EAGLE COUNTY, COLORADO
2005
NEXUS/PROPORTIONALITY ANALYSIS
FOR EMPLOYEE HOUSING MITIGATION PROGRAMS

Introduction

Eagle County is reviewing their employee housing mitigation programs for both commercial and residential development. Current "Local Resident Housing Guidelines" outline a program that utilizes a combination of inclusionary zoning and commercial and residential linkage to create housing for low and moderate income households. On-site development of units is preferred, with off-site development and payment-in-lieu options also available.

Linkage programs would require that developers of commercial and residential space contribute to the provision of affordable housing in proportion to the affordable housing need that they generate by creating new employment. The basic premise of employee housing mitigation programs is that new commercial and residential development fuels demand for housing by generating new jobs. In Eagle County, and other areas where land is expensive and housing demand is fueled by wealth from outside the region, the private market tends to supply housing that is priced beyond the reach of most local employees. This results in an undersupply of adequate housing that is affordable for low- to middle-income employees and, therefore, also results in housing prices that tend to escalate much faster than wages.[1]

This report establishes the link between new commercial and residential development and the demand for employees. It provides a rationale for determining the percentage of employees that should be mitigated by new development through linkage programs and presents a formula for determining the amount of fee that could be paid in lieu of producing units. This report does not address inclusionary zoning requirements, given that a nexus/proportionality analysis is not required for inclusionary programs.

In summary, this report finds that housing linkage programs that target employee households earning less than 80 percent AMI could require up to a 30 percent mitigation rate in Eagle County based on current housing service levels in the County. Linkage programs that target employee households earning less than 100 percent AMI could require up to a 45 percent mitigation rate. And, for programs targeting 120 percent AMI households or below, a 58 percent mitigation rate could be supported. Communities may require mitigation rates different from the above service levels depending upon community needs, supplemental housing programs and development undertaken by the County, and desired outcomes from linkage housing programs.

[1] Average yearly wages in Eagle County increased about 13.7 percent between 2000 and 2004; the median sale price of single family homes increased 10 percent and the median sale price of condominiums increased 7 percent during this same period, which is generally favorable. However, a household earning the median wage in 2000 could afford a home priced at $240,000, whereas the median sale price of a single family home in 2000 was about $465,700. In 2004, a median AMI household could afford a home priced at $270,000 and the median sale price of a single family home was $510,000. In other words, despite home prices increasing slower than wages over the past four years, the difference was not significant enough to noticeably affect home affordability to locals. See the background "data report" in support of this Nexus for other housing and affordability trends.

Legal Tests

There are several legal considerations involved in the design of impact mitigation regulations. First, a "rational nexus" must be demonstrated between the impacts caused by a development and the nature of the mitigation required. Second, there must be a "rough proportionality" between the extent of the impacts generated and the extent of the mitigation required. In other words, there must be a direct relationship between the need for affordable housing and the parties upon which mitigation requirements are imposed. In addition, the fee must be no greater than the cost of mitigating the direct impacts from the specific developments. Therefore, it must be demonstrated that new development creates the need for affordable housing and that the fee assessed will be no greater than the cost of providing housing for employees generated by the development.

Methodology

The following seven-step process is used to establish a nexus/proportionality formula for these employee mitigation programs. The process uses well-documented statistics from primary research conducted in Eagle County and other mountain resort communities in Colorado and neighboring states to provide a method for quantifying the number of jobs and corresponding housing demand generated by development. The steps are:

1. Identifying the level of service that has been set for Eagle County in terms of the percentage of low-income households and employees for which housing is to be ensured;

2. Determining the number of jobs generated by existing commercial and residential development to calculate the housing demand generated by new development;

3. Accounting for multiple job holding to avoid double counting employees;

4. Converting the number of employees to households by applying an employees per household ratio;

5. Identifying the households to target in the employee housing mitigation programs by examining the income levels of Eagle County's residents;

6. Crediting developments for contributions to employee housing; and

7. Consolidating the information on job generation, job holding patterns, employees per household, and income levels into a formula that can be applied to commercial, residential, or mixed-use projects to calculate mitigation requirements.

The above formula often results in a fraction of a dwelling unit being required. When this occurs, or in other circumstances as may be permitted by the County's Housing Guidelines, fees can be paid in lieu of producing units. The amount of the payment in lieu is based on the affordability gap, which is the difference between what targeted households can afford to pay and market prices for housing. This report concludes with an estimate of the gap between affordable and market costs and a calculation of the payment in lieu.

Level of Service

Programs that require new development to produce affordable housing as mitigation for the housing demand generated by the development must conform to level of service standards applicable for both existing and future needs. The level of service indicates the current level of affordable housing that exists in the community and, when considered in conjunction with County commitments for providing housing, provides a guideline for workforce housing mitigation requirements. It should be noted, however, that new development requirements need not be limited by the current level of service in the community if the county is actively in adopting and implementing housing programs to increase the County's current level of service.

The level of service is defined by the current percentage of households residing in the study area that earn within the income range targeted by the adopted housing program. For example, presently 30 percent of Eagle County's households earn less than 80 percent of the AMI. If Eagle County adopted a housing linkage program requiring developments to mitigate employee households earning less than 80 percent of the AMI, the county could require up to a 30 percent mitigation rate – equal to the current service level of the county (see Table 2, below).

Eagle County's "Local Resident Housing Guidelines" presently specify targeting households earning 80 to 100% AMI with inclusionary programs and 60 to 80% AMI with linkage programs, with a fee-in-lieu alternative permitted for both programs. Orienting programs to the County's median family income, as published by the U.S. Department of Housing and Urban Development (HUD) each year, corresponds with State and Federal programs that might be used by private developers as well as the public sector to produce employee housing, as these programs also base income levels on the County's median family income. The following table shows U.S. Department of Housing and Urban Development (HUD) estimates of the median household incomes in Eagle County for one- through five-person households in 2005.

Table 1. 2005 Median Family Incomes for Eagle County: HUD

AMI Range	Number of Persons in Household				
	1	2	3	4	5
50% AMI	$28,000	$32,000	$36,000	$40,000	$43,150
60% AMI	$33,600	$38,400	$43,200	$48,000	$51,780
80% AMI	$40,600	$46,400	$52,200	$58,000	$62,650
100% AMI	$56,000	$64,000	$72,000	$79,950	$86,300
120% AMI	$67,200	$76,800	$86,400	$96,000	$103,560

Source: US Department of Housing and Urban Development (HUD)

Household incomes by AMI in 2005 were estimated from the 2000 US Census CHAS (Comprehensive Housing Affordability Strategy) special tabulations of households by AMI in 1999, the 1999 and 2005 HUD median family incomes in Eagle County, housing tenure and incomes from the 2000 US Census and the estimated number of Eagle County households in 2005. These projections include the following assumptions: the percentage of households in each AMI group has remained fairly constant since 1999 and household tenure has remained relatively constant since 2000[2]. These estimates indicate that about 36 percent of owners and 62 percent of renters earn less than 100% AMI, for a total of 45.6 percent of all households

[2] The methodology is described in more detail in a supplement to this report which evaluates changes observed in key indicators since 2000 (housing units, sales, rentals, incomes, wages and employment) and provides support for the aforementioned assumptions.

(8,100 total). In other words, the current service level in Eagle County for households earning less than 100 percent of the AMI is about 45 percent.

Table 2. Eagle County Households by AMI: 2005 Estimates

AMI Range	Owners		Renters		Total	
	%	#	%	#	%	#
<50%	10.5%	1,187	25.6%	1,646	16.0%	2,833
50.1 to 60%	2.1%	239	4.6%	298	3.0%	536
60.1 to 80%	8.2%	928	15.2%	980	10.8%	1,908
80.1 to 100%	15.5%	1,752	16.7%	1,073	15.9%	2,825
100.1 to 120%	13.1%	1,477	12.5%	804	12.9%	2,281
120% or more	50.6%	5,718	25.5%	1,639	41.5%	7,358
TOTAL	100.0%	11,301	100.0%	6,440	100.0%	17,741
Total <80%	20.8%	2,354	45.4%	2,924	29.7%	5,277
Total <100%	36.3%	4,106	62.1%	3,997	45.6%	8,102
Total <120%	49.4%	5,583	74.6%	4,801	58.5%	10,383

Source: 2000 US Census, CHAS special tabulations; HUD median family incomes; DOLA population projections; RRC Associates, Inc.

It is recognized that a portion of the households in Eagle County that earn less than 100 percent of the AMI are cost-burdened[3]. However, these households are still residing in the County regardless of their ratio of income to housing payments and are, therefore, being served by housing in the community. Employee housing programs and development is intended to ease the burden on these lower-income households and provide more suitable housing options for local workers. This not only results in a more stable and content workforce, but also helps the County compete with other areas for employees by providing suitable and affordable housing for the workforce. The following table lists employee unit projects that have been developed in Eagle County since the year 2000. This includes 318 rental units affordable to low income households earning less than 60 percent of the AMI, 100 rental units affordable to households earning less than 80 percent of the AMI and 162 for-sale units affordable to households earning between 60 and 120 percent of the AMI, with another 120 for-sale units to be available as of mid-2006. The below recent projects, in combination with additional programs and future planned projects of the Eagle County Housing department discussed in Appendix A, are indications of the commitment by Eagle County to provide much needed housing for its local workforce.

[3] Based on year 2000 US Census data, about 53 percent of households earning less than 100% AMI were cost-burdened (paid over 30% of income for housing). This may be lower in 2005, given the addition of 700 total rental and ownership units priced affordable to these households since 2000. See the background "data report" in support of this Nexus for more discussion on cost-burdened households.

Table 3. Employee Restricted Units Built/Under Construction Since The 2000 US Census

Property	Year built/ occupied	AMI served	Type	# units	Restriction
Middle Creek	Dec-04	60%	Rent	142	Income
Buffalo Ridge	Mar-04	30-60% tax credit	Rent	176	Income
		<80%	Rent	100	
Miller Ranch*	Late 2003	60-120% (based on sales prices of units)	Own	282	Eagle County Employee
TOTAL UNITS				700	

*Miller Ranch will be completed in 2006. Distribution of units by AMI based on current sales (162 total to-date) and remaining units expected to serve a similar AMI mix.
Source: Vail Local Housing Authority; 2005 Assessor database

The above approach generates a potential measurement for the County's existing level of service for housing residents earning less than 100 percent of the AMI. The data comfortably support a mitigation level of 30 percent and may support mitigation as high as 46 percent (the current level of service of the County) or more based on continued workforce housing programs and development by the County Housing department. It is important to recognize that alternative interpretations of the level of service standard may be more or less conservative than presented herein, potentially supporting a higher or lower mitigation rate than the 30 percent presented above. It is recommended that communities consult with their attorney regarding mitigation rates that conform to the level of service standard.

Job Generation Rates

When new commercial/industrial/lodging/residential projects are built, additional employment is generated. New commercial employment may be from new businesses or from businesses relocating from other space (thereby freeing up that space for other tenants). Regardless, the net effect over time is a net increase in employment in the community. Job generation rates that measure the number of jobs typically generated by residential units and in various types of commercial spaces can be used to estimate the number of jobs that will be created by new development.

Commercial Linkage

RRC Associates and Rees Consulting, Inc., both members of The Housing Collaborative, LLC, have been conducting housing needs assessments in mountain resort communities throughout Colorado and in neighboring states since 1990. As part of these studies, public and private sector employers were surveyed concerning the number of jobs they offer and the amount of space they occupy. From these surveys, a total of 1,857 employers were used to compile a database on job generation ratios, which are expressed as the number of total jobs (full and part time combined, not FTE) per 1,000 square feet of space. The study area includes both core resort areas as well as nearby communities, which are listed below, with survey dates ranging between 1990 and 2004.

- Blaine County, ID: 1990, 1996
- Chaffee County: 1994
- Copper: 2001
- Eagle County: 1990, 1999, 2001
- Estes Park: 1991, 1999
- Frisco: 1998
- Grand County: 1992, 2001
- Gunnison County: 1992, 1998
- Composite of Pitkin, Eagle, and Garfield Counties (from Healthy Mountain Communities surveys of 1997/98 season)
- Keystone: 2001
- Pitkin County: 1991
- Routt County: 1990
- San Miguel County: 2000
- Snowmass Village: 1999
- Summit County: 1990, 2001
- Telluride: 1993, 1996, 2001
- Aspen 2002
- Garfield County 2004
- Pitkin County 2004

For the purposes of comparison with Eagle County, results from Chaffee County and Estes Park were not included in the merged database runs shown below in Table 4. The composite database shows about 2.9 employees work in every 1,000 square feet of commercial space overall. The ratios are considerably higher for restaurants and bars (8.1 per 1,000 SF) and recreation-related establishments (5.8 per 1,000 SF) and slightly higher for retail space (3.0 per 1,000 SF). Generation rates in Eagle County are similar, or slightly higher, than the composite database for most categories.

Table 4. Commercial Job Generation Rates

	Merged Database*	Eagle County 1990/1999/2001
Bar/restaurant	8.1	9.8
Construction	4.4	4.7
Education	1.4	1.2
Office (Finance/Banking, Legal, Medical, Professional Services)	3.8	4.3
Government	2.0	1.4
Lodging/hotel/housekeeping	0.8/room	0.9/room
Personal services	2.5	6.0
Real estate/property management (office)	6.1	4.2
Retail sales	3.0	3.9
Service	1.4	1.7
Recreation/attractions/amusements	5.8	3.5
Utilities	1.5	1.6
Property Management (units)	0.4/unit	0.5/unit
Overall	2.9	3.4

*Merged database excludes Estes Park and Chaffee County.
Source: RRC Associates, inc.

Considerations for Commercial Linkage Requirements

When developing commercial linkage requirements, some communities use a single average while others combine similar categories into several groups. The rates are usually used to estimate employment when the PUD or building permit application is filed. The rates can be applied to new development and to redevelopment that results in additional space being created. Using a single average makes it less problematic when the exact use of space is not defined at the time of project approval; however, it can place disproportionate burden on commercial uses that have lower job generation rates. Utilizing multiple rates can complicate the situation when a change in use occurs. Some programs consider change in use to be exempt while others provide a credit. *Most programs provide the opportunity for the applicant to provide their own job generation estimates in the event that the proposed use is expected to generate jobs at a different rate than established by the community*.

The following table shows job generation rates aggregated into five categories. The overall rate would be applied to uses that do not fit within the specified categories. "Office" includes such uses as finance/banking, legal and medical professions and other professional services. This shows that commercial operations in Eagle County are slightly more labor intensive than uses in the merged database as a whole.

Table 5. Commercial Job Generation Rates by Condensed Categories

	Merged Database	Eagle County 1990, 1999, 2001	Units
Bar/restaurant	8.1	9.8	Emps/1,000 sq. ft.
Lodging/hotel	0.8/room	0.9/room	Emps/room
Commercial retail	3.0	3.9	Emps/1,000 sq. ft.
Property Management	0.4/unit	0.5/unit	Emps/unit
Office	3.8	4.3	Emps/1,000 sq. ft.
OVERALL	2.9	3.4	Emps/1,000 sq. ft.
N=	1,544	203	

Source: RRC Associates, inc.

The merged database contains 203 valid cases from Eagle County (103 in 1990, 100 in 1999/2001 combined). The compared composite database has 1,544 valid cases sampled from 1990 through 2004 and combines surveys from commercial core areas, where space tends to be intensively used, and nearby communities and unincorporated areas, where employment is often less. Although the figures generated from Eagle County surveys could be used to determine local job generation, it is recommended that the merged dataset be used rather than specific local figures for the following reasons:

- The smaller number of cases in individual communities is less statistically valid than the merged data set, particularly when broken down by types of businesses;
- Surveys of individual communities provide point-in-time estimates of job generation during the year of the survey. These rates are subject to change depending on many factors, including local and regional economic conditions and changes in development incentives, ordinances and regulations that may affect the intensity of commercial space usage in the community;
- The merged data set provides a more general sample of the types of businesses and intensity of uses found in resort communities over a period of time that includes both economic booms and slumps. This results in numbers that represent average commercial job generation that can be comfortably used over an extended period of time, rather than constantly changing with point-in-time economic conditions.
- The merged data set also provides a more general sample of the intensity of uses of businesses in multiple resort communities. Because each community represents a different "maturation" state, the database presents an average mix of intensities that could be expected as communities change and as businesses move into and out of communities. The merged database provides job generation rates that recognize the

economic mix of communities change over time, both within and between different industries, and accommodates this change.

Residential Linkage

Residential dwelling units generate demand for housing through their operation and maintenance. Activities including exterior and interior maintenance and upkeep, house cleaning, meal preparation, childcare, personal services, and home office support generate jobs, many of which are relatively low paying. The employees that fill these jobs generate demand for modestly priced housing. Further, homes built for second homeownership reduce the land and number of units available for the local workforce. As a result, the more homes that are built in Eagle County (particularly for visitor or second home use), the more the affordable housing problem is aggravated.

Eagle County sponsored a study in 2001 on job generation associated with residential uses. Conducted by RRC Associates and other Housing Collaborative members, the study was used to estimate the number of permanent jobs associated with various types and sizes of residential units. This study focused on jobs directly generated as a result of the residential unit. That is, jobs associated with housing maintenance and operations, including property and rental management, homeowner's association, gardeners, snow removal, exterior maintenance, housekeepers, kitchen help/chef, child care provider/nanny, caretaker/concierege/bulter, personal trainer/administrative assistant and other related employees. This study did not include workers generated through construction of the home. The study was based on surveys of homeowners and property management companies, with 1,112 homeowners and 6 property management companies responding. The data clearly show that employment generation intensifies as the size of the dwelling unit increases.

Average job generation rates were calculated to support an employee housing mitigation program that is fairly simple to administer, yet responsive to the finding that large residential units generate more jobs than smaller units. The job generation rates, expressed in full-time equivalents (FTE) per unit, were found to vary by square footage according to the following exponential function:

Equation of Residential Employee Generation by Home Size

$$\text{Total FTE} = 0.0913 * e^{(.0003)(\text{Square Footage})}$$

The following table of FTE employee generation rates was calculated by applying the above formula to the mid-point of each of the residential square-footage categories shown in the first column.

Table 6. Residential Employee Generation Rates By Home Size

Size of Residential Unit (Square Feet)	FTE Employees	Size of Residential Unit (Square Feet)	FTE Employees
< 500 s.f.	0.11	6,000 – 6,499	0.60
500– 999	0.11	6,500 – 6,999	0.69
1,000 – 1,499	0.13	7,000 – 7,499	0.80
1,500 – 1,999	0.15	7,500 – 7,999	0.93
2,000 – 2,499	0.18	8,000 – 8,499	1.08
2,500 – 2,999	0.21	8,500 – 8,999	1.26
3,000 – 3,499	0.24	9,000 – 9,499	1.46
3,500 – 3,999	0.28	9,500 – 9,999	1.70
4,000 – 4,499	0.33	10,000 – 10,499	1.98
4,500 – 4,999	0.38	10,500 – 10,999	2.30
5,000 – 5,499	0.44	11,000 – 11,499	2.67
5,500 – 5,999	0.51	11,500 – 12,000	3.10

Source: RRC Associates, Inc.

A study on residential job generation was also recently conducted by the Northwest Council of Governments (NWCOG), titled "Second Homes and the Amenity Based Economy." The study found that, through owner spending, second homes generated about 8,500 direct basic jobs (51.5 percent of total direct basic jobs) and 12,000 total jobs (45.1 percent of total jobs) in 2002. More specifically, this resulted in about 1.8 jobs per second home unit that is 3,000 square feet or more in size and 1.1 jobs per second home unit that is less than 3,000 square feet in size.

Table 7. Jobs Created Through 2nd Homeowner Spending: Eagle County, 2002

Size of 2nd Home	Basic Jobs	Total Jobs	Total Jobs per Unit	Denomination of Unit
Under 3,000 Sq. Ft.	6,219	8,793	1.1	Dwelling Unit
3,000 Sq. Ft. or more	2,283	3,228	1.8	Dwelling Unit

Source: Northwest Council of Governments "Second Homes and the Amenity-Based Economy," April 2004.

The NWCOG job generation figures differ from those estimated by RRC Associates for the following primary reasons:

- NWCOG focuses on second homeowner properties only. RRC Associates calculations represent jobs generated by all residential properties (those occupied by full-time residents and second homeowners) and
- NWCOG figures represent all jobs created through second homeowner expenditures in the local economy (this includes not only property maintenance, but retail jobs, service jobs, etc.). RRC Associates calculations represent only those jobs generated by the constructed residence, as measured through direct employment by property owners for ongoing property maintenance and operation (gardeners, property managers, housekeepers, etc.).

Considerations for Residential Linkage Requirements

The above data presents some interesting considerations for communities when devising a residential linkage program. One method evaluates the total impact of second homes on the economy based on expected homeowner expenditure patterns in the area and, therefore, all primary and secondary jobs created as a result of that impact (NWCOG). The other method evaluates only that employment directly generated by the constructed residence (employees directly hired by property owners to maintain and operate their property). When considering the impact of residential uses, and particularly second homeowners, on local job generation and developing regulations that respond to those impacts, the following issues need to be considered:

- Homeownership cannot be determined until the time of sale of the property, although it may be possible to reasonably "predict" home occupation based on the size, price and location of proposed developments, among other factors;
- Properties sold to locals may be resold to second homeowners, causing a potential increase in employment, but with no ability to require a respective increase in employee mitigation;
- Communities considering commercial linkage and residential linkage must ensure that the adopted programs are not "double-charging" for the same employees. In other words, if residential developments are required to mitigate for all jobs created through homeowner expenditures (direct basic jobs and secondary jobs, including property management as well as retail jobs, service jobs, etc.), commercial linkage figures must ensure that employees housed by residential linkage requirements are not also required to be housed through commercial linkage; and
- There is a positive correlation between household size and job generation – the larger the home, the more jobs that are generated by the residence. To ensure fairness in implementation, requirements should vary by size of the home. The implementation of requirements segmented by broad categories of mitigation (e.g., less than 3,000 square feet and 3,000 square feet or more) does not equitably distribute job generation and employee mitigation.

It should be noted that the direct employment figures generated by RRC Associates, Inc., include the above considerations. Residential job generation figures purposefully only include employees directly hired by property owners to avoid double-counting employees that are needed by local commercial operations. Residential generation figures also purposefully include all property owners. This negates the complexity of trying to determine whether properties will be purchased by locals or second homeowners, but provides a middle-ground figure that results in mitigation fitted to the life of the property (including changes in ownership). However, it is recognized that some communities may prefer to have higher requirements for second homeowners in line with their total job generation in a local economy, with corresponding reduced requirements for commercial development. This is within the realm of possibilities and could be achieved through creative program development and sensitivity to the above-mentioned issues.

Accounting for Multiple Job Holding

The job generation ratios for commercial space measure the total number of full- and part-time employees combined; no adjustment was made when counting part-time jobs. Some of the employees, particularly the part-time workers, may also hold other jobs. To avoid double counting and potentially requiring two different commercial developments to pay for housing the same employee, the number of total employees in commercial space that generate demand for housing in Eagle County needs to be adjusted for multiple job holding. Because job generation rates for residential dwellings are presented in terms of full-time equivalents (FTE), they do not need to be adjusted for multiple job holding.

The 1999 Eagle County Housing Needs Assessment found that employees in Eagle County hold an average of 1.2 jobs. This measure was calculated by evenly weighting the number of jobs held during the winter, summer and shoulder seasons. It is similar to the results found in other mountain resort communities where, over the years, the number of jobs held by employees has typically ranged between 1.15 and 1.35. The projections of jobs and workers holding jobs in Eagle County in 2005 that were compiled by the Department of Local Affairs also average about 1.2 jobs per worker (see the "background data" report).

Converting from Workers to Households

Employees often live together in family and unrelated roommate households. Housing requirements need to recognize these lifestyle patterns. The number of employees per household living in family households has been estimated from the 2000 US Census. Family households with at least one employee have 1.96 employees on average. When non-family household estimates are included (including householders under 65 that are living alone and with unrelated persons), this drops to about 1.8 employees per household, on average. This results in large part because 21 percent of households in Eagle County are single-person households and can, therefore, have at most one employee. The number of households generated by a project equals the number of new employees divided by 1.8 employees per household.

Identifying Program Methods and Household Targets

A decision must be made as to which types of programs will be targeted by Eagle County's proposed residential and commercial employee housing mitigation programs. It is important that developers not be "double-charged" by housing requirements to avoid the need for crediting developments for payments made through other mechanisms (see the section on Credits in this report). For example, many programs implemented in other Colorado mountain resort communities typically employ either residential linkage or inclusionary zoning to avoid "double-charging" residential developments for the same employees. However, the current approach outlined in Eagle County's Guidelines also prevents double-charging by having inclusionary and linkage requirements target different household income ranges (80 to 100% AMI and 60 to 80% AMI, respectively).

Income ranges served by programs are unique for each community depending on their specific household needs. Most programs adopted in other Colorado mountain communities require housing to be built for households earning anywhere between 60 percent and 120 percent AMI, with many requiring that employee units average 80 percent AMI mitigation. Different ranges can be targeted based on local needs – for example, Aspen/Pitkin County have eight service-level categories, covering from low-income households through four levels of upper income categories.

The County has the discretion to require different mitigation rates for residential and commercial development, provided the rates are based on a legitimate public purpose. For example, commercial development can be assessed a lower mitigation rate than residential provided there is a finding of fact that doing so achieves a public purpose, such as the encouragement of economic development and the support of fiscal soundness through the generation of sales tax revenues.

Credits

Any taxes or fees paid by new development that are used to address existing housing deficiencies must be credited for the amounts paid. In Eagle County, none of the fees or taxes paid by residential or commercial development are allocated to housing.

Mitigation Formula

To determine the number of affordable housing units that commercial, residential, or mixed-use projects must produce, the following formula is used. For illustrative purposes, the below table is based on the assumption that a 30% mitigation rate is required for commercial and 30% for residential mitigation. Other mitigation rates could easily be substituted, if desired.

Table 8. Calculation of Commercial and Residential Linkage Requirements

Commercial	**Factor**	**Calculation**
Size of Development		Leasable Square Feet
Jobs generated	Rate per 1,000 SF	rate x SF/1,000
	Bar/restaurant – 8.1	
	Commercial retail – 3.0	
	Office – 3.8	
	Other – 2.9	
Employees generated	1.2 jobs per employee	Jobs generated / 1.2
Households generated	1.8 employees per unit	Employees generated/1.8
Units Required	30% mitigation rate	Households generated x 30%
Lodging and Property Management		
Size of Development		# Rooms or # Units
Jobs generated	Lodge/Hotel - 0.8/Room	# rooms x 0.8
	Prop. Management - 0.4/Unit	# units x 0.4
Employees generated	1.2 jobs per employee	Jobs generated / 1.2
Households generated	1.8 employee per unit	Employees generated/1.8
Units required	30%	Households generated x 30%

Residential	**Factor**	**Calculation**
Size of Development		# Units
Employees generated	Unit Size See *Residential Employee Generation Rates By Home Size* table (pg. 7)	# units x approximate job generation rates
Households generated	1.8 employees per unit	Employees generated/1.8
Units required	30% mitigation rate	Households generated x 30%

- The size of the project is first multiplied by the appropriate job generation rates to estimate the number of jobs that will be created;

- The number of jobs generated for commercial space and lodging is then divided by the average job holding ratio of 1.2 jobs per employee to estimate the number of new employees that will be generated by the development;

- The number of new employees is then divided by the number of employees per household (1.8) to estimate the number of new households generated by the project; and

- The total number of households is then multiplied by the percent mitigation rates, as approved by the Eagle County Board of Commissioners, to determine the number of units required.

The number of new households for which housing must be provided is a function of public policy as well as proportionality. Eagle County can require developers to provide housing for up to 100 percent of the income-targeted households generated by the development, particularly in light of existing Eagle County programs and projects that address affordable housing needs of households in the targeted categories. Based on the analyses presented in this report, a 30 percent mitigation rate would be easily supported for programs targeting households earning 100 percent of AMI or less, with rates potentially supportable up to 45 percent or more. The mitigation requirements can be less than the maximum permitted for residential or commercial development, or both, based on the desires of the County to achieve its goals and objectives for Community Housing through mechanisms other than employee housing mitigation.

Fee in Lieu Calculation

The difference between prevailing market prices and what targeted low-income households can afford to pay for housing is the gap that must be taken into consideration when determining the amount of fee that could be paid in lieu of producing units under certain circumstances. This gap varies by the income level of the targeted household and whether homeownership or rental housing is to be provided.

To generate one number for each targeted income category that represents the gap between affordable and market costs, a series of calculations must be made, as follows:

1. The income range of targeted households is first established. The basis is the median family income for three-person households in Eagle County. The income for three-person households was used since the average household size in Eagle County as of 2004 is 2.74 persons (as estimated by the Department of Local Affairs). The income range must be updated annually to reflect changes in the published wage or median income figures, depending upon which is used as an eligibility measure. As a result, the amount of the gap and resulting payment in lieu will fluctuate yearly.

2. The target income point within the range is then set so that a single gap calculation can be performed. For the calculation under Category 1 (incomes at or below 80% of the median), the target point is set at 60% of the median. This rationale can be supported by the fact that the funds received from payments in lieu will be used by Eagle County to leverage funds to develop employee housing (the fee only covers the gap) and 60% of the median income is often targeted by Federal and State financing programs.

3. The affordable monthly housing payment is next established based on a commonly used standard: 30% of gross income equals housing payment.

4. The affordable monthly housing payment is then converted to an affordable purchase price by assuming the cost of property taxes and insurance is equal to 20 percent of the total affordable housing payment, then assuming that mortgage terms based on the remaining 80 percent of the payment include a 5 percent down payment and a 6 percent fixed rate of interest for 30 years.

5. An average size for each income category is set taking into consideration the County's housing goals and objectives, which include providing a variety of housing units for multiple

types of households. Guidelines for the County's program should establish both an allowable range of sizes and a required average for the income categories.

6. The per square foot sales prices of dwelling units recently purchased in Eagle County is used as the basis for housing costs. The figure of $270 per square foot was the median cost of units sold from September 2004 through August 2005 (with outliers removed). The cost of units sold rather than the cost of construction has been used for several reasons:

    - Market-rate prices on a per square foot basis can be readily obtained and can be used to update the fee on a regular basis;

    - Construction costs vary widely, depending upon numerous variables. Adding the cost of land further complicates the calculation; and

    - The County may use the fees obtained to purchase existing units, provide rent subsidies, or support other housing efforts in addition to new construction projects.

7. The affordability gap is the difference between the cost (median per square foot price of recently purchased dwellings multiplied by the average size of units required for each income category) and the affordable purchase price.

Programs targeting the lower income category (≤ 80% AMI) would have a per unit payment in lieu of $77,807, as shown in the following table.

Table 9. Calculation of Fees in Lieu based on Median Income Limits

	Category 1 £80% AMI	Category 2 81% - 100% AMI
Income Range (3-person households)	$ 0 - $52,200	$52,201 - $72,000
Target Income Point (60% - Cat. 1; 90% AMI – Cat. 2)	$43,200	$62,100
Affordable Monthly Housing Pmt.	$1,080	$1,553
Property Taxes/Insurance/HOA estimate (20% of Aff. Monthly Hsg. Pmt.)	$216	$311
Mortgage Payment	$864	$1,242
Max. Mortgage Amount*	$144,108	$207,155
Affordable Purchase Price	$151,693	$218,058
Average Sq. Ft of Units	850	950
Median per Sq Ft.	$270	$270
Cost per Unit	$229,500	$297,000
Affordability Gap / Payment per Unit in Lieu	$77,807	$38,442

* Assumes 5% down, 6% interest for 30 years.

It should be noted that the calculations presented above assume that any HOA fees (plus property taxes and insurance) would be covered by 20 percent of the "affordable monthly housing payment." This percentage can be amended depending upon expected HOA dues being lower or higher than this allowance. For developments that result in a fraction of a housing unit being required, the payment is determined by applying that fraction to the per-unit in lieu amount.

For reference, the Table 10 shows the current 2005 Area Median Income levels for Eagle County Households and Table 11 shows the estimated affordable purchase price of homes for each income category.

Table 10. Area Median Income by Household Size: Eagle County, 2005

	1-person	2-persons	3-persons	4-persons	5-persons
30%	$16,800	$19,200	$21,600	$24,000	$25,900
50%	$28,000	$32,000	$36,000	$40,000	$43,150
80%	$40,600	$46,400	$52,200	$58,000	$62,650
100%	$56,000	$64,000	$72,000	$79,950	$86,300
120%	$67,200	$76,800	$86,400	$96,000	$103,560

Source: Department of Housing and Urban Development

Table 11. Affordable Purchase Prices of Homes* by AMI: Eagle County, 2005

	1-person	2-persons	3-persons	4-persons	5-persons
30%	$58,992	$67,419	$75,846	$84,274	$90,945
50%	$98,319	$112,365	$126,411	$140,456	$151,517
80%	$142,563	$162,929	$183,295	$203,661	$219,989
100%	$196,639	$224,730	$252,821	$280,912	$303,034
120%	$235,966	$269,676	$303,385	$337,095	$363,641

Source: Department of Housing and Urban Development, RRC Associates, Inc.
*Assumes a 30-year, 6% fixed rate loan, with 5% down and 20% of monthly payment for property taxes, insurance and HOA fees, with no more than 30% of household income used for housing payments.