Administrative Draft Report

Nexus-Based Affordable Housing Fee Analysis for Rental Housing





Prepared for:

Mono County

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Table of Contents

Exec	CUTIVE SUMMARY	1
1.	AFFORDABILITY GAP ANALYSIS	7
	Product Type	7
	Development Cost Assumptions	8
	Revenue Assumptions	9
	Affordability Gap Results	. 10
2.	DEMAND-BASED NEXUS FEE CALCULATION	. 11
	Market-Rate Household Income Levels	. 11
	Household Expenditures and Job Creation by Income Level	. 12
	Combined Demand for Income-Qualified Workers	. 14
	Fee Calculation	. 17

Appendices:

APPENDIX A: Household Expenditures and Employment Generation

APPENDIX B: Worker Household Generation

List of Figures and Tables

Figure 1	Illustration of Nexus-Based Housing Fee Methodology2
Table 1	Summary of Maximum Supportable Nexus-Based Housing Fees or Unit Requirements In Lieu of Fees6
Table 2	Affordability Gap Analysis Rental Product Type8
Table 3	Income Limits for Affordable Housing9
Table 4	Required Income by Unit Type - Market-Rate Rental Apartments
Table 5	Summary of Worker and Household Generation per 100 Market-Rate Units 16
Table 6	Nexus-Based Housing Fee Calculations (For-Rent Studio/1-Bedroom Apartment) 18
Table 7	Nexus-Based Housing Fee Calculations (For-Rent 2-Bedroom Apartment)
Table 8	Nexus-Based Housing Fee Calculations (For-Rent 3-Bedroom Apartment)

EXECUTIVE SUMMARY

Economic & Planning Systems, Inc. (EPS) was retained by Mono County to conduct a nexus study analyzing the impact that the development of market-rate rental housing has on demand for below-market-rate housing and, based on the results, to determine the defensible nexus-based fee that could be charged to market-rate rental residential development.

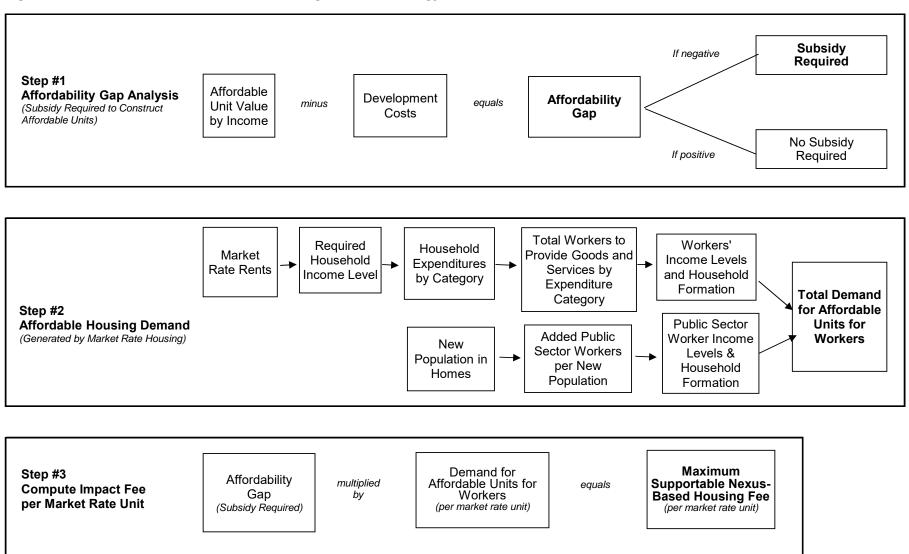
The technical approach used herein quantifies the impacts that the introduction of market-rate rental apartments have on the local economy and the demand for additional affordable housing. As new households occupying market rate housing are added to the community, local employment expands to provide the goods and services required by the new households. To the extent that these new jobs do not pay adequate wages for the employees to afford market-rate housing in the community, the new households' spending is creating a need for affordable housing. A nexus-based affordable housing fee is, therefore, based on the impact of the new market-rate homes on the demand for affordable housing. The fee calculated in this study represents the maximum fee that may be charged to new market-rate rental housing units to mitigate the impact on the affordable housing supply. Fee revenue may be collected by the County and used to subsidize the production of new affordable units for lower-income households not accommodated by market-rate projects.

Calculating the impact of market-rate development in the County on affordable housing needs and the fees needed to mitigate those impacts, involves three main analytical steps:

- **Step #1**. Estimate the typical subsidy required to construct units affordable at various income levels (the "affordability gap").
- **Step #2.** Determine the market-rate households' demand for goods and services, the jobs created by that demand, and the affordable housing needs of workers in those jobs.
- Step #3. Combine the affordability gap with the affordable housing demand projections to compute the maximum supportable nexus-based affordable housing fees per market-rate unit.

These technical steps are illustrated in **Figure 1** and detailed in the body of this Report and the attached appendices. The findings regarding each of these steps are presented below.

Figure 1 Illustration of Nexus-Based Housing Fee Methodology



Step #1. The cost to construct housing units affordable to many households exceeds the value of those units based on the rents the households can afford to pay. The estimated subsidy required to construct affordable housing units in Mono County ranges from roughly \$254,300 for Very Low-Income households earning up to 50 percent of AMI to \$48,000 for Moderate Income households earning up to 120 percent of AMI.

An "affordability gap analysis" evaluates whether or not the cost to construct affordable units exceeds the value of units that are affordable to lower- and moderate-income households. For each affordable housing income level—households with incomes at 50, 80, and 120 percent of Area Median Income (AMI)—this analysis estimates the subsidy required to construct affordable housing units.

The affordability gap analysis assumes that the average affordable unit for all income levels will be a 2-bedroom unit in a multifamily development in a two-story building, which is assumed to be occupied by three people on average. The average density assumed is 26 dwelling units per acre, consistent the Mono County General Plan, which indicates that multifamily residential development projects containing density bonuses may not exceed 26 units/acre. The estimated costs to acquire land and construct the prototypical affordable unit are based on recent Mono County transactions, County staff input, and other development cost data sources.

A household's ability to pay is estimated based on standard percentages of income available for housing costs at each household income level. Income available for housing costs is then converted into a monthly affordable rent and a capitalized unit value. This unit value is then compared to the costs of development to determine the subsidy required to make the unit affordable to each income level.

Step #2. The demand for affordable housing created by the expenditures of new households in Mono County increases along with the market-rate rent price (and related renter income). For example, a studio/one-bedroom unit that rents for \$1,600 per month is estimated to create demand for 0.11 affordable housing units, while a 3-bedroom unit that rents for \$3,400 per month creates demand for 0.21 affordable units.

Any justified nexus-based fee is based on the total demand for affordable housing units generated by construction of market-rate units. The link (or nexus) between market-rate housing and increased demand for affordable housing is that residents of market-rate units demand goods and services that rely on wage earners (for example, retail sales clerks) some of whom cannot afford market-rate housing and thus require affordable housing.

Because more expensive housing units require renters to have higher incomes, and higher income households create more jobs through their spending, the nexus impacts and thus the justified fees for rental units vary according to the rental price range of the market-rate units. Typically, larger apartments (i.e., more bedrooms) command higher rents, so their occupants are required to have higher household incomes than renters of smaller units. Thus, larger units create and/or support more jobs as a result of their occupants' spending patterns.

¹ Mono County Land Use Element, page II-155.

Consequently, nexus impacts and the justified fees for market-rate rental apartments vary by unit size.

This analysis evaluates the demand for affordable housing generated by a range of for-rent unit sizes. For each unit size, the demand-based nexus fee calculation involves the following steps:

- A. Market-Rate Household Income Levels. The expected rental price of the unit is based on an analysis of the rents needed to justify development costs and varied for apartments of different sizes. The required income levels of households occupying new market-rate housing are derived based on the rental rate, assuming standard housing cost expenses as a proportion of overall household income. For example, a typical household renting a market-rate studio/one-bedroom unit for around \$1,600 per month would have an income of roughly \$74,200, if it spends 30 percent of its income on housing costs (rent and utilities).
- **B.** Household Expenditures. Based on the household income computed in Step A, Consumer Expenditure Survey data is used to evaluate the typical spending patterns of the household. This analysis provides an estimate of how much the household spends on specific categories of expenditures, such as "Food at Home." As the households' income increases along with the price and size of the market-rate units, the total spending on goods and services also increases. The Consumer Expenditure Survey also indicates that these relationships are not linear (e.g., a household with twice the income does not necessarily spend twice as much on food).
- C. Job Creation and Worker Households. Having estimated the households' spending on various items, that spending is then converted into an estimation of jobs created. For each expenditure category, data regarding average worker wages and the ratio between gross business receipts and wages are used to translate these household expenditures into the total number of private-sector workers. Because each new worker does not represent an independent household (Mono County has an average of 1.86 workers per working household), the total number of new households created is somewhat less than the number of new jobs created. This analysis assumes that workers form households with others earning similar wages. EPS has further adjusted the household formation rates to reflect the fact that a certain proportion of workers will not form their own households, particularly those of younger ages.²
- D. Worker Households by Income Category. Each worker household generated is assigned to an income category—represented as a proportion of AMI ranging from 50 to 120 percent—based on its estimated gross wages. This provides the total number of households generated at each income level by construction of market-rate units at various sizes and price points. The results indicate that residents of smaller, lower-priced units generate fewer worker households requiring affordable housing than do residents of larger, higher-priced units.

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² BLS data indicates that 12.5 percent of retail/restaurant workers are age 16-19, but an average of only 1.9 percent of workers overall (this factor is applied to other industries). EPS has assumed that such young workers do not form their own households.

These steps of the nexus-based fee calculation provide the total number of income-qualified workers required to meet the needs for goods and services generated by market-rate rental housing. The number of workers servicing market-rate housing (at each apartment unit size) is then converted to total income qualified households and each household is assumed to require one housing unit.

Step #3. This analysis calculates the fees that could be charged to fully mitigate the impact that new market-rate rental housing has on Mono County's affordable housing demand at various representative unit sizes. These fees could range from \$18,808 for studio/one-bedroom apartments to \$35,949 for 3-bedroom apartments.

The nexus fee is calculated by applying the number of affordable units needed by income qualified households to the affordability gap for each housing income category. This calculation is made for several different apartment sizes based on bedroom counts. **Table 1** summarizes the maximum nexus-based fees calculated for representative rental unit sizes. The County may also consider whether to allow developers to provide affordable apartment units within their projects, rather than paying the nexus-based fee. **Table 1** illustrates the proportions of affordable units that correspond to the fee calculation and demands created by the market-rate units. For instance, a project offering two-bedroom units would effectively mitigate the demand being created by the market-rate units if it provided 0.14 affordable units for each market-rate unit.

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 rental housing 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 Supportable Nexus-Based Housing Fees or Unit Requirements In Lieu of Fees

			Un	it Requirements	s by Income Level	
	Maximum Next	us-Based Fees	Very Low	Low	Moderate	Total
Rental Apartments	Fee per Unit	Fee/Sq.Ft. [1]	(<50% of AMI)	(<80% of AMI)	(<120% of AMI)	
Studio/1-Bedroom (900 sq.ft.) 2-Bedroom (1,250 sq.ft.) 3-Bedroom (2,000 sq.ft.)	\$18,808 \$23,763 \$35,949	\$20.90 \$19.01 \$17.97	4.1% 5.2% 7.8%	5.4% 7.0% 10.5%	1.6% 1.5% 2.9%	11.1% 13.7% 21.2%

^[1] Fee/Sq.Ft. is calculated by dividing the maximum fee per unit by the average square footage of various unit types, assumed at 900 sq.ft., 1,250 sq.ft., and 2,000 sq.ft. per unit based on square footage reflected in data reported by Trulia.

1. AFFORDABILITY GAP ANALYSIS

For any nexus-based affordable housing fee calculation, it is necessary to estimate the subsidy required to construct affordable housing units. **Table 2** shows the subsidy needed to produce multifamily rental housing that is affordable to very low- through moderate-income households (50 through 120 percent of AMI).

Product Type

While the nexus fees calculated herein are based on demands created by market-rate rental housing that may be single family or multifamily, the analysis assumes that new lower-income worker households would be housed in affordable units, similar to the assumed prototype, which 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. This analysis estimates the subsidy that would be required to build for-rent housing for the lower-income worker households.

Table 2 Affordability Gap Analysis -- Rental Product Type

	2-5)	
nsity/Acre [1] sss Unit Size t Unit Size [2] mber of Bedrooms mber of Persons per 2-Bedroom Unit [3] king Spaces/Unit [4] st Assumptions d/Acre [5] nd/Unit ect Costs irrect Construction Costs/Net SF [6] irrect Construction Costs/Unit arking Construction Costs/Unit arking Construction Costs/Unit ubtotal, Direct Costs/Unit irrect Costs as a % of Direct Costs [7] irrect Costs/Unit irrect Costs/Unit	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
let Unit Size [2]	975	975	975
	2	2	2
	3	3	3
arking Spaces/Unit [4]	2.17	2.17	2.17
ost Assumptions			
and/Acre [5]	\$519,000	\$519,000	\$519,000
and/Unit	\$19,962	\$19,962	\$19,962
irect 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
ndirect Costs as a % of Direct Costs [7]	40%	40%	40%
ndirect Costs/Unit	\$80,740	\$80,740	\$80,740
Profit Margin (% of all costs)	14%	14%	14%
Profit (rounded)	\$42,000	\$42,000	\$42,000
otal Cost/Unit	\$344,552	\$344,552	\$344,552
otal Cost/SF	\$300	\$300	\$300
laximum Supported Home Price			
lousehold Income [8]	\$36,550	\$57,550	\$87,700
evenue to Property Owner/Year [9]	\$10,965	\$17,265	\$26,310
ess) Operating Expenses per Unit/Year [10]	(\$6,000)	(\$6,000)	(\$10,000
et Operating Income	\$4,965	\$11,265	\$16,310
apitalization Rate [11]	5.5%	5.5%	5.5%
otal 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).

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

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.). EPS evaluated land

^[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.

value information based on recently reported CoStar land sale transactions in the County. For direct construction costs, EPS used Saylor Construction Cost estimates (2018) and refined those estimates based on Mono County staff input, to calculate appropriate development cost assumptions for Mono County. These assumptions are shown on **Table 2** and demonstrate that the total cost per unit for rental apartments is about \$344,600, or \$300 per square foot.

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 3**).
- 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.

Table 3 Income Limits for Affordable Housing

Income Group a	and Definition	2018 Maximum Income 3-Person Household
Very Low	>30% to ≤50% AMI	\$36,550
Low	>50% to ≤80% AMI	\$57,550
Median (Base)	>80% to ≤100% AMI	\$73,100
Moderate	>100% AMI to ≤120% AMI	\$87,700

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

Affordability Gap Results

Table 2 shows the subsidies required for construction of rental apartments for households at very- low, low, and moderate-income levels. As shown, a unit affordable to a household earning 50 percent of AMI is expected to require a subsidy of roughly \$254,300, while a unit affordable to a household at 120 percent of AMI is expected to require a subsidy of about \$48,000. A household at 80 percent of AMI falls in between with a required subsidy of \$139,700.

These rental housing affordability gaps then were used to calculate the justified nexus-based fees by multiplying the required subsidy by the number of units required to house workers providing goods and services to new market-rate housing development. This methodology is discussed in more detail in the following chapter.

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.

2. Demand-Based Nexus Fee Calculation

The maximum supportable nexus-based fees are based on both the affordability gap and the estimated impact that new market-rate rental units have on the need for affordable units, as reflected in the number of income-qualified local workers required to support the residents of market-rate apartments and the total subsidy required to construct housing for those workers.

This approach is based on the following logic: (a) residents of market-rate housing have disposable incomes and require a variety of goods and services (including private sector goods and services and government services); (b) the provision of those goods and services will create employment demand for some workers who make moderate or lower incomes and cannot afford market-rate housing; and (c) fees charged to market-rate projects can mitigate the impact of those projects on the increased need for affordable housing.

Market-Rate Household Income Levels

Households with larger incomes typically spend more on goods and services, thereby creating additional lower income jobs, which in turn generate a greater demand for affordable housing. To assess the impact that market-rate rental units have on the need for affordable housing, EPS estimated the typical income required to rent a market-rate apartment at various bedroom sizes in Mono County, as shown in **Table 4**.

EPS calculated the average monthly rents for studio/1-, 2-, and 3-bedroom units that are needed for new development to be feasible in Mono County. Generally, new apartment rents are slightly higher than rental rates for existing rental housing stock, both because the newer units are of better-than-average quality and because the higher rents are required to cover the costs of construction.

Assuming utility costs for each unit size based on the Mono County Community Development Commission allowances, the minimum household income needed to rent each unit is then calculated, predicated on the assumption that a household will spend 30 percent of their income on housing costs (rent and utility payments combined). As shown, required household incomes range from approximately \$74,200 for a studio/1-bedroom apartment to roughly \$150,300 for a 3-bedroom apartment. Changes in housing market and financing conditions can have a significant effect on the calculations in this study.

Table 4 Required Income by Unit Type - Market-Rate Rental Apartments

			Required Inc	ome by Unit Type	e
Apartment Size	Required Monthly Rent [1]	Monthly Utility Cost [2]	Monthly Rent and Utilities	Annual Rent and Utilities	Minimum Annual Household Income Required [3]
Formula	А	В	C = A + B	D = C * 12	E = D / 30%
Studio/1-Bedroom	\$1,600	\$256	\$1,856	\$22,272	\$74,240
2-Bedroom	\$2,200	\$306	\$2,506	\$30,072	\$100,240
3-Bedroom	\$3,400	\$357	\$3,757	\$45,084	\$150,280

^[1] Average monthly rent for a 2-bedroom unit is set at the rent level needed to achieve development feasibility as demonstrated by the financing gap analysis shown on Table 2. Assuming a 1,250 sq.ft. unit, monthly rent of \$2,200 is the equivalent of \$1.76 per square foot. Rent for a studio/1-Bedroom is assumed to be \$1.80 per square foot per month. Assuming 900 square feet per unit, rent is estimated to be \$1,600 per unit per month. Rent for a 3-Bedroom is assumed to be \$1.70 per square foot per month. Assuming 2,000 square feet per unit, rent is estimated to be \$3,400 per unit per month.

Source: Mono County; Mono County Housing Needs Assessment and Residential Survey, BBC Research & Consulting; U.S. Department of Housing and Urban Development; Economic & Planning Systems, Inc.

Household Expenditures and Job Creation by Income Level

Having established the income requirements for renting apartments of various sizes, the fee calculation then requires an analysis of the household spending patterns at those required income levels. Consistent with nexus fee calculations and impact analysis for schools, parks, roads, etc., this analysis also assumes that all households renting new market-rate units in Mono County are "net new" households to the County. To assume otherwise—for instance, that only those buyers or renters of new housing units relocating from outside Mono County should be counted in the impact analysis—would require assuming that the homes left by those households relocating *within* Mono County would be demolished or left vacant in perpetuity. This would only be the case were the County experiencing a significant loss of population and housing inventory, as has occurred, for instance, in Detroit. On the other hand, the population in Mono County has been relatively stable in the years since 2010.

The Consumer Expenditure Survey from the United States Bureau of Labor Statistics provides data for households within various income cohorts, detailing the amounts that typical households spend on things like Food at Home, Apparel and Services, and Vehicle Maintenance and Repairs. Interestingly, household expenditures by category are not uniformly proportional to household income levels. For example, households earning around \$74,240 (adequate to rent a studio/one-bedroom apartment) spend roughly 11.3 percent of their income on food and drink (at home and eating out), while households earning \$100,240 who can afford to rent a two-bedroom apartment spend only about 10 percent of their income on food and drink. Because of these and other differences in proportionate spending, the expenditure profile varies at different income levels. It is important to note that the two- and three-bedroom householders are placed in the

^[2] Assumes annual utility expenditures consistent with the 2018 U.S. Department of Housing and Urban Development schedule.

^[3] Assumes a housing costs to income ratio of 30 percent.

same household expenditure group because the three-bedroom income category is on the cusp of the next highest income cohort and EPS believes these two household types will have similar expenditure patterns. These spending patterns can be viewed in **Tables A-1** to **A-3** in **Appendix A**.

The renter household's typical expenditures were converted to the number of jobs created by its spending. The first step in this process is to determine how much of an industry's gross receipts are used to pay wages and employee compensation. EPS relied on data from the Economic Census,³ which provides employment, gross sales, and payroll data by industry for Mono County. In certain instances, where local data was not available for a specific industry, EPS relied on statewide Economic Census data for that industry.

To link the Economic Census data and the Consumer Expenditure Survey data, EPS made determinations as to the industries involved with expenditures in various categories. For example, purchases in the Consumer Expenditure Survey's "Food at Home" category would likely involve the Economic Census's "Food & Beverage Stores" industry, where gross receipts were almost ten times the employees' wages. By contrast, purchases in the Consumer Expenditure Survey's "Entertainment Fees and Admissions" category were attributed to the Economic Census' "Arts, Entertainment, and Recreation" industry, where gross receipts are only three times the employees' wages. Where more than one Economic Census category was attributable to a Consumer Expenditure Survey category, EPS estimated the proportion of expenditures associated with each Economic Census category.

After determining the amount of the household's expenditures that were used for employee wages, EPS estimated the number of employees those aggregate wages represent. EPS calculated the number of workers supported by that spending using the average wage per worker (also from the Economic Census). After accounting for CPI adjustments, these wages ranged from a low of roughly \$15,400 per year for workers in the General Merchandise industry to a high of almost \$104,000 in Legal Services.

A range of occupations and incomes exist in a given industry sector. For instance, the methodology used to generate **Tables B-1** to **B-3** in **Appendix B** distinguishes between the typical incomes of workers in different types of retail stores (e.g., "food and beverage stores" versus "general merchandise stores"), rather than assuming all retail sector workers earn the same income. However, the average wage is used for each sub-category of industry employment and represents a reasonable proxy for the range of incomes in that group. While some employees will have higher wages and require lower subsidies, others will have lower incomes and require higher subsidies. Using the average approximates the total housing subsidy needed by workers in that industry.

To calculate the number of *households* supported by the expenditures of market-rate housing units, EPS estimated the employees' household formation rates. Importantly, employees generated from the increase in housing units do not all form households; some employees, in the

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³ The Economic Census and Consumer Expenditure Survey and were published in 2012 and 2017, respectively, but are current as of 2018. EPS converted all numbers to 2018 dollars using the Consumer Price Index (CPI) for the Eastern Sierra Region Metropolitan Statistical Area (MSA) from the Bureau of Labor Statistics.

retail and food services industries in particular, are young workers and do not form households. Data from the Bureau of Labor Statistics indicates that 12.5 percent of retail/restaurant workers are age 16 to 19, but an average of only 1.9 percent of workers in the workforce overall. EPS applied these discounts to household formation by type of business to get a more accurate calculation of households formed by the employees and the average total incomes of those households.

To get the overall households' income rather than the individual workers', the wages of workers forming households were multiplied by the average of approximately 1.86 workers per working household in Mono County.⁴ This assumption implies the workers in a given household will have roughly equivalent pay per hour. While certainly there will often be some variation in wages per employee within a household, on average this assumption is reasonable because it implies comparable levels of education and training among all workers in a household. The average household incomes then are allocated to various income categories to estimate the number of affordable housing units demanded in each income category (50 through 120 percent of AMI).

A simplified example of these calculations follows:

A.	Number of Households (prototype project)	1,000
B.	Average Household Income (in the project)	\$100,200
C.	Aggregate Household Income (A x B)	\$100 million
D.	Average Income Spent on Gasoline (Consumer Expen	diture Survey) \$3,300
E.	Aggregate Gasoline Spending (A x D)	\$3.3 million
F.	Gasoline Gross Receipts: Payroll Ratio (Economic Cen	sus) 18:1
G.	Estimated Gas Station Payroll (E ÷ F)	\$183,300
Н.	Average Gas Station Employee Wage (Economic Cens	us) \$24,800
I.	Estimated Total Jobs (G ÷ H)	7
J.	Percent Age 20+ (Bureau of Labor Statistics)	87.5%
K.	Total Workers Forming Households	6
L.	Average Workers/Household (Census Data)	1.86
M.	Estimated Households Created (K÷L)	3
N.	Average Household Income (H x L)	\$46,000
Ο.	Income Category Low	-Income (up to 80% of AMI)

In this illustrative example, 1,000 new market-rate apartments rented to households earning \$100,200 per year would create demand for 3 housing units for gas station workers with household incomes typically between 50 and 80 percent of AMI. Actual calculations and impact distinctions by type of household expenditure for various rental unit sizes are shown in the series of tables presented in **Appendix B**.

Combined Demand for Income-Qualified Workers

The total number of income-qualified households required to support the expenditure and publicsector service needs of new market-rate units were determined based on the affordable housing

⁴ Workers per working household based on a five-year average (2012-2016) of American Community Survey (ACS) Census data. Although ACS data reported is based on historical figures, these figures can vary somewhat based on ongoing revisions to the ACS data.

income limits from HCD for a 3-person household. **Table 3** summarizes the HCD income limits used to compute the total number of income-qualified households generated by construction of market-rate units.⁵ The number of income-qualified households required to provide goods and services to new housing units is detailed in **Appendix B**.

The nexus methodology used herein computes the total number of income-qualified households generated by market-rate units (as shown in **Table 5**) and calculates the impact fee based on the estimated cost to subsidize the production of units to meet that affordable housing demand.

This analysis assumes that the fees on residential 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.

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⁵ To correspond to the available data regarding employee wages, the 2018 Mono County affordable housing income limits from HCD were used to determine the number of income-qualified households based on household expenditures.

Table 5 Summary of Worker and Household Generation per 100 Market-Rate Units

	Minimum				Worker Hous	seholds by Inco	me Category	
For-Rent Apartments	Household Income Requirement	Total Workers Generated [1]	Total Worker Households [2]	Total Income Qualified Households [3]	Very Low Income Households	Low Income Households	Moderate Income Households	
Studio/1-Bedroom	\$74,240	24.1	11.8	11.1	4.1	5.4	1.6	
2-Bedroom	\$100,240	30.9	15.1	13.7	5.2	7.0	1.5	
3-Bedroom	\$150,280	46.3	22.6	21.2	7.8	10.5	2.9	

^[1] Total workers generated detailed by rental apartment size in Tables B-1 through B-3.

^[2] Total worker households derived assuming 1.86 workers per household. Includes a 12.5% discount for retail and 1.9% discount for other industries to account for workers under age 20.

^[3] Total income qualified households reflects the low-income households eligible for affordable housing based on total household income. See Tables B-1 through B-3 for detail.

Fee Calculation

The affordability gap analysis quantifies the subsidy required to construct affordable housing at various income levels. Analysis of consumer expenditures that rely on lower wage workers provides an estimate of the total number of income-qualified households generated by new forrent units. Then for each category of market-rate rental units, the nexus-based fee is calculated by applying the total number of income-qualified households generated to the affordability gap computed for each affordable household income level. The analysis provides the maximum supportable nexus-based fees for new rental housing development in Mono County.

Tables 6 through **8** show the impact fee calculation for market-rate rental units by number of bedrooms. The total impact fees required for a representative project of 100 units is calculated by multiplying the number of affordable units required per income level by the cost of subsidizing such housing. All income-qualified households are assumed to be housed in multifamily units and the subsidies needed are calculated as the affordability gaps shown in **Table 2**. The resulting maximum impact fee for market-rate rental units ranges from \$18,800 for a studio/1-bedroom apartment to \$36,000 for a 3-bedroom apartment (**Table 1**).

While the County has the option of adopting fees up to the maximum levels calculated, there may be a variety of reasons to adopt the fee level below the maximum, including insufficient wages relative to development costs. 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. Imposing a maximum fee on the residential and commercial linkage fee would also result in the double-counting of impacts attributed to new housing and new commercial uses. 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. Other California communities have made reductions to the maximum allowable fee when adopting their fee program, for reasons such as those cited above.

Table 6 Nexus-Based Housing Fee Calculations (For-Rent Studio/1-Bedroom Apartment)

	Affordable Units	Affordability	Total Nexus-Based Fee Supported				
Item	Required Per 100 Market-Rate Units [1]	Gap per Affordable Unit [2]	Per 100 Market-Rate Units	e Per Market-Rate Uni			
	(A)	(B)	(C = A * B)	(D = C / 100)			
Affordable Units - Very Low Income	4.1	\$254,279	\$1,049,046	\$10,490			
Affordable Units - Low Income	5.4	\$139,733	\$753,496	\$7,535			
Affordable Units - Moderate Income	<u>1.6</u>	\$48,006	<u>\$78,265</u>	<u>\$783</u>			
Total	11.1		<i>\$1,880,807</i>	\$18,808			

^[1] See Table 5.

^[2] See Table 2. EPS has assumed units across all affordabilities will be rental apartments.

Table 7 Nexus-Based Housing Fee Calculations (For-Rent 2-Bedroom Apartment)

	Affordable Units	Affordability	Total Nexus-Based Fee Supported				
Item	Required Per 100 Market-Rate Units [1]	Gap per Affordable Unit [2]	Per 100 Market-Rate Units	e Per Market-Rate Unit			
	(A)	(B)	(C = A * B)	(D = C / 100)			
Affordable Units - Very Low Income	5.2	\$254,279	\$1,327,974	\$13,280			
Affordable Units - Low Income	7.0	\$139,733	\$976,028	\$9,760			
Affordable Units - Moderate Income	<u>1.5</u>	\$48,006	<u>\$72,346</u>	<u>\$723</u>			
Total	13.7		\$2,376,348	\$23,763			

^[1] See Table 5.

^[2] See Table 2. EPS has assumed units across all affordabilities will be rental apartments.

Table 8 Nexus-Based Housing Fee Calculations (For-Rent 3-Bedroom Apartment)

	Affordable Units	Affordability	Total Nexus-Based Fee Supported				
Item	Required Per 100 Market-Rate Units [1]	Gap per Affordable Unit [2]	Per 100 Market-Rate Units	Per Market-Rate Unit			
	(A)	(B)	(C = A * B)	(D = C / 100)			
Affordable Units - Very Low Income	7.8	\$254,279	\$1,990,901	\$19,909			
Affordable Units - Low Income	10.5	\$139,733	\$1,463,263	\$14,633			
Affordable Units - Moderate Income	<u>2.9</u>	\$48,006	\$140,703	\$1,407			
Total	2 1.2		\$3,594,868	\$35,949			

^[1] See Table 5.

^[2] See Table 2. EPS has assumed units across all affordabilities will be rental apartments.

APPENDIX A:

Household Expenditures and Employment Generation



Table A-1 Household Expenditures and Employment Generation - For Rent Studio/1-Bedroom Apartment Mono County Rental Residential Nexus Study; EPS #181044

Item	% of Household Income Spent per Category [1]	% of Category Expenditure per Type of Business [2]	Expenditures [3]	Expenditures per 1,000 HHs	Gross Receipts to Wages	Total Wages per 1,000 Households	2018 Avg. Wages [4]	# of New Workers	% Forming HH [5]	Workers/ HH [6]	Total Worker HH	Avg. Worker HH Income	Income Category
Calculation	а	b	С	d = c * 1,000	е	f = d/e	g	h = f/g	i	j	k= h * i / j	l = g * j	
Food at Home	6.4%		\$4,740										
Food & Beverage Stores		100%	\$4,740	\$4,739,822	9.71	\$488,037	\$31,638	15.4	87.5%	1.86	7.3	\$58,749	Moderate Income
Food Away From Home	4.9%	100%	\$3,639										
Food Services and Drinking Places		100%	\$3,639	\$3,639,294	3.24	\$1,122,575	\$15,417	72.8	87.5%	1.86	34.3	\$28,628	VLI Households
Alcoholic Beverages	0.8%	100%	\$592										
Food & Beverage Stores		50%	\$296	\$295,991	9.71	\$30,477		1.0		1.86			Moderate Income
Food Services and Drinking Places		50%	\$296	\$295,991	3.24	\$91,301	\$15,417	5.9	87.5%	1.86	2.8	\$28,628	VLI Households
Housing Maintenance, Repairs, Insurance, Other expenses	2.0%	100%	\$1,515										
Personal and Household Goods Repair and Maintenance		45%	\$682	\$681,623	3.76	\$181,296	\$25,662	7.1	98.1%	1.86	3.7	\$47,653	LI Households
Building Material and Garden Equipment and Supplies Dealer		45%	\$682	\$681,623	9.19	\$74,163		2.8	87.5%	1.86			LI Households
Real Estate and Rental and Leasing		10%	\$151	\$151,472	3.89	\$38,898	\$29,091	1.3	98.1%	1.86	0.7	\$54,020	LI Households
Fuel oil and Other fuels [8]	0.1%	100%	\$83										
Nonstore Retailers [7]		100%	\$83	\$83,434	13.82	\$6,039	\$65,041	0.1	87.5%	1.86	0.0	\$120,777	Above Mod
Water and Other Public Services [8]	0.9%	100%	\$660										
Waste Management and Remediation Services		100%	\$660	\$659,523	3.36	\$196,544	\$32,099	6.1	98.1%	1.86	3.2	\$59,605	Moderate Income
Household Operations Personal Services	0.6%	100%	\$423										
Nursing and Residential Care Facilities		40%	\$169	\$169,251	2.93	\$57,701	\$69,714	0.8	98.1%	1.86		\$129,455	Above Mod
Social Assistance		60%	\$254	\$253,876	2.93	\$86,552	\$69,714	1.2	98.1%	1.86	0.7	\$129,455	Above Mod
Household Operations Other Household Expenses	1.3%	100%	\$964										
Services to Buildings and Dwellings [7]		100%	\$964	\$964,453	2.54	\$379,285	\$29,308	12.9	98.1%	1.86	6.8	\$54,424	LI Households
Housekeeping Supplies	0.9%	100%	\$705										
Building Materials and Garden Equipment and Supplies Dealers		10%	\$71	\$70,521	9.19	\$7,673	\$26,488	0.3	87.5%	1.86	0.1	\$49,186	LI Households
Food & Beverage Stores		35%	\$247	\$246,824	9.71	\$25,414	\$31,638	0.8	87.5%	1.86	0.4	\$58,749	Moderate Income
General Merchandise		35%	\$247	\$246,824	13.55	\$18,215			87.5%	1.86			VLI Households
Miscellaneous Store Retailers		20%	\$141	\$141,042	3.43	\$41,118	\$30,805	1.3	87.5%	1.86	0.6	\$57,203	LI Households

^[1] Percent of income spent per category is based on the nationwide 2016 Consumer Expenditure Survey data for households at this income level. Note that the sum of the categories included in this analysis is well below the total expenditures of households at this income level, and thus represents a conservative estimate of job creation and housing impacts. Expenditure categories not incorporated due to data constraints include taxes, housing and lodging, most utilities, tobacco, health insurance, personal/ life insurance, cash contributions, and financing charges.

^[2] Where multiple business types are likely to provide goods and services in the expenditure category, EPS has estimated the proportion accruing to each business type.

^{[3] 2016} expenditures are based on the estimated household income distributed based on the percent of income spent per the 2016 U.S. Consumer Expenditure Survey. Per Table 4 the rental of a typical new 1 Bedroom Apartment requires a household income of \$74,240.

^{[4] 2016} expenditures converted to 2018 dollars using the CPI adjustment for California from the BLS.

^[5] BLS data indicates that 12.5% of retail/restaurant workers are age 16-19, but an average of only 1.9% of workers are 16-19 in other industries. EPS has assumed that such young workers do not form their own households.

^[6] Based on US Census, ACS Data (2012-2016) for Mono County.

^[7] Mono County data not available from 2012 Economic Census (published September 2016). Gross receipts to wages and 2012 average wage thus based on statewide data.

^[8] Part of the Utilities, Fuels, and Public Services category (includes natural gas, electricity, and telephone services). Natural gas, electricity, and telephone services not estimated because data was not available in the 2012 Economic Census.

^[9] Note that average salary reported for architecture, engineering and related industries reflects the full range of employees within the industry, not solely professional and technical staff.

Table A-1
Household Expenditures and Employment Generation - For Rent Studio/1-Bedroom Apartment
Mono County Rental Residential Nexus Study; EPS #181044

Item	% of Household Income Spent per Category [1]	% of Category Expenditure per Type of Business [2]	Expenditures [3]	Expenditures per 1,000 HHs	Gross Receipts to Wages	Total Wages per 1,000 Households	2018 Avg. Wages [4]	# of New Workers	% Forming HH [5]	Workers/ HH [6]	Total Worker HH	Avg. Worker HH Income	Income Category
Calculation	а	b	С	d = c * 1,000	е	f = d/e	g	h = f/g	i	j	k= h * i / j	l = g * j	
Household Furnishings and Equipment	2.7%	100%	\$2,025										
Furniture and Home Furnishings Stores		40%	\$810	\$810,100	15.21	\$53,262	\$23,503	2.3	87.5%	1.86	1.1	\$43,644	LI Households
Electronics and Appliance Stores [7]		40%	\$810	\$810,100	10.07	\$80,438	\$27,985	2.9	87.5%	1.86	1.4	\$51,966	LI Households
General Merchandise Stores		10%	\$203	\$202,525	13.55	\$14,946	\$15,405	1.0	87.5%	1.86	0.5	\$28,605	VLI Households
Miscellaneous Store Retailers		10%	\$203	\$202,525	3.43	\$59,042	\$30,805	1.9	87.5%	1.86	0.9	\$57,203	LI Households
apparel and Services	2.7%	100%	\$1,996										
Clothing and Clothing Accessories Stores		40%	\$799	\$798,579	9.19	\$86,888	\$26,488	3.3	87.5%	1.86	1.5	\$49,186	LI Households
General Merchandise		40%	\$799	\$798,579	13.55	\$58,934	\$15,405	3.8	87.5%	1.86	1.8	\$28,605	VLI Households
Miscellaneous Store Retailers		10%	\$200	\$199,645	3.43	\$58,202	\$30,805	1.9	87.5%	1.86	0.9	\$57,203	LI Households
Personal and Household Goods Repair and Maintenance		5%	\$100	\$99,822	3.76	\$26,550	\$25,662	1.0	87.5%	1.86	0.5	\$47,653	LI Households
Drycleaning and Laundry Services		5%	\$100	\$99,822	3.76	\$26,550	\$25,662	1.0	87.5%	1.86	0.5	\$47,653	LI Households
ehicle Purchases (net outlay)	6.0%	100%	\$4,428										
Motor Vehicle and Parts Dealers		100%	\$4,428	\$4,427,940	9.19	\$481,776	\$26,488	18.2	87.5%	1.86	8.6	\$49,186	LI Households
asoline and motor oil	3.3%	100%	\$2,434										
Gasoline Stations		100%	\$2,434	\$2,434,473	17.81	\$136,661	\$24,814	5.5	87.5%	1.86	2.6	\$46,078	LI Households
ehicle Maintenance and Repairs	1.4%	100%	\$1,007										
Repair and Maintenance		100%	\$1,007	\$1,007,163	3.76	\$267,882	\$25,662	10.4	98.1%	1.86	5.5	\$47,653	LI Households
edical Services	1.3%	100%	\$972										
Ambulatory Health Care Services		40%	\$389	\$388,959	2.93	\$132,605	\$69,714	1.9	98.1%	1.86	1.0	\$129,455	Above Mod
General Medical and Surgical Hospitals		30%	\$292	\$291,720	2.93	\$99,453	\$69,714	1.4	98.1%	1.86	0.8	\$129,455	Above Mod
Nursing and Residential Care Facilities		30%	\$292	\$291,720	2.93	\$99,453	\$69,714	1.4	98.1%	1.86	0.8	\$129,455	Above Mod
rugs	0.7%	100%	\$506										
Health and Personal Care Stores		100%	\$506	\$505,568	8.37	\$60,422	\$28,665	2.1	87.5%	1.86	1.0	\$53,228	LI Households
edical Supplies	0.2%	100%	\$175										
Health and Personal Care Stores		100%	\$175	\$174,813	8.37	\$20,893	\$28,665	0.7	87.5%	1.86	0.3	\$53,228	LI Households
ntertainment Fees and Admissions	1.0%	100%	\$720										
Arts. Entertainment, & Recreation		100%	\$720	\$720,111	3.14	\$229,254	\$34,993	6.6	87.5%	1.86	3.1	\$64 979	Moderate Income

^[1] Percent of income spent per category is based on the nationwide 2016 Consumer Expenditure Survey data for households at this income level. Note that the sum of the categories included in this analysis is well below the total expenditures of households at this income level, and thus represents a conservative estimate of job creation and housing impacts. Expenditure categories not incorporated due to data constraints include taxes, housing and lodging, most utilities, tobacco, health insurance, personal/ life insurance, cash contributions, and financing charges. [2] Where multiple business types are likely to provide goods and services in the expenditure category, EPS has estimated the proportion accruing to each business type.

^{[3] 2016} expenditures are based on the estimated household income distributed based on the percent of income spent per the 2016 U.S. Consumer Expenditure Survey. Per Table 4 the rental of a typical new 1 Bedroom Apartment requires a household income of \$74,240.

^{[4] 2016} expenditures converted to 2018 dollars using the CPI adjustment for California from the BLS.

^[5] BLS data indicates that 12.5% of retail/restaurant workers are age 16-19, but an average of only 1.9% of workers are 16-19 in other industries. EPS has assumed that such young workers do not form their own households.

^[6] Based on US Census, ACS Data (2012-2016) for Mono County.

^[7] Mono County data not available from 2012 Economic Census (published September 2016). Gross receipts to wages and 2012 average wage thus based on statewide data.

^[8] Part of the Utilities, Fuels, and Public Services category (includes natural gas, electricity, and telephone services). Natural gas, electricity, and telephone services not estimated because data was not available in the 2012 Economic Census.

^[9] Note that average salary reported for architecture, engineering and related industries reflects the full range of employees within the industry, not solely professional and technical staff.

Table A-1 Household Expenditures and Employment Generation - For Rent Studio/1-Bedroom Apartment Mono County Rental Residential Nexus Study; EPS #181044

Item	% of Household Income Spent per Category [1]	% of Category Expenditure per Type of Business [2]	Expenditures [3]	Expenditures per 1,000 HHs	Gross Receipts to Wages	Total Wages per 1,000 Households	2018 Avg. Wages [4]	# of New Workers	% Forming HH [5]	Workers/ HH [6]	Total Worker HH	Avg. Worker HH Income Income Category
Calculation	а	b	С	d = c * 1,000	е	f = d/e	g	h = f/g	i	j	k= h * i / j	I = g * j
Entertainment Audio and Visual Equipment and Services Electronics and Appliance Stores [7]	1.7%	100% 100%	\$1,232 \$1,232	\$1,231,639	10.07	\$122,294	\$27,985	4.4	87.5%	1.86	2.1	\$51,966 LI Households
Entertainment Pets, Toys, Hobbies, and Playground Equip. Sporting Goods, Hobby, and Musical Instrument Stores Miscellaneous Store Retailers Veterinary Services [7]	1.3%	100% 40% 40% 20%	\$932 \$373 \$373 \$186	\$372,670 \$372,670	9.19 3.43 2.94	\$108,645	\$30,805	3.5	87.5% 87.5% 98.1%	1.86 1.86	1.7	\$49,186 LI Households \$57,203 LI Households \$73,725 Moderate Income
Other Entertainment Supplies, Equipment, and Services Sporting Goods, Hobby, and Musical Instrument Stores Photographic Services [7]	0.7%	100% 85% 15%	\$544 \$463 \$82		9.19 4.40			1.9 0.7	87.5% 98.1%	1.86 1.86		\$49,186 LI Households \$52,177 LI Households
Personal Care Products and Services Miscellaneous Store Retailers Personal Care Services	1.1%	100% 50% 50%	\$784 \$392 \$392	\$391,840	3.43 3.76				87.5% 98.1%	1.86 1.86		\$57,203 LI Households \$47,653 LI Households
Reading Sporting Goods, Hobby, and Musical Instrument Stores	0.2%	100% 100%	\$113 \$113		9.19	\$12,320	\$26,488	0.5	87.5%	1.86	0.2	\$49,186 LI Households
Education Educational Services	1.4%	100% 100%	\$1,005 \$1,005		3.09	\$325,576	\$30,600	10.6	98.1%	1.86	5.6	\$56,823 LI Households
Tobacco Products and Smoking Supplies Miscellaneous Store Retailers	0.5%	100% 100%	\$387 \$387	\$387,370	3.43	\$112,930	\$30,805	3.7	87.5%	1.86	1.7	\$57,203 LI Households
Miscellaneous Accounting Architectural, Engineering, and Related [9] Specialized Design Services [7] Death Care Services [7] Legal Services [7]	1.4%	100% 20% 20% 20% 20% 20%	\$1,060 \$212 \$212 \$212 \$212 \$212	\$211,961 \$211,961 \$211,961 \$211,961	2.54 1.98 3.29 3.41 2.99	\$106,784 \$64,524 \$62,219	\$57,799 \$68,790 \$44,794		98.1% 98.1% 98.1% 98.1% 98.1%	1.86 1.86 1.86 1.86	1.0 0.5 0.7	
Total per 1,000 Market Rate Households								241.5			117.7	

^[1] Percent of income spent per category is based on the nationwide 2016 Consumer Expenditure Survey data for households at this income level. Note that the sum of the categories included in this analysis is well below the total expenditures of households at this income level, and thus represents a conservative estimate of job creation and housing impacts. Expenditure categories not incorporated due to data constraints include taxes, housing and lodging, most utilities, tobacco, health insurance, personal/ life insurance, cash contributions, and financing charges [2] Where multiple business types are likely to provide goods and services in the expenditure category, EPS has estimated the proportion accruing to each business type.

^{[3] 2016} expenditures are based on the estimated household income distributed based on the percent of income spent per the 2016 U.S. Consumer Expenditure Survey. Per Table 4 the rental of a typical new 1 Bedroom Apartment requires a household income of \$74,240.

^{[4] 2016} expenditures converted to 2018 dollars using the CPI adjustment for California from the BLS.

^[5] BLS data indicates that 12.5% of retail/restaurant workers are age 16-19, but an average of only 1.9% of workers are 16-19 in other industries. EPS has assumed that such young workers do not form their own households.

^[6] Based on US Census, ACS Data (2012-2016) for Mono County.

^[7] Mono County data not available from 2012 Economic Census (published September 2016). Gross receipts to wages and 2012 average wage thus based on statewide data.

^[8] Part of the Utilities, Fuels, and Public Services category (includes natural gas, electricity, and telephone services). Natural gas, electricity, and telephone services not estimated because data was not available in the 2012 Economic Census.

^[9] Note that average salary reported for architecture, engineering and related industries reflects the full range of employees within the industry, not solely professional and technical staff.

Table A-2 Household Expenditures and Employment Generation - For Rent 2-Bedroom Apartment Mono County Rental Residential Nexus Study; EPS #181044

Item	% of Household Income Spent per Category [1]	% of Category Expenditure per Type of Business [2]	Expenditures [3]	Expenditures per 1,000 HHs	Gross Receipts to Wages	Total Wages per 1,000 Households	2018 Avg. Wages [4]	# of New Workers	% Forming HH [5]	Workers/ HH [6]	Total Worker HH	Avg. Worker HH Income	Income Category
Calculation	а	b	С	d = c * 1,000	е	f = d / e	g	h = f/g	i	j	k= h * i / j	I = g * j	
Food at Home	5.4%	100%	\$5,379										
Food & Beverage Stores		100%	\$5,379	\$5,378,855	9.71	\$553,835	\$31,638	17.5	87.5%	1.86	8.2	\$58,749	Moderate Income
Food Away From Home	4.6%	100%	\$4,646										
Food Services and Drinking Places		100%	\$4,646	\$4,645,727	3.24	\$1,433,019	\$15,417	93.0	87.5%	1.86	43.8	\$28,628	VLI Households
Alcoholic Beverages	0.7%	100%	\$711										
Food & Beverage Stores		50%	\$355	\$355,427	9.71	\$36,597	\$31,638			1.86			Moderate Income
Food Services and Drinking Places		50%	\$355	\$355,427	3.24	\$109,635	\$15,417	7.1	87.5%	1.86	3.4	\$28,628	VLI Households
Housing Maintenance, Repairs, Insurance, Other expenses	2.1%	100%	\$2,080										
Personal and Household Goods Repair and Maintenance		45%	\$936	\$936,118	3.76	\$248,985	\$25,662						LI Households
Building Material and Garden Equipment and Supplies Dealer Real Estate and Rental and Leasing		45% 10%	\$936 \$208	\$936,118 \$208,026	9.19 3.89	\$101,853 \$53,421	\$26,488 \$29,091	3.8 1.8				,	LI Households LI Households
iveal Estate and ivertial and Leasing		1070	Ψ200	\$200,020	3.09	930,421	Ψ23,031	1.0	90.170	1.00	1.0	934,020	Li i lousellolus
Fuel oil and Other fuels [8]	0.1%	100%	\$109										
Nonstore Retailers [7]		100%	\$109	\$109,437	13.82	\$7,921	\$65,041	0.1	87.5%	1.86	0.1	\$120,777	Above Mod
Water and Other Public Services [8]	0.7%	100%	\$698										
Waste Management and Remediation Services		100%	\$698	\$698,263	3.36	\$208,089	\$32,099	6.5	98.1%	1.86	3.4	\$59,605	Moderate Income
Household Operations Personal Services	0.9%	100%	\$892										
Nursing and Residential Care Facilities		40%	\$357	\$356,783	2.93	\$121,635	\$69,714					,	Above Mod
Social Assistance		60%	\$535	\$535,174	2.93	\$182,452	\$69,714	2.6	98.1%	1.86	1.4	\$129,455	Above Mod
Household Operations Other Household Expenses	1.2%	100%	\$1,157										
Services to Buildings and Dwellings [7]		100%	\$1,157	\$1,157,316	2.54	\$455,132	\$29,308	15.5	98.1%	1.86	8.2	\$54,424	LI Households
Housekeeping Supplies	0.9%	100%	\$948										
Building Materials and Garden Equipment and Supplies Dealers		10%	\$95	\$94,813	9.19	\$10,316	\$26,488						LI Households
Food & Beverage Stores		35%	\$332	\$331,845	9.71	\$34,168	\$31,638						Moderate Income
General Merchandise		35%	\$332	\$331,845	13.55	\$24,490	\$15,405					,	VLI Households
Miscellaneous Store Retailers		20%	\$190	\$189,625	3.43	\$55,282	\$30,805	1.8	87.5%	1.86	0.8	\$57,203	LI Households

^[1] Percent of income spent per category is based on the nationwide 2016 Consumer Expenditure Survey data for households at this income level. Note that the sum of the categories included in this analysis is well below the total expenditures of households at this income level, and thus represents a conservative estimate of job creation and housing impacts. Expenditure categories not incorporated due to data constraints include taxes, housing and lodging, most utilities, tobacco, health insurance, personal/ life insurance, cash contributions, and financing charges.

^[2] Where multiple business types are likely to provide goods and services in the expenditure category, EPS has estimated the proportion accruing to each business type.

^{[3] 2016} expenditures are based on the estimated household income distributed based on the percent of income spent per the 2016 U.S. Consumer Expenditure Survey. Per Table 4 the rental of a typical new 2 Bedroom Apartment requires a household income of \$100,240.

^{[4] 2016} expenditures converted to 2018 dollars using the CPI adjustment for California from the BLS.

^[5] BLS data indicates that 12.5% of retail/restaurant workers are age 16-19, but an average of only 1.9% of workers are 16-19 in other industries. EPS has assumed that such young workers do not form their own households.

^[6] Based on US Census, ACS Data (2012-2016) for Mono County.

^[7] Mono County data not available from 2012 Economic Census (published September 2016). Gross receipts to wages and 2012 average wage thus based on statewide data.

^[8] Part of the Utilities, Fuels, and Public Services category (includes natural gas, electricity, and telephone services). Natural gas, electricity, and telephone services not estimated because data was not available in the 2012 Economic Census.

^[9] Note that average salary reported for architecture, engineering and related industries reflects the full range of employees within the industry, not solely professional and technical staff.

Table A-2 Household Expenditures and Employment Generation - For Rent 2-Bedroom Apartment Mono County Rental Residential Nexus Study; EPS #181044

item	% of Household Income Spent per Category [1]	% of Category Expenditure per Type of Business [2]	Expenditures [3]	Expenditures per 1,000 HHs	Gross Receipts to Wages	Total Wages per 1,000 Households	2018 Avg. Wages [4]	# of New Workers	% Forming HH [5]	Workers/ HH [6]	Total Worker HH	Avg. Worker HH Income	Income Category
Calculation	а	b	С	d = c * 1,000	е	f = d / e	g	h = f/g	i	j	k= h * i / j	I = g * j	
Household Furnishings and Equipment	2.8%	100%	\$2,835										
Furniture and Home Furnishings Stores		40%	\$1,134	\$1,133,879	15.21	\$74,550	\$23,503	3.2	87.5%	1.86	1.5	\$43,644	LI Households
Electronics and Appliance Stores [7]		40%	\$1,134	\$1,133,879	10.07	\$112,587	\$27,985	4.0	87.5%	1.86	1.9	\$51,966	LI Households
General Merchandise Stores		10%	\$283	\$283,470	13.55	\$20,920	\$15,405	1.4	87.5%	1.86	0.6	\$28,605	VLI Households
Miscellaneous Store Retailers		10%	\$283	\$283,470	3.43	\$82,640	\$30,805	2.7	87.5%	1.86	1.3	\$57,203	LI Households
Apparel and Services	2.4%	100%	\$2,379										
Clothing and Clothing Accessories Stores		40%	\$951	\$951,420		\$103,518	\$26,488	3.9		1.86			LI Households
General Merchandise		40%	\$951	\$951,420	13.55	\$70,214	\$15,405	4.6	87.5%	1.86			VLI Households
Miscellaneous Store Retailers		10%	\$238		3.43	\$69,342	\$30,805	2.3	87.5%	1.86	1.1	\$57,203	LI Households
Personal and Household Goods Repair and Maintenance		5%	\$119		3.76	\$31,632	\$25,662	1.2		1.86			LI Households
Drycleaning and Laundry Services		5%	\$119	\$118,928	3.76	\$31,632	\$25,662	1.2	87.5%	1.86	0.6	\$47,653	LI Households
Vehicle Purchases (net outlay)	5.6%	100%	\$5,581										
Motor Vehicle and Parts Dealers		100%	\$5,581	\$5,581,264	9.19	\$607,261	\$26,488	22.9	87.5%	1.86	10.8	\$49,186	LI Households
Gasoline and motor oil	2.7%	100%	\$2,694										
Gasoline Stations		100%	\$2,694	\$2,694,270	17.81	\$151,245	\$24,814	6.1	87.5%	1.86	2.9	\$46,078	LI Households
Vehicle Maintenance and Repairs	1.2%	100%	\$1,216										
Repair and Maintenance		100%	\$1,216	\$1,216,392	3.76	\$323,532	\$25,662	12.6	98.1%	1.86	6.7	\$47,653	LI Households
Medical Services	1.3%	100%	\$1,316										
Ambulatory Health Care Services		40%	\$526	\$526,458		\$179,481	\$69,714	2.6		1.86			Above Mod
General Medical and Surgical Hospitals		30%	\$394.84	\$394,843	2.93	\$134,611	\$69,714	1.9	98.1%	1.86			Above Mod
Nursing and Residential Care Facilities		30%	\$395	\$394,843	2.93	\$134,611	\$69,714	1.9	98.1%	1.86	1.0	\$129,455	Above Mod
Drugs	0.6%	100%	\$571										
Health and Personal Care Stores		100%	\$571	\$571,394	8.37	\$68,289	\$28,665	2.4	87.5%	1.86	1.1	\$53,228	LI Households
Medical Supplies	0.2%	100%	\$211										
Health and Personal Care Stores		100%	\$211	\$211,125	8.37	\$25,232	\$28,665	0.9	87.5%	1.86	0.4	\$53,228	LI Households
Entertainment Fees and Admissions	1.0%	100%	\$1,045										
Arts, Entertainment, & Recreation		100%	\$1,045	\$1,044,974	3.14	\$332,676	\$34,993	9.5	87.5%	1.86	4.5	\$64,979	Moderate Income

[1] Percent of income spent per category is based on the nationwide 2016 Consumer Expenditure Survey data for households at this income level. Note that the sum of the categories included in this analysis is well below the total expenditures of households at this income level, and thus represents a conservative estimate of job creation and housing impacts. Expenditure categories not incorporated due to data constraints include taxes, housing and lodging, most utilities, tobacco, health insurance, personal/ life insurance, cash contributions, and financing charges.

^[2] Where multiple business types are likely to provide goods and services in the expenditure category, EPS has estimated the proportion accruing to each business type.

^{[3] 2016} expenditures are based on the estimated household income distributed based on the percent of income spent per the 2016 U.S. Consumer Expenditure Survey. Per Table 4 the rental of a typical new 2 Bedroom Apartment requires a household income of \$100,240.

^{[4] 2016} expenditures converted to 2018 dollars using the CPI adjustment for California from the BLS.

^[5] BLS data indicates that 12.5% of retail/restaurant workers are age 16-19, but an average of only 1.9% of workers are 16-19 in other industries. EPS has assumed that such young workers do not form their own households.

^[6] Based on US Census, ACS Data (2012-2016) for Mono County.

^[7] Mono County data not available from 2012 Economic Census (published September 2016). Gross receipts to wages and 2012 average wage thus based on statewide data.

^[8] Part of the Utilities, Fuels, and Public Services category (includes natural gas, electricity, and telephone services). Natural gas, electricity, and telephone services not estimated because data was not available in the 2012 Economic Census.

^[9] Note that average salary reported for architecture, engineering and related industries reflects the full range of employees within the industry, not solely professional and technical staff.

Table A-2 Household Expenditures and Employment Generation - For Rent 2-Bedroom Apartment Mono County Rental Residential Nexus Study; EPS #181044

Item	% of Household Income Spent per Category [1]	% of Category Expenditure per Type of Business [2]	Expenditures [3]	Expenditures per 1,000 HHs	Gross Receipts to Wages	Total Wages per 1,000 Households	2018 Avg. Wages [4]	# of New Workers	% Forming HH [5]	Workers/ HH [6]	Total Worker HH	Avg. Worker HH Income	Income Category
Calculation	а	b	С	d = c * 1,000	е	f = d / e	g	h = f/g	i	j	k= h * i / j	I = g * j	
Entertainment Audio and Visual Equipment and Services	1.4%	100%	\$1,377										
Electronics and Appliance Stores [7]		100%	\$1,377	\$1,377,157	10.07	\$136,743	\$27,985	4.9	87.5%	1.86	2.3	\$51,966	LI Households
Entertainment Pets, Toys, Hobbies, and Playground Equip.	1.1%	100%	\$1,102										
Sporting Goods, Hobby, and Musical Instrument Stores		40%	\$441	\$440,845	9.19	\$47,966	\$26,488	1.8	87.5%	1.86	0.9	\$49,186	LI Households
Miscellaneous Store Retailers		40%	\$441	\$440,845	3.43	\$128,520	\$30,805			1.86		\$57,203	LI Households
Veterinary Services [7]		20%	\$220	\$220,423	2.94	\$75,063	\$39,702	1.9	98.1%	1.86	1.0	\$73,725	Moderate Income
Other Entertainment Supplies, Equipment, and Services	0.7%	100%											
Sporting Goods, Hobby, and Musical Instrument Stores		85%				\$63,682	\$26,488			1.86		\$49,186	LI Households
Photographic Services [7]		15%	\$103	\$103,287	4.40	\$23,471	\$28,098	0.8	98.1%	1.86	0.4	\$52,177	LI Households
Personal Care Products and Services	1.0%	100%	\$1,025										
Miscellaneous Store Retailers		50%	\$512	\$512,318	3.43	\$149,356	\$30,805		87.5%	1.86	2.3	\$57,203	LI Households
Personal Care Services		50%	\$512	\$512,318	3.76	\$136,265	\$25,662	5.3	98.1%	1.86	2.8	\$47,653	LI Households
Reading	0.1%	100%											
Sporting Goods, Hobby, and Musical Instrument Stores		100%	\$142	\$142,364	9.19	\$15,490	\$26,488	0.6	87.5%	1.86	0.3	\$49,186	LI Households
Education	1.8%	100%	\$1,783										
Educational Services		100%	\$1,783	\$1,782,944	3.09	\$577,494	\$30,600	18.9	98.1%	1.86	10.0	\$56,823	LI Households
Tobacco Products and Smoking Supplies	0.4%	100%											
Miscellaneous Store Retailers		100%	\$364	\$364,143	3.43	\$106,159	\$30,805	3.4	87.5%	1.86	1.6	\$57,203	LI Households
Miscellaneous	1.4%	100%											
Accounting		20%				\$108,205	\$42,533			1.86		,	Moderate Income
Architectural, Engineering, and Related [9]		20%				\$138,564	\$57,799		98.1%	1.86		,	Above Mod
Specialized Design Services [7]		20%				\$83,727	\$68,790			1.86		. ,	Above Mod
Death Care Services [7] Legal Services [7]		20% 20%	\$275 \$275			\$80,736 \$91,949	\$44,794 \$104,045	1.8 <u>0.9</u>		1.86 1.86	1.0 <u>0.5</u>		Above Mod Above Mod
Total per 1,000 Market Rate Households								308.6			150.7		

[1] Percent of income spent per category is based on the nationwide 2016 Consumer Expenditure Survey data for households at this income level. Note that the sum of the categories included in this analysis is well below the total expenditures of households at this income level, and thus represents a conservative estimate of job creation and housing impacts. Expenditure categories not incorporated due to data constraints include taxes, housing and lodging, most utilities, tobacco, health insurance, personal/ life insurance, cash contributions, and financing charges.

^[2] Where multiple business types are likely to provide goods and services in the expenditure category, EPS has estimated the proportion accruing to each business type.

^{[3] 2016} expenditures are based on the estimated household income distributed based on the percent of income spent per the 2016 U.S. Consumer Expenditure Survey. Per Table 4 the rental of a typical new 2 Bedroom Apartment requires a household income of \$100,240.

^{[4] 2016} expenditures converted to 2018 dollars using the CPI adjustment for California from the BLS.

^[5] BLS data indicates that 12.5% of retail/restaurant workers are age 16-19, but an average of only 1.9% of workers are 16-19 in other industries. EPS has assumed that such young workers do not form their own households.

^[6] Based on US Census, ACS Data (2012-2016) for Mono County.

^[7] Mono County data not available from 2012 Economic Census (published September 2016). Gross receipts to wages and 2012 average wage thus based on statewide data.

^[8] Part of the Utilities, Fuels, and Public Services category (includes natural gas, electricity, and telephone services). Natural gas, electricity, and telephone services not estimated because data was not available in the 2012 Economic Census.

^[9] Note that average salary reported for architecture, engineering and related industries reflects the full range of employees within the industry, not solely professional and technical staff.

Table A-3 Household Expenditures and Employment Generation - For Rent 3-Bedroom Apartment Mono County Rental Residential Nexus Study; EPS #181044

ltem	% of Household Income Spent per Category [1]	% of Category Expenditure per Type of Business [2]	Expenditures [3]	Expenditures per 1,000 HHs	Gross Receipts to Wages	Total Wages per 1,000 Households	2018 Avg. Wages [4]	# of New Workers	% Forming HH [5]	Workers/ HH [6]	Total Worker HH	Avg. Worker HH Income	Income Category
Calculation	а	b	С	d = c * 1,000	е	f = d/e	g	h = f/g	i	j	k= h * i / j	l = g * j	
Food at Home	5.4%	100%	\$8,064										
Food & Beverage Stores		100%	\$8,064	\$8,063,989	9.71	\$830,310	\$31,638	26.2	87.5%	1.86	12.4	\$51,659	LI Households
Food Away From Home	4.6%	100%	\$6,965										
Food Services and Drinking Places		100%	\$6,965	\$6,964,882	3.24	\$2,148,385	\$15,417	139.4	87.5%	1.86	65.7	\$25,173	VLI Households
Alcoholic Beverages	0.7%		\$1,066										
Food & Beverage Stores		50%	\$533	\$532,856		\$54,866	\$31,638	1.7					LI Households
Food Services and Drinking Places		50%	\$533	\$532,856	3.24	\$164,365	\$15,417	10.7	87.5%	1.86	5.0	\$25,173	VLI Households
Housing Maintenance, Repairs, Insurance, Other expenses	2.1%		\$3,119										
Personal and Household Goods Repair and Maintenance		45%	\$1,403	\$1,403,430		\$373,280	\$25,662	14.5					LI Households
Building Material and Garden Equipment and Supplies Dealer		45%	\$1,403	\$1,403,430		\$152,698	\$26,488	5.8		1.86		,	LI Households
Real Estate and Rental and Leasing		10%	\$312	\$311,873	3.89	\$80,088	\$29,091	2.8	98.1%	1.86	1.5	\$47,501	LI Households
Fuel oil and Other fuels [8]	0.1%		\$164										
Nonstore Retailers [7]		100%	\$164	\$164,067	13.82	\$11,875	\$65,041	0.2	87.5%	1.86	0.1	\$106,201	Above Mod
Water and Other Public Services [8]	0.7%	100%	\$1,047										
Waste Management and Remediation Services		100%	\$1,047	\$1,046,838	3.36	\$311,967	\$32,099	9.7	98.1%	1.86	5.1	\$52,412	LI Households
Household Operations Personal Services	0.9%	100%	\$1,337										
Nursing and Residential Care Facilities		40%	\$535	\$534,889		\$182,355	\$69,714	2.6		1.86			Above Mod
Social Assistance		60%	\$802	\$802,334	2.93	\$273,533	\$69,714	3.9	98.1%	1.86	3 2.1	\$113,831	Above Mod
Household Operations Other Household Expenses	1.2%	100%	\$1,735										
Services to Buildings and Dwellings [7]		100%	\$1,735	\$1,735,050	2.54	\$682,334	\$29,308	23.3	98.1%	1.86	12.3	\$47,855	LI Households
Housekeeping Supplies	0.9%	100%	\$1,421										
Building Materials and Garden Equipment and Supplies Dealers		10%	\$142	\$142,143		\$15,466	\$26,488	0.6				,	LI Households
Food & Beverage Stores		35%	\$498	\$497,502		\$51,225	\$31,638	1.6				,	LI Households
General Merchandise		35%	\$498	\$497,502		\$36,715	\$15,405	2.4				,	VLI Households
Miscellaneous Store Retailers		20%	\$284	\$284,287	3.43	\$82,878	\$30,805	2.7	87.5%	1.86	1.3	\$50,299	LI Households

^[1] Percent of income spent per category is based on the nationwide 2016 Consumer Expenditure Survey data for households at this income level. Note that the sum of the categories included in this analysis is well below the total expenditures of households at this income level, and thus represents a conservative estimate of job creation and housing impacts. Expenditure categories not incorporated due to data constraints include taxes, housing and lodging, most utilities, tobacco, health insurance, personal/ life insurance, cash contributions, and financing charges.

^[2] Where multiple business types are likely to provide goods and services in the expenditure category, EPS has estimated the proportion accruing to each business type.

^{[3] 2016} expenditures are based on the estimated household income distributed based on the percent of income spent per the 2016 U.S. Consumer Expenditure Survey. Per Table 4 the rental of a typical new 3 Bedroom Apartment requires a household income of \$150,280.

^{[4] 2016} expenditures converted to 2018 dollars using the CPI adjustment for California from the BLS.

^[5] BLS data indicates that 12.5% of retail/restaurant workers are age 16-19, but an average of only 1.9% of workers are 16-19 in other industries. EPS has assumed that such young workers do not form their own households.

^[6] Based on US Census, ACS Data (2012-2016) for Mono County.
[7] Mono County data not available from 2012 Economic Census (published September 2016). Gross receipts to wages and 2012 average wage thus based on statewide data.

^[8] Part of the Utilities, Fuels, and Public Services category (includes natural gas, electricity, and telephone services). Natural gas, electricity, and telephone services not estimated because data was not available in the 2012 Economic Census.

^[9] Note that average salary reported for architecture, engineering and related industries reflects the full range of employees within the industry, not solely professional and technical staff.

Table A-3
Household Expenditures and Employment Generation - For Rent 3-Bedroom Apartment
Mono County Rental Residential Nexus Study; EPS #181044

Item	% of Household Income Spent per Category [1]	% of Category Expenditure per Type of Business [2]	Expenditures [3]	Expenditures per 1,000 HHs	Gross Receipts to Wages	Total Wages per 1,000 Households	2018 Avg. Wages [4]	# of New Workers	% Forming HH [5]	Workers/ HH [6]	Total Worker HH	Avg. Worker HH Income	Income Category
Calculation	а	b	С	d = c * 1,000	е	f = d/e	g	h = f/g	i	j	k= h * i / j	l = g * j	
Household Furnishings and Equipment	2.8%	100%	\$4,250										
Furniture and Home Furnishings Stores		40%	\$1,700	\$1,699,913	15.21	\$111,765	\$23,503	4.8	87.5%	1.86	2.2	\$38,377	LI Households
Electronics and Appliance Stores [7]		40%	\$1,700	\$1,699,913	10.07	\$168,790	\$27,985	6.0	87.5%	1.86	2.8	\$45,694	LI Households
General Merchandise Stores		10%	\$425	\$424,978	13.55	\$31,363	\$15,405	2.0	87.5%	1.86	1.0	\$25,153	VLI Households
Miscellaneous Store Retailers		10%	\$425	\$424,978	3.43	\$123,894	\$30,805	4.0	87.5%	1.86	1.9	\$50,299	LI Households
Apparel and Services	2.4%	100%	\$3,566										
Clothing and Clothing Accessories Stores		40%	\$1,426	\$1,426,371	9.19	\$155,194	\$26,488	5.9	87.5%	1.86	2.8	\$43,250	LI Households
General Merchandise		40%	\$1,426	\$1,426,371	13.55	\$105,265	\$15,405	6.8	87.5%	1.86	3.2	\$25,153	VLI Households
Miscellaneous Store Retailers		10%	\$357	\$356,593	3.43	\$103,958	\$30,805	3.4	87.5%	1.86	1.6	\$50,299	LI Households
Personal and Household Goods Repair and Maintenance		5%	\$178	\$178,296		\$47,423		1.8	87.5%	1.86			LI Households
Drycleaning and Laundry Services		5%	\$178	\$178,296	3.76	\$47,423	\$25,662	1.8	87.5%	1.86	0.9	\$41,902	LI Households
Vehicle Purchases (net outlay)	5.6%	100%	\$8,367										
Motor Vehicle and Parts Dealers		100%	\$8,367	\$8,367,441	9.19	\$910,408	\$26,488	34.4	87.5%	1.86	16.2	\$43,250	LI Households
Gasoline and motor oil	2.7%	100%	\$4,039										
Gasoline Stations		100%	\$4,039	\$4,039,254	17.81	\$226,747	\$24,814	9.1	87.5%	1.86	4.3	\$40,517	LI Households
Vehicle Maintenance and Repairs	1.2%	100%	\$1,824										
Repair and Maintenance		100%	\$1,824	\$1,823,617	3.76	\$485,039	\$25,662	18.9	98.1%	1.86	10.0	\$41,902	LI Households
Medical Services	1.3%	100%	\$1,973										
Ambulatory Health Care Services		40%	\$789	\$789,266	2.93	\$269,078	\$69,714	3.9	98.1%	1.86	2.0	\$113,831	Above Mod
General Medical and Surgical Hospitals		30%	\$592	\$591,950	2.93	\$201,808	\$69,714	2.9	98.1%	1.86		\$113,831	Above Mod
Nursing and Residential Care Facilities		30%	\$592	\$591,950	2.93	\$201,808	\$69,714	2.9	98.1%	1.86	1.5	\$113,831	Above Mod
Drugs	0.6%	100%	\$857										
Health and Personal Care Stores		100%	\$857	\$856,635	8.37	\$102,380	\$28,665	3.6	87.5%	1.86	1.7	\$46,804	LI Households
Medical Supplies	0.2%	100%	\$317										
Health and Personal Care Stores		100%	\$317	\$316,520	8.37	\$37,828	\$28,665	1.3	87.5%	1.86	0.6	\$46,804	LI Households
Entertainment Fees and Admissions Arts, Entertainment, & Recreation	1.0%	100% 100%	\$1,567 \$1,567	\$1,566,627	3.14	\$498,749	\$34,993	14.3	87.5%	1.86	6.7	\$57,137	LI Households

^[1] Percent of income spent per category is based on the nationwide 2016 Consumer Expenditure Survey data for households at this income level. Note that the sum of the categories included in this analysis is well below the total expenditures of households at this income level, and thus represents a conservative estimate of job creation and housing impacts. Expenditure categories not incorporated due to data constraints include taxes, housing and lodging, most utilities, tobacco, health insurance, personal/ life insurance, cash contributions, and financing charges.

^[2] Where multiple business types are likely to provide goods and services in the expenditure category, EPS has estimated the proportion accruing to each business type.

^{[3] 2016} expenditures are based on the estimated household income distributed based on the percent of income spent per the 2016 U.S. Consumer Expenditure Survey. Per Table 4 the rental of a typical new 3 Bedroom Apartment requires a household income of \$150,280.

^[5] BLS data indicates that 12.5% of retail/restaurant workers are age 16-19, but an average of only 1.9% of workers are 16-19 in other industries. EPS has assumed that such young workers do not form their own households.

^[6] Based on US Census, ACS Data (2012-2016) for Mono County.

^[7] Mono County data not available from 2012 Economic Census (published September 2016). Gross receipts to wages and 2012 average wage thus based on statewide data.

^[8] Part of the Utilities, Fuels, and Public Services category (includes natural gas, electricity, and telephone services). Natural gas, electricity, and telephone services not estimated because data was not available in the 2012 Economic Census.

^[9] Note that average salary reported for architecture, engineering and related industries reflects the full range of employees within the industry, not solely professional and technical staff.

Table A-3 Household Expenditures and Employment Generation - For Rent 3-Bedroom Apartment Mono County Rental Residential Nexus Study; EPS #181044

Item	% of Household Income Spent per Category [1]	% of Category Expenditure per Type of Business [2]	Expenditures [3]	Expenditures per 1,000 HHs	Gross Receipts to Wages	Total Wages per 1,000 Households	2018 Avg. Wages [4]	# of New Workers	% Forming HH [5]	Workers/ HH [6]	Total Worker HH	Avg. Worker HH Income Category
Calculation	а	b	С	d = c * 1,000	е	f = d/e	g	h = f/g	i	j	k= h * i / j	I = g * j
Entertainment Audio and Visual Equipment and Services	1.4%	100%	\$2,065									
Electronics and Appliance Stores [7]		100%	\$2,065	\$2,064,637	10.07	\$205,005	\$27,985	7.3	87.5%	1.86	3.5	\$45,694 LI Households
Entertainment Pets, Toys, Hobbies, and Playground Equip.	1.1%	100%	\$1,652									
Sporting Goods, Hobby, and Musical Instrument Stores		40%	\$661			\$71,910	\$26,488	2.7		1.86		
Miscellaneous Store Retailers		40%	\$661	\$660,916	3.43	\$192,677	\$30,805	6.3	87.5%	1.86	3 2.9	\$50,299 LI Households
Veterinary Services [7]		20%	\$330	\$330,458	2.94	\$112,534	\$39,702	2.8	98.1%	1.86	1.5	\$64,827 Moderate Income
Other Entertainment Supplies, Equipment, and Services	0.7%	100%	\$1,032									
Sporting Goods, Hobby, and Musical Instrument Stores		85%	\$877			\$95,472	\$26,488	3.6		1.86	1.7	\$43,250 LI Households
Photographic Services [7]		15%	\$155	\$154,848	4.40	\$35,188	\$28,098	1.3	98.1%	1.86	0.7	\$45,880 LI Households
Personal Care Products and Services	1.0%	100%	\$1,536									
Miscellaneous Store Retailers		50%	\$768	\$768,068	3.43	\$223,915	\$30,805	7.3	87.5%	1.86	3.4	\$50,299 LI Households
Personal Care Services		50%	\$768	\$768,068	3.76	\$204,288	\$25,662	8.0	98.1%	1.86	3 4.2	\$41,902 LI Households
Reading	0.1%	100%	\$213									
Sporting Goods, Hobby, and Musical Instrument Stores		100%	\$213	\$213,433	9.19	\$23,222	\$26,488	0.9	87.5%	1.86	0.4	\$43,250 LI Households
Education	1.8%	100%	\$2,673									
Educational Services		100%	\$2,673	\$2,672,993	3.09	\$865,780	\$30,600	28.3	98.1%	1.86	14.9	\$49,965 LI Households
Tobacco Products and Smoking Supplies	0.4%	100%	\$546									
Miscellaneous Store Retailers		100%	\$546	\$545,924	3.43	\$159,153	\$30,805	5.2	87.5%	1.86	5 2.4	\$50,299 LI Households
Miscellaneous	1.4%	100%	\$2,062									
Accounting		20%	\$412	\$412,347	2.54	\$162,220	\$42,533	3.8	98.1%	1.86	2.0	\$69,449 Moderate Income
Architectural, Engineering, and Related [9]		20%	\$412	\$412,347	1.98	\$207,736	\$57,799	3.6	98.1%	1.86	1.9	\$94,376 Above Mod
Specialized Design Services [7]		20%	\$412			\$125,524	\$68,790	1.8		1.86	1.0	\$112,323 Above Mod
Death Care Services [7] Legal Services [7]		20% 20%	\$412 \$412			\$121,040 \$137,851	\$44,794 \$104,045	2.7 1.3		1.86 1.86		\$73,140 Moderate Income \$169,888 Above Mod
Total per 1,000 Market Rate Households								462.7	,		226.0	

^[1] Percent of income spent per category is based on the nationwide 2016 Consumer Expenditure Survey data for households at this income level. Note that the sum of the categories included in this analysis is well below the total expenditures of households at this income level, and thus represents a conservative estimate of job creation and housing impacts. Expenditure categories not incorporated due to data constraints include taxes, housing and lodging, most utilities, tobacco, health insurance, personal/ life insurance, cash contributions, and financing charges.

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^[2] Where multiple business types are likely to provide goods and services in the expenditure category, EPS has estimated the proportion accruing to each business type.

^{[3] 2016} expenditures are based on the estimated household income distributed based on the percent of income spent per the 2016 U.S. Consumer Expenditure Survey. Per Table 4 the rental of a typical new 3 Bedroom Apartment requires a household income of \$150,280.

^{[4] 2016} expenditures converted to 2018 dollars using the CPI adjustment for California from the BLS.

^[5] BLS data indicates that 12.5% of retail/restaurant workers are age 16-19, but an average of only 1.9% of workers are 16-19 in other industries. EPS has assumed that such young workers do not form their own households.

^[6] Based on US Census, ACS Data (2012-2016) for Mono County.

^[7] Mono County data not available from 2012 Economic Census (published September 2016). Gross receipts to wages and 2012 average wage thus based on statewide data.

^[8] Part of the Utilities, Fuels, and Public Services category (includes natural gas, electricity, and telephone services). Natural gas, electricity, and telephone services not estimated because data was not available in the 2012 Economic Census.

^[9] Note that average salary reported for architecture, engineering and related industries reflects the full range of employees within the industry, not solely professional and technical staff.

APPENDIX B: Worker Household Generation



Table B-1 Income Levels for Worker Households Worker Household Generation per 1,000 Market Rate Units - For Rent Studio/1-Bedroom Apartment Mono County Rental Residential Nexus Study; EPS #181044

Industry	Total Workers	Total Worker Households [1] He	ELI ouseholds	Very Low Income Households	Low Income Households	Moderate Income Households	Above Moderate Income Households
Retail							
Unspecified Retail	7.4	3.5	0.0	0.0	3.5	0.0	0.0
Food & Beverage Stores	17.2	8.1	0.0	0.0	0.0	8.1	0.0
Food Services and Drinking Places	78.7	37.1	0.0	37.1	0.0	0.0	0.0
Health and Personal Care Stores	2.8	1.3	0.0	1.3	0.0	0.0	0.0
General Merchandise	6.0	2.8	0.0	2.8	0.0	0.0	0.0
Furniture and Home Furnishings Stores	2.3	1.1	0.0	0.0	1.1	0.0	0.0
Building Material and Garden Equipment and Supplies Dealer	3.1	1.5	0.0	0.0		0.0	0.0
Electronics and Appliance Stores	7.2	3.4	0.0	0.0	3.4	0.0	0.0
Clothing and Clothing Accessories Stores	3.3	1.5	0.0	0.0		0.0	0.0
Motor Vehicle and Parts Dealers	18.2	8.6	0.0	0.0		0.0	0.0
Gasoline Stations	5.5	2.6	0.0	0.0		0.0	0.0
Sporting Goods, Hobby, and Musical Instrument Stores	3.9	1.8	0.0	0.0		0.0	0.0
Miscellaneous Store Retailers	8.7	4.1	0.0	0.0		0.0	0.0
Nonstore Retailers	0.1	0.0	0.0	0.0		0.0	0.0
	6.6	3.1	0.0	0.0		3.1	0.0
Arts, Entertainment, & Recreation	0.0	3.1	0.0	0.0	0.0	3.1	0.0
Medical/Health							
Ambulatory Health Care Services	1.9	1.0	0.0	0.0	0.0	0.0	1.0
General Medical and Surgical Hospitals	1.4	0.8	0.0	0.0	0.0	0.0	0.8
Nursing and Residential Care Facilities	2.3	1.2	0.0	0.0	0.0	0.0	1.2
Social Assistance	1.2	0.7	0.0	0.0	0.0	0.0	0.7
Services							
Personal and Household Goods Repair and Maintenance	8.1	4.2	0.0	0.0	4.2	0.0	0.0
Services to Buildings and Dwellings	12.9	6.8	0.0	0.0	6.8	0.0	0.0
Waste Management and Remediation Services	6.1	3.2	0.0	0.0		3.2	0.0
Real Estate and Rental and Leasing	1.3	0.7	0.0	0.0	0.7	0.0	0.0
Personal Care Services	4.1	2.1	0.0	0.0	2.1	0.0	0.0
Dry Cleaning and Laundry Services	1.0	0.5	0.0	0.0	0.5	0.0	0.0
Auto Repair and Maintenance	10.4	5.5	0.0	0.0	5.5	0.0	0.0
Veterinary Services	1.6	0.8	0.0	0.0	0.0	0.8	0.0
Photographic Services	0.7	0.3	0.0	0.0		0.0	0.0
Educational Services	10.6	5.6	0.0	0.0	5.6	0.0	0.0
Accounting	2.0	1.0	0.0	0.0	0.0	1.0	0.0
Architectural, Engineering, and Related	1.8	1.0	0.0	0.0		0.0	1.0
Specialized Design Services	0.9	0.5	0.0	0.0		0.0	0.5
Death Care Services	1.4	0.7	0.0	0.0		0.0	0.7
Legal Services	0.7	<u>0.4</u>	0.0	<u>0.0</u>		0.0	0.4
Total Workers and Households	241.5	117.7	0.0	41.3	53.9	16.3	6.2
Total Income-Qualified HH Generated Per 1,000 Market-Rate Units [2]		111.5	0.0	41.3	53.9	16.3	
Total Income-Qualified HH Generated Per 100 Market-Rate Units [2]		11.1	0.0	4.1	5.4	1.6	

^[1] Assumes 1.86 workers per worker household in Mono County based on data from the US Census, ACS 2012-16. Includes a 12.5% discount for retail and 1.9% discount for other industries to account for workers under age 20.

Table B-2 Income Levels for Worker Households Worker Household Generation per 1,000 Market Rate Units - For Rent 2-Bedroom Apartment Mono County Rental Residential Nexus Study; EPS #181044

Industry	Total Workers	Total Worker Households [1]	Very Low Income Households	Low Income Households	Moderate Income Households	Above Moderate Income Households
Retail						
Unspecified Retail	8.3	3.9	0.0	3.9	0.0	0.0
Food & Beverage Stores	19.7	9.3	0.0	0.0	9.3	0.0
Food Services and Drinking Places	100.1	47.2	47.2		0.0	0.0
Health and Personal Care Stores	3.3	1.5	1.5	0.0	0.0	0.0
General Merchandise	7.5	3.5	3.5	0.0	0.0	0.0
Furniture and Home Furnishings Stores	3.2	1.5	0.0	1.5	0.0	0.0
Building Material and Garden Equipment and Supplies Dealer	4.2	2.0	0.0	2.0	0.0	0.0
Electronics and Appliance Stores	8.9	4.2	0.0		0.0	0.0
Clothing and Clothing Accessories Stores	3.9	1.8	0.0	1.8	0.0	0.0
Motor Vehicle and Parts Dealers	22.9	10.8	0.0		0.0	0.0
Gasoline Stations	6.1	2.9	0.0	2.9	0.0	0.0
Sporting Goods, Hobby, and Musical Instrument Stores	4.8	2.3	0.0	2.3	0.0	0.0
Miscellaneous Store Retailers	10.9	5.1	0.0	5.1	0.0	0.0
Nonstore Retailers	0.1	0.1	0.0	0.0	0.0	0.1
Arts, Entertainment, & Recreation	9.5	4.5	0.0	0.0	0.0	4.5
Medical/Health						
Ambulatory Health Care Services	2.6	1.4	0.0	0.0	0.0	1.4
General Medical and Surgical Hospitals	1.9	1.0	0.0	0.0	0.0	1.0
Nursing and Residential Care Facilities	3.7	1.9	0.0	0.0	0.0	1.9
Social Assistance	2.6	1.4	0.0	0.0	0.0	1.4
Services						
Personal and Household Goods Repair and Maintenance	10.9	5.7	0.0		0.0	0.0
Services to Buildings and Dwellings	15.5	8.2	0.0		0.0	0.0
Waste Management and Remediation Services	6.5	3.4	0.0		3.4	0.0
Real Estate and Rental and Leasing	1.8	1.0	0.0		0.0	0.0
Personal Care Services	5.3	2.8	0.0		0.0	0.0
Dry Cleaning and Laundry Services	1.2	0.6	0.0		0.0	0.0
Auto Repair and Maintenance	12.6	6.7	0.0		0.0	0.0
Veterinary Services	1.9	1.0	0.0		1.0	0.0
Photographic Services	0.8	0.4	0.0		0.0	0.0
Educational Services	18.9	10.0	0.0		0.0	0.0
Accounting	2.5	1.3	0.0		1.3	0.0
Architectural, Engineering, and Related	2.4	1.3	0.0		0.0	1.3
Specialized Design Services	1.2	0.6	0.0		0.0	0.6
Death Care Services	1.8	1.0	0.0		0.0	1.0
Legal Services	<u>0.9</u>	<u>0.5</u>	0.0	0.0	0.0	0.5
Fotal Workers and Households	308.6	150.7	52.2	69.8	15.1	13.6
Total Income-Qualified HH Generated Per 1,000 Market-Rate Units [2]		137.1	52.2	69.8	15.1	
Total Income-Qualified HH Generated Per 100 Market-Rate Units [2]		13.7	5.2	7.0	1.5	

^[1] Assumes 1.86 workers per worker household in Mono County based on data from the US Census, ACS 2012-16. Includes a 12.5% discount for retail and 1.9% discount for other industries to account for workers under age 20.

Table B-3 Income Levels for Worker Households Worker Household Generation per 1,000 Market Rate Units - For Rent 3-Bedroom Apartment Mono County Rental Residential Nexus Study; EPS #181044

Industry	Total Workers	Total Worker Households [1]	Very Low Income Households	Low Income Households	Moderate Income Households	Above Moderate Income Households
Retail						
Unspecified Retail	12.4	5.9	0.0	5.9	0.0	0.0
Food & Beverage Stores	29.6	13.9	0.0	0.0	13.9	0.0
Food Services and Drinking Places	150.0	70.7	70.7	0.0	0.0	0.0
Health and Personal Care Stores	4.9	2.3	2.3	0.0	0.0	0.0
General Merchandise	11.3	5.3	5.3	0.0	0.0	0.0
Furniture and Home Furnishings Stores	4.8	2.2	0.0	2.2	0.0	0.0
Building Material and Garden Equipment and Supplies Dealer	6.3	3.0	0.0	3.0	0.0	0.0
Electronics and Appliance Stores	13.4	6.3	0.0	6.3	0.0	0.0
Clothing and Clothing Accessories Stores	5.9	2.8	0.0	2.8	0.0	0.0
Motor Vehicle and Parts Dealers	34.4	16.2	0.0	16.2	0.0	0.0
Gasoline Stations	9.1	4.3	0.0	4.3	0.0	0.0
Sporting Goods, Hobby, and Musical Instrument Stores	7.2	3.4	0.0	3.4	0.0	0.0
Miscellaneous Store Retailers	16.3	7.7	0.0	7.7	0.0	0.0
Nonstore Retailers	0.2	0.1	0.0	0.0	0.0	0.1
Arts, Entertainment, & Recreation	14.3	6.7	0.0	0.0	6.7	0.0
Medical/Health						
Ambulatory Health Care Services	3.9	2.0	0.0	0.0	0.0	2.0
General Medical and Surgical Hospitals	2.9	1.5	0.0	0.0	0.0	1.5
Nursing and Residential Care Facilities	5.5	2.9	0.0	0.0	0.0	2.9
Social Assistance	3.9	2.1	0.0	0.0	0.0	2.1
Services						
Personal and Household Goods Repair and Maintenance	16.4	8.6	0.0		0.0	0.0
Services to Buildings and Dwellings	23.3	12.3	0.0		0.0	0.0
Waste Management and Remediation Services	9.7	5.1	0.0		5.1	0.0
Real Estate and Rental and Leasing	2.8	1.5	0.0		0.0	0.0
Personal Care Services	8.0	4.2	0.0		0.0	0.0
Dry Cleaning and Laundry Services	1.8	0.9	0.0		0.0	0.0
Auto Repair and Maintenance	18.9	10.0	0.0		0.0	0.0
Veterinary Services	2.8	1.5	0.0		1.5	0.0
Photographic Services	1.3	0.7	0.0		0.0	0.0
Educational Services	28.3	14.9	0.0		0.0	0.0
Accounting	3.8	2.0	0.0		2.0	0.0
Architectural, Engineering, and Related	3.6	1.9	0.0		0.0	1.9
Specialized Design Services	1.8	1.0	0.0		0.0	1.0
Death Care Services	2.7	1.4	0.0		0.0	1.4
Legal Services	<u>1.3</u>	<u>0.7</u>	0.0	0.0	0.0	0.7
Total Workers and Households	462.7	226.0	78.3	104.7	29.3	13.6
Total Income-Qualified HH Generated Per 1,000 Market-Rate Units [2]		212.3	78.3	104.7	29.3	
Total Income-Qualified HH Generated Per 100 Market-Rate Units [2]		21.2	7.8	10.5	2.9	

^[1] Assumes 1.86 workers per worker household in Mono County based on data from the US Census, ACS 2012-16. Includes a 12.5% discount for retail and 1.9% discount for other industries to account for workers under age 20.