

APPENDIX B

Countywide Growth Assumptions 2035

bae urban economics

MEMORANDUM

To: Coleen Shade, RO Anderson
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From: Matt Kowta, Principal
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Date: January 17, 2012

Re: Plumas County General Plan Long-Range Housing Growth Projections

To support preparation of the Environmental Impact Report (EIR) for the Plumas County General Plan Update, BAE Urban Economics (BAE) has developed a set of assumptions regarding new housing development over the General Plan time horizon, through 2035. The purpose of this memo is to present the countywide growth assumptions, developed based on historic trends, a review of available literature regarding trends in second homeownership, and Countywide population and housing unit projections. This memo distinguishes between anticipated countywide growth in housing units occupied by full-time County residents and growth in housing units that would be occupied for seasonal or vacation use.

Historic Housing Growth

Table 1 draws on data from the 1990, 2000, and 2010 Censuses as well as the 2008-2010 American Community Survey in order to track the historic growth in Plumas County's housing stock and its permanent resident population. The County's permanent residential population grew by 1,085 persons (5.5 percent) between 1990 and 2000, reaching a high of 20,824 residents, before losing 817 residents (-3.9 percent) between 2000 and 2010. During the same time period, the average household size decreased steadily from 2.43 persons per household in 1990, to 2.31 persons per household in 2000, and dropped to 2.23 persons per household by 2010. In other words, the average Plumas County household includes more than two persons, but smaller households are becoming more predominant over time.

The growth in the number of housing units in Plumas County has consistently exceeded the growth in the County's residential population during the past two decades. Indeed, between 1990 and 2000, the housing stock grew by 12.1 percent, or 1,444 units, even though the number of resident households grew by only 10.8 percent during the same time period. These trends became even more marked during the nationwide housing boom between 2000 and 2010, during which time the Plumas County housing stock increased by

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16.3 percent, or 2,180 units, even as the number of resident households dropped by 0.3 percent. In other words, the trend of housing production outpacing local population needs dates back to the 1990s, though it became more pronounced in the 2000s.

The U.S. Census categorizes vacation homes as a sub-type of vacant housing units. The number of housing units categorized as “seasonal, recreational, or occasional use” grew from 3,054 units in 1990 to 3,346 units in 2000, and then to 5,230 in 2010. This represented an increase of 9.6 percent in the 1990s, a rate slightly below the overall housing growth rate of 12.1 percent, and boomed in the 2000s, growing by 56.3 percent even as the overall housing inventory increased by only 16.3 percent. This sudden burst in vacation home construction may be partly due to the nationwide housing boom, the increased interest in mountain recreation opportunities outside of the Tahoe region, increasing income levels among households residing in the upper Sacramento Valley, and the large numbers of baby boomers reaching the age and financial security status where second home purchases are most attractive.

¹ Burger, B.M and Carpenter, R. 2010. “Rural Real Estate Markets and Conservation Development in the Intermountain West: Perspectives, Challenges and Opportunities Emerging from the Great Recession.” Lincoln Institute of Land Policy Working Paper.

Table 1: Plumas County Population and Household Characteristics, 2010

	1990		2000		2010		1990-2000 Growth		2000-2010 Growth	
	Number	%	Number	%	Number	%	Number	%	Number	%
Population	19,739		20,824		20,007		1,085	5.5%	(817)	-3.9%
Households	8,125		9,000		8,977		875	10.8%	(23)	-0.3%
Avg. Household Size	2.43		2.31		2.23					
Housing Units	11,942		13,386		15,566		1,444	12.1%	2,180	16.3%
Housing Type										
Single-Family	9,044	75.7%	10,581 (a)	79.0%	12,883 (b)	83.0%	1,537	17.0%	2,302	21.8%
Multifamily	904	7.6%	772 (a)	5.8%	830 (b)	5.3%	(132)	-14.6%	58	7.5%
Mobile Homes	1,812	15.2%	1,794 (a)	13.4%	1,696 (b)	10.9%	(18)	-1.0%	(98)	-5.5%
Other	182	1.5%	239 (a)	1.8%	115 (b)	0.7%	57	31.3%	(124)	-51.9%
Total, All Units	11,942	100.0%	13,386 (a)	100.0%	15,524 (b)	100.0%	1,444	12.1%	2,138	16.0%
Housing Occupancy Status										
Occupied	8,125	68.0%	9,000	67.2%	8,977	57.7%	875	10.8%	(23)	-0.3%
Vacant	3,817	32.0%	4,386	32.8%	6,589	42.3%	569	14.9%	2,203	50.2%
Total, All Units	11,942	100.0%	13,386	100.0%	15,566	100.0%	1,444	12.1%	2,180	16.3%
Household Tenure										
Renter-occupied	2643	32.5%	2,699	30.0%	2,742	30.5%	56	2.1%	43	1.6%
Owner-occupied	5482	67.5%	6,301	70.0%	6,235	69.5%	819	14.9%	(66)	-1.0%
Total, Occupied Units	8,125	100.0%	9,000	100.0%	8,977	100.0%	875	10.8%	(23)	-0.3%
Vacant Unit Characteristics										
For Sale or Rent	340	8.9%	487	11.1%	766	11.6%	147	43.2%	279	57.3%
Rented or Sold, Not Occupied	83	2.2%	76	1.7%	37	0.6%	(7)	-8.4%	(39)	-51.3%
Seasonal, Recreational, or Occasional Use	3,054	80.0%	3,346	76.3%	5,230	79.4%	292	9.6%	1,884	56.3%
Other, inc. Migrant Workers	340	8.9%	477	10.9%	556	8.4%	137	40.3%	79	16.6%
Total, Vacant Units	3,817	100.0%	4,386	100.0%	6,589	100.0%	569	14.9%	2,203	50.2%

Note:

(a) The source for this data is the 2000 Census Summary File 3 data, as opposed to the Summary File 1 data reported for the other 2000 statistics in this table.

(b) The source for this data is the 2008-2010 American Community Survey. Because the other statistics in the table are collected by the U.S. Census, a different data source, there is a small discrepancy in the total number of housing units.

Sources: U.S. Census 2010, Summary File 1; U.S. Census 2000, Summary File 1; U.S. Census 1990, Summary File 1; American Community Survey, 2008-2010; BAE, 2011.

Projected Population and Housing Growth

Overall Population and Housing Growth

Table 2 compares the available long-term projections for population and housing growth in Plumas County, as published by the State Department of Transportation (Caltrans) and by the State Department of Finance (DOF). These two sources offer slightly different estimates for the Plumas County growth rates between 2010 and 2030. Caltrans' projections estimate that the County will grow by 1,700 residents, or 8.6 percent, while the Department of Finance projections estimate that the County will grow by 2,700 residents, or 12.4 percent. Unfortunately, DOF has not updated its County population growth projections since the recession took hold in 2008. On the other hand, the Caltrans projections were issued in 2009, after the early effects of the recession were evident. For this reason, of the two sets of projections, BAE is more confident in the Caltrans projections, particularly given the severity and length of the recession, which will likely translate to an extended period for economic recovery and return to growth in counties like Plumas that have been particularly hard hit. It should also be noted that neither projection source uses the 2010 Census figures as a baseline, due to the relatively recent release of the 2010 Census data; thus, the focus of this discussion is on the incremental increase projected by each source, rather than the absolute numbers.

In addition to estimating resident population, Caltrans' projections further predict that the number of housing units constructed within Plumas County will grow from 15,649 in 2010 to 20,606 in 2035. Caltrans figures predict that the County's housing stock will grow almost three times as fast as the County's permanent resident population during the General Plan time horizon, implying that homes constructed for vacation use will represent a substantial portion of the overall residential construction, as these homes would not contribute to the County's permanent resident population. Absent alternative projection sources for overall growth in the number of housing units in Plumas County during the General Plan time horizon, the overall Caltrans housing unit projections for Plumas County are used for the purposes of this memo.

Based on the increment of new housing units projected by Caltrans for Plumas County, it is estimated that the County's overall housing stock will grow by approximately 5,000 new housing units between 2010 and 2035, for an average increase of about 200 units per year.

Regional Growth Projections

Population changes in the surrounding region are likely to be a notable driver for growth in demand for Plumas County vacation homes in particular, as residents of the larger Northern California region are likely to serve as a primary market for such homes. Such trends would be consistent with existing purchasing patterns, as well as with nationwide findings that rural second homes within 500 miles of a buyer's primary home have become

increasingly popular over time among all but the wealthiest households.² This analysis focuses on a regional area that centers on Plumas County, and also includes the nearby counties of Butte, Colusa, Glenn, Lassen, Nevada, Placer, Sierra, Sutter, Tehama, and Yuba (hereafter, Regional Area), which are generally within 2-3 hours drive of Plumas County, even though a portion of Plumas County second home owners may come from more distant locations.

As shown in the lower part of Table 2, the population growth projection for the Regional Area for the 2010 to 2035 time period ranges from about 32 percent (Caltrans) to 47 percent (CA DOF). As with the Plumas County growth projections, the DOF projections have not been revised since the economic slowdown took hold in 2008, while the Caltrans projections were updated in 2009; thus, BAE feels that the more conservative Caltrans projections may be more reliable for the purposes estimating potential growth in demand for vacation homes in Plumas County.

It is worth noting that some demand for second homes in Plumas County may come from residents in neighboring Washoe County, Nevada, which includes the City of Reno and is located within two hours driving distance of many residential areas in Plumas County. Indeed, the developers of second home projects located near Graegle, in south-eastern Plumas County, have actively marketed these homes to residents in Reno. According to the Nevada State Demographer's Office,³ the population of Washoe County is expected to grow from 417,000 in 2010 to 517,000 in 2030. With an annual average growth rate of 1.1 percent, Washoe County is projected to grow at a rate that is similar to that predicted for the Regional Area defined above. It is therefore likely that the proportion of second home buyers who live in Washoe County will remain constant during the General Plan time horizon.

² National Association of Realtors, Investment and Vacation Home Buyers' Survey, 2011.

³ Harscastle, J. October 1, 2011. *Nevada County Population Projections, 2010 – 2030*. Nevada State Demographer's Office.

Table 2: Overall Population and Housing Unit Projections, 2010 to 2035

	2010	2015	2020	2025	2030	2035	Absolute Change 2010-2030	Absolute Pct. Change 2010-2030	Average Annual Increase 2010-2030
Plumas County									
Population (DOF estimate)	21,824	-	22,934	-	24,530	-	2,706	12.4%	0.6%
Population (Caltrans Estimate)	20,155	20,332	20,907	21,460	21,882	22,263	1,727	8.6%	0.4%
Housing Units (a)	15,649	16,529	17,518	18,560	19,591	20,606	3,942	25.2%	1.1%
Regional Area (b)									
Population (DOF estimate)	1,024,851	-	1,267,736	-	1,514,690	-	489,839	47.8%	2.0%
Population (Caltrans Estimate)	1,016,158	1,090,807	1,174,255	1,259,065	1,340,873	1,418,756	324,715	32.0%	1.4%
Housing Units (a)	441,846	473,140	507,749	544,438	580,079	614,917	138,233	31.3%	1.4%

Notes:

(a) The estimated housing unit figures take into account 2010 U.S. Census data, as well as Caltrans projections for new homes permitted.

(b) The Regional Area includes: Butte, Colusa, Glenn, Lassen, Nevada, Placer, Plumas, Sierra, Sutter, Tehama, and Yuba Counties.

Sources: California Department of Transportation, County Level Economic Forecast, 2010-2035; California Department of Finance, Table P-3: Population Projections by Race / Ethnicity, Gender and Age for California and Its Counties, 2000-2050; U.S. Census 2010, Summary File 1; BAE, 2011.

Table 3: Population Projections by Age, 2010 - 2035

Plumas County	Population Increase 2010-2035							
	1990 (a)	2000 (a)	2010 (a)	2020 (b)	2030 (b)	2035 (b)	#	%
Under 20	27.3%	24.9%	20.8%	21.5%	22.8%	22.2%	1,462	27.1%
20 - 24	3.2%	3.8%	4.6%	4.9%	5.6%	6.0%	594	11.0%
25 - 34	12.5%	8.0%	8.5%	13.4%	9.1%	10.3%	933	17.3%
35 - 44	16.7%	14.6%	9.5%	11.0%	13.8%	11.7%	1,051	19.5%
45 - 54	11.4%	17.3%	16.1%	8.9%	12.1%	13.3%	173	3.2%
55 - 64	11.9%	13.5%	19.6%	14.2%	9.0%	10.5%	-1,249	-23.1%
65 & Over	17.0%	17.9%	20.8%	26.0%	27.6%	26.0%	2,435	45.1%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	5,398	100.0%
Regional Area (c)								
Under 20	28.3%	29.0%	26.7%	27.2%	27.7%	27.5%	273,944	28.0%
20 - 24	7.4%	6.3%	6.7%	7.0%	6.9%	7.0%	56,279	5.8%
25 - 34	15.1%	11.7%	12.0%	13.3%	11.8%	11.9%	111,706	11.4%
35 - 44	15.6%	15.4%	12.2%	11.6%	13.0%	12.4%	125,227	12.8%
45 - 54	10.2%	14.2%	14.5%	11.8%	11.3%	11.9%	103,915	10.6%
55 - 64	8.9%	9.2%	13.1%	12.5%	10.4%	10.3%	87,544	8.9%
65 & Over	14.5%	14.1%	15.0%	16.6%	19.0%	19.1%	220,024	22.5%
Total	100.0%	100.0%	100.0%	100.0%	100.0%	100.0%	978,637	100.0%

Notes:

- (a) Data reported in decennial U.S. Census, Summary File 1.
- (b) Data estimated by the California Department of Finance, Table P-3: Population Projections by Age for California and Its Counties 2000–2050.
- (c) The Regional Area includes: Butte, Colusa, Glenn, Lassen, Placer, Plumas, Nevada, Sutter, Tehama, and Yuba Counties.

Sources: U.S. Census, Summary File 1, 1990, 2000, 2010; California Department of Finance, Table P-3: Population Projections by Race / Ethnicity, Gender and Age for California and Its Counties, 2000–2050; BAE, 2011

Permanently Occupied Homes Versus Vacation Homes

For the EIR for the Plumas County General Plan Update, it is important to distinguish between the increase in Plumas County homes that would be occupied by permanent County residents versus the increase in housing units that would be used as vacation homes or for seasonal use only. Depending on how the units are used, they will likely create different environmental impacts.

Population Growth by Age

As noted earlier, regional population growth can be an important driver of future demand for vacation homes in Plumas County; however, it would be dangerous to assume that the 32 to 47 percent overall growth in the Regional Area population would translate to a similar increase in demand for vacation homes. This is because an individual's age can be a strong predictor for his or her housing preferences, particularly the case of the market for vacation homes. According to the 2011 National Association of Realtors' Investment and Vacation Home Buyers' Survey, the average age of an individual purchasing a second home is 49 years.⁴ Given the relative differences in the size of the Baby Boomer generation, the "Echo Boomer" generation, and the "Gen X"/"Gen Y" generations, the rates of growth of different age cohorts over time will vary substantially from the overall average. Indeed, as shown in Table 3, the relative size of the 45-55 year old age cohort within the Regional Area may have peaked in 2010, when persons that age represented 14.5 percent of the total population in the region. Though the overall regional population is projected to grow substantially (32 to 47 percent between 2010 and 2035, as discussed above), the growth in the population from 45 to 55 years of age that is considered the primary buyers of second homes will grow at a more modest rate, increasing by just over 10 percent for the period. Meanwhile, the majority of the Regional Area's population growth is projected to occur in the age cohorts under 20 years or 65 years and over during the 2010 to 2035 time period.

Estimated Increase in Permanently-Occupied Homes Versus Vacation Homes

Based on historic trends, a review of secondary literature, and anticipated growth in the larger Regional Area, BAE developed an estimate of the potential countywide increase in housing units that would be constructed and occupied by permanent residents versus those units that would be used for seasonal/vacation use during the General Plan time horizon. Table 4 summarizes the estimates for the 2010 to 2035 time period.

Of the total increase in housing units, approximately 1,065 could be expected to be occupied by permanent residents, and 3,700 could be expected to be used as seasonal or vacation homes, with the remainder of approximately 200 new homes likely to be vacant

⁴ National Association of Realtors, Investment and Vacation Home Buyers' Survey, 2011.

while for sale or for rent. Based on these figures, over the course of 25 years, the supply of permanently occupied homes would increase by 12 percent, in pace with projected population growth, and the supply of seasonal/vacation homes would be expected to increase by about 70 percent. These figures point to a notable increase in the supply of Plumas County seasonal/vacation homes, a finding consistent with the increasing popularity of such homes during the past two decades, while assuming a slowing in the rate of construction compared to the housing boom of the 2000s.

The overall growth model assumes that the housing vacancy rate during future time periods will approximate the average vacancy rate since 1990, or 7.6 percent, as recorded by the U.S. Census. The model further assumes that the supply of permanently-occupied housing stock will continue to grow by approximately 43 housing units per year, which was the average growth rate for such units between 1990 and 2010 according to the U.S. Census. It assumes that the population decline observed in the 2000 to 2010 period would be reversed, with increasing population supported by the growth in the tourism economy tied to Plumas County's status as a tourism and recreation destination, among other industry sectors. The population growth assumption is consistent with Caltrans and DOF projections, which both predict steady but relatively small growth in the number of Plumas County residents during the coming four decades.

BAE considered other methods to estimate the potential countywide increase in permanently-occupied homes and vacation homes, but felt that the approach outlined above yielded reasonable results, based on historic trends and the outlook for continued growth in the County during the next 25 years. Other methods would have required reliance on more numerous assumptions, or would have generated results that deviated significantly from documented historical trends.

Table 4: Estimated Increase in Plumas County Housing Units, by Type (2010 - 2035)

Plumas County	Total Housing Units	Total			Projected Cumulative Increase		
		Primary Homes	Second Homes	Vacant Homes	Primary Homes	Second Homes	Vacant Homes
2010	15,566	8,977	5,230	1,359	-	-	-
2020	17,435	9,403	6,702	1,330	426	1,472	-29
2030	19,508	9,829	8,191	1,488	852	2,961	129
2035	20,531	10,042	8,923	1,566	1,065	3,693	207

Notes:

(a) The housing unit and household estimates are benchmarked to the 2010 U.S. Census data, and incorporate projected growth rates as estimated by the California Department of Transportation in order to reach 2015-2035 figures.

Sources: California Department of Transportation, County Level Economic Forecast, 2010-2035; U.S. Census, Summary File 1, 1990, 2000, and 2010; BAE, 2011.