APPENDIX L

Jobs/Housing Analysis

for

DUNNIGAN SPECIFIC PLAN

January 9, 2012

Yolo County

Woodland, CA

Appendix L

The County General Plan emphasizes smart growth in planning for new development. This is to be achieved, in part, by maintaining a jobs/housing relationship in new growth areas. Chapter 7 of the Specific Plan describes how the DSP conforms to County policies pertaining to jobs/housing balance, phasing, and match. This Appendix provides detail into the technical analysis that was developed to analyze the following:

- The DSP's jobs and housing balance by phase (e.g., total jobs and total units by phase).
- The relationship between DSP home values by product type, and the estimated household incomes of future DSP residents.

Jobs/Housing Balance

The General Plan categorizes jobs as private employment from onsite nonresidential development. Employment from these sources is based on the DSP land use plan and on the County's jobs per acre factors provided in Policy CC-3.11 of the General Plan Land Use and Housing Element. The jobs per acre factors are derived from the County's nonresidential developable acres in the General Plan and new jobs assumed, as shown in **Table L-1**.

In addition to generating employment from private employers, the DSP will create jobs through the following additional sources:

- Public Employment
- Home-Based Employment
- Construction Employment

Table L-2 calculates the total DSP jobs by phase from private, public, and home-based employment, as well as residents employed in construction. **Table L-2** also identifies the DSP population and calculates the jobs/housing balance by phase. **Tables L-3** and L-**4** contain supporting calculations.

<u>Public Employment</u>

The DSP will contain a variety of onsite public land uses that will generate public employment. Specific public facilities planned in the DSP are below.

- Sheriff sub station
- Fire station
- County administrative offices
- Parks
- Wastewater treatment
- Schools (elementary, middle, and high schools)

Public employment was estimated based on staffing factors for each type of public facility, as identified in Table 7.2 in Chapter 7.

Home Based Employment

Based upon statistics from the US Census Bureau, on average approximately 5 percent of the total labor force within an area is employed in one form or another of home-based employment. Home-based employment includes, but is not limited to, day care, health and beauty care, legal, tax, financial and other service-based industries. **Table L-3** shows the estimated DSP labor force calculations and resulting estimated home-based employment by DSP phase.

Construction Employment

The DSP will require a steady stream of construction employment as it builds out over a period of at least 20 years. Construction employment will be required for both the development of backbone infrastructure and residential and nonresidential land uses. As shown in **Table L-5**, this is estimated to translate into an average of approximately 976 jobs over the buildout period. In addition, for every construction job created, an additional 0.3 indirect jobs are estimated, as shown in **Table L-6**. Indirect employment would include services-related jobs in the County to support DSP construction workers, such as food service providers.

DSP construction employment will consist of residents living in Dunnigan and in other areas in the region. For those who would live in Dunnigan, the DSP used construction costs as a percentage of total population to calculate the estimated DSP construction employment. Construction employment is calculated based on the average share of total residents employed in construction in jurisdictions with a similar economic base, as shown in **Table L-4.**[1] The DSP jobs/housing balance includes the jobs of Dunnigan residents employed in construction. These residents may by employed by the DSP or by other construction projects.

Jobs/Housing Wage Match

In normal market conditions there is typically a range that demonstrates the relationship between household income levels and home prices and vice versa. As shown in **Figure 1**, for the State of California, the typical range of home prices to household incomes is approximately 4 to 6 times, such that a home price typically equates to approximately 4 to 6 times the annual household income level.

Using assumptions about income levels, mortgage underwriting and the amount of income spent on housing, the range of housing that will be affordable to future DSP employees and households was estimated. The analysis shown in **Table L-7** calculates the range of affordable home prices for a given range in assumed annual household income. For example, a potential homebuyer with an annual household income range of $50,000 to $75,000 could afford to purchase a home that is valued between $240,000 and

[1] These jurisdictions include the Cities of Williams, Winters, Red Bluff, Oakdale, and Hollister and Yolo County.

$353,000. It is also important to note that not all households will be in for-sale homes and that a percentage of the DSP population will live in rental housing.

Estimated affordable home price ranges were calculated using the following assumptions:

1. A 6-percent, 30-year fixed-rate mortgage with a 20-percent down payment and 2-percent annual taxes and insurance. Taxes and insurance include ad valorem taxes, as well as existing and proposed special taxes and assessments for infrastructure and services.

2. Maximum of 35 percent of income dedicated to mortgage payments, taxes, and insurance.

Estimated affordable home prices were compared to current household incomes in the County as well as incomes from Colusa and Sutter Counties, which could be considered relatively comparable to the Dunnigan area in terms of income and employment. The County's average household income was adjusted to exclude residents in the Cities of Davis and West Sacramento, which have higher household incomes in the County and would overstate the current average household income in the DSP area. Since it is likely that future DSP jobs will meet or exceed current County household income levels (excluding Davis and West Sacramento), this comparison can serve as a proxy in determining whether DSP housing prices will match the incomes of DSP jobs and households.

Using information from **Table L-7** and the estimated DSP home price assumptions, **Table L-8** shows the cumulative share of County population that could afford to purchase a home within the DSP. This analysis concludes that the DSP will consist of a mix of housing types at prices that are anticipated to be attainable to the majority of the County's current population that may wish to purchase a home. Again, a certain percentage of DSP population will also reside in rental housing.

Table L-1
Dunnigan Specific Plan
Dunnigan Jobs per Acre in County General Plan

Land Uses	Policy CC-3.11 [1] Acres	New Jobs Assumed	Jobs per Acre
Formula	*a*	*b*	*c = b/a*
Commercial General	212	4,961	**23**
Commercial Local	30	690	**23**
Industrial	208	2,167	**10**
			"policy"

[1] Acres and new jobs assumed taken from Policy CC-3.11 in the County of Yolo 2030 Countywide General Plan.

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Table L-2
Dunnigan Specific Plan
Estimated Dunnigan Employment and Jobs/Housing Balance

Item	Reference	Assumption [1]	Phase 1	Phase 2	Phase 3	Phase 4	Phase X	Buildout
Dunnigan Units								
Rural			91	85	101	138	319	734
Low Density			1,302	789	881	907	103	3,982
Medium Density			508	382	287	748	322	2,247
High Density/Mixed Use			641	678	407	286	34	2,046
Total			**2,542**	**1,934**	**1,676**	**2,079**	**778**	**9,009**
Dunnigan Population		*persons per unit*						
Rural		2.62	238	223	265	362	836	1,923
Low Density		2.62	3,411	2,067	2,308	2,376	269	10,432
Medium Density		2.62	1,331	1,001	752	1,960	844	5,887
High Density/Mixed Use		2.62	1,679	1,776	1,066	749	89	5,361
Total Estimated Population			**6,660**	**5,067**	**4,391**	**5,447**	**2,037**	**23,603**
Total Estimated Population			**6,660**	**5,067**	**4,391**	**5,447**	**2,037**	**23,603**
Estimated Employment								
Onsite Employment	**[2]**		3,108	2,273	2,037	3,398	480	11,296
Home-Based Workers	**Table L-3**	*5% of Labor Force*	159	121	105	130	48	562
Construction Employment	**Table L-4**	*1.9% of Total Pop.*	129	98	85	106	40	458
Total Estimated Employment			**3,396**	**2,492**	**2,227**	**3,633**	**568**	**12,316**
Jobs/Housing Balance			**1.3**	**1.3**	**1.3**	**1.7**	**0.7**	**1.4**
Total Housing Units at Target Jobs/Housing		1.2	**2,830**	**2,076**	**1,856**			
Amount Exceeding Existing Units			*288*	*142*	*180*			

"jobs"

Source: U.S. Census Bureau, New American FactFinder - 2010 American Community Survey 1-Year Estimates and EPS.

[1] This analysis uses the average persons per unit factor for all land use types. The fiscal impact analysis and urban services plan use different factors for low/medium and high density units for the purpose of estimating annual costs based on the relative population demand of different land use types. The average factor for all land use types is used so that project-wide employment totals (including Phase X) match those in the Specific Plan.

[2] Based on the Dunnigan Specific Plan land use plan. Includes additional employment estimates from public agencies (e.g., schools).

Table L-3
Dunnigan Specific Plan
Estimated Home-Based Employment

Item	Assumption [1]	Phase 1	Phase 2	Phase 3	Phase 4	Phase X	Buildout
Total Estimated Dunnigan Population		6,660	5,067	4,391	5,447	2,037	23,603
Estimated Dunnigan Labor Force	47.6%	**3,171**	**2,412**	**2,090**	**2,593**	**970**	**11,236**
Estimated Range of Home-Based Workers [2]							
4.5% of Total Workers		143	109	94	117	44	506
5.0% of Total Workers		159	121	105	130	48	562
5.5% of Total Workers		174	133	115	143	53	618

"home_emp"

Source: U.S. Census Bureau, New American FactFinder - 2010 American Community Survey, State of California, and EPS.

[1] Based on the average labor force of Yolo, Placer, and Sutter Counties as a share of the total population. Labor force data was taken from the California Employment Development Department, while population was based on projections from the California Department of Finance.

Comparison County	Yolo	Placer	Sutter	Average
2010 Labor Force	98,000	177,100	42,100	
2010 Population	206,100	348,432	94,737	
Share of Labor Force	**47.5%**	**50.8%**	**44.4%**	**47.6%**

[2] On average, 5.2 percent of California workers are home-based. This estimate represents a range based on the State average and the average share of home-based workers in Sacramento County, San Joaquin County, Sutter County, and Yolo County.

Table L-4
Dunnigan Specific Plan
Construction Employees as a Share of Total Jurisdiction Employment

Jurisdiction	Construction Employees [1]	Total Residents [1]	Share
City of Williams	58	4,888	1.2%
City of Winters	144	7,047	2.0%
City of Red Bluff	377	14,017	2.7%
City of Oakdale	500	21,274	2.4%
City of Hollister	607	35,661	1.7%
Yolo County	3,825	200,839	1.9%
Average (Weighted by Total Residents)			**1.9%**

"share"

[1] Taken from Claritas' Business-Facts: Workplace and Employment Summary, 2011.

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Table L-5
Dunnigan Specific Plan
Summary of Construction Job Generation [1]

Construction Activity	Costs	Jobs Generated			Average Annual Jobs
		Direct	Indirect	**Total**	
					Assumed Buildout = 20 years
Backbone Infrastructure					
Hard Costs	$363,860,000	2,263.5	473.0	**2,736.5**	136.8
Soft Costs (A&E)	$88,530,000	667.2	209.9	**877.1**	43.9
Subtotal Backbone Infrastructure	**$452,390,000**	**2,930.7**	**682.9**	**3,613.7**	**180.7**
Nonresidential Construction [2]					
Site Development	$81,289,000	505.7	105.7	**611.4**	30.6
Vertical Construction	$933,447,240	6,125.3	890.7	**7,016.0**	350.8
Subtotal Nonresidential	**$1,014,736,240**	**6,630.9**	**996.4**	**7,627.4**	**381.4**
Residential Construction [2]					
Site Development	$375,850,000	2,338.1	488.6	**2,826.7**	141.3
Vertical Construction	$826,670,000	3,695.9	1,752.3	**5,448.2**	272.4
Subtotal Residential	**$1,202,520,000**	**6,034.0**	**2,241.0**	**8,275.0**	**413.7**
Total All Construction Activities	**$2,669,646,240**	**15,595.7**	**3,920.3**	**19,516.0**	**975.8**

"jobs_gen"

Source: Minnesota IMPLAN Group and EPS.

[1] Excludes induced jobs.
[2] IMPLAN industry production functions adjusted to exclude architecture and engineering and legal services. These sectors are therefore excluded from the indirect impacts associated with construction activities, and are evaluated separately as stand alone economic impacts.

Table L-6
Dunnigan Specific Plan
Employment Impacts and Multipliers by Construction Activity [1]

Construction Activity	Jobs per $1 Million Output			Multipliers		
	Direct	Indirect	**Total**	Direct	Indirect	**Total**
Infrastructure and Site Improvements [2]	6.2	1.3	**7.5**	1.0	0.2	**1.2**
Vertical Construction						
Nonresidential Construction [2]						
Commercial and Health Care Structures	6.6	1.0	**7.5**	1.0	0.1	**1.1**
Residential Construction [2]	4.5	2.1	**6.6**	1.0	0.5	**1.5**
Soft Costs						
Architecture and Engineering	7.5	2.4	**9.9**	1.0	0.3	**1.3**

"multipliers"

Source: Minnesota IMPLAN Group.

[1] Excludes induced jobs.
[2] IMPLAN industry production functions adjusted to exclude architecture and engineering. These sectors are therefore excluded from the indirect impacts associated with construction activities, and are evaluated separately as stand alone economic impacts.

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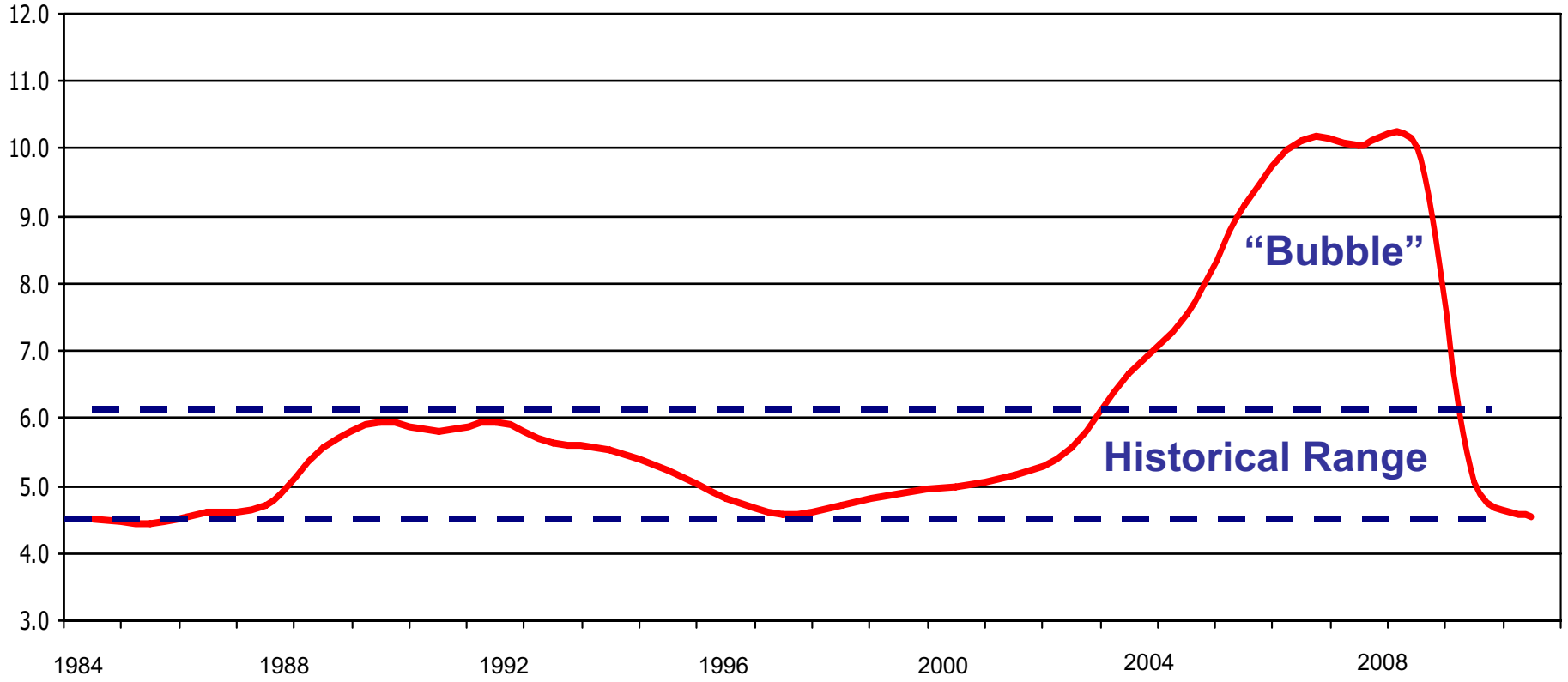
Figure 1
Ratio of Average New Home Price to Median Income: California



Source: The Gregory Group, EPS, US Census, Census 2000, American Community Survey, Estimates by The Gregory Group (Income 1999, 2001 and 2008).

Table L-7
Dunnigan Specific Plan
Income and Home Price Analysis

Item	% of Population in Income Range: Yolo County Adjusted [1]	Colusa County	Sutter County	Minimum Income	Total Annual Housing Cost	Monthly Housing Cost [2]	Monthly Mortgage [3]	Loan Amount [4]	Maximum Affordable Home Price Range [5]	
Formula				*a*	*b = a * 35%*	*c = b / 12*	*d =c * 80%*	*e* *(assumes 80/20 loan)*	*f = e * 1.2*	
Household Income Range										
Renter	**29%**	**38%**	**33%**							
Homebuyer										
$35,999 - $49,999	14%	15%	14%	$35,999	$12,600	$1,000	$800	$133,000	$160,000	$239,999
$50,000 - $74,999	19%	20%	21%	$50,000	$17,500	$1,500	$1,200	$200,000	$240,000	$352,999
$75,000 - $99,999	13%	11%	13%	$75,000	$26,250	$2,200	$1,760	$294,000	$353,000	$463,999
$100,000 - $149,999	15%	11%	12%	$100,000	$35,000	$2,900	$2,320	$387,000	$464,000	$703,999
$150,000+	10%	5%	7%	$150,000	$52,500	$4,400	$3,520	$587,000	$704,000	+
Subtotal, Homebuyer	**71%**	**62%**	**67%**							
Total	**100%**	**100%**	**100%**							

"salary"

Source: American Fact Finder & EPS.

[1] Excludes household income data for the Cities of Davis and West Sacramento.
[2] Includes Principal, Interest, Taxes, and Insurance.
[3] Monthly housing cost less estimate for insurance and taxes, which is estimated to be approximately 2 percent annually of the home price.
[4] Assumes purchaser takes out loan for 80% of purchase price of the home. Loan amount calculated by computing the present value of a monthly mortgage payment stream assuming 30 year loan with fixed 6% interest.
[5] Home price computed based on loan amount plus 20% down payment.

Table L-8
Dunnigan Specific Plan
Comparison of Dunnigan Residential Products and Yolo County Homebuyer Affordability

Land Use	Cost per Unit	Units	Share of Total Owner-Occupied Units [1]	Cumulative Share of Units	Yolo County Adjusted [2]	
					Adjusted Share of County Population w/Target Income	Cumulative Share of Population Able to Afford Product
Dunnigan Residential						
Rural	$500,000	415	6%	6%	25%	25%
Low Density	$400,000	3,879	54%	59%	13%	38%
Medium Density	$260,000	1,925	27%	86%	19%	57%
High Density/ Mixed Use [2]	$190,000	1,006	14%	**100%**	14%	71%
Total		**7,225**	**100%**		**71%**	

"inc_pop"

[1] Excludes units that are anticipated to be renter-occupied.
[2] Excludes household income data for the Cities of Davis and West Sacramento.