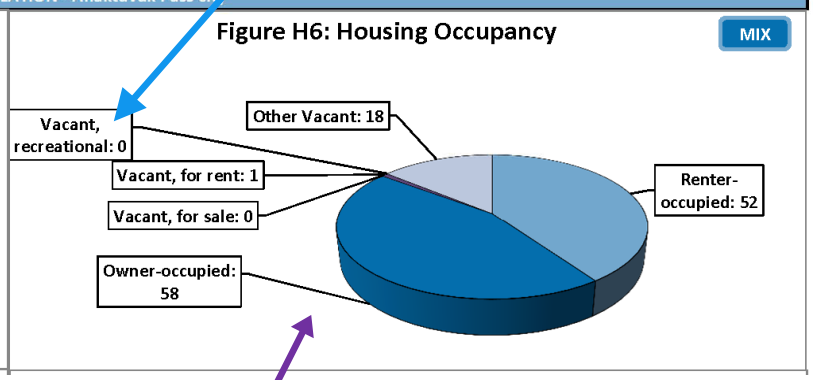
2

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.

OVERCROWDING & VENTILATION - Anaktuvuk Pass cit





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

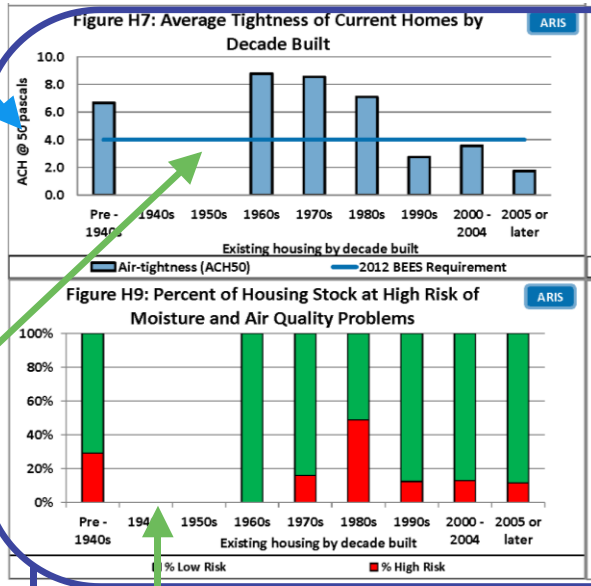
2

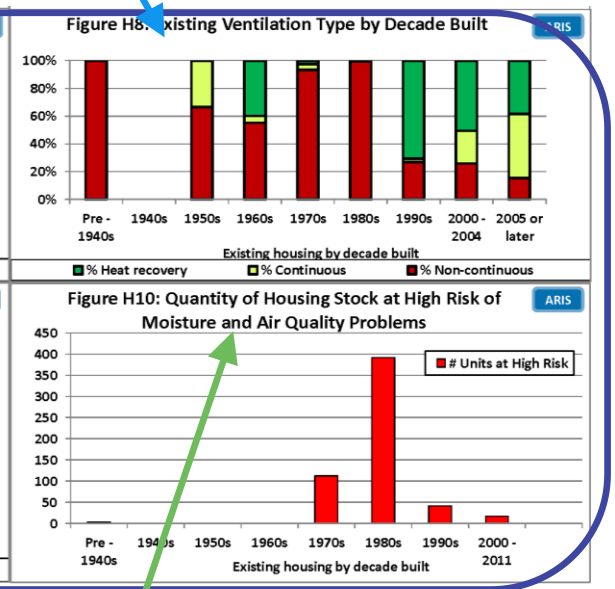
Heat Recovery: Continuous mechanical ventilation with heat recovery operated with automatic controls.

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

3

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.

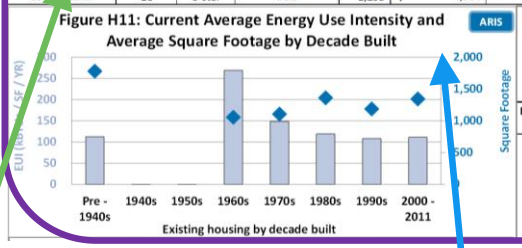
ECI: Energy Cost Index, the amount of money spent on energy per year divided by square footage.

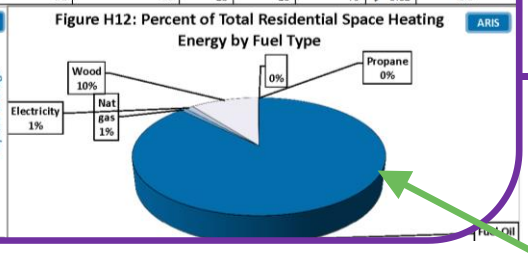
Home Heating Index: The energy used per square foot per year divided by the area's heating degree days.

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

Current Fairbanks Housing Energy Characteristics By Decade Built

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 End Use (million Btus)			Avg. EUI (kBTUS/SF)	Avg. ECI ($ / SF)	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	151	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- 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.

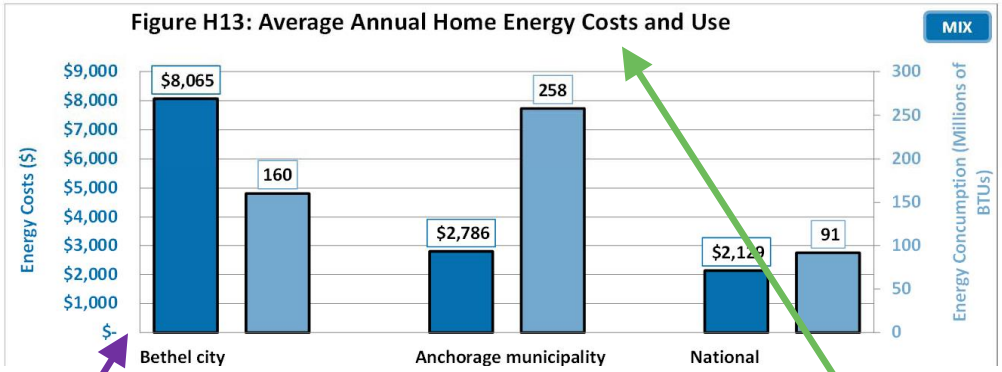
Red: value is less than 75% of the 2012 BEES requirement.

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



Housing Information	Avg Household Size (# of people)
All-occupied	3.4
Owner-occupied	3.7
renter-occupied	3.1

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).

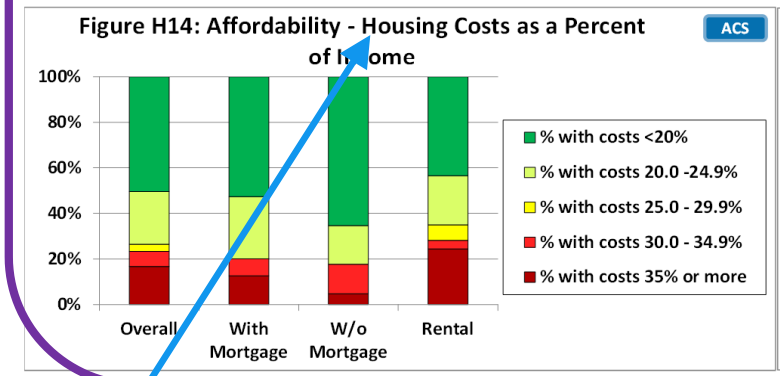
Owner-occupied House with Mortgage, Median Value
$226,800

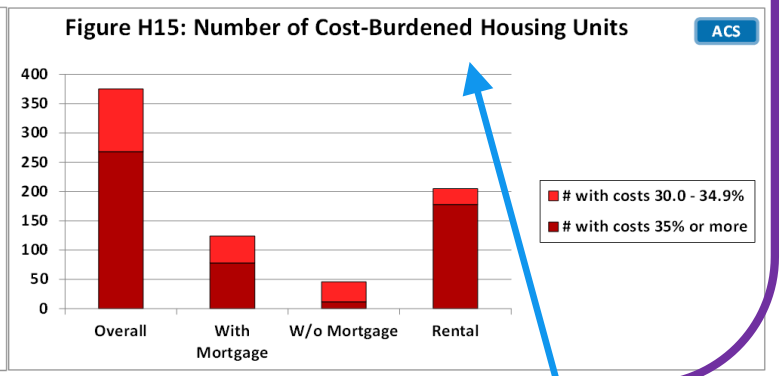
Owner-ocupied House without a Mortgage, Median Value
$119,600

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:	Petersburg Census Area

ANCSA Region:	Sealaska Corporation

Regional Housing Authority:	Tlingit-Haida Regional Housing Authority

BEES Climate Zone (Heating Degree Day Range)	Zone 6 (7,200 - 9,000 HDD)

COMMUNITY - Petersburg Census Area

Figure C1: Existing Housing by Decade Built

ACS

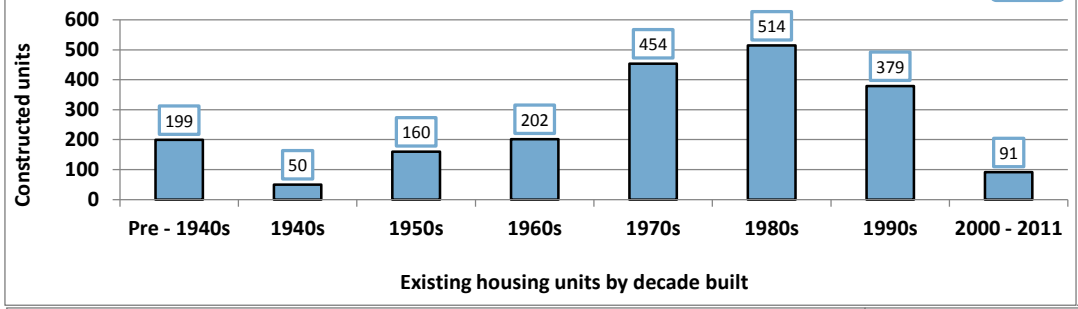


Figure C2: Population

CEN

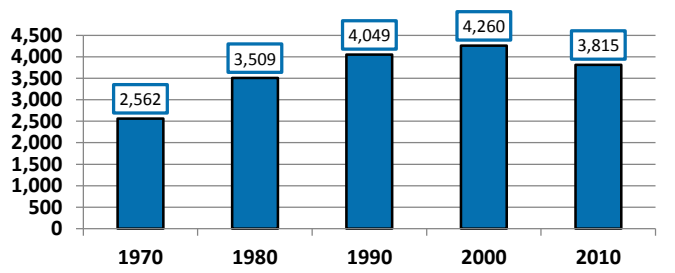


Figure C3: Trends in Housing Unit Size

MIX

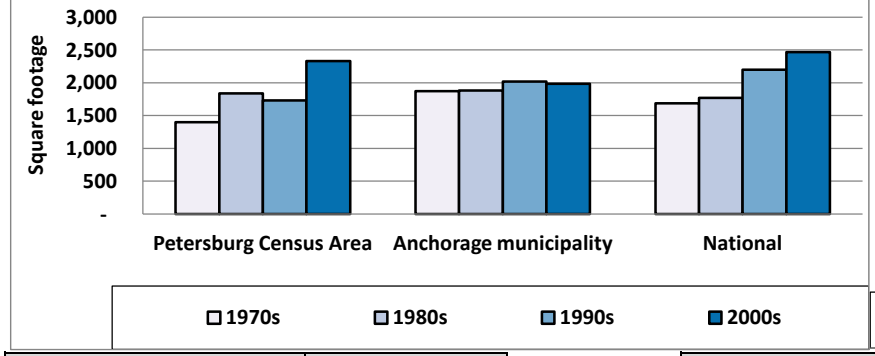
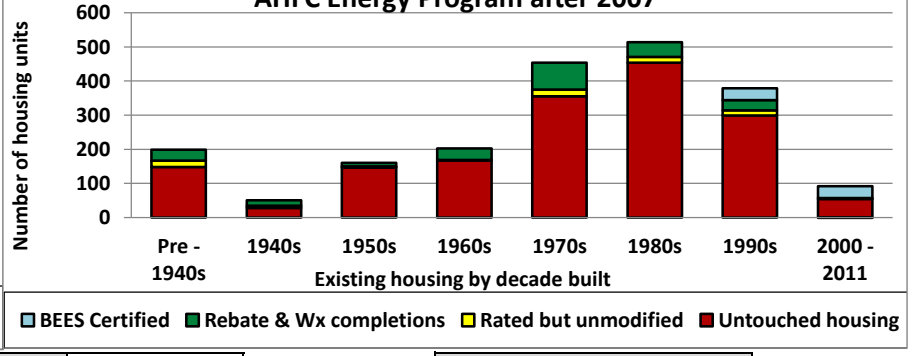


Figure C4: Housing Units Completing an AHFC Energy Program after 2007

ARIS



Houses Lacking Complete Plumbing or Kitchen Facilities	Households	
	Number	Percent
Lack complete plumbing	30	2%
Lack complete kitchen	30	2%

Avg Annual Energy Cost with PCE	$5,033
Avg Annual Energy Cost without PCE	$5,300

Weatherization Retrofits (funding increased 2008)	
Date Range	Units
2008 -2011	123
2003-2007	15
1990-2002	54

Estimated Total Annual Community Space Heating Fuel Use		
Fuel Oil	929,699	(gallons)
Natural Gas	-	(ccf)
Electricity	11,244,547	(kWh)
Wood	1,512	(cords)
Propane	55,204	(gallons)
Coal	-	(tons)

Housing Need Indicators	Number of Units	% Occupied Housing
Overcrowded	46	3%
Housing cost burdened	356	23%
1 Star Homes	387	25%

Housing Stock Estimates	Number of Units
All Housing	2,049
All Occupied Housing	1,564
All Vacant housing	485
Vacant Housing for Sale or Rent	91

OVERCROWDING & VENTILATION - Petersburg Census Area

Figure C5: Overcrowded Units

ACS

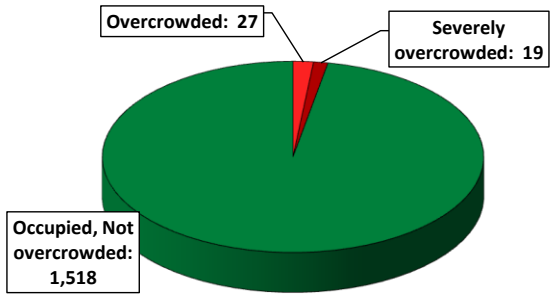


Figure C6: Housing Occupancy

MIX

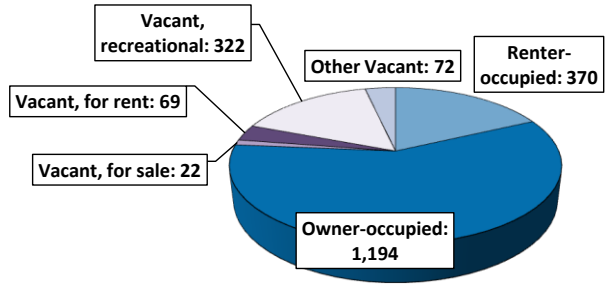


Figure C7: Average Air-Tightness of Current Homes by Decade Built

ARIS

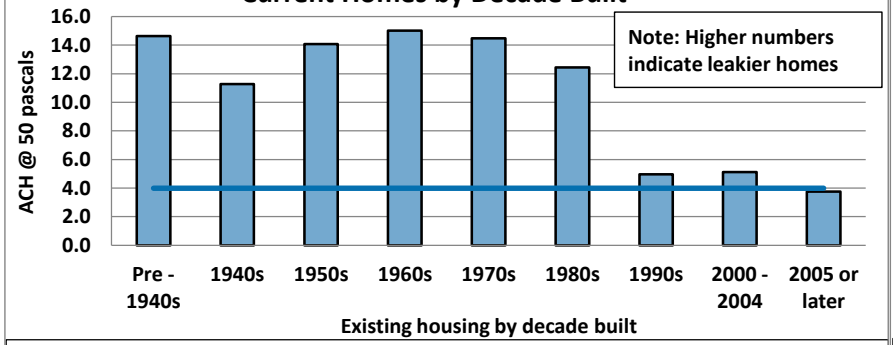


Figure C8: Existing Ventilation Type by Decade Built

ARIS

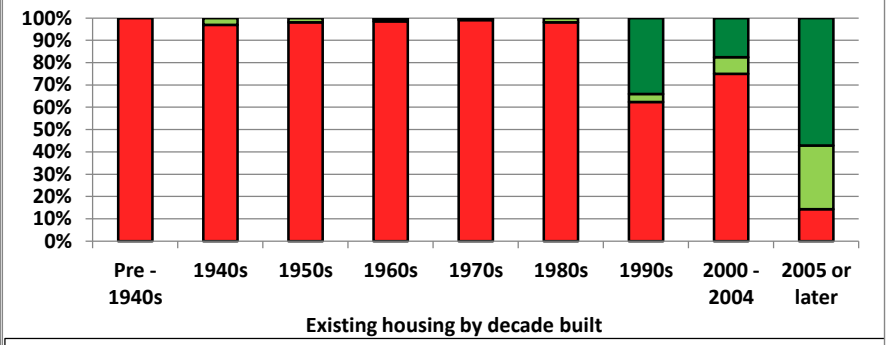


Figure C9: Percent of Housing Stock at High Risk of Moisture and Air Quality Problems

ARIS

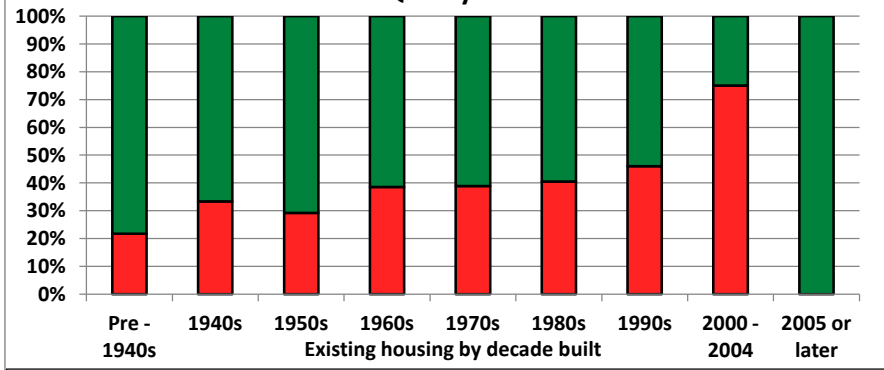
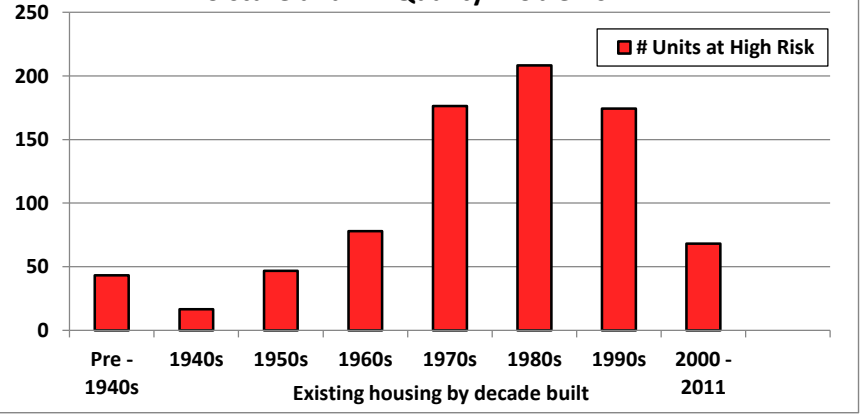


Figure C10: Quantity of Housing Stock at High Risk of Moisture and Air Quality Problems

ARIS



ENERGY - Petersburg Census Area

Current Petersburg Census Area Housing Energy Characteristics By Decade Built

Current Residential Units by Year Built	# of AkWarm Records	Avg Energy Rating Stars	Avg Energy Rating Points	Avg Sq. Feet	Avg. Annual Energy Cost (with PCE)	Avg. Annual Energy Use (million BTUs)	Avg Ann Energy by End Use (million Btus)			Avg. EUI (kBTUS /SF)	Avg. ECI ($ / SF)	Avg. Home Heating Index
							Space Heating	DHW	Appliances			
OVERALL	520	2-star	59.1	1,753	$5,033	172	115	25	30	112	$3.39	9.8
Pre- 1940	83	1-star plus	40.0	1,803	$5,565	213	159	22	31	125	$3.29	11.9
1940- 49	38	1-star plus	48.9	1,834	$5,824	212	151	30	31	122	$3.27	11.3
1950- 59	24	1-star	35.5	2,005	$7,105	283	230	22	31	146	$3.47	14.9
1960- 69	69	1-star plus	48.5	1,857	$5,810	198	150	20	28	125	$3.84	11.9
1970- 79	179	2-star	59.3	1,400	$5,346	156	105	25	27	117	$4.08	9.8
1980- 89	101	2-star	58.7	1,838	$4,805	173	121	23	29	104	$2.99	9.2
1990- 99	112	4-star	80.6	1,733	$3,511	114	56	21	26	73	$2.37	5.0
2000- 2004	25	4-star	82.2	2,330	$4,368	133	75	25	33	57	$1.87	4.0
2005 or later	15	5-star	89.7	1,966	$2,992	91	34	27	29	57	$1.87	2.6

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

ARIS

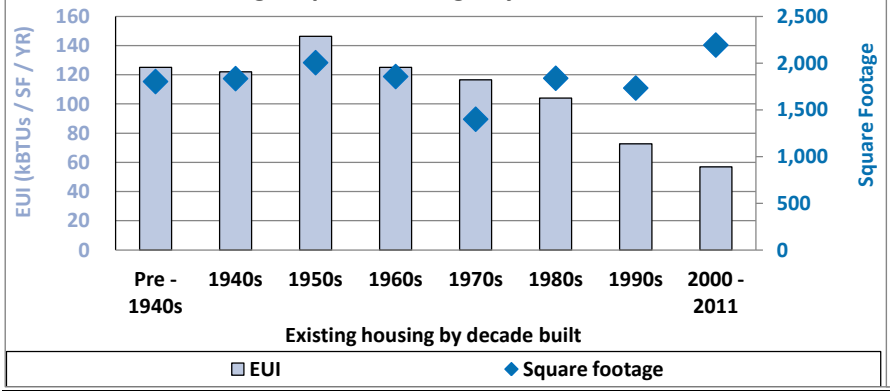
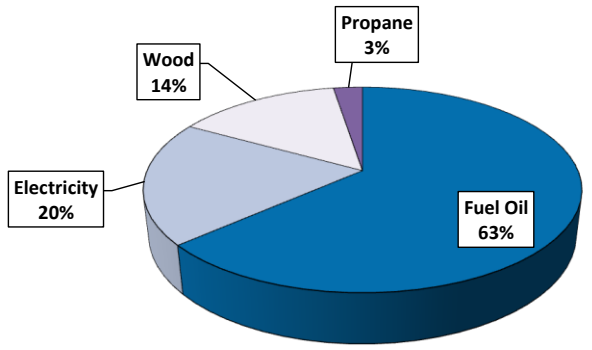


Figure C12: Percent of Total Residential Space Heating Energy by Fuel Type

ARIS



Current Petersburg Census Area Housing Envelope Characteristics By Decade Built

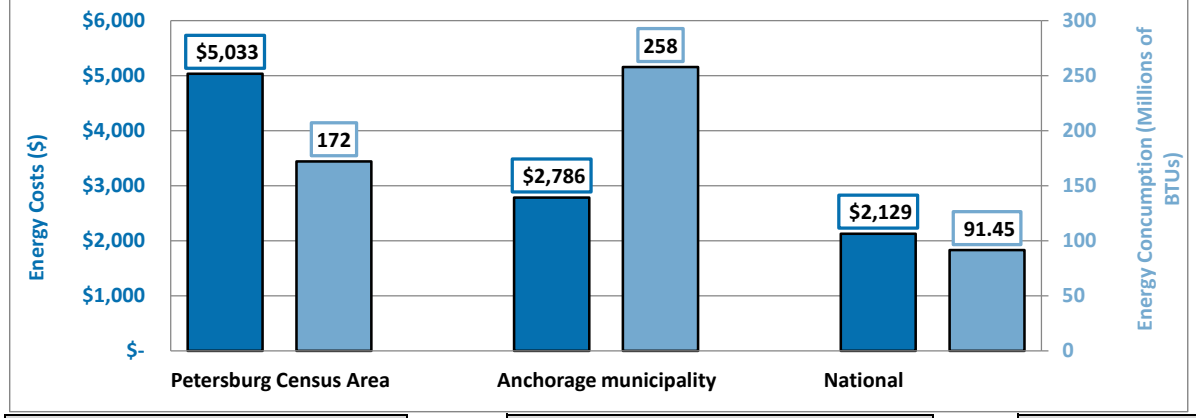
Current Residential Units by Year Built	# of AkWarm Records	ACH 50	Ceiling R	Above Grade Wall R	Below Grade Wall R	Above Grade Floor R	On Grade Floor R	Below Grade Floor R	Door U	Garage Door U	Window U
OVERALL	520	12.4	15	10	2	17	3	3	0.40	0.40	0.60
Pre- 1940	83	14.6	10	7	2	14	2	2	0.41	0.42	0.63
1940- 49	38	11.3	11	9	2	13	2	3	0.34	NR	0.57
1950- 59	24	14.1	7	7	2	13	2	2	0.48	NR	0.68
1960- 69	69	15.0	11	9	2	13	2	NR	0.36	0.39	0.62
1970- 79	179	14.5	19	11	3	18	2	NR	0.36	0.42	0.63
1980- 89	101	12.4	20	12	3	18	2	NR	0.42	0.45	0.71
1990- 99	112	5.0	39	14	17	29	3	NR	0.48	0.30	0.37
2000- 2004	25	5.1	33	18	2	37	8	NR	0.22	0.37	0.33
2005 or later	15	3.8	36	18	NR	39	4	NR	0.29	NR	0.33

BEES 2009 - Climate Zone 6	7.0	38	21	15	30	15	15	0.33	0.33	0.33
BEES 2012 - Climate Zone 6	4.0	43	25	15	38	15	15	0.30	0.30	0.30

AFFORDABILITY - Petersburg Census Area

Figure C13: Average Annual Home Energy Cost and Use

MIX



Housing Information	Avg Household Size (# of people)
All-occupied	2.3
Owner-occupied	2.4
Renter-occupied	2.2

Median Value of Owner-occupied House with Mortgage
$214,300

Median Value of Owner-occupied House without a Mortgage
$136,100

Median Annual Household Income	
Housing Units	Household Income
All-occupied	$ 64,216
Renter-occupied	$ 36,587
Owner-occupied	$ 77,230
w/ mortgage	$ 92,308
w/o mortgage	$ 37,159

Median Housing Costs		
	Monthly	Annual
All-occupied	$ 802	$ 9,624
Gross rent	$ 760	$ 9,120
Owner-occupied	$ 958	$ 11,496
Housing units w/ mortgage	$ 1,455	$ 17,460
Housing units w/out a mortgage	$ 494	$ 5,928

Avg % of Median Income Spent on Energy	7.8%

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

ACS

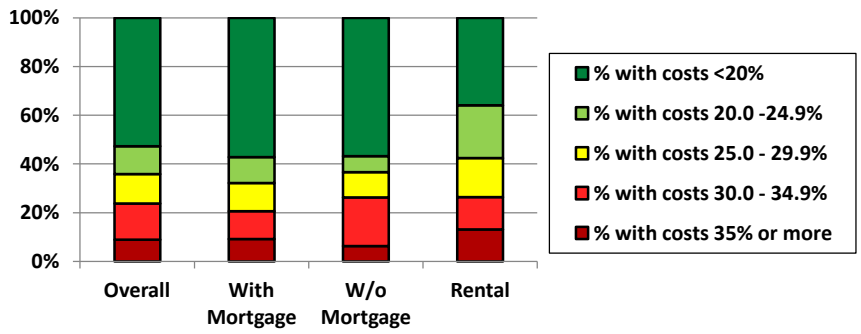
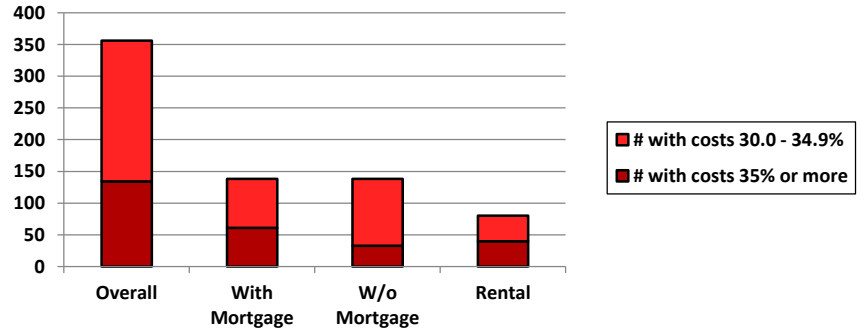


Figure C15: Number of Cost-Burdened Housing Units

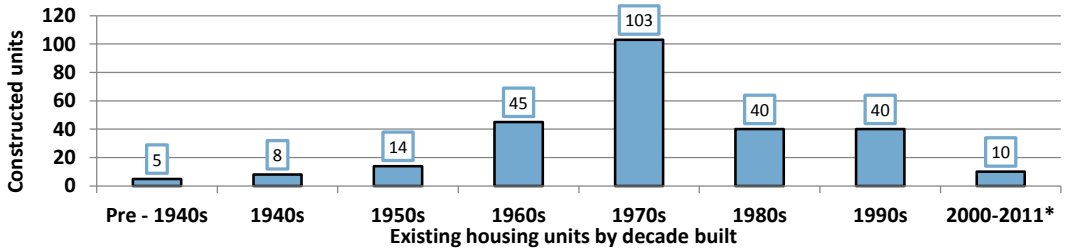
ACS



Community Profile for:	Kake city	ANCSA Region	Sealaska Corporation
Regional Housing Authority	Tlingit-Haida Regional Housing Authority	BEES Climate Zone (Heating Degree Days)	Zone 6 (8,527 HDD)

Figure M1: Existing housing by decade built

ACS



*Modified by data from Regional Housing Authorities

Figure M2: Population

CEN

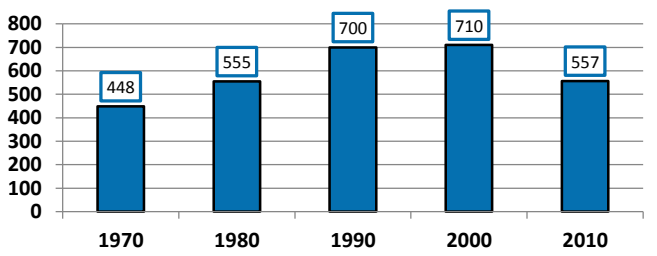


Figure M3: Overcrowded Units

ACS

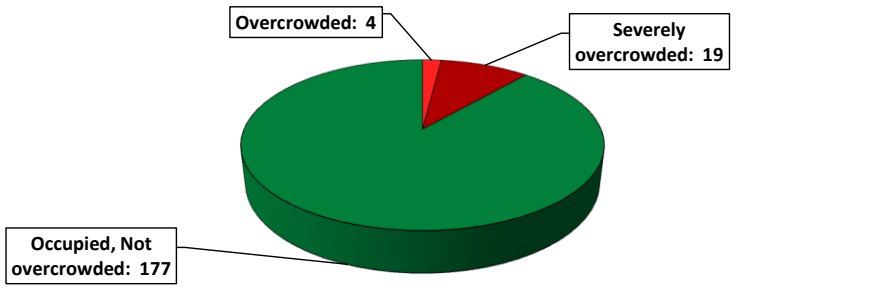
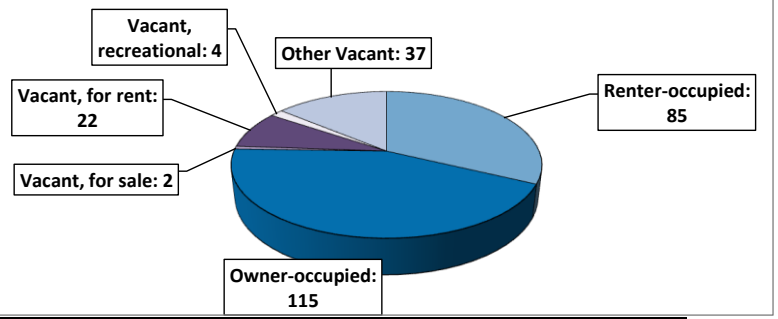


Figure M4: Housing Occupancy

MIX



Kake city Housing Energy Characteristics

Residential Unit Categories	Number of records	Avg Energy Rating Stars	Avg Energy Rating Points	Avg Sq. Feet	Avg. Ann Energy Cost w/ PCE	Avg. Ann Energy Use (million BTUs)	Avg. EUI (kBTUS/SF	Avg. ECI	Avg. Home Heating Index	% Tight Homes, No Ventilation
Pre-retrofit units	53	2-star	58.2	1,188	$ 6,654	147	127	$5.76	10.3	12%
Retrofit units	46	3-star plus	75.7	1,200	$ 4,754	103	90	$4.20	6.1	27%
New construction	2	NR	NR	NR	NR	NR	NR	NR	NR	NR
Overall	101	2-star plus	61.5	1,199	$ 6,338	139	120	$5.48	9.5	15%

Kake 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	53	12.5	20	9	NR	18	NR	NR	0.42	NR	0.52
Retrofit units	46	9.6	37	12	NR	35	NR	NR	0.22	NR	0.41
New construction	2	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
Overall	101	12.2	21	10	NR	19	NR	NR	0.40	NR	0.51
BEES 2009		7.0	38	21	15	30	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

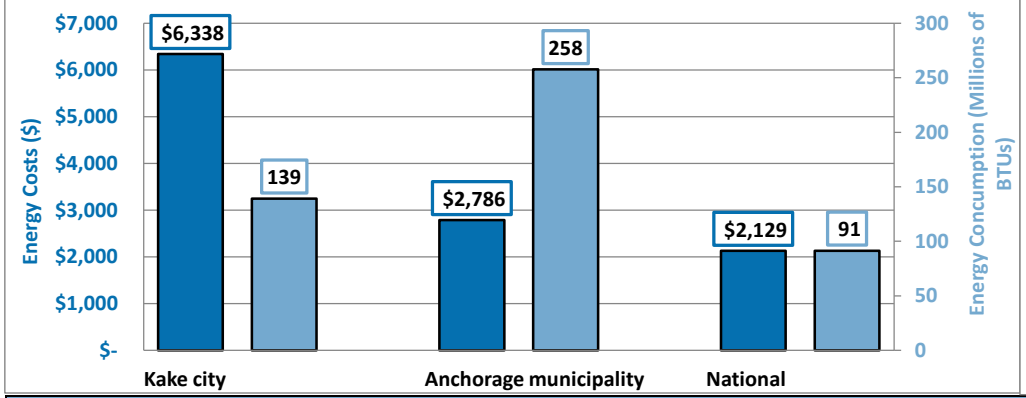
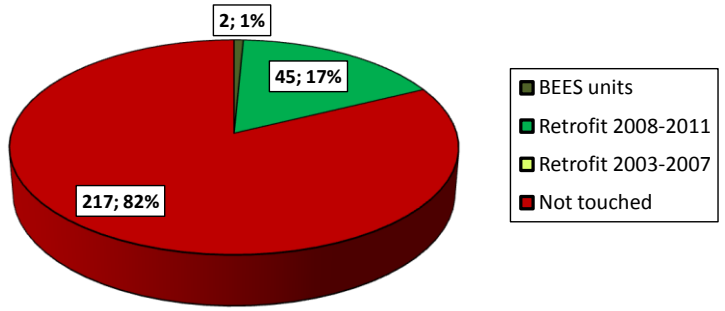


Figure M6: Housing Units Completing an AHFC Energy Program

ARIS



AFFORDABILITY - Kake city

Owner occupied House with Mortgage, Median Value
$118,800

Owner-ocupied House without a Mortgage, Median Value
$74,700

Estimated Energy Prices as of January 2013		
#1 Fuel oil cost ($ / gallon)	$	5.75
Electricity with PCE ($/kWh)	$	0.21
Electricity without PCE ($/kWh)	$	0.59

Median Annual Household Income		
Housing Units	Household Income	
All-occupied	$	40,769
Renter-occupied	$	41,607
Owner-occupied	$	39,583
w/ mortgage	$	63,333
w/o mortgage	$	36,875

Average Annual Energy Cost	
With PCE	$6,338
Without PCE	$8,456

Avg % Median Income spent on Energy	15.5%

Median Housing Costs				
	Monthly		Annual	
All-occupied	$	405	$	4,860
Gross rent	$	381	$	4,572
Owner-occupied	$	438	$	5,256
Housing units w/ mortgage	$	1,083	$	12,996
Housing units w/out a mortgage	$	342	$	4,104

Housing Stock Estimates	Number of Units
All Housing	265
All Occupied Housing	200
All Vacant housing	65
Vacant Housing for Sale/Rent	24

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

ACS

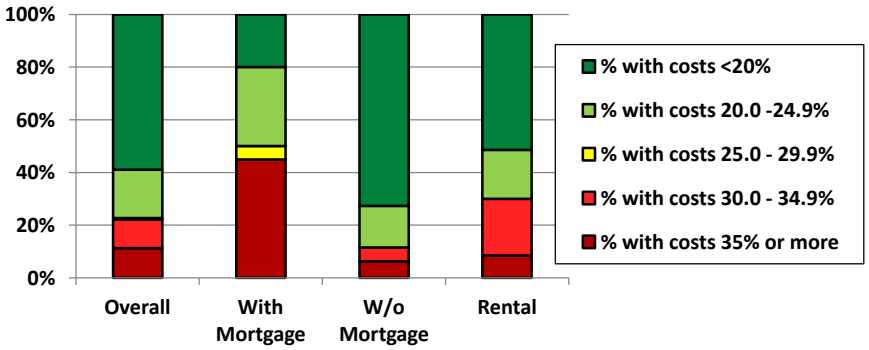
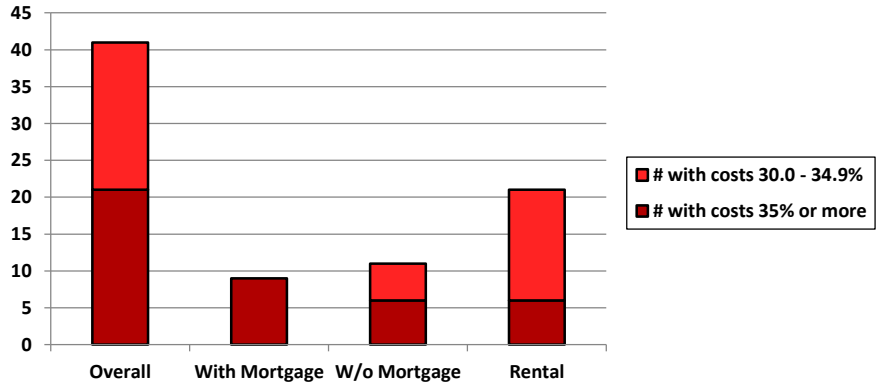


Figure M8: Number of Cost-Burdened Housing Units

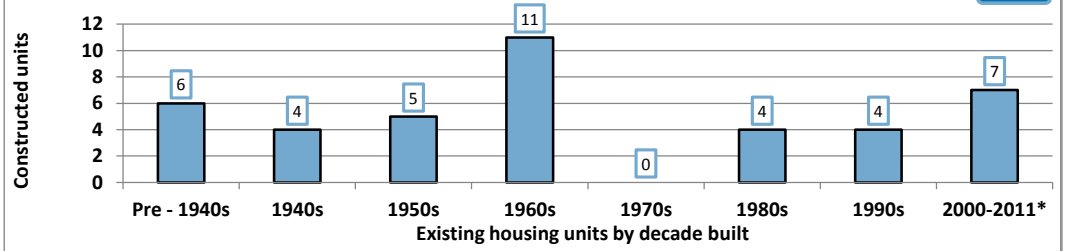
ACS



Community Profile for:	Kupreanof city	ANCSA Region	Sealaska Corporation	Climate Zone	6

Figure L1: Existing Housing by Decade Built

ACS



*Modified by data from Regional Housing Authorities

Figure L2: Population

CEN

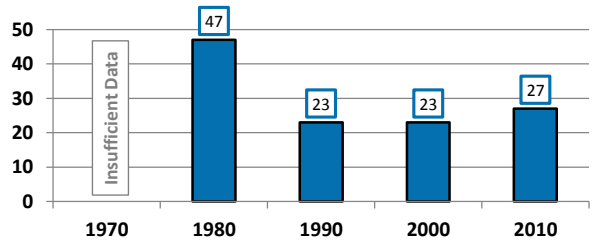


Figure L3: Overcrowded Units

ACS

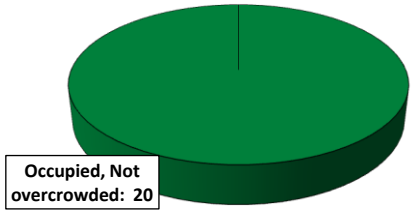


Figure L4: Housing Occupancy

MIX

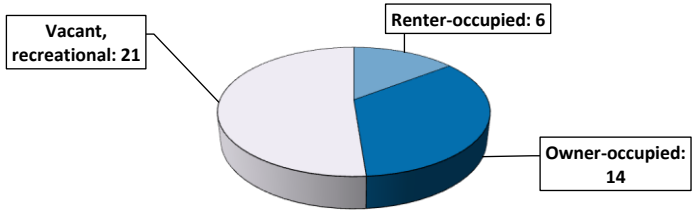


Figure L5: Affordability - Housing Costs as a Percent of Income

ACS

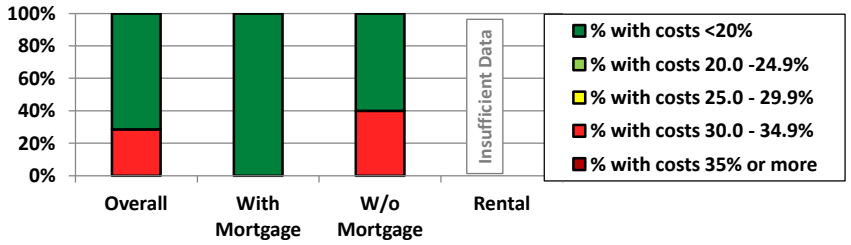
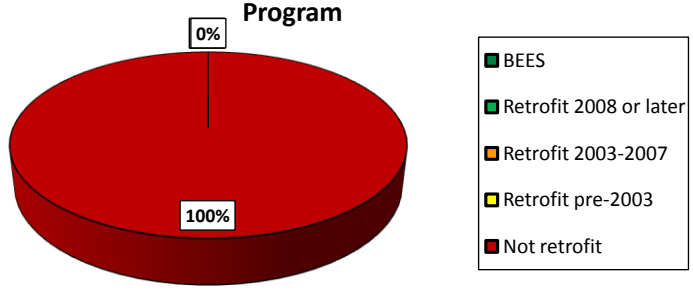


Figure L6: Housing Units Completing an AHFC Energy Program

ARIS



Owner-occupied House with Mortgage, Median Value
NR

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

Median Annual Household Income	
Housing Units	Household Income
All-occupied	$ 35,833
Renter-occupied	$ 35,000
Owner-occupied	$ 63,750
w/ mortgage	NR
w/o mortgage	$ 26,875

Median Housing Costs		
	Monthly	Annual
All-occupied	$ 663	$ 7,956
Gross rent	NR	NR
Owner-occupied	$ 625	$ 7,500
Housing units w/ mortgage	NR	NR
Housing units w/out a mortgage	$ 225	$ 2,700

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	41
All Occupied Housing	20
All Vacant housing	21

Community Profile for:	Petersburg city

ANCSA Region	Sealaska Corporation

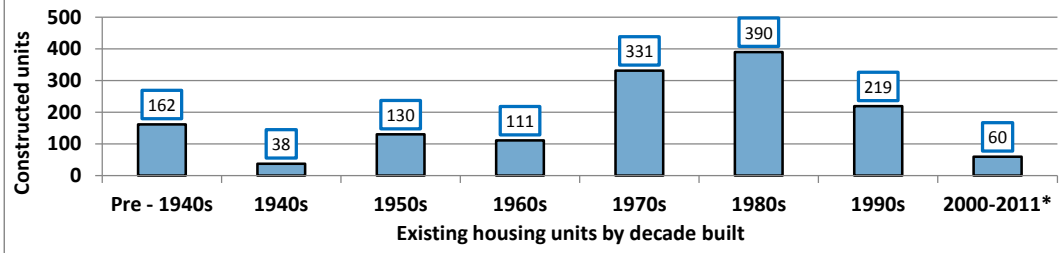
Regional Housing Authority:	Tlingit-Haida Regional Housing Authority

BEES Climate Zone (Heating Degree Days)	Zone 6 (8,134 HDD)

COMMUNITY - Petersburg city

Figure H1: Existing Housing by Decade Built

ACS



*Modified by data from Regional Housing Authorities

Figure H2: Population

CEN

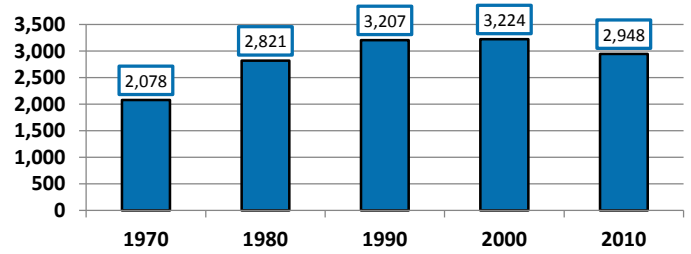


Figure H3: Trends in Housing Unit Size

MIX

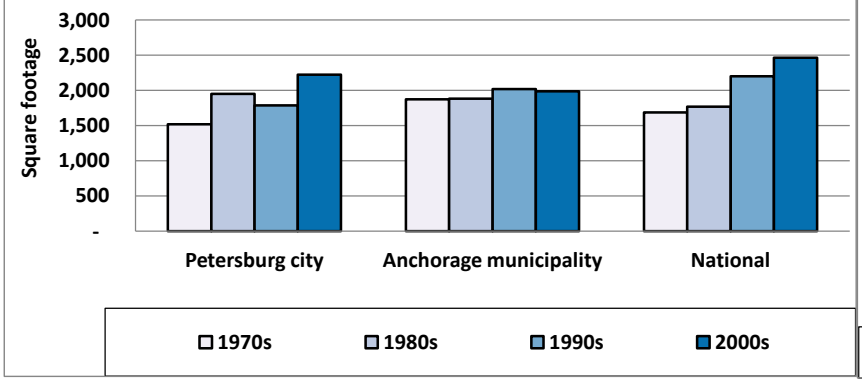
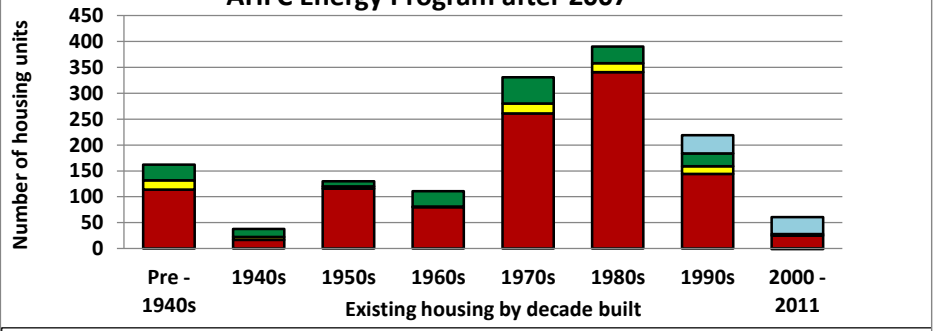


Figure H4: Housing Units Completing an AHFC Energy Program after 2007

ARIS



Houses Lacking Complete Plumbing or Kitchen Facilities	Households	
	Number	Percent
Lack complete plumbing	3	0%
Lack complete kitchen	17	1%

Avg Annual Energy Cost with PCE	NO PCE
Avg Annual Energy Cost without PCE	$4,851

Weatherization Program Retrofits (funding increased in 2008)	
Date Range	Units
2008-2011	79
2003-2007	10
1990-2002	52

Estimated Total Annual Community Space Heating Fuel Use		
Fuel Oil	774,717	(gallons)
Nat Gas	-	(ccf)
Electricity	10,357,489	(kWh)
Wood	1,216	(cords)
Propane	23,853	(gallons)
Coal	-	(tons)

Estimated Energy Prices as of January 2013	
#1 Fuel oil cost ($ / gallon)	$4.27
Electricity with PCE ($/kWh)	No PCE
Electricity cost without PCE ($/kWh)	$0.12

Housing Stock Estimates	Number of Units
All Housing	1441
All Occupied Housing	1278
All Vacant housing	163
Vacant Housing for Sale or Rent	67

OVERCROWDING & VENTILATION - Petersburg city

Figure H5: Overcrowded Units

ACS

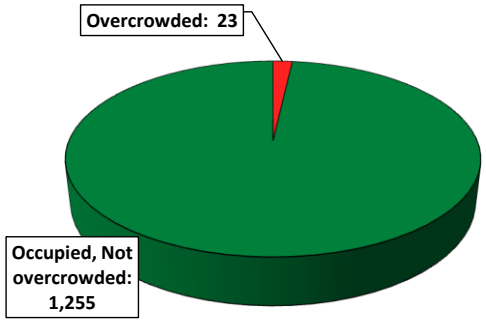


Figure H6: Housing Occupancy

MIX

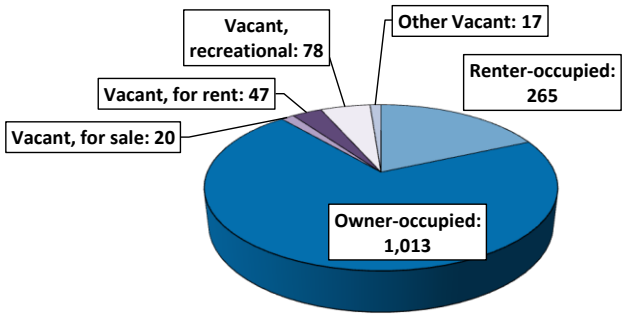


Figure H7: Average Air-Tightness of Current Homes by Decade Built

ARIS

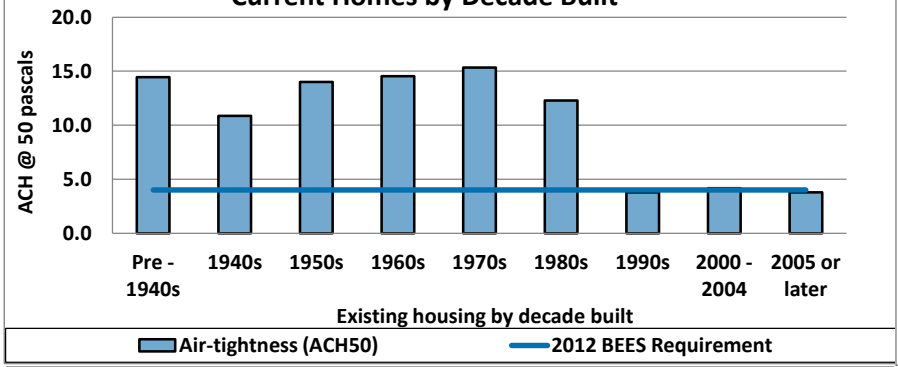


Figure H8: Existing Ventilation Type by Decade Built

ARIS

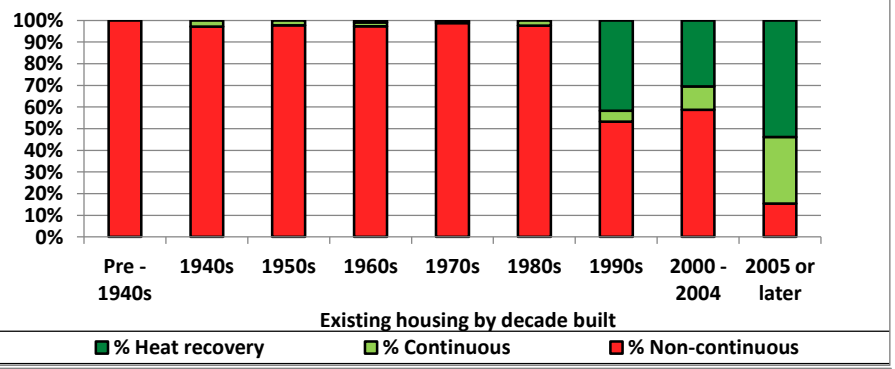


Figure H9: Percent of Housing Stock at High Risk of Moisture and Air Quality Problems

ARIS

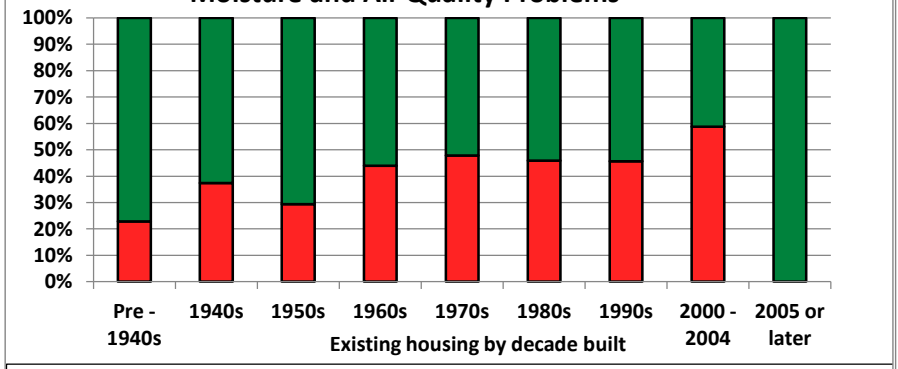
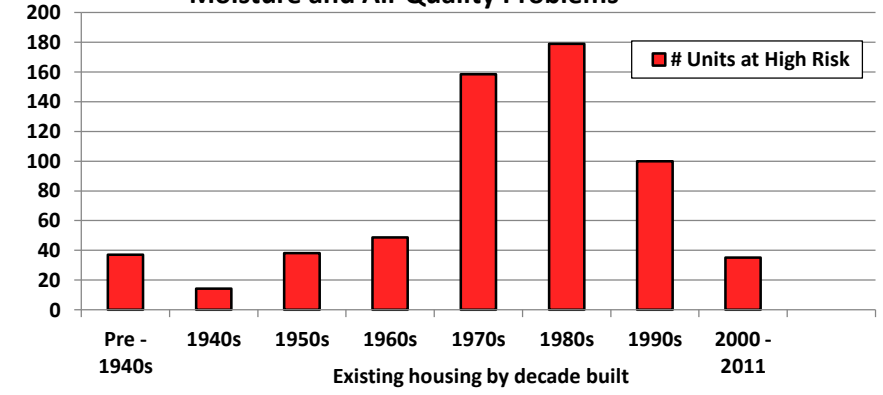


Figure H10: Quantity of Housing Stock at High Risk of Moisture and Air Quality Problems

ARIS



ENERGY - Petersburg city												
Current Petersburg 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	459	2-star	58.8	1,816	$ 4,851	176	116	25	30	108	$ 3.02	9.6
Pre- 1940	78	1-star plus	40.9	1,802	$ 5,488	210	156	22	32	123	$ 3.24	11.7
1940- 49	37	2-star	52.5	1,861	$ 5,750	207	144	31	31	117	$ 3.20	10.6
1950- 59	24	1-star	36.0	1,999	$ 7,049	281	227	22	31	145	$ 3.44	14.8
1960- 69	61	1-star plus	49.7	1,881	$ 5,447	192	142	21	29	120	$ 3.57	11.3
1970- 79	119	2-star	58.5	1,517	$ 5,053	172	117	26	29	120	$ 3.53	10.5
1980- 89	81	2-star	59.3	1,949	$ 4,642	172	119	24	29	97	$ 2.66	8.6
1990- 99	102	4-star plus	83.1	1,785	$ 3,027	106	46	19	24	62	$ 1.80	4.0
2000- 2004	24	4-star plus	84.7	2,222	$ 3,905	120	62	26	32	55	$ 1.76	3.5
2005 or later	14	5-star	89.7	2,009	$ 2,803	90	33	27	30	56	$ 1.71	2.5

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

ARIS

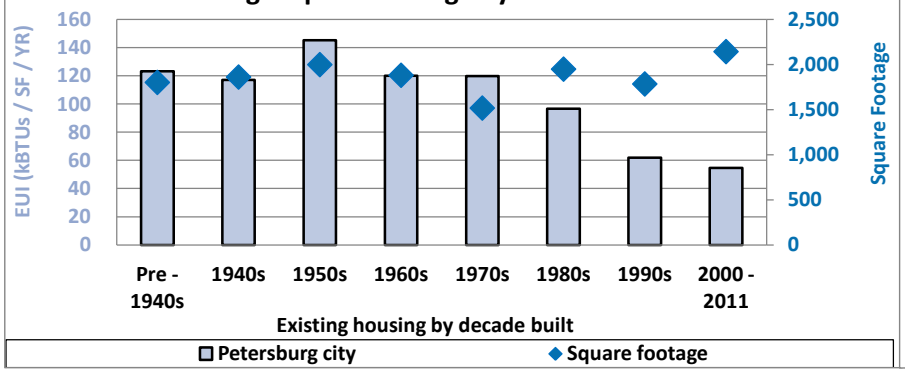
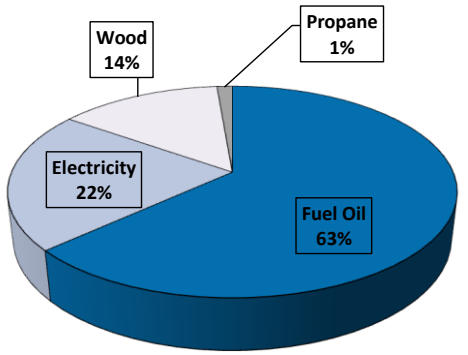


Figure H12: Percent of Total Residential Space Heating Energy by Fuel Type

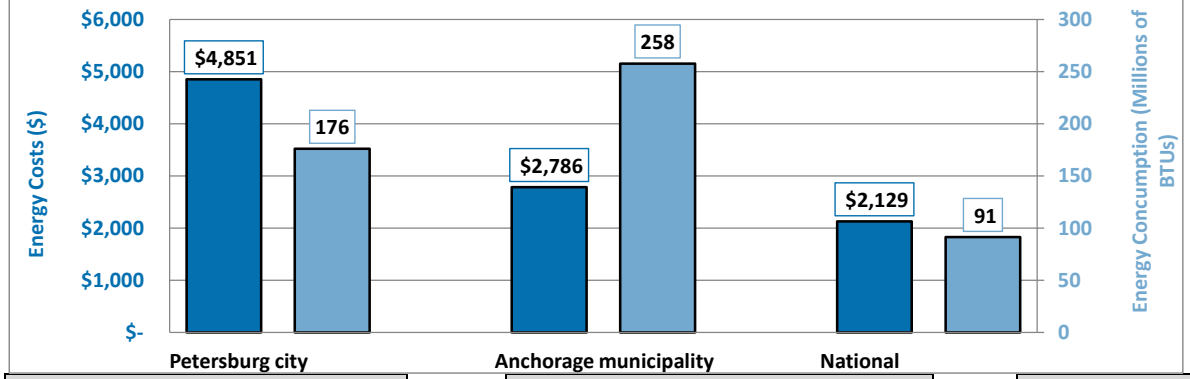
ARIS



Current Petersburg 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	459	12.2	15	10	2	17	3	3	0.40	0.40	0.61
Pre- 1940	78	14.4	11	7	2	14	2	2	0.41	0.41	0.62
1940- 49	37	10.9	11	9	2	14	2	3	0.34	NR	0.54
1950- 59	24	14.0	8	7	2	13	2	2	0.47	NR	0.67
1960- 69	61	14.5	12	9	2	14	2	NR	0.36	0.39	0.61
1970- 79	119	15.3	18	12	3	16	2	NR	0.37	0.42	0.69
1980- 89	81	12.3	19	13	3	19	2	NR	0.41	0.45	0.73
1990- 99	102	3.8	49	23	19	35	3	NR	0.26	0.26	0.31
2000- 2004	24	4.2	35	19	3	38	6	NR	0.24	0.37	0.33
2005 or later	14	3.8	36	18	NR	39	NR	NR	0.30	NR	0.33
BEES 2009 - Climate Zone 6		7.0	38	21	15	30	15	15	0.33	0.33	0.33
BEES 2012 - Climate Zone 6		4.0	43	25	15	38	15	15	0.30	0.30	0.30

Figure H13: Average Annual Home Energy Costs and Use

MIX



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

Owner-occupied House with Mortgage, Median Value
$212,100

Owner-ocupied House without a Mortgage, Median Value
$155,200

Median Annual Household Income	
Housing Units	Household Income
All-occupied	$ 70,417
Renter-occupied	$ 36,181
Owner-occupied	$ 79,263
w/ mortgage	$ 97,768
w/o mortgage	$ 36,563

Median Housing Costs		
	Monthly	Annual
All-occupied	$ 951	$ 11,412
Gross rent	$ 769	$ 9,228
Owner-occupied	$ 1,075	$ 12,900
Housing units w/ mortgage	$ 1,486	$ 17,832
Housing units w/out a mortgage	$ 505	$ 6,060

Avg % of Median Income Spent on Energy	6.9%

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

ACS

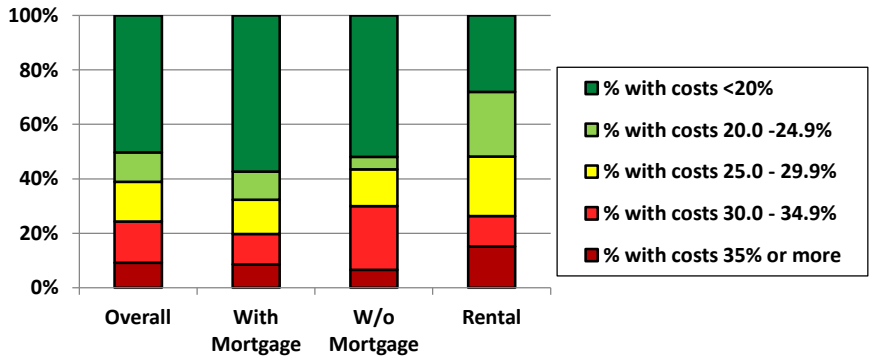
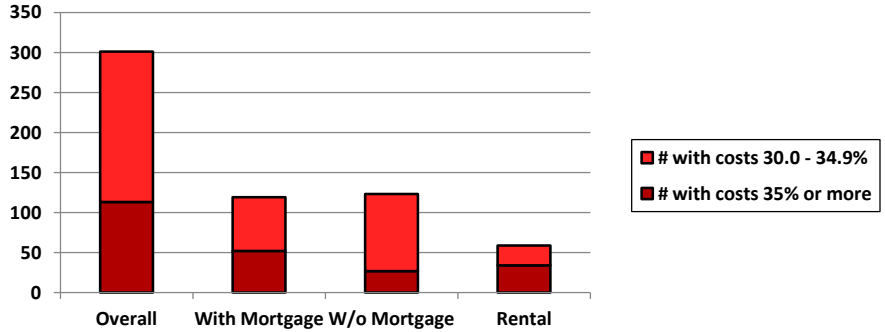


Figure H15: Number of Cost-Burdened Housing Units

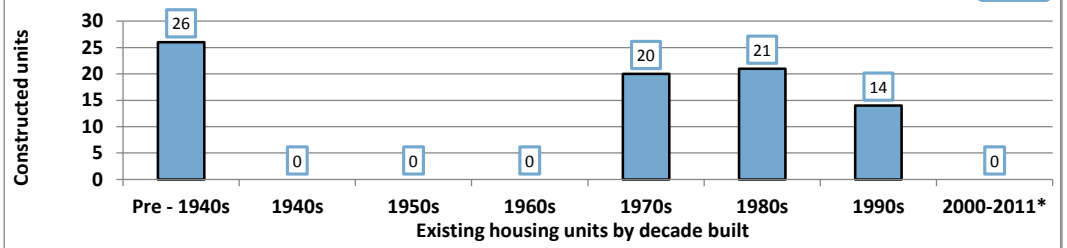
ACS



Community Profile for:	Port Alexander city	ANCSA Region	Sealaska Corporation	Climate Zone	6

Figure L1: Existing Housing by Decade Built

ACS



*Modified by data from Regional Housing Authorities

Figure L2: Population

CEN

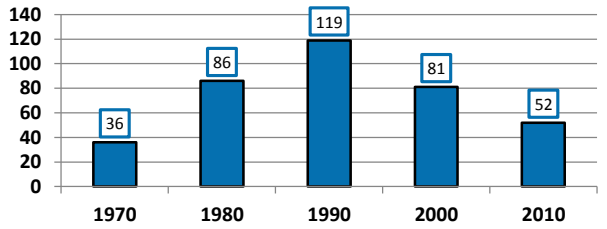


Figure L3: Overcrowded Units

ACS

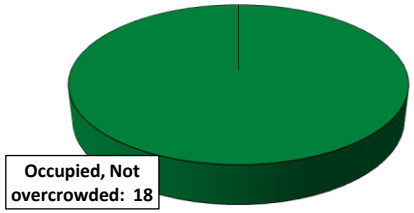


Figure L4: Housing Occupancy

MIX

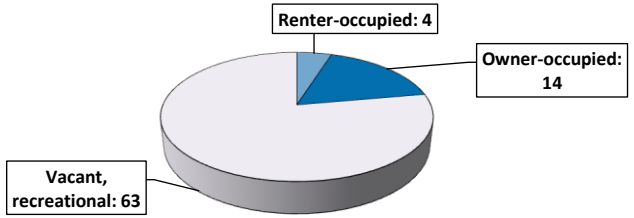
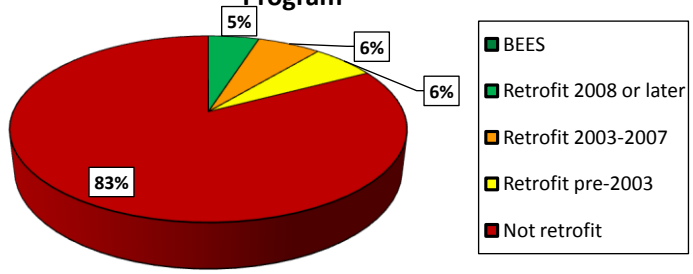


Figure L5: Affordability - Housing Costs as a Percent of Income

ACS

Figure L6: Housing Units Completing an AHFC Energy Program

ARIS



Owner-occupied House with Mortgage, Median Value
$217,500

Owner-occupied House without a Mortgage, Median Value
$162,500

Median Annual Household Income	
Housing Units	Household Income
All-occupied	$ 75,500
Renter-occupied	$ 4,167
Owner-occupied	$ 76,000
w/ mortgage	$ 75,875
w/o mortgage	NR

Median Housing Costs		
	Monthly	Annual
All-occupied	$ 2,150	$ 25,800
Gross rent	NR	NR
Owner-occupied	$ 2,150	$ 25,800
Housing units w/ mortgage	$ 2,175	$ 26,100
Housing units w/out a mortgage	NR	NR

Estimated Energy Prices as of January 2013	
#1 Fuel oil cost ($ / gallon)	$ 4.35
Electricity with PCE ($/kWh)	No PCE
Electricity without PCE ($/kWh)	$ 1.00

Housing Stock Estimates	Number of Units
All Housing	81
All Occupied Housing	18
All Vacant housing	63