

Provisional Long-Term
Regional Growth Forecasts
2018 – 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 Regional Transportation Plan (RTP), 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.

The forecasts have been prepared as the Camp Fire related impacts to population, housing, and employment are still being assessed. Therefore, these figures are provisional. Concurrently, BCAG has undertaken an effort to better understand these impacts and the associated changes to planning assumptions resulting from the Camp Fire with the preparation of a Post-Camp Fire Regional Population and Transportation Study. It is anticipated the study will be completed in early 2021, at which time the regional forecasts will be revised.

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 anticipated development and related 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.

As stated above, the regional growth forecasts will be revised upon completion of the Post-Camp Fire Regional Population and Transportation Study and incorporated into the development of BCAG's 2024 RTP/SCS.

APPROACH

The growth forecasts presented in this document represent an update of the 2014-2040 forecasts developed during the 2014/15 fiscal year and include a revised methodology which considers the latest California Department of Finance (DOF) population projections and estimates, California Employment Development Department (EDD) job estimates, past housing production by the local jurisdictions, and preliminary housing unit loss and population re-distribution estimates resulting from the Camp Fire. As presented, the forecasts meet both state and federal transportation planning requirements.

REGIONAL FORECASTS

In comparison to the regional forecast prepared by BCAG in 2014, the 2018 forecast presents a significantly slower growth trend. Compound annual growth rates (CAGR) for the 2018 forecasts (2018-2040) range from 0.48% to 0.88% for housing, compared to the 1.17% to 1.57% CAGR prepared in 2014 (2014-2040). This represents a 50% decrease for the medium scenario.

As observed in BCAG's past forecasts, the City of Chico is expected to see the greatest growth in housing units, followed by the unincorporated areas of Butte County and the City of Oroville. As a temporary place holder, the Town of Paradise has been given a range of housing recovery, due to the Camp Fire, at 69% (low scenario) to 106% (high scenario). As previously mentioned, these figures will be updated upon completion of the Post-Camp Fire Regional Population and Transportation Study.

In terms of population, the cities of Chico and Oroville show a significant increase between 2018 and 2020 as a result of the re-distribution of people associated with the Camp Fire with this trend reversing into 2025. By the year 2030, Chico and Oroville are again gaining in population. In contrast, the Town of Paradise shows significant growth for the 2020-2025 period. The cities of Biggs and Gridley are each projected to increase by over 40% for the long-term planning period.

Employment exceeded forecasts prepared in 2014 with a job to housing unit ratio of 0.83 achieved for 2018, compared to the 0.78 projected ratio included in 2014. In 2020, this ratio continues to increase to 0.96 as a result of the housing loss associated with the Camp Fire. By the year 2030, the area returns to its historic ratio of 0.80 and this continues into the horizon year of 2040.

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Table 1: Housing Forecasts 2018-2040

Low Scenario

Jurisdiction^	2018*	2020	2025	2030	2035	2040	Total Increase 2018-2040	Percent Increase 2018-2040	Compound Annual Growth Rate (CAGR) 2018-2040
Biggs	692	711	761	805	839	920	228	33%	1.30%
Chico	39,810	40,594	42,317	43,809	44,993	47,767	7,957	20%	0.83%
Gridley	2,517	2,593	2,799	2,978	3,120	3,453	936	37%	1.45%
Oroville	7,333	7,467	7,841	8,165	8,422	9,024	1,691	23%	0.95%
Paradise	13,091	1,856	5,035	7,000	8,038	8,994	-4,097	-31%	-1.69%
Unincorporated^^	35,910	33,256	35,333	36,916	38,029	40,232	4,322	12%	0.52%
Total County	99,353	86,477	94,087	99,673	103,442	110,391	11,038	11%	0.48%

Medium Scenario

Jurisdiction^	2018*	2020	2025	2030	2035	2040	Total Increase 2018-2040	Percent Increase 2018-2040	Compound Annual Growth Rate (CAGR) 2018-2040
Biggs	692	718	790	853	903	948	256	37%	1.44%
Chico	39,810	40,689	43,168	45,314	47,018	48,574	8,764	22%	0.91%
Gridley	2,517	2,622	2,920	3,177	3,381	3,567	1,050	42%	1.60%
Oroville	7,333	7,524	8,062	8,528	8,898	9,236	1,903	26%	1.05%
Paradise	13,091	1,916	6,490	9,318	10,811	11,347	-1,744	-13%	-0.65%
Unincorporated^^	35,910	33,460	36,449	38,726	40,328	41,563	5,653	16%	0.67%
Total County	99,353	86,929	97,879	105,916	111,339	115,235	15,882	16%	0.68%

High Scenario

Jurisdiction^	2018*	2020	2025	2030	2035	2040	Total Increase 2018-2040	Percent Increase 2018-2040	Compound Annual Growth Rate (CAGR) 2018-2040
Biggs	692	725	821	905	971	978	286	41%	1.59%
Chico	39,810	40,792	44,088	46,943	49,209	49,446	9,636	24%	0.99%
Gridley	2,517	2,654	3,049	3,391	3,663	3,692	1,175	47%	1.76%
Oroville	7,333	7,586	8,301	8,921	9,413	9,465	2,132	29%	1.17%
Paradise	13,091	1,980	8,064	11,824	13,809	13,891	800	6%	0.27%
Unincorporated^^	35,910	33,681	37,656	40,684	42,814	43,003	7,093	20%	0.82%
Total County	99,353	87,418	101,980	112,668	119,880	120,474	21,121	21%	0.88%

* Source: State of California, Department of Finance, E-5 Population and Housing Estimates for Cities, Counties and the State, 2010-2019, with 2010 Benchmark. Sacramento, California, May 2019.

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.

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Table 2: Population Forecasts 2018-2040

Low Scenario

Jurisdiction^	2018*	2020	2025	2030	2035	2040	Total Increase 2018-2040	Percent Increase 2018-2040	Compound Annual Growth Rate (CAGR) 2018-2040
Biggs	1,894	2,103	2,148	2,221	2,303	2,519	625	33%	1.30%
Chico	92,861	111,631	105,472	104,133	105,550	111,421	18,560	20%	0.83%
Gridley	6,921	7,398	7,809	8,222	8,590	9,494	2,573	37%	1.45%
Oroville	18,091	21,934	20,757	20,552	20,904	22,264	4,173	23%	0.95%
Paradise	26,423	4,880	11,342	14,585	16,380	18,154	-8,269	-31%	-1.69%
Unincorporated^^	81,706	79,569	81,981	84,456	86,670	91,541	9,835	12%	0.52%
Total County	227,896	227,515	229,508	234,169	240,398	255,392	27,496	12%	0.52%

Medium Scenario

Jurisdiction^	2018*	2020	2025	2030	2035	2040	Total Increase 2018-2040	Percent Increase 2018-2040	Compound Annual Growth Rate (CAGR) 2018-2040
Biggs	1,894	2,123	2,230	2,354	2,477	2,595	701	37%	1.44%
Chico	92,861	111,892	107,593	107,712	110,301	113,303	20,442	22%	0.91%
Gridley	6,921	7,482	8,144	8,770	9,308	9,810	2,889	42%	1.60%
Oroville	18,091	22,102	21,342	21,466	22,086	22,785	4,694	26%	1.05%
Paradise	26,423	5,037	14,619	19,413	22,031	22,902	-3,521	-13%	-0.65%
Unincorporated^^	81,706	80,057	84,570	88,597	91,910	94,569	12,863	16%	0.67%
Total County	227,896	228,694	238,497	248,313	258,113	265,964	38,068	17%	0.70%

High Scenario

Jurisdiction^	2018*	2020	2025	2030	2035	2040	Total Increase 2018-2040	Percent Increase 2018-2040	Compound Annual Growth Rate (CAGR) 2018-2040
Biggs	1,894	2,145	2,318	2,498	2,665	2,677	783	41%	1.59%
Chico	92,861	112,174	109,886	111,583	115,440	115,338	22,477	24%	0.99%
Gridley	6,921	7,573	8,506	9,363	10,085	10,151	3,230	47%	1.76%
Oroville	18,091	22,283	21,976	22,455	23,364	23,350	5,259	29%	1.17%
Paradise	26,423	5,207	18,164	24,634	28,142	28,038	1,615	6%	0.27%
Unincorporated^^	81,706	80,585	87,370	93,077	97,576	97,844	16,138	20%	0.82%
Total County	227,896	229,968	248,219	263,610	277,271	277,397	49,501	22%	0.90%

* Source: State of California, Department of Finance, E-5 Population and Housing Estimates for Cities, Counties and the State, 2010-2019, with 2010 Benchmark. Sacramento, California, May 2019.

Notes:

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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/Honey Run Specific Plan, Thermalito Afterbay, Biggs Area, and Gridley Area and includes shared growth (50%) of Thermalito, Southern Oroville and Eastern Oroville.

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Table 3: Employment Forecasts 2018-2040

Low Scenario

Jurisdiction	2018*	2020	2025	2030	2035	2040	Total Increase 2018-2040	Percent Increase 2018-2040
Butte County	82,900	83,018	80,915	79,738	82,753	88,313	5,413	7%

Medium Scenario

Jurisdiction	2018*	2020	2025	2030	2035	2040	Total Increase 2018-2040	Percent Increase 2018-2040
Butte County	82,900	83,452	84,176	84,733	89,071	92,188	9,288	11%

High Scenario

Jurisdiction	2018*	2020	2025	2030	2035	2040	Total Increase 2018-2040	Percent Increase 2018-2040
Butte County	82,900	83,921	87,703	90,135	95,904	96,379	13,479	16%

Table 4: Jobs (Non-Farm) to Housing Unit Ratios 2018-2040

Factor	2018*	2020	2025	2030	2035	2040
Jobs/Housing Unit	0.83	0.96	0.86	0.80	0.80	0.80

* Source: State of California, Department of Finance, E-5 Population and Housing Estimates for Cities, Counties and the State, 2010-2019, with 2010 Benchmark. Sacramento, California, May 2019. California Employment Development Department, Industry Employment & Labor Force - by Annual Average, March 2018 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 DOF 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 jurisdictions, were reviewed and inserted at the local jurisdiction level, therefore incorporating a “bottom up” approach. Adjustments were made to compensate for the re-distribution and re-population of the Camp Fire burn area. 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 DOF long range projections, as of January 2018, were analyzed for the period 2018-2040 for the Butte County region. These projections estimate that the Butte County region will add ~16,600 new housing units over the next 22 years. This information was used to establish the control total for BCAG’s medium forecast scenario.

BCAG then prepared an update of the 2014 BCAG growth forecasts utilizing 2018 base line data and the long-range forecasts from DOF. A base allocation of units at the jurisdictional level was built on each jurisdiction’s share of regional growth contained in the 2014-2040 forecasts and then balanced to historical building permit data for the 2000-2017 period. Appendix A provides details and assumptions regarding the county and jurisdiction level adjustments.

A Camp Fire adjustment was then incorporated into the methodology to account for the units lost (~14,500) within the burn area. An initial 75% re-build assumption (~10,900 units) was first applied to Town of Paradise and unincorporated portions of the burn area, followed by a secondary re-distribution of 20% (~2,900) units to all jurisdictions using the base allocation method.

The units developed at the jurisdictional level for the base allocation and Camp Fire adjustment were then combined resulting in regional Compound Annual Growth Rate (CAGR) of 0.68%. This information was used to represent the medium forecast scenario. 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 0.48% and 0.88%. This incremental change is identical to that included with the 2014 forecasts.

POPULATION

Population forecasts were prepared by applying the 2018 average persons per housing unit to the housing unit forecasts. This method allows for the capture of variations in household size for each jurisdiction. As with the housing unit forecasts, a Camp Fire adjustment was made. This adjustment incorporates 2019 post-Camp Fire person per housing unit numbers then assumes 2018 averages will be re-established by the year 2040.

EMPLOYMENT

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

Baseline 2018 and historical employment data was obtained from the California Employment Development Department (EDD) for the years 1999-2018. The EDD data provide an annual average total of all non-farm jobs for the region. This information was then used in conjunction with DOF housing unit estimates to calculate a ratio of 0.83 jobs per housing unit for the year 2018 and a ratio of 0.80 20-year (1999-2018) average.

The 20-year ratio was applied to the years 2035-2040 based on the long-term historical average. Year 2020 (0.82) and 2030 (0.81) represent a linear reduction of the 2018 average.

The ratios for year 2020 and 2025 are based on employment information from EDD which shows minimal job loss within the region as a result of the Camp Fire. These numbers, in conjunction with the regional housing losses, drive the ratio up to 0.96 for the 2020 period then return to 0.86 in 2025 as housing begins to rebound.

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

Appendix A

Housing Assumptions

Share of Regional Growth (Base Allocation)

	A	B	C
Jurisdiction	2014 Forecasts	Building Permit History (2000-2017)	2018 Forecasts
Biggs	2.0%	0.6%	1.3%
Chico	39.3%	50.7%	45.0%
Gridley	7.4%	3.5%	5.4%
Oroville	14.4%	4.9%	9.7%
Paradise	6.3%	5.0%	5.6%
Unincorporated	30.6%	35.3%	33.0%
Total County	100.0%	100.0%	100.0%

- A. Share of regional growth used in BCAG's 2014-2040 Long-Term Regional Growth Forecasts
- B. Share of regional growth based on each jurisdiction's building permit history for the 2000-2017 period
- C. Share of regional growth developed for BCAG's 2018-2040 Long-Term Regional Growth Forecasts. Formula $(A+B)/2=C$

Camp Fire Adjustment

	A	B	C	D	E	F	G	H	I
		<i>Base Allocation</i>		<i>Camp Fire Adjustment</i>					
Jurisdiction	Revised 2018 Housing Units (Jan. 1, 2018)*	Base Distribution of New Units	Base Housing Unit Growth	Estimated Housing Unit Loss (Burn Area)	75% HU Re-Build (Burn Area Only)	20% Remaining Distribution (All Jurisdictions)	Housing Unit Growth (Gross Total)	Housing Unit Growth (Net Total)	Year 2040 Housing Unit Totals
Biggs	692	1.3%	217			38	255	255	947
Chico	39,810	45.0%	7,474			1,304	8,779	8,779	48,589
Gridley	2,517	5.4%	900			157	1,058	1,058	3,575
Oroville	7,333	9.7%	1,604			280	1,884	1,884	9,217
Paradise	13,091	5.6%	937	11,371	8,528	164	9,629	-1,742	11,349
Unincorporated	35,910	33.0%	5,473	3,119	2,339	955	8,768	5,649	41,559
Total	99,353	100.00%	16,606	14,490	10,868	2,898	30,372	15,882	115,235

* DOF E-5 City/County Population and Housing Estimates - January 1, 2018 (Updated May 2019)

- A. Year 2018 housing unit total by jurisdiction from DOF E-5 report (May 2019)
- B. Base distribution of units by jurisdictions based on historical housing production and 2014 BCAG forecasts
- C. Base housing unit growth of estimated units over 22-year planning period (2018-2040)

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- D. Estimated unit loss in Camp Fire burn area by jurisdiction (source: DOF E-5 report May 2019)
- E. Camp Fire - 75% housing unit re-build applied to burn area jurisdictions
- F. Camp Fire - 20% housing unit re-distribution to all jurisdictions
- G. Gross total of housing units by jurisdiction over 22-year planning period
- H. Net total of housing units by jurisdiction over 22-year planning period
- I. Total housing units by jurisdiction for year 2040

Population Assumptions

Persons Per Housing Unit by Year

Jurisdiction	Average Persons Per Housing Unit					
	2018*	2020	2025	2030	2035	2040
Biggs	2.74	2.96	2.82	2.76	2.74	2.74
Chico	2.33	2.75	2.49	2.38	2.35	2.33
Gridley	2.75	2.85	2.79	2.76	2.75	2.75
Oroville	2.47	2.94	2.65	2.52	2.48	2.47
Paradise	2.02	2.63	2.25	2.08	2.04	2.02
Unincorporated	2.28	2.39	2.32	2.29	2.28	2.28
Total County	2.29	2.63	2.44	2.34	2.29	2.29

* DOF E-5 City/County Population and Housing Estimates -January 1, 2018 (Updated May 2019)

Countywide Population Forecast Comparison to DOF Estimates

	A	B	C
Year	DOF	BCAG	Meets State Requirement
2018	227,804	227,896	-
2020	230,701	228,694	YES
2025	238,538	238,497	YES
2030	247,331	248,313	YES
2035	256,034	258,113	YES
2040	263,634	265,964	YES

- A. Population projections prepared by Demographic Research Unit, California Department of Finance, January 2018
- B. BCAG Provisional Long-Term Regional Growth Forecasts 2018-2040
- C. California regulations (CA Code §65584.01) require that population forecasts used in preparing the RTP/SCS must be within +/- 1.5% of DOF numbers