GARFIELD COUNTY, COLORADO

NEXUS/PROPORTIONALITY ANALYSIS
FOR EMPLOYEE HOUSING MITIGATION PROGRAMS

Introduction

Garfield County is reviewing their inclusionary zoning program. Current regulations are imposed at the time a property applies for rezoning. The requirement varies from 10 to 20 percent depending on the property's initial zoning and requested zone change. Currently, the requirements specify ownership units to be developed and priced for households earning less than 120 percent of the Area Median Income (AMI) and averaging affordability for 80% AMI households. On-site development of units is preferred, with off-site development open to review and consideration. Current regulations do not provide for a fee-in-lieu nor land-in-lieu of development.

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. A formula for calculating a fee-in-lieu based on the existing inclusionary zoning requirement is also presented. This report does not address inclusionary zoning percentage requirements, given that a nexus/ proportionality analysis is not required for inclusionary programs.

Linkage programs require developers of commercial and residential space to contribute to the provision of housing in proportion to the housing need that they generate by creating new employment. As a matter of policy, local governments determine the income group to be targeted under the mitigation program, which is usually households who are priced out of the market under current conditions. The basic premise of employee housing mitigation programs is that new commercial and residential development fuels demand for housing by generating new employees. In Garfield County, particularly in the Glenwood Springs to Carbondale corridor where land is expensive, the private market tends to supply housing that is priced beyond the reach of many local employees. This creates an undersupply of housing that is affordable for low- to middle-income employees and results in housing prices that tend to escalate much faster than wages.[1]

Summary

<u>Level of Service:</u> This report finds that housing linkage programs that target employee households earning less than 80 percent AMI could require up to a 33 percent mitigation rate in Garfield 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 50 percent

[1] Average yearly wages in Garfield County increased about 17.8 percent between 1999 and 2004; the median sale price of single family homes increased 36.5 percent, the median sale price of condominiums increased about 11 percent and the median sale price of duplexes/triplexes/townhomes increased about 29 percent. See the "2005 Garfield County Housing Assessment" in support of this Nexus for other housing and affordability trends.

mitigation rate. And, for programs targeting 120 percent AMI households or below, a 63 percent mitigation rate could be supported. The County may require mitigation rates different from the above service levels depending upon local needs, supplemental housing programs and development undertaken by the County, and desired outcomes from linkage housing programs.

Program application: This report finds that, because housing needs in Garfield County are not consistent in all regions of the County, a scaled program based on County region may be appropriate. In other words, the Carbondale/Glenwood Springs area is generally not affordable for households earning less than 120 percent of the AMI given the higher price of land in this area, more competition for housing and resulting higher priced market rate homes that are developed. The Battlement Mesa/Silt region is generally affordable for households until they fall below the 100 percent AMI level and homes in Rifle/Parachute are generally affordable for households except for those earning 60 to 80 percent of the AMI. The relative difference in the cost per square foot of homes also points to alternative fee-in-lieu amounts in each region.

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 Garfield 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 report concludes with an estimate of the gap between affordable and market costs and a calculation of the payment in lieu based both on existing inclusionary zoning requirements and linkage requirements presented herein.
The steps are:

1. Identifying the level of service that has been set for Garfield County in terms of the percentage of low to moderate-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 Garfield 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 procedure 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, a pro-rata share of the fees can be paid in lieu of producing units or a rounding factor can be applied. 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.

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 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 active in adopting and implementing housing programs to increase the County's current level of service. This test stems from the fact that mitigation programs cannot be used to correct existing problems unless they are matching existing efforts

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 37 percent of Garfield County's households earn less than 80 percent of the AMI. If Garfield 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 37 percent mitigation rate – equal to the current service level of the county (see Table 2, below).

Garfield County's current ordinance specifies an inclusionary program that targets households earning 60 to 120 percent AMI, where units shall average 80 percent AMI affordability. 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 Garfield County for one- through five-person households in 2005.

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

AMI Range	Number of Persons in Household				
	1	2	3	4	5
50% AMI	$22,100	$25,300	$28,450	$31,600	$34,150
60% AMI	$26,520	$30,360	$34,140	$37,920	$40,980
80% AMI	$35,400	$40,450	$45,500	$50,550	$54,600
100% AMI	$44,200	$50,600	$56,900	$63,200	$68,300
120% AMI	$53,040	$60,720	$68,280	$75,840	$81,960
150% AMI	$63,600	$72,750	$81,750	$90,900	$98,100

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

Employee household incomes by AMI in 2005 were estimated from the 2004 Travel Patterns employee survey. Table 2 assumes that employee household incomes by AMI have not significantly changed between 2004 and 2005. The survey results indicate that about 50 percent of all employee households employed in Garfield County earn less than 100 percent of the AMI. In other words, the current service level in Garfield County for households earning less than 100 percent of the AMI is about 50 percent. This varies by region in the County, where 48 percent of employee households in the Carbondale/Glenwood Springs area and 62 percent in the New Castle/Silt/Rifle/Parachute area earn less than 100 percent of the AMI.

Table 2. AMI Distribution of Employee Households That Are Employed in Garfield County (2005 est.)

AMI Range	Garfield County	Carbondale/ Glenwood Springs	New Castle/ Silt/ Rifle/ Parachute
30% or less AMI	6%	6%	9%
30.1% - 50% AMI	8%	7%	10%
50.1% - 60% AMI	9%	9%	13%
60.1% - 80% AMI	10%	11%	11%
80.1 to 100% AMI	17%	15%	19%
100.1 to 120% AMI	13%	13%	12%
120.1 to 150% AMI	18%	19%	13%
Over 150% AMI	19%	21%	13%
TOTAL	100%	100%	100%
<80% AMI	33%	33%	43%
<100% AMI	50%	48%	62%
<120% AMI	63%	61%	74%
<150% AMI	81%	79%	87%

Source: 2004 Travel Patterns Study employee survey; RRC Associates, Inc.

It is recognized that a portion of the households in Garfield County that earn less than 100 percent of the AMI are cost-burdened or have other housing problems[2]. 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 are 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 above approach generates a potential measurement for the County's existing level of service for housing residents earning incomes at different AMI levels. The data comfortably support a mitigation level of 33 percent for households earning less than 80 percent of the AMI; 50 percent for households earning less than 100 percent of the AMI, about 63 percent for households earning less than 120 percent of the AMI and up to about 81 percent for households earning under 150 percent of the AMI. 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 higher or lower mitigation rates than those 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.

[2] Based on year 2000 US Census data (CHAS compilations), about 53 percent of households earning less than 100% AMI were cost-burdened (paid over 30% of income for housing), living in overcrowded conditions and/or living in substandard units.

- 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, 2004
- Routt County: 1990
- San Miguel County: 2000
- Snowmass Village: 1999
- Summit County: 1990, 2001
- Telluride: 1993, 1996, 2001
- Aspen 2002
- Garfield County 2004

For comparison with Garfield County, results from the more intensive employment areas of Snowmass, Aspen and Pitkin County were not included in the merged database runs shown below in Table 3. The composite database shows about 2.7 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), recreation-related establishments (4.3 per 1,000 SF) and office uses (3.7 per 1,000 SF) and slightly higher for retail space (2.9 per 1,000 SF). Generation rates in Garfield County are generally lower, than the composite database for most categories. However, the sample size for Garfield County businesses in each category is fairly thin. For example, only one bar/restaurant and one lodge/hotel property each responded to the survey.[3]

Table 3. Commercial Job Generation Rates

	Merged Database	Garfield County 2004
Bar/restaurant	8.1	3.1
Construction	4.0	2.7
Education	1.4	3.1
Office (Finance/Banking, Legal, Medical, Professional Services)	3.7	3.5
Government	1.8	1.7
Lodging/hotel/housekeeping	0.6/room	1.6/room
Personal services	2.0	-
Real estate/property management (office)	6.0	1.4
Retail sales	2.9	2.2
Service	1.3	2.9
Recreation/attractions/amusements	4.3	3.5
Utilities	1.4	1.3
Property Management (units)	0.4/unit	-
Overall	2.7	2.1

Source: RRC Associates, inc.

[3] It should be noted that the primary purpose of the survey conducted in 2004 was not for calculating job generation rates, but for collecting information on employer transportation options and employee housing issues in the Garfield, Eagle and Pitkin County region. Samples collected were sufficient for their primary purpose, but are a little thin with respect to employee generation rates by business type.

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, unless shown otherwise by the applicant. "Office" includes such uses as finance/banking, legal and medical professions and other professional services. This shows that commercial operations in Garfield County are slightly less labor intensive than uses in the merged database as a whole, but this is based on a substantially fewer number of cases than the merged database.

Table 4. Commercial Job Generation Rates by Condensed Categories

	Merged Database	Garfield County 2004	Units
Bar/restaurant	8.1	3.1	Emps/1,000 sq. ft.
Lodging/hotel	0.6/room	1.6/room	Emps/room
Commercial retail	2.9	2.2	Emps/1,000 sq. ft.
Property Management	0.4/unit	-	Emps/unit
Office	3.7	3.5	Emps/1,000 sq. ft.
OVERALL	2.7	2.1	Emps/1,000 sq. ft.
N=	1,591	28	

Source: RRC Associates, inc.

The merged database contains 28 valid cases from Garfield County. The compared composite database has 1,591 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. 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 counties/communities is less statistically valid than the merged data set, particularly when broken down by types of businesses;
- Surveys of individual counties/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 mountain 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 Garfield County, the more the affordable housing problem is aggravated.

Since 1999, RRC Associates and the Housing Collaborative, LLC, have collected over 7,000 responses on homeowner surveys in the following mountain resort communities:

- Eagle County, Co. (2001);
- Teton County, Wy. (99/00);
- Gunnison County, Co. (99/00);
- Breckenridge/Upper Blue, Co. (00/01);
- San Miguel County, Co. (99/00);
- Blaine County, Id. (2002); and
- Pitkin County (2004).

These homeowner surveys were used to estimate the number of permanent jobs associated with various types and sizes of residential units. The studies 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/concierge/butler, personal trainer/administrative assistant and other related employees. The studies did not include workers generated through construction of the home. The data clearly show that employment generation intensifies as the size of the dwelling unit increases.

Average job generation rates by residential units size were calculated from the composite database 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, vary by square footage according to the following exponential function:

Equation of Residential Employee Generation by Home Size

$$\text{Total FTE} = 0.158 * e^{(.0002)(\text{Square Footage})}$$

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 5. 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.	0.17	6,000 – 6,499	0.55
500– 999	0.18	6,500 – 6,999	0.61
1,000 – 1,499	0.20	7,000 – 7,499	0.67
1,500 – 1,999	0.22	7,500 – 7,999	0.74
2,000 – 2,499	0.25	8,000 – 8,499	0.82
2,500 – 2,999	0.27	8,500 – 8,999	0.91
3,000 – 3,499	0.30	9,000 – 9,499	1.00
3,500 – 3,999	0.33	9,500 – 9,999	1.11
4,000 – 4,499	0.37	10,000 – 10,499	1.23
4,500 – 4,999	0.41	10,500 – 10,999	1.36
5,000 – 5,499	0.45	11,000 – 11,499	1.50
5,500 – 5,999	0.50	11,500 – 12,000	1.66

Source: RRC Associates, Inc.

Considerations for Residential Linkage Requirements

When considering the impact of residential uses on local job generation and developing regulations that respond to those impacts, the following issues need to be considered:

- 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 presented herein 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 and provides a middle-ground figure that results in mitigation fitted to the life of the property (including changes in ownership).

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 Garfield 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.

Based on the 2004 Travel Patterns employee surveys, employees in Garfield County hold about 1.16 jobs on average. This is very similar to the estimate of 1.15 jobs per employee by the Department of Local Affairs. The Department of Local Affairs projects this ratio to stay about the same through at least 2015. As shown below, persons employed in the Carbondale/ Glenwood Springs area tend to hold slightly more jobs (1.17 on average) than those employed in the west County (1.13 on average).

Table 6. Average Jobs Per Employee by Place of Employment: 2004

	Garfield County total	Carbondale/ Glenwood Springs	New Castle/ Silt/ Rifle/ Parachute
Jobs per employee	1.16	1.17	1.13

Source: 2004 Travel Patterns Employee Survey

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 was estimated from the 2004 Travel Patterns employee survey. There are 1.95 employees per household on average in the County as a whole, with slightly fewer in the west County (1.90 on average). This includes households with at least one employee only (retired and otherwise unemployed households are not included in this ratio). Therefore, the number of employee households generated by a project equals the number of new employees divided by 1.95 employees per household.

Table 7. Average Employees Per Household by Place of Employment: 2004

	Garfield County total	Carbondale/ Glenwood Springs	New Castle/ Silt/ Rifle/ Parachute
Employees per household	1.95	1.95	1.90

Source: 2004 Travel Patterns Employee Survey

Identifying Program Methods and Household Targets

A decision must be made as to which types of programs will be targeted by Garfield 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. As another approach, draft guidelines proposed by Eagle County also prevent double-charging by having inclusionary and linkage requirements target different household income ranges (80 to 100% AMI and 60 to 80% AMI, respectively). Yet another consideration is that mitigation rates for both commercial and residential linkage could be implemented at low enough rates so that they "share" the requirements for housing the workforce without overlapping in their requirements.

Income ranges served by programs are unique for each community and county 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.

With specific respect to Garfield County, different income ranges may need to be targeted at different locations within the county based on current market housing development patterns. Households earning less than 120 percent of the AMI have difficulty affording homes in the Glenwood Springs and Carbondale area, whereas homes west of Glenwood Springs, in the New Castle/Silt/Rifle/Parachute areas, are affordable to these households. Households earning less than 100 percent AMI will have difficulty in the New Castle and Silt area, whereas homes in Rifle/Parachute may be affordable for these households. Households earning less than 80 percent of the AMI, however, may need some assistance in the Rifle/Parachute areas. However, as home prices continue climbing in all areas, these AMI mitigation ranges will be subject to change and should be accordingly tracked.

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 Garfield County, none of the fees or taxes paid by residential or commercial development are allocated to housing.

Linkage Mitigation Formula

To determine the number of affordable housing units that commercial, residential, or mixed-use projects must produce under a linkage program, the following formula is used. For illustrative purposes, the below table is based on the assumption that a 20 percent mitigation rate is required for commercial and 20 percent 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 – 2.9	
	Office – 3.7	
	Other – 2.7	
Employees generated	1.15 jobs per employee	Jobs generated / 1.15
Households generated	1.95 employees per unit	Employees generated/1.95
Units Required	20% mitigation rate	Households generated x 20%
Lodging and Property Management		
Size of Development		# Rooms or # Units
Jobs generated	Lodge/Hotel - 0.6/Room	# rooms x 0.6
	Prop. Management - 0.4/Unit	# units x 0.4
Employees generated	1.15 jobs per employee	Jobs generated / 1.15
Households generated	1.95 employee per unit	Employees generated/1.95
Units required	20%	Households generated x 20%

Residential	Factor	Calculation
Size of Development		# Units
Employees generated	Unit Size See *Residential Employee Generation Rates By Home Size* Table 5 (pg. 8)	# units x approximate job generation rates
Households generated	1.95 employees per unit	Employees generated/1.95
Units required	20% mitigation rate	Households generated x 20%

- 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 1.15 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 (1.95) 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 Garfield 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. Garfield County can require developers to provide housing for up to 100 percent of the income-targeted households generated by the development. Based on the analyses presented in this report, a 50 percent mitigation rate would be supported for programs targeting households earning 100 percent of AMI or less. 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 gap between the *cost of housing* and the ability of the targeted households to *pay for housing* defines the subsidy, or fee-in-lieu, required to bring the cost of housing down to affordable levels. Therefore, the fee-in-lieu does not cover construction costs of a project, but rather fills the gap between market rate and the affordable purchase prices for targeted households. The fee-in-lieu amount would be paid in lieu of producing units under certain circumstances. The fee 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 used herein is the median family income for three-person households in Garfield County, given that the average household size in Garfield County as of 2004 is 2.66 persons (as estimated by the Department of Local Affairs). The income range must be updated annually to reflect changes in the published median income figures, 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 for incomes at or below 80 percent of the median, the target point is set at 60 percent of the median[4]; for units affordable to households earning between 80 and 100 percent of the AMI, the target point would be set at 90 percent of the median; etc.

3. The affordable monthly housing payment is next established based on a commonly used standard: 30 percent of gross income equals the 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 6.5 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 size for the income categories. Estimates used herein assume an average size of 1,100 square feet for a 3-person 80 percent AMI household; 1,200 for a 3-persons 100 percent AMI household and 1,300 for a 3-person 120 percent AMI household.

6. The per square foot sales prices of dwelling units recently purchased in Garfield County is used as the basis for housing costs. These varied by region in the County, as shown Table

[4] This rationale can be supported by the fact that the funds received from payments in lieu will be used by Garfield County to leverage funds to develop employee housing (the fee only covers the gap) and 60 percent of the median income is often targeted by Federal and State financing programs.

9, below. It should also be noted that these values vary by size of home, where units sized between 1,000 and 1,300 square feet (averages used herein for different AMI housing requirements indicated above in #5) sold for higher median home prices per square foot than the average of all homes in the County.

Table 9. Median Sale Price per Square Foot: Single Family, Condominium and Duplex/Triplex/Townhome Units Combined (2005)

	Garfield County Total	Carbondale/ Glenwood Springs	New Castle/ Silt	Rifle/ Parachute/ Battlement Mesa
All homes sold	$155	$187	$153	$128
Homes sold sized between 1,100 and 1,300 square feet	$158	$202	$159	$137

Source: 2005 Garfield County Assessor data; RRC Associates, Inc.

The above figures include residential properties on unincorporated land neighboring each community to ensure compatibility on a regional basis. These include sales from January through September 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 percent AMI) in the Carbondale/Glenwood Springs area would have a per unit payment in lieu of $92,038, compared to $27,138 in the Rifle/Parachute area, as shown in Table 10, below.

Table 10. Calculation of Fees in Lieu based on Median Income Limits

	Less than 80% AMI Households		
	Carbondale/ Glenwood Springs area	***New Castle/ Silt area***	***Rifle/ Parachute/ Battlement Mesa area***
Income Range (3-person households)	$ 0 - $45,500	$ 0 - $45,500	$ 0 - $45,500
Target Income Point (60% - Cat. 1)	$34,140	$34,140	$34,140
Affordable Monthly Housing Pmt.	$854	$854	$854
Property Taxes/Insurance/HOA estimate (20% of Aff. Monthly Hsg. Pmt.)	$171	$171	$171
Mortgage Payment	$683	$683	$683
Max. Mortgage Amount*	$107,979	$107,979	$107,979
Affordable Purchase Price	$113,662	$113,662	$113,662
Average Sq. Ft of Units	1,100	1,100	1,100
Median per Sq Ft.	$187	$153	$128
Cost per Unit	$205,700	$168,300	$140,800
Affordability Gap / Payment per Unit in Lieu	$92,038	$54,638	$27,138

* Assumes 5% down, 6.5% interest for 30 years and 20% of monthly payment for property taxes, insurance and HOA fees, with no more than 30% of household income used for housing payments.

**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.

To determine the final fee-in-lieu payment, the number of units the development is required to provide, as determined from the residential or commercial linkage formula presented in the "linkage mitigation formula" section above, is then multiplied by the respective "payment per unit in lieu" amount presented in the above table (Table 10). Alternatively, if an inclusionary program is used, then the number of units required as calculated from the inclusionary percentage (E.g., 10 percent of a proposed 20-unit development equals 2 units required) will be multiplied by the respective payment per unit in lieu of development for each income range for which units are to be provided (in Table 10, if a development was being built in New Castle/Silt area and was required to provide units for 80 percent AMI households, this would equate to a payment in lieu for 2 units of $96,946).

For reference, the Table 10 shows the current 2005 Area Median Income levels for Garfield 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: Garfield County, 2005

AMI Income	1-person	2-person	3-person	4-person	5-person
60% AMI	$26,520	$30,360	$34,140	$37,920	$40,980
80% AMI	$35,400	$40,450	$45,500	$50,550	$54,600
100% AMI	$44,200	$50,600	$56,900	$63,200	$68,300
120% AMI	$53,040	$60,720	$68,280	$75,840	$81,960

Source: Department of Housing and Urban Development

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

AMI Income	1-person	2-person	3-person	4-person	5-person
60% AMI	$88,293	$101,078	$113,662	$126,247	$136,435
80% AMI	$117,857	$134,670	$151,483	$168,296	$181,780
100% AMI	$147,155	$168,463	$189,437	$210,412	$227,391
120% AMI	$176,586	$202,155	$227,325	$252,494	$272,869

Source: Department of Housing and Urban Development, RRC Associates, Inc.
*Assumes a 30-year, 6.5% 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.

Potential For Dedication of Land-In-Lieu

Dedication of land in-lieu of providing a unit is an option that could be made available under either the inclusionary zoning or mitigation requirements. Typically, the local government retains the right to approve acceptance of land in lieu of building/providing units or paying a fee. Land provided in lieu of building units carries a requirement that all land dedicated as land-in-lieu shall be used by the county to provide housing as outlined in the ordinances adopting the housing programs. In addition, the local government retains the right to use the dedicated land to directly provide such units, sell the land and acquire other land or residential units or may give the dedicated land to an entity that agrees to provide such units, other land or residential units. Land-in-lieu would carry the following requirements:

1. The site is located within an area that is or would be appropriate for residential development within the next five years;

2. Water, sewer and other utilities are in existence at the site;

3. There are no site constraints, including but not limited to environmental hazards and access;

4. The site is otherwise suitable for residential development;

5. Under the current zoning and PUD requirements, or under those expected to be in place, the amount of land to be provided will allow for the construction of the number of Affordable Housing Units that are required under the mitigation program; however, the local government could also accept land that would allow for a greater number of units than would be required under the mitigation program.

6. A professional appraisal of the land is completed which indicates the value of the land, the location of current improvements and any development constraints that could affect potential development or marketability of the site;

7. The value of the land must be equal to or greater than the total amount of cash-in-lieu payment that would be required pursuant to these guidelines if a cash-in-lieu payments was approved; and

8. Title to the land must be free and clear of any encumbrances, liens or other obligations.