City & Borough of Yakutat

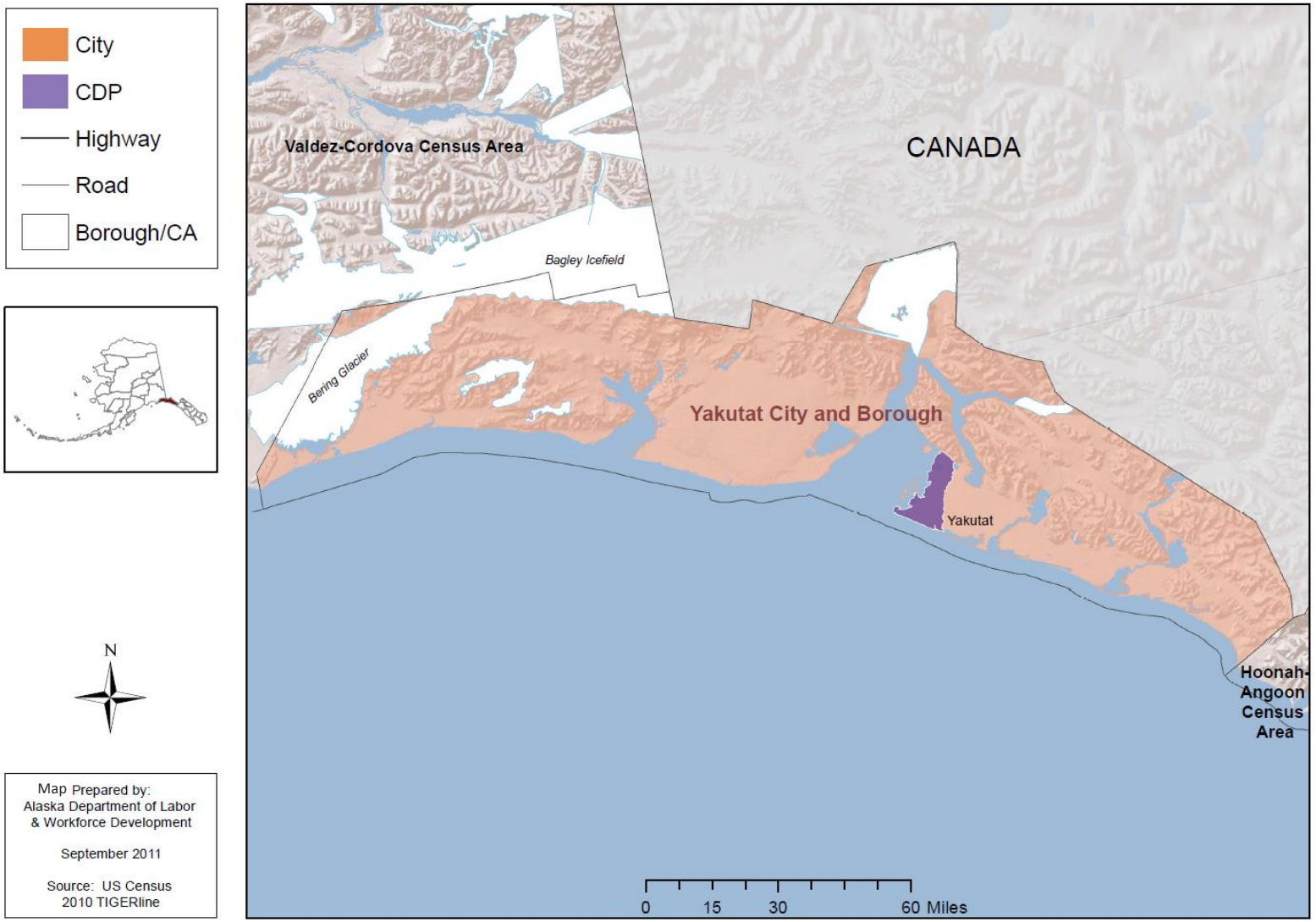


Table of Contents

Yakutat City and Borough Dashboard

Population: The Alaska Department of Labor and Workforce Development's current (2012) population estimate for the Yakutat City and Borough is 622–a decrease of 30% from 2000.

Housing Units: There are currently 449 housing units in the Yakutat City and Borough. Of these, 259 are occupied, 31 are for sale or rent, and the remaining 159 are seasonal or otherwise vacant units (Profile Figure C6).

Energy Programs: Approximately 8% of occupied housing in the Yakutat City and Borough has completed either the Home Energy Rebate, Weatherization, or BEES programs since 2008, compared to 21% statewide (Profile Figure C12).

Overcrowding: 12% of occupied units are estimated to be either overcrowded (4%) or severely overcrowded (8%). This is roughly 4 times the national average, and makes the Yakutat City and Borough the ninth most overcrowded census area in the state.

Affordability: On average, approximately 21% of households in the Yakutat City and Borough spend more than 30% of total income on housing costs, which include rent, utilities, and energy costs.

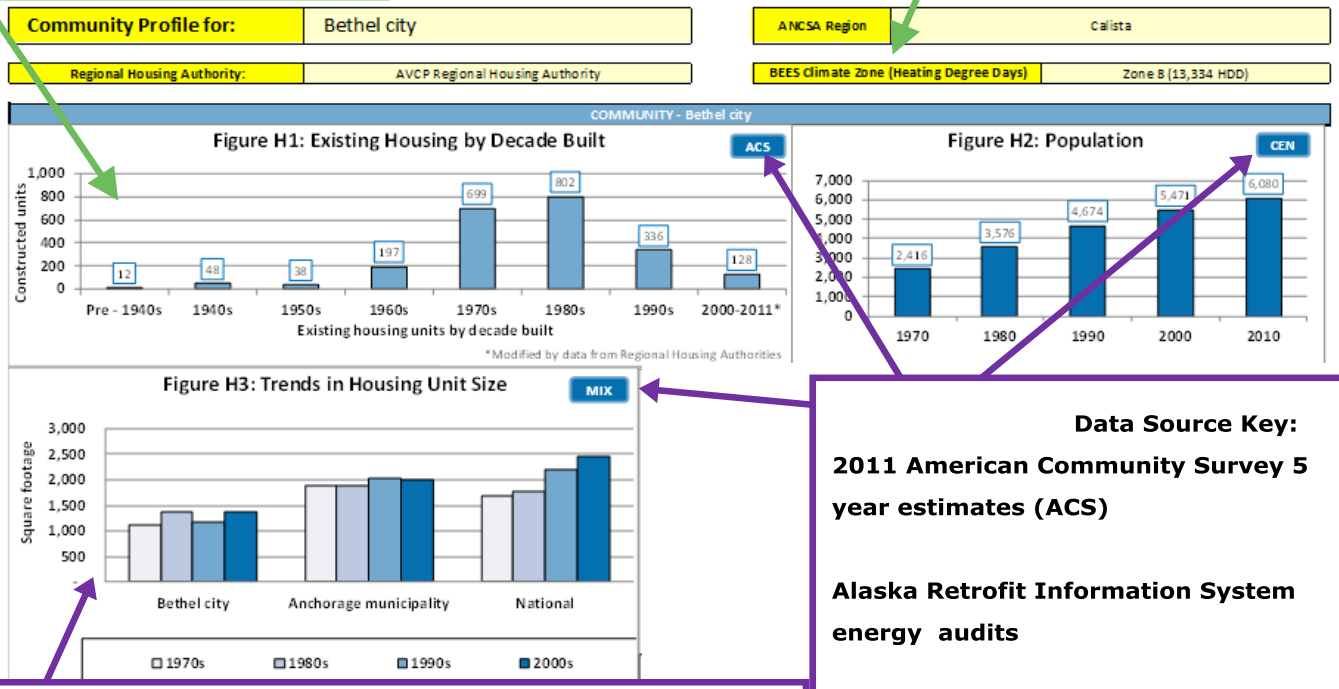
Energy, Energy Costs, Housing Quality, Air-tightness, and Ventilation: For Yakutat, lack of AKWarm rating data in the Alaska Retrofit Information System precludes reporting information for these topics.

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

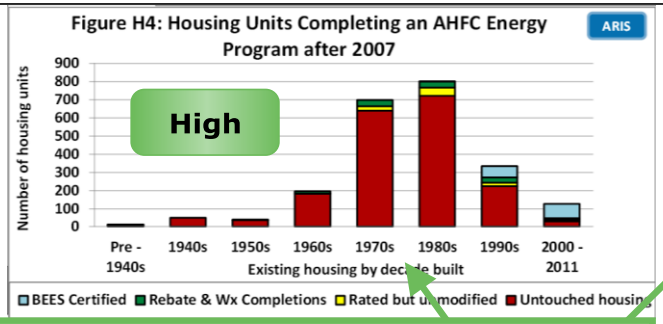
Mixed data source; see individual graphs for details. — MIX

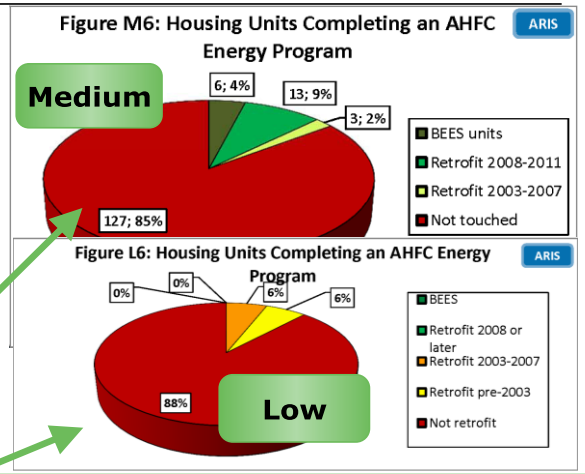
Data Sources: National trends come from the 2009 Residential Energy Consumption Statistics published by the U.S. Energy Information Administration. Anchorage and census area data come from the Alaska Retrofit Information System.

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).

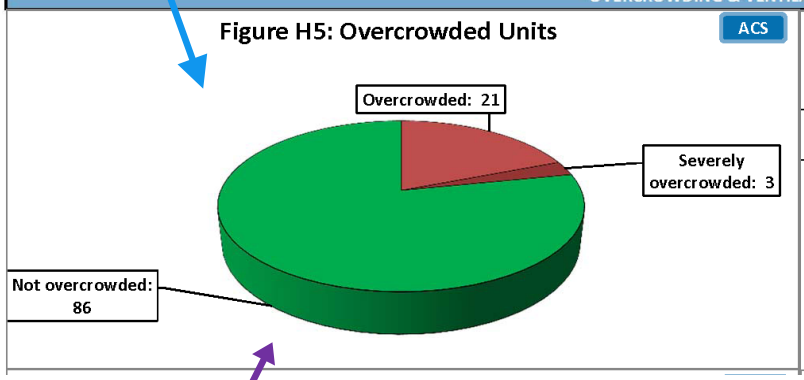
How to Interpret the Profile: Data Sources, Definitions & Clarifications

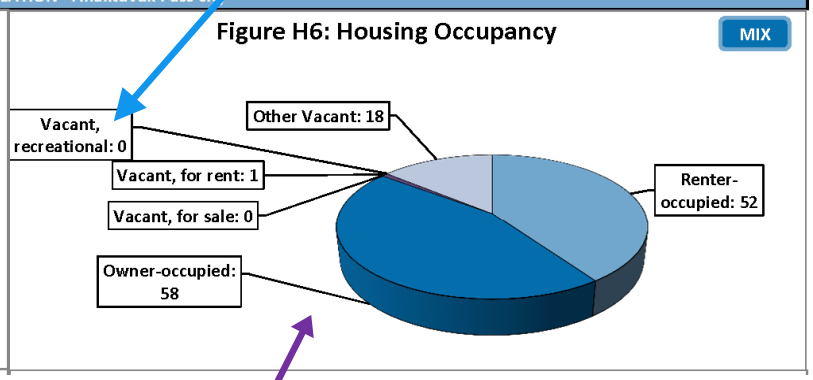
2

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

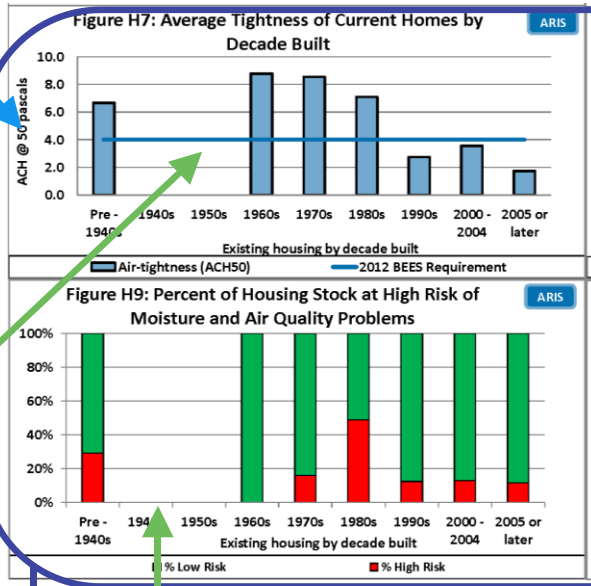
2

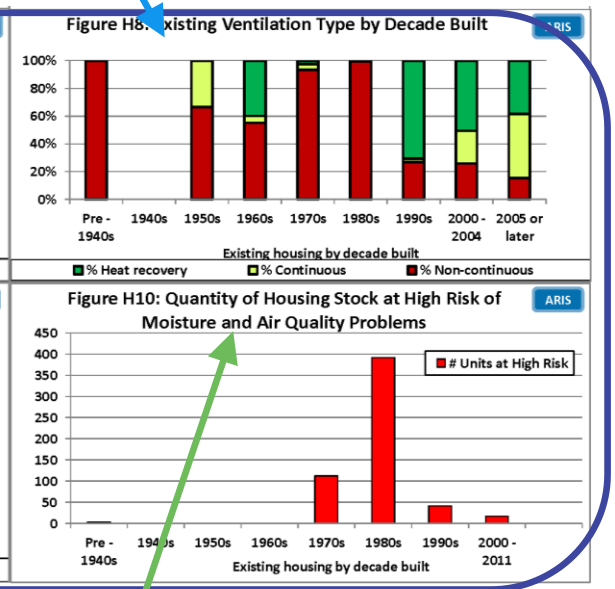
Heat Recovery: Continuous mechanical ventilation with heat recovery operated with automatic controls.

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.

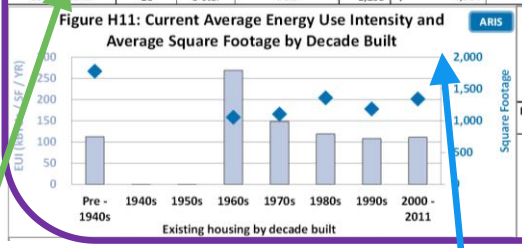
ECI: Energy Cost Index, the amount of money spent on energy per year divided by square footage.

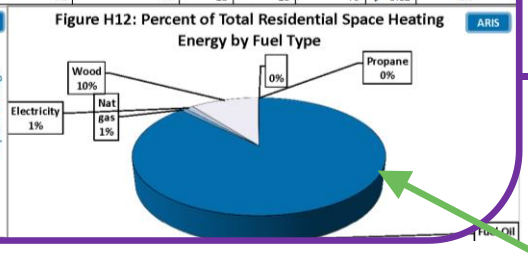
Home Heating Index: The energy used per square foot per year divided by the area's heating degree days.

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.

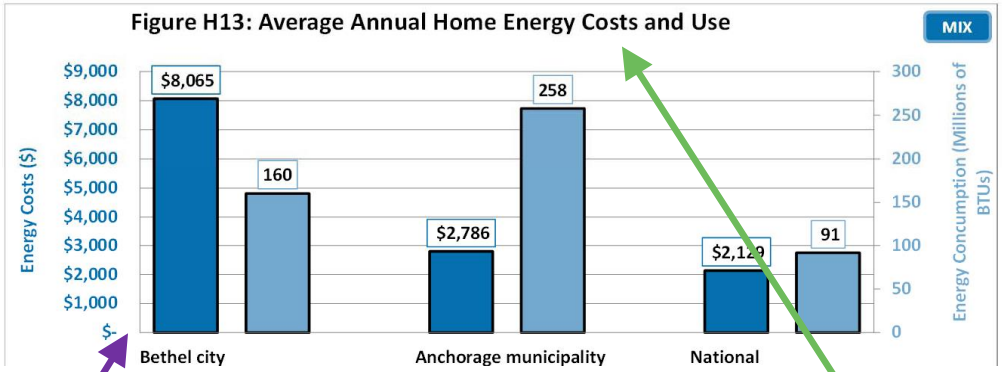
Red: value is less than 75% of the 2012 BEES requirement.

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).

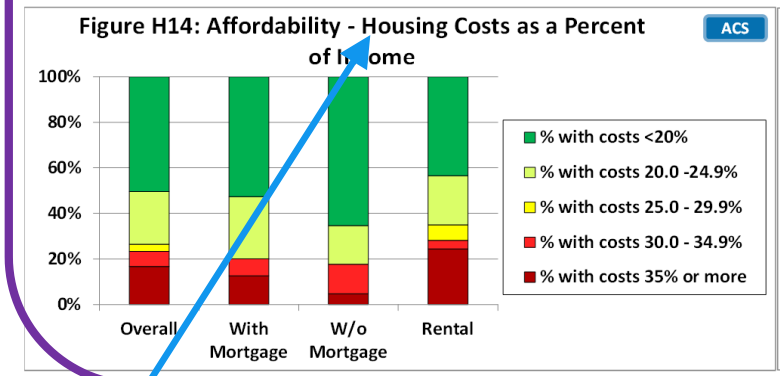
Owner-occupied House with Mortgage, Median Value
$226,800

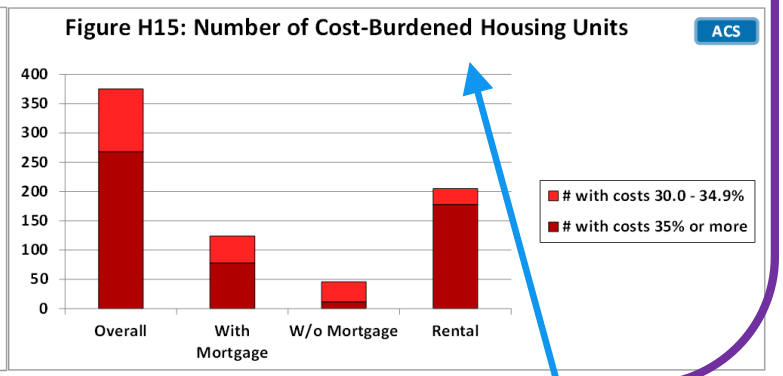
Owner-ocupied House without a Mortgage, Median Value
$119,600

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:	Yakutat City and Borough

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 - Yakutat City and Borough

Figure C1: Existing Housing by Decade Built

ACS

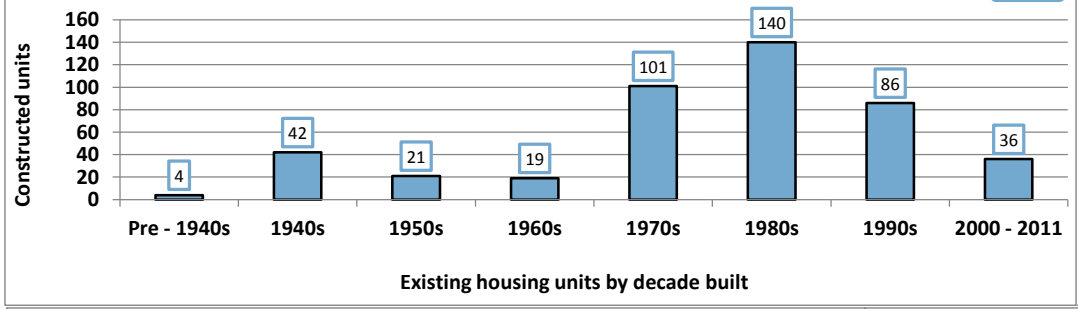


Figure C2: Population

CEN

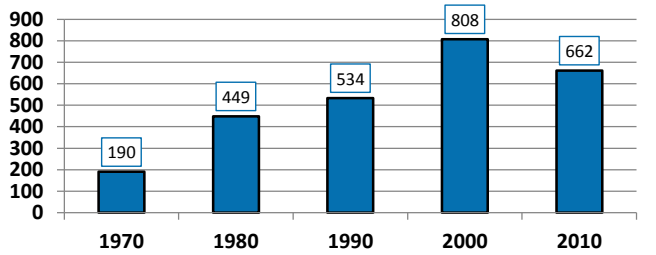


Figure C3: Trends in Housing Unit Size

MIX

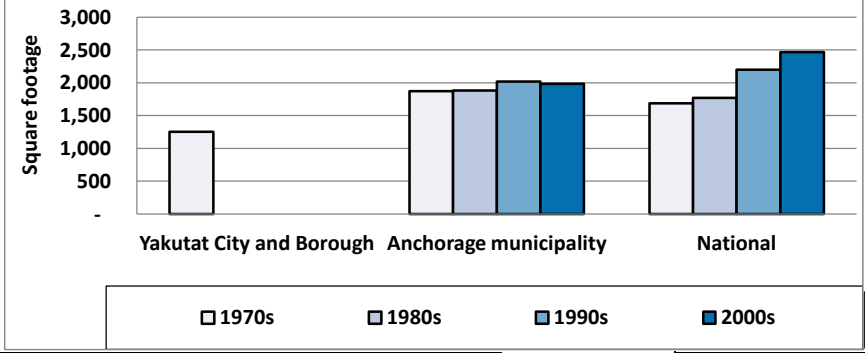
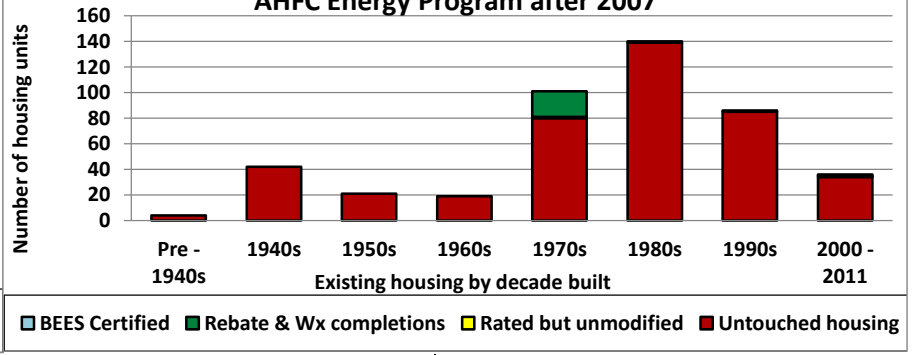


Figure C4: Housing Units Completing an AHFC Energy Program after 2007

ARIS



Houses Lacking Complete Plumbing or Kitchen Facilities	Households	
	Number	Percent
Lack complete plumbing	26	10%
Lack complete kitchen	23	9%

Avg Annual Energy Cost with PCE	$4,506
Avg Annual Energy Cost without PCE	$6,435

Weatherization Retrofits (funding increased 2008)	
Date Range	Units
2008 -2011	20
2003-2007	0
1990-2002	0

Estimated Total Annual Community Space Heating Fuel Use		
Fuel Oil	88,206	(gallons)
Natural Gas	-	(ccf)
Electricity	45,333	(kWh)
Wood	658	(cords)
Propane	-	(gallons)
Coal	-	(tons)

Housing Need Indicators	Number of Units	% Occupied Housing
Overcrowded	31	12%
Housing cost burdened	47	18%
1 Star Homes	-	0%

Housing Stock Estimates	Number of Units
All Housing	449
All Occupied Housing	259
All Vacant housing	190
Vacant Housing for Sale or Rent	31

OVERCROWDING & VENTILATION - Yakutat City and Borough

Figure C5: Overcrowded Units

ACS

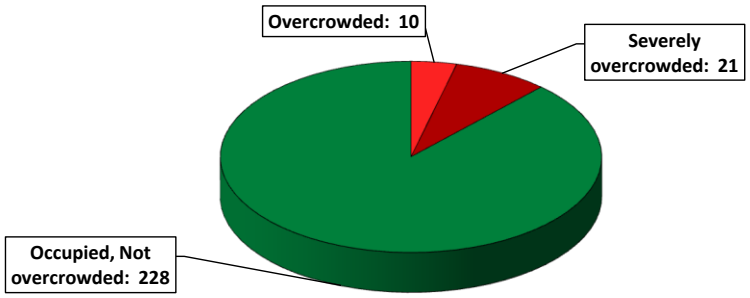


Figure C6: Housing Occupancy

MIX

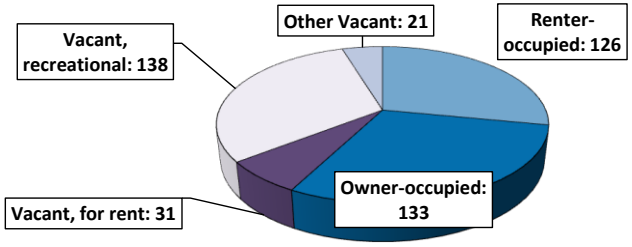


Figure C7: Average Air-Tightness of Current Homes by Decade Built

ARIS

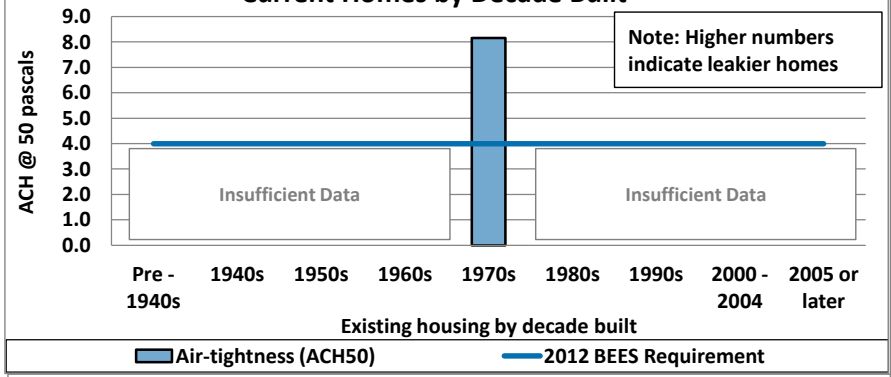


Figure C8: Existing Ventilation Type by Decade Built

ARIS

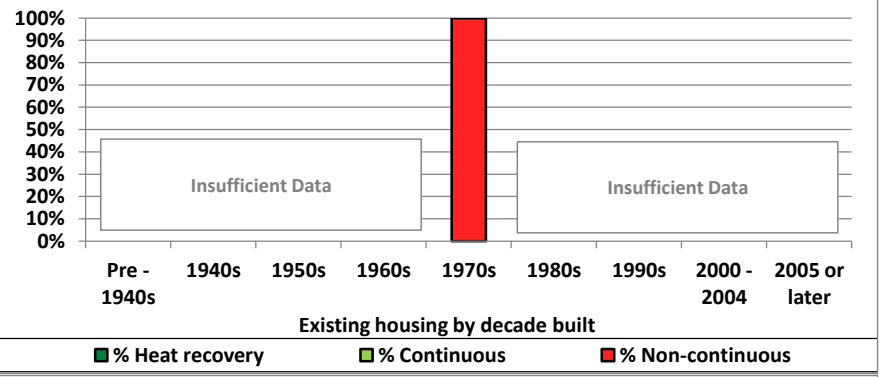


Figure C9: Percent of Housing Stock at High Risk of Moisture and Air Quality Problems

ARIS

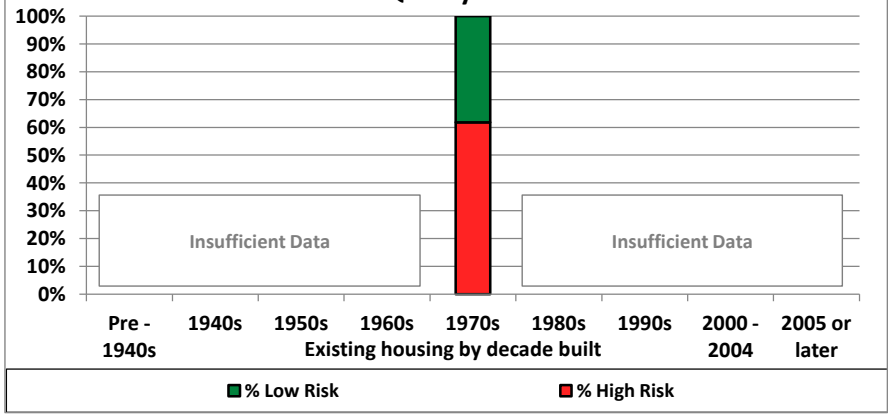
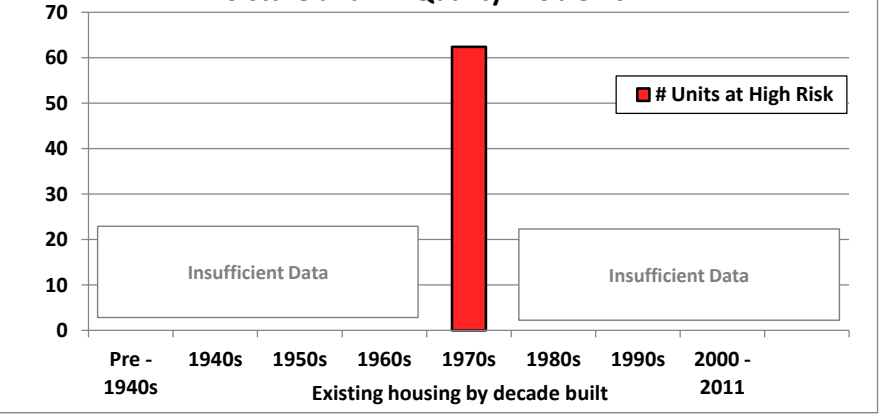


Figure C10: Quantity of Housing Stock at High Risk of Moisture and Air Quality Problems

ARIS



ENERGY - Yakutat City and Borough												
Current Yakutat City and 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 (with PCE)	Avg. Annual Energy Use (million BTUs)	Avg Ann Energy by End Use (million Btus)			Avg. EUI (kBTUS /SF)	Avg. ECI ($ / SF)	Avg. Home Heating Index
							Space Heating	DHW	Appliances			
OVERALL	25	4-star	78.5	1,397	$4,506	141	91	26	24	105	$3.73	7.1
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	0	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1960- 69	0	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1970- 79	21	3-star plus	75.8	1,253	$4,636	121	71	26	24	98	$3.79	6.0
1980- 89	1	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1990- 99	1	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
2000- 2004	0	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
2005 or later	2	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR

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

ARIS

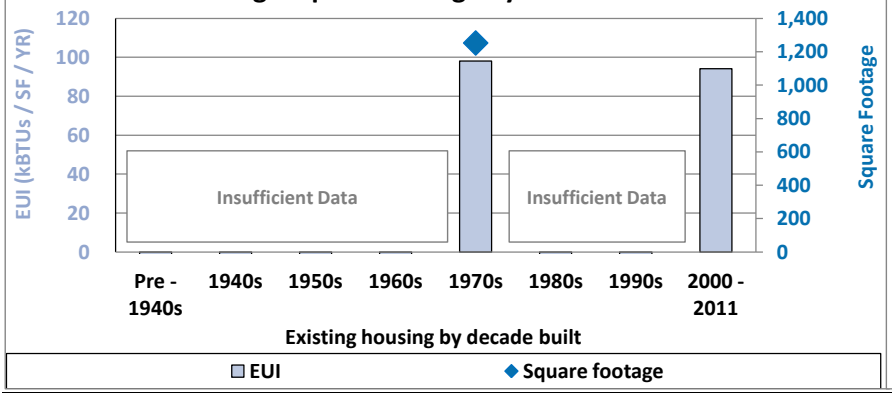
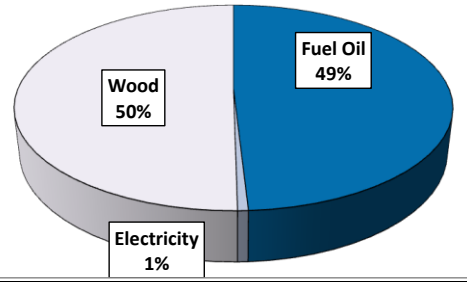


Figure C12: Percent of Total Residential Space Heating Energy by Fuel Type

ARIS



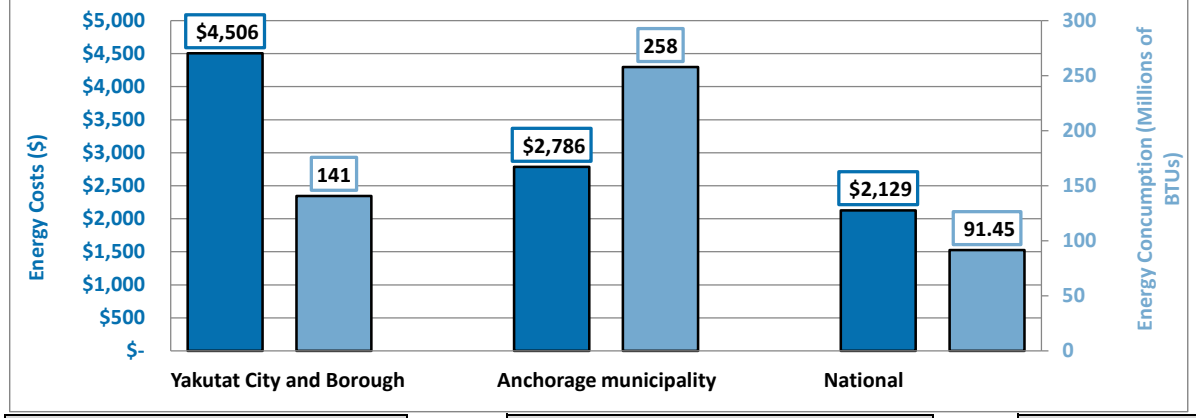
Current Yakutat City and Borough Housing Envelope Characteristics By Decade Built											
Current Residential Units by Year Built	# of AkWarm Records	ACH 50	Ceiling R	Above Grade Wall R	Below Grade Wall R	Above Grade Floor R	On Grade Floor R	Below Grade Floor R	Door U	Garage Door U	Window U
OVERALL	25	6.5	23	16	NR	18	NR	NR	0.43	NR	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	0	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1960- 69	0	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1970- 79	21	8.2	30	17	NR	20	NR	NR	0.28	NR	0.54
1980- 89	1	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
1990- 99	1	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
2000- 2004	0	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR
2005 or later	2	NR	NR	NR	NR	NR	NR	NR	NR	NR	NR

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 - Yakutat City and Borough

Figure C13: Average Annual Home Energy Cost and Use

MIX



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

Median Value of Owner-occupied House with Mortgage
$155,000

Median Value of Owner-occupied House without a Mortgage
$155,700

Median Annual Household Income	
Housing Units	Household Income
All-occupied	$ 74,844
Renter-occupied	$ 59,375
Owner-occupied	$ 90,938
w/ mortgage	$ 90,833
w/o mortgage	$ 91,250

Median Housing Costs		
	Monthly	Annual
All-occupied	$ 921	$ 11,052
Gross rent	$ 1,000	$ 12,000
Owner-occupied	$ 793	$ 9,516
Housing units w/ mortgage	$ 1,229	$ 14,748
Housing units w/out a mortgage	$ 523	$ 6,276

Avg % of Median Income Spent on Energy	6.0%

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

ACS

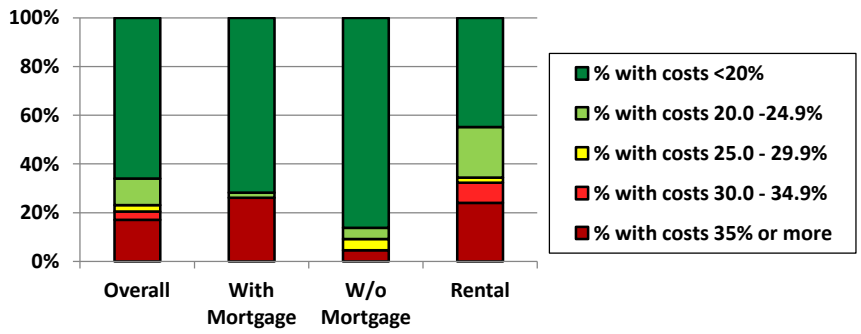


Figure C15: Number of Cost-Burdened Housing Units

ACS