

**NAPA COUNTY
AFFORDABLE HOUSING ORDINANCE REVISIONS
UPDATE AND ECONOMIC ANALYSIS**

RESIDENTIAL COMPONENT

Prepared for Napa County

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Keyser Marston Associates

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INTRODUCTION

This document provides materials in support of the residential component of the proposed Napa County Affordable Housing Ordinance. The materials have been prepared by Keyser Marston Associates for Napa County pursuant to a contractual agreement.

Napa County adopted an Affordable Housing Ordinance in 1993 establishing a housing impact fee on non-residential construction and an inclusionary housing requirement on residential construction. The non-residential component of the program was updated and revised in 2004 but the residential component has not been revised or adjusted since the original adoption. The current inclusionary program has an in lieu fee option available to all new construction and virtually all residential projects have paid the in lieu fee.

The shortage of affordable housing in Napa County for its workforce has become far more acute over the past sixteen years as Napa has become a more and more expensive place to find housing. The success of the wine industry and stature of the wine culture regionally, nationally, and even internationally, has elevated Napa as both a visitor destination and a place to live. The downside of the success has been a rise in the cost of all housing, causing most local workers to commute from lower cost housing areas outside the county. The social and environmental costs of the affordable housing shortage are now widely recognized, leading to the proposed revisions to the residential component of the Napa Affordable Housing Ordinance.

Materials in this Document

This document presents an economic nexus analysis to demonstrate support for the requirements on new residential construction contained in the proposed Affordable Housing Ordinance. The economic nexus analysis is a socioeconomic analysis describing and quantifying the linkages between new residential construction, the expenditures of new households in Napa, new jobs generated by the expenditures, and the demand for additional affordable housing units. The nexus analysis demonstrates that there is a reasonable relationship between the affordable housing required by the proposed Affordable Housing Ordinance and the demand for affordable housing created by new residential development.

The nexus analysis also demonstrates support for both housing fees and percentage requirements to mitigate the demand for affordable housing created by new residential development.

The materials provided herein also contain real estate analyses of residential development in Napa County and demonstrate how the on-site compliance requirements for larger projects (five or more units) affect the development economics of residential projects in Napa. The real estate analyses are important to the design of the program for on-site compliance and also for evaluating and selecting fee levels at or below the quantified nexus maximums. In addition,

surveys of real estate material and evaluation of market conditions have informed the selection of market values of various types of residential units. These market values are the starting point of the nexus analysis and also determine affordability gaps which translate to mitigation costs.

Timing and Updates

The materials in this report have been prepared over the course of the past two years. The first analysis was summarized in a draft document transmitted in February 2008, but due to the dramatic changes in residential market conditions over the period, the analysis was updated in early 2009. To confirm that the early 2009 assumptions and values are still appropriate in late summer 2009, an update crosscheck was undertaken again in the summer of 2009.

At the time of this analysis and report preparation in the summer and fall of 2009, most economists on the national level believe that the cycle is near the bottom and that residential values will begin to move in a positive direction within a year or two. For purposes of this analysis and revising the Affordable Housing Ordinance, the objective as related to the assumptions used in this analysis is not to represent the very bottom. Rather, the objective is to select values that reflect the values of the last two years, certainly lower than the peak, and expected for the next few years since the economic recovery is expected to be slow.

It may be desirable to revisit the analysis again when conditions do change significantly.

Organization of this Document

The various program features of the proposed changes to the Affordable Housing Ordinance are interconnected and overlapping. We have elected to organize the materials as follows:

- Section I – Nexus Analysis Summary of Findings – This section provides a reduced version of the nexus analysis, describing briefly the concept, the methodology, the data used and the conclusions. The full nexus report, which could be a free standing document, is provided in an appendix section.
- Section II – Fee Levels Supported and Recommendations. This section presents fee levels supported by the Residential Nexus Analysis for each type of residential unit. In order to evaluate and select fee levels for Napa County, an analysis of the proposed on-site requirement is provided to demonstrate equivalent fees. This section also contains a presentation of alternative ways of quantifying and structuring affordable housing requirements and provides examples from other jurisdictions. A chart of programs in other North Bay jurisdictions is also provided for reference. The section concludes with a recommended fee range for each residential type.

- Appendix I contains the full Residential Nexus Analysis and all the tables that are a part of the analysis.
- Appendix II – Residential Values – Market and Affordable. This is a background section that establishes the market values of various types of attached and detached residential units or “projects” based on surveys of new units selling in Napa. As noted previously, this material has been updated and adjusted over the past two years due to the rapid changes in housing markets and the economic recession. The Appendix also contains the calculations of affordable sales prices and rent levels at various affordability levels, per the current Area Median Income (AMI). The affordability gap conclusions are used in Residential and Non-Residential (Jobs Housing) Nexus Analyses.
- Appendix III – Other Supporting Tables – This section provides tables and other materials that demonstrate the effects of on-site requirements for larger projects.

Current and Proposed Affordable Housing Ordinance for Residential Construction

Below is a brief outline of the existing and proposed Affordable Housing Ordinance as it relates to residential construction, focusing on the aspects addressed in the various analyses in this document.

The existing Affordable Housing Ordinance adopted in 1993 has the following main features:

- All residential construction is covered, including single family detached units.
- 10% of all residential units must be affordable
 - o Ownership units – 5% units at moderate income or 120% AMI
5% units at median income or 100% AMI
 - o Rental Units – 5% units at very low income or 50% AMI
5% units at low income at 80% AMI
- The In Lieu Fee option
 - o is available to all projects
 - o is based on 2% of building permit valuation (or 1% if the valuation is less than \$77,000, or exempt if the building permit valuation is under \$25,000).
- Since the fee option is much less expensive for a developer than the on-site requirement, the program has functioned as a fee program only.

The Proposed Affordable Housing Ordinance incorporates many changes. Most affordability level definitions have been changed for consistency with other program definitions in State law, some new since the 1993 adoption. The proposed ordinance has the following main features:

- All residential construction is covered by the program; however ownership projects of five units or more will be required to do on-site compliance
- Single Family Detached units
 - o 20% of units at moderate income or 120% AMI
- Condominium and other Attached ownership units
 - o 17% of units at moderate income or 120% AMI
- Fee option for ownership projects of four units or less
 - o Fee level to be a fixed amount per square foot, adjusted from time to time by Resolution of the Board of Supervisors.
 - o Fee level could be raised substantially based on the nexus study
- For rental projects (without maps), a payment of an impact fee will be the primary means of compliance
 - o The fee level will be set by Resolution of the Board of Supervisors, also intended to be a fixed amount per square foot.
 - o On site compliance will be available as an option, set at 12% of all units at Low Income, or 60% AMI, and only if the developer requests on-site compliance and enters into a contract with the County consistent with the Costa Hawkins Act.

Disclaimer and Note

This report has been prepared using the best and most recent data available. Local data and sources were used wherever possible. Major sources include the U.S. Census 2000, California Employment Development Department and the IMPLAN model. While we believe all sources utilized are sufficiently sound and accurate for the purposes of this analysis, we cannot guarantee their accuracy. Keyser Marston Associates, Inc. assumes no liability for information from these and other sources.

It should also be recognized that this analysis and report has been prepared during a period of rapid change and severe economic recession, particularly as affects residential values. Values for each type of residential unit were selected at the lower end of the value range and could prove conservative. In other words, higher fee levels and percentage compliance findings would result if higher values were used in the analysis. However all findings support substantially higher fees and percentages than those in the current program. The County may wish to revisit the analysis in several years if conditions change again.

SECTION I: RESIDENTIAL NEXUS ANALYSIS SUMMARY

This section presents a description of the methodology and findings of the nexus analysis. The complete report can be found in Appendix I. The nexus analysis quantifies the affordable housing impacts attributable to net new households in Napa County that are associated with new residential units. The new households generate new jobs through their expenditures on goods and services; some of the jobs are at lower compensation levels and thus require new affordable housing.

The nexus analysis provides supporting documentation to the requirements of the existing Affordable Housing program of Napa County, and any revisions that result from this update program.

The Nexus Concept

The methodology or analysis procedure for this nexus analysis starts with the sales price (or rental rate) of a market rate residential prototype unit, and moves through a series of linkages to the income of the household that purchased or rented the unit, the disposable income of the household, the annual expenditures on goods and services, the jobs associated with the purchases and delivery of services, the income of the workers doing those jobs, the household income and, ultimately, the affordability level of the housing needed by the worker households. The procedure is done for each of the four prototypes identified in this report.

The steps of the analysis from disposable income to jobs generated are performed using the IMPLAN model, a model widely used for the past 35 years to quantify employment impacts from personal income. From employment impacts, or jobs generation by industry, KMA uses its own nexus model to quantify the income of worker households by affordability level.

To illustrate the linkages by looking at a simplified example, we can take an average household that buys a house at a certain price. From that price, we determine the gross income of the household (from mortgage rates and lending practices) and the disposable income of the household. The disposable income, on average, will be used to “purchase” or consume a range of goods and services, such as purchases at the supermarket or services at the bank. Purchases in the local economy in turn generate employment. The jobs generated are at different compensation levels. Some of the jobs are low paying and as a result, even when there is more than one worker in the household, there are some lower and middle-income households who cannot afford market rate housing in Napa County.

The IMPLAN model quantifies direct, indirect and induced employment impacts. Direct jobs are generated at establishments that serve new residents directly (i.e. supermarkets, banks or schools); indirect jobs are generated by increased demand at firms which service or supply these establishments (wholesalers, janitorial contractors, accounting firms, or any jobs down the

service/supply chain from direct jobs); induced jobs are generated when direct and indirect employees spend their wages in the local economy and generate additional jobs. The analysis is presented in a manner that indicates direct impacts alone and all impacts – direct, indirect and induced impacts. Consistent with other nexus analyses that have used the IMPLAN model and adopted programs supported by the analyses, KMA used all impacts, inclusive of indirect and induced impacts for nexus purposes.

Net New Underlying Assumption

An underlying assumption of the analysis is that households that purchase or rent new units represent net new households in Napa County. If purchasers or renters have relocated from elsewhere in the County, a vacancy has been created that will be filled. An adjustment to new construction of units would be warranted if the County was experiencing demolitions or loss of existing housing inventory. However, the rate of housing unit removal is so low as to not warrant an adjustment or offset.

Since the analysis addresses net new households in the County and the impacts generated by their consumption expenditures, it quantifies net new demands for affordable units to accommodate new worker households. As such, the impact results do not address nor in any way include existing deficiencies in the supply of affordable housing.

The Nexus Analysis Results

The first step in the analysis is to determine the income of the purchasing or renting households in prototypical for-sale and rental units. Standards and lending practices (over a period of years) provide the factors for estimating the household income from the sales values or rent levels.

- For the for-sale units, the following terms for the purchase of residential units are used – 20% down payment, 30 year fixed rate mortgage, 6.5% interest rate, and 1.1% property taxes. The attached prototype includes \$200 per month for condo homeowners' association (HOA) dues, per industry practice. A key assumption is that annual housing costs run, on average, at about 35% of gross income. In recent years lending institutions have been more willing to accept higher than 35% for all debt as a share of income, but most households have other forms of debt, such as auto loans, student loans, and credit card debt. Since 2007, there has been a return to more conservative lending practices.
- For rental units, the standard for relating annual rent to household income is 30%, excluding utilities. While leasing agents and landlords may permit rental payments to represent a slightly higher share of total income, 30% represents an average. This is based on that fact that renters are likely to have other debt, and that many do not choose to spend more than 30% of their income on rent, since, unlike an ownership situation, the unit is not viewed as an investment with value enhancement potential.

Four residential prototypes are the tested in the analysis. The market values and rent levels were determined from surveys and are documented in Appendix II. The four prototypes are: a two bedroom apartment unit renting for \$1,575 per month, a two bedroom condominium of 1,000 square feet, selling for \$350,000, a three bedroom, 2,000 square foot, single family detach house selling for \$700,000. Also analyzed is a larger or more expensive house selling for \$1.2 million to illustrate how the results of the analysis are influenced by the sales price and estimated household income. The two single family detached houses are referred to as SFD #1 and SFD#2 in the following inset tables.

	Rental	For Sale Units		
		Condo	SFD #1	SFD #2
Market Rate Rent/Sales Price	\$1,575/mo	\$350,000	\$700,000	\$1,200,000
Gross Household Income	\$63,000	\$78,700	\$143,400	\$245,800

The next step in the nexus analysis converts gross household income to disposable income, which is the starting point for the IMPLAN model. Disposable income, as defined for the purposes of the IMPLAN model, is income after state and federal taxes, Social Security and Medicare deductions, and personal savings. Housing expenses are not deducted from disposable income; rather, they are handled internally within the IMPLAN model. For ease of presentation and to avoid awkward fractions, the analysis is run for a universe of 100 households.

The IMPLAN model output provides jobs by industry; the total numbers of jobs generated are shown in the table below.

Jobs Generated per 100 Units	Rental	Residential Prototypes		
		Condo	SFD #1	SFD #2
Disposable Income	\$4,900,000	\$5,700,000	\$9,800,000	\$15,200,000
Direct Impacts (Jobs)	23.1	26.9	46.2	71.6
Total Impacts (Jobs)	40.0	46.6	80.1	124.2

The resulting number of jobs in Napa County (all jurisdictions) attributable to the impacts of the spending of new residential households is low compared to what a similar analysis would produce in a larger more economically diverse county or region. Napa County (inclusive of the cities) does not, for example, have the full spectrum of retail shopping opportunities. There are no major regional shopping malls, few large scale big box retailers such as Home Depot. Even some food purchases, which traditionally are all local, are probably now made in Costco and other stores located outside the County. The same pattern of Napa limitations in meeting the full needs of its residents is also found in the services, wholesaling, medical and health care, and other industries or types of economic activities. As a result, the job impacts that are located within Napa County are less than would be the case using a larger economic region.

The jobs that are generated within the County are heavily retail jobs, jobs in restaurants and other eating establishments, and the services that are provided locally.

The output of the IMPLAN model, the numbers of jobs by industry, are then input into the Keyser Marston Associates jobs housing nexus analysis model to quantify the income of the worker households. The KMA model sorts the jobs by industry into jobs by occupation, based on national data, and then attaches wage distributions to the occupations, based on local wage data. The KMA model also converts the number of employees to the number of employee households, recognizing that there is, on average, more than one worker per household, and thus the number of housing units in demand for new workers is reduced. The output of the model is the number of households by income level generated by the expenditures of the prototypical new households.

Total Impacts in Affordable Unit Demand per 100 Market Rate Units	Residential Prototypes			
	Rental	Condo	SFD #1	SFD #2
Under 50% AMI (units)	5.4	6.2	10.7	16.6
50% to 80% AMI (units)	7.7	9.0	15.4	23.9
80% to 120% AMI (units)	6.1	7.1	12.2	18.9
Total	19.1	22.3	38.3	59.4

Comparison of Analysis Results to Inclusionary Percentages

The analysis findings identify how many lower and moderate income households are generated for every 100 market rate units. These findings are adjusted to percentages for purposes of comparison to current and the proposed on-site inclusionary requirements. The percentages are calculated including both market rate and affordable units (for example, 25 affordable units per 100 market rate units translates to 125 units; 25 affordable units out of 125 units equals 20%).

The inset table below presents the nexus analysis results for Total Impacts. Total Impacts refers to all Direct, Indirect and Induced Impacts. (See Appendix I for more explanation and discussion.) Each tier is cumulative (inclusive of the tiers above it).

Inclusionary Percentage Supported by Total Impacts	Residential Prototypes			
	Rental	Condo	SFD#1	SFD #2
Up to 50% AMI	5%	6%	10%	14%
Up to 80% AMI	12%	13%	21%	29%
Up to 120% AMI	16%	18%	28%	37%

The conclusion is that development of market rate rental unit generates a need for affordable housing equal to 5% Very Low Income (up to 50% AMI) and cumulatively 12% up through Low Income (80% AMI). Since the current on-site program for rentals requires that 10% of the units

be affordable, the results of the analysis support the current program percentages for rental units. In addition, the nexus supports a program of up to 12% of rental units affordable to low income households (or an impact fee, as demonstrated in the next section).

The findings of the analysis with respect to for-sale units are presented for the three prototypes. The \$350,000 condominium unit generates impacts that result in Total Impacts of 18% up through Moderate Income (120% AMI). The conclusion is therefore that the current Inclusionary Program at 10% up through Moderate Income is supported by the analysis. In addition, the nexus analysis would support an on-site requirement for condominium units of up to 18%. For single family detached units, the nexus analysis supports up to 28% for an on-site requirement associated with the \$700,000 unit and up to 37% requirement associated with the \$1.2 million unit.

Conclusion

The analysis has demonstrated that the County's proposed revisions to the Program are supported by the residential nexus analysis. In addition, the percentage requirements embodied in the current Napa County Affordable Housing Program are supported by the residential nexus analysis. The new households that buy or rent new units in Napa generate impacts, through their expenditures on goods and services, that result in demand for additional affordable units in amounts equal to or higher than the County's Affordable Housing Program requires or proposes to require.

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SECTION II: FEE LEVELS SUPPORTED AND RECOMMENDATIONS

This section addresses the calculation and structure of fees. The primary focus is on fee levels supported by the nexus analysis and how those levels might be modified or reduced taking into account other considerations, most particularly economic feasibility and avoiding constraints on new housing development. Alternative ways that fees may be structured are also presented along with examples from other jurisdictions. The section concludes with a recommended range of fees for each of the residential types studied in this analysis.

Section II is divided into four parts.

- Part A addresses maximum supported fee levels by the nexus analysis.
- Part B contains a discussion of economic modifications to maximum fees supported.
- Part C covers fee programs in other jurisdictions, including a survey of affordable housing program in other North Bay jurisdictions.
- Part D provides summary comments on fees for Napa County and KMA recommendations.

Current Fee Program

The Napa County Affordable Housing Ordinance since 1993 has functioned exclusively as a fee collection program. Fees are calculated as a percent of building permit valuation and collected as follows:

Below \$25,000 building permit valuation	Exempt
\$25,000 to \$77,000 building permit valuation	1%
Over \$77,000 building permit valuation	2%

In order to understand the magnitude of the actual fee levels paid under the current program, KMA contacted the County Building Department for its experience with valuation for various types of and quality buildings. A project with basic or minimal construction quality may be valued at \$125 per square foot, better quality projects at \$175 per square foot, and higher-end construction quality at \$225 per square foot.

For the purpose of estimating the approximate fees paid, the prototype units in this analysis were assigned a permit valuation. We assumed that the rental unit would be constructed at the basic or minimal level (due to difficulty in making rental projects financially feasible in the market cycle of the last ten years). For the attached or condominium unit, or minimal for-sale in the analysis, we used a slightly higher construction cost of \$135 per square foot. For the single family detached unit selling at \$700,000, we used the better quality level of \$175 per square foot and for the \$1.2 million single family detached unit we used the higher end value of \$225 per square foot.

Estimated permit valuations and total fee levels, per unit and per square foot, are calculated below. These figures are intended as representative averages for the purposes of understanding the fee amounts paid.

	Rental Prototype	For Sale Prototypes		
		Condo	SFD #1	SFD#2
Square Foot Area of Unit	900 sf	1,000 sf	2,000 sf	3,000 sf
Estimated Construction Cost psf	\$125/sf	\$135/sf	\$175/sf	\$225/sf
Estimated Building Permit Valuation	\$112,500	\$135,000	\$350,000	\$675,000
In-Lieu @ 2% Permit Valuation	\$2,250	\$2,700	\$7,000	\$13,500
In-Lieu Per Square Foot	\$2.50	\$2.70	\$3.50	\$4.50

As shown, based on Napa County's current in-lieu fee structure and building valuation methodology, fees might range from about \$2,250 for the basic rental prototype to \$13,500 for the higher-end single family detached prototype. Actual experience suggests that the average fee paid is around \$2.50 per square foot, according to recent input from the County.

Part A: Nexus Analysis Fees Supported

The residential nexus analysis, summarized in Section I and presented in greater detail in Appendix I of this report, concludes with numbers of households by income affordability level for each of the four residential prototypes used in the analysis. The conclusions are repeated below:

Total Impacts in Affordable Unit Demand per 100 Market Rate Units	Residential Prototypes			
	Rental	Condo	SFD #1	SFD #2
Under 50% AMI (units)	5.4	6.2	10.7	16.6
50% to 80% AMI (units)	7.7	9.0	15.4	23.9
80% to 120% AMI (units)	6.1	7.1	12.2	18.9
Total	19.1	22.3	38.3	59.4

Each of the affordable units is associated with a subsidy needed to produce and deliver the units at the specified affordability levels. These subsidies are equal to affordability gaps, or the difference between the cost of development and the sales price or rent that can be paid by a household at the specified income level. In the County's Affordable Housing Ordinance, these affordable sales prices and rents are calculated using the methods utilized for State housing programs. Alternatively, these affordability gaps may be referred to as Total Nexus Costs or Mitigation Costs.

Development costs and market values are based on surveys of recently built residential units and projects in the Napa area. Appendix II presents the survey materials, methodology and findings. Appendix II also presents the affordable rent and value calculations in some detail, as

well as the affordability gap conclusions. An important point is that the selected sales values and development costs are at the low end of the range. They probably understate the real costs to develop many projects, and as a result the affordability gaps used in the analysis could be low. That is to say, they are conservative and may understate the fees that would in fact be required to fully mitigate the need for affordable units created by new development.

When the affordability gap conclusions for each income tier are linked to the number of affordable units required as a result of market rate development, as indicated in the previous inset table, and divided by 100 units, the result is a Total Nexus Cost per residential unit. The results per unit are:

Income Category		Total Nexus Cost Per Unit			
	Affordability Gap	Rental	Condo	SFD #1	SFD #2
Household Income Level					
Under 50% Median Income	\$146,000	\$7,816	\$9,092	\$15,632	\$24,246
50% to 80% Median Income	\$86,000	\$6,625	\$7,707	\$13,251	\$20,552
80% to 120% Median Income	\$118,950	<u>\$7,232</u>	<u>\$8,413</u>	<u>\$14,465</u>	<u>\$22,435</u>
Total		\$21,674	\$25,212	\$43,348	\$67,233

The affordability gaps used in the analysis also incorporate a policy to match households at various income levels with types of residential units. Specifically, it is assumed that households under 50% Area Median Income (AMI) and also in the 50% to 80% AMI range will be housed in rental apartments. The moderate income households, or those in the 80% to 120% tier, are assumed to be housed in condominium units. Household size is assumed to equal the number of bedrooms plus one.

The Total Nexus Costs, or Mitigation Costs, indicated above, may also be expressed on a per square foot level. The square foot area of the prototype unit used throughout the analysis becomes the basis for the calculation. Again, see Appendix II for more discussion of the prototype. The results per square foot are as follows:

INCOME CATEGORY		Total Nexus Cost Per Sq. Ft.			
	Affordability Gap	Rental	Condo	SFD #1	SFD #2
Prototype Size (Square Feet)		900 SF	1,000 SF	2,000 SF	3,000 SF
Under 50% Median Income	\$146,000	\$8.68	\$9.09	\$7.82	\$8.08
50% to 80% Median Income	\$86,000	\$7.36	\$7.71	\$6.63	\$6.85
80% to 120% Median Income	\$118,950	<u>\$8.04</u>	<u>\$8.41</u>	<u>\$7.23</u>	<u>\$7.48</u>
Total		\$24.08	\$25.21	\$21.67	\$22.41

In summary, the Residential Nexus Analysis supports fee levels of at least \$20,000 per market rate unit, or \$20 per square foot. The per unit costs indicated in the first table above result in a predictable higher cost per unit associated with the bigger or more expensive housing unit and the higher income (and expenditures) of the more affluent households.

The per square foot results produce a relatively consistent pattern per square foot and demonstrate the advantages of a per square foot approach to a fee structure, as will be discussed in the recommendations at the end of this section.

Part B: Economic Modifications to Maximum Justified Affordable Housing Requirements

There are several economic or real estate considerations to be taken into account in recommending and enacting affordable housing requirements. The first concern is that fee levels or on-site requirements not be so onerous as to serve as a constraint on the development of new units. A second concern is an understanding of how an on-site requirement in larger projects (five or more units) compares to nexus based fees. To the extent that there are choices, relative burdens can be designed to incentivize either payment of fees or provision of on-site units.

To examine these and other questions, this report briefly reviews conditions in Napa County, including land values, and the circumstances under which residential development occurs. Land value is the one variable in the development equation that can and does adjust as a result of local requirements. Such adjustments may occur slowly, over a period of time, but land values do ultimately either absorb or adjust to local requirements.

The Napa County Affordable Housing Ordinance since its inception has applied primarily to single family residential units. With a few exceptions, noted in the survey material (Appendix II), sales values of new single family homes in the County unincorporated area are high, even by Bay Area standards. Based on the surveys, a new single-family home selling for \$700,000 is at the low end of the market. A \$1.2 million prototype is typical of Up Valley estate homes, although many properties sell at values well in excess of \$1.2 million (or are custom built for owners and will eventually be sold for such values). Land values for single family detached units often represent 40% to 50% of ultimate sales value of the developed home. In the Napa unincorporated area, where developable parcels are in short supply and the ultimate value structure is high, the land value component (inclusive of infrastructure) is at least as high at the 40% to 50% range. In summary the land value component of single family unit values in Napa is substantial and would not be significantly reduced by fees even at the maximum level supported.

Multi-family development in Napa County has not occurred because there is limited land zoned for multi-family development. There are, however, developed parcels in the unincorporated area now in industrial or commercial use that could potentially be redeveloped into higher density residential uses, such as condominiums or other types of attached ownership units and rental apartment units. For instance, the County is currently processing an application for a large-scale multifamily development at Napa Pipe. Land parcels that might be possible to redevelop have no established land value structure at this time associated with the potential residential use (as opposed to industrial use) because development entitlements are uncertain. Consequently, on

these sites, the primary impact of the proposed fees or on-site requirements in the Napa County Affordable Housing Ordinance will be to influence future residential land value.

On-Site Compliance Requirements

The proposed Napa County Affordable Housing Ordinance has an on-site requirement applicable to projects of five or more units. As a reference point for selecting a fee level not exceeding the maximum fees supported by the Residential Nexus Analysis, it is useful to review the costs to development projects of the on-site requirement.

The proposal is to require on-site compliance as follows:

- Single Family Detached – 20% of all units must be affordable to households at 120% AMI in projects of five or more units. (A subdivision is a project.)
- Single Family Attached – 17% of all units must be affordable to households at 120% AMI in projects of five or more units.
- Rental units (without condominium maps) – Requirement only for payment of impact fee. If the developer instead desires to provide affordable units on-site, 12% of all units must be affordable at 60% AMI, if the developer receives an incentive and agrees to enter into an agreement consistent with the Costa Hawkins Act.

These percentages have been selected for consistency with the Housing Element and the findings of the nexus analysis summarized in Section I.

The proposed methods of calculating affordable housing cost and rent are revised from the current ordinance to conform to methods used in calculating affordable housing costs under the State Density Bonus Law and other State programs. The affordable rent level and sales prices using these definitions are presented in Appendix II.

The methodology for testing the impacts of these requirements is to examine modest size projects. For this purpose in Napa, twenty unit projects are utilized. Single family detached projects of this size result in whole unit requirements. In the case of the single family attached requirement, the test is made assuming fractional units are possible (which are accounted for in the proposed ordinance through payment of housing fees).

The full analysis of these onsite requirements is contained in Appendix III. The "onsite equivalent" is essentially the cost of producing the units on-site, and is calculated by comparing total revenues for a 100% market rate project to total revenues for a project than includes on-site affordable units. The difference in total revenues is then divided by the total number of units in the project to develop a per market rate unit amount. The results are summarized below:

Rental Apartments – On-site equivalent	
Per market rate unit	\$11,880
Per square foot	\$13.20

Condominium/Attached Units – On-site equivalent	
Per market rate unit	\$15,470
Per square foot	\$ 15.47

Single Family Detached #1 – On-site equivalent	
Per market rate unit	\$ 82,400
Per square foot	\$ 41.40

The higher value \$1.2 million single family detached prototype has an on-site equivalent substantially higher than the \$700,000 units in the example above.

In our opinion, the selected fee level should avoid exceeding the comparable cost of providing the units on-site, even if the project has a greater impact calculated from the nexus analysis results.

Of the three ownership prototypes tested, the attached units or condominiums are the only ones that have lower on-site costs than supported maximum nexus costs. The rental project also has lower onsite costs than maximum supported nexus costs. The KMA recommendations are influenced accordingly.

Part C. Fee Programs in Other Jurisdictions

KMA has identified five basic ways that fees are structured and presented. They are based on underlying concepts, as follows:

1. Percent of building permit valuation (the current Napa County model)
2. Percent of sales price of market rate units
3. Actual gap calculated for each project
4. Gap established based on market averages and charged one of three ways:
 - a. Charged by the number and size of affordable units owed
 - b. Charged per market rate unit built
 - c. Charged on a per square foot basis on market rate units
5. Fees based on nexus analysis findings (proposed Napa model)

Since the proposed Napa County Affordable Housing Ordinance fees will be nexus supported, the first four options are of interest as reference points only. Some result in fee levels in excess

of the fee ranges recommended by KMA for Napa County. More information on each of these structures and examples of jurisdictions that employ them is contained in Appendix III.

The affordable housing programs in other North Bay jurisdictions were surveyed, including Marin and Sonoma Counties. We also surveyed Monterey County, since there are some similarities in its economy and land value structure. Cities in the survey include Napa City (now in the process of studying an update to its program), American Canyon, St. Helena, Yountville, Calistoga, Novato, San Rafael, Sonoma, Santa Rosa and Petaluma. A four page chart on the key program provisions of these fourteen jurisdictions follows this section.

The chart points to the wide disparity in the programs in all features – fee levels, percentage requirements, and affordability levels. The fee levels are particularly variable while the on-site percentages, however, are all bracketed in the 10% to 20% range. Charts such as these do not always capture the jurisdiction's experience in collecting the fees or achieving on-site units, the current Napa County program being a good example.

As an overview comment, Napa County has a residential value structure at least as strong, if not stronger, than all of the other jurisdictions. Arguably the other Up Valley cities of St. Helena, Yountville and Calistoga are the most comparable in residential value structure.

Part D: Fee Setting Summary and Recommendations

In our opinion, fee components of an affordable housing program applied to residential construction should be designed for the local jurisdiction based on a combination of local policy objectives, demonstrated legal limitations or maximums, economic feasibility, avoidance of constraints on development, and local real estate market conditions. In addition, they should be easy to understand, easy to administer, and applied fairly to the various types of residential units affected by the program.

As to fee structure, KMA recommends the fixed fee per square foot approach, with a different fee level for each of the three main categories – single family detached, attached, and rental apartments. A simple fee expression meets the criteria for easy to understand, easy to apply and equitable for the range of unit sizes likely to be built.

The nexus analysis of two single family unit prototypes, one selling for \$700,000 and one for \$1.2 million demonstrate the higher justified requirement for the larger and/or more expensive units. The on-site compliance analysis also demonstrates the same pattern. While a single fee for all single family detached units may not capture the highest fee payment that the analysis supports, a fee that is charged per square foot does go a long way to capturing higher fees on larger units.

As to fee level, the maximum fee supported by the nexus analysis produced per square foot findings as follows:

Rental Units	\$24.08
Condominium/Attached	\$25.21
Single Family Detached	\$21.67

The current economic recession aside, real estate market conditions in Napa County, are, in our judgment, strong enough to sustain the nexus fees and proposed on-site compliance percentages.

At the proposed 17% requirement for attached units and the 20% requirement for detached units, on-site compliance costs may be high, but relative to total sales prices, they are sustainable. In addition, the land value component of total development costs in Napa is substantial and affords considerable room for adjustment, especially compared to the adjustments required by the proposed amendments to the County's Affordable Housing Ordinance.

Conditions governing rental apartment development in Napa are quite different. Rental apartments have not been feasible under most circumstances anywhere in Napa County for around ten years now and are unlikely to become feasible in the near term. Values for condominium units are so much more favorable that a land parcel that could accommodate either rentals or condominiums will likely be developed with condominium units. When the recession is over, these conditions are likely to persist, at least for a while. If development of apartments as a share of total housing production is a goal of Napa County, then we recommend a minimal affordable housing obligation in the near term for rental projects.

Recommended Range

Combining all the considerations, we recommend the following fee ranges for each of the three residential types.

Single Family Detached – \$15 to \$20 per square foot
Attached/Condominiums – \$10 to \$15 per square foot
Rental Apartments (with no recorded map) – \$0 to \$8 per square foot.

In summary, it is our opinion that affordable housing fees within the ranges indicated above, applied to projects of four units or less, meet all the tests for suitable fees for Napa County. The strength of the local residential market (under normal market conditions) can readily sustain these fee levels without deterring construction and significantly altering development decisions.

The ranges identified above are intended to indicate the higher and of the supportable range, both from a nexus and real estate point of view. The County may, of course, select any fee level below the range indicated, deferring to other policy considerations. In addition, it would be fully acceptable to treat all ownership units alike, and not have differentiated fees for detached and

attached units. In summary, the analysis clearly establishes the ceilings, but below the ceilings the County may design the affordable housing requirements program in any manner it wishes to meet its multiple concerns and policy objectives.

Phasing

At the time of this writing, market conditions are not normal and the country, state and local economy are all affected by the severe economic recession. We do have reason to believe the worst is over, but no one can assure that recovery will occur in the immediate future. To address this situation, we recommend a phase in of the fees over a five year period.

In our opinion, the phase-in of the selected fee level should occur in fairly even steps from the current level, assumed to be approximately \$2.50 per square foot. To illustrate, if the selected fee level for condominiums is \$12, the steps might go as follows:

2010	\$2.50
2011	\$4.50
2012	\$7.00
2013	\$9.50
2014	\$12.00

As for the on-site requirement, given the limited number of projects subject to the requirement, we see no need for a five year phase-in. A five year phase-in would only lead to confusion about which year's percentage will apply at what trigger action in the entitlement process. Instead, we suggest that the revised on-site requirements be effective at some fixed date specified in the ordinance.

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**Residential Report, Section II Table 1
COMPARISON OF HOUSING PROGRAMS
OTHER NORTH BAY JURISDICTIONS
NAPA COUNTY, CA**

	Napa County	Marin County	Sonoma County	Monterey County	City of Napa	American Canyon	St. Helena
Year Established/Updated	1993 Update Proposal	2003	2005	Updated 2003	1999 Updated under study	2001 Updated 2006	2003
Minimum Project Size							
For In-lieu Fee	1 unit	2 units	1 unit (<1,000 SF exempt)	3 units	Single Family Detached: 1 units Multi-family: 3 units	5 units	1 unit
For Build Requirement	No build req.	No build req.	No build req.	5 units	SFD: no build req. Multi-family: 3 units (in-lieu fee with Council approval)	FS: No build req. Rental: 5 units	5 units
For Sale							
Percent of Units	10%: 1/2 at 120% and 1/2 at 100%	20%	20%: 1/2 at 60% AMI and 1/2 at 120% AMI	20%: 8% at 120%, 6% at 80%, 6% at 50%	10%: 1/2 at 120% and 1/2 at 100%	10% at <80% AMI	20%
Income for Price Calculation (% AMI)	120%; 100%	60%	120%; 60% ²	110%; 70%; 50%	120%; 100%	80% AMI ²	1/2 at 120%; 1/2 at 100% ^{1,2}
Rental							
Percent of Units	10%: 1/2 at 80% and 1/2 at 50%	20%	15%: 1/2 at 60% AMI and 1/2 at 50% AMI; or 10%: 1/2 at 50% AMI and 1/2 at 30% AMI	20%: 8% at 120%, 6% at 80%, 6% at 50%	10%: 1/2 at 80% and 1/2 at 50%	10%: 1/2 at 80% and 1/2 at 50%	20%
Income for Rent Calculation (% AMI)	80%; 50%	50%	60%; 50%; 30% ²	110%; 60%; 50%	80%; 50%	80%; 50% ²	50%; 80%; 120%. ² Distribution based on fair share requirements.
In-Lieu Fee	2% of bldg. permit construction costs (>\$77,000) 1% of bldg. permit construction costs (<\$77,000)	Standard aff. gap set by County staff periodically	Varies by SF of unit For example: 1,500 SF : \$3,891 2,500 SF: \$20,784 3,500 SF: \$37,677	Varies by Planning Area, either \$183,636 or \$339,636 per aff. unit.	Construction costs < \$86,700 – no fee 1% of construction costs (\$86,700 to \$115,250) 2% of construction costs > \$115,250	\$38,770 per unit (FS only)	2.5% of valuation of construction

1. Income for qualification; income for pricing not available.
2. If project is located in Sonoma Residential District, must provide 10% at 120% and 10% at 50%.

Abbreviations:

R = Rental

FS = For Sale

SF = Square Foot

NOTE: This chart has been assembled to present an overview, and as a result, terms are simplified. The information is recent but not all data has been updated as of the date of this report. In some cases, fees are adjusted by an index (such as CPI) which may not be reflected. For use other than general comparison, please consult the code and staff of the jurisdiction.

Residential Report, Section II Table 1
COMPARISON OF HOUSING PROGRAMS
OTHER NORTH BAY JURISDICTIONS
NAPA COUNTY, CA

	Napa County	Marin County	Sonoma County	Monterey County	City of Napa	American Canyon	St. Helena
Terms of Affordability	40 years	Perpetuity	30 years	Life of the structure/ in perpetuity.	FS: 30 years Rental: perpetuity	40 years	FS: 30 years, each sale R: Perpetuity
Fractional Units	Round up, pay in-lieu fee, alternative action.	Round up at 0.5; in-lieu fee if round down. <5 units, can pay fee.	Round up or pay fee or construct Farm Family or Second Dwelling Unit	Round up or pay in-lieu fee.	Round up, pay in-lieu fee, alternative action.	Round up at 0.3	Round up or pay in-lieu fee.
Alternatives to Onsite Provision⁵							
Fee Option	Yes (Developer)	Yes (Staff)	Yes (Developer)	<5 units (Developer) >5 units ("approving body")	Yes (SFD - Developer, MF - City Council)	Yes, FS only ("Decision-making body")	<5 units (Developer) >5 units (Council)
Land Dedication	Yes (Planning Director)	Yes (Staff)	Yes (Board of Sup.)	No.	Yes (Council)	Yes, ("Decision-making body")	Yes (Council)
Offsite	Yes (Planning Committee)	Yes (Staff)	Yes (Board of Sup.)	Yes, but more onerous. ("approving body")	Yes (Council)	Yes, ("Decision-making body")	Yes (Council)
Design of Inclusionary Units⁵							
Smaller Units	Yes (Planning Director)	Yes (Staff)		Yes, similar in BRs, but may be smaller. Need not exceed 4 BRs.	Yes (Planning and Housing Directors)	Yes	Yes (Planning Comm.)
Lesser Interior Finishes	Yes (Planning Director)	Yes (Staff)		Not specified.	Yes (Planning and Housing Directors)	Yes	Yes (Planning Comm.)
Other Design Standards		All ground-floor aff. units must be accessible.		Not specified.	Waiver of "city standards".	City may agree to reduction in site development standards..	
Other Concessions	If include units onsite, building permit fee are waived. Planning Commission may consider others.	Rental units allowed in a FS project.			Deferred fees, marketing assistance, financial assistance, etc.	Rental units allowed in a FS project.	Preliminary Council review; priority applications; deferred city fees for aff. units.

3. Parentheses indicate which entity has discretion.

Abbreviations:
R = Rental
FS = For Sale
SF = Square Foot

NOTE: This chart has been assembled to present an overview, and as a result, terms are simplified. The information is recent but not all data has been updated as of the date of this report. In some cases, fees are adjusted by an index (such as CPI) which may not be reflected. For use other than general comparison, please consult the code and staff of the jurisdiction.

Residential Report, Section II Table 1
COMPARISON OF HOUSING PROGRAMS
OTHER NORTH BAY JURISDICTIONS
NAPA COUNTY, CA

	Yountville	Calistoga	Novato	San Rafael	City of Sonoma	Santa Rosa	Petaluma
Year Established/Updated		1989	1999 Updated 2007	1992 Updated 2004	2003	1992	1984
Minimum Project Size For In-lieu Fee	5 units	No fee option.	3 units	2 units	No fee option.	1 unit	5 units
For Build Requirement	No build req.	5 units.	7 units	5 units	5 units	15 acres	No build req.
For Sale Percent of Units	10% at <100% AMI 20% if density bonus	20% at < 120% AMI	10 - 20% depending on size of project 1/2 at 120%; 1/2 at 80%	<10 units: 10% 11-20 units: 15% >20 units: 20%	20% ³	15%	15%
Income for Price Calculation (% AMI)	100% ²	120% ²	90%; 65%	1/2 at 90%; 1/2 at 65%	120% ²	80%	120% ² ; flexible ⁴
Rental Percent of Units	10% at <100% AMI 20% if density bonus	20% at < 120% AMI	10 - 20% depending on size of project 1/2 at 80%; 1/2 at 50%	<10 units: 10% 11-20 units: 15% >20 units: 20%	20% ³	15%	15%
Income for Rent Calculation (% AMI)	100% ²	120% ²	50%; 60%	1/2 at 60%; 1/2 at 50%	120% ²	60%	80% ² ; flexible ⁴
In-Lieu Fee	Only if no density bonus.	No fee option.	\$11,808/unit.	Approximately \$250,000 per aff. Unit	None.	<15 acres. Varies by SF of unit For example: 1,500 SF : \$7,271 2,500 SF: \$17,481 3,500 SF: \$29,340	Varies by SF of unit For example: 1,500 SF : \$6,347 2,500 SF: \$11,978 3,500 SF: \$18,728

1. Income for qualification; income for pricing not available.
2. If project is located in Sonoma Residential District, must provide 10% at 120% and 10% at 50%.

Abbreviations:
R = Rental
FS = For Sale
SF = Square Foot

NOTE: This chart has been assembled to present an overview, and as a result, terms are simplified. The information is recent but not all data has been updated as of the date of this report. In some cases, fees are adjusted by an index (such as CPI) which may not be reflected. For use other than general comparison, please consult the code and staff of the jurisdiction.

Residential Report, Section II Table 1
COMPARISON OF HOUSING PROGRAMS
OTHER NORTH BAY JURISDICTIONS
NAPA COUNTY, CA

	Yountville	Calistoga	Novato	San Rafael	City of Sonoma	Santa Rosa	Petaluma
Terms of Affordability		Not specified in ordinance; typically 10 years, accdg, to Housing Element.	99 years.	55 years.	30 years	FS: Established in agreement (Council) R: 30 years	FS: Not specified. R: Perpetuity
Fractional Units	Round up at 0.5.		Round up at 0.7; in-lieu fee if round down.	Round up at 0.5; in-lieu fee if round down.	Round up at 0.5	Round down; pay in-lieu fee.	Flexible.
Alternatives to Onsite Provision⁵							
Fee Option	Yes (Developer)	No.	Yes (Council)	<5 units (Developer) >5 units (Council)	No	<15 acres (Developer)	Yes (Developer)
Land Dedication	Not specified.	No.	Yes (City)	Yes (Council)	Yes	Yes (Council) <20 acres: 10% >20 acres: 7.5%	Yes
Offsite	Not specified.	No.	Yes (City)	Yes (Council)	No	If <20 acres; req. 20% of units	Yes
Design of Inclusionary Units⁵							
Smaller Units	Not specified.	Not specified	FS : Need not exceed 1,400 SF and 3 BRs. Rental: Need not exceed 900 SF and 2 BRs.	No	Yes	Min. of 800 SF and 2 BR	Yes
Lesser Interior Finishes	Not specified.	Not specified	"Comparable construction quality"	No	Yes	Yes	Yes
Other Design Standards	Not specified.	Not specified			Yes (Council)		
Other Concessions	Rental units allowed in a FS project. Fee waivers for affordable units.						

3. Parentheses indicate which entity has discretion.

Abbreviations:
R = Rental
FS = For Sale
SF = Square Foot

NOTE: This chart has been assembled to present an overview, and as a result, terms are simplified. The information is recent but not all data has been updated as of the date of this report. In some cases, fees are adjusted by an index (such as CPI) which may not be reflected. For use other than general comparison, please consult the code and staff of the jurisdiction.

APPENDICES

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RESIDENTIAL NEXUS ANALYSIS

**Napa County Inclusionary
Housing Program**

Prepared for

NAPA COUNTY

Keyser Marston Associates, Inc.

November 2009

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INTRODUCTION AND OVERVIEW

Keyser Marston Associates (KMA) has prepared this residential nexus analysis for Napa County per contract agreement. This report has been prepared to support the County's existing Inclusionary Housing Program, which is incorporated into County Code Sections 15.60.140 through 15.60.220, and the proposed Ordinance. This residential nexus analysis addresses market rate residential projects and units which are subject to the inclusionary program and quantifies the linkages between new market rate units and the demand for affordable housing generated by the residents of new units.

The Existing Napa County Inclusionary Program

The Napa County inclusionary program was adopted in the early 1990's and has been implemented since that time. The basic requirement of the program is that 10% of all units in residential projects must be affordable to lower income households. In for-sale residential projects, half of the inclusionary units, or 5% of total units, must be affordable to households at Moderate Income and half at Median Income. In rental projects, half of the inclusionary units must be affordable to households at Very Low Income and half at Low Income. All residential projects and units are subject to the program and all have the option of paying an in lieu fee instead of providing on-site units. Since the County experiences very little multi-family construction and since the fee option is far less expensive to the developer than the on-site option, most new residential units do use the in lieu fee option.

The following nexus analysis demonstrates that the impacts attributable to net new households in Napa County that are associated with new residential units generate new jobs, some of which are at lower compensation levels and thus require new affordable housing. The nexus analysis demonstrates that the impacts are higher than the 10 percent affordable unit requirement in the Napa County inclusionary program.

The Proposed Revisions to the Inclusionary Program

The County would like to increase the basic onsite requirement to 17% for condominium projects and 20% for single family detached projects and to impose an impact fee on rental units. In for-sale projects, all of the inclusionary units must be affordable to moderate income households, with prices set to be affordable to households earning 110% AMI. Rental units would have the option of providing on-site units instead of paying the fee. The nexus analysis demonstrates that the impacts are equal to, or higher than, the proposed requirements in the Napa County inclusionary program.

Use of This Study

An impact analysis of this nature has been prepared for the limited purpose of demonstrating nexus support to the Napa County Inclusionary Program and the proposed changes. It has not been prepared as a document to guide policy design in the broader context. We caution against the use of this study, or any impact study for that matter, for purposes beyond the intended use. All impact studies are limited and imperfect, but can be helpful for addressing narrow concerns.

To cite a parallel example, a study could be prepared on the relative fiscal impacts of developing various price (or value) residential units in Napa. Fiscal impact analysis, unlike this nexus analysis, is a widely prepared type of analysis in which revenues to a governmental entity are quantified and compared to the costs of services provided by the entity. For residential development, revenues include property tax, sales tax from expenditures of residents, intergovernmental transfers and subventions (such as vehicle license tax) and a number of other revenues to the General Fund. Cost of services cover police, fire, health care, general administration and all else that the County expends from its General Fund to serve its residents. If such an analysis were prepared for various price residential units in Napa, it can be predicted with assurance that higher price units would yield more revenues to the County than lower price units and a more favorable fiscal balance. If fiscal impact analysis alone were to guide policy, then Napa County would never pursue the development of another unit of affordable housing. Needless to say, governments must develop housing policy based on a range of competing goals and objectives.

Impact Methodology and Models Used

The methodology or analysis procedure for this nexus analysis starts with the sales price (or rental rate) of a market rate residential unit, and moves through a series of linkages to the income of the household that purchased or rented the unit, the disposable income of the household, the annual expenditures on goods and services, the jobs associated with the purchases and delivery of services, the income of the workers doing those jobs, the household income and, ultimately, the affordability level of the housing needed by the worker households. The steps of the analysis from disposable income to jobs generated was performed using the IMPLAN model, a model widely used for the past 35 years to quantify employment impacts from personal income. From jobs generation by industry, KMA used its own nexus model to quantify the income of worker households by affordability level.

To illustrate the linkages by looking at a simplified example, we can take an average household that buys a house at a certain price. From that price, we can determine the gross income of the household (from mortgage rates and lending practices) and the disposable income of the household. The disposable income, on average, will be used to “purchase” or consume a range of goods and services, such as purchases at the supermarket or services at the bank. Purchases in the local economy in turn generate employment. The jobs generated are at

different compensation levels. Some of the jobs are low paying and as a result, even when there is more than one worker in the household, there are some lower and middle-income households who cannot afford market rate housing in Napa County.

The IMPLAN model quantifies direct, indirect and induced employment impacts. Direct jobs are generated at establishments that serve new residents directly (i.e. supermarkets, banks or schools); indirect jobs are generated by increased demand at firms which service or supply these establishments (wholesalers, janitorial contractors, accounting firms, or any jobs down the service/supply chain from direct jobs); induced jobs are generated when direct and indirect employees spend their wages in the local economy and generate additional jobs. The analysis is presented in a manner that indicates direct impacts alone and all impacts – direct, indirect and induced impacts. Consistent with other nexus analyses that have used the IMPLAN model and adopted programs supported by the analyses, KMA used all impacts, inclusive of indirect and induced impacts for nexus purposes.

Net New Underlying Assumption

An underlying assumption of the analysis is that households that purchase or rent new units represent net new households in Napa County. If purchasers or renters have relocated from elsewhere in the County, a vacancy has been created that will be filled. An adjustment to new construction of units would be warranted if the County were experiencing demolitions or loss of existing housing inventory. However, the rate of housing unit removal is so low as to not warrant an adjustment or offset.

Since the analysis addresses net new households in the County and the impacts generated by their consumption expenditures, it quantifies net new demands for affordable units to accommodate new worker households. As such, the impact results do not address nor in any way include existing deficiencies in the supply of affordable housing.

Special Notes and Disclaimers

At the end of the analysis, two issues specific to Napa are addressed: 1) the role of second or vacation homes and the impact analysis and 2) the possibility of double counting related to the Napa County housing nexus program which charges a housing impact fee on most commercial and industrial construction.

This report has been prepared using the best and most recent data available at the time of the analysis. Local data and sources were used wherever possible. Major sources include the U.S. Census 2000, California Employment Development Department and the IMPLAN model. While we believe all sources utilized are sufficiently sound and accurate for the purposes of this analysis, we cannot guarantee their accuracy. Keyser Marston Associates, Inc. assumes no liability for information from these and other sources.

SECTION I: MARKET RATE UNITS AND DISPOSABLE INCOME

Section I describes the prototypical market rate units that are subject to affordable housing requirements under Napa County's inclusionary housing program, the income of the purchaser households, and the disposable income of the households. Disposable income is the input to the IMPLAN model described in Section II of this report. These are the starting points of the chain of linkages that connect new market rate units to incremental demand for affordable residential units.

The vast majority of residential units built in Napa County are single family detached units. However occasionally condominiums and rentals are built and in the future larger scale multi-family residential projects could potentially built on a few sites within the County unincorporated area. Since the program applies to all projects and residential units, a cross section of existing and potential residential unit prototypes has been selected for the purposes of the nexus analysis.

Recent Housing Market Activity and Prototypical Units

To select residential prototypes, KMA undertook a survey of residential units sold or marketed recently throughout the county. KMA accessed readily available data on real estate sales values, both free and for purchase for various providers. The survey included new projects selling November 2008, MLS listings for November 2008, and previous KMA experience in Napa County. In general, there is a little data available for the unincorporated areas of Napa County. This is especially true for recently built and sold condominiums in the Napa area.

Appendix Tables 1 to 5 list unit size, bedroom count, and pricing/rent levels for four Napa County submarkets: American Canyon, Napa City, the Up Valley cities, and Unincorporated Areas. Information on sales or rent levels for single family units, attached units, and apartments was assembled. Because data on market activity in the Unincorporated Areas is limited, data on units in the cities was also used in selecting the prototypes. While there is considerable variation among the pricing of various unit types, the number of prototypes was reduced to four to capture most of the range, particularly in the lower end of the pricing spectrum.

- In general, the lowest-priced for-sale units in Napa County are two- to three-bedroom units about 1,000 to 1,500 sf in size. Sales prices start at around \$350,000. Examples are very minimal single family detached homes in less prestigious unincorporated areas of the county, such as Lake Berryessa and Pope Valley, and basic condominium units in the cities, particularly Napa City. The condo-type unit was chosen as Prototype 1 for purposes of this analysis, as this product will likely be built in the future, responding to increasing pressure to add more affordable units near southern county job centers.

Occasionally, houses priced below \$350,000 have been built in the County unincorporated area. For units significantly below the \$350,000 prototype, KMA

recommends a Code provision that would offer a reduced burden or some other accommodation.

- The next prototype of a for-sale unit was identified as larger single-family homes with better finishes overall selling in the range of \$700,000. Representative units are 4-5 bedroom homes 3,000 sf or larger with basic to good construction quality, as seen in American Canyon. In Napa City, the Up Valley cities, and the unincorporated area, units in this category are typically smaller (2,000 sf and up with 3-4 bedrooms) and have better finishes.
- At the higher price ranges of for-sale units, unit size and quality both increase but often it is location or setting that is deemed superior by the marketplace and thus at the highest end of the pricing spectrum, land value is a substantial cost component. The selected prototype unit is about 3,000 sf in size, with 4 bedrooms, good to luxury finish levels, and a sales price of \$1,200,000. Prototype 3 is intended to capture these types of units. Clearly, in Napa new units are built that sell for far higher yet, but for purposes of the analysis the \$1.2M home is the highest, and demonstrates a pattern when compared to the lesser priced prototype units.
- The rental prototype is based on the few recently developed apartment projects available in the Napa area. As shown in the prototype summary table below, these rental units are around 900 sf in size, with 2 bedrooms, and rent for about \$1,575 per month.

The three for-sale unit prototypes and one rental unit prototype were agreed upon by County staff. The basic characteristics are summarized below:

	Rental	For Sale Units		
		Prototype 1	Prototype 2	Prototype 3
Unit Type	rental	condo	detached	detached
Unit Size	900 sf	1,000 sf	2,000 sf	3,000 sf
Bedrooms	2 BR	2 BR	3 BR	4 BR
Rent/Sales Price	\$1,575/mo	\$350,000	\$700,000	\$1,200,000
Rent/Sales Price per sf	\$1.75/sf/mo	\$350/sf	\$350/sf	\$400/sf

Income of Housing Unit Purchasers

The next step in the analysis is to determine the income of the purchasing households in the prototypical for-sale units. To make the determination, terms for the purchase of residential units are used – 20% down payment, 30 year fixed rate mortgage, 6.5% interest rate, and 1.1% property taxes. The attached prototype includes \$200 per month for condo homeowners' association (HOA) dues, per industry practice. A key assumption is that housing costs run, on average, at about 35% of gross income. In recent years lending institutions have been more willing to accept higher than 35% for all debt as a share of income, but most households have

other forms of debt, such as auto loans, student loans, and credit card debt. Looking ahead, most analysts see a return to more conservative lending practices than those of the last few years.

Tables I-1 to I-3 at the end of this section summarize the analysis for the prototypical for-sale units. The conclusion is that the household purchasing the \$350,000 condominium unit will have an income of \$78,700 per year, the purchaser of the \$700,000 detached prototype will have an income of \$143,400 annually, and the purchaser of the \$1,200,000 detached prototype will have an annual income of \$245,800. The ratio of sales price to income of the household purchasing Prototype 1 is roughly 4.4:1, which is to say that a unit selling for \$440,000 would require a household income of \$100,000, using the assumptions of the analysis. The sales price to income ratio for both Prototype 2 and 3 is 4.9:1, a little higher because there is no HOA adjustment.

Income of Apartment Renters

The standard for relating annual rent to household income is 30%, excluding utilities. While leasing agents and landlords may permit rental payments to represent a slightly higher share of total income, 30% represents an average. This is based on that fact that renters are likely to have other debt, and that many do not choose to spend more than 30% of their income on rent, since, unlike an ownership situation, the unit is not viewed as an investment with value enhancement potential. The resulting relationship is that annual household income is 3.3 times annual rent. The conclusion with respect to the prototype rental household in a newly constructed unit is an income of about \$63,000 per year. (See Table I-4.)

Disposable Income

The IMPLAN model used in this analysis is driven by disposable household income as the primary input. To arrive at disposable income, gross income for residents of prototypical units must be adjusted downward to account for taxes and savings. Per KMA correspondence with the producers of the IMPLAN model (the Minnesota IMPLAN Group), gross income was adjusted to disposable income, for purposes of the model, by deducting State and Federal Income taxes, Social Security and Medicare (FICA) taxes, and personal savings. Other taxes including sales tax, gas tax, and property tax are handled internally within the model. The calculation of disposable income for the unit prototypes is presented in Table I-5.

Disposable income is estimated at approximately 72% of gross income in the case of Prototype 1. This assumption is based on review of data from the Tax Policy Center (a joint venture of the Brookings Institution and the Urban Institute) and the California Franchise Tax Board website tax calculator. Averaging information from the Tax Policy Center for households earning between \$75,000 - \$100,000 per year and \$100,000 - \$200,000 per year indicated that residents of the prototypical attached units will pay about 13.5% of gross income for federal taxes. State taxes were estimated at 5.5% of gross income based on tax rates per the California

Franchise Tax Board. The employee share of the FICA payroll taxes is 7.65% of gross income (conservatively assuming that all earners in the household are within the \$94,200 ceiling on income subject to social security taxes).

Savings represent another adjustment from gross income to disposable income. Savings, including various IRA and 401 K type programs, were estimated at 1.3% of gross income based on the projected average for U.S. households per the 2006 RREEF (a local real estate investment trust) report "*Prospects for the U.S. Economy and Sectors*". This savings rate is consistent with a Federal Reserve Bank paper, sourced in the footnote of Table I-5.

The households purchasing Prototypes 2 and 3 were estimated to have a smaller proportion of disposable gross income (68% and 62%, respectively) because they are in higher tax brackets. Conversely, the rental household is assumed to have a higher proportion of disposable gross income (77%). Savings rates for all prototypes were assumed to be the same.

The gross income and disposable income of the households in the prototype units are summarized below:

	Rental	For Sale Units		
		Prototype 1	Prototype 2	Prototype 3
Gross Household Income	\$68,400	\$78,700	\$143,400	\$245,800
Percent Disposable	77%	72%	68%	62%
Disposable Income	\$52,700	\$56,600	\$97,510	\$152,400

Summary

Tables I-6 and I-7 summarize the key assumptions and steps from the market rate price or rent of the prototype residential units, to the annual income of the household, to disposable income. The analysis is shown on a per unit and per square foot basis, as well as per 100 residential units. The disposable income, used to consume goods and services, is the generator of jobs and ultimately of the demand for more affordable housing for worker households.

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**APPENDIX I TABLE 1
FOR SALE PROTOTYPE 1 - CONDO
SALES PRICE TO INCOME RATIO
INCLUSIONARY PROGRAM UPDATE
NAPA COUNTY, CA**

			For Sale Prototype 1 Condo Unit
Sales Price	\$350 /SF	1,000 SF	\$350,000
Mortgage Payment			
Downpayment @ 20%		20%	\$70,000
Loan Amount			\$280,000
Interest Rate			6.5%
Term of Mortgage			30 years
Annual Mortgage Payment			\$21,237
Other Costs			
HOA Dues	\$200	per month	\$2,400
Property Taxes	1.1%	of sales price	\$3,900
Total Annual Housing Cost			\$27,537
% of Income Spent on Hsg			35%
Annual Income Required			\$78,700
Sales Price to Income Ratio			4.4

**APPENDIX I TABLE 2
FOR SALE PROTOTYPE 2 - SFD
SALES PRICE TO INCOME RATIO
INCLUSIONARY PROGRAM UPDATE
NAPA COUNTY, CA**

			For Sale Prototype 2 Single Family Unit
Sales Price	\$350 /SF	2,000 SF	\$700,000
Mortgage Payment			
Downpayment @ 20%		20%	\$140,000
Loan Amount			\$560,000
Interest Rate			6.5%
Term of Mortgage			30 years
Annual Mortgage Payment			\$42,475
Property Taxes	1.1% of sales price		\$7,700
Total Annual Housing Cost			\$50,175
% of Income Spent on Hsg			35%
Annual Income Required			\$143,400
Sales Price to Income Ratio			4.9

APPENDIX I TABLE 3
FOR SALE PROTOTYPE 3 - SFD
SALES PRICE TO INCOME RATIO
INCLUSIONARY PROGRAM UPDATE
NAPA COUNTY, CA

			For Sale Prototype 3
			Single Family Unit
Sales Price	\$400 /SF	3,000 SF	\$1,200,000
Mortgage Payment			
Downpayment @ 20%		20%	\$240,000
Loan Amount			\$960,000
Interest Rate			6.5%
Term of Mortgage			30 years
Annual Mortgage Payment			\$72,814
Property Taxes	1.1% of sales price		\$13,200
Total Annual Housing Cost			\$86,014
% of Income Spent on Hsg			35%
Annual Income Required			\$245,800
Sales Price to Income Ratio			4.9

APPENDIX I TABLE 4
RENTAL UNITS
ANNUAL RENT TO INCOME RATIO
INCLUSIONARY PROGRAM UPDATE
NAPA COUNTY, CA

			<u>Prototype Rental Unit</u>
Market Rent			
Monthly	\$1.75 /SF	900 SF	\$1,575
Annual			\$18,900
% of Income Spent on Rent (excludes utilities)			30%
Annual Household Income Required			\$63,000
Annual Rent to Income Ratio			3.3

APPENDIX I TABLE 5
DISPOSABLE INCOME ¹
INCLUSIONARY PROGRAM UPDATE
NAPA COUNTY, CA

	Residents of Prototypical Rental Units	Residents of Prototype 1 Condo Units	Residents of Prototype 2 SFD Units	Residents of Prototype 3 SFD Units
Gross Income	100%	100%	100%	100%
(Less) Average Federal Income Tax Rate ²	9.7%	13.5%	15.3%	22.4%
(Less) FICA Tax Rate ³	7.65%	7.65%	7.65%	6.39%
(Less) Average State Income Tax Rate ⁴	4.50%	5.50%	7.50%	8.00%
(Less) Savings ⁵	1.3%	1.3%	1.3%	1.3%
<i>Disposable Income ¹</i> <i>(Input to IMPLAN model)</i>	77%	72%	68%	62%

Notes:

- ¹ As defined within the IMPLAN model. Includes all income except income taxes and savings.
- ² Per the Urban-Brookings Tax Policy Center (joint venture between the Brookings Institution and the Urban Institute). Prototype 1 tax rate based on an average of AGI classes: 75k-100k and 100k-200k; Prototype 2 based on AGI class 100k - 200k; Prototype 3 based on AGI class 200k-500k; Rental based on AGI class 50k-75k.
- ³ Conservatively assumes all earners in each household will be below the ceiling applicable to social security taxes, currently \$102,000. Prototype 3 assumes two earners per household each earning in excess of the ceiling for social security taxes.
- ⁴ Estimated based on Franchise Tax Board website tax calculator.
- ⁵ Projected based on the forecast of average U.S. household savings rate included in the RREEF publication *Prospects for the US Economy and Property Sectors*. Page 7. November 8, 2006. Savings rate is consistent with the average U.S. household savings rate in 2000 per Maki, Dean M. and Palumbo, Michael G. Federal Reserve System Working Paper No. 2001-21. *Disentangling the Wealth Effect: A Cohort Analysis of Household Savings in the 1990s*. April 2001.

**APPENDIX I TABLE 6
RESIDENTIAL HOUSEHOLD SUMMARY - FOR SALE
INCLUSIONARY PROGRAM UPDATE
NAPA COUNTY, CA**

		Per Unit	Per Sq.Ft.	Per 100 Units
For Sale Market Rate Condo Prototype ¹				
Units				100 Units
Building Sq.Ft. (net salable area)		1,000	1	100,000
Sales Price		\$350,000	\$350	\$35,000,000
Sales Price to Income Ratio ¹		4.4		4.4
Gross Household Income		\$78,700	\$39.35	\$7,870,000
Disposable Household Income ²	72% of gross	\$56,660	\$28.50	\$5,700,000
For Sale Market Rate SFD Prototype ²				
Units				100 Units
Building Sq.Ft. (net salable area)		2,000	1	200,000
Sales Price		\$700,000	\$350	\$70,000,000
Sales Price to Income Ratio ¹		4.9		4.9
Gross Household Income		\$143,400	\$71.70	\$14,340,000
Disposable Household Income ²	68% of gross	\$97,510	\$49.00	\$9,800,000
For Sale Market Rate SFD Prototype ³				
Units				100 Units
Building Sq.Ft. (net salable area)		3,000	1	300,000
Sales Price		\$1,200,000	\$400	\$120,000,000
Sales Price to Income Ratio ¹		4.9		4.9
Gross Household Income		\$245,800	\$122.90	\$24,580,000
Disposable Household Income ²	62% of gross	\$152,400	\$76.00	\$15,200,000

Notes:

¹ See Tables I-1, I-2, and I-3.

² Estimated income available after deduction of federal income, payroll taxes, state income tax, and savings. (Per discussions with the Minnesota IMPLAN group, sales tax and property tax are not deducted from disposable household income).

**APPENDIX I TABLE 7
RESIDENTIAL HOUSEHOLD SUMMARY - RENTAL
INCLUSIONARY PROGRAM UPDATE
NAPA COUNTY, CA**

		<u>Per Unit</u>	<u>Per Sq.Ft.</u>	<u>Per 100 Units</u>
Market Apartment Prototype				
Units				100 Units
Building Sq.Ft. (net rentable area)		900	1	90,000
Rent				
Monthly		\$1,575	\$1.75	\$157,500
Annual		\$18,900	\$21.00	\$1,890,000
Rent to Income Ratio ¹		3.3		3.3
Gross Household Income		\$63,000	\$70.00	\$6,300,000
Disposable Household Income ²	77% of gross	\$48,510	\$54.44	\$4,900,000

Notes:

¹ See Table I-4.

² Estimated income available after deduction of federal income, payroll taxes, state income tax, and savings. (Per discussions with the Minnesota IMPLAN group, sales tax and property tax are not deducted from disposable household income). See Table I-5.

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SECTION II: THE IMPLAN MODEL

Consumer spending by residents of new housing units will create jobs, particularly in sectors such as restaurants, health care, and retail, which are closely connected to the expenditures of residents. The widely used economic analysis tool, IMPLAN (IMpact Analysis for PLANning), was used to quantify these new jobs by industry sector.

IMPLAN Model Description

The IMPLAN model is an economic analysis software package commercially available through the Minnesota IMPLAN Group. IMPLAN was originally developed by the U.S. Forest Service, the Federal Emergency Management Agency, and the U.S. Department of the Interior Bureau of Land Management and has been in use since 1979 and refined over time. It has become a widely used tool for analyzing economic impacts from a broad range of applications from major construction projects to natural resource programs.

IMPLAN is based on an input-output accounting of commodity flows within an economy from producers to intermediate and final consumers. The model establishes a matrix of supply chain relationships between industries and also between households and the producers of household goods and services. Assumptions about the portion of inputs or supplies for a given industry likely to be met by local suppliers, and the portion supplied from outside the region or study area, are derived internally within the model using data on the industrial structure of the region.

The output or result of the model is driven by tracking how changes in purchases for final use (final demand) filter through the supply chain. Industries that produce goods and services for final demand or consumption must purchase inputs from other producers, which in turn, purchase goods and services. The model tracks these relationships through the economy to the point where leakages from the region stop the cycle. This allows the user to identify how a change in demand for one industry will affect a list of over 500 other industry sectors. The projected response of an economy to a change in final demand can be viewed in terms of economic output, employment, or income.

Data sets are available for each county and state, so the model can be tailored to the specific economic conditions of the region being analyzed. This analysis utilized the data set for Napa County.

Economic impacts estimated using the IMPLAN model are divided into three categories:

- *Direct Impacts* – are associated with the direct final demand changes. A relevant example is restaurant employment created when households in new residential buildings spend money dining out. Employment at the restaurant would be considered a direct impact.

- *Indirect Impacts* – are those associated with industries down the supply chain from the industry experiencing the direct impact. With the restaurant example, indirect impacts would include employment at food wholesalers, kitchen suppliers, and producers of agricultural products.
- *Induced Impacts* – are generated by the household spending induced by direct and indirect employment. Again using the restaurant example, induced impacts would include employment generated when restaurant, food wholesaler, and kitchen suppliers spend their earnings in the local economy.

We have summarized the results of the analysis separately for direct impacts alone, and for all direct, indirect, and induced impacts.

Application of the IMPLAN Model to Estimate Job Growth

The IMPLAN model was applied to link household consumption expenditures to job growth occurring in Napa County. Employment generated by the consumer spending of residents is analyzed per 100 residential units. The IMPLAN model distributes spending among various types of goods and services (industry sectors) based on data from the Consumer Expenditure Survey and the Bureau of Economic Analysis Benchmark input-output study, to estimate direct, indirect, and induced employment generated. Job creation, driven by increased demand for products and services, was projected for each of the industries which will serve the new households. The employment generated by this new household spending is summarized below.

Jobs Generated per 100 Units	Rental	For Sale Units		
		Prototype 1	Prototype 2	Prototype 3
Disposable Income	\$4,900,000	\$5,700,000	\$9,800,000	\$15,200,000
Direct Impacts (Jobs)	23.1	26.9	46.2	71.6
Total Impacts (Jobs)	40.0	46.6	80.1	124.2

Table II-1 provides a detailed summary of employment generated by industry. The table shows industries sorted by projected employment. Estimated employment is shown for each IMPLAN industry sector representing 1% or more of direct, indirect, and induced employment.

As discussed previously, the analysis separately evaluates the nexus considering only direct impacts and total impacts which include direct, indirect, and induced impacts. Considering total impacts yields about 75% more employees than considering direct impacts alone.

The resulting number of jobs in Napa County attributable to the impacts of the spending of new residential households is low compared to what a similar analysis would produce in a larger more economically diverse county or region. Napa County (inclusive of the cities) does not, for example, have the full spectrum of retail shopping opportunities. There are no major regional shopping malls, few large scale big box retailers such as Home Depot. Even some food

purchases, which traditionally are all local, are probably now made in the Costco and Walmart stores located outside the County. The same pattern of Napa limitations in meeting the full needs of its residents is also found in the services, wholesaling, medical and health care, and other industries or types of economic activities. As a result, the job impacts that are located within Napa County are less than would be the case using a larger economic region.

The jobs that are generated within the County are heavily retail jobs, jobs in restaurants and other eating establishments, and the services that are provided locally. See Table I-8 for more information.

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APPENDIX I TABLE 8
IMPLAN MODEL OUTPUT
EMPLOYMENT GENERATED
AFFORDABLE HOUSING ORDINANCE REVISIONS ANALYSIS
NAPA COUNTY, CA

2009 ADJUSTED VALUES

PER 100 MARKET RATE UNITS	Direct Impacts Only					Direct, Indirect & Induced Impacts				
	Prototype 1		Prototype 2	Prototype 3		Prototype 1		Prototype 2	Prototype 3	
	Rental	Condo	SFD	SFD	% of Jobs ³	Rental	Condo	SFD	SFD	% of Jobs ³
Disposable Income of New Residents¹ (after taxes & savings)	\$4,900,000	\$5,700,000	\$9,800,000	\$15,200,000		\$4,900,000	\$5,700,000	\$9,800,000	\$15,200,000	
Employment Generated by Industry²										
Food services and drinking places	3.0	3.5	6.1	9.4	13%	4.2	4.9	8.4	13.0	11%
Offices of physicians- dentists- and other health	1.8	2.0	3.5	5.5	8%	2.3	2.7	4.6	7.1	6%
Hospitals	1.7	2.0	3.4	5.3	7%	2.2	2.6	4.4	6.8	5%
Social assistance- except child day care services	1.1	1.3	2.2	3.5	5%	1.4	1.6	2.8	4.4	4%
Private households	1.0	1.1	2.0	3.0	4%	1.2	1.4	2.5	3.8	3%
Food and beverage stores	0.9	1.1	1.8	2.8	4%	1.3	1.5	2.6	4.0	3%
Religious organizations	0.7	0.8	1.4	2.2	3%	0.9	1.1	1.8	2.9	2%
Colleges, universities, and junior colleges	0.7	0.8	1.4	2.1	3%	0.9	1.0	1.8	2.7	2%
Clothing and clothing accessories stores	0.6	0.7	1.3	1.9	3%	0.9	1.0	1.7	2.7	2%
General merchandise stores	0.6	0.7	1.1	1.7	2%	0.8	0.9	1.6	2.4	2%
Elementary and secondary schools	0.6	0.7	1.1	1.7	2%	0.7	0.8	1.4	2.1	2%
Miscellaneous store retailers	0.5	0.6	1.1	1.6	2%	0.7	0.9	1.5	2.3	2%
Child day care services	0.5	0.6	1.1	1.6	2%	0.7	0.8	1.3	2.0	2%
Motor vehicle and parts dealers	0.4	0.5	0.9	1.4	2%	0.6	0.7	1.2	1.9	2%
Nonstore retailers	0.4	0.5	0.9	1.4	2%	0.6	0.7	1.3	1.9	2%
Other ambulatory health care services	0.4	0.5	0.9	1.4	2%	0.6	0.7	1.2	1.9	1%
Building material and garden supply stores	0.4	0.5	0.9	1.3	2%	0.6	0.7	1.2	1.9	2%
Other amusement- gambling- and recreation	0.4	0.5	0.8	1.3	2%	0.5	0.6	1.0	1.6	1%
Wholesale trade	0.4	0.5	0.8	1.3	2%	0.7	0.8	1.4	2.2	2%
Automotive repair and maintenance- except car wash	0.4	0.5	0.8	1.2	2%	0.5	0.6	1.1	1.6	1%
Nonstore retailers	0.4	0.4	0.8	1.2	2%	0.5	0.6	1.1	1.6	1%
Other educational services	0.3	0.4	0.6	1.0	1%	0.4	0.5	0.9	1.4	1%
Monetary authorities and depository credit intermediaries	0.3	0.4	0.6	1.0	1%	0.5	0.6	1.0	1.6	1%
Hotels and motels	0.3	0.4	0.6	1.0	1%	0.5	0.6	1.0	1.6	1%
Fitness and recreational sports centers	0.2	0.3	0.5	0.7	1%	1.2	1.4	2.5	3.8	3%
State & Local Non-Education	0.0	0.0	0.0	0.0	0%	0.9	1.0	1.7	2.7	2%
Employment services	0.0	0.0	0.0	0.0	0%	0.8	1.0	1.7	2.6	2%
New residential structures	0.0	0.0	0.0	0.0	0%	0.7	0.8	1.4	2.1	2%
State & Local Education	0.0	0.0	0.0	0.0	0%	0.7	0.8	1.4	2.1	2%
Securities- commodity contracts- investments	0.0	0.0	0.0	0.0	0%	0.5	0.5	0.9	1.5	1%
Commercial and institutional buildings	0.0	0.0	0.0	0.0	0%	0.5	0.5	0.9	1.4	1%
Services to buildings and dwellings	0.0	0.0	0.0	0.0	0%	0.4	0.5	0.9	1.4	1%
Other Industries	4.8	5.6	9.7	15.0	21%	10.0	11.6	20.0	31.0	25%
	23.1	26.9	46.2	71.6	100%	40.0	46.6	80.1	124.2	100%

(1) The IMPLAN model tracks how increases in consumer spending creates jobs in the local economy. See Tables C-6 and C-7 for estimates of the disposable income available to residents of 100 prototypical market rate units.

(2) For Industries representing more than 1% of total employment.

(3) Applies to all unit types.

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SECTION III: THE KMA JOBS HOUSING NEXUS MODEL

This section presents a summary of the analysis linking the employment growth associated with residential development, or the output of the IMPLAN model (see Section II), to the estimated number of lower income housing units required in each of four income categories, for each of the four residential prototype units.

Analysis Approach and Framework

The analysis approach is to examine the employment growth for industries related to consumer spending by residents in 100-unit modules. Then, through a series of linkage steps, the number of employees is converted to households and housing units by affordability level. The findings are expressed in terms of numbers of affordable households per 100 market rate units.

The analysis addresses the affordable unit demand associated with rental, condominium, and two types of single family detached units in Napa County. The table below shows the Napa County income limits for the four income categories that were evaluated, ranging from 50% to 120% of Area Median Income (AMI). The income categories are consistent with those covered in the County Inclusionary program.

	Household Size (Persons)					
	1	2	3	4	5	6 +
2009 Income Limits						
50% of AMI	\$28,650	\$32,700	\$36,800	\$40,900	\$44,150	\$47,450
80% of AMI	\$44,800	\$51,200	\$57,600	\$64,000	\$69,100	\$74,250
100% of AMI	\$57,250	\$65,450	\$73,600	\$81,800	\$88,350	\$94,900
120% of AMI	\$68,700	\$78,500	\$88,350	\$98,150	\$100,600	\$113,850

The analysis is conducted using a model that KMA developed and has applied to similar evaluations in many other jurisdictions, including the Napa County Jobs Housing Nexus Analysis for non-residential development. The model inputs are all local data to the extent possible, and are fully documented in the following description.

Analysis Steps

Tables I-9 and I-10 at the end of this section present a summary of the nexus analysis steps for the prototype units. Following is a description of each step of the analysis.

Step 1 – Estimate of Total New Employees

Table I-9 commences with the total number of employees associated with the new market rate units. The employees were estimated based on household expenditures of new residents using the IMPLAN model (see Section II). One hundred market rate units are associated with 23 new

direct jobs in the case of apartments, 27 jobs for condominiums, 46 jobs for the \$700,000 single family prototype, and 72 jobs for the \$1,200,000 single family prototype. New direct, indirect, and induced jobs generated per 100 units are 40 for rentals, 47 for condos, 80 for the \$700,000 single family prototype, and 124 for the \$1,200,000 single family prototype.

Step 2 – Adjustment from Employees to Employee Households

This step (Table I-9) converts the number of employees to the number of employee households, recognizing that there is, on average, more than one worker per household, and thus the number of housing units in demand for new workers is reduced. The workers-per-worker-household ratio eliminates from the equation all non-working households, such as retired persons, students, and those on public assistance. The County average of 1.67 workers per worker household (from the U. S. Census 2000) is used in the analysis. The number of jobs is divided by 1.67 to determine the number of worker households. (Average workers per total households is a lower ratio because all households are counted in the denominator, not just worker households; using average workers per total households produces greater demand for housing units.)

Step 3 – Occupational Distribution of Employees

The occupational breakdown of employees is the first step to arrive at income level. The output from the IMPLAN model provides the number of employees by industry sector. The IMPLAN output is paired with data from the Department of Labor, Bureau of Labor Statistics 2006 Occupational Employment Survey (OES) to estimate the occupational composition of employees for each industry sector.

Pairing of OES and IMPLAN data was accomplished by matching IMPLAN industry sector codes with the four-digit North American Industry Classification System Code (NAICS) used in the OES. Each IMPLAN industry sector is associated with one or more NAICS codes, with matching NAICS codes ranging from two to five digits. Employment for IMPLAN sectors with multiple matching NAICS codes was distributed among the matching codes based on the distribution of employment among those industries at the national level. Employment for IMPLAN sectors where matching NAICS codes were only at the two- or three-digit level of detail was distributed using a similar approach, among all of the corresponding four-digit NAICS codes falling under the broader two- or three-digit categories.

National-level employment totals for each industry within the OES were pro-rated to match the employment distribution projected using the IMPLAN model. Occupational composition within each industry was held constant. The result is the estimated occupational mix of employees.

As shown on Table I-9, new jobs will be distributed across a variety of occupational categories. The three largest occupational categories based on direct impacts are food preparation and

serving (15%), office and administrative support (15%), and sales (14%). Based on total direct, indirect, and induced impacts, office and administrative support is the largest category (16%), followed by food preparation and serving, and sales (each at 12%).

Step 3 of Table I-9 indicates both the percentage of total employee households and, on page 2 of the table, the number of employee households by occupation associated with 100-unit market rate units.

Step 4 – Estimates of Employee Households Meeting the Lower Income Definitions

In this step, occupation is translated to income based on recent Napa County wage and salary information from the California Employment Development Department. The wage and salary information shown in Tables I-13 and I-15 provided the income inputs to the model. This step in the analysis calculates the number of employee households that fall into each income category for each household size.

Individual *employee* income data was used to calculate the number of *households* that fall into the income categories by assuming that multiple earner households are, on average, formed of individuals with similar incomes. Employee households not falling into one of the major occupation categories per Tables I-14 and I-16 are assumed to have the same income distribution as the major occupation categories.

Step 5 – Estimate of Household Size Distribution

In this step, household size distribution was input into the model in order to estimate the income and household size combinations that meet the income definitions established by the County. The household size distribution utilized in the analysis is that of worker households in Napa County derived using a combination of Census sources.

Step 6 – Estimate of Households that Meet Size and Income Criteria

For this step KMA built a cross-matrix of household size and income to establish probability factors for the two criteria in combination. For each occupational group a probability factor was calculated for each income and household size level, and multiplied by the number of households. Table I-10 shows the result after completing Steps 4, 5, and 6. The calculated number of households that meet size and income criteria shown are for the under 50% of AMI category generated by 100 market rate prototype units. The methodology was repeated for each income tier, resulting in a total count of worker households per 100 units.

Summary Findings

Table I-11 indicates the results of the analysis for the residential prototype units in the four lower income categories. The table presents the number of households generated in each affordability category and the total number over 120% of Area Median Income.

According to Table I-11, approximately 80% of new worker households generated by the expenditures of new residents have incomes below 120% of AMI, with most of these households earning less than 80% of AMI. The finding that the jobs associated with consumer spending tend to be low-paying jobs where the workers will require housing affordable at the lower income levels is not surprising. As noted above, direct consumer spending results in employment is concentrated in lower paid occupations including food preparation, administrative, and retail sales.

Many of the higher-paying occupations in Napa County are not directly tied to consumer spending within Napa and therefore have a miniscule representation in the analysis. Management level jobs within the wine industry, and related professional services, such as legal and accounting, for example, largely serve the wine industry and consumers beyond Napa.

An abbreviated version of Table I-11 is presented below. The version below shows Total Impacts, or all Direct, Indirect and Induced Impact combined, measured in housing units in demand by affordability level, associated with 100 market rate units.

Total Impacts in Affordable Unit Demand per 100 Market Rate Units	Residential Prototypes			
	Rental	Prototype 1	Prototype 2	Prototype 3
Under 50% AMI (units)	5.4	6.2	10.7	16.6
50% to 80% AMI (units)	7.7	9.0	15.4	23.9
80% to 100% AMI (units)	4.1	4.7	8.2	12.6
100% to 120% AMI (units)	2.0	2.3	4.0	6.2
	19.1	22.3	38.3	59.4

Comparison of Analysis Results to Inclusionary Program

The analysis findings identify how many lower income households are generated for every 100 market rate units. These findings are adjusted to percentages for purposes of comparison to inclusionary requirements. The percentages are calculated including both market rate and affordable units (for example, 25 affordable units per 100 market rate units translates to a project of 125 units; 25 affordable units out of 125 units equals 20%).

The inset table below presents the results of the analysis for Total Impacts, drawn from Table I-12, which contains greater detail. Total Impacts refers to all Direct, Indirect and Induced Impacts. Each tier is cumulative; inclusive of the tiers above it.

Inclusionary Percentage Supported by Total Impacts	Residential Prototypes			
	Rental	Prototype 1	Prototype 2	Prototype 3
Up to 50% AMI	5%	6%	10%	14%
Up to 80% AMI	12%	13%	21%	29%
Up to 100% AMI	15%	17%	26%	35%
Up to 120% AMI	16%	18%	28%	37%

The conclusion is that the rental prototype has total impacts generated by new residents that are 5% up to Very Low Income (up to 50% AMI) and cumulatively 12% up through Low Income (80% AMI.) Since the current inclusionary program for rentals requires that 10% of the units be affordable, the results of the analysis support the current program percentages for rental units. The nexus supports an inclusionary program of up to 12% of rental units at low income affordability level.

The findings of the analysis with respect to for-sale units are presented for the three prototypes. Prototype 1, the \$350,000 unit household, results in Total Impacts of 17% up through Median Income (100% AMI) and 18% up through Moderate Income (120% AMI). The conclusion is therefore that the current Inclusionary Program at 10% up through Moderate Income is supported by the analysis. In addition, the nexus analysis would support an Inclusionary Program for condominium units of up to 18%. For single family detached units, the nexus analysis supports an Inclusionary Program of up to 28% for the \$700,000 unit and 37% for the \$1.2 million unit.

Conclusion

The analysis has demonstrated that the percentage requirements embodied in the current Napa County Inclusionary Program are supported by the residential nexus analysis. In addition, the percentage requirements for the County's proposed revisions to the Inclusionary Program are also supported by the residential nexus analysis. The new households that buy or rent new units in Napa generate impacts, through their expenditures on goods and services, which results in demand for additional affordable units in amounts higher than the County Inclusionary Program requires.

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APPENDIX I TABLE 9
NET NEW HOUSEHOLDS AND OCCUPATION DISTRIBUTION
EMPLOYEE HOUSEHOLDS GENERATED
AFFORDABLE HOUSING ORDINANCE REVISIONS ANALYSIS
NAPA COUNTY, CA

2009 ADJUSTED VALUES

PER 100 UNITS OF RESIDENTIAL HOUSING

	Direct Impacts Only				Direct, Indirect & Induced Impacts			
	Prototype 1		Prototype 2	Prototype 3	Prototype 1		Prototype 2	Prototype 3
	Rental	Condo	SFD	SFD	Rental	Condo	SFD	SFD
Page 1 of 2								
Step 1 - Employees ¹	23.1	26.9	46.2	71.6	40.0	46.6	80.1	124.2
Step 2 - Adjustment for Number of Households (based on 1.67 workers per worker household)	13.9	16.1	27.7	43.0	24.0	28.0	48.1	74.6
Step 3 - Occupation Distribution - Percent								
Management Occupations	3%	3%	3%	3%	4%	4%	4%	4%
Business and Financial Operations	2%	2%	2%	2%	3%	3%	3%	3%
Computer and Mathematical	1%	1%	1%	1%	1%	1%	1%	1%
Architecture and Engineering	0%	0%	0%	0%	1%	1%	1%	1%
Life, Physical, and Social Science	1%	1%	1%	1%	1%	1%	1%	1%
Community and Social Services	3%	3%	3%	3%	2%	2%	2%	2%
Legal	0%	0%	0%	0%	1%	1%	1%	1%
Education, Training, and Library	5%	5%	5%	5%	5%	5%	5%	5%
Arts, Design, Entertainment, Sports, and Media	1%	1%	1%	1%	1%	1%	1%	1%
Healthcare Practitioners and Technical	9%	9%	9%	9%	7%	7%	7%	7%
Healthcare Support	5%	5%	5%	5%	4%	4%	4%	4%
Protective Service	1%	1%	1%	1%	1%	1%	1%	1%
Food Preparation and Serving Related	15%	15%	15%	15%	12%	12%	12%	12%
Building and Grounds Cleaning and Maint.	6%	6%	6%	6%	6%	6%	6%	6%
Personal Care and Service	6%	6%	6%	6%	4%	4%	4%	4%
Sales and Related	14%	14%	14%	14%	12%	12%	12%	12%
Office and Administrative Support	15%	15%	15%	15%	16%	16%	16%	16%
Farming, Fishing, and Forestry	0%	0%	0%	0%	0%	0%	0%	0%
Construction and Extraction	0%	0%	0%	0%	3%	3%	3%	3%
Installation, Maintenance, and Repair	3%	3%	3%	3%	3%	3%	3%	3%
Production	2%	2%	2%	2%	2%	2%	2%	2%
Transportation and Material Moving	5%	5%	5%	5%	5%	5%	5%	5%
Other / Not Identified	3%	3%	3%	3%	4%	4%	4%	4%
Totals	100%	100%	100%	100%	100%	100%	100%	100%

APPENDIX I TABLE 9
NET NEW HOUSEHOLDS AND OCCUPATION DISTRIBUTION
EMPLOYEE HOUSEHOLDS GENERATED
AFFORDABLE HOUSING ORDINANCE REVISIONS ANALYSIS
NAPA COUNTY, CA

2009 ADJUSTED VALUES

PER 100 UNITS OF RESIDENTIAL HOUSING

Page 2 of 2

Step 3 - Occupation Distribution - Employee HH

	Direct Impacts Only				Direct, Indirect & Induced Impacts			
	Prototype 1	Prototype 2	Prototype 3		Prototype 1	Prototype 2	Prototype 3	
	Rental	Condo	SFD	SFD	Rental	Condo	SFD	SFD
Management Occupations	0.5	0.6	1.0	1.5	0.9	1.1	1.8	2.8
Business and Financial Operations	0.3	0.4	0.6	1.0	0.8	0.9	1.6	2.4
Computer and Mathematical	0.1	0.1	0.2	0.3	0.2	0.3	0.5	0.8
Architecture and Engineering	0.0	0.0	0.0	0.1	0.2	0.2	0.3	0.5
Life, Physical, and Social Science	0.1	0.1	0.1	0.2	0.1	0.2	0.3	0.5
Community and Social Services	0.4	0.4	0.7	1.1	0.5	0.6	1.0	1.6
Legal	0.1	0.1	0.1	0.2	0.2	0.2	0.3	0.5
Education, Training, and Library	0.7	0.9	1.5	2.3	1.2	1.4	2.4	3.7
Arts, Design, Entertainment, Sports, and Media	0.2	0.2	0.4	0.6	0.3	0.3	0.6	0.9
Healthcare Practitioners and Technical	1.3	1.5	2.6	4.0	1.8	2.0	3.5	5.4
Healthcare Support	0.7	0.8	1.4	2.2	1.0	1.1	1.9	3.0
Protective Service	0.1	0.1	0.2	0.3	0.3	0.4	0.7	1.0
Food Preparation and Serving Related	2.0	2.3	4.0	6.3	2.8	3.3	5.7	8.8
Building and Grounds Cleaning and Maint.	0.9	1.0	1.7	2.7	1.4	1.7	2.9	4.4
Personal Care and Service	0.8	0.9	1.6	2.5	1.1	1.2	2.1	3.3
Sales and Related	1.9	2.2	3.8	5.9	2.9	3.4	5.8	9.0
Office and Administrative Support	2.1	2.5	4.3	6.7	3.9	4.6	7.9	12.2
Farming, Fishing, and Forestry	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.1
Construction and Extraction	0.0	0.1	0.1	0.1	0.8	1.0	1.7	2.6
Installation, Maintenance, and Repair	0.4	0.5	0.9	1.4	0.8	1.0	1.7	2.6
Production	0.3	0.3	0.5	0.8	0.5	0.6	1.0	1.6
Transportation and Material Moving	0.6	0.7	1.3	2.0	1.2	1.4	2.4	3.7
Other / Not Identified	<u>0.4</u>	<u>0.4</u>	<u>0.7</u>	<u>1.1</u>	<u>1.0</u>	<u>1.2</u>	<u>2.0</u>	<u>3.2</u>
Totals	13.9	16.1	27.7	43.0	24.0	28.0	48.1	74.6

Notes:

¹ Generated by household expenditures within 100 prototypical market rate units. Estimates are based on the IMPLAN Group's economic model, IMPLAN, for Napa County. See Table I-8.

APPENDIX I TABLE 10
**VERY LOW INCOME EMPLOYEE HOUSEHOLDS¹ GENERATED
AFFORDABLE HOUSING ORDINANCE REVISIONS ANALYSIS
NAPA COUNTY, CA**
2009 ADJUSTED VALUES
PER 100 UNITS OF RESIDENTIAL HOUSING

	Direct Impacts Only				Direct, Indirect & Induced Impacts			
	Rental	Prototype 1 Condo	Prototype 2 SFD	Prototype 3 SFD	Rental	Prototype 1 Condo	Prototype 2 SFD	Prototype 3 SFD
Step 4, 5, & 6 - Very Low Income Households¹ within Major Occupation Categories								
Management	-	-	-	-	-	-	-	-
Business and Financial Operations	0.00	0.00	0.00	0.00	0.00	0.00	0.01	0.01
Computer and Mathematica	-	-	-	-	-	-	-	-
Architecture and Engineering	-	-	-	-	-	-	-	-
Life, Physical and Social Science	-	-	-	-	-	-	-	-
Community and Social Services	0.01	0.01	0.02	0.03	0.02	0.02	0.03	0.05
Legal	-	-	-	-	-	-	-	-
Education Training and Library	0.08	0.09	0.15	0.24	0.11	0.13	0.23	0.35
Arts, Design, Entertainment, Sports, & Media	-	-	-	-	-	-	-	-
Healthcare Practitioners and Technica	-	-	-	-	-	-	-	-
Healthcare Support	0.08	0.10	0.17	0.26	0.11	0.13	0.22	0.34
Protective Service	-	-	-	-	-	-	-	-
Food Preparation and Serving Relate	1.36	1.58	2.72	4.22	1.92	2.23	3.84	5.95
Building Grounds and Maintenance	0.25	0.30	0.51	0.79	0.41	0.48	0.83	1.28
Personal Care and Service	0.35	0.40	0.69	1.08	0.47	0.54	0.93	1.45
Sales and Related	0.71	0.83	1.43	2.22	0.94	1.10	1.89	2.93
Office and Admin	0.14	0.16	0.28	0.44	0.25	0.29	0.49	0.76
Farm, Fishing, and Forestry	-	-	-	-	-	-	-	-
Construction and Extraction	-	-	-	-	0.01	0.01	0.02	0.03
Installation Maintenance and Repai	0.00	0.00	0.01	0.01	0.00	0.01	0.01	0.01
Production	-	-	-	-	0.10	0.12	0.20	0.31
Transportation and Material Moving	0.28	0.33	0.57	0.88	0.48	0.55	0.95	1.48
Total Very Low Income Households - Major Occupation	3.28	3.81	6.56	10.17	4.82	5.61	9.65	14.96
 Very Low Income Households ¹ - "all other" occupations	 0.31	 0.36	 0.61	 0.95	 0.53	 0.62	 1.06	 1.64
 Total Very Low Income Households¹	 3.59	 4.17	 7.17	 11.12	 5.35	 6.23	 10.71	 16.61

¹ Includes households earning from zero through 50% of Napa County Median Income.

APPENDIX I TABLE 11
IMPACT ANALYSIS SUMMARY
EMPLOYEE HOUSEHOLDS GENERATED
AFFORDABLE HOUSING ORDINANCE REVISIONS ANALYSIS
NAPA COUNTY, CA

2009 ADJUSTED VALUES

RESIDENTIAL UNIT DEMAND IMPACTS
PER 100 MARKET RATE UNITS

	Direct Impacts Only					Direct, Indirect & Induced Impacts			
	Prototype 1		Prototype 2	Prototype 3	Percent of Total ¹	Prototype 1		Prototype 2	Prototype 3
	Rental	Condo	SFD	SFD		Rental	Condo	SFD	SFD
Number of New Households									
Under 50% Median Income	3.6	4.2	7.2	11.1	26%	5.4	6.2	10.7	16.6
50% to 80% Median Income	4.6	5.3	9.1	14.1	33%	7.7	9.0	15.4	23.9
80% to 100% Median Income	2.2	2.5	4.4	6.8	16%	4.1	4.7	8.2	12.6
100% to 120% Median Income	1.0	1.1	1.9	3.0	7%	2.0	2.3	4.0	6.2
Subtotal through 120% of Median	11.3	13.1	22.6	35.0	81%	19.1	22.3	38.3	59.4
Over 120% of Median Income	2.6	3.0	5.2	8.1	19%	4.9	5.7	9.8	15.2
Total Employee Households	13.9	16.1	27.7	43.0	100%	24.0	28.0	48.1	74.6

Notes:

¹ Percentages apply to all unit types.

APPENDIX I TABLE 12
INCLUSIONARY REQUIREMENT SUPPORTED WITH 2009 VALUES
AFFORDABLE HOUSING ORDINANCE REVISIONS ANALYSIS
NAPA COUNTY, CA

2009 ADJUSTED VALUES

SUPPORTED INCLUSIONARY REQUIREMENT

	Direct Impacts Only				Direct, Indirect & Induced Impacts			
	Rental	Prototype 1 Condo	Prototype 2 SFD	Prototype 3 SFD	Rental	Prototype 1 Condo	Prototype 2 SFD	Prototype 3 SFD
Supported Inclusionary Requirement								
Per 100 Market Rate Units - Cumulative Through ¹								
50% of Median Income	4 Units	4 Units	7 Units	11 Units	5 Units	6 Units	11 Units	17 Units
80% of Median Income	8 Units	9 Units	16 Units	25 Units	13 Units	15 Units	26 Units	41 Units
100% of Median Income	10 Units	12 Units	21 Units	32 Units	17 Units	20 Units	34 Units	53 Units
120% of Median Income	11 Units	13 Units	23 Units	35 Units	19 Units	22 Units	38 Units	59 Units
Supported Inclusionary Percentage - Cumulative Through ²								
50% of Median Income	3%	4%	7%	10%	5%	6%	10%	14%
80% of Median Income	8%	9%	14%	20%	12%	13%	21%	29%
100% of Median Income	9%	11%	17%	24%	15%	17%	26%	35%
120% of Median Income	10%	12%	18%	26%	16%	18%	28%	37%

Notes:

¹ See Table C-11

² Calculated by dividing the supported number of affordable units by the total number of units (supported affordable units + 100 market rate units).

APPENDIX I TABLE 13
2006 NATIONAL RESIDENT SERVICES WORKER DISTRIBUTION BY OCCUPATION
DIRECT EMPLOYMENT IMPACTS WITHIN NAPA COUNTY
RESIDENTIAL NEXUS ANALYSIS
NAPA COUNTY

Major Occupations (2% or more)	2006 National Resident Services Occupation Distribution ¹
Management occupations	3.4%
Business and financial operations occupations	2.3%
Community and social services occupations	2.6%
Education, training, and library occupations	5.3%
Healthcare practitioners and technical occupations	9.3%
Healthcare support occupations	5.1%
Food preparation and serving related occupations	14.5%
Building and grounds cleaning and maintenance occupations	6.3%
Personal care and service occupations	5.7%
Sales and related occupations	13.6%
Office and administrative support occupations	15.5%
Installation, maintenance, and repair occupations	3.1%
Transportation and material moving occupations	4.6%
All Other Resident Services Related Occupations	<u>8.6%</u>
INDUSTRY TOTAL	100.0%

¹ Distribution of employment by industry is per the IMPLAN model and the distribution of occupational employment within those industries is based on the Bureau of Labor Statistics Occupational Employment Survey.

APPENDIX I TABLE 14
AVERAGE ANNUAL COMPENSATION, 2007
RESIDENT SERVICES WORKER OCCUPATIONS
DIRECT EMPLOYMENT IMPACTS - NAPA COUNTY
RESIDENTIAL NEXUS ANALYSIS
NAPA COUNTY

Occupation ³	2007 Avg. Compensation ¹	% of Total Occupation Group ²	% of Total Resident Services Workers
<i>Page 1 of 4</i>			
<i>Management occupations</i>			
Chief executives	\$140,000	4.4%	0.2%
General and operations managers	\$121,200	31.0%	1.1%
Sales managers	\$103,800	4.3%	0.1%
Administrative services managers	\$81,600	4.3%	0.1%
Financial managers	\$106,000	6.5%	0.2%
Food service managers	\$58,500	7.1%	0.2%
Medical and health services managers	\$78,200	8.8%	0.3%
Social and community service managers	\$65,500	6.3%	0.2%
All other Management Occupations	<u>\$83,200</u>	<u>27.3%</u>	<u>0.9%</u>
Weighted Mean Annual Wage	\$96,400	100.0%	3.4%
<i>Business and financial operations occupations</i>			
Wholesale and retail buyers, except farm products	\$55,900	4.2%	0.1%
Claims adjusters, examiners, and investigators	\$59,400	5.9%	0.1%
Training and development specialists	\$61,400	5.6%	0.1%
Human resources, training, and labor relations specialists, all other	\$54,900	4.8%	0.1%
Business operations specialists, all other	\$54,900	18.7%	0.4%
Accountants and auditors	\$70,100	17.3%	0.4%
Loan officers	\$102,400	5.0%	0.1%
All Other Business and financial operations occupations (Avg. All Categories)	<u>\$64,100</u>	<u>38.4%</u>	<u>0.9%</u>
Weighted Mean Annual Wage	\$64,100	100.0%	2.3%
<i>Community and social services occupations</i>			
Substance abuse and behavioral disorder counselors	\$39,200	4.7%	0.1%
Educational, vocational, and school counselors	\$53,800	7.1%	0.2%
Mental health counselors	\$55,900	6.1%	0.2%
Rehabilitation counselors	\$33,900	9.0%	0.2%
Child, family, and school social workers	\$36,200	12.7%	0.3%
Medical and public health social workers	\$55,900	7.1%	0.2%
Mental health and substance abuse social workers	\$39,200	7.7%	0.2%
Social and human service assistants	\$35,800	21.7%	0.6%
Community and social service specialists, all other	\$46,700	6.1%	0.2%
Clergy	\$38,600	4.4%	0.1%
All Other Community and social services occupations (Avg. All Categories)	<u>\$41,600</u>	<u>13.3%</u>	<u>0.3%</u>
Weighted Mean Annual Wage	\$41,600	100.0%	2.6%

APPENDIX I TABLE 14
AVERAGE ANNUAL COMPENSATION, 2007
RESIDENT SERVICES WORKER OCCUPATIONS
DIRECT EMPLOYMENT IMPACTS - NAPA COUNTY
RESIDENTIAL NEXUS ANALYSIS
NAPA COUNTY

Occupation ³	2007 Avg. Compensation ¹	% of Total Occupation Group ²	% of Total Resident Services Workers
<i>Page 2 of 4</i>			
<i>Education, training, and library occupations</i>			
Postsecondary teachers, all other	\$59,200	4.6%	0.2%
Preschool teachers, except special education	\$39,200	16.6%	0.9%
Elementary school teachers, except special education	\$54,100	8.7%	0.5%
Teacher assistants	\$25,200	16.0%	0.9%
Secondary school teachers, except special and vocational education	\$51,600	5.8%	0.3%
Self-enrichment education teachers	\$38,500	5.6%	0.3%
Teachers and instructors, all other	\$71,300	6.7%	0.4%
All Other Education, training, and library occupations (Avg. All Categories)	<u>\$43,600</u>	<u>36.1%</u>	<u>1.9%</u>
Weighted Mean Annual Wage	\$43,600	100.0%	5.3%
<i>Healthcare practitioners and technical occupations</i>			
Registered nurses	\$43,900	33.7%	3.1%
Licensed practical and licensed vocational nurses	\$43,900	9.5%	0.9%
All Other Healthcare practitioners and technical occupations (Avg. All Categories)	<u>\$43,900</u>	<u>56.7%</u>	<u>5.3%</u>
Weighted Mean Annual Wage	\$43,900	100.0%	9.3%
<i>Healthcare support occupations</i>			
Home health aides	\$22,900	22.5%	1.2%
Nursing aides, orderlies, and attendants	\$30,200	30.5%	1.6%
Dental assistants	\$34,600	11.4%	0.6%
Medical assistants	\$32,200	15.5%	0.8%
Healthcare support workers, all other	\$33,100	5.1%	0.3%
All Other Healthcare support occupations (Avg. All Categories)	<u>\$29,400</u>	<u>15.0%</u>	<u>0.8%</u>
Weighted Mean Annual Wage	\$29,400	100.0%	5.1%
<i>Food preparation and serving related occupations</i>			
First-line supervisors/managers of food preparation and serving workers	\$37,500	6.8%	1.0%
Cooks, fast food	\$18,100	5.9%	0.9%
Cooks, restaurant	\$25,800	7.8%	1.1%
Food preparation workers	\$22,100	7.6%	1.1%
Bartenders	\$21,900	4.6%	0.7%
Combined food preparation and serving workers, including fast food	\$20,000	22.1%	3.2%
Counter attendants, cafeteria, food concession, and coffee shop	\$18,600	4.4%	0.6%
Waiters and waitresses	\$20,300	21.8%	3.2%
Dishwashers	\$18,800	4.7%	0.7%
All Other Food preparation and serving related occupations (Avg. All Categories)	<u>\$22,000</u>	<u>14.3%</u>	<u>2.1%</u>
Weighted Mean Annual Wage	\$22,000	100.0%	14.5%

APPENDIX I TABLE 14
AVERAGE ANNUAL COMPENSATION, 2007
RESIDENT SERVICES WORKER OCCUPATIONS
DIRECT EMPLOYMENT IMPACTS - NAPA COUNTY
RESIDENTIAL NEXUS ANALYSIS
NAPA COUNTY

Occupation ³	2007 Avg. Compensation ¹	% of Total Occupation Group ²	% of Total Resident Services Workers
<i>Building and grounds cleaning and maintenance occupations</i>			
Janitors and cleaners, except maids and housekeeping cleaners	\$25,700	45.2%	2.9%
Maids and housekeeping cleaners	\$21,800	17.0%	1.1%
Landscaping and groundskeeping workers	\$28,900	25.8%	1.6%
All Other Building and grounds cleaning and maintenance occupations (Avg. All Categories)	<u>\$25,900</u>	<u>11.9%</u>	<u>0.7%</u>
Weighted Mean Annual Wage	\$25,900	100.0%	6.3%
<i>Personal care and service occupations</i>			
Amusement and recreation attendants	\$20,600	6.0%	0.3%
Hairdressers, hairstylists, and cosmetologists	\$21,300	18.0%	1.0%
Child care workers	\$27,500	19.3%	1.1%
Personal and home care aides	\$22,600	21.9%	1.3%
Fitness trainers and aerobics instructors	\$28,600	7.1%	0.4%
Recreation workers	\$24,300	4.9%	0.3%
All Other Personal care and service occupations (Avg. All Categories)	<u>\$24,000</u>	<u>22.7%</u>	<u>1.3%</u>
Weighted Mean Annual Wage	\$24,000	100.0%	5.7%
<i>Sales and related occupations</i>			
First-line supervisors/managers of retail sales workers	\$42,400	10.0%	1.4%
Cashiers	\$24,500	30.0%	4.1%
Retail salespersons	\$25,600	42.3%	5.8%
All Other Sales and related occupations (Avg. All Categories)	<u>\$27,200</u>	<u>17.7%</u>	<u>2.4%</u>
Weighted Mean Annual Wage	\$27,200	100.0%	13.6%
<i>Office and administrative support occupations</i>			
First-line supervisors/managers of office and administrative support workers	\$53,500	5.8%	0.9%
Bookkeeping, accounting, and auditing clerks	\$39,000	7.2%	1.1%
Customer service representatives	\$36,200	7.0%	1.1%
Receptionists and information clerks	\$29,900	9.0%	1.4%
Stock clerks and order fillers	\$27,900	10.0%	1.5%
Executive secretaries and administrative assistants	\$44,300	5.8%	0.9%
Medical secretaries	\$35,100	4.8%	0.7%
Secretaries, except legal, medical, and executive	\$37,900	7.8%	1.2%
Office clerks, general	\$30,000	13.3%	2.1%
All Other Office and administrative support occupations (Avg. All Categories)	<u>\$35,600</u>	<u>29.3%</u>	<u>4.5%</u>
Weighted Mean Annual Wage	\$35,600	100.0%	15.5%

APPENDIX I TABLE 14
AVERAGE ANNUAL COMPENSATION, 2007
RESIDENT SERVICES WORKER OCCUPATIONS
DIRECT EMPLOYMENT IMPACTS - NAPA COUNTY
RESIDENTIAL NEXUS ANALYSIS
NAPA COUNTY

Occupation ³	2007 Avg. Compensation ¹	% of Total Occupation Group ²	% of Total Resident Services Workers
<i>Page 4 of 4</i>			
<i>Installation, maintenance, and repair occupations</i>			
First-line supervisors/managers of mechanics, installers, and repairers	\$63,600	8.0%	0.3%
Automotive body and related repairers	\$37,900	8.8%	0.3%
Automotive service technicians and mechanics	\$45,700	26.1%	0.8%
Bus and truck mechanics and diesel engine specialists	\$57,700	4.0%	0.1%
Maintenance and repair workers, general	\$42,300	22.7%	0.7%
All Other Installation, maintenance, and repair occupations (Avg. All Categories)	<u>\$46,300</u>	<u>30.5%</u>	<u>1.0%</u>
Weighted Mean Annual Wage	\$46,300	100.0%	3.1%
<i>Transportation and material moving occupations</i>			
Bus drivers, school	\$22,000	9.2%	0.4%
Driver/sales workers	\$30,500	9.6%	0.4%
Truck drivers, heavy and tractor-trailer	\$31,800	8.7%	0.4%
Truck drivers, light or delivery services	\$24,100	11.3%	0.5%
Taxi drivers and chauffeurs	\$25,200	4.8%	0.2%
Cleaners of vehicles and equipment	\$21,200	9.1%	0.4%
Laborers and freight, stock, and material movers, hand	\$28,700	14.8%	0.7%
Packers and packagers, hand	\$18,500	9.4%	0.4%
All Other Transportation and material moving occupations (Avg. All Categories)	<u>\$25,400</u>	<u>23.2%</u>	<u>1.1%</u>
Weighted Mean Annual Wage	\$25,400	100.0%	4.6%
			91.4%

¹ Hourly paid employees are assumed to be employed full-time. Annual compensation is calculated by multiplying hourly wages by 40 hours per work week and 52 weeks per year.

² Occupation percentages are based on the 2006 National Industry - Specific Occupational Employment survey compiled by the Bureau of Labor Statistics. Wages are based on 2006 Occupational Employment Survey data for the Napa MSA (Napa County) updated by the California Employment Development Department to 2007 wage levels.

³ Including occupations representing 4% or more of the major occupation group.

APPENDIX I TABLE 15
2006 NATIONAL RESIDENT SERVICES WORKER DISTRIBUTION BY OCCUPATION
DIRECT, INDIRECT AND INDUCED EMPLOYMENT IMPACTS WITHIN NAPA COUNTY
RESIDENTIAL NEXUS ANALYSIS
NAPA COUNTY

Major Occupations (2% or more)	2006 National Resident Services Occupation Distribution ¹
Management occupations	3.8%
Business and financial operations occupations	3.2%
Community and social services occupations	2.2%
Education, training, and library occupations	5.0%
Healthcare practitioners and technical occupations	7.3%
Healthcare support occupations	4.0%
Food preparation and serving related occupations	11.8%
Building and grounds cleaning and maintenance occupations	5.9%
Personal care and service occupations	4.4%
Sales and related occupations	12.1%
Office and administrative support occupations	16.4%
Construction and extraction occupations	3.5%
Installation, maintenance, and repair occupations	3.5%
Production occupations	2.1%
Transportation and material moving occupations	4.9%
All Other Resident Services Related Occupations	<u>9.9%</u>
INDUSTRY TOTAL	100.0%

¹ Distribution of employment by industry is per the IMPLAN model and the distribution of occupational employment within those industries is based on the Bureau of Labor Statistics Occupational Employment Survey.

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AVERAGE ANNUAL COMPENSATION, 2007
RESIDENT SERVICES WORKER OCCUPATIONS
DIRECT, INDIRECT AND INDUCED EMPLOYMENT IMPACTS - NAPA COUNTY
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Occupation ³	2007 Avg. Compensation ¹	% of Total Occupation Group ²	% of Total Resident Services Workers
Page 1 of 5			
<i>Management occupations</i>			
Chief executives	\$140,000	4.5%	0.2%
General and operations managers	\$121,200	29.5%	1.1%
Administrative services managers	\$81,600	4.2%	0.2%
Financial managers	\$106,000	7.2%	0.3%
Food service managers	\$58,500	5.3%	0.2%
Medical and health services managers	\$78,200	6.3%	0.2%
Property, real estate, and community association managers	\$52,400	7.0%	0.3%
Social and community service managers	\$65,500	4.4%	0.2%
All other Management Occupations	<u>\$83,200</u>	<u>31.5%</u>	<u>1.2%</u>
Weighted Mean Annual Wage	\$94,000	100.0%	3.8%
<i>Business and financial operations occupations</i>			
Claims adjusters, examiners, and investigators	\$59,400	4.8%	0.2%
Training and development specialists	\$61,400	4.0%	0.1%
Management analysts	\$74,200	6.3%	0.2%
Business operations specialists, all other	\$54,900	16.6%	0.5%
Accountants and auditors	\$70,100	20.8%	0.7%
Financial analysts	\$109,000	4.1%	0.1%
All Other Business and financial operations occupations (Avg. All Categories)	<u>\$67,400</u>	<u>43.4%</u>	<u>1.4%</u>
Weighted Mean Annual Wage	\$67,400	100.0%	3.2%
<i>Community and social services occupations</i>			
Substance abuse and behavioral disorder counselors	\$39,200	4.4%	0.1%
Educational, vocational, and school counselors	\$53,800	7.6%	0.2%
Mental health counselors	\$55,900	5.6%	0.1%
Rehabilitation counselors	\$33,900	8.6%	0.2%
Child, family, and school social workers	\$36,200	14.2%	0.3%
Medical and public health social workers	\$55,900	6.5%	0.1%
Mental health and substance abuse social workers	\$39,200	6.8%	0.1%
Social and human service assistants	\$35,800	21.1%	0.5%
Community and social service specialists, all other	\$38,600	6.3%	0.1%
All Other Community and social services occupations (Avg. All Categories)	<u>\$41,100</u>	<u>19.0%</u>	<u>0.4%</u>
Weighted Mean Annual Wage	\$41,100	100.0%	2.2%

APPENDIX I TABLE 16
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Occupation ³	2007 Avg. Compensation ¹	% of Total Occupation Group ²	% of Total Resident Services Workers
<i>Page 2 of 5</i>			
<i>Education, training, and library occupations</i>			
Postsecondary teachers, all other	\$59,200	4.4%	0.2%
Preschool teachers, except special education	\$39,200	13.1%	0.6%
Elementary school teachers, except special education	\$54,100	10.8%	0.5%
Middle school teachers, except special and vocational education	\$59,900	4.6%	0.2%
Secondary school teachers, except special and vocational education	\$51,600	7.3%	0.4%
Self-enrichment education teachers	\$38,500	5.0%	0.2%
Teachers and instructors, all other	\$71,300	7.0%	0.3%
Teacher assistants	\$25,200	15.4%	0.8%
All Other Education, training, and library occupations (Avg. All Categories)	<u>\$45,700</u>	<u>32.4%</u>	<u>1.6%</u>
Weighted Mean Annual Wage	\$45,700	100.0%	5.0%
<i>Healthcare practitioners and technical occupations</i>			
Registered nurses	\$43,900	33.8%	2.5%
Licensed practical and licensed vocational nurses	\$43,900	9.7%	0.7%
All Other Healthcare practitioners and technical occupations (Avg. All Categories)	<u>\$43,900</u>	<u>56.4%</u>	<u>4.1%</u>
Weighted Mean Annual Wage	\$43,900	100.0%	7.3%
<i>Healthcare support occupations</i>			
Home health aides	\$22,900	22.2%	0.9%
Nursing aides, orderlies, and attendants	\$30,200	30.7%	1.2%
Dental assistants	\$34,600	11.2%	0.4%
Medical assistants	\$32,200	15.4%	0.6%
Healthcare support workers, all other	\$33,100	5.2%	0.2%
All Other Healthcare support occupations (Avg. All Categories)	<u>\$29,400</u>	<u>15.4%</u>	<u>0.6%</u>
Weighted Mean Annual Wage	\$29,400	100.0%	4.0%
<i>Food preparation and serving related occupations</i>			
First-line supervisors/managers of food preparation and serving workers	\$37,500	6.9%	0.8%
Cooks, fast food	\$18,100	5.8%	0.7%
Cooks, restaurant	\$25,800	7.8%	0.9%
Food preparation workers	\$22,100	7.6%	0.9%
Bartenders	\$21,900	4.7%	0.6%
Combined food preparation and serving workers, including fast food	\$20,000	22.1%	2.6%
Counter attendants, cafeteria, food concession, and coffee shop	\$18,600	4.4%	0.5%
Waiters and waitresses	\$20,300	21.8%	2.6%
Dishwashers	\$18,800	4.7%	0.6%
All Other Food preparation and serving related occupations (Avg. All Categories)	<u>\$22,000</u>	<u>14.4%</u>	<u>1.7%</u>
Weighted Mean Annual Wage	\$22,000	100.0%	11.8%

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Occupation ³	2007 Avg. Compensation ¹	% of Total Occupation Group ²	% of Total Resident Services Workers
Page 3 of 5			
<i>Building and grounds cleaning and maintenance occupations</i>			
Janitors and cleaners, except maids and housekeeping cleaners	\$25,700	46.0%	2.7%
Maids and housekeeping cleaners	\$21,800	16.5%	1.0%
Landscaping and groundskeeping workers	\$28,900	25.7%	1.5%
All Other Building and grounds cleaning and maintenance occupations (Avg. All Cat	<u>\$25,900</u>	<u>11.8%</u>	<u>0.7%</u>
Weighted Mean Annual Wage	\$25,900	100.0%	5.9%
<i>Personal care and service occupations</i>			
Amusement and recreation attendants	\$20,600	5.8%	0.3%
Hairdressers, hairstylists, and cosmetologists	\$21,300	18.0%	0.8%
Child care workers	\$27,500	18.8%	0.8%
Personal and home care aides	\$22,600	21.1%	0.9%
Fitness trainers and aerobics instructors	\$28,600	6.8%	0.3%
Recreation workers	\$24,300	5.1%	0.2%
All Other Personal care and service occupations (Avg. All Categories)	<u>\$24,000</u>	<u>24.4%</u>	<u>1.1%</u>
Weighted Mean Annual Wage	\$24,000	100.0%	4.4%
<i>Sales and related occupations</i>			
First-line supervisors/managers of retail sales workers	\$42,400	9.2%	1.1%
Cashiers	\$24,500	27.4%	3.3%
Retail salespersons	\$25,600	38.5%	4.7%
Sales representatives, wholesale and manufacturing, except technical and scientific	\$80,800	4.1%	0.5%
All Other Sales and related occupations (Avg. All Categories)	<u>\$30,000</u>	<u>20.8%</u>	<u>2.5%</u>
Weighted Mean Annual Wage	\$30,000	100.0%	12.1%
<i>Office and administrative support occupations</i>			
First-line supervisors/managers of office and administrative support workers	\$53,500	5.7%	0.9%
Bookkeeping, accounting, and auditing clerks	\$39,000	7.7%	1.3%
Customer service representatives	\$36,200	7.6%	1.3%
Receptionists and information clerks	\$29,900	7.7%	1.3%
Stock clerks and order fillers	\$27,900	8.0%	1.3%
Executive secretaries and administrative assistants	\$44,300	6.6%	1.1%
Secretaries, except legal, medical, and executive	\$37,900	8.3%	1.4%
Office clerks, general	\$30,000	14.2%	2.3%
All Other Office and administrative support occupations (Avg. All Categories)	<u>\$36,000</u>	<u>34.0%</u>	<u>5.6%</u>
Weighted Mean Annual Wage	\$36,000	100.0%	16.4%

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Occupation ³	2007 Avg. Compensation ¹	% of Total Occupation Group ²	% of Total Resident Services Workers
<i>Page 4 of 5</i>			
<i>Construction and extraction occupations</i>			
First-line supervisors/managers of construction trades and extraction workers	\$67,300	8.7%	0.3%
Carpenters	\$49,700	16.1%	0.6%
Construction laborers	\$36,000	16.4%	0.6%
Operating engineers and other construction equipment operators	\$59,300	5.1%	0.2%
Electricians	\$64,800	8.8%	0.3%
Painters, construction and maintenance	\$36,300	4.6%	0.2%
Plumbers, pipefitters, and steamfitters	\$40,800	6.6%	0.2%
All Other Construction and extraction occupations (Avg. All Categories)	<u>\$49,600</u>	<u>33.7%</u>	<u>1.2%</u>
Weighted Mean Annual Wage	\$49,600	100.0%	3.5%
<i>Installation, maintenance, and repair occupations</i>			
First-line supervisors/managers of mechanics, installers, and repairers	\$63,600	7.9%	0.3%
Automotive body and related repairers	\$37,900	6.3%	0.2%
Automotive service technicians and mechanics	\$45,700	19.2%	0.7%
Heating, air conditioning, and refrigeration mechanics and installers	\$52,700	5.0%	0.2%
Maintenance and repair workers, general	\$42,300	29.5%	1.0%
All Other Installation, maintenance, and repair occupations (Avg. All Categories)	<u>\$46,100</u>	<u>32.2%</u>	<u>1.1%</u>
Weighted Mean Annual Wage	\$46,100	100.0%	3.5%
<i>Production occupations</i>			
First-line supervisors/managers of production and operating workers	\$68,900	5.3%	0.1%
Team assemblers	\$27,200	9.3%	0.2%
Bakers	\$25,600	5.8%	0.1%
Butchers and meat cutters	\$36,300	5.7%	0.1%
Laundry and dry-cleaning workers	\$21,300	12.5%	0.3%
Pressers, textile, garment, and related materials	\$20,300	4.4%	0.1%
Inspectors, testers, sorters, samplers, and weighers	\$32,300	4.5%	0.1%
Packaging and filling machine operators and tenders	\$32,600	4.9%	0.1%
Helpers--production workers	\$25,300	5.7%	0.1%
Production workers, all other	\$24,400	4.2%	0.1%
All Other Production occupations (Avg. All Categories)	<u>\$30,200</u>	<u>37.6%</u>	<u>0.8%</u>
Weighted Mean Annual Wage	\$30,200	100.0%	2.1%

APPENDIX I TABLE 16
AVERAGE ANNUAL COMPENSATION, 2007
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Occupation ³	2007 Avg. Compensation ¹	% of Total Occupation Group ²	% of Total Resident Services Workers
<i>Page 5 of 5</i>			
<i>Transportation and material moving occupations</i>			
Bus drivers, school	\$22,000	8.2%	0.4%
Driver/sales workers	\$30,500	7.5%	0.4%
Truck drivers, heavy and tractor-trailer	\$31,800	9.9%	0.5%
Truck drivers, light or delivery services	\$24,100	10.9%	0.5%
Taxi drivers and chauffeurs	\$25,200	4.1%	0.2%
Industrial truck and tractor operators	\$32,600	4.1%	0.2%
Cleaners of vehicles and equipment	\$21,200	6.8%	0.3%
Laborers and freight, stock, and material movers, hand	\$28,700	20.8%	1.0%
Packers and packagers, hand	\$18,500	9.4%	0.5%
All Other Transportation and material moving occupations (Avg. All Categories)	<u>\$26,200</u>	<u>18.4%</u>	<u>0.9%</u>
Weighted Mean Annual Wage	\$26,200	100.0%	4.9%
			90.1%

¹ Hourly paid employees are assumed to be employed full-time. Annual compensation is calculated by multiplying hourly wages by 40 hours per work week and 52 weeks per year.

² Occupation percentages are based on the 2006 National Industry - Specific Occupational Employment survey compiled by the Bureau of Labor Statistics. Wages are based on 2006 Occupational Employment Survey data for the Napa MSA (Napa County) updated by the California Employment Development Department to 2007 wage levels.

³ Including occupations representing 4% or more of the major occupation group.

SECTION IV: SPECIAL NOTES

Second or Vacation Homes

It is widely recognized that a portion of the homes currently being built in Napa (and existing homes purchased) are serving as second homes for affluent households. In terms of impacts from the residential nexus perspective, one might question whether these homes might not have lesser impacts. In this regard, several points are useful to note:

- Much of this activity is occurring in the luxury price ranges, in units more akin to the \$1.2 Million prototype units or even higher. At these price ranges, impacts are substantially greater due to the presumed higher income of the purchasers. Thus even if only a share of the impacts were counted, the County's 10% inclusionary requirement, or the proposed 20% requirement, would be supported by the analysis.
- Homes that are purchased as second homes do not necessarily remain second homes. The inclusionary requirement is a one time event that addresses the "project" impacts over the project's useful life. For assessing impacts, a unit that is suitable as a permanent residence should be treated as a permanent resident irrespective of the intent of the first purchaser (or renter).

For these reasons, no adjustment to the Residential Nexus Analysis is made to account for second or vacation home purchases.

Non-Residential Housing Fee – No Duplication

Since the early 1990's, Napa County has also been collecting housing impact fee revenues levied on most non-residential construction. The initial ordinance was adopted in 1993 and an update of the program was undertaken in 2004. KMA prepared the jobs housing nexus analyses for both the original program and the update. Concurrent with this report, KMA prepared a partial update to the 2004 analysis for use by the County in considering a revision to the fee levels. The jobs housing nexus analyses were based on similar logic to this residential nexus analysis: new workplace buildings translate to additional jobs, some of which do not pay well enough for the new worker households to afford housing in Napa. This section addresses the issue of possible over-lap or double counting of impacts between this residential nexus and the jobs-housing linkage fee.

New households in new residential buildings, through their demand for goods and services, generate new jobs in Napa. These new jobs are part of a larger employment market driven by demand for services by residents as well as by other sources of demand resulting in job growth in many sectors, including agriculture, manufacturing (wine industry), tourism and others.

Some of the jobs which are counted in the jobs-housing analysis are also counted in the residential nexus analysis. The potential degree of over-lap or double counting varies primarily by type of commercial use (i.e. supermarket vs. hotel). Restaurants represent a major industry in Napa that is clearly supported by both residents and visitors. Some jobs counted in the residential nexus are not addressed in the jobs housing analysis at all. For example, school and government employees are counted in the residential nexus analysis but are not counted in the jobs housing analysis, which is limited to private sector office buildings, retail and hotel projects.

There is theoretically a subset of buildings in which 100% of the jobs counted for purposes of the jobs-housing linkage fee are also counted for purposes of the residential nexus analysis. For example, a small retail store located in a residential area and entirely dependent upon customers from the local neighborhood. In this special case, the combined mitigation requirements for the residential and commercial buildings cannot exceed 100% of nexus for the commercial buildings. Although 100% overlap could occur only in the very narrowest set of circumstances, the following analysis demonstrates that the combined mitigation requirements do not exceed nexus in any case.

Jobs-Housing Fee Requirement as a Percent of Nexus

The following table summarizes the total nexus cost per square foot per KMA's 2004 Jobs Housing Nexus analysis update, and the current jobs-housing linkage fee per square foot and as a percentage of nexus.

	Office	Retail	Hotel	Mfg/Indus	Winery	Warehouse
Nexus Cost (Per Sq.Ft.)	\$24.29	\$65.90	\$55.28	\$15.58	\$6.05	\$4.90
Current Fee (Per Sq.Ft.)	\$2.00	\$2.00	\$3.00	\$1.00	\$1.00	\$0.80
Percent of Nexus Cost	8.2%	3.0%	5.4%	6.4%	16.5%	16.3%

The conclusion is that the current fee levels represent in the range of 3% to 16% of the nexus cost, per the 2009 report.

Even if Housing Impact fees on commercial construction were substantially raised, the percent of Total Nexus Cost, particularly in the most relevant retail category, would continue to be very low. The potential for overcharging would be minimal to non-existent.

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APPENDIX II: RESIDENTIAL VALUES – MARKET AND AFFORDABLE

This appendix section provides the building blocks for the values used in other sections of this report, by establishing both market values and affordable values for various types of residential units or projects potentially developed in Napa County.

Market values are based on surveys of newly developed residential units or projects in the Napa area covering a range of residential types: single family detached, attached units or condominiums, and rental apartments. Affordable values are based on formula, starting from the Napa County Area Median Income and amounts “affordable” for housing per state and local policies. The difference between market and affordable values for any given residential unit type, assuming a fixed unit size and occupying household, is referred to as the affordability gap. The affordability gaps play a major role in both residential and non residential components of the Affordable Housing Ordinance Revision programs.

A. MARKET VALUES

Market Surveys and Timing Issues

The surveys summarized in this appendix section were first conducted in early 2008 and then updated a year later due to the rapid changes in the housing market over the year and the national economic recession. A cross check to confirm the 2009 values was again undertaken in the summer 2009 to insure the use of suitable values for purposes of this analysis. As of the time of this writing, most state and national economists see minimal further declines in value and predict that values will begin moving in a positive direction in the near future, although the return to the peak values of a few years ago may take many years.

Market values for all units, new and old, plummeted some 30% to 35% in Napa in the year from December 2007 to December 2008. In early 2009, it appeared that the greatest decreases in value percentage-wise were experienced in the mid to lower tiers of the price structure. In the more recent months, values for all units appear to have stabilized, according to indices.

For the purposes of this analysis and revising the affordable housing programs, the objective is to not use the very bottom but the values expected to be experienced over the next several years. As a result, the values used in these analyses are lower than the 2008 survey results for all types of residential units.

It is important to note that the values determined from the surveys may not be sufficiently high to support the costs of development today. Many units have transacted at values that have not resulted in adequate profits for developers and developers likely would not undertake construction at these lower values. As a result, this analysis may reflect lower costs to developers of the on-site inclusionary requirements than will be the case and in lieu fee

equivalents could be understated. By the same reasoning, the nexus analysis summarized in Section I could be understated. On the other hand, a prolonged recession could result in land, construction, and other costs coming down, enabling development to resume at these lower values.

Geographic Variations in Napa County

The unincorporated area, the area where the Affordable Housing requirements of the existing and revised program will be in effect, does not include enough new development activity in a range of product types (condominiums, rentals, etc.) to provide a solid base of information. In addition, a large portion of the single family detached units built in the unincorporated county are either custom or single unit projects that do not get reported to Multiple Listing Services and other data monitoring entities. As a result, using only unincorporated area residential sales experience is inadequate for the purposes at hand.

Surveys of residential development activity in other Napa jurisdictions were conducted to determine the values of units in a range of types not developed in the unincorporated area in recent years and value changes from the earlier more comprehensive survey to the update a year later.

To cover the range, the following were examined:

- Napa City values, particularly of attached units – condominiums and townhomes since potentially units could be built in the County on parcels adjacent to the city of Napa. Also, it was possible to track same unit values in early 2008 and early 2009 to discern the decline in sales valuations per square foot. Napa City is also one of the only locations where there are recently developed apartment units. (Appendix II Tables 1 through 6)
- American Canyon is generally regarded as a separate market area. Different products are built in American Canyon, selling at a different price structure. Values were examined as a reference point and also for understanding rate of change over the period. (Appendix II Tables 7 and 8)
- The Up Valley cities of Rutherford, Yountville, St. Helena and Calistoga were instructive for the single family detached price structure and changes over the period. (Appendix II Tables 9 and 10)
- Berryessa and Pope Valley portions of the unincorporated area were important for identifying the lowest price structure portion of the county and how values differ from the average elsewhere (Appendix II Tables 11 and 12).

In our opinion, the Affordable Housing Program should be designed for the lower end of the average, for each of the housing product types. How the program impacts the higher end should also be understood and taken into account in the program design since the range is so broad. As for the lowest value areas, such as Berryessa and Pope Valley, instead of designing the program using the values in these areas, we would prefer an ordinance feature that favorably treats units that are more affordable than the market overall.

Market Value Conclusions

The market value conclusions, based on all the surveys and indices, for analysis and program design purposes are as follows:

- For new single family detached units, the lower end average unit value is estimated at \$700,000. The unit is assumed to be 2,000 square feet in size, selling for \$350 per square foot on average. Since the range in values is so broad, we also conducted the nexus, on-site compliance and in lieu fee analyses using a \$1.2 million, 3,000 square foot unit to illustrate the effect of higher values on program impacts.
- For attached or condominium units, the minimum newly constructed unit value is \$350,000. The unit is assumed to be a two bedroom unit, 1,000 square feet, selling for \$350 per square foot. This value represents the lowest of any ownership unit, with the exception of occasional small units, such as those built in the Berryessa and Pope Valley Areas.
- For rental apartments, a rent level of \$1.75 per square foot has been used. This translates to a two bedroom apartment of 900 square feet renting for \$1,575 per month. The unit value is approximately \$182,000 by the time operating expenses and vacancy allowance is taken into account, and the income is capitalized at 7%.

At this juncture, we would like to reiterate that these values are at the low end of the current experience range for new units. We believe these values are probably below the levels required to make projects feasible today. At these values, either there will be no new construction until the market recovers or the recession is prolonged to the point that land prices and construction costs will come down sufficiently to make projects feasible at these values. They have been selected for use in the analysis to be conservative and to demonstrate that even using these conservative analysis starting points, the current Affordable Housing Program can be updated and fees substantially increased over current levels.

B. AFFORDABLE VALUES

Affordable sales prices and rent levels are a function of the income level for which the unit is aimed to be affordable; the calculations are formula based according to a combination of statute and policy, both local and statewide.

The area median income is the starting point of the affordable rent/sales price calculation. The California Department of Housing and Community Development (HCD) sets and publishes Median Incomes for each county annually. The Napa County Area Median Income (AMI) in 2009 for a four person household is \$81,800.

The full set of data for a range of household sizes is provided in Appendix II, Tables 14 and 15. The analyses in the subsequent sections of this report use a number of different affordability levels or percent of AMI, depending on the application, as will be explained when used.

For purposes of calculating affordable rents and sales prices, current standards for relating number of bedrooms to household size are used. Studio units are for one person households, one bedroom units are for two person households, and so forth.

Affordable Sales Prices

The maximum affordable for sale unit price is calculated based on an assumption for the percent of income spent on housing, per state and local policy standard. The assumption used here is 35%, consistent with local policy and some State code sections. Housing expenditures for ownership units include mortgage payments, insurance, property taxes, utilities, and in the case of attached units, Home Owners Association dues (HOA).

Affordable prices were calculated for three income levels – 100%, 110% and 120% AMI. A sample of affordable sales prices for ownership units in the median to moderate range is presented below:

Median Income at 100% AMI	2 bedroom unit	\$231,050
Moderate income at 110% AMI	1 bedroom unit	\$229,400
Moderate income at 120% AMI	1 bedroom unit	\$254,400
Moderate income at 120% AMI	3 bedroom unit	\$319,250

Appendix II Table 14 presents the calculations for four different unit sizes and the three moderate income levels that are variously applicable to the program.

It should be noted that these calculations establish sales prices of units. Eligibility to buy and live in the units is set by a broader range of income level. For example, an affordable unit set at 110% AMI may be made available to households with incomes up to 120% AMI. These affordable sales prices, per the ordinance, establish the prices at which the developer must sell

the units regardless of the size of, and actual income of, the household to whom the units are sold.

Affordable Rent Levels

For rentals, affordable rent is based on 30% of household income available for rent and utilities, a standard used consistently throughout state and local programs. An average utility cost schedule is published annually by the local housing authority; KMA estimated utilities based on a common utility profile for rental units. Working from the starting point of the income level, the affordable rent is determined.

Affordable rents ranging from income levels as low as 40% AMI and up to 65% AMI and a number of levels in between are variously used in the subsequent analyses. Appendix Table 16 presents the calculations for four different unit sizes and five different income levels. Examples of affordable rent are as follows:

Very low income at 40% AMI	1 bedroom unit	\$667 per month
Low income at 60% AMI	2 bedroom unit	\$1,035 per month
Low income at 80% AMI	2 bedroom unit	\$1,403 per month
Low income at 80% AMI	studio unit	\$1,107 per month

As with the sales prices, the rent levels so defined (by unit size and income category) govern what the building owner may charge for a particular unit.

C. AFFORDABILITY GAPS

The affordability gaps are the differences between market values, which in normal market conditions closely approximate total development costs inclusive of profit, and affordable values. These gaps are relevant to the Affordable Housing Ordinance and how the program affects projects, and to the nexus studies. In the nexus studies, the affordability gap is the amount of subsidy dollars required to bridge the difference between the two values. In the case of non-profit developers of affordable units as in the use of housing Trust Fund monies, the various fees and extraordinary financing costs typically result in total development costs that are similar to totals costs experience in market rate projects.

Estimates of minimal development costs are taken from the market analysis described in previously. Development costs for ownership housing are estimated at \$350,000. Total development costs for a new apartment unit are estimated at \$182,000. For a nexus analysis, housing development costs are intended to represent low-end development costs and are designed to be averages across economic cycles. The development costs summarized above are on the low-end and many projects would be significantly more expensive to develop in Napa County, especially during market peaks. However, we believe that the estimates are conservative figures appropriate for use in the analysis.

The affordability gap for ownership units is the total development costs (\$350,000) less the affordable sales price. KMA calculated the affordability gaps for affordable units priced levels affordable to households at 100% AMI, 110% AMI and 120% AMI. For two bedroom units, the affordability gaps are as follows.

	<u>Sales Price</u>	<u>Development Costs</u>	<u>Affordability Gap</u>
Affordable to 100% AMI	\$231,050	\$350,000	\$118,950
Affordable to 110% AMI	\$258,950	\$350,000	\$91,050
Affordable to 120% AMI	\$286,850	\$350,000	\$63,150

The above affordability gaps are used in the nexus analysis. In addition, affordability gaps for condominiums and the two single family detached prototypes have relevance for understanding the effects of the on-site compliance requirements in larger projects. The affordability gaps represent forgone sales revenue to the developer from designating a unit as affordable. In other words, it is the difference between the market rate sales price and the restricted affordable sales price. The affordability gaps for the ownership unit prototypes priced at 110% are as follows.

	<u>Condominium</u>	<u>SFD1</u>	<u>SFD2</u>
Market Sales Price	\$350,000	\$700,000	\$1,200,000
Affordable Price @110% AMI	\$259,000	\$288,000	\$311,000
Affordability Gap	\$91,000	\$412,000	\$889,000

Tables 16 and 17, in Appendix I, present an overview of the affordability gap calculations for ownership units.

For rental units it is necessary to convert the net annual income to the value of the unit, which, when development is feasible, is at least as much or more than the cost to develop the unit. Rental unit value relative to net annual income is determined by the annual income net of operating expenses and vacancy allowance, converted to value at a capitalization rate. At the current time, a capitalization rate of 6% is used for the market rate units and 7% for the affordable or income restricted units. A few years ago lower capitalization rates were used, resulting in higher values for the same income. KMA calculated the affordability gaps at the following affordability levels: 40%, 50%, 60%, 65% and 80% AMI. For two-bedroom units, the affordability gaps are as follows.

	<u>Unit Value</u>	<u>Development Costs</u>	<u>Affordability Gap</u>
Affordable to 40% AMI	\$36,000	\$182,000	\$146,000
Affordable to 50% AMI	\$66,000	\$182,000	\$116,000
Affordable to 60% AMI	\$83,000	\$182,000	\$99,000
Affordable to 65% AMI	\$96,000	\$182,000	\$86,000
Affordable to 80% AMI	\$135,000	\$182,000	\$47,000

Table 18, in Appendix II, present the calculation of affordability gaps.

**APPENDIX II TABLE 1
ASKING PRICES IN NAPA CITY
NEW SINGLE FAMILY DETACHED AND TOWNHOME PROJECTS
AFFORDABLE HOUSING ORDINANCE REVISIONS ANALYSIS
NAPA COUNTY, CA**

<u>Single Family Detached</u>	<u>Bd.</u>	<u>Ba.</u>	<u>SF</u>	<u>September 2007</u>		<u>November 2008</u>		<u>Difference</u>
				<u>Asking Price</u>	<u>\$/SF</u>	<u>Asking Price</u>	<u>\$/SF</u>	
NAPA CITY								
CHURCHILL TRAILS								
Plan 1	3	3	1,743	\$519,900	\$298	\$469,900	\$270	(\$50,000)
Plan 2	3	2.5	1,919	\$529,900	\$276	\$479,900	\$250	(\$50,000)
Plan 3	3	2.5	2,087	\$539,900	\$259	\$489,900	\$235	(\$50,000)
Plan 4	3	3.5	2,437	\$569,900	\$234	\$569,900	\$234	\$0
LAVENDER HILL								
Plan 2	4	2.5	2,450	\$719,900	\$294	\$689,900	\$282	(\$30,000)
Plan 3	4	2.5	2,517	\$739,900	\$294	\$669,900	\$266	(\$70,000)
Plan 1	4	3	2,924	\$759,900	\$260	\$675,900	\$231	(\$84,000)
Plan 4	5	3	3,062	\$769,900	\$251	\$739,900	\$242	(\$30,000)
OAK LEAF RANCH								
Plan 2	4	3	2,589	\$849,900	\$328	\$856,317	\$331	\$6,417
Plan 3	4	3	2,640	\$939,900	\$356	\$893,844	\$339	(\$46,056)
Plan 1	3	3	2,640	\$893,844	\$339	\$957,999	\$363	\$64,155
Plan 4	5	3.5	2,867	\$889,900	\$310	\$897,999	\$313	\$8,099
Plan 5	3	2.5	2,932	\$914,900	\$312	\$899,359	\$307	(\$15,541)
WILLOWBEND								
Plan 1	3	2	2,000	\$759,000	\$380	\$699,000	\$350	(\$60,000)
Plan 2	4	3	2,097	\$744,000	\$355	\$690,000	\$329	(\$54,000)
Plan 3	4	2.5	2,334	\$749,000	\$321	\$700,000	\$300	(\$49,000)
Plan 5	3	2.5	2,478	\$749,000	\$302	\$719,000	\$290	(\$30,000)
Plan 4	4	2.5	3,116	\$779,000	\$250	\$779,000	\$250	\$0
Weighted Average, Napa	4	3	2,375	\$708,700	\$300	\$673,700	\$284	(\$35,000)
VALLEY OAK VILLAS (TOWNHOMES)								
Two Bedroom	2	2	1,000	\$495,000	\$495	\$369,000	\$369	(\$126,000)
Three Bedroom	3	2.5	1,168	\$582,000	\$498	\$379,000	\$324	(\$203,000)
Weighted Average, Napa TH	3	2	1,102	\$547,957	\$497	\$375,087	\$342	(\$172,870)

Source: Hanley Wood, Sep 2007 and Nov 2008

Keyser Marston Associates, Inc.

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APPENDIX II TABLE 2
ASKING PRICES - NEW FOR-SALE UNITS
NEW SINGLE FAMILY DETACHED AND TOWNHOME PROJECTS
AFFORDABLE HOUSING ORDINANCE REVISIONS ANALYSIS
NAPA COUNTY, CA

Project	Units Sold	Bd.	Ba.	SF	Asking Price	\$/SF	Notes
NAPA CITY							
CHURCHILL TRAILS							
Plan 1	7	3	3	1,743	\$469,900	\$270	90 units planned; 35 released; 27 sold. HOA dues: \$130
Plan 2	9	3	2.5	1,919	\$479,900	\$250	
Plan 3	6	3	2.5	2,087	\$489,900	\$235	
Plan 4	5	3	3.5	2,437	\$569,900	\$234	
HIDDEN HILLS							
Glen Plan 1	0	3	2.5	2,337	\$775,000	\$332	71 units planned; 16 released; 4 sold. HOA Dues: \$182
Glen Plan 3	1	3	3.5	2,861	\$865,000	\$302	
Glen Plan 4	2	4	3	3,018	\$895,000	\$297	
Summit Plan 2	0	3	3	3,197	\$1,095,000	\$343	
Summit Plan 3	0	3	2.5	3,436	\$1,195,000	\$348	
Summit Plan 4	0	4	3.5	3,758	\$1,295,000	\$345	
Summit Plan 5	1	4	3.5	3,844	\$1,295,000	\$337	
LAVENDER HILL							
Plan 2	5	4	2.5	2,450	\$689,900	\$282	21 planned; 21 released; 18 sold
Plan 3	3	4	2.5	2,517	\$669,900	\$266	
Plan 1	4	4	3	2,924	\$675,900	\$231	
Plan 4	6	5	3	3,062	\$739,900	\$242	
LINCOLN SQUARE							
Barbera	2	4	2.5	2,211	\$649,990	\$294	10 planned; 10 released; 2 sold HOA dues: \$130
Syra	0	4	3	2,715	\$719,000	\$265	
OAK LEAF RANCH							
Plan 2	5	4	3	2,589	\$856,317	\$331	45 planned; 25 released; 16 sold. HOA dues: \$116
Plan 3	2	4	3	2,640	\$893,844	\$339	
Plan 1	3	3	3	2,640	\$957,999	\$363	
Plan 4	4	5	3.5	2,867	\$897,999	\$313	
Plan 5	2	3	2.5	2,932	\$899,359	\$307	
WALDEN GLEN							
Residence 1	4	3	3	2,002	\$769,900	\$385	18 planned; 18 released; 6 sold
Residence 2	3	4	3	2,778	\$899,000	\$324	
Residence 3	2	3	3	2,904	\$829,900	\$286	
Residence 4	3	5	4.5	3,611	\$995,900	\$276	
WILLOWBEND							
Plan 1	5	3	2	2,000	\$699,000	\$350	Sold out July 2008.
Plan 2	6	4	3	2,097	\$690,000	\$329	
Plan 3	8	4	2.5	2,334	\$700,000	\$300	
Plan 5	5	3	2.5	2,478	\$719,000	\$290	
Plan 4	1	4	2.5	3,116	\$779,000	\$250	
Weighted Average, Napa SFD		4	3	2,446	\$707,900	\$290	
VALLEY OAK VILLAS (TOWNHOMES)							
Two Bedroom	9	2	2	1,000	\$369,000	\$369	Sales halted May 2008.
Three Bedroom	14	3	2.5	1,168	\$379,000	\$324	
Two Bedroom Plus	12	3	2.5	1,382	\$399,000	\$289	
Three Bedroom + loft	4	4	3	2,416	\$650,000	\$269	
Weighted Average, Napa TH		3	2	1,323	\$410,641	\$318	

Source: Hanley Wood, Sep 2007 and Nov 2008

Prepared by: Keyser Marston Associates, Inc.

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APPENDIX II TABLE 3
APARTMENT ASKING RENTS - CITY OF NAPA, CA
AFFORDABLE HOUSING ORDINANCE REVISIONS ANALYSIS
NAPA COUNTY, CA

<u>Project</u>	<u>Bd.</u>	<u>Ba.</u>	<u>SF</u>	<u>Rent</u>	<u>\$/SF</u>	<u>Notes</u>
<i>New Units</i>						
HAWTHORN VILLAGE						
Aegean	1	1	790	\$1,550	\$1.96	44 new units in 2007.
Adriadic	2	1	932	\$1,698	\$1.82	
Baltic	2	2	1,136	\$1,858	\$1.64	
Caspian	2	2	1,240	\$2,005	\$1.62	
Danube	3	2	1,454	\$2,195	\$1.51	
SARATOGA DOWNS						
Model 1A	1	1	863	\$1,200	\$1.39	Built in 2007.
Model 2A	2	2	1,163	\$1,450	\$1.25	
Model 2B	2	2	932	\$1,350	\$1.45	
Model 3A	3	2	1,179	\$1,650	\$1.40	
<i>Older Units/Remodeled Units</i>						
VINEYARD TERRACE						
1 Bedroom	1	1	778	\$1,260	\$1.62	Remodeled.
2 Bedroom	2	1-2	938	\$1,500	\$1.60	
3 Bedroom	3	2	1,296	\$1,825	\$1.41	
MONTRACHET APARTMENTS						
Auberge	1	1	552	\$1,350	\$2.45	Built in 2004.
Bouchon	1	1	744	\$1,450	\$1.95	
Copia	1	1	823	\$1,550	\$1.88	
Grgich	2	2	1,052	\$1,750	\$1.66	
Etude	2	2	1,142	\$1,875	\$1.64	
Franciscan	2	2	1,096	\$2,013	\$1.84	
Domaine	2	2	1,196	\$1,950	\$1.63	

Sources: ForRent.com, Rent.com.

APPENDIX II TABLE 4
MARKET RATE HOUSING SURVEY
NAPA CITY - SINGLE FAMILY DETACHED PROJECTS
AFFORDABLE HOUSING ORDINANCE REVISIONS ANALYSIS
NAPA COUNTY, CA

<u>Project/Unit Mix</u>	<u>Units</u> <u>Sold</u>	<u>%</u> <u>Total</u>	<u>Bd.</u>	<u>Ba.</u>	<u>Bldg</u> <u>SF</u>	<u>Recent</u> <u>Price</u>	<u>\$/SF</u>
Seabiscuit	31		2	2.5	1,627	\$490,000	\$301
Brescia X	6		2	3	2,573	\$899,990	\$350
Plan 1	3		3	3	1,743	\$519,900	\$298
Plan 2	3		3	2.5	1,919	\$529,900	\$276
Plan 3	2		3	2.5	2,087	\$539,900	\$259
Plan 4	4		3	3.5	2,437	\$569,900	\$234
Plan One	2		3	3	2,640	\$939,900	\$356
Plan Five	1		3	2.5	2,932	\$914,900	\$312
One	3		3	2	2,000	\$759,000	\$380
Five	2		3	2.5	2,478	\$749,000	\$302
Citation	28		3	2.5	1,668	\$535,900	\$321
Kelso	29		3	2.5	1,998	\$615,900	\$308
Brookstone	2		3	2	2,000	\$759,900	\$380
Fieldstone	5		3	2.5	2,362	\$799,900	\$339
Plan 6	3		3	3	2,560	\$979,000	\$382
Plan 2	4		3	3.5	3,416	\$1,170,000	\$343
Plan 1	3		3	2	2,000	\$749,000	\$375
Siena	9		3	2	2,014	\$739,900	\$367
Roma	5		3	3	2,511	\$779,900	\$311
Brescia	7		3	3	2,600	\$849,990	\$327
8	3		3	2.5	3,477	\$1,475,000	\$424
2	8		3	3.5	3,580	\$1,795,000	\$501
4	6		3	4	4,527	\$2,295,000	\$507
The Anjou	5		3	2.5	1,791	\$502,950	\$281
The Bartlett	7		3	2.5	2,275	\$591,950	\$260
The Bosc	9		3	2.5	2,298	\$589,950	\$257
Subtotal (Wt. Avg.)	190	64%		2.7	2,202	\$752,366	\$329
Plan Two	0		4	2.5	2,450	\$719,900	\$294
Plan Three	1		4	2.5	2,517	\$739,900	\$294
Plan One	0		4	3	2,924	\$759,900	\$260
Plan Two	2		4	3	2,589	\$849,900	\$328
Plan Three	1		4	3	2,640	\$893,844	\$339
Two	3		4	3	2,097	\$744,000	\$355
Three	2		4	2.5	2,334	\$749,000	\$321
Four	2		4	2.5	3,116	\$779,000	\$250
Laurelstone	3		4	3	2,852	\$851,900	\$299
Plan 4	5		4	3.5	2,616	\$995,000	\$380
Plan 2	2		4	3	2,097	\$774,000	\$369
Plan 3	3		4	2.5	2,334	\$785,000	\$336
Plan 4	3		4	2.5	2,639	\$819,000	\$310
Altamira	6		4	4	3,227	\$819,900	\$254
Florence	7		4	3	3,267	\$924,990	\$283
Marsala	8		4	3.5	3,423	\$984,990	\$288
Tuscana	8		4	3.5	3,511	\$924,990	\$263
Valencia X	3		4	4.5	3,862	\$974,990	\$252
Valencia	3		4	4.5	3,917	\$1,029,990	\$263
1	9		4	2.5	3,085	\$1,495,000	\$485
3	7		4	3.5	3,263	\$1,495,000	\$458
7	6		4	3.5	3,752	\$1,525,000	\$406
5	7		4	3.5	3,835	\$1,795,000	\$468
6	4		4	3.5	4,915	\$1,775,000	\$361
The Comice	10		4	2.5	2,275	\$629,950	\$277
Subtotal (Wt. Avg.)	105	35%		3.2	3,159	\$1,087,961	\$342
Plan Four	1		5	3	3,062	\$769,900	\$251
Plan Four	1		5	3.5	2,867	\$889,900	\$310
Subtotal (Wt. Avg.)	2	1%		3.3	2,965	\$829,900	\$281
2003 - 2007 NAPA CITY WEIGHTED AVG.	297	100%			2,546	\$871,533	\$333

Source: Hanley Wood, September 2007

Prepared by: Keyser Marston Associates, Inc.;

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APPENDIX II TABLE 5
MARKET RATE HOUSING SURVEY
NAPA CITY - SINGLE FAMILY ATTACHED PROJECTS 2007
AFFORDABLE HOUSING ORDINANCE REVISIONS ANALYSIS
NAPA COUNTY, CA

<u>Project/Unit Mix</u>	<u>Units Sold</u>	<u>% Total</u>	<u>Bd.</u>	<u>Ba.</u>	<u>Bldg SF</u>	<u>Recent Price</u>	<u>\$/SF</u>
Two Bedroom	6		2	2	1,000	\$495,000	\$495
California Blvd #36	1		2	1.5	1,070	\$499,000	\$466
California Blvd #32	1		2	1.5	1,070	\$499,000	\$466
California Blvd #6	1		2	1.5	1,077	\$569,000	\$528
California Blvd #10	1		2	1.5	1,119	\$569,000	\$508
California Blvd #8	1		2	1.5	1,119	\$569,000	\$508
California Blvd #25	1		2	1.5	1,248	\$569,000	\$456
California Blvd #28	1		2	1.5	1,248	\$569,000	\$456
California Blvd #21	1		2	1.5	1,248	\$569,000	\$456
California Blvd #24	1		2	1.5	1,248	\$569,000	\$456
Subtotal (Wt. Avg.)	15	75%			1,096	\$530,067	\$485
Three Bedroom	4		3	2.5	1,168	\$582,000	\$498
California Blvd #31	1		3	2.5	1,521	\$659,000	\$433
Subtotal (Wt. Avg.)	5	25%			1,239	\$597,400	\$485
2007 NAPA CITY WEIGHTED AVG.	20	100% (total)			1,132	\$546,900	\$485

Source: Hanley Wood, September 2007, MLS Listings 10/15/07

APPENDIX II TABLE 6
COMPARABLE RENTAL UNITS
AFFORDABLE HOUSING ORDINANCE REVISIONS ANALYSIS

Project	No. of Units	Occu-pancy	Floor Plans	Unit Size	Monthly Rent	\$ per Sq. Ft.	Amenities	Parking	Resident Profile	Comments
Montrachet 3200 Soscol Avenue Napa	200 Built in 2004	93.0%	126 1-Bd, 1-Ba 74 2-Bd, 2-Ba	552 - 823 1,052 - 1,196	\$1,350 - \$1,585 \$1,700 - \$2,125	\$1.85 - \$2.45 \$1.61 - \$1.94	Granite counters, marble vanities, wine rack, DW, W/D, A/C, walk-in closet, cable, broadband, patio or balcony.	1 bldg w/ underground parking. Assigned carport parking. Unassigned uncovered parking.	Professionals such as traveling nurses, retired people, a couple families, newlyweds	Project amenities include barbecue, clubhouse, fitness center, heated swimming pool, concierge, courtesy patrol.
The Lodge at Napa Junction 5500 Eucalyptus Drive American Canyon	216 Built in 2006	77.0%	96 1-Bd, 1-Ba 108 2-Bd, 2-Ba 12 3-Bd, 2-Ba	715 - 841 970 - 1,085 1,322	\$1,395 - \$1,545 \$1,685 - \$1,750 \$2,025 - \$2,850	\$1.84 - \$1.96 \$1.61 - \$1.74 \$1.53 - \$2.16	GE appliances, 9-ft ceilings, crown molding, full-size W/D, DW, microwave, broadband, cable, patio or balcony. Built to condo specs. Condo mapped.	Carports, surface parking, select units have private garage w/opener.	Professionals, many from the medical industry. Wide range of ages	Select units w/fireplace. Project amenities include resort style pool, spa, outdoor fireplace, 2 computer labs, clubroom w/plasma TV, fitness center. Corporate suites available.
Azure at Lakeville Square 1 Indigo Drive Petaluma	147 Complete in January 2008		1-Bd, 1-Ba 2-Bd, 2-Ba 2-Bd, 2.5-Ba TH	700 - 810 950 - 1,035 1,810	\$1,475 - \$1,650 \$1,850 - \$1,975 \$2,700	\$2.04 - \$2.11 \$1.91 - \$1.95 \$1.49	Whirlpool appliances, Kohler plumbing fixtures, W/D, granite counters, DW, A/C, large MBR closets, track lighting, cultured granite in master bath, cable, broadband.	Surface and covered parking, TH units include 2-car tandem garage.	Single and couples, business professionals.	Heated pool, clubhouse, spa, fitness center. Located next to Lakeville Square retail center.
The Waterfront Apartments 1st Street & E Street Petaluma	90 Built in 2006		5 Studios 28 1-Bd, 1-Ba 53 2-Bd, 2-Ba 2-Bd, 2-Ba TH 4 2-Bd, 2-Ba LW	560 - 575 750 - 1,040 1,022 - 1,100 1,226 - 1,265	\$1,400 - \$1,500 \$1,550 - \$1,600 \$1,700 - \$2,100 \$2,800 \$3,400	\$2.50 - \$2.61 \$1.52 - \$1.54 \$1.66 - \$1.91 \$2.21 - \$2.28	High end kitchen appliances, DW, W/D, A/C, granite counter tops, microwave, walk-in closet, cable, broadband, balcony or patio.	On-site, assigned surface parking and carports.		River views, water, sewer and garbage included, located in the Theatre District near Downtown Petaluma.
The Lofts at Basin Street Landing 2nd Street & C Street Petaluma	54 Built in 2006		Studios 1-Bd 1-Bd, Study 2-Bd 2-Bd, Study		\$1,400 - \$1,600 \$1,800 - \$2,000 \$2,600		Granite counters, black appliances, pendent lighting, polished black cement floors, microwave, DW, W/D, 20-ft. vaulted ceilings, double-paned windows, cable, broadband.	Covered and open parking.		River views, water/sewer/garbage included, located in the Theatre District near Downtown Petaluma.

**APPENDIX II TABLE 7
ASKING PRICES IN AMERICAN CANYON
NEW SINGLE FAMILY DETACHED AND TOWNHOME PROJECTS
AFFORDABLE HOUSING ORDINANCE REVISIONS ANALYSIS
NAPA COUNTY, CA**

<u>Project</u>	<u>Bd.</u>	<u>Ba.</u>	<u>SF</u>	<u>September 2007</u>		<u>November 2008</u>		<u>Difference</u>
				<u>Asking Price</u>	<u>\$/SF</u>	<u>Asking Price</u>	<u>\$/SF</u>	
AMERICAN CANYON								
BERGAMO AT VINTAGE RANCH								
Classic	4	3	2,591	\$683,400	\$264	\$504,900	\$195	(\$178,500)
Villa	4	3	2,803	\$695,800	\$248	\$504,900	\$180	(\$190,900)
Reserve	4	2.5	2,816	\$715,650	\$254	\$529,900	\$188	(\$185,750)
Estate	5	3	2,972	\$730,900	\$246	\$539,900	\$182	(\$191,000)
DOLCETTO AT VINTAGE RANCH								
Trentino	4	3	2,810	\$789,000	\$281	\$699,900	\$249	(\$89,100)
Marquesa	4	3.5	3,116	\$883,713	\$284	\$632,000	\$203	(\$251,713)
Umbria	5	3.5	3,416	\$884,603	\$259	\$661,500	\$194	(\$223,103)
Campanio	4	3.5	3,545	\$828,400	\$234	\$629,900	\$178	(\$198,500)
Tuscany	5	3.5	3,820	\$926,900	\$243	\$689,900	\$181	(\$237,000)
Genoa	5	3.5	3,985	\$942,900	\$237	\$709,900	\$178	(\$233,000)
LUCERA AT VINTAGE RANCH								
Romano	3	2	1,842	\$589,000	\$320	\$474,518	\$258	(\$114,482)
Siena	4	3	2,153	\$669,952	\$311	\$476,480	\$221	(\$193,472)
Augusta	4	2.5	2,408	\$681,522	\$283	\$516,809	\$215	(\$164,713)
Castello	4	3	2,740	\$690,197	\$252	\$478,900	\$175	(\$211,297)
Vittoria	5	3	2,871	\$724,732	\$252	\$533,190	\$186	(\$191,542)
MARSANNE AT VINTAGE RANCH								
Cielo	4	3.5	2,699	\$762,900	\$283	\$554,900	\$206	(\$208,000)
Allegro	4	3.5	2,751	\$729,900	\$265	\$549,900	\$200	(\$180,000)
Dolce	5	4	3,578	\$832,900	\$233	\$559,900	\$156	(\$273,000)
Felice	6	5	3,625	\$838,600	\$231	\$715,900	\$197	(\$122,700)
Weighted Average, AmCan SF	4.3	3.135	2,804	\$728,758	\$264	\$543,334	\$197	(\$185,424)

Source: Hanley Wood, Sep 2007 and Nov 2008

Keyser Marston Associates, Inc.

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APPENDIX II TABLE 8
MARKET RATE HOUSING SURVEY
AMERICAN CANYON - SINGLE FAMILY DETACHED PROJECTS (2007)
AFFORDABLE HOUSING ORDINANCE REVISIONS ANALYSIS
NAPA COUNTY, CA

<u>Project/Unit Mix</u>	<u>Units</u> <u>Sold</u>	<u>%</u> <u>Total</u>	<u>Bd.</u>	<u>Ba.</u>	<u>Bldg</u> <u>SF</u>	<u>Recent</u> <u>Price</u>	<u>\$/SF</u>
Romano	34		3	2	1,842	\$589,000	\$320
The Bluebird	15		3	2	2,136	\$681,160	\$319
The Madison	23		3	2.5	2,594	\$584,990	\$226
Verona	25		3	2	1,924	\$449,990	\$234
Cabrillo	23		3	2.5	2,550	\$481,990	\$189
Elkenbary	41		3	2	2,223	\$517,400	\$233
Sandpiper	39		3	3	2,756	\$601,990	\$218
Heron	50		3	3	3,132	\$572,490	\$183
Subtotal (Wt. Avg.)	250	22%		2.4	2,465	\$557,397	\$233
Classic	38		4	3	2,591	\$683,400	\$264
Villa	40		4	3	2,803	\$695,800	\$248
Reserve	39		4	2.5	2,816	\$715,650	\$254
Trentino	6		4	3	2,810	\$789,000	\$281
Marquesa	7		4	3.5	3,116	\$883,713	\$284
Campania	5		4	3.5	3,545	\$828,400	\$234
Siena	34		4	3	2,153	\$669,952	\$311
Augusta	34		4	2.5	2,408	\$681,522	\$283
Castello	36		4	3	2,740	\$690,197	\$252
Cielo	29		4	3.5	2,699	\$762,900	\$283
Allegro	30		4	3.5	2,751	\$729,900	\$265
The Cardinal	18		4	3	2,445	\$701,035	\$287
The _____	19		4	2.5	3,052	\$839,923	\$275
The Jefferson	27		4	2.5	3,068	\$564,990	\$184
Portofino	19		4	3	2,975	\$534,990	\$180
Monticello	20		4	3	3,460	\$549,990	\$159
Williams	44		4	2.5	2,682	\$528,140	\$197
Seriano	50		4	2.5	2,711	\$558,300	\$206
Quail	41		4	2	2,378	\$519,990	\$219
Meadowlark	41		4	2	2,689	\$542,990	\$202
Crane	28		4	2.5	2,855	\$612,490	\$215
Subtotal (Wt. Avg.)	605	54%		2.7	2,716	\$642,105	\$239
Estate	36		5	3	2,972	\$730,900	\$246
Umbria	4		5	3.5	3,416	\$884,603	\$259
Tuscany	4		5	3.5	3,820	\$926,900	\$243
Genoa	6		5	3.5	3,985	\$942,900	\$237
Vittoria	36		5	3	2,871	\$724,732	\$252
Dolce	31		5	4	3,578	\$832,900	\$233
The Goldfinch	17		5	3	2,887	\$804,744	\$279
The Nightengale	20		5	3	3,565	\$667,990	\$187
The _____	29		5	3	3,586	\$599,990	\$167
The Baxter	19		5	3.5	3,534	\$584,625	\$165
The Hannigan	23		5	3	3,579	\$626,845	\$175
The Marceau	17		5	4	3,835	\$625,585	\$163
Felice	29		6	5	3,625	\$838,600	\$231
Subtotal (Wt. Avg.)	271	24%		3.5	3,388	\$723,417	\$216
2003 - 2007 AMERICAN CYN WEIGHTED	1,126	100%			2,822	\$642,867	\$232

Source: Hanley Wood, September 2007

Prepared by: Keyser Marston Associates, Inc.;

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11/7/2007

APPENDIX II TABLE 9
ASKING PRICES IN UPVALLEY CITIES
SINGLE FAMILY DETACHED PROJECTS - RECENT LISTINGS (2009)
AFFORDABLE HOUSING ORDINANCE REVISIONS ANALYSIS
NAPA COUNTY, CA

<u>Address</u>	<u>Location</u>	<u>Bd.</u>	<u>Ba.</u>	<u>Bldg SF</u>	<u>Asking Price</u>	<u>\$/SF</u>
Myrtle St	Calistoga	3	3	2,490	\$799,000	\$321
Lande Way	Calistoga	3	3	1,842	\$999,999	\$543
Lande Way	Calistoga	4	3	2,718	\$1,295,000	\$476
	Calistoga	2	2	2,250	\$1,295,000	\$576
Firview Dr	Calistoga	3	3	2,750	\$1,595,000	\$580
Myrtledale	Calistoga	3	3	3,050	\$1,650,000	\$541
Greenwood Ave	Calistoga	2	3	2,400	\$2,895,000	\$1,206
Hwy 128	Calistoga	4	5	4,000	\$3,695,000	\$924
	Calistoga	4	4	3,718	\$3,900,000	\$1,049
Pickett Road	Calistoga	3	5	6,006	\$4,495,000	\$748
Allison Ave	St. Helena	3	3	1,600	\$750,000	\$469
Allison Ave	St. Helena	3	3	1,650	\$750,000	\$455
Allison Ave	St. Helena	3	3	1,600	\$795,000	\$497
McCorkle	St. Helena	3	3	2,568	\$1,750,000	\$681
Adams	St. Helena	3	3	2,932	\$2,695,000	\$919
Hudson	St. Helena	4	4	3,100	\$2,695,000	\$869
Adams St	St. Helena	3	3	3,094	\$2,975,000	\$962
* Spring Mountain Rd	St. Helena	3	5	3,914	\$5,900,000	\$1,507
* Sage Canyon Rd	St. Helena	4	5	5,000	\$6,950,000	\$1,390
* White Sulphur Spring	St. Helena	3	4	8,700	\$18,750,000	\$2,155
Jefferson St	Yountville	3	2	1,178	\$639,950	\$543
Average				3,170	\$3,203,283	\$829
Average excluding properties indicated with *				2,719	\$1,981,608	\$687
Median				2,750	\$1,750,000	\$681
CONDO						
Lommel Rd	Calistoga	2	4	2,500	\$475,000	\$190

All houses built since 2000.

Source: MLS Listings January 2009.

APPENDIX II TABLE 10
MARKET RATE HOUSING SURVEY
UPVALLEY CITIES - SINGLE FAMILY DETACHED PROJECTS
AFFORDABLE HOUSING ORDINANCE REVISIONS ANALYSIS
NAPA COUNTY, CA

<u>Project/Unit Mix</u>	<u>Units Sold</u>	<u>% Total</u>	<u>Bd.</u>	<u>Ba.</u>	<u>Bldg SF</u>	<u>Recent Price</u>	<u>\$/SF</u>
Lantana, Yountville	5	12%	2	2	1,917	\$1,035,000	\$540
Hyacinth, Yountville	8		3	2.5	1,685	\$895,000	\$531
Wisteria, Yountville	5		3	2.5	2,166	\$1,050,000	\$485
Pope St., St. Helena	1		3	3	1,800	\$1,249,500	\$694
St. Helena	1		3	3	2,932	\$2,800,000	\$955
Calistoga	1		3	2.5	1,990	\$739,000	\$371
Calistoga	1		3	3	1,900	\$769,000	\$405
Calistoga	1		3	2	2,148	\$810,000	\$377
Calistoga	1		3	2	2,093	\$815,000	\$389
Calistoga	1		3	2.5	2,099	\$820,000	\$391
Calistoga	1		3	2.5	2,700	\$849,000	\$314
Emerald Dr., Calistoga	1		3	2	2,090	\$875,000	\$419
Emerald Dr., Calistoga	1		3	2.5	2,063	\$895,000	\$434
Myrtle St., Calistoga	1		3	2	1,760	\$995,000	\$565
Subtotal (Wt. Avg.)	24	56%		2.5	1,995	\$1,001,104	\$499
Begonia, Yountville	7		4	3	2,505	\$1,280,000	\$511
Camellia, Yountville	5		4	3	2,645	\$1,170,000	\$442
Stockton St., St. Helena	1		4	3.5	3,000	\$1,775,000	\$592
Stockton St., St. Helena	1		4	3.5	3,000	\$1,775,000	\$592
Subtotal (Wt. Avg.)	14	33%		3.1	2,626	\$1,311,429	\$498
WEIGHTED AVERAGE	43	100%			2,191	\$1,106,081	\$504

Sources: Hanley Wood, September 2007, MLS Listings 10/15/07

APPENDIX II TABLE 11
ASKING PRICES IN UNINCORPORATED AREAS
SINGLE FAMILY DETACHED PROJECTS
AFFORDABLE HOUSING ORDINANCE REVISIONS ANALYSIS
NAPA COUNTY, CA

<u>Address</u>	<u>Location</u>	<u>Bd.</u>	<u>Ba.</u>	<u>Bldg</u> <u>SF</u>	<u>Asking</u> <u>Price</u>	<u>\$/SF</u>
White Cottage Road	Angwin	2	2	2,388	\$1,295,000	\$542
Near Steel Park	Berryessa	3	2	1,152	\$189,000	\$164
Rimrock Dr	Berryessa	3	2	1,065	\$199,500	\$187
Rimrock Dr	Berryessa	3	2	1,340	\$230,000	\$172
Arroyo Grande Dr	Berryessa	3	2	1,300	\$249,900	\$192
	Berryessa	3	2	1,152	\$285,000	\$247
Westridge Dr	Berryessa	3	3	2,100	\$375,000	\$179
Berryessa Dr	Berryessa	2	2	1,100	\$399,000	\$363
Eastridge Dr	Berryessa	5	3	2,477	\$399,000	\$161
Eastridge Dr	Berryessa	3	3	1,731	\$429,900	\$248
Rimrock Dr	Berryessa	3	2	1,793	\$495,000	\$276
Lariat St	Pope Valley	3	2	1,320	\$171,000	\$130
Stagecoach Canyon	Pope Valley	3	1	1,880	\$193,500	\$103
Wagon Wheel Dr	Pope Valley	3	2	1,600	\$249,900	\$156
Wagon Wheel Dr	Pope Valley	3	2	1,800	\$339,000	\$188
Harness Dr	Pope Valley	3	2	1,960	\$619,000	\$316
Average				1,635	\$382,419	\$227
Median				1,666	\$312,000	\$188

All houses built since 2000.

Source: MLS Listings January 2009.

APPENDIX II TABLE 12
MARKET RATE HOUSING SURVEY
UNINCORPORATED AREAS - SINGLE FAMILY DETACHED PROJECTS
AFFORDABLE HOUSING ORDINANCE REVISIONS ANALYSIS
NAPA COUNTY, CA

<u>Address</u>	<u>Location</u>	<u>Units</u> <u>Sold</u>	<u>%</u> <u>Total</u>	<u>Bd.</u>	<u>Ba.</u>	<u>Bldg</u> <u>SF</u>	<u>Recent</u> <u>Price</u>	<u>\$/SF</u>
Redrock Ln	Lake Berryessa	1		3	2	1,850	\$249,000	\$135
Arroyo Grande Dr	Lake Berryessa	1		3	2	1,152	\$265,000	\$230
Lariat St	Pope Valley	1		3	2	1,700	\$359,000	\$211
Harness Dr	Pope Valley	1		3	2	1,760	\$385,000	\$219
Westridge	Lake Berryessa	1		3	2.5	1,751	\$429,900	\$246
Wagon Wheel Dr	Pope Valley	1		3	2	1,600	\$515,000	\$322
Subtotal (Wt. Avg.)		4	57%		2.1	1,703	\$422,225	\$249
Harness Dr	Pope Valley	1		4	3	2,672	\$750,000	\$281
Wyatt Ave	Near Napa City	1		4	3	2,154	\$839,111	\$390
Subtotal (Wt. Avg.)		2	29%		3.0	2,413	\$794,556	\$335
Buttercup Ct	Near Napa City	1	14%	5	3.5	2,867	\$988,826	\$345
WEIGHTED AVERAGE		7	100%			2,072	\$609,548	\$287

Source: MLS Listings 10/15/07

APPENDIX II TABLE 13
INCOME RANGES AT VARYING HOUSEHOLD SIZES
2009 INCOME STANDARDS DISTRIBUTED BY HCD/HUD
AFFORDABLE HOUSING ORDINANCE REVISIONS ANALYSIS
NAPA COUNTY, CA

Household Size	Median	Very-Low Income 0%-50% of Median		Lower Income 51%-80% of Median ¹		Moderate Income 81%-120% of Median	
1 Person	\$57,250	\$0	\$28,650	\$28,650	\$44,800	\$44,800	\$68,700
2 Person	65,450	0	32,700	32,700	51,200	51,200	78,500
3 Person	73,600	0	36,800	36,800	57,600	57,600	88,350
4 Person	81,800	0	40,900	40,900	64,000	64,000	98,150
5 Person	88,350	0	44,150	44,150	69,100	69,100	106,000
6 Person	94,900	0	47,450	47,450	74,250	74,250	113,850
7 Person	104,450	0	50,700	50,700	79,350	79,350	121,700
8 Person	108,000	0	54,000	54,000	84,500	84,500	129,550

¹ Set at lesser of 80% of County median income or 100% of National median income

APPENDIX II TABLE 14
AFFORDABLE SALES PRICES (1-BEDROOM TO 4-BEDROOMS)
MODERATE INCOME HOUSEHOLDS
AFFORDABLE HOUSING ORDINANCE REVISIONS ANALYSIS
NAPA COUNTY, CA

	1-Bdrm	2-Bdrm	3-Bdrm	4-Bdrm
Household Size	2	3	4	5
<u>Moderate @ 100% AMI</u>				
Income @ 100% County Median	\$65,450	\$73,600	\$81,800	\$88,350
% of Income Allotted to Housing	35%	35%	35%	35%
Monthly Housing Expenses	\$22,908	\$25,760	\$28,630	\$30,923
(Less) Ongoing Expenses ¹	(8,160)	(9,108)	(10,092)	(10,938)
Income Available for Mortgage	\$14,748	\$16,652	\$18,538	\$19,984
Maximum Purchase Price ²	\$204,650	\$231,050	\$257,250	\$277,400
<u>Moderate @ 110% AMI</u>				
Income @ 110% County Median	\$71,995	\$80,960	\$89,980	\$97,185
% of Income Allotted to Housing	35%	35%	35%	35%
Monthly Housing Expenses	\$25,198	\$28,336	\$31,493	\$34,015
(Less) Ongoing Expenses ¹	(8,667)	(9,676)	(10,721)	(11,608)
Income Available for Mortgage	\$16,531	\$18,660	\$20,772	\$22,406
Maximum Purchase Price ²	\$229,400	\$258,950	\$288,300	\$310,950
<u>Moderate at 120% AMI</u>				
Income @ 120% County Median	\$78,540	\$88,320	\$98,160	\$106,020
% of Income Allotted to Housing	35%	35%	35%	35%
Monthly Housing Expenses	\$27,489	\$30,912	\$34,356	\$37,107
(Less) Ongoing Expenses ¹	(9,155)	(10,245)	(11,351)	(12,279)
Income Available for Mortgage	\$18,334	\$20,667	\$23,005	\$24,828
Maximum Purchase Price ²	\$254,400	\$286,850	\$319,250	\$344,500

¹ Includes home owner association dues, utilities, insurance, and property taxes.

² Mortgage interest rate @ 6.5% with 5% downpayment.

APPENDIX II TABLE 15
AFFORDABLE RENTS (STUDIOS - 3-BEDROOM UNITS)
VERY-LOW AND LOW INCOME HOUSEHOLDS
2009 INCOME STANDARDS DISTRIBUTED BY HCD/HUD
NAPA COUNTY

	Studios	1-Bdrm	2-Bdrm	3-Bdrm
Household Size	1	2	3	4
IA. Very Low Income @ 40% AMI				
Income @ 40% County Median	\$22,900	\$26,180	\$29,440	\$32,720
% of Income Allotted to Housing	30%	30%	30%	30%
Monthly Housing Expenses	\$573	\$655	\$736	\$818
(Less) Utilities Expenses ¹	(38)	(52)	(69)	(85)
Monthly Rent	\$535	\$603	\$667	\$733
IB. Very Low Income @ 50% AMI				
Income @ 50% County Median	\$28,630	\$32,730	\$36,800	\$40,900
% of Income Allotted to Housing	30%	30%	30%	30%
Monthly Housing Expenses	\$716	\$818	\$920	\$1,023
(Less) Utilities Expenses ¹	(38)	(52)	(69)	(85)
Monthly Rent	\$678	\$766	\$851	\$938
IIA. Low Income @ 60% AMI				
Income @ 60% County Median	\$34,350	\$39,270	\$44,160	\$49,080
% of Income Allotted to Housing	30%	30%	30%	30%
Monthly Housing Expenses	\$859	\$982	\$1,104	\$1,227
(Less) Utilities Expenses ¹	(38)	(52)	(69)	(85)
Monthly Rent	\$821	\$930	\$1,035	\$1,142
IIB. Low Income @ 65% AMI				
Income @ 65% County Median	\$37,210	\$42,540	\$47,840	\$53,170
% of Income Allotted to Housing	30%	30%	30%	30%
Monthly Housing Expenses	\$930	\$1,064	\$1,196	\$1,329
(Less) Utilities Expenses ¹	(38)	(52)	(69)	(85)
Monthly Rent	\$892	\$1,012	\$1,127	\$1,244
IIC. Low Income @ 80% AMI				
Income @ 80% County Median	\$45,800	\$52,360	\$58,880	\$65,440
% of Income Allotted to Housing	30%	30%	30%	30%
Monthly Housing Expenses	\$1,145	\$1,309	\$1,472	\$1,636
(Less) Utilities Expenses ¹	(38)	(52)	(69)	(85)
Monthly Rent	\$1,107	\$1,257	\$1,403	\$1,551

¹ Estimated utilities allowances to be confirmed by the Napa Housing Authority.

APPENDIX II TABLE 16
AFFORDABILITY GAPS - INCLUSIONARY FOR SALE UNITS
AFFORDABLE HOUSING ORDINANCE REVISIONS ANALYSIS
NAPA COUNTY, CA

	Prototype ¹		
	1	2	3
Unit Size	1,000 sf	2,000 sf	3,000 sf
Bedrooms	2 BR	3 BR	4 BR
Household Size ²	3 people	4 people	5 people
Market Rate Sales Price	\$350,000	\$700,000	\$1,200,000
(Early 2009)			
Affordable Sales Price ³			
110% AMI	\$259,000	\$288,000	\$311,000
Affordability Gap per Unit ⁴			
110% AMI	\$91,000	\$412,000	\$889,000

¹ Prototypes are based on market rate units recently available in Napa County, and were agreed upon during a work session with County staff on November 7, 2007.

² Household size is number of bedrooms plus one, per State and local affordable housing policy.

³ Based on 2009 HCD median income.

⁴ The affordability gap is the difference between the market rate sales price and the affordable sales price.

APPENDIX II TABLE 17
TOWNHOME UNIT AFFORDABILITY GAP
AFFORDABLE HOUSING ORDINANCE REVISIONS ANALYSIS
NAPA COUNTY, CA

Two-Bedroom Unit/Three Person Household			
Income Level	Affordable Sales Price	Total Development Costs¹	Affordability Gap
Moderate @ 100% AMI	\$231,050	\$350,000	(\$118,950)
Moderate @ 110% AMI	\$258,950	\$350,000	(\$91,050)
Moderate at 120% AMI	\$286,850	\$350,000	(\$63,150)

1. From the 2004 Jobs Housing Nexus Analysis.

**APPENDIX II TABLE 18
UNIT VALUES SUPPORTED BY RENTS & AFFORDABILITY GAP
APARTMENT UNITS - TWO BEDROOMS
AFFORDABLE HOUSING ORDINANCE REVISIONS ANALYSIS
NAPA COUNTY, CA**

Calculation of Unit Value Supported

	<u>Rent</u>		<u>Less Vacancy</u>	<u>Less Op Exp¹</u>	<u>Net Operating Income</u>	<u>Unit Value Supported²</u>
	<u>Month</u>	<u>Year</u>				
			5%			
Market Rate Unit	\$1,575 /Unit \$1.75 /SF	\$18,900	(\$945)	(\$7,050)	\$10,905	\$182,000
Affordable Units						
Very Low Income @ 40% AMI	\$667 /Unit \$0.74 /SF	\$8,004	(\$400)	(\$5,050)	\$2,554	\$36,000
Very Low Income @ 50% AMI	\$851 /Unit \$0.95 /SF	\$10,212	(\$511)	(\$5,050)	\$4,651	\$66,000
Low Income @ 60% AMI	\$1,035 /Unit \$1.15 /SF	\$12,400	(\$620)	(\$6,000)	\$5,780	\$83,000
Low Income @ 65% AMI	\$1,127 /Unit \$1.25 /SF	\$13,524	(\$676)	(\$6,100)	\$6,748	\$96,000
Low Income @ 80% AMI	\$1,403 /Unit \$1.56 /SF	\$16,800	(\$840)	(\$6,500)	\$9,460	\$135,000

Calculation of Value Impact Per Rental Unit

	<u>Unit Value Supported²</u>	<u>Total Development Cost³</u>	<u>Affordability Gap</u>
Affordable Units			
Very Low Income @ 40% AMI	\$36,000	(\$182,000)	(\$146,000)
Very Low Income @ 50% AMI	\$66,000	(\$182,000)	(\$116,000)
Low Income @ 60% AMI	\$83,000	(\$182,000)	(\$99,000)
Low Income @ 65% AMI	\$96,000	(\$182,000)	(\$86,000)
Low Income @ 80% AMI	\$135,000	(\$182,000)	(\$47,000)

¹ General operating expenses based on average operating expenses from similar size apartment projects in the market area. It is assumed for this analysis that units restricted to very-low income households will be exempt from property tax.

² Net operating income capitalized at 7% for affordable units and 6% for market rate units.

³ Equals Unit Value Supported for the market rate unit.

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APPENDIX III – OTHER MATERIALS RE: FEE SELECTION

The materials in this appendix provide more detail and explanation than is contained in the main body of the report, Section II.

Proposed On-site Requirements: Equivalency Calculations

The proposed revisions to the Affordable Housing section of the County code entail several changes to the on-site component of the program. In order to better understand how the on-site requirements affect projects of five or more units, the following more detailed description and tables are provided, in addition to the summary in the main body of the report.

Percentage Requirements

The current program is 10% of all units must be affordable in projects of ten or more units, but as noted in the Introduction, the more favorable fee option has been used exclusively. Also, there have been virtually no projects of ten or more units. The proposed changes are to require on-site compliance as follows:

- Single Family Detached – 20% of all units must be affordable in projects of five or more units. (A subdivision is a project.)
- Single Family Attached – 17% of all units must be affordable in projects of five or more units.
- Rental units (without condominium maps) – 12% of all units must be affordable in projects of five units or more. It is noted that for rental units, a fee will be the primary means of compliance with the provision of on-site an option.

These percentages have been selected for consistency with the Housing Element and the findings of the nexus analysis summarized in Section I and other policy objectives.

Affordability Levels

The current program stipulates that affordable ownership units must be half for median income at 100% AMI and half at moderate income defined as 120% AMI. Since the adoption of the program in 1993, there have been some additions to State law that use 110% AMI as the moderate income definition. Most relevant to Napa County is the state Density Bonus Law, for which a separate ordinance will be adopted in Napa County to comply with the State law. The Density Bonus Law will use the 110% AMI definition, so for consistency the County's inclusionary program should do the same.

With respect to the income levels relevant to rental units, the current program stipulates half the units at 50% AMI and half the units at 80% AMI. Again for consistency with Density Bonus Law, affordable rental units are proposed to be set at 60% AMI for purposes of on-site compliance.

The methodology for testing the impacts of these requirements is to examine modest size projects and for this purpose in Napa, twenty unit projects are utilized. Projects of this size result in whole unit requirements. In the case of the 17% requirement, the test is made assuming fractional units are possible to develop because rounding either up or down distorts the impact for purposes of drawing general conclusions.

The four market prototypes established in Appendix I are analyzed to determine the impact on project economics of the proposed revisions to the program, assuming on-site compliance.

Single Family Detached Units

Two single family detached prototypes were selected, based on the market survey – the \$700,000 unit and the more expensive \$1.2 Million unit. The more modest unit has three bedrooms, accommodating a household of four persons on average, and is 2,000 square feet in size.

The restricted income affordable price at 110% AMI is \$288,000 for the same unit (See Section I), more than \$400,000 less than the market sales price.

When applied to a hypothetical twenty unit project, 20% affordable translates to sixteen market rate units and four affordable units. The sales revenue losses are:

Total sales revenue loss for the project - \$1,648,000
Sales revenue lost divided by 20 units - \$82,400 per unit
Sales revenue lost divided by the square feet in the project - \$41.20 psf

The calculations are summarized in Appendix Table III – 1.

For the more expensive project of \$1.2 Million homes, the affordability gaps or forgone sales revenues are substantially larger because the affordable prices are determined irrespective of square foot area or development cost. Only the number of bedrooms and the assumed household size dictates, and in this case the unit is assumed to be 3,000 square feet or four bedrooms, accommodating a five person household.

The forgone sales revenue in a 20 unit project requiring four affordable units (at 20%), would be nearly \$3.6 million. See Table III-1.

To the developer the gap is forgone sales income, income that would have been realized were it not for the inclusionary requirement. Actual cost to develop the affordable units may be less,

starting with the profit component which is not a cost per se. In addition, the ordinance will allow certain types of modifications, to reduce the cost of the affordable units, if the developer so chooses. The most effective cost reduction feature is permission to build the unit smaller in terms of square feet, as long as the bedroom count is comparable. Also more modest interior finishes and other cost reducing measures are possible.

A key cost component in inclusionary programs is land price or valuation. Over time, land values adjust to inclusionary requirements because land is the one cost component that can adjust as a result of local policy. When an inclusionary program has been in place for a period of time, it is understood by buyers and sellers of land that affordable units are required and these units cannot support land value at a level comparable to market rate units. As a result, a jurisdiction that has been requiring on site affordable units and raises the percentage requirement, the only adjustment is the amount of forgone sales revenue resulting from the incremental change. In Napa County, however, the on-site requirement has been irrelevant due to the fee option. In the future, most all projects affected by the inclusionary requirements will entail land that will be rezoned and does not have a preexisting residential value that must be reset by the new requirement. Rather the new requirements, if adopted, will influence the future value of land that may be developed in residential use.

Attached Single Family Units

Attached units, which are likely to be condominiums or townhomes, are proposed to have an inclusionary requirement set at 17% of all units. Since the modest condominium prototype is a \$350,000 two bedroom unit, 1,000 square feet in size, affordability gaps are far smaller than for single family detached units.

The 17% requirement on a 20 unit project computes to 16.6 market rate units and 3.4 affordable units. In real application, there would be a rounding up on the market rate units and rounding down of the affordable units for a 20 unit project, and the fractional 0.4 unit would be subject to an in lieu fee. Since rounding distorts findings, the fractional units are left fractional for illustrative purposes.

Total sales revenue loss for the project - \$309,400

Sales revenue loss divided by 20 units - \$15,470 per unit

Sales revenue loss divided by square feet in the project - \$15.47 per square foot

Appendix Table III-1 presents the full analysis.

The same comments regarding the detached unit projects, about loss of sales revenue being different from cost per se and about land value adjustments, pertain also to attached units.

Rental Apartment Units

The proposed revisions to the Affordable Housing program with respect to rental apartment units are to allow an on-site compliance option as an alternative to the fee. For purposes of understanding the on-site and possibly setting a fee in a manner to incentivize one means of compliance versus another, a 20 unit rental project is similarly analyzed.

The percentage requirement is 12% and the affordability level is 60% AMI, a level that supports a unit value of \$83,000. Appendix Table III-2 presents the analysis.

Total value loss for the project - \$237,600

Total value loss divided by 20 units - \$11,880 per unit

Total value loss divided by square feet in the project - \$13.20 per sq. ft.

In theory, the value lost versus actual cost and land value adjustment comments apply to rental units as well. In practice, land value for development of rental units for most real estate parcels in the Napa area does not compete with land value for development of condominium units, so all such comments are somewhat academic at this time. In other economic cycles, this condition could change.

Fee Structure Options

It was noted in Section II that there are a number of different ways that jurisdictions structure the fee components of their programs. The chart provided as Appendix III- Table 3 provides more information on these alternatives, including examples of jurisdictions that use each type, advantages and disadvantages.

The proposed program for Napa County at this time is a nexus based approach and all supporting material has been prepared accordingly. The chart is provided for reference only.

APPENDIX III TABLE 1
IN-LIEU FEE EQUIVALENT TO ONSITE COMPLIANCE - FOR SALE UNITS
AFFORDABLE HOUSING ORDINANCE REVISIONS ANALYSIS
NAPA COUNTY, CA

	For Sale Prototypes								
	Condo			SFD			SFD		
I. Hypothetical Project Size	20 units			20 units			20 units		
II. Prototype Description									
Unit Size	1,000 sf			2,000 sf			3,000 sf		
Bedrooms	2 BR			3 BR			4 BR		
Household Size	3 people			4 people			5 people		
III. Project Sales Revenues	Units	\$ per Unit	Total \$	Units	\$ per Unit	Total \$	Units	\$ per Unit	Total \$
100% Market Rate Project		\$350,000	\$7,000,000		\$700,000	\$14,000,000		\$1,200,000	\$24,000,000
On-Site Inclusionary Project									
Inclusionary Percentage	<u>17%</u>			<u>20%</u>			<u>20%</u>		
Market Rate Units	16.6	\$350,000	\$5,810,000	16.0	\$700,000	\$11,200,000	16.0	\$1,200,000	\$19,200,000
110% AMI Units ¹	3.4	\$259,000	<u>\$880,600</u>	4.0	\$288,000	<u>\$1,152,000</u>	4.0	\$311,000	<u>\$1,244,000</u>
			\$6,690,600			\$12,352,000			\$20,444,000
IV. Sales Revenue Lost Due to Providing Affordable Units									
Total Sales Revenue Lost per Project ²	\$309,400			\$1,648,000			\$3,556,000		
Per Market Rate Unit/In-Lieu Fee Equivalent	\$15,470			\$82,400			\$177,800		
Per Square Foot In-Lieu Fee Equivalent	\$15.47			\$41.20			\$59.27		

¹ See Appendix II

APPENDIX III TABLE 2
IN-LIEU FEE EQUIVALENT TO ONSITE COMPLIANCE - APARTMENT UNITS
AFFORDABLE HOUSING ORDINANCE REVISIONS ANALYSIS
NAPA COUNTY, CA

I. Hypothetical Project Size	20 units		
II. Prototype Description ¹			
Unit Size	900 sf		
Bedrooms	2 BR		
Household Size	3 people		
III. Project Value	<u>Units</u>	<u>Supportable Value/Unit ¹</u>	<u>Total Value</u>
100% Market Rate Project	20	\$182,000	\$3,640,000
On-Site Inclusionary Project			
Inclusionary Percentage	<u>12%</u>		
Market Rate Units	17.6	\$182,000	\$3,203,200
60% AMI Affordable Units	2.4	\$83,000	<u>\$199,200</u>
			\$3,402,400
IV. Value Lost Due to Providing Affordable Units			
Total Value Lost per Project	\$237,600		
Per Market Rate Unit Value Lost/In-Lieu Fee Equivalent	\$11,880		
Per Square Foot In-Lieu Fee Equivalent	\$13.20		

¹ See Appendix II

**APPENDIX III TABLE 3
COMPARISON CHART
IN-LIEU PAYMENT ALTERNATIVES
AFFORDABLE HOUSING ORDINANCE REVISIONS ANALYSIS
NAPA COUNTY, CA**

Approach and Brief Description	Sample Jurisdictions	Advantages	Disadvantages
1. Percent of Building Valuation	Napa, Half Moon Bay, San Carlos	Larger size units yield higher fees. Easily understood Easy to administer; collect at bldg. permit	Permit valuation doesn't capture higher value locations.
2. Percent of Sales Price of Market Rate Unit	Palo Alto, Menlo Park, Mountain View	Higher value units yield higher fees. Larger size units yield higher fees. Easily understood	May not capture full gap for highest end units. Administration – must place lien on escrow
3. Actual Gap for Each Project	Santa Cruz County, Danville, Sunnyvale	Higher value units yield higher fees. Larger size units yield higher fees. Captures full gap	More difficult to explain and predict. More administration
4a. Gap Established for Each Affordable Unit Owed (Usually based on average unit)	Monterey County, San Jose Redev., Davis, San Francisco	Easy to administer; collect at Bldg. Permit Easy to apply to fractional unit	No ability to capture higher fee for larger or more valuable units Needs annual/periodic adjustment
4b. Gap/Fee Established for Each Market Rate Unit Built (Variation on IV above; gap allocated to market rate units.)	Novato, Irvine, Carlsbad	Easily understood Easy to administer; collect at bldg. permit Easy to apply to fractional units	No ability to capture higher fee for larger or more valuable units. Needs annual/periodic adjustment
4c. Gap/Fee Established per Square Foot on Market Rate Units	Pasadena, Walnut Creek, West Hollywood, San Diego, Santa Rosa	Easily understood Easy to administer; collect at bldg. permit Captures more for large units	Needs annual/periodic adjustment May not fully capture full gap for higher end units
5. Nexus Based Fees	Santa Monica Elk Grove	Easily understood Easy to administer; collect at bldg. permit Captures more for large units	Requires Nexus Analysis Needs annual/periodic adjustment May not fully capture full gap for higher end units