How Does the ACS Compare to Local Utility Data for Understanding Local Housing Occupancy?

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What I Will Be Covering

- A Case Study Looking at Occupied Housing Units
- Looked at One, Three, and Five Year ACS
- Developed a typology of results.
 - Signal
 - Change
 - Review
 - Okay: Enough consistency after study to say nothing needs to change (Two Counties)





The Importance of Occupied Unit Information

- Key part of Nevada estimates
 - Certified estimate is (Housing Unit-based estimate plus Regression-based estimate)/2
- Estimates used to distribute \$2 Billion from 1999 to 2011 among local governments based on population and assessed valuation change.
- Control totals for other estimates
- Still recovering from the housing bubble



For the housing unit-based estimate we must use by regulation:

- Assessor housing counts or local government counts
- An occupancy rate

There were a number of issues in comparing the local housing counts to the Census especially in 2010.

- Non-traditional housing units such as unpermitted units, RV's, and daily/weekly/monthly units
- New condominium developments



How well do the overall local housing counts and Census compare?

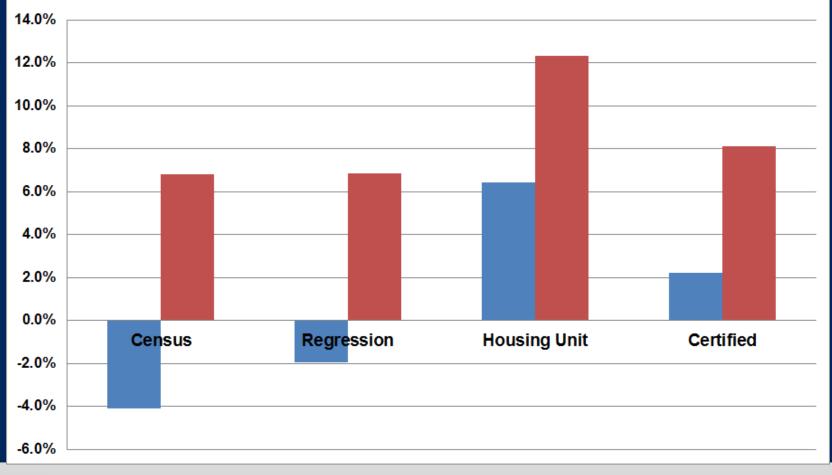
Table 1: Comparison of Nevada Local and Census Housing Counts 2000 and 2010													
	Total Counts					Differences Between Local and Census					Change Between Counts		
	2000	2000	2010	2010		2000	2000	2010	2010	Change in	Change		
							%		%	Local	in	Local	
						Assessor	Difference	Assessor	Difference	Count	Census	Change	
	Assessor		Assessor			Less	Census	Less	Census	2000 to	Count	Less	
	Plus Other	Census	Plus Other	Census		Census	Less Other	Census	Less Other	2010	2000 to	Census	
Carson City	21,432	21,283	23,652	23,534		149	0.7%	118		2,220	2,251	-31	
Churchill	9,923	9,732	11,099	10,826		191	2.0%	273	2.5%	1,176	1,094	82	
Clark	562,965	559,799	816,263	840,343		3,166	0.6%	-24,080	-2.9%	253,298	280,544	-27,246	
Douglas	19,009	19,006	24,218	23,671		3	0.0%	547	2.3%	5,209	4,665	544	
Elko	17,129	18,456	19,181	19,566		-1,327	-7.2%	-385	-2.0%	2,052	1,110	942	
Esmeralda	902	833	891	850		69	8.3%	41	4.8%	-11	17	-28	
Eureka	945	1,025	994	1,076		-80	-7.8%	-82	-7.6%	49	51	-2	
Humboldt	6,757	6,954	7,116	7,123		-197	-2.8%	-7	-0.1%	359	169	190	
Lander	2,758	2,780	2,685	2,575		-22	-0.8%	110	4.3%	-73	-205	132	
Lincoln	1,809	2,178	2,551	2,730		-369	-16.9%	-179	-6.6%	742	552	190	
Lyon	14,769	14,279	23,057	22,547		490	3.4%	510	2.3%	8,288	8,268	20	
Mineral	2,508	2,866	2,308	2,830		-358	-12.5%	-522	-18.4%	-200	-36	-164	
Nye	15,830	15,934	22,687	22,350		-104	-0.7%	337	1.5%	6,857	6,416	441	
Pershing	2,526	2,389	2,555	2,464		137	5.7%	91	3.7%	29	75	-46	
Storey	1,624	1,596	2,026	1,990		28	1.8%	36	1.8%	402	394	8	
Washoe	146,423	143,908	179,241	184,841		2,515	1.7%	-5,600	-3.0%	32,818	40,933	-8,115	
White Pine	4,312	4,439	4,699	4,498		-127	-2.9%	201	4.5%	387	59	328	
Nevada Total	831,621	827,457	1,145,223	1,173,814		4,164	0.5%	-28,591	-2.4%	313,602	346,357	-32,755	
Assessor Plus Other includes the local assessor counts plus any reservation or military housing in each county.													

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Chart 1: Comparing July 2010 Rebased Population Estimates for Nevada's 17 Counties to Census Evaluation, Nevada Regression Model, Housing Unit, and Certified Estimates

Mean Algebraic Percent Error
Mean Absolute Percent Error





Occupancy rate approaches:

- 2000 to 2010
 - Clark County used USPS and later in the decade local energy data
 - For other counties from 2001 to 2010 local energy data used where possible
- Post-2010 we are using a modified version of Florida's approach
 - Florida uses direct estimate of occupied units by ratio
 - We update the 2010 Census rate using a ratio with Local Electric Data in Nevada.





ACS provides three estimates to consider

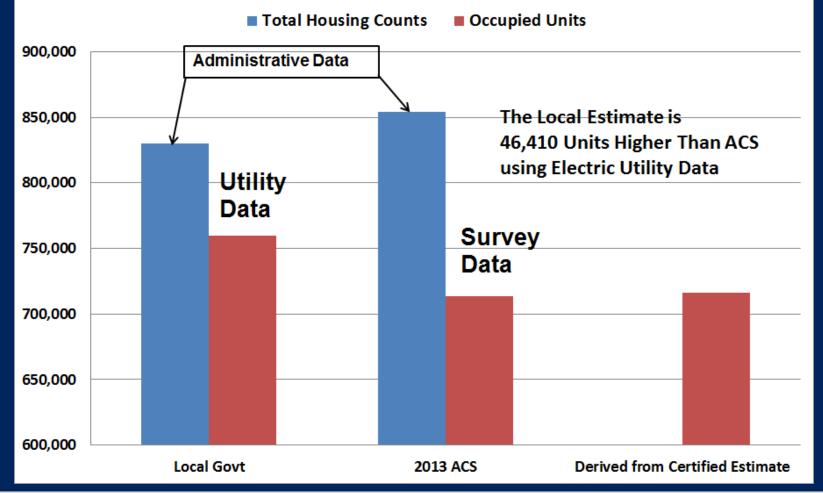
- Administrative Record Based
 - Population (averages for multiyear)
 - Housing Counts (average for multiyear)
- Occupied Unit Counts (weighted survey results)

Maybe useful for signaling that there continues to be unresolved issues with local housing markets

- Is it a better source?
- Timeliness impacts ability to use for certified estimates.
- How to use for determining trends.









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Chart 3: Comparing 2013 Total and Occupied Units Counts for Washoe County, Nevada from Local Government and Energy Data, and Estimated from Certified Estimate

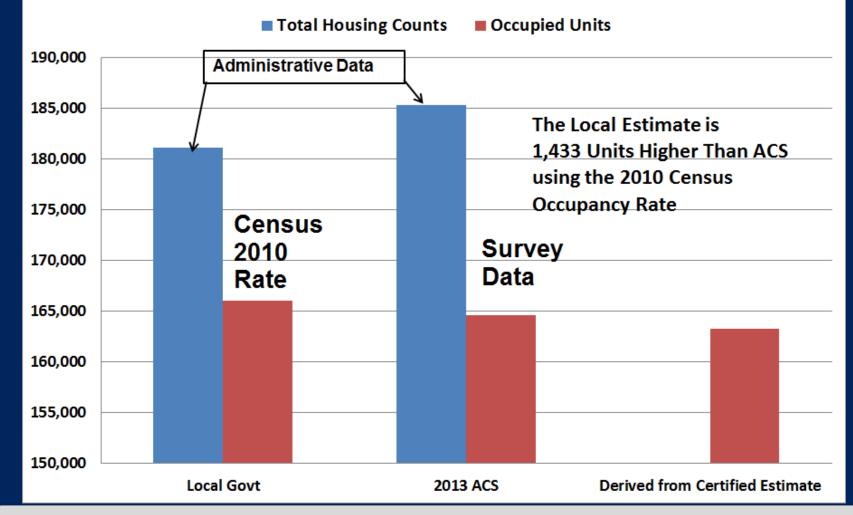




Table 2: Comparing 2009 to 2013 ACS Occupancy to Local Occupied Unit Estimates for 2011 For Counties With Local Energy Data

	2010 Coverage Rate (Compared to Loca		rcentage Diff Occupied Unit		Nevada Population			
		Local	Nevada	Nevada	Implied	Estimate Less Census Population	PPHH	
	Census	Energy	Less ACS	Less ACS	Less ACS		ACS)/MOE	Category
Pershing	99%	99%	-50	-2.4%	-4.6%	0.3%	1.3	Change
Storey	98%	99%	-101	-5.5%	-4.9%	1.3%	1.1	Change
Esmeralda	102%	95%	-86	-18.0%	-14.5%	-19.2%	0.0	Review
Humboldt	99%	91%	182	2.9%	0.9%	2.0%	0.3	Review
Lander	94%	114%	270	13.4%	11.3%	2.4%	1.2	Review
Mineral	115%	121%	-616	-28.7%	-16.6%	-2.7%	0.1	Review

Six Counties are reported in the 2009 to 2013 ACS and local utility data.



Counties

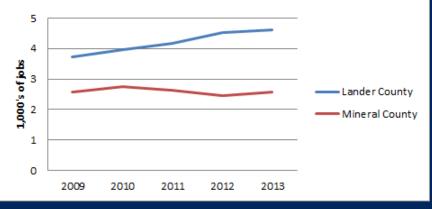
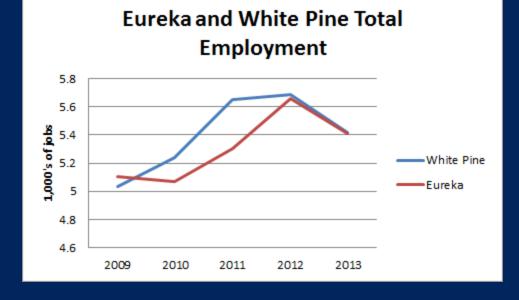




Table 3: Comparing 2009 to 2013 ACS Occupancy to Local Occupied Unit Estimates for 2011 For Counties Using 2010 Census Occupancy Rate

						Nevada		
	2010 Coverage Rate	2011 Perc	entage Di	fferences	Population			
	(Compared to Loca	Oc	cupied Un	its	Estimate	(Census		
						Less	PPHH	
		Local	Nevada	Nevada	Implied	Census	Less	
	Census	Energy	Less ACS	Less ACS	Less ACS	Population	ACS)/MOE	Category
Eureka	101%	0%	85	11.5%	14.2%	10.5%	0.2	Review
Lincoln	110%	0%	-128	-6.5%	0.6%	-0.2%	0.3	Review
White Pine	102%	0%	294	8.8%	6.5%	-0.2%	2.3	Change

Three Counties are reported in the 2009 to 2013 ACS but do not have local energy data.





Conclusions

- Important to understand controls, time frame, and possible interaction between them. (see Realizing the Potential of the American Community Survey: Challenges, Tradeoffs, and Opportunities www.nap.edu)
- 5 year estimates are hard to interpret.
- Does overlap matters if looking at trends?





Lessons and Comments Learned While Putting This Together

- The H31 Units In Structure For Vacant Housing Units Table is gone.
- There are still questions about the use of ACS for affordable housing grant programs.
- The MOE is a problem for folks dealing with small geographies and determining program qualifications.
- Programs need time to grow, sampling error may move an area in and out of programs and destabilize funding.



Sources:

Cresce, Arthur R. (2012). Evaluation of Gross Vacancy Rates From the 2010 Census Versus Current Surveys: Early Findings from Comparisons with the 2010 Census and the 2010 ACS 1-Year Estimates. Paper presented at the January 2012 meeting of the Federal Committee on Statistical Methodology in Washington, DC. SEHSD Working Paper Number 2012-07. Available: http://www.census.gov/housing/files/FCSM%20paper.pdf [March 2014]

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