

Final Report

Nonresidential Development Housing Linkage Fee Nexus Study

The Economics of Land Use



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City of Calistoga

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1. INTRODUCTION AND EXECUTIVE SUMMARY

Background

Incorporated in 1886, the City of Calistoga (City) adopted its first in lieu of housing fee in 1994. While new growth has been modest during the last decade, several major resorts are in various stages of development as well as other projects in the City's pipeline. The City recognizes the need to determine the impacts of new development on capital facilities and infrastructure as well as its affordable housing needs. To address this goal, the City retained EPS to conduct a *Commercial/Housing Linkage Fee Nexus Study* to update and re-affirm an affordable housing impact fee for new, nonresidential development.

Purpose

Economic & Planning Systems, Inc. (EPS) was retained by the City of Calistoga to conduct a nexus study that quantifies the relationship between the growth in nonresidential land uses and the demand for and cost of affordable housing for the local workforce. As a development impact fee, the nonresidential linkage fee (fee) can only be charged to new development and must be based on the impact of new development on the need for resources to subsidize the development of new affordable housing. The purpose of this report is to provide the nexus (or reasonable relationship) between new nonresidential development that occurs in the City and the need for additional affordable housing as a result of this new development.

The fee generated by this program will be used to provide assistance for production, acquisition of at-risk units, or rehabilitation of affordable housing.

Authority

This study serves as the basis for requiring development impact fees under AB 1600 legislation, as codified by the Mitigation Fee Act (California Government Code sections 66000 *et seq.*). This section of the Mitigation Fee Act sets forth the procedural requirements for establishing and collecting development impact fees. These procedures require that a reasonable relationship, or nexus, must exist between a governmental exaction and the purpose of the condition.

Required Nexus Findings

- Identify the purpose of the fee.
- Identify how the fee is to be used.
- Determine how a reasonable relationship exists between the fee's use and the type of development project on which the fee is imposed.
- Determine how a reasonable relationship exists between the demand for the affordable housing and the type of development project on which the fee is imposed.
- Demonstrate a reasonable relationship between the amount of the fee and the cost of the public benefit attributable to the development on which the fee is imposed.

In 1991, the Ninth Circuit U.S. Court of Appeals upheld the City of Sacramento's nonresidential linkage fee.¹ In that case, the court found that the City's fee program "substantially advanced a legitimate interest." EPS is using a similar methodology to the nexus study reviewed in that case to develop the City's fee program.

Summary

As new employment-generating development continues to occur in the City, additional affordable housing will be required to house a portion of the new lower wage workforce. The cost to construct new housing units is higher than can be supported by the rents that many workers will be able to pay. The difference between costs and affordable rent levels is considered an "affordability gap." The costs allocated to new nonresidential development through this fee reflect this affordability gap that would need to be filled in order to provide housing for additional workforce demanded by nonresidential development.

Table 1 summarizes the maximum justifiable fee by employment category. EPS recommends that the City adopt a fee that is less than the maximum justifiable fee for policy reasons. Policy reasons include the fact that affordable housing development is not the sole responsibility of nonresidential developers. In addition, maximum fee levels would add substantial cost burden to new nonresidential development, likely significantly affecting the viability of many development projects. Ultimately, the City should decide the appropriate fee levels based on its own goals and policy considerations and, potentially, fee levels in other jurisdictions.

As a point of reference, the existing in lieu of housing fees in the City of Calistoga are as follows:

- Retail: \$0.80 per square foot
- Office: \$1.00 per square foot
- Tourist Accommodations: \$1.40 per square foot
- Industrial: \$0.50 per square foot

Sources

To estimate the fee, EPS relied on numerous sources of data, including the following:

- U.S. Bureau of Labor Statistics (BLS) "May 2012 National Industry-Specific Occupational Employment and Wage Estimates".
- State Department of Housing and Community Development (HCD) annual income limits for 2013.
- U.S. Census Bureau American Community Survey (ACS) 2011 estimate.
- Input from City of Calistoga's staff.

These and other data sources are identified on the tables provided throughout this report. In addition, EPS based its development and operating cost assumptions on interviews with local and regional affordable housing developers and other market professionals.

¹ *Commercial Builders of Northern California v. City of Sacramento*, 941 F2d 872 (1991).

**Table 1
Summary of Maximum Allowable Commercial Housing Linkage Fees and EPS Recommended Levels**

Fee	Unit	Maximum Fee	Suggested Fee Range (1)
Tourist Accommodation	per sq.ft.	\$89.64	\$3.00
Winery (2)	per winery	\$264,361	\$26,400
Commercial	per sq.ft.	\$80.22	\$1.00
Restaurant	per sq.ft.	\$198.30	\$3.00

(1) Rounded; based on comparable jurisdictions.

(2) Based on the 10% to 20% of maximum range.

Source: EPS.

Organization of Report

Following this **Introduction and Executive Summary**, this study includes the following chapters:

- **Chapter 2** presents the nexus findings based on the methodology.
- **Chapter 3** provides a general discussion of the City's development trends and employment composition.
- **Chapter 4** describes the methodology used to calculate the fee.

2. FINDINGS FOR FEE PROGRAM

Purpose of Fee

The fee program developed through this Nexus Study would fund the development and preservation of affordable housing projects in the City as required by the increase in local lower wage workers employed by new nonresidential construction projects. The businesses that occupy new nonresidential buildings will demand employees, many of whom will have difficulty finding suitable local housing they can afford.

Use of Fee

The funds generated by this fee will be used to provide assistance for the production of affordable housing, acquisition of affordable units that are at risk of being converted to market rate, or rehabilitation of affordable housing. The fee also will fund the studies and administration to support the fee program.

Relationship Between Use of Fee and Type of Development

The development of new nonresidential land uses in the City will generate need for additional workers. The wages of a significant portion of the new employees will be inadequate to support sufficient rent prices to attract residential developers to provide housing opportunities without subsidy. The fee will be used to help to fill the "affordability gap" for housing development and increase the number of homes available for the local workforce.

Relationship Between Demand for Affordable Housing and Type of Project

The City and EPS have identified three employment categories for which a separate fee has been calculated. The proportion of lower wage workers and the number of square feet per employee for each employment category has been assessed to ensure a proper nexus has been established.

Relationship Between Amount of Fee and Cost of Public Benefit Attributed to New Development

EPS estimated the gap between the cost of developing new rental housing and the achievable value of the new rental units based on different income levels². To estimate the maximum fee, this gap was then multiplied by the number of lower wage workers anticipated by the new development projects and the number of households of various income categories those workers

² EPS assumed the units would be rented rather than for-sale because the financing gap for rental units is lower than for for-sale units, as further described on page 16.

are likely to form. As the fee is one of several mechanisms for generating resources for or reducing the cost of housing development, the EPS recommends a fee below the maximum calculated level.

3. *EMPLOYMENT AND HOUSING TRENDS*

Recent Development Trends

Calistoga is a small rural community located in the upper Napa Valley. It has a population of about 5,200 residents and 2,200 jobs. The City's main economic activity is tourism that draws on the wine industry cluster, resorts and spa facilities, and a quaint downtown.

Calistoga experienced modest growth over the last decade. The vast majority of new housing construction in the City over the last decade has been single-family development, reinforcing the lower density orientation of Calistoga's housing stock. As **Table 2** displays, an average of fewer than 10 units of housing each year have been constructed annually over the last 12 years.

Employment and Income Composition

This report provides information regarding income categories as commonly defined by state and federal agencies that administer affordable housing programs. **Table 3** presents the income categories that are relevant for this fee program. EPS uses acronyms in several of the tables provided and those acronyms are also included in **Table 3** for reference.

Calistoga had 2,200 jobs in 2010, including many jobs oriented towards wine cultivation and tourism accommodation. Calistoga's desirability can be attributed to its quality of life associated with a variety of community attributes, including scenic location, small-town charm, good schools, low crime rate, recreational amenities, and an attractive downtown. Calistoga's historic market orientation towards single-family ownership has resulted in limited availability of multifamily housing. Local workers compete for a limited housing supply with retirees who may have built substantial equity in their prior homes or higher income households who have more flexibility regarding where they choose to live. As a result of this type of demand on the City's housing supply, it will be difficult for new lower wage workers to find suitable housing in the City without a program designed to bring the cost of housing down to an affordable range.

**Table 2
Residential Construction Trends in Calistoga**

Year	Single-Family	Multifamily	Total
2000	7	0	7
2001	3	0	3
2002	3	0	3
2003	1	0	1
2004	26	0	26
2005	27	0	27
2006	21	0	21
2007	14	0	14
2008	8	0	8
2009	1	0	1
2010	0	0	0
2011	0	0	0
2012	0	0	0
Total	111	0	111

∞

Source: SOCDs Database from the U.S. Department of Housing and Urban Development; EPS.

Table 3
Napa County Income Category Definitions (2013)

Affordability Category	Acronym	Percentage of County Median	Maximum Income Threshold 3-person household
Very Low Income (1)	VLI	0% - 50%	\$38,750
Low Income (2)	LI - 65	51% - 65%	\$48,975
Low Income	LI - 80	66% - 80%	\$59,200
Median Income	Median	80% - 100%	\$77,500
Moderate Income	Moderate	101% - 120%	\$92,950

(1) Captures a combination of extremely low (0% to 30% of median incomes) and very low income (31% to 50% of median incomes).

(2) Based on the average between very low (VLI) and low (LI-80) maximum income figures.

Source: California HCD and EPS.

4. METHODOLOGY AND FEE CALCULATION

Employment Categories

Employment categories utilized in this analysis are displayed in **Table 4** along with a description of the types of businesses that are included in each category. In general, each employment category is intended to be associated with a particular type of building or land use, to which the fees can be applied. Based on the City's development pipeline and existing development, EPS recommends four land use categories to include tourist accommodation, wineries, commercial (office, general retail, light industrial, and R&D), and restaurant uses. Consolidation of commercial uses reflects the notion that their tenant types are generally interchangeable and might occupy the same general type of building space. For example, an R&D business may occupy office space or light industrial space, and a single "flex" commercial building may house businesses of each of these three types. Other employment categories are more discretely associated with a particular type of building, and thus the appropriate fees for such buildings are easier to determine when a building is proposed and constructed.

Occupational Category and Wage Distribution

EPS used U.S. Bureau of Labor Statistics (BLS) *National Industry-Specific Occupational Employment and Wage Estimates* for 2012 to estimate the wages earned by employees in industry sectors related to the employment categories. This BLS data set includes wage data at both the national and Napa County metropolitan statistical area (MSA). Wage data for the Napa County MSA is provided for occupations for all industries in the aggregate, while national-level wage data are provided by industry sector. To account for regional wage disparities, EPS calculated wage adjustment factors as displayed in **Table 4**. EPS applied these adjustment factors to the nationwide income level data by industry sector to estimate the wages for the Napa County MSA.

EPS used BLS nationwide data regarding industries and occupation categories to estimate the proportion of occupations likely to be represented under each employment category. For example, EPS evaluated the occupation categories for the lodging industry to determine the proportional distribution of occupations for the employment category "Tourist Accommodation." North American Industry Classification System (NAICS) sector 721000 ("Accommodation") shows that nationwide, 4.3 percent of the jobs in the lodging industry are taken by managers while 29.2 percent are in the category of buildings and grounds cleaning and maintenance (see **Table B-1**). The occupational distribution for all designated employment categories are provided in **Appendix B**.

The employee household income calculation approach is illustrated in **Table 5**. The wages of each occupation were multiplied by 1.7, the average number of workers per working household in the City according to Census Bureau's American Community Survey data. The resulting figure is assumed to represent the annual household wage. Also according to the American Community Survey, the average household size in Calistoga is 2.53. Rounding these average household and

Table 4
Adjustment Factors for Converting National Wages to Napa County MSA Wages

Occupation Category	US Average Wage	Napa County MSA Avg. Wage	Napa County as % of US Average
Management	\$108,570	\$111,800	103.0%
Business and Financial Operations	\$69,550	\$72,010	103.5%
Computer and Mathematical Science	\$80,180	\$74,080	92.4%
Architecture and Engineering	\$79,000	\$79,760	101.0%
Life, Physical, and Social Science	\$68,360	\$76,820	112.4%
Community and Social Services	\$44,240	\$50,970	115.2%
Legal Occupations	\$98,570	\$70,680	71.7%
Education, Training and Library	\$51,210	\$57,240	111.8%
Arts, Design, Entertainment, Sports, and Media	\$54,490	\$50,580	92.8%
Healthcare Practitioner and Technical	\$73,540	\$93,640	127.3%
Healthcare Support	\$27,780	\$35,450	127.6%
Protective Services	\$43,050	\$43,490	101.0%
Food Preparation and Serving	\$21,380	\$25,110	117.4%
Buildings and Grounds Cleaning and Maintenance	\$25,670	\$30,900	120.4%
Personal Care and Service	\$24,550	\$28,520	116.2%
Sales and Related Occupations	\$37,990	\$42,770	112.6%
Office and Administrative Support	\$34,410	\$40,310	117.1%
Farming, Fishing and Forestry	\$24,230	\$27,830	114.9%
Construction and Extraction	\$44,960	\$53,630	119.3%
Installation, Maintenance, and Repair	\$43,870	\$49,410	112.6%
Production	\$34,500	\$37,350	108.3%
Transportation and Material Moving	\$33,590	\$33,450	99.6%

Sources: BLS *National Industry-Specific Occupational Employment and Wage Estimates*, May 2011

**Table 5
Illustration of Employees' Household Income Calculation**

Item	Example	Source
Employment Category	Tourist Accommodation	City of Calistoga and EPS
Industry	Accommodation (NAICS Code 721000)	Bureau of Labor Statistics (BLS)
Occupation Category	Buildings and Grounds Cleaning and Maintenance	BLS
Nationwide Mean Income for Occupation	\$22,740	BLS (2012)
Regional Wage Adjustment Factor for Occupation	120.4%	BLS and EPS
Mean Wage Estimate for Napa County	\$27,373	BLS and EPS
Workers per Household	1.70	American Community Survey 2011 est.
Mean Income per Household	\$46,490	Workers per HH Multiplied by Mean Annual Wage
Income Category for 3-person Family	Low Income - (LI-65)	Dept. of Housing and Community Development (HCD)

family sizes, EPS compared the estimated household wage with the income thresholds for a 3-person household to identify the income category into which each occupation would fall. Key assumptions and their sources are summarized in **Appendix A**.

Distribution of Workers by Land Use Type

After identifying income ranges for each occupation and employment category, EPS summed the percentages of occupations by income bracket. These proportions of anticipated household income brackets by employment category are presented in **Table 6**.

As shown, Restaurants and Wineries are expected to generate the most significant numbers of households below the 65 percent of the area's median income level, while tourist accommodation and commercial uses will also generate substantial numbers of households in the 65 to 80 percent of area median income bracket. Many commercial jobs are comprised of retail where wages are below those in other commercial land use sectors (e.g. office, light industrial).

Employment Densities

Commercial operations have varying levels of employment requirements. Retail space, for example, does not require a significant number of employees but does require a significant amount of building square footage. Office space, on the other hand, may not require a significant amount of square footage, but often requires a significant number of employees. The number of building square feet or acres of property anticipated for a certain number of employees is termed the "employment density" of each employment category.

EPS estimated the employment density for each of the employment categories, as shown in **Table 7**. Using those employment density assumptions, EPS estimated the number of employees that would be demanded for a 100,000-square foot building.

Household Formation

EPS then estimated the number of households those employees would represent. First, EPS adjusted for the fact that younger workers may not be at the age to form their own households. Data from the Bureau of Labor Statistics indicate that young workers age 16 to 19 represent only about 3.2 percent of the overall workforce. However, the majority of these young workers are in the retail/restaurant industries, where they represent 10.1 percent of the overall industry employment. EPS has assumed that these young workers age 16 to 19 would not form their own households. Second, EPS has assumed that, on average, new households formed in response to growing employment opportunities would have 1.7 wage-earning workers. This assumption is based on the Census Bureau's American Community Survey 2011 data regarding the number of Calistoga residents who are "workers" in households that have workers. The combination of these adjustments results in the assumption that nearly six households are formed for every ten new employees.

Table 6
Income Distribution of Worker Households by Employment Category [1]

Employment Category	VLI	LI - 65	LI - 80	Median	Moderate	Above Mod
Tourist Accommodation	0.0%	34.6%	51.0%	8.0%	1.9%	4.5%
Winery	0.0%	76.5%	1.2%	11.4%	0.3%	10.6%
Commercial	0.0%	10.4%	75.3%	6.1%	0.4%	7.8%
Restaurant	4.9%	91.8%	0.8%	0.1%	0.1%	2.3%

[1] Designation of household income is based on a 3-person household and 1.7 workers per household, both based on American Community Survey data. The households are assumed to be in the same income group.

Source: BLS, HCD, EPS, and American Community Survey 2011.

Table 7
Household Generation Rates by Employment Category

Employment Category	Sq.Ft. per Worker/ Worker/Winery [1]	Total Workers per 100k Sq.Ft./Winery	% of Workers Forming Households [2]	Total Households per 100k Sq.Ft. [3,4]/Winery	Households by Income Level [4]					
					VLI	LI - 65	LI - 80	Median	Moderate	Above Mod
Tourist Accommodation	500	200	96.8%	114	0	39	58	9	2	5
Winery	4	4	96.8%	2	0	2	0	0	0	0
Commercial	430	233	93.4%	128	0	13	96	8	1	10
Restaurant	350	286	89.9%	151	7	139	1	0	0	3
% Allocation				100%	2%	49%	39%	4%	1%	5%

[1] See **Appendix Table A-1** for sources on employment densities in different land uses.

[2] BLS data indicates that 3.2% of workers are age 16-19 in the U.S., however, the average is higher in the retail and restaurants industry. EPS assumes that 10.1% of workers are age 16-19 based on the National Retail Federation data. This age group is assumed to not form their own households due to a young age.

[3] Assumes 1.7 employees per household based on the American Community Survey estimate for Napa County.

[4] Figures are rounded to nearest whole number.

Sources: BLS, National Retail Federation, ACS 2011, and EPS.

Housing Development Costs and Affordability Gap

EPS has assumed that the average type of housing for Calistoga's lower-income workers would be a 2-bedroom apartment unit in a two-story walk-up apartment building. This prototype was selected for several reasons. First, the average size of a Calistoga household is just over 2.5 people, and households of this size are appropriately housed in 2-bedroom units, according to

State law (California Health and Safety Code Section 50025.5). Second, the density of walk-up apartments is typically around 20 units per acre, and Calistoga staff indicated that this density would be appropriate for new multifamily development in the City. Third, this building prototype is also generally cost-effective to construct, as it makes efficient use of land and does not involve expensive construction materials or techniques. Finally, EPS assumed the units would be rented rather than for-sale because the financing gap for rental units is lower than for for-sale units.

Development Cost Assumptions

Affordable housing development costs include land costs, direct costs (e.g., labor and materials), and indirect or "soft" costs (e.g., architecture, entitlement, marketing, etc.). For rental projects, operating costs also must be incorporated into the analysis. Data from recent North Bay developments and recent Calistoga land transactions have been combined with EPS's information from various market-rate and affordable housing developers to estimate appropriate development cost assumptions for use in Calistoga. These assumptions are shown on **Table 8**.

Revenue Assumptions

To calculate the values of the affordable units, assumptions must be made regarding the applicable income level (moderate, median, and low) and the percentage of income spent on housing costs. In addition, translating these assumptions into unit prices and values requires estimates of operating expenses, capital reserves, and capitalization rates. The following assumptions were used in these calculations:

- *Income Levels*—This analysis estimates the subsidy required to produce units for households earning 50, 65, 80, 100, and 120 percent of Area Median Income for a three-person household. In 2013, AMI in Napa County for these households was \$77,500, as shown in the California Department of Housing and Community Development's (HCD's) income limits chart.
- *Percentage of Gross Household Income Available for Housing Costs*—HCD standards on overpaying for rent indicate that households earning less than 80 percent of AMI should pay no more than 30 percent of their gross income on housing costs. For this analysis, EPS has assumed that all households shall spend 30 percent of their gross income on housing costs.
- *Operating Costs for Rental Units*—The analysis assumes that apartment operators incur annual operating costs of \$6,200 per unit, which include the cost of utilities, for units affordable at 80 percent of AMI or below. EPS has assumed the units for median income households and above would have similar operating costs but would be built by for-profit builders and thus also be subject to property taxes.

Affordability Gap Results

Table 8 shows the subsidies for construction of for-rent apartments for households at various income levels. For low- and very-low incomes, the cost of constructing the unit is higher than the value of the unit. This is considered the “affordability gap,” and serves as the basis for calculating the subsidies required to provide housing for the employees who will be working in new nonresidential development in Calistoga. However, this analysis suggests that rents affordable to median and moderate income households could support the costs of new construction without subsidy.

Fee Calculation

Tables 9 through **12** provide the maximum nonresidential housing fee calculations for each of the four employment categories. Assuming a 100,000-square foot nonresidential building prototype for each employment category (except the winery), the number of new households by income category is multiplied by the per-unit affordability gap to determine the level of subsidy required to provide housing for the new worker households. The adjusted affordability gap is then divided by the size of the assumed building or land to determine a maximum fee per building square foot.

While the City has the option of adopting fees up to the maximum levels calculated, EPS does not recommend the City adopt the entire maximum fee. There are several factors compounding the issue of housing affordability; insufficient wages relative to development costs constitutes just one factor. Market forces, land use regulations, construction costs, and entitlement costs also impact housing affordability. In addition, revenue generated through this fee program is just one source of potential subsidy funds to help finance affordable housing projects. Finally, adoption of the maximum fees for certain employment categories would represent a very large addition to the costs of development, and could hamper the City’s economic development objectives. EPS recommends that the linkage fee is adopted at the level below the maximum calculated fee consistent with comparable California communities. Other California communities—including Sacramento, Rohnert Park, and the County of Sonoma, among others—have made reductions to the maximum allowable fee when adopting their fee program, for reasons such as those cited above.

**Table 8
Housing Affordability Gap**

Item	2-Story Multifamily With Surface Parking				
	Very Low Income (50% AMI)	Low Income (65% AMI)	Low Income (80% AMI)	Median Income (100% AMI)	Moderate Income (120% AMI)
Development Program Assumptions					
Density/Acre	20	20	20	20	20
Average Gross Unit Size	1,100	1,100	1,100	1,100	1,100
Average Net Unit Size	950	950	950	950	950
Average Number of Bedrooms	2	2	2	2	2
Average Number of Persons per Household	3	3	3	3	3
Parking Spaces/Unit [1]	2.00	2.00	2.00	2.00	2.00
Cost Assumptions					
Land/Acre [2]	\$800,000	\$800,000	\$800,000	\$800,000	\$800,000
Land/Unit	\$40,000	\$40,000	\$40,000	\$40,000	\$40,000
Direct Construction Costs/Gross SF [3]	\$148	\$148	\$148	\$148	\$148
Direct Construction Costs/Unit	\$162,800	\$162,800	\$162,800	\$162,800	\$162,800
Offsites/Intracts per Unit [4]	\$22,000	\$22,000	\$22,000	\$22,000	\$22,000
Parking Construction Costs/Space	\$3,000	\$3,000	\$3,000	\$3,000	\$3,000
Parking Construction Costs/Unit	\$6,000	\$6,000	\$6,000	\$6,000	\$6,000
Subtotal, Direct Costs/Unit	\$190,800	\$190,800	\$190,800	\$190,800	\$190,800
Indirect Costs as a % of Direct Costs [5]	40%	40%	40%	40%	40%
Indirect Costs/Unit	\$76,320	\$76,320	\$76,320	\$76,320	\$76,320
Total Cost/Unit	\$307,120	\$307,120	\$307,120	\$307,120	\$307,120
Maximum Supported Unit Value					
Household Income [6]	\$38,750	\$48,975	\$59,200	\$77,500	\$92,950
Income Available for Housing Costs/Year [7]	\$11,625	\$14,693	\$17,760	\$23,250	\$27,885
Operating Expenses per Unit/Year [8]	\$6,200	\$6,200	\$6,200	\$9,732	\$9,732
Net Operating Income	\$5,425	\$8,493	\$11,560	\$13,518	\$18,153
Capitalization Rate [9]	4.8%	4.8%	4.8%	4.8%	4.8%
Total Supportable Unit Value	\$114,211	\$178,789	\$243,368	\$284,592	\$382,171
Financing Gap	\$192,909	\$128,331	\$63,752	\$0	\$0

[1] Reflects an average parking ratio in the City.

[2] The land costs rate based on interviews with local brokers and review of recent land sale transactions in the area.

[3] Direct construction costs based upon EPS findings in the North Bay. Includes costs for labor and materials. Assumes Direct Construction Costs for rentals are \$10/SF less than for-sale developments.

[4] Assumes an offsite/intract cost of \$10 per land square foot; net of surface parking/grading cost.

[5] Includes costs for architecture and engineering; entitlement and fees; project management, marketing, commissions, and general administration; financing and charges; insurance; and contingency.

[6] Based on HCD 2013 income limits for Napa County.

[7] Assumes housing costs to be 30% of gross household income.

[8] Operating expenses based upon previous findings in other Bay Area jurisdictions, and include costs of tenants' utilities. Units for median- and moderate-income households are assumed to be built as for-profit projects and thus subject to property tax.

[9] Reflects average investor interest for apartment capitalization rates from RealShare/Jones Lang LaSalle's Apartments Outlook 2012 Survey.

Sources: Bay Area housing developers; Department of Housing and Urban Development; Economic & Planning Systems, Inc.

**Table 9
Fee Calculation - Tourist Accommodation**

Item	Worker Households per 100k sq. ft.	Affordability Gap per household	Total Gap
<i>Table references:</i>	<i>Table 7</i>	<i>Table 8</i>	
Aggregate Financing Gap per 100K Sq. Ft			
Affordability Level			
VLI	0	\$192,909	\$0
LI - 65	39	\$128,331	\$5,004,891
LI - 80	58	\$63,752	\$3,697,592
Median	9	\$0	\$0
Moderate	2	\$0	\$0
Above Moderate	5	\$0	\$0
Total	113	n/a	\$8,702,482
Fee Calculation			
		<i>formula</i>	
Total Financing Gap		<i>a</i>	\$8,702,482
Total Building Sq. Ft.		<i>b</i>	100,000
Maximum Fee per Sq. Ft.		<i>c = a / b</i>	\$87.02
Potential Fee Range			
10% of Maximum		<i>d = c * 10%</i>	\$8.70
15% of Maximum		<i>e = c * 15%</i>	\$13.05
20% of Maximum		<i>f = c * 20%</i>	\$17.40
Fee Program Administration			
10% of Maximum		<i>g = d * 3%</i>	\$0.26
15% of Maximum		<i>h = e * 3%</i>	\$0.39
20% of Maximum		<i>i = f * 3%</i>	\$0.52
Potential Fee Range including Administrative Fee			
10% of Maximum		<i>j = d + g</i>	\$8.96
15% of Maximum		<i>k = e + h</i>	\$13.45
20% of Maximum		<i>l = f + i</i>	\$17.93

Table 10
Fee Calculation - Winery

Item	Worker Households per winery	Affordability Gap per household	Total Gap
<i>Table references:</i>	<i>Table 7</i>	<i>Table 8</i>	
Aggregate Financing Gap per Winery			
Affordability Level			
VLI	0	\$192,909	\$0
LI - 65	2	\$128,331	\$256,661
LI - 80	0	\$63,752	\$0
Median	0	\$0	\$0
Moderate	0	\$0	\$0
Total	2	n/a	\$256,661
Fee Calculation			
		<i>formula</i>	
Total Financing Gap		<i>a</i>	\$256,661
Maximum Fee per Winery		<i>c = a / b</i>	\$256,661
Potential Fee Range			
10% of Maximum		<i>d = c * 10%</i>	\$25,666
15% of Maximum		<i>e = c * 15%</i>	\$38,499
20% of Maximum		<i>f = c * 20%</i>	\$51,332
Fee Program Administration			
10% of Maximum		<i>g = d * 3%</i>	\$770
15% of Maximum		<i>h = e * 3%</i>	\$1,155
20% of Maximum		<i>i = f * 3%</i>	\$1,540
Potential Fee Range including Administrative Fee			
10% of Maximum		<i>j = d + g</i>	\$26,436
15% of Maximum		<i>k = e + h</i>	\$39,654
20% of Maximum		<i>l = f + i</i>	\$52,872

Table 11
Fee Calculation - Commercial

Item	Worker Households per 100k sq. ft.	Affordability Gap per household	Total Gap
<i>Table references:</i>		<i>Table 7</i>	<i>Table 8</i>
Aggregate Financing Gap per 100K Sq. Ft			
Affordability Level			
VLI	0	\$192,909	\$0.00
LI - 65	13	\$128,331	\$1,668,297
LI - 80	96	\$63,752	\$6,120,152
Median	8	\$0	\$0
Moderate	1	\$0	\$0
Above Moderate	10	\$0	\$0
Total	128	n/a	\$7,788,448
Fee Calculation			
		<i>formula</i>	
Total Financing Gap		<i>a</i>	\$7,788,448
Total Building Sq. Ft.		<i>b</i>	100,000
Maximum Fee per Sq. Ft.		<i>c = a / b</i>	\$77.88
Potential Fee Range			
10% of Maximum		<i>d = c * 10%</i>	\$7.79
15% of Maximum		<i>e = c * 15%</i>	\$11.68
20% of Maximum		<i>f = c * 20%</i>	\$15.58
Fee Program Administration			
10% of Maximum		<i>g = d * 3%</i>	\$0.23
15% of Maximum		<i>h = e * 3%</i>	\$0.35
20% of Maximum		<i>i = f * 3%</i>	\$0.47
Potential Fee Range including Administrative Fee			
10% of Maximum		<i>j = d + g</i>	\$8.02
15% of Maximum		<i>k = e + h</i>	\$12.03
20% of Maximum		<i>l = f + i</i>	\$16.04

Table 12
Fee Calculation - Restaurant

Item	Worker Households per 100k sq. ft.	Affordability Gap per household	Total Gap
<i>Table references:</i>			
	<i>Table 7</i>	<i>Table 8</i>	
Aggregate Financing Gap per 100K Sq. Ft			
Affordability Level			
VLI	7	\$192,909	\$1,350,366
LI - 65	139	\$128,331	\$17,837,943
LI - 80	1	\$63,752	\$63,752
Median	0	\$0	\$0
Moderate	0	\$0	\$0
Above Moderate	3	\$0	\$0
Total	150	n/a	\$19,252,061
Fee Calculation			
		<i>formula</i>	
Total Financing Gap		<i>a</i>	\$19,252,061
Total Building Sq. Ft.		<i>b</i>	100,000
Maximum Fee per Sq. Ft.		<i>c = a / b</i>	\$192.52
Potential Fee Range			
10% of Maximum		<i>d = c * 10%</i>	\$19.25
15% of Maximum		<i>e = c * 15%</i>	\$28.88
20% of Maximum		<i>f = c * 20%</i>	\$38.50
Fee Program Administration			
10% of Maximum		<i>g = d * 3%</i>	\$0.58
15% of Maximum		<i>h = e * 3%</i>	\$0.87
20% of Maximum		<i>i = f * 3%</i>	\$1.16
Potential Fee Range including Administrative Fee			
10% of Maximum		<i>j = d + g</i>	\$19.83
15% of Maximum		<i>k = e + h</i>	\$29.74
20% of Maximum		<i>l = f + i</i>	\$39.66

APPENDIX A:
Assumptions and Sources



**Table A-1
Assumptions and Sources**

Item	Total	Unit	Source
Demographic Assumptions			
Workers per Household with Workers	1.70 persons		American Community Survey Estimate 2011
Persons per Household	2.53 persons		American Community Survey Estimate 2011
Employment Density Assumptions (FTEs)			
Tourist Accommodation	500 sq. ft. per employee		EPS
Winery	4 employees per winery		EPS
Commercial	430 sq. ft. per employee		EPS
Restaurant	350 sq. ft. per employee		EPS

[1] Reflects an average of various employment densities.

Sources: City of Calistoga and EPS.