

The Economics of Land Use



Administrative Draft Report

Commercial Linkage Fee Nexus Study

Prepared for:

Mono County

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1. INTRODUCTION AND EXECUTIVE SUMMARY

Background and Purpose

Mono County's nonresidential housing mitigation requirements are described in Chapter 15.40 of the Mono County Code. The County's Housing Mitigation Ordinance (HMO), which enacts the mitigation requirements, is currently suspended, but the suspension is slated to expire at the end of August 2018. At the direction of the Board of Supervisors and in advance of the expiration of the suspension of the HMO, the HMO and supporting technical analysis are being revised and the affordable housing fee for new commercial (i.e., nonresidential) development is being re-evaluated.

EPS was retained by Mono County 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 County and the need for additional affordable housing as a result of this new development.

Fee revenue may be collected by the County and used to subsidize the production of new affordable units for lower-income households.

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.

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 of Sacramento's fee program "substantially advanced a legitimate interest." EPS is using a similar methodology to the nexus study reviewed in that case to develop Mono County's fee program.

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

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.

Summary

As new employment-generating development occurs in the County, 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 or home prices 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 land use category. The methodology used to establish maximum justifiable fees is described in the subsequent chapters. It is understood that a lower fee level below the maximum fee may be appropriate given a range of development feasibility and economic development considerations. The lower fee may also be appropriate due to the fact that affordable housing development is not the sole responsibility of nonresidential developers, as the County, State, and federal government have other programs and resources that can offset some affordable housing production costs.

Table 1 Summary of Maximum Allowable Fees and Current Fee Levels

Land Use Category	Maximum Fee per sq. ft.
Storage and Warehouses	\$26.40
Commercial [1]	\$71.30
Industrial/Service Commercial	\$8.60
Visitor Accommodations	\$94.74

[1] Includes Office, Retail, Restaurants/Food Services, Repair / Professional Services, Assembly, etc.

Source: Mono County; Economic & Planning Systems, Inc.

These and other data sources are identified on the tables provided throughout this report. In addition, information from County staff and data from recent Mono County land transactions have been used to estimate appropriate development cost assumptions for use in Mono County.

Table 2 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 2** for reference.

Table 2 Mono County Income Category Definitions (2018)

Affordability Category	Acronym	Maximum Percentage of County Median	Maximum Income Threshold 3-person household	Source
Very Low Income	VLI	50%	\$36,550	HCD
Low Income	LI	80%	\$57,550	HCD
Median Income	Median	100%	\$73,100	HCD
Moderate Income	Moderate	120%	\$87,700	HCD

Source: Mono County 2018 Income Limits, California Housing and Community Development (HCD).

Sources

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

- U.S. Bureau of Labor Statistics (BLS) "May 2017 National Industry-Specific Occupational Employment and Wage Estimates".
- State Department of Housing and Community Development (HCD) annual income limits for 2018.
- U.S. Census Bureau American Community Survey (ACS).
- Input from Mono County's staff regarding development costs, market assumptions, and nexus study methodology.

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** describes the methodology used to calculate the fee.

2. REQUIRED NEXUS FINDINGS FOR FEE PROGRAM

Purpose of Fee

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

Use of Fee

The fee will be collected by the County. The funds are used to provide assistance for production, acquisition of at-risk units, or rehabilitation of affordable housing. The fee also may 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 County 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 further 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 County and EPS have identified four 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 is 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 prices affordable at different income levels for households below certain income levels. The affordable rents yielded unit values below the cost of construction, indicating an “affordability gap.” To estimate the maximum fee for each nonresidential development category, 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 are likely to form. As the fee is one of several mechanisms for generating resources for or reducing the cost of housing development, a fee level below the maximum calculated fee may be appropriate.

3. *METHODOLOGY AND FEE CALCULATION*

Employment Categories

Employment categories utilized in this analysis are presented in **Table 3** 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. The County has asked EPS to evaluate four distinct categories to better match potential land uses and nexus linkages to employment categories. While most employment categories are discretely associated with a particular type of building, others may be interchangeable as tenants may shift between building types (e.g., commercial space locating in retail space). This analysis bases its employment projections on NAICS codes, as defined in **Appendix B**, considered the most typical tenants for each land use category.

Table 3 Employment Category Descriptions

Employment Category	Description and Examples
Storage and Warehouses	<ul style="list-style-type: none"> -Storage units -Wholesale trade and truck transportation -Inventory and packaging -Light equipment rental and/or storage yards -Storage yard for construction materials and equipment -Storage of recreational vehicles, boats and miscellaneous recreational related equipment -Collection, sorting and transportation of recyclables -Freight terminals -Waste transfer and management facilities for diversion -Heavy equipment storage -Firewood processing and storage
Commercial	<ul style="list-style-type: none"> -Retail Trade – e.g., food, drug, hardware, limited apparel, liquor stores, limited department stores, dry goods, gift shops, home furnishings, paint, tires, bookstores, bakery, florist, pet supplies, health food stores, sporting goods, etc. -Services – e.g., finance, insurance and real estate, banks, title & escrow, real estate developers and builders, investment services, bail bonds, etc. -Personal Services – e.g., self-service laundries and dry cleaning, beauty salons, barbers, shoe repair, photographic services, cleaning and laundry, etc. -Business Services – e.g., business centers, general advertising, business and management consulting, employment services, etc. -Repair Services – e.g., electronics repair, furniture and jewelry repair, repair of anything sold in this district, etc. -Professional Services – e.g., physicians, dental and legal services, welfare and charitable services, medical and dental laboratories, etc. -Cultural/Religious Activities – e.g., churches, art galleries, museums, etc. -Food-service establishments – e.g., restaurants, delis, fast food, bars, etc. -Small-scale agriculture -Transportation, communications – e.g., parking lot automotive service stations -Educational – e.g., nursery and primary schools, private childcare facilities -Public – e.g., hospitals; post offices; water treatment plants; collection, sorting and transportation of recyclables; etc. -Entertainment establishments – e.g., theaters, movies, cocktail lounges, bars, nightclubs, etc. -Retail establishments – e.g., department stores, etc. -Professional offices – e.g., medical complex, administrative centers, small animal hospitals and boarding kennels,
Industrial/Service Commercial	<ul style="list-style-type: none"> -Cottage industry – e.g., limited recreational equipment, apparel and other finished products, crafts, printing, etc. -Repair services – e.g., car repair and parts, plumbing, electrical, etc. -Construction services – e.g., contractor or building services, engineering contractor, cabinetmaking, roofing, water-well drilling, contractor storage, etc. -Transportation services, limited travel agents, bus terminals, enclosed packing and shipping terminals, existing truck and trailer parking – heavy- equipment storage -Sale lots – e.g., car sales
Visitor Accommodations	<ul style="list-style-type: none"> -Mobile-home parks -Recreational-vehicle parks -Condominiums, cooperatives, townhomes, cluster developments, apartments containing four or more units used for transient rental -Hotels, motels, lodges, bed-and-breakfast establishments, cabins -Lodging – e.g., Hotels, motels, time-share, RV parks, bed-and-breakfast establishments, etc.

Sources: Mono County; Economic & Planning Systems, Inc.

Occupational Category and Wage Distribution

EPS used U.S. Bureau of Labor Statistics (BLS) *National Industry-Specific Occupational Employment and Wage Estimates* for 2017 – the most recent year available - 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 Metropolitan Statistical Area (MSA) levels, with the Eastern Sierra Region MSA covering Mono County. Wage data for the MSA are provided for occupations for all industries in aggregate, while national-level wage data are provided by

industry sector (e.g., “management” workers in retail industries versus in healthcare services). To account for regional wage disparities, EPS calculated wage adjustment factors as displayed in **Table 4** to show that Mono County wages exceed national averages in, for example, “architecture and engineering” and “protective services,” but the County wages are lower in “management” and “business and financial operations.” EPS applied these adjustment factors to the nationwide income level data by industry sector to estimate the wages for Mono County.

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 “Visitor Accommodations.” 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 27.9 percent are in the category of buildings and grounds cleaning and maintenance (see **Table B-2**). The occupational distribution for all designated employment categories is provided in **Appendix B**.

The wages within each occupation were multiplied by 1.86, the average number of workers per working household in the County, according to the Census Bureau’s American Community Survey data. The resulting figure is assumed to represent the annual household income assuming workers form households with those of similar earning potential. While certainly there will be some variation in wages per employee within a household, in the absence of more specific data, this analysis assumes comparable levels of education and training among all workers in a household. **Table 5** presents an example of this calculation.

Table 4 Adjustment Factors: Converting National Wages to Eastern Sierra Region Wages

Occupation Category	US Average Wage	Eastern Sierra Region - Mono County Average Wage	Eastern Sierra Region - Mono County % of US Average
Management	\$119,910	\$84,930	70.8%
Business and Financial Operations	\$76,330	\$62,880	82.4%
Computer and Mathematical Science	\$89,810	\$72,850	81.1%
Architecture and Engineering	\$86,190	\$91,950	106.7%
Life, Physical, and Social Science	\$74,370	\$51,280	69.0%
Community and Social Services	\$48,050	\$52,340	108.9%
Legal Occupations	\$107,370	\$84,420	78.6%
Education, Training and Library	\$55,470	\$56,030	101.0%
Arts, Design, Entertainment, Sports, and Media	\$58,950	\$48,610	82.5%
Healthcare Practitioner and Technical	\$80,760	\$95,670	118.5%
Healthcare Support	\$31,310	\$42,760	136.6%
Protective Services	\$47,190	\$57,220	121.3%
Food Preparation and Serving	\$24,710	\$29,450	119.2%
Buildings and Grounds Cleaning and Maintenance	\$28,930	\$29,370	101.5%
Personal Care and Service	\$27,270	\$32,000	117.3%
Sales and Related Occupations	\$40,680	\$34,000	83.6%
Office and Administrative Support	\$37,950	\$37,770	99.5%
Farming, Fishing and Forestry	\$28,840	\$33,940	117.7%
Construction and Extraction	\$49,930	\$51,940	104.0%
Installation, Maintenance, and Repair	\$47,870	\$46,440	97.0%
Production	\$38,070	\$42,610	111.9%
Transportation and Material Moving	\$37,070	\$37,480	101.1%

Sources: Bureau of Labor Statistics *National Industry-Specific Occupational Employment and Wage Estimates*, May 2017; Economic & Planning Systems, Inc.

Table 5 Illustration of Employees' Household Income Calculation

Item	Source	Example
Employment Category	Mono County and EPS	Visitor Accommodations
Industry	Bureau of Labor Statistics (BLS)	Accommodation (NAICS Code 721000)
Occupation Category	BLS	Buildings and Grounds Cleaning and Maintenance
Nationwide Median Income for Occupation	BLS	\$25,870
Regional Wage Adjustment Factor for Occupation	BLS and EPS	101.5%
Median Wage Estimate for the Eastern Sierra Region	BLS and EPS	\$26,263
Workers per Household	ACS 2012 - 2016 est.	1.86
Median Income per Household	Workers per HH Multiplied by Med. Annual Wage	\$48,770
Income Category for 3-person Family	California Housing and Community Development (HCD)	Low Income - up to 80% AMI

Sources: Mono County; Bureau of Labor Statistics; California Housing and Community Development; Economic & Planning Systems, Inc.

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, new development in the Commercial and Visitor Accommodations categories are expected to generate significant numbers of households at the Low-income level, while a greater share of jobs in the Industrial/Service Commercial category are tied to households at the Above Moderate-income level.

Employment Densities

Certain land use categories operate with varying levels of employment requirements. Industrial uses, for example, often do not require a significant number of employees but do 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 anticipated for an employee is termed the “employment density” of each employment category.

Based on prior nexus studies, input from County staff, independent research, and experience with other comparable cities, EPS estimated the employment density for each of the employment categories as shown in **Table 7** with more detail in **Appendix Table A-1**. Using those employment density assumptions, EPS estimated the number of employees that would occupy a 100,000-square foot building for each employment category.

Household Formation

EPS then estimated the number of households represented by those employees calculated on **Table 7**. 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 1.9 percent of the overall workforce. However, the majority of these young workers are in the retail/restaurant industries, where they represent 12.5 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 1.86 wage-earning workers. This assumption is based on the Census Bureau’s American Community Survey 2012-2016 data regarding the number of Mono County’s residents who are “workers” in households that have workers. The combination of these adjustments results in the assumption that approximately nine households are formed for every ten new employees.

This analysis assumes that the fees on nonresidential development will fund required affordable housing for all new workers generated. In practice, only a portion of Mono County’s workers resides in the County as many workers commute *in* to the County from other areas for a variety of reasons, one of which is the relative cost of housing among different communities. However, if every jurisdiction were to adopt a policy that it would only fund housing for the fraction of its locally generated workers that chooses to live within the County, in aggregate the region’s affordable housing demand would be grossly underrepresented and underfunded.

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

Land Use Category	Income Category			
	Very Low	Low	Moderate	Above Moderate
Storage and Warehouses	0.0%	0.1%	62.1%	37.8%
Commercial	0.0%	32.7%	30.0%	37.3%
Industrial/Service Commercial	0.0%	0.8%	16.5%	82.7%
Visitor Accommodations	0.0%	49.4%	43.8%	6.8%

[1] Designation of household income is based on a 3-person household and 1.86 workers per household, based on American Community Survey data.

Sources: Bureau of Labor Statistics; California Housing and Community Development (HCD); Economic & Planning Systems, Inc.

Table 7 Household Generation Rates by Employment Category

Land Use Category	Sq.Ft. per Worker [1]	Total Workers per 100k Sq.Ft.	% of Workers Forming Households [2]	Total Households per 100k Sq.Ft. [3] [4]	Households by Income Level [4]			
					Very Low	Low	Moderate	Above Moderate
Storage and Warehouses	600	167	98.1%	88	0	0	55	33
Commercial	400	250	87.5%	118	0	39	35	44
Industrial/Service Commercial	600	167	98.1%	88	0	1	15	73
Visitor Accommodations	500	200	98.1%	106	0	52	46	7

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

[2] National Retail Federation data indicates that 12.5% of retail/restaurant workers are age 16-19, but an average of only 1.9% of workers in other industries. EPS has assumed that workers of age 16-19 do not form their own households.

[3] Assumes 1.86 employees per household based on Census data; rounded.

[4] Figures are rounded to nearest whole number.

Sources: US Census; California Housing and Community Development (HCD); Economic & Planning Systems, Inc.

Housing Development Costs and Affordability Gap

EPS has assumed that the average type of housing for Mono County's lower-income workers would be a 2-bedroom apartment unit in a two-story building. The assumed prototype reflects multifamily construction at 26 dwelling units to the acre with surface parking. This building prototype is generally cost-effective to construct, as it makes efficient use of land and does not involve overly expensive construction materials or techniques.

California State law (California Health and Safety Code Section 50052.5) assumes that a 2-bedroom unit is occupied by a 3-person household, and this assumption is used in this analysis. Consistent with input from the County, EPS assumes that the typical gross square footage of a 2-bedroom rental unit in Mono County will be approximately 1,150 square feet. Applying an efficiency ratio of 85 percent to account for shared lobbies, hallways, etc., results in net square footage of 975 square feet.

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.). Information from County staff and data from recent Mono County land transactions have been used to estimate appropriate development cost assumptions for use in Mono County. For rental projects, operating costs also must be incorporated into the analysis. 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 (very low, low, and moderate) and the percentage of household income spent on housing costs. In addition, translating these assumptions into unit prices and values requires estimates of operating expenses 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 up to 50, 80, and 120 percent of AMI for a three-person household. In 2018, AMI in Mono County for these households is \$73,100, as shown in the California Department of Housing and Community Development's (HCD's) income limits chart (see **Table 2**).
- *Percentage of Gross Household Income Available for Housing Costs*—HCD standards on overpaying for rent indicate that households should pay no more than 30 percent of their gross income on housing costs. For this analysis, EPS has assumed that all households spend 30 percent of their gross income on rent costs.
- *Operating Costs for Rental Units*—This analysis assumes that apartment operators incur annual operating costs of \$6,000 per unit, which include the cost of utilities, for units affordable at 80 percent of AMI or below. EPS has assumed the units for moderate income households would have similar operating costs but would be built by for-profit builders and thus also subject to property taxes, increasing their annual operating cost to \$10,000 per unit.

Affordability Gap Results

Table 8 shows the subsidies for construction of for-rent apartments for households at various income levels. Across all categories, 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 Mono County. In other words, this analysis suggests that rents affordable to moderate income households and below cannot support the costs of new construction without subsidy.

It is worth noting that the affordability gaps estimated in this analysis are not as large as they might be using other also-valid assumptions. For example, the funding gaps for low income units assume that prices are set at 80 percent of median income, while State law indicates low-income unit prices may be set at 70 percent of median income. This methodology used by EPS yields higher unit values and thus results in lower maximum fees than would result from less conservative assumptions.

Table 8 Affordability Gap Analysis -- Rental Product Type

Item	2-Story Multifamily Building with Surface Parking		
	Very Low Income (50% AMI)	Low Income (80% AMI)	Moderate Income (120% AMI)
Development Program Assumptions			
Density/Acre [1]	26	26	26
Gross Unit Size	1,147	1,147	1,147
Net Unit Size [2]	975	975	975
Number of Bedrooms	2	2	2
Number of Persons per 2-Bedroom Unit [3]	3	3	3
Parking Spaces/Unit [4]	2.17	2.17	2.17
Cost Assumptions			
Land/Acre [5]	\$519,000	\$519,000	\$519,000
Land/Unit	\$19,962	\$19,962	\$19,962
Direct Costs			
Direct Construction Costs/Net SF [6]	\$167	\$167	\$167
Direct Construction Costs/Unit	\$191,000	\$191,000	\$191,000
Parking Construction Costs/Space	\$5,000	\$5,000	\$5,000
Parking Construction Costs/Unit	\$10,850	\$10,850	\$10,850
Subtotal, Direct Costs/Unit	\$201,850	\$201,850	\$201,850
Indirect Costs as a % of Direct Costs [7]			
Indirect Costs/Unit	\$80,740	\$80,740	\$80,740
Profit Margin (% of all costs)			
Profit (rounded)	\$42,000	\$42,000	\$42,000
Total Cost/Unit			
Total Cost/SF	\$344,552	\$344,552	\$344,552
Maximum Supported Home Price			
Household Income [8]	\$36,550	\$57,550	\$87,700
Revenue to Property Owner/Year [9]	\$10,965	\$17,265	\$26,310
(less) Operating Expenses per Unit/Year [10]	(\$6,000)	(\$6,000)	(\$10,000)
Net Operating Income	\$4,965	\$11,265	\$16,310
Capitalization Rate [11]	5.5%	5.5%	5.5%
Total Supportable Unit Value [12]	\$90,273	\$204,818	\$296,545
Affordability Gap	(\$254,279)	(\$139,733)	(\$48,006)

[1] The Mono County General Plan indicates that multifamily residential development projects containing density bonuses may not exceed 26 units/acre (Land Use Element, page II-155).

[2] An efficiency ratio of 85% is applied to the gross unit size to calculate the net unit size.

[3] This analysis assumes an average unit size for income-qualified worker households is 2-bedrooms. State law (Health and Safety Code Section 50052.5) indicates that a 2-bedroom unit is typically occupied by a 3-person household.

[4] The Mono County General Plan indicates that each residential unit requires two (2) parking spaces, and for every six (6) units, one (1) guest parking space is required (Land Use Element, page II-228).

[5] Land values are based on recently reported CoStar land sale transactions in the County.

[6] Construction cost estimates are based on 2018 Saylor Construction Costs for Zone 3 with a Fresno County index adjustment (Mono County is not available). With Mono County Staff input, the direct costs are rounded up so that total costs per square foot are \$300, consistent with what County staff is observing in terms of current construction costs. Assumes construction of a two story apartment, with a 10-foot story height, and 15,000 sq. ft. of gross floor area, with wood siding on stud frame.

[7] Includes costs for architecture and engineering; entitlement and fees; project management; appraisal and market study; marketing, commissions, and general administration; financing and charges; insurance; developer fee and contingency.

[8] Based on 2018 income limits for a three-person household in Mono County.

[9] Assumes housing costs (e.g., rent and utilities) to be 30% of gross household income.

[10] Operating expenses are generally based on data reported by CoStar and reflective of properties in Mono County. Estimates are inclusive of utility costs and property taxes, except Very Low and Low properties which are assumed to be exempt from property taxes.

[11] The capitalization rate is used to determine the current value of a property based on estimated future operating income, and is typically a measure of estimated operating risk. The capitalization rate used in this analysis is based on recent CoStar reported transaction data in Mono County.

[12] The total supportable unit value is determined by dividing the net operating income by the capitalization rate.

Sources: Mono County; California Housing and Community Development; Saylor Construction Cost Estimates (2018); IRR Monitor Investor Survey; CoStar Group; and Economic & Planning Systems, Inc.

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, 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 to determine a maximum fee per building square foot.

While the County has the option of adopting fees up to the maximum levels calculated, EPS does not recommend the County 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 affect 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 County's economic development and competitiveness objectives. As the fee is one of several mechanisms for generating resources for or reducing the cost of housing development, the fee level below the maximum calculated fee may be appropriate. Other California communities—including Sacramento, Walnut Creek, 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. The notion of the appropriate fee level will be further explored by EPS in subsequent analyses.

Table 9 Fee Calculation – Storage and Warehouses

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			
Very Low Income	0	\$254,279	\$0
Low Income	0	\$139,733	\$0
Moderate	55	\$48,006	<u>\$2,640,335</u>
Total	55		\$2,640,335
Fee Calculation			
		<i>formula</i>	
Total Financing Gap		<i>a</i>	\$2,640,335
Total Building Sq. Ft.		<i>b</i>	100,000
Maximum Fee per Sq. Ft.		<i>c = a / b</i>	\$26.40

Source: Economic & Planning Systems, Inc.

Table 10 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			
Very Low Income	0	\$254,279	\$0
Low Income	39	\$139,733	\$5,449,601
Moderate	<u>35</u>	\$48,006	<u>\$1,680,213</u>
Total	74		\$7,129,814
Fee Calculation			
		<i>formula</i>	
Total Financing Gap		<i>a</i>	\$7,129,814
Total Building Sq. Ft.		<i>b</i>	100,000
Maximum Fee per Sq. Ft.		<i>c = a / b</i>	\$71.30

Source: Economic & Planning Systems, Inc.

Table 11 Fee Calculation – Industrial/Service Commercial

Item	Worker Households per 100k sq. ft.	Affordability Gap per household	Total Gap
<i>Table References:</i>	<i>Table 7</i>	<i>Table 9</i>	
Aggregate Financing Gap per 100K Sq. Ft			
Affordability Level			
Very Low Income	0	\$254,279	\$0
Low Income	1	\$139,733	\$139,733
Moderate	<u>15</u>	\$48,006	<u>\$720,091</u>
Total	16		\$859,825
Fee Calculation			
		<i>formula</i>	
Total Financing Gap		<i>a</i>	\$859,825
Total Building Sq. Ft.		<i>b</i>	100,000
Maximum Fee per Sq. Ft.		<i>c = a / b</i>	\$8.60

Source: Economic & Planning Systems, Inc.

Table 12 Fee Calculation – Visitor Accommodation

Item	Worker Households per 100k sq. ft.	Affordability Gap per household	Total Gap
<i>Table References:</i>	<i>Table 7</i>	<i>Table 9</i>	
Aggregate Financing Gap per 100K Sq. Ft			
Affordability Level			
Very Low Income	0	\$254,279	\$0
Low Income	52	\$139,733	\$7,266,135
Moderate	<u>46</u>	\$48,006	<u>\$2,208,280</u>
Total	98		\$9,474,414
Fee Calculation			
		<i>formula</i>	
Total Financing Gap		<i>a</i>	\$9,474,414
Total Building Sq. Ft.		<i>b</i>	100,000
Maximum Fee per Sq. Ft.		<i>c = a / b</i>	\$94.74

Source: Economic & Planning Systems, Inc.



APPENDICES:

Appendix A: Assumptions and Sources

Appendix B: Occupation Distribution by
Employment Category



APPENDIX A:
Assumptions and Sources

Table A-1
Assumptions and Sources
Mono County Commercial Linkage Fee Study; EPS #181044

Item	Total	Unit	Source
Demographic Assumptions			
Total Employed	7,638 persons		American Community Survey Estimate 2012-2016
Households	4,950 households		American Community Survey Estimate 2012-2016
Households with Earnings	4,113 households		American Community Survey Estimate 2012-2016
Workers per Household with Workers	1.86 persons		American Community Survey Estimate 2012-2016
Employment Density Assumptions			
Storage and Warehouses	600 sq. ft. per employee		EPS; based on typical industry employment densities
Commercial	400 sq. ft. per employee		EPS; based on typical industry employment densities
Industrial/Service Commercial	600 sq. ft. per employee		EPS; based on typical industry employment densities
Visitor Accommodations	500 sq. ft. per employee		EPS; based on typical industry employment densities

Sources: U.S. Census American Community Survey Estimate 2012-2016; Mono County; Keyser Marston Associates Nexus Studies (2004 and 2016); and Economic & Planning Systems, Inc.

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APPENDIX B:

Occupation Distribution by Employment Category



**Table B-1
Occupation and Wage Distribution - Storage and Warehouses
Mono County Commercial Linkage Fee Study; EPS #181044**

Storage and Warehouses

Occupation Category	STORAGE AND WAREHOUSES [1]					
	US Total Jobs by Occupation in Industry	US Average Wage by Occupation in Industry	Eastern Sierra Wage Est. [2]	% of Industry Jobs in Occupation Category	HH Income at 1.86 workers/HH	Income Category
Management	499,480	\$130,517	\$92,442	6.02%	\$171,660	Above Moderate
Business and Financial Operations	337,050	\$69,655	\$57,381	4.06%	\$106,554	Above Moderate
Computer and Mathematical Science	184,410	\$84,076	\$68,199	2.22%	\$126,640	Above Moderate
Architecture and Engineering	67,870	\$85,712	\$91,440	0.82%	\$169,799	Above Moderate
Life, Physical, and Social Science	14,980	\$73,240	\$50,501	0.18%	\$93,777	Above Moderate
Community and Social Services	550	\$68,430	\$74,540	0.01%	\$138,415	Above Moderate
Legal Occupations	4,130	\$126,243	\$99,259	0.05%	\$184,318	Above Moderate
Education, Training and Library	690	\$61,640	\$62,262	0.01%	\$115,617	Above Moderate
Arts, Design, Entertainment, Sports, and Media	75,900	\$48,731	\$40,184	0.91%	\$74,619	Moderate
Healthcare Practitioner and Technical	28,880	\$68,417	\$81,048	0.35%	\$150,501	Above Moderate
Healthcare Support	1,690	\$35,740	\$48,810	0.02%	\$90,637	Above Moderate
Protective Services	11,850	\$34,682	\$42,054	0.14%	\$78,091	Moderate
Food Preparation and Serving	9,050	\$25,715	\$30,647	0.11%	\$56,910	Low Income
Buildings and Grounds Cleaning and Maintenance	37,580	\$31,323	\$31,800	0.45%	\$59,050	Moderate
Personal Care and Service	2,050	\$29,187	\$34,249	0.02%	\$63,598	Moderate
Sales and Related Occupations	1,481,350	\$68,681	\$57,403	17.85%	\$106,594	Above Moderate
Office and Administrative Support	1,710,120	\$38,286	\$38,105	20.61%	\$70,758	Moderate
Farming, Fishing and Forestry	47,250	\$28,972	\$34,095	0.57%	\$63,312	Moderate
Construction and Extraction	30,530	\$48,253	\$50,195	0.37%	\$93,210	Above Moderate
Installation, Maintenance, and Repair	484,730	\$47,633	\$46,210	5.84%	\$85,810	Above Moderate
Production	351,610	\$36,570	\$40,931	4.24%	\$76,007	Moderate
Transportation and Material Moving	2,915,160	\$38,743	\$39,172	35.14%	\$72,739	Moderate
Total or Weighted Average	8,296,910		\$47,896	100.00%	\$88,939	

[1] Includes NAICS Sector 493 - Storage and Warehouses; 42 - Wholesale Trade; and 484 - Truck Transportation.

[2] Adjusted using factors calculated in Table 4.

Sources: US Bureau of Labor Statistics, May 2016 National Industry-Specific Occupational Employment and Wage Estimates; Economic & Planning Systems, Inc.

**Table B-2
Occupation and Wage Distribution - Commercial
Mono County Commercial Linkage Fee Study; EPS #181044**

Commercial

Occupation Category	COMMERCIAL [1]					
	US Total Jobs by Occupation in Industry	US Average Wage by Occupation in Industry	Eastern Sierra Wage Est. [2]	% of Industry Jobs in Occupation Category	HH Income at 1.86 workers/HH	Income Category
Management	4,734,880	\$121,318	\$85,927	4.89%	\$159,561	Above Moderate
Business and Financial Operations	5,186,730	\$77,871	\$64,149	5.36%	\$119,122	Above Moderate
Computer and Mathematical Science	3,448,600	\$90,050	\$73,045	3.56%	\$135,640	Above Moderate
Architecture and Engineering	1,144,920	\$86,062	\$91,814	1.18%	\$170,492	Above Moderate
Life, Physical, and Social Science	673,150	\$75,451	\$52,025	0.70%	\$96,608	Above Moderate
Community and Social Services	1,607,960	\$46,788	\$50,966	1.66%	\$94,640	Above Moderate
Legal Occupations	806,780	\$110,990	\$87,266	0.83%	\$162,048	Above Moderate
Education, Training and Library	8,508,830	\$55,640	\$56,201	8.80%	\$104,363	Above Moderate
Arts, Design, Entertainment, Sports, and Media	1,673,290	\$59,551	\$49,105	1.73%	\$91,185	Above Moderate
Healthcare Practitioner and Technical	7,974,120	\$80,878	\$95,810	8.24%	\$177,914	Above Moderate
Healthcare Support	3,978,810	\$31,207	\$42,619	4.11%	\$79,141	Moderate
Protective Services	1,410,650	\$32,471	\$39,373	1.46%	\$73,113	Moderate
Food Preparation and Serving	12,487,850	\$24,459	\$29,151	12.91%	\$54,132	Low Income
Buildings and Grounds Cleaning and Maintenance	3,527,270	\$28,902	\$29,341	3.65%	\$54,485	Low Income
Personal Care and Service	4,950,370	\$26,995	\$31,677	5.12%	\$58,823	Moderate
Sales and Related Occupations	12,353,260	\$36,325	\$30,360	12.77%	\$56,376	Low Income
Office and Administrative Support	14,649,500	\$36,624	\$36,450	15.14%	\$67,686	Moderate
Farming, Fishing and Forestry	49,590	\$29,170	\$34,329	0.05%	\$63,746	Moderate
Construction and Extraction	394,660	\$48,092	\$50,028	0.41%	\$92,899	Above Moderate
Installation, Maintenance, and Repair	2,231,630	\$44,253	\$42,931	2.31%	\$79,721	Moderate
Production	1,728,780	\$31,519	\$35,278	1.79%	\$65,510	Moderate
Transportation and Material Moving	3,222,000	\$28,774	\$29,092	3.33%	\$54,022	Low Income
Total or Weighted Average	96,743,630		\$47,950	100.00%	\$89,039	

[1] Includes NAICS Sectors: 44, 45 - Retail; 51 - Information; 52 - Finance and Insurance; 53 - Real Estate and Rental Leasing; 54 - Professional, Scientific, and Technical Services; 55 - Management of Companies and Enterprises; 561 - Administrative and Support Services; 61 - Educational Services; 62 - Health Care and Social Services; 71 - Arts, Entertainment, and Recreation; 722 - Food Services and Drinking Places; 812 - Personal and Laundry Facilities; and 813 - Religious, Grantmaking, Civic, Professional, and Similar Organizations.

[2] Adjusted using factors calculated in Table 4.

Sources: US Bureau of Labor Statistics, May 2016 National Industry-Specific Occupational Employment and Wage Estimates; Economic & Planning Systems, Inc.

Table B-3
Occupation and Wage Distribution - Industrial
Mono County Commercial Linkage Fee Study; EPS #181044

**Industrial/ Service
Commercial**

Occupation Category	INDUSTRIAL/SERVICE COMMERCIAL [1]					
	US Total Jobs by Occupation in Industry	US Average Wage by Occupation in Industry	Eastern Sierra Wage Est. [2]	% of Industry Jobs in Occupation Category	HH Income at 1.86 workers/HH	Income Category
Management	1,301,360	\$126,111	\$89,322	6.00%	\$165,865	Above Moderate
Business and Financial Operations	852,610	\$74,699	\$61,536	3.93%	\$114,269	Above Moderate
Computer and Mathematical Science	415,050	\$97,413	\$79,017	1.91%	\$146,730	Above Moderate
Architecture and Engineering	1,054,290	\$87,114	\$92,936	4.86%	\$172,576	Above Moderate
Life, Physical, and Social Science	301,360	\$81,038	\$55,878	1.39%	\$103,762	Above Moderate
Community and Social Services	3,650	\$58,318	\$63,525	0.02%	\$117,963	Above Moderate
Legal Occupations	14,200	\$150,581	\$118,395	0.07%	\$219,852	Above Moderate
Education, Training and Library	6,400	\$73,078	\$73,816	0.03%	\$137,072	Above Moderate
Arts, Design, Entertainment, Sports, and Media	107,230	\$57,701	\$47,580	0.49%	\$88,354	Above Moderate
Healthcare Practitioner and Technical	56,050	\$71,847	\$85,112	0.26%	\$158,047	Above Moderate
Healthcare Support	5,840	\$35,727	\$48,793	0.03%	\$90,605	Above Moderate
Protective Services	28,670	\$44,486	\$53,941	0.13%	\$100,166	Above Moderate
Food Preparation and Serving	64,860	\$25,795	\$30,743	0.30%	\$57,088	Low Income
Buildings and Grounds Cleaning and Maintenance	114,270	\$30,281	\$30,741	0.53%	\$57,084	Low Income
Personal Care and Service	4,490	\$30,564	\$35,866	0.02%	\$66,600	Moderate
Sales and Related Occupations	642,610	\$63,284	\$52,892	2.96%	\$98,217	Above Moderate
Office and Administrative Support	2,082,970	\$40,826	\$40,632	9.60%	\$75,452	Moderate
Farming, Fishing and Forestry	34,560	\$31,112	\$36,614	0.16%	\$67,989	Moderate
Construction and Extraction	4,539,950	\$50,051	\$52,065	20.92%	\$96,682	Above Moderate
Installation, Maintenance, and Repair	2,000,970	\$50,102	\$48,605	9.22%	\$90,257	Above Moderate
Production	6,622,970	\$39,311	\$43,998	30.51%	\$81,702	Above Moderate
Transportation and Material Moving	1,451,260	\$34,755	\$35,139	6.69%	\$65,251	Moderate
Total or Weighted Average	21,705,620		\$52,152	100.00%	\$96,844	

[1] Includes NAICS Sectors: 22 - Construction; 23 - Utilities; 31-33 - Manufacturing; 5417 - Scientific R&D Services; and 811 - Repair and Maintenance.

[2] Adjusted using factors calculated in Table 4.

Sources: US Bureau of Labor Statistics, May 2016 National Industry-Specific Occupational Employment and Wage Estimates; Economic & Planning Systems, Inc.

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**Table B-4
Occupation and Wage Distribution - Visitor Accommodation
Mono County Commercial Linkage Fee Study; EPS #181044**

Visitor Accommodations

Occupation Category	VISITOR ACCOMODATION [1]					
	US Total Jobs by Occupation in Industry	US Average Wage by Occupation in Industry	Eastern Sierra Wage Est. [2]	% of Industry Jobs in Occupation Category	HH Income at 1.86 workers/HH	Income Category
Management	87,220	\$78,820	\$55,827	4.30%	\$103,667	Above Moderate
Business and Financial Operations	30,600	\$54,840	\$45,177	1.51%	\$83,890	Above Moderate
Computer and Mathematical Science	3,430	\$60,990	\$49,472	0.17%	\$91,867	Above Moderate
Architecture and Engineering	530	\$72,590	\$72,441	0.03%	\$143,803	Above Moderate
Life, Physical, and Social Science	110	\$34,460	\$23,761	0.01%	\$44,123	Low Income
Community and Social Services	220	\$46,640	\$50,804	0.01%	\$94,340	Above Moderate
Legal Occupations	100	\$115,700	\$90,969	0.00%	\$168,925	Above Moderate
Education, Training and Library	1,440	\$38,170	\$38,555	0.07%	\$71,595	Moderate
Arts, Design, Entertainment, Sports, and Media	7,240	\$49,100	\$40,488	0.36%	\$75,183	Moderate
Healthcare Practitioner and Technical	700	\$49,280	\$58,378	0.03%	\$108,405	Above Moderate
Healthcare Support	9,840	\$44,370	\$60,596	0.49%	\$112,523	Above Moderate
Protective Services	47,730	\$31,430	\$38,110	2.36%	\$70,768	Moderate
Food Preparation and Serving	506,460	\$30,000	\$35,755	24.99%	\$66,394	Moderate
Buildings and Grounds Cleaning and Maintenance	564,810	\$25,870	\$26,263	27.87%	\$48,770	Low Income
Personal Care and Service	156,400	\$29,290	\$34,370	7.72%	\$63,824	Moderate
Sales and Related Occupations	60,220	\$39,480	\$32,997	2.97%	\$61,273	Moderate
Office and Administrative Support	369,310	\$28,420	\$28,285	18.23%	\$52,524	Low Income
Farming, Fishing and Forestry	980	\$29,890	\$35,176	0.05%	\$65,319	Moderate
Construction and Extraction	4,610	\$48,810	\$50,775	0.23%	\$94,286	Above Moderate
Installation, Maintenance, and Repair	107,440	\$36,660	\$35,565	5.30%	\$66,042	Moderate
Production	41,810	\$26,930	\$30,142	2.06%	\$55,971	Low Income
Transportation and Material Moving	25,160	\$26,580	\$26,874	1.24%	\$49,903	Low Income
Total or Weighted Average	2,026,360		\$32,604	100.00%	\$60,543	

[1] Includes NAICS Sector: 721 - Accommodation.

[2] Adjusted using factors calculated in Table 4.

Sources: US Bureau of Labor Statistics, May 2016 National Industry-Specific Occupational Employment and Wage Estimates; Economic & Planning Systems, Inc.