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*Draft*

Butte County Long-Term  
Regional Growth Forecasts  
2014 – 2040

Prepared by:  
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## **INTRODUCTION**

Approximately every four years, the Butte County Association of Governments (BCAG) prepares long-term regional growth forecasts of housing, population, and employment for the Butte County area. Once prepared, the forecasts are utilized in developing BCAG's Metropolitan Transportation Plan (MTP), Sustainable Communities Strategy (SCS), Air Quality Conformity Determination, and Regional Housing Needs Plan and provides data support for BCAG's regional Travel Demand Model. Local land use planning agencies may also elect to utilize the forecasts for preparing district plans or city and county long range plans.

As in the past, the forecasts have been developed by BCAG in consultation with its Planning Directors Group which consists of representatives from each of BCAG's local jurisdiction members and the Butte Local Agency Formation Commission. Each of the local jurisdictions provided valuable input regarding the anticipated amount of growth within their respective planning areas.

A low, medium, and high scenario has been developed for each forecast of housing, population, and employment. The use of these scenarios provides for increased flexibility when utilizing the forecast for long-term planning and alleviates some of the uncertainty inherent in long range projections.

The regional growth forecasts will be updated again during the 2018/19 fiscal year in preparation for BCAG's 2020 MTP/SCS and to ensure that any unexpected trends will be integrated into the forecasts.

## **APPROACH**

The growth forecasts presented in this document represent a revision of the 2010-2035 forecasts developed during the 2010/11 fiscal year and utilized in preparing the 2016 MTP/SCS. This revision approach has been taken given the extensive amount of effort put forth by BCAG and the local agencies in developing the 2010-2035 forecasts, the lack of available grant funding to assist with its development, and minimal changes in local land use plans. As revised, the forecasts meet both state and federal transportation planning requirements.

## REGIONAL FORECASTS

In comparison to the regional forecasts prepared by BCAG in 2010, the 2014 forecasts present a similar growth trend with each of the first three projection periods (2020, 2025, and 2030) showing increased population growth over the previous. Between the years 2014 and 2030, the forecasts show a compound annual growth rate (CAGR) of 1.54% for the medium scenario. However, unlike the 2010 forecasts, the 2014 forecasts capture a greater return to the slower growth anticipated statewide for the 10 year period from 2030 to 2040. Between the years 2030 and 2040, the forecasts show a CAGR of 1.11% for the medium scenario.

As previously observed in BCAG's 2006 and 2010 growth forecasts, jurisdictions in the southern portions of the region are projected to absorb a greater percentage of the regional growth than achieved in past growth trends. The cities of Biggs and Gridley are forecasted to, at a minimum, double in population by the year 2040 and the City of Oroville is projected to see between 77% and 109% increases over the next 26 years. While the greatest amount of growth will continue to be occurring in the Chico area with a forecasted range of 13,507 – 19,099 new housing units by the year 2040.

Employment is on track with forecasts prepared in 2010. The 2014 jobs to housing unit ratio met the forecasts of 0.76, an increase from 0.74 year 2010 levels. The rebound is projected to continue with a return to historic long term levels 0.78 jobs per housing unit in 2020 and into the horizon year of 2040.

**Table 1: Housing Forecasts 2014-2040**

**Low Scenario**

Jurisdiction^	2014*	2020	2025	2030	2035	2040	Total Increase 2014-2040	Percent Increase 2014-2040	Compound Annual Growth Rate (CAGR) 2014-2040
Biggs	613	738	925	1,071	1,214	1,304	691	113%	2.95%
Chico	38,146	40,018	42,501	46,103	49,531	51,653	13,507	35%	1.17%
Gridley	2,482	3,026	3,689	4,211	4,734	5,019	2,537	102%	2.75%
Oroville	6,408	7,306	8,504	10,060	10,859	11,357	4,949	77%	2.23%
Paradise	13,023	13,472	13,930	14,450	14,915	15,197	2,174	17%	0.60%
Unincorporated^^	36,707	39,263	41,501	43,851	45,982	47,238	10,531	29%	0.97%
Total County	97,379	103,823	111,050	119,745	127,235	131,768	34,389	35%	1.17%

**Medium Scenario**

Jurisdiction^	2014*	2020	2025	2030	2035	2040	Total Increase 2014-2040	Percent Increase 2014-2040	Compound Annual Growth Rate (CAGR) 2014-2040
Biggs	613	763	988	1,163	1,335	1,444	831	136%	3.35%
Chico	38,146	40,396	43,381	47,711	51,831	54,382	16,236	43%	1.37%
Gridley	2,482	3,136	3,933	4,560	5,189	5,532	3,050	123%	3.13%
Oroville	6,408	7,488	8,928	10,798	11,758	12,357	5,949	93%	2.56%
Paradise	13,023	13,563	14,113	14,738	15,298	15,636	2,613	20%	0.71%
Unincorporated^^	36,707	39,779	42,469	45,294	47,856	49,365	12,658	34%	1.15%
Total County	97,379	105,125	113,812	124,264	133,266	138,716	41,337	42%	1.37%

**High Scenario**

Jurisdiction^	2014*	2020	2025	2030	2035	2040	Total Increase 2014-2040	Percent Increase 2014-2040	Compound Annual Growth Rate (CAGR) 2014-2040
Biggs	613	789	1,054	1,260	1,463	1,590	977	159%	3.73%
Chico	38,146	40,793	44,304	49,398	54,244	57,245	19,099	50%	1.57%
Gridley	2,482	3,251	4,189	4,926	5,666	6,070	3,588	145%	3.50%
Oroville	6,408	7,678	9,372	11,572	12,701	13,406	6,998	109%	2.88%
Paradise	13,023	13,658	14,305	15,040	15,699	16,097	3,074	24%	0.82%
Unincorporated^^	36,707	40,321	43,485	46,808	49,821	51,597	14,890	41%	1.32%
Total County	97,379	106,491	116,710	129,005	139,594	146,005	48,626	50%	1.57%

\* Source: State of California, Department of Finance, E-5 Population and Housing Estimates for Cities, Counties and the State, 2010-2014, with 2010 Benchmark. Sacramento, California, May 2014.

Notes:

^ Jurisdictional figures reflect anticipated new growth within the anticipated boundaries of each jurisdiction and do not reflect future annexation of existing units or as-yet-unbuilt new units in unincorporated areas to the respective cities. Assumptions about future boundaries are not intended by BCAG to be interpreted as factors limiting such jurisdictions' future boundaries.

^^ Unincorporated Butte County figures exclude forecasted growth identified in the Butte County General Plan 2030 - Environmental Impact Report as Bell Muir/Chico Area, Doe Mill/Honey Run Specific Plan, Thermalito Afterbay, Biggs Area, and Gridley Area and includes shared growth (50%) of Thermalito, Southern Oroville and Eastern Oroville.

**Table 2: Population Forecasts 2014-2040**

**Low Scenario**

Jurisdiction^	2014*	2020	2025	2030	2035	2040	Total Increase 2014-2040	Percent Increase 2014-2040	Compound Annual Growth Rate (CAGR) 2014-2040
Biggs	1,684	2,027	2,541	2,941	3,335	3,583	1,899	113%	2.9%
Chico	88,389	92,726	98,480	106,827	114,769	119,686	31,297	35%	1.2%
Gridley	6,739	8,216	10,017	11,433	12,853	13,628	6,889	102%	2.7%
Oroville	15,980	18,221	21,208	25,088	27,079	28,322	12,342	77%	2.2%
Paradise	26,109	27,010	27,927	28,969	29,903	30,467	4,358	17%	0.6%
Unincorporated^^	83,415	89,224	94,310	99,651	104,494	107,348	23,933	29%	1.0%
Total County	222,316	237,424	254,483	274,909	292,433	303,034	80,718	36%	1.2%

**Medium Scenario**

Jurisdiction^	2014*	2020	2025	2030	2035	2040	Total Increase 2014-2040	Percent Increase 2014-2040	Compound Annual Growth Rate (CAGR) 2014-2040
Biggs	1,684	2,096	2,714	3,195	3,668	3,967	2,283	136%	3.4%
Chico	88,389	93,603	100,519	110,552	120,099	126,009	37,620	43%	1.4%
Gridley	6,739	8,515	10,679	12,381	14,088	15,020	8,281	123%	3.1%
Oroville	15,980	18,673	22,264	26,928	29,322	30,816	14,836	93%	2.6%
Paradise	26,109	27,192	28,294	29,547	30,669	31,347	5,238	20%	0.7%
Unincorporated^^	83,415	90,398	96,511	102,931	108,752	112,183	28,768	34%	1.1%
Total County	222,316	240,476	260,981	285,534	306,598	319,342	97,026	44%	1.4%

**High Scenario**

Jurisdiction^	2014*	2020	2025	2030	2035	2040	Total Increase 2014-2040	Percent Increase 2014-2040	Compound Annual Growth Rate (CAGR) 2014-2040
Biggs	1,684	2,169	2,896	3,461	4,018	4,369	2,685	159%	3.7%
Chico	88,389	94,522	102,658	114,460	125,691	132,643	44,254	50%	1.6%
Gridley	6,739	8,828	11,373	13,376	15,384	16,481	9,742	145%	3.5%
Oroville	15,980	19,148	23,372	28,858	31,674	33,432	17,452	109%	2.9%
Paradise	26,109	27,383	28,680	30,154	31,473	32,271	6,162	24%	0.8%
Unincorporated^^	83,415	91,629	98,820	106,371	113,219	117,255	33,840	41%	1.3%
Total County	222,316	243,678	267,799	296,681	321,459	336,450	114,134	51%	1.6%

\* Source: State of California, Department of Finance, E-5 Population and Housing Estimates for Cities, Counties and the State, 2010-2014, with 2010 Benchmark. Sacramento, California, May 2014.

Notes:

^Jurisdictional figures reflect anticipated new growth within the anticipated boundaries of each jurisdiction and do not reflect future annexation of existing units or as-yet-unbuilt new units in unincorporated areas to the respective cities. Assumptions about future boundaries are not intended by BCAG to be interpreted as factors limiting such jurisdictions' future boundaries.

^^ Unincorporated Butte County figures exclude forecasted growth identified in the Butte County General Plan 2030 - Environmental Impact Report as Bell Muir/Chico Area, Doe Mill/Honey Run Specific Plan, Thermalito Afterbay, Biggs Area, and Gridley Area and includes shared growth (50%) of Thermalito, Southern Oroville and Eastern Oroville.

**Table 3: Employment Forecasts 2014-2040****Low Scenario**

Jurisdiction	2014*	2020	2025	2030	2035	2040	Total Increase 2014-2040	Percent Increase 2014-2040
Butte County	74,100	80,982	86,619	93,401	99,243	102,779	28,679	39%

**Medium Scenario**

Jurisdiction	2014*	2020	2025	2030	2035	2040	Total Increase 2014-2040	Percent Increase 2014-2040
Butte County	74,100	81,998	88,773	96,926	103,948	108,198	34,098	46%

**High Scenario**

Jurisdiction	2014*	2020	2025	2030	2035	2040	Total Increase 2014-2040	Percent Increase 2014-2040
Butte County	74,100	83,063	91,033	100,624	108,883	113,884	39,784	54%

**Table 4: Jobs (Non-Farm) to Housing Unit Ratios 2014-2040**

Factor	2014*	2020	2025	2030	2035	2040
Jobs/Housing Unit	0.76	0.78	0.78	0.78	0.78	0.78

\* Source: State of California, Department of Finance, E-5 Population and Housing Estimates for Cities, Counties and the State, 2010-2014, with 2010 Benchmark. Sacramento, California, May 2014. California Employment Development Department, Industry Employment & Labor Force - by Annual Average, September 2013 Benchmark, for Butte County (Chico MSA).

## **FORECAST METHODOLOGY**

BCAG has prepared the forecasts using professionally accepted methodologies for long-range forecasting. Utilizing a “top down” approach, long-term projections prepared by the State of California were consulted for Butte County and used to re-establish control totals for the region. Additionally, a variety of data sources, including input from local jurisdiction staff, were reviewed and carried over from the 2010 forecasts and inserted at the local jurisdiction level, therefore incorporating a “bottom up” approach. Forecasts were then allocated into five year increments until the year 2040. Lastly, low, medium, and high scenarios were prepared for each forecasted category.

### **HOUSING**

The latest California Department of Finance (DOF) long range population and housing projections, as of June 2014, were analyzed for the period 2015-2040 for the Butte County region. These projections determine that the Butte County region will grow at a Compound Annual Growth Rate (CAGR) of 1.4%. This information was used to establish the control total for BCAG’s medium forecast scenario.

BCAG then prepared a revise of the 2010 BCAG growth forecasts utilizing 2014 base line data and the long range forecasts from DOF. A “carry-over” of the forecasted growth from the 2010-2035 forecasts to the new 2014-2040 range was applied. An adjustment to the 2035 and 2040 forecast periods was then made to mirror the trend of the DOF forecasts at the Butte County level. Appendix #1 provides details regarding the county level adjustments. The information was then reviewed by local agency planning staff.

A similar approach was then applied at the jurisdiction level, taking into consideration the latest DOF information for each. Once compiled for all jurisdictions, the housing forecasts showed a regional CAGR of 1.37%. This information was used to represent the medium forecast scenario. Appendix #2 provides details regarding the local level adjustments. The information was then reviewed by local agency planning staff.

Based on a 0.2 percent incremental change between the established high and medium scenarios, a low and high housing scenario were developed using a CAGR of 1.17% and 1.57%. This incremental change is identical to that included with the 2010 forecasts.

### **POPULATION**

Population forecasts were prepared by applying average persons per housing unit to the housing unit forecasts. This method allows for the capture of variations in household for each jurisdiction. The average person per housing unit was prepared by dividing the 2014 DOF preliminary population estimates by the preliminary housing estimates for each jurisdiction. This method was applied to all scenarios.



## EMPLOYMENT

Employment forecasts were prepared at the regional/county level only and are based on a ratio of jobs per housing unit.

Baseline 2014 employment data was obtained from the California Employment Development Department (EDD) for the year 2013 – an annual average for 2014 was not available at the time the BCAG regional forecasts were prepared. The 2013 EDD data provide a total of all non-farm jobs for the region. This information was then used in conjunction with 2014 DOF preliminary housing unit estimates to calculate a ratio of 0.76 jobs per housing unit.

In 2010, historic employment information was obtained from the EDD for the period 1990-2009 and averaged to calculate a long range jobs to housing unit ratio of 0.78. This information was updated to include 2013 data and the ratio of 0.78 was unchanged. The ratio was applied to the years 2020-2040 based on the anticipated continued recovery of employment rates and the long term historical average.

Lastly, the jobs to housing unit ratio developed for each 5 year period was applied to all scenarios.

## APPENDIX 1

### BCAG 2014-2040 REGIONAL GROWTH FORECASTS – PRELIMINARY COUNTY LEVEL UPDATES (08/22/14)

**Purpose:** Every four years BCAG prepares long range growth forecasts of housing, population, and jobs in order to inform the development of the region's long range Metropolitan Transportation Plan (MTP) and Sustainable Communities Strategy (SCS), as required by federal regulations. Local land use planning agencies may also utilize the forecasts in preparing their long range plans.

**Approach:** Given the extensive amount of effort put forth by BCAG and local agencies in developing the forecasts for the 2012 MTP/SCS, lack of available grant funding and minimal changes in local land use plans, the latest forecasts will undergo a minor revision for the purpose of realigning with the state forecasts and meeting federal requirements.

**CA Department of Finance – Long Range Forecasts:** The long range forecasts produced by the state provide the Butte County region with a control total for population at the county level. In January of 2013, the CA Dept. of Finance (DOF) released the latest available long range forecasts for the state and Butte County region. The forecasts estimate a 0.83% compound annual growth rate (CAGR) for the state over the 25 year period from 2015 to 2040.

Table 1.

DOF Estimate for California 2015-2040		
Year	Projected Population	CAGR
2015	38,801,063	-
2020	40,643,643	0.93%
2025	42,451,760	0.87%
2030	44,279,354	0.85%
2035	46,083,482	0.80%
2040	47,690,186	0.69%
2015-2040 CAGR		0.83%

The same forecasts estimate a 1.39% CAGR for Butte County over the same period with the greatest growth (1.79% CAGR) occurring between 2025-2030 years and tapering downward to the slowest growth (0.82% CAGR) between the 2035 and 2040 years.

Table 2.

DOF Estimate for Butte County 2015-2040		
Year	Projected Population	CAGR
2015	224,955	-
2020	241,521	1.43%
2025	259,926	1.48%
2030	284,082	1.79%
2035	305,039	1.43%
2040	317,718	0.82%
2015-2040 CAGR		1.39%

## APPENDIX 1

**Carry-over Previous BCAG Forecast to New Period (2014-2040):** A carry-over of the forecasted growth from the BCAG 2010-2035 forecasts to the new 2014-2040 range. The results of this carry-over are included in Table 3. A similar trend is seen when comparing the DOF forecasts of Butte County with the Carry-over Estimates, the steady rise of the CAGR over the first three 5-year periods (2014/15-2030). However, there is a significant difference for the 2030-2040 periods.

Table 3.

<b>Carry-over Estimate for Butte County 2014-2040</b>		
<b>Year</b>	<b>Projected Population</b>	<b>CAGR</b>
2014	222,316	-
2020	240,476	1.32%
2025	260,981	1.65%
2030	285,534	1.81%
2035	309,997	1.66%
2040	336,377	1.65%
<b>2014-2040 CAGR</b>		<b>1.61%</b>

**2035 and 2040 CAGR Adjustment:** Given the significant difference in the trends for the 2030-2040 periods, the growth rates of the state forecasts were applied to the BCAG carry-over. The results, see Table 4, show similar growth rates of 1.4% (BCAG adjusted) and 1.39% (state) for the entire planning period (2014/15-2040). The countywide population totals are within the +/- 3% allowed by the state.

Table 4.

<b>Adjusted Carry-over Estimate for Butte County 2014-2040</b>		
<b>Year</b>	<b>Projected Population</b>	<b>CAGR</b>
2014	222,316	-
2020	240,476	1.32%
2025	260,981	1.65%
2030	285,534	1.81%
2035	306,598	1.43%
2040	319,342	0.82%
<b>2015-2040 CAGR</b>		<b>1.40%</b>

## APPENDIX 2

### BCAG 2014-2040 REGIONAL GROWTH FORECASTS – PRELIMINARY JURISDICTION LEVEL UPDATES (10/14/14)

Based on the approach and adjustments developed for the county level forecasts, BCAG prepared preliminary jurisdiction level forecasts for the 2014-2040 period. These forecasts reflect growth, by jurisdiction, for each 5 year period. Base years (2014) numbers for housing, population, and jobs are taken from the latest CA Department of Finance and CA Employment Development Department estimates.

**Table 1. Housing Forecasts**

Jurisdiction^	2014*	2020	2025	2030	2035	2040	Total Increase 2014-2040	Percent Increase 2014-2040	Compound Annual Growth Rate (CAGR) 2014-2040
Biggs	613	763	988	1,163	1,335	1,444	831	136%	3.35%
Chico	38,146	40,396	43,381	47,711	51,831	54,382	16,236	43%	1.37%
Gridley	2,482	3,136	3,933	4,560	5,189	5,532	3,050	123%	3.13%
Oroville	6,408	7,488	8,928	10,798	11,758	12,357	5,949	93%	2.56%
Paradise	13,023	13,563	14,113	14,738	15,298	15,636	2,613	20%	0.71%
Unincorporated^^	36,707	39,779	42,469	45,294	47,856	49,365	12,658	34%	1.15%
Total County	97,379	105,125	113,812	124,264	133,266	138,716	41,337	42%	1.37%

**Table 2. Population Forecasts**

Jurisdiction^	2014*	2020	2025	2030	2035	2040	Total Increase 2014-2040	Percent Increase 2014-2040	Compound Annual Growth Rate (CAGR) 2014-2040
Biggs	1,684	2,096	2,714	3,195	3,668	3,967	2,283	136%	3.35%
Chico	88,389	93,603	100,519	110,552	120,099	126,009	37,620	43%	1.37%
Gridley	6,739	8,515	10,679	12,381	14,088	15,020	8,281	123%	3.13%
Oroville	15,980	18,673	22,264	26,928	29,322	30,816	14,836	93%	2.56%
Paradise	26,109	27,192	28,294	29,547	30,669	31,347	5,238	20%	0.71%
Unincorporated^^	83,415	90,398	96,511	102,931	108,752	112,183	28,768	34%	1.15%
Total County	222,316	240,476	260,981	285,534	306,598	319,342	97,026	44%	1.40%

**Table 3. Employment Forecasts**

Jurisdiction	2014	2020	2025	2030	2035	2040	Total Increase 2014-2040	Percent Increase 2014-2040
Butte County	73,433	81,998	88,773	96,926	103,948	108,198	34,765	47%

**Table 4. Jobs (Non-Farm) to Housing Unit Ratios**

Factor	2014*	2020	2025	2030	2035	2040
Jobs/Housing Unit	0.76	0.78	0.78	0.78	0.78	0.78

## APPENDIX 2

*\* Source: State of California, Department of Finance, E-5 Population and Housing Estimates for Cities, Counties and the State, 2010-2014, with 2010 Benchmark. Sacramento, California, May 2014. California Employment Development Department, Industry Employment & Labor Force - by Annual Average, September 2013 Benchmark, for Butte County (Chico MSA).*

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*^^ Unincorporated Butte County figures exclude forecasted growth identified in the Butte County General Plan 2030 - Environmental Impact Report as Bell Muir/Chico Area, Doe Mill/Hone Run Specific Plan, Thermalito Afterbay, Biggs Area, and Gridley Area and includes shared growth (50%) of Thermalito, Southern Oroville and Eastern Oroville.*