APPENDIX L

Income and Housing Match Analysis for

DUNNIGAN SPECIFIC PLAN

Revised: April 29, 2013
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 relation 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 developed to analyze the relation between DSP home values by product type and the estimated household incomes of future DSP residents.

Jobs/Housing Wage Match

In normal market conditions, typically there is a range that demonstrates the relation between household income levels and home prices and vice versa. As shown in **Figure L-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, EPS estimated the range of housing that will be affordable to future DSP employees and households. The analysis shown in **Table L-1** calculates the range of affordable home prices for a given range in assumed annual household income. For example, as shown on **Figure L-2**, a potential homebuyer with an annual household income range of $60,000 to $80,000 could afford to purchase a home that is valued between $250,000 and $350,000. **Figure L-2** also shows the relation between the minimum household income and the estimated affordable home price range, which is consistent with the range of home prices to household income in the State of California.

It also is important to note that not all DSP households will be in for-sale homes, and a percentage of the DSP population will elect to live in rental housing. The analysis is based on the assumption that households earning less than $40,000 are renters.
In addition, a certain percentage of households earning greater than $40,000 would elect to rent versus own.

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

1. A 5-percent, 30-year, fixed-rate mortgage.
2. A 20-percent down payment.
3. Annual taxes and insurance of 1.8 percent. Taxes and insurance include ad valorem taxes, as well as existing and proposed special taxes and assessments for infrastructure and services.
4. Maximum of 35 percent of income dedicated to mortgage payments, taxes, and insurance.

Table L-2 calculates the estimated household distribution by job-based household income. The estimated number of jobs and households is based on the Dunnigan Economic Development Strategy Report prepared by Applied Development Economics (ADE) and is used to calculate the number of households in each household income range. The analysis shown on **Table L-2** assumes that half of the employees who work in the DSP will live in the DSP. This assumption is predicated on the premise that the DSP is planned to maximize the number of residents who work in the community. As articulated in Chapter 7, the DSP includes three job-housing principles designed to encourage residents to work within the DSP and reduce travel to destinations outside of the community. As such, the plan seeks to accommodate up to half of all DSP residents being able to work within the DSP. This would achieve a much higher percentage than the regional norm, as shown in Appendix Q. Considering its distance from the existing job centers in the region, a larger percentage of Dunnigan residents may choose to work within the community.

When quantifying total households that will live within the DSP, the jobs/housing wage match analysis also includes Phase 4 construction jobs as a proxy for permanent DSP households that will be supported by at least one household worker in the construction industry. While most of the construction jobs created by the DSP will be temporary, the DSP housing stock will ultimately house some residents who are employed in the construction industry. Inclusion of the Phase 4 construction jobs acts as a proxy for the long-term, ongoing construction employment estimate.

As shown on **Table L-2** and **Figure L-3**, approximately 40 percent of the households supported by new employment in the DSP are anticipated to have annual household incomes in the $40,000 to $60,000 income range. This income range includes a majority of the construction, food, agricultural, and retail jobs that are typical for the region. Approximately 11 percent of the households are anticipated to earn more than $100,000, and approximately 27 percent would have annual household incomes within the $60,000 to $100,000 range. The remaining approximately 21 percent would have annual household incomes within the $20,000 to $40,000 range and are assumed to be renters. As an integral part of the economic development strategy, the DSP will seek to draw new employers to the area in certain industry sectors that have higher wage jobs.

Table L-3 compares the planned DSP residential products and households by income range to demonstrate the jobs/housing wage match, which is also illustrated in **Figure L-4.** The DSP jobs/housing wage match was calculated using the one half of households in the estimated job-based household income range that could afford each residential product. EPS assumed that households will buy a housing unit in their affordable price range and that a household will not buy a housing unit priced below their minimum affordable home price, although they could. Also, the analysis does not account for the natural occurrence of "equity-trade-up" purchases wherein a household could live in a house valued at an amount greater than the amount their annual income would support, because they were able to put down a larger down payment (e.g., through equity-trade-up). Obviously, to the extent that this occurs, the blue shaded area within **Figure L-4** would shift to the right for any such households. Finally, to reiterate, EPS also assumed that households earning less than $40,000 would be renters.

EPS used the estimated employment and household income data provided by ADE to calculate the households in each household income range on **Table L-3**. **Table L-3** also aligns the estimated DSP home prices with the affordability calculations from **Table L-1**. As an example, the estimated medium-density and low-density sales prices are approximately $221,000 and $340,000, respectively. Therefore, the affordable home price range for a medium-density unit is $221,000 to $339,999. Consequently, the job-based household income range that could afford a medium-density unit is $55,500 to $72,999.

As **Figure L-4** shows, the DSP provides an adequate supply of new homes that are anticipated to be affordable to new residents, again assuming half of DSP employees reside within the DSP. The amount of potential homeowners that could afford the DSP high-density / mixed use units is closely aligned with the supply of such housing units. Similarly, the amount of potential renter households is also closely aligned with the amount of planned DSP rental housing units. The largest gap, for low density residential units, will be closed by a combination of higher income households (e.g., those that could qualify for Rural Estates units) and by households supported by jobs in the surrounding region (e.g., workers employed in Davis, Woodland, Sacramento, Dixon, Vacaville, etc.). 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 DSP population that may wish to purchase a home. A certain percentage of the DSP population also will reside in rental housing, which has a sufficient amount of supply for the amount of potential renters.

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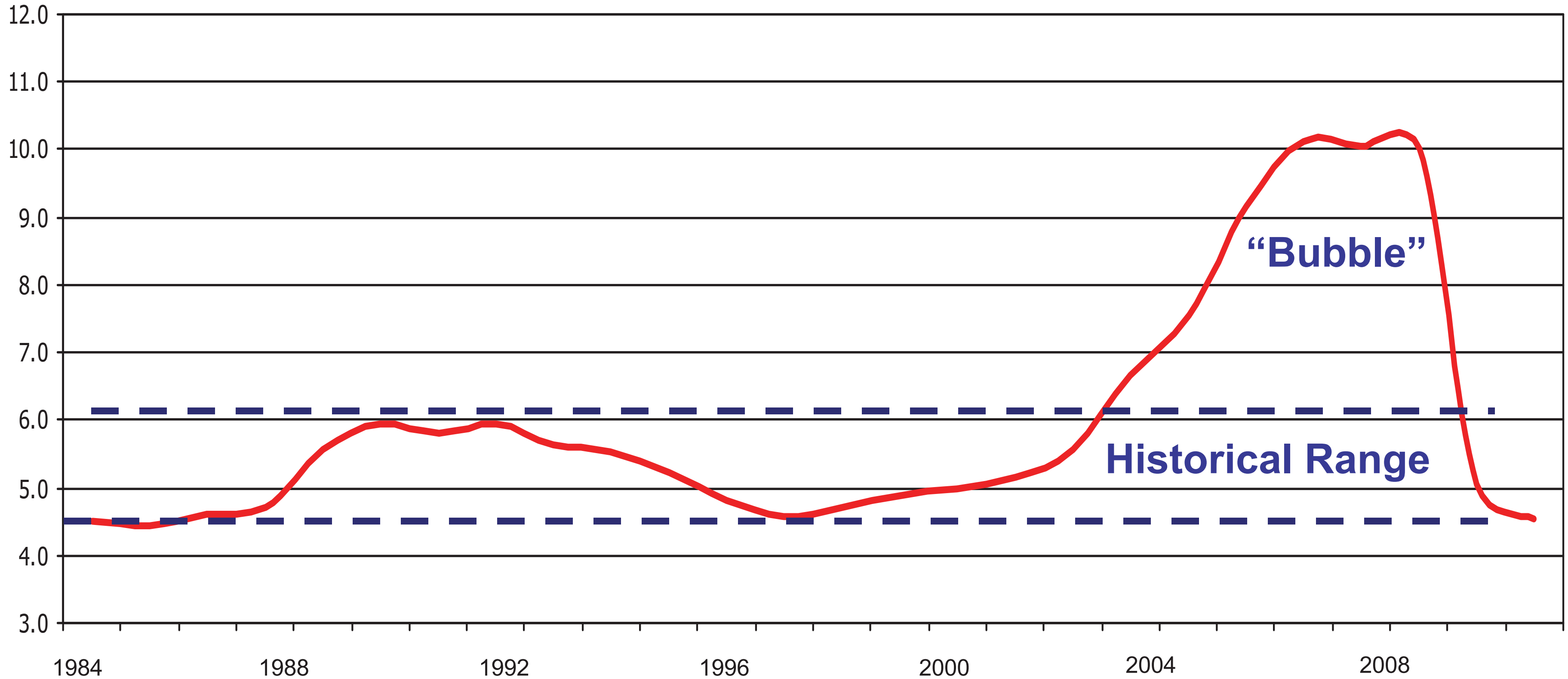
Figure L-1
Ratio of Average New Home Price to Median Income: California



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

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Table L-1
Dunnigan Specific Plan
Income and Home Price Analysis (2013$)

Item	Minimum Income	Total Annual Housing Cost	Monthly Housing Cost [1]	Monthly Mortgage [2]	Loan Amount [3]	Estimated Affordable Home Price Range [4]	
Formula	*a*	*b = a * 35%*	*c = b / 12*	*d = c - mo. costs*	*e*	*f = e / 0.8*	
Household Income Range							
Renter [5]	Below $39,999						
Homebuyer							
$40,000 - $59,999	$40,000	$14,000	$1,170	$780	$145,000	$181,000	$250,999
$60,000 - $79,999	$60,000	$21,000	$1,750	$1,080	$201,000	$251,000	$350,999
$80,000 - $99,999	$80,000	$28,000	$2,330	$1,510	$281,000	$351,000	$488,999
$100,000 - $119,999	$100,000	$35,000	$2,920	$2,100	$391,000	$489,000	$623,999
$120,000 - $140,000	$120,000	$42,000	$3,500	$2,680	$499,000	$624,000	$728,000

"salary"

Source: American Fact Finder & EPS.

[1] Includes Principal, Interest, Taxes, Insurance and estimated Homeowner's Association costs.
[2] Monthly housing cost less estimate for homeowner's association, insurance and property taxes, as estimated below.

	Priced Below $200,000		Prices $300,000 - $400,000		Priced Above $400,000	
	Annual	Monthly	Annual	Monthly	Annual	Monthly
Homeowner's Association Dues	$480	$40	$600	$50	$960	$80
Property Insurance	$600	$50	$840	$70	$1,080	$90
Property Taxes	$3,600	$300	$6,600	$550	$7,800	$650
Total	**$4,680**	**$390**	**$8,040**	**$670**	**$9,840**	**$820**

[3] 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 5% interest.
[4] Home price computed based on loan amount plus 20% down payment.
[5] Assumes households earning below $40,000 would be renters. A certain percentage of the households earning greater than this amount will also elect to rent versus own as well.

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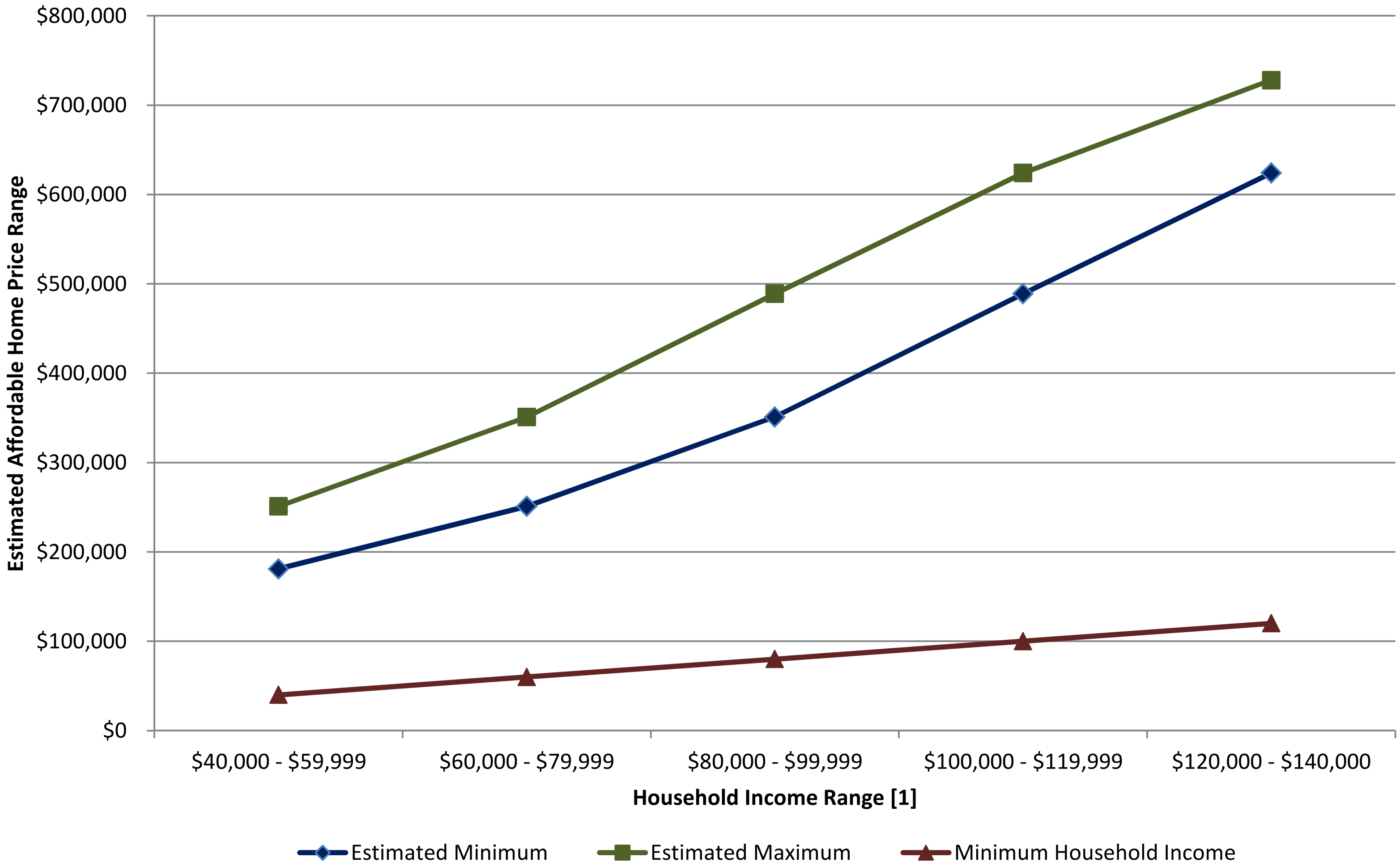
Figure L-2
Dunnigan Specific Plan
Estimated Affordable Home Price Range and Household Income



[1] Assumes households earning below $40,000 would be renters. A certain percentage of the households earning greater than this amount will also elect to rent versus own as well.

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Table L-2
Dunnigan Specific Plan
Household Distribution by Job-Based Household Income

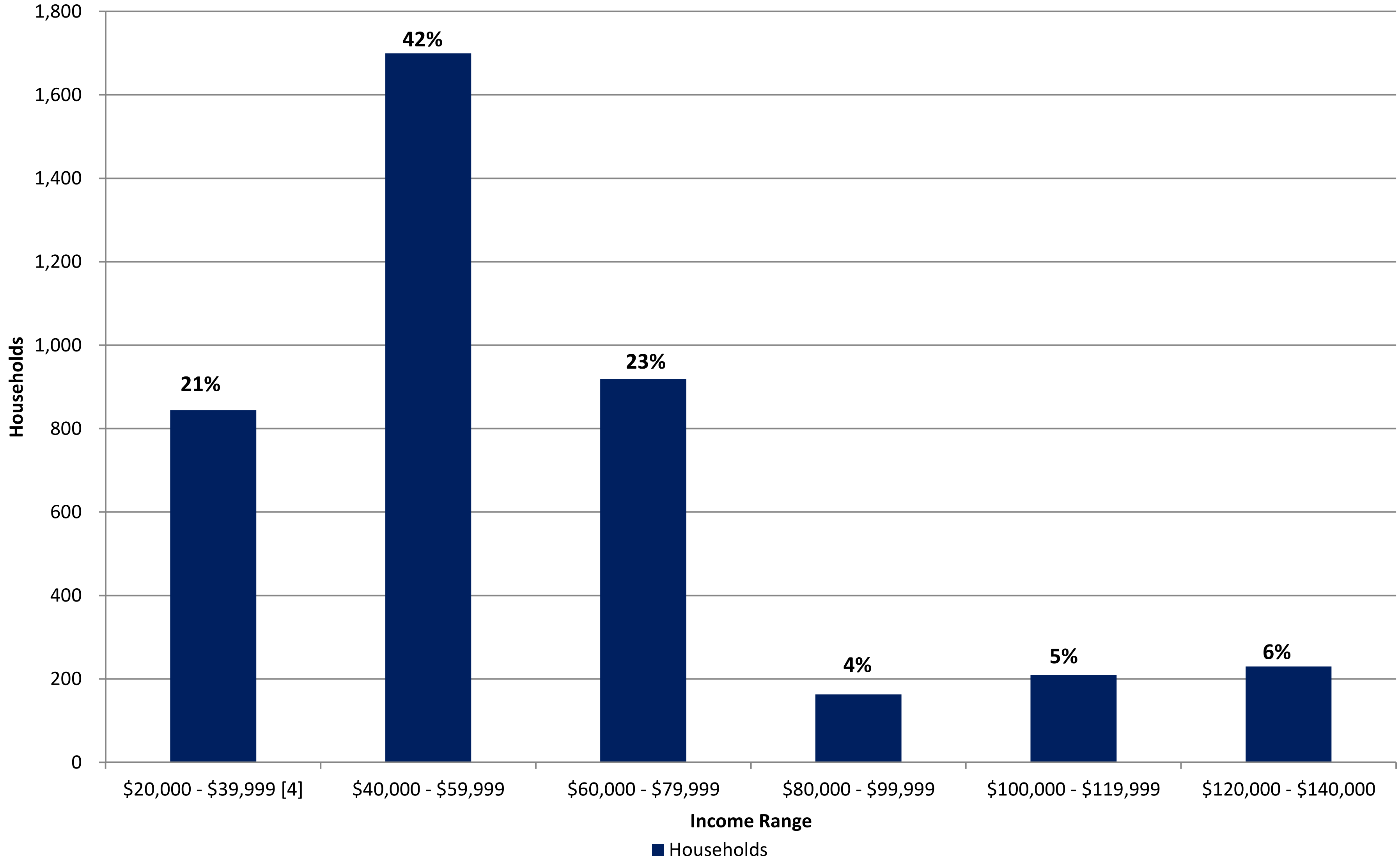
Job-Based Household Income Ranges	Affordable Home Price Range [1]		HH Distribution by Income Cat. @ Buildout	
	Min.	*Max.*	Households [2] [3]	% of Total
$20,000 - $39,999 [4]	n/a	n/a	845	21%
$40,000 - $59,999	$181,000	$250,999	1,699	42%
$60,000 - $79,999	$251,000	$350,999	919	23%
$80,000 - $99,999	$351,000	$488,999	163	4%
$100,000 - $119,999	$489,000	$623,999	209	5%
$120,000 - $140,000	$624,000	$728,000	230	6%
Total [1]			**4,064**	**100%**

"hh_dist"

Source: ADE and EPS.

[1] See Table L-1 for range of affordable home prices by household income range.
[2] Assumes that half of the new employees associated with the DSP would live in the DSP. Therefore, this analysis assumes only half of the total households supported by new employment in the DSP.
[3] Households supported by Phase 4 construction jobs are included to account for the number of households supported by construction jobs that would live in Dunnigan.
[4] Assumes households with income levels less than $40,000 would be renters.

Figure L-3
Dunnigan Specific Plan
Households by Income Range and Percent of Total Households



Prepared by EPS 4/22/2013

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Table L-3
Dunnigan Specific Plan
Comparison of Residential Products and Dunnigan Specific Plan Household Income

Land Use	Dunnigan Home Price	Affordable Home Price Range	Job Based Household Income Range	Dunnigan Housing Units (Phase 1-4) [1]	Households by Income Range [2]	Surplus / (Deficit)
Dunnigan Residential Products						
High Density / MU / CL / OPRD - Rental [3]	n/a	n/a	$20,000 - $39,999	1,006	845	161
High Density / MU / CL / OPRD - Owner-Occupied [3]	$161,500	$181,000 - $220,999	$40,000 - $55,499	1,006	971	35
Medium Density	$221,000	$221,000 - $339,999	$55,500 - $72,999	2,189	1,546	643
Low Density	$340,000	$340,000 - $424,999	$73,000 - $90,499	3,233	188	3,045
Rural Estates	$425,000	$425,000 +	$90,500 +	371	514	(143)
Total				**7,805**	**4,064**	

"match"

Source: ADE and EPS.

[1] Excludes Phase X housing units.
[2] Assumes households will buy a housing unit in their affordable price range. This analysis assumes that a household will not buy a housing unit priced below their minimum affordable home price. Assumes households earning below $40,000 would be renters.
[3] Assumes that high density, mixed use (MU), commercial local (CL), and office park and R&D (OPRD) residential units would be 50% owner-occupied and 50% renter-occupied.

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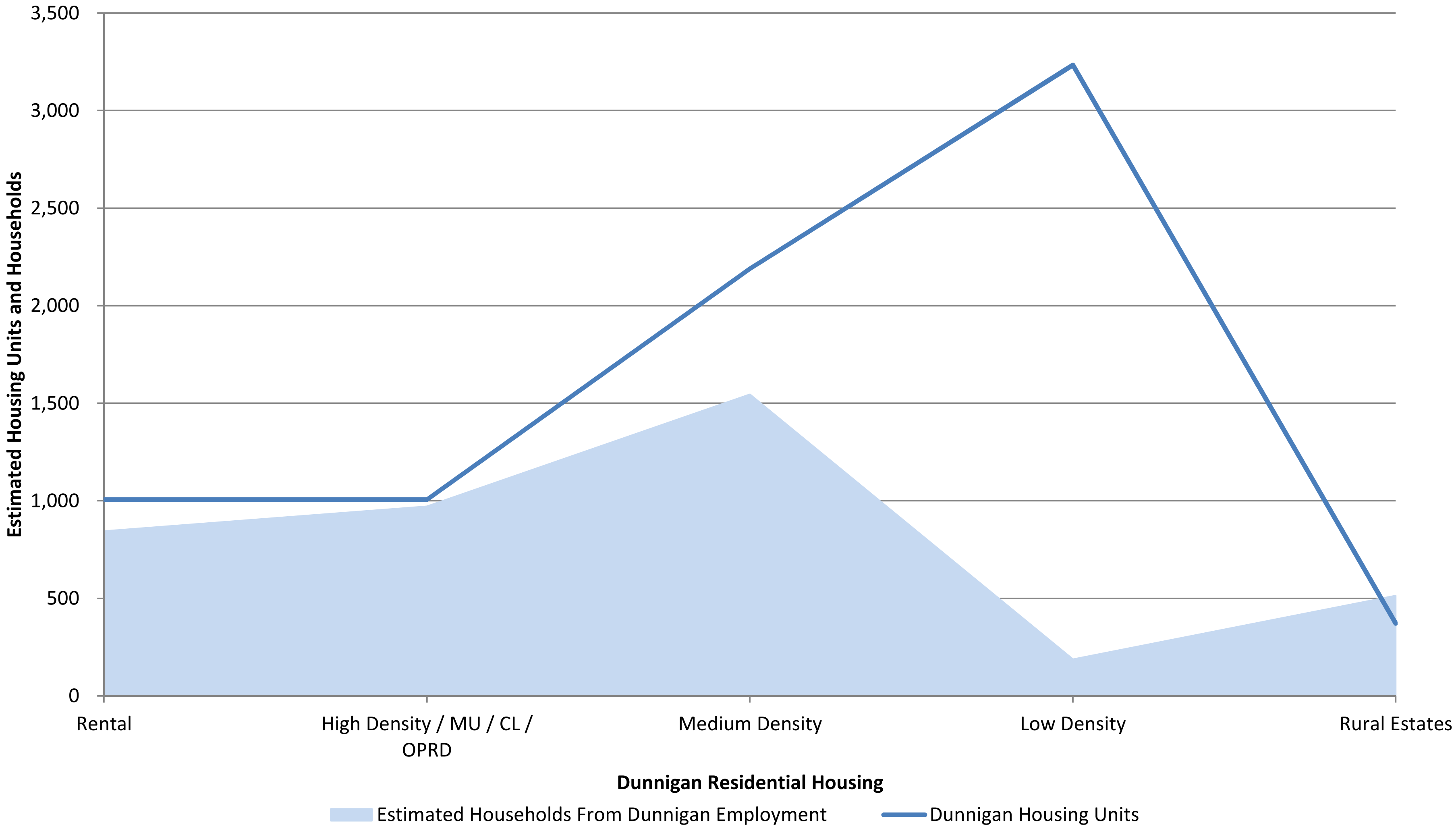
Figure L-4
Dunnigan Specific Plan
Jobs/Housing Wage Match



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