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Anchorage Dashboard

Population: The Alaska Department of Labor and Workforce Development's current (2012) population estimate for the Anchorage municipality is 298,842—an increase of 15% from 2000.

Housing Units: There are currently 112,804 housing units in the Anchorage municipality. Of these, 105,123 are occupied, 3,447 are for sale or rent, and the remaining 4,234 are seasonal or otherwise vacant units (Profile Figure C6).

Energy: The average home in the Anchorage municipality is 1,888 square feet and uses 141,000 BTUs of energy per square foot annually, 3% more 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 Anchorage municipality is \$2,790, which is approximately 1.3 times more than the national average (Profile Figure C13).

Energy Programs: Approximately 23% of the occupied housing in the Anchorage municipality 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-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 before 1940 are 2.4 times leakier than those built since 2000 (Profile Figure C7).

Ventilation: An estimated 70,273 occupied housing units (or 67%) in the Anchorage municipality 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: Four percent 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 Anchorage municipality the 19th most overcrowded census area in the state.

Affordability: On average, approximately 35% of households in the Anchorage municipality 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 4% of census median area income for occupied housing.



Anchorage Summary

Community

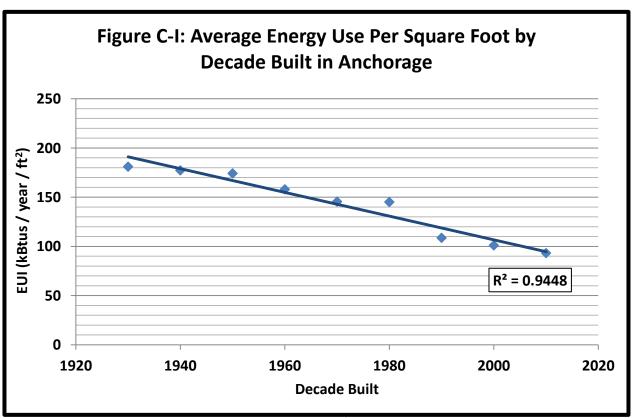
Anchorage is Alaska's largest city and is located on the shore of Cook Inlet off the Gulf of Alaska. It is located in the Cook Inlet Native Corporation ANCSA region, which is in southcentral Alaska. The average home size in Anchorage has increased over time, albeit more slowly than the national average home size. With an average size of 1,888 square feet, Anchorage homes are the 3rd largest in the state, behind those in the Matanuska-Susitna and Kenai Peninsula Boroughs.

Overcrowding

Anchorage is the 11th least crowded census area in Alaska. The average home size is 1,888 square feet and the average occupancy, at 2.7 people per household, is only above the statewide slightly of 2.67 people average household. A total of 4% of Anchorage households are overcrowded, with 1% being severely overcrowded. According to ACS data, just over 3% of all housing units are for sale (1,141 units) or rent (2,306 units).

Energy

The average annual energy use per home in Anchorage is 258 million BTUs, which results in an average



annual energy cost of \$2,786 per household. This is the lowest average annual energy cost of all Alaska census areas. Normalizing by square feet, Anchorage homes use 141,000 BTUs of energy per square foot on average, at a per square foot cost of \$1.57, the lowest of all Alaska



census areas. Energy use per square foot has decreased mostly linearly since 1930, with a noticeable drop between the 1980s and 1990s (Figure C-I).

Anchorage has the highest participation of all census areas in the Home Energy Rebate Program, with over 9% of occupied housing units taking part. Twenty-three percent of occupied housing has participated in the BEES, Weatherization, or Home Energy Rebate Programs. However, average insulation levels in on-grade and below-grade floors are much lower than BEES recommendations for homes built in all decades, and fewer than 20% of housing units built before 2005 have continuous ventilation systems. In fact, 80% of housing units built between 1990 and 2004 are relatively air-tight and lack a ventilation system, indicating they are at a higher risk for moisture- and indoor air quality-related problems. From 2005-2011, the percentage of homes built with continuous ventilation systems increased to 42%.

Affordability

According to ACS estimates¹, Anchorage census area has the highest percentage of cost-burdened housing of all census areas in the state, with 35% of all households spending more than 30% of household income on housing costs. These households include both rentals and those owning their homes. Almost half of households living in rental units are cost-burdened.

As the largest population center in Alaska, Anchorage's unique housing market and needs have been studied extensively elsewhere. For more specific, in-depth analysis of the increasingly tight housing market, affordability, and homelessness issues that Anchorage faces, please see the *Anchorage Housing Market Analysis*² and the *2013-2017 Housing and Community Development Consolidated Plan*³.

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

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.

² http://www.muni.org/Departments/OCPD/Planning/Documents/Anchorage%20Housing%20Market%20Analysis%20Summary%20Report.pdf

³ http://www.muni.org/Departments/health/services/neighborhoods/Documents/2013-2017ConsolidatedNeedsAssessmentOct2.pdf



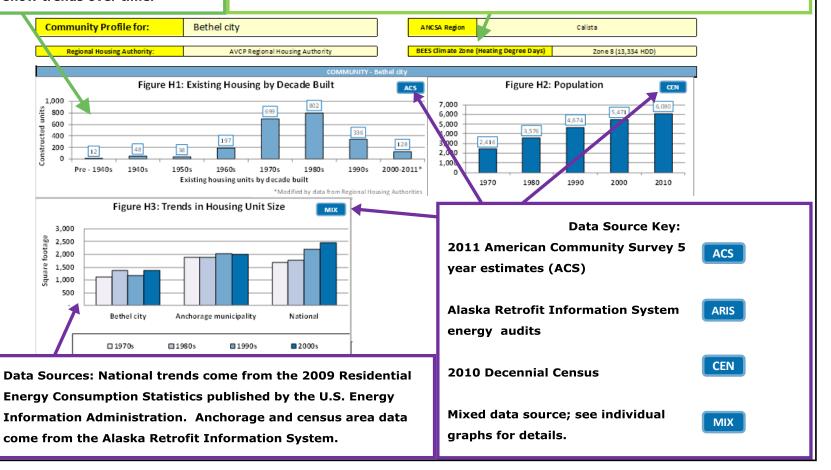
census area characterizing the housing stock from the perspective of community, overcrowding, energy and affordability. These different tiers of information and analysis allow researchers, housing authorities, policymakers and others to generate answers to specific questions. For a detailed discussion of estimating housing need and comparison of methods to previous Housing Assessments, see Appendix B, "Statewide Need Assessment" of the 2014 Alaska Housing Assessment.





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.

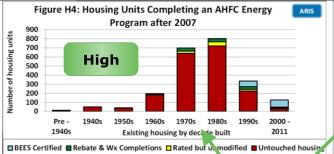
The Alaska Building Energy Efficiency Standard (BEES) was established by AHFC for the State of Alaska to promote the construction of energy efficient buildings. The standards for specific building components are divided into four climate zones, from Zone 6 in Southeast AK to Zone 9 on the North Slope.







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.

American Community Survey (ACS) Data:

Complete Plumbing: Includes hot & cold running water, a flush toilet, and a bathtub or shower within the home.

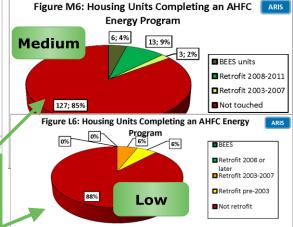
Complete Kitchen: Includes a sink with a faucet, a stove/range, and a refrigerator.

Houses Lacking Co	omplete 🚄	# Hou	se-	% House-	
Plumbing or Kitcher	ı Facilities	hold	S	holds	
Lack complete plumbi	ng	ACS	3	10%	
Lack complete kitchen			0	0%	
Estimated Total Co	mmunity S	pace Hea	iting	Fuel Use b	, 1
Fuel Oil		20,8	316	(gallo	n

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

with PCE	\$5,265		
Avg Annual Energy Cost without PCE	\$6,643		
		Α	RIS
Estimated Energy Prices a	s of January 201	3	
#1 Fuel oil cost (\$ / gallon)	\$5.16		
Electricity with PCE (\$/kWh)	\$0.03		
Electricity cost without PCE (\$/kWh)	\$0.27		

Aug Annual Engray Cost



- 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.

Weatherization Prog (funding increase	
Date Range	Units
2008-2011	17
2003-2007	-
1990-2002	10
lousing Stock Estima	tes

Housing Stock Estimates N
All Housing
All Occupied Housing
A CEN Ising
Vacant mousing for Sale or Rent

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

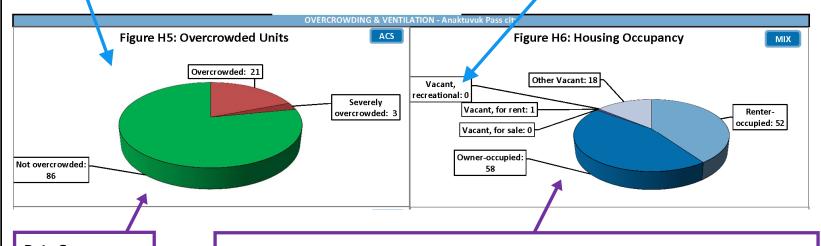




Overcrowded: Housing units with more than 1 person per room Severely Overcrowded: Housing units with more than 1.5 people per room.

"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.





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.



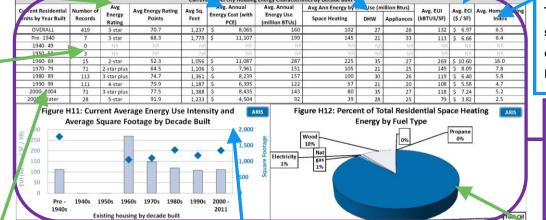


Rating stars and points are based on AHFC's AkWarm energy rating system. Average annual energy cost:
Includes all end uses. Costs
are estimated using January
2013 energy prices, and
include reductions from the
PCE program.

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.

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



Home Heating Index:

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

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.





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 Er ve	elope Characteristics By Decade Built					
	Current Residential Units by Year Built	Number of Records	ACH 50	Ceiling R	Above Grade Wall R	Below Graue 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 - Clima	te Zone 8	7.0	38	30	15	38	15	15	0.22	0.22	0.22
	BEES 2012 Clima	te 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.



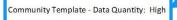


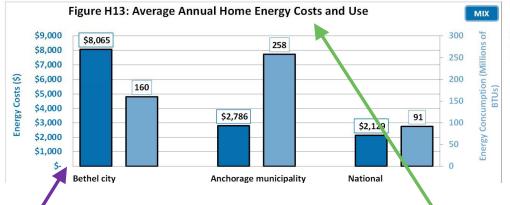
Communities are categorized in this report by the amount of ARIS data available, and reporting is more extensive for locations with more data. Data quantities are defined as--

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.





Avg Household Size (# of people)
3.4
3.7
3.1

Data Source:
2007-2011 American
Community Survey

Data Sources: Census Area and Anchorage data come from AFHC's Alaska Retrofit Information System.

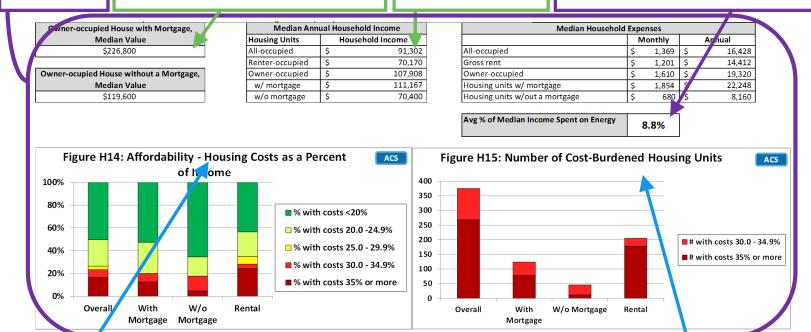
National figures come from the U.S. Energy Information Administration's 2009 Residential Energy Consumption Statistics (RECS) for "cold"/"very cold" climate regions. Average annual home energy costs and usage estimates are for all end uses, including space heating, domestic hot water, lighting and appliances. Costs are estimated using January 2013 energy prices and include reductions from the PCE program.





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).



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:

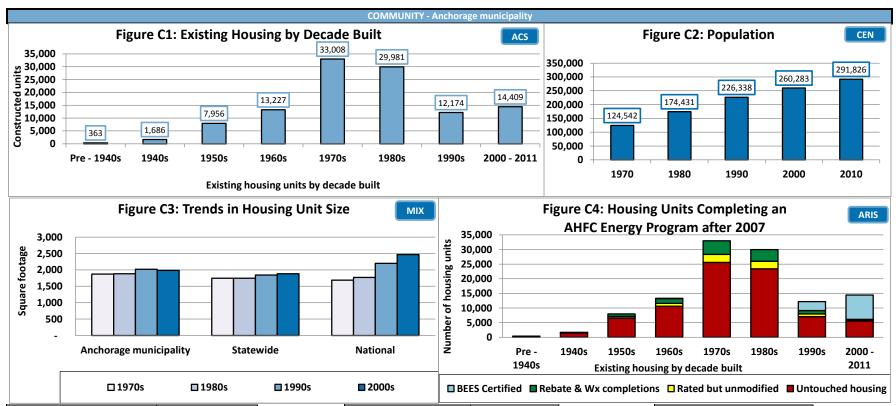
Anchorage municipality

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)



Houses Lacking Complete	Households			
Plumbing or Kitchen Facilities	Number	Percent		
Lack complete plumbing	841	1%		
Lack complete kitchen	736	1%		

Estimated Total Annual Community Space Heating Fuel Use				
Fuel Oil	201,344	(gallons)		
Natural Gas	192,380,364	(ccf)		
Electricity	108,283,655	(kWh)		
Wood	49,844	(cords)		
Propane	74,722	(gallons)		
Coal	-	(tons)		

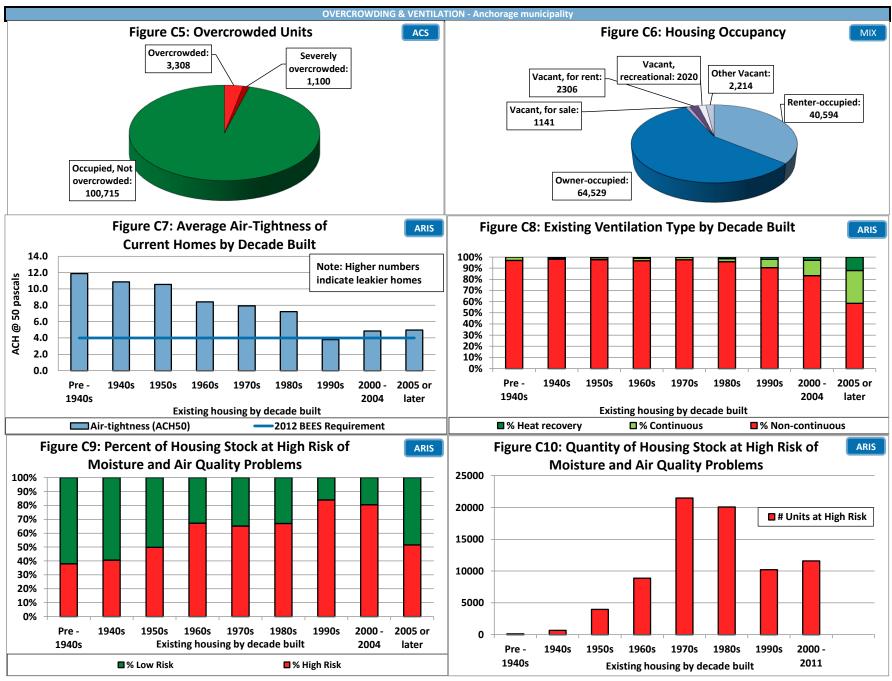
Avg Annual Energy Cost with PCE	NO PCE
Avg Annual Energy Cost without PCE	\$2,786

Housing Need Indicators	Number of Units	% Occupied Housing
Overcrowded	4,408	4%
Housing cost burdened	35,923	34%
1 Star Homes	4,337	4%

Weatherization Retrofits (funding			
increased 2008)			
Date Range	Units		
2008 -2011	2,988		
2003-2007	1009		
1990-2002	5573		

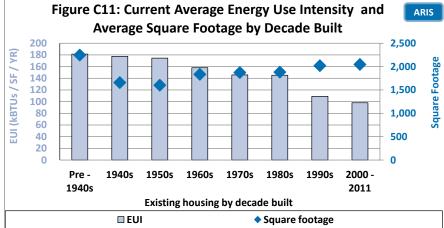
Housing Stock Estimates	Number of Units
All Housing	112,804
All Occupied Housing	105,123
All Vacant housing	7,681
Vacant Housing for Sale or Rent	3,447

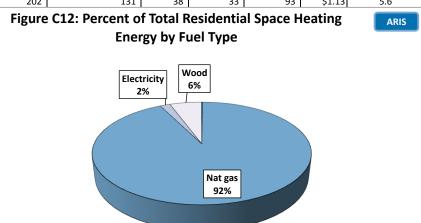






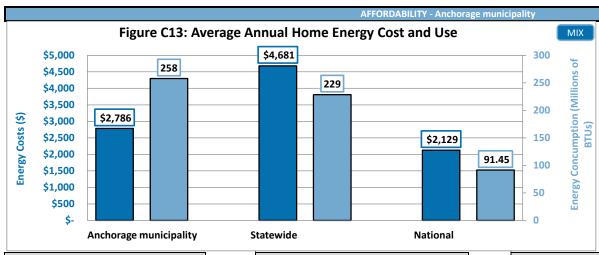
ENERGY - Anchorage municipality												
	Current Anchorage municipality Housing Energy Characteristics By Decade Built											
Current Residential	# of	Avg Energy	Avg Energy Rating	Avg Sq.	Avg. Annual	Avg. Annual	Avg Ann Energy by	nergy by End Use (million Btus)			Avg. ECI	Avg. Home
Units by Year Built	AkWarm Records	Rating Stars	Points	Feet	Energy Cost	Energy Use (million BTUs)	Space Heating	DHW	Appliances	Avg. EUI (kBTUS /SF)	(\$ / SF)	Heating Index
OVERALL	41,868	3-star	69.5	1,888	\$2,786	258	183	36	31	141	\$1.57	9.8
Pre- 1940	54	2-star	56.4	2,246	\$4,070	359	292	32	35	181	\$2.29	14.1
1940- 49	402	2-star	56.6	1,657	\$2,877	268	207	31	30	177	\$2.00	12.9
1950- 59	2,281	2-star	57.7	1,601	\$2,763	264	200	33	31	174	\$1.90	12.5
1960- 69	4,244	2-star plus	63.0	1,833	\$2,854	277	210	36	31	158	\$1.68	11.3
1970- 79	12,039	2-star plus	65.5	1,872	\$2,911	271	202	36	33	146	\$1.62	10.3
1980- 89	10,555	3-star	69.8	1,880	\$2,896	272	203	37	32	145	\$1.60	10.2
1990- 99	6,241	4-star	79.4	2,019	\$2,580	225	118	27	23	109	\$1.30	7.0
2000- 2004	6,051	4-star plus	84.3	1,986	\$2,344	198	126	41	31	101	\$1.23	6.0
2005 or later	2,990	4-star plus	84.6	2,167	\$2,366	202	131	38	33	93	\$1.13	5.6





	□ EUI			• Square lootage							
Current Anchorage municipality 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	41,868	7.3	25	12	4	18	3	3	0.36	0.36	0.51
Pre- 1940	54	11.9	18	10	3	10	3	2	0.44	0.33	0.58
1940- 49	402	10.9	18	9	3	14	3	2	0.45	0.30	0.58
1950- 59	2,281	10.6	20	10	3	14	2	2	0.41	0.38	0.57
1960- 69	4,244	8.4	21	11	4	17	2	2	0.41	0.39	0.57
1970- 79	12,039	7.9	23	11	4	17	2	2	0.38	0.39	0.54
1980- 89	10,555	7.2	27	12	4	18	2	3	0.37	0.40	0.51
1990- 99	6,241	3.8	40	21	6	27	3	3	0.25	0.24	0.35
2000- 2004	6,051	4.8	38	16	14	25	3	3	0.24	0.20	0.36
2005 or later	2,990	5.0	38	16	11	25	3	3	0.23	0.20	0.36
	· · · · · · · · · · · · · · · · · · ·		·				·	·		·	
BEES 2009 - Climate Zone 7 7.0 38 21 15 38 15 15 0.33 0.33							0.33	0.33			
BEES 2012 - Climat	e Zone 7	4.0	43	25	15	38	15	15	0.30	0.30	0.30





Housing Information	Avg Household Size (# of people)
All-occupied	2.7
Owner-occupied	2.8
Renter-occupied	2.5

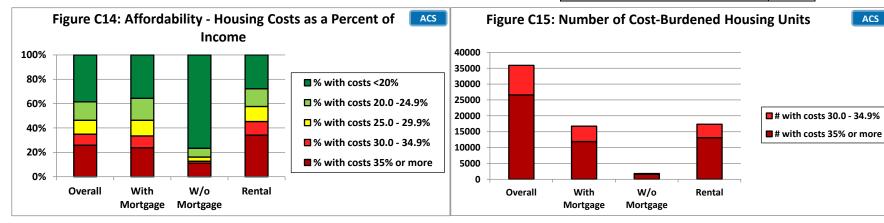
Median Value of Owner-occupied House with Mortgage \$280,700

Median Value of Owner-occupied House without a Mortgage \$253,000

Median Annual Household Income							
Housing Units		Household Income					
All-occupied	\$	75,485					
Renter-occupied	\$	46,705					
Owner-occupied	\$	96,821					
w/ mortgage	\$	102,956					
w/o mortgage	\$	72,970					

Median Housing Costs								
		Monthly			Annual			
All-occupied	Ç	5	1,401	\$	16,812			
Gross rent	\$	5	1,058	\$	12,696			
Owner-occupied	Ç	5	1,746	\$	20,952			
Housing units w/ mortgage	Ç	5	1,997	\$	23,964			
Housing units w/out a mortgage	Ç	5	663	\$	7,956			

Avg % of Median Income Spent on Energy 3.7%



ACS