APPENDIX H

Idaho-Maryland Mine Economic and Fiscal Analysis

IDAHO-MARYLAND MINE
GRASS VALLEY, CALIFORNIA
ECONOMIC AND FISCAL ANALYSIS

FINAL REPORT

Prepared for
THE CITY OF GRASS VALLEY

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ECONOMIC AND FISCAL ANALYSIS OF THE PROPOSED IDAHO-MARYLAND MINE PROJECT IN GRASS VALLEY, CALIFORNIA

INTRODUCTION AND OVERVIEW

This report for the City of Grass Valley presents results of economic and fiscal analysis of the proposed Idaho-Maryland Mine (IMM). The project is located in the Grass Valley sphere of influence and would require annexation to the City. Comparison of the proposed project to what would otherwise be expected under a General Plan Land Use Alternative for the proposed annexation area is a key element of the analytical approach.

The evaluation of the proposed project and the General Plan Land Use alternative includes consideration of implications for jobs/housing balance, the City's tax base, and regional market demand. The analysis satisfies steps 4 and 5 of the procedures for annexations laid out in Grass Valley City Council Resolution 03-39. The analysis also conforms to the recommendations for jobs/housing balance and fiscal impact analysis in the April 2006 *Economic and Fiscal Conditions Study for the City of Grass Valley* that is also known as *The SDA Study*.

Following the summary of results, there are four main sections to this report and a methodology appendix. The first section presents employment and population estimates for the proposed project and discusses housing demand associated with the proposed IMM. The second section describes the General Plan Land Use Alternative and provides estimates of population and employment for that development scenario for the project area. The third section contains the jobs/housing balance analysis, and the fourth section contains the fiscal impact analysis.

SUMMARY OF RESULTS

- The proposed IMM project would employ workers in a variety of capacities for exploration, construction, operations, and reclamation activities, expected to occur over a 23 year period. Exploration activity would employ up to 40 workers; construction would employ 140 to 350 workers; and mine operations and ceramics production would employ 210 to 400 workers. The final mine reclamation phase would provide jobs for 20 workers over a two-year period.
- The IMM project, at a stabilized level of 400 operations workers, would represent a four percent increase in the City's existing job base. The 400 jobs at the IMM project would represent ten percent of job growth forecast for the City through 2020 or 10 percent more job growth than otherwise expected, assuming that some or all of the IMM jobs would be net additional employment for Grass Valley.
- The proposed IMM would be a major employer in Grass Valley and in Western Nevada County, but not all of the workers would be drawn from the local labor pool. On average, about half of the workers are expected to be people already living in the area, and the other half would relocate because of the IMM job opportunities.

- Based on patterns observed at similar mining operations, some workers living outside Grass Valley would commute on a daily basis from their place of residence. Others would be "weekly commuters" who rent shared housing in Grass Valley during the workweek.
- Early years of the operation, when construction and operations overlapped, would see the greatest Grass Valley population impact from the proposed mine and ceramics production facility, with about 980 people living in the City who were either working at or dependents of people working at the IMM. Those relocating would total about 400 (workers plus dependents). The 400 newcomers would represent a three percent increase in the current population of the city of Grass Valley and either five percent of the growth forecast for the City of Grass Valley through the year 2020 or five percent more growth than otherwise projected, if the proposed IMM represented net additional economic activity beyond that expected under the General Plan.
- In addition to this population of full-time residents, part-time "commuter" residents would total about 120 – 150 during the early phases, stabilizing at about 100 part-time residents.
- The proposed project would result in demand for owner-occupied family housing, rental family housing, and other rental housing (larger units that would be shared and smaller units that would not be shared). The majority of housing demand would be in the rental market. In total, during the active phases of IMM construction and operations, housing demand in Grass Valley would range from almost 100 units to about 225 units. Two hundred units represent about three percent of the 2007 housing inventory in the City of Grass Valley and an increment of six percent over the 3,400 unit housing demand projected for the City in *The SDA Study*.
- The General Plan Land Use Alternative describes an amount of development and associated population and employment that would be expected on the parcels in the IMM project area proposed for annexation to the City of Grass Valley, if they were developed under the City's 2020 General Plan land use designations. Just under 400,000 sq. ft. of business park space could be developed, accommodating almost 800 jobs at full occupancy. In the East Bennett area, 270 units of medium and high density housing would accommodate about 720 residents.
- The proposed project would reduce the amount of land in the City's sphere of influence designated for future business park and residential development, replacing those planned land uses with mining and manufacturing land uses. After reclamation of the mining site (after 20 years of operation), the property would be available for longer-term development for industrial uses.

- The General Plan land use change proposed by the IMM project would add 45 acres to the land supply to accommodate business growth in Grass Valley's annexation areas. In the context of the concern about land supply to support long-term economic growth in the City, the increase in General Plan land capacity for business activity in this other part of the City's sphere of influence outside the SDAs represents a positive impact.
- At the same time, the proposed land use change would reduce the City's land supply for housing development. While this could theoretically mean a higher jobs/housing ratio than otherwise expected, and therefore a more robust economy for a time, reduction of the close-in housing supply potential combined with resultant higher housing prices and rents could eventually dampen economic development potential. Continuation of City efforts to increase infill, mixed-use, and SDA residential development potential would be important parts of a strategy to mitigate against an outcome that would increase lower-density development outside the city, increasing commute travel, and other associated negative impacts.
- The proposed Idaho-Maryland Mine Project would result in positive fiscal impacts for the City of Grass Valley, assuming a profitable mining and ceramics production operation. This conclusion includes costs and revenue associated with the proposed business operations as well as costs and some revenue attributable to the new City residents whose presence in Grass Valley would be a direct result of IMM job opportunities.
- Public safety costs would account for about 80 percent of annual City costs. Property tax and sales tax revenue would be the most important revenue sources. During the 14 years of stabilized operations, annual revenue would be almost two times annual costs. Estimates for both revenue sources assume identification of additional proven reserves and steady operating income for both the mining operation and ceramics production.
- Development of the General Plan Land Use Alternative for the Idaho-Maryland site would also result in positive fiscal impacts for the City of Grass Valley. At buildout, annual revenue would exceed annual cost by about 30 percent. The business park development would contribute the most to this positive fiscal outcome. Considered independently, the residential development would be fiscally neutral to the City, with net revenue about equal to net cost.
- The proposed IMM project would have the potential to generate a larger surplus of revenue compared to public service cost and more revenue over a shorter time horizon than would be expected of a traditional business park development or residential subdivision. The trade-off for this potential is the more speculative nature of the proposed mining and ceramics production operation.

IDAHO-MARYLAND MINE PROJECT EMPLOYMENT AND POPULATION

The analysis is based on estimates of project employment by activity and phase presented on page 3-10 of the *Revised Mineral Project Application for the Mineral Exploration and/or Environmental Assessment of the Idaho-Maryland Mine Project, Grass Valley, California*,

prepared by the Idaho-Maryland Mining Corporation, May 29, 2007. The analysis also relies on estimates of the characteristics of the workforce derived from information about the workforce at the McLaughlin Gold Mine in Lake County that was in mining operation from the 1970s though the 1990s, with production continuing through the early years of this decade. The workforce characteristics from the McLaughlin Gold Mine are presented in the *Socioeconomic Analysis Idaho-Maryland Mine Project, Grass Valley, California*, prepared for the Idaho-Maryland Mining Corporation by MACTEC Engineering and Consulting, December 17, 2004 (also known as *Appendix M* of the Application for Exploration and Mining Use Permit).

Employment

The proposed IMM project would employ workers in a variety of capacities for exploration, construction, operations, and reclamation activities, expected to occur over a 23 year period from 2008 through 2030. Operations would include mining and ceramics production. **Table 1** presents estimates of employment by activity and phase. Throughout the operations phase, as many as 40 workers would be employed in exploration activity. During the eight-year construction phase, the number of construction workers would range from 140 to 350. During the 21 year operations phase, the number of workers employed in mine operations and ceramics production would range from 210 to 400. The final mine reclamation phase would provide jobs for 20 workers over a two-year period.

TABLE 1
IDAHO-MARYLAND MINE EMPLOYMENT
BY PROJECT ACTIVITY AND PHASE

Phase/Activity	Time Frame	Maximum Estimated Construction Personnel	Maximum Estimated Operations Personnel	Reclamation Personnel
Exploration	2008 - 2027	n/a	40	n/a
Construction Phase 1	2008 - 2011	265	n/a	n/a
Construction Phase 2	2011 - 2013	350	n/a	n/a
Construction Phase 3	2013 - 2015	140	n/a	n/a
Operations Phase 1	2009 - 2013	-	210	n/a
Operations Phase 2	2013 - 2015	-	310	n/a
Operations Phase 3	2015 - 2029	-	400	n/a
Reclamation	2029 - 2030	n/a	n/a	20

NOTE: According to the project applicant, maximum estimated construction and operations personnel in each phase would not occur simultaneously, and therefore are not additive.

SOURCE: Idaho-Maryland Mining Corporation, *Revised Mineral Project Application,* May 29, 2007, page 3-10.

There are about 10,000 jobs in the City of Grass Valley.[1] The IMM project, at a stabilized level of 400 operations workers, would represent a four percent increase in the City's existing job

[1] The *Economic and Fiscal Conditions Study of the City of Grass Valley* (Applied Development Economics, April 11, 2006) estimated 10,000 jobs for the City in 2003, assuming about 33 percent of total wage and salary employment in Nevada County were located in Grass Valley. The level of employment in the County has been relatively stable since 2003; applying the 33 percent factor to estimated County employment for 2007 results in an estimate of 10,200 jobs in Grass Valley (see **Appendix Table A.1)**.

base. *The SDA Study* completed in 2006 projects employment growth at two percent per year for the City through 2020—about 3,800 jobs from a 2003 base. The 400 jobs at the IMM project would represent ten percent of that job growth. In consideration of the conclusion that some or all of the IMM jobs would be net additional employment for Grass Valley, i.e., jobs that would add to the City's export economic activity and would not otherwise be expected in the City, then the proposed project would add 10 percent more job growth than otherwise projected through 2020.

The employment estimates presented here and used throughout this analysis are assumed to represent annual full-time-equivalent (FTE) jobs. The number of job opportunities and the number of individuals employed would likely be larger than these estimates. For example, many construction job assignments are specialized and relatively short-term in duration. For the mine operations and ceramics processing jobs that would be of longer duration, normal job turnover would be expected resulting in periodic job openings and new hires, i.e., new workers employed.

Source of Labor and Place of Residence of Workers

The proposed IMM would be a major employer in Grass Valley and in Western Nevada County. The number of jobs, the mix of skill levels required, working conditions, and the nature of the operation requiring three shifts per day, 24 hours per day every day of the year mean that not all of the workers would be drawn from the local labor pool. The specialized nature of gold mine construction and operations demands that mine-specific characteristics be used to estimate the labor market and housing market implications of the proposed IMM. Information on workforce characteristics collected from workers at the McLaughlin Gold Mine—an operation in a similar exurban location straddling Lake, Napa, and Yolo counties—provide a reasonable means of estimating where the workers would come from and where they might choose to live. **Table 2** summarizes the workforce characteristics from the McLaughlin Mine situation that are used to estimate a potential scenario for the IMM workers.

On average, about half of the workers are expected to be people already living in the area, and the other half would relocate to the Grass Valley area because of the IMM job opportunities. Most (65 percent) of the workers would be expected to live nearby (in Grass Valley). Some of these would be existing residents and some would be new residents relocating to Grass Valley. Of the 35 percent of the workers expected to commute from outside Grass Valley, almost all would live in nearby Nevada County communities; some would live in neighboring counties such as Placer or Yuba.

TABLE 2
FACTORS FOR ESTIMATING WORKFORCE CHARACTERISTICS OF A CALIFORNIA GOLD MINE

	Percent of Workers
Source of Workforce	
Living In Area	48%
Relocating	52%
Total Workforce	100%
Distribution of Workers by Place of Residence	
Local (Grass Valley) Residents	65%
Weekly Commuters	35%
Total Workforce	100%
Distribution of Commuters by Place of Residence	
Nevada County	95%
Other Counties	5%
Total Commuters	100%

SOURCE: *Socioeconomic Analysis Idaho-Maryland Mine Project, Grass Valley California*, MACTEC Engineering and Consulting, Inc., December 17, 2004.; and Hausrath Economics Group.

Table 3 shows the results of applying these factors to the employment estimates for the proposed IMM through all years of operation. Although the project applicant states that the maximum estimated construction and operations personnel in each phase would not occur simultaneously and therefore are not additive, for the purposes of a conservative or "worst case" analysis (and for ease of presentation), some of the following analysis presents totals that add the phases together.

TABLE 3
SOURCE OF LABOR FOR THE PROPOSED IDAHO-MARYLAND MINE: ANNUAL ESTIMATES BY ACTIVITY

Source of Workers, by Activity	2008	2009	2010	2011	2012	2013	2014	2015	2016 - 29 (14 yrs.)	2030
Local Labor Pool (unemployed and underemployed)										
Construction	127	127	127	168	168	168	67	67	-	-
Operations	-	101	101	101	101	149	149	192	192	-
Reclamation	-	-	-	-	-	-	-	-	-	10
Total	*127*	*228*	*228*	*269*	*269*	*317*	*216*	*259*	*192*	
Movers/Workers who Relocate										
Construction	138	138	138	182	182	182	73	73	-	-
Operations	-	109	109	109	109	161	161	208	208	-
Reclamation	-	-	-	-	-	-	-	-	-	10
Total	*138*	*247*	*247*	*291*	*291*	*343*	*234*	*281*	*208*	*10*
Total All Workers	**265**	**475**	**475**	**560**	**560**	**660**	**450**	**540**	**400**	**20**

NOTE: When phases overlap, the larger employment number is shown for the annual estimate. Annual estimates are added across phases for the purposes of a conservative or "worst case" analysis. **Detail may not add to total due to independent rounding**.

SOURCE: Hausrath Economics Group based on factors presented in *Socioeconomic Analysis Idaho-Maryland Mine Project, Grass Valley California*, MACTEC Engineering and Consulting, Inc., December 17, 2004.

The annual estimates in **Table 3** are based on the assumption that 48 percent of the mine workers would already be living in the area. Local people taking jobs in mine construction or operations or ceramics processing would be local unemployed or under-employed workers or others who would choose to leave an existing job if the IMM opportunity offered better wages or working conditions. Mine construction work would provide opportunities for construction workers already living in the area but in need of work because of cyclical downturns in other sectors. In the early phases of the proposed project, construction work would employ up to about 170 people annually from the existing local labor pool. That number would drop to about 70 per year as the construction phase ended. Mine and ceramics operations would employ 100 to 150 people annually from the local labor pool in the early years and about 200 people per year during the 14 years of full operations.

This level of employment represents less than one percent of the total Nevada County labor pool of about 51,000 people.[2] If all were drawn from the ranks of those out of work and looking for work, these 200 job opportunities would represent 5 – 10 percent of Nevada County's unemployed.

The rest of the workers (52 percent) would move to the area because of the job opportunities represented by the proposed IMM. From the earliest phases, there would be workers moving to the area—250 to 300 would be expected (counting both construction and operations phases) in the first five years. Employment would peak in 2013, attracting up to an additional 50 workers to the local area, for a total of about 340 relocating workers. During the 14 years of full operations, just over 200 jobs would be expected to be filled by workers new to the area.

Once they relocate to the Grass Valley area for employment, the IMM workers would become residents of Grass Valley and of nearby communities. **Table 4** uses the factors in **Table 2** to estimate a scenario of the likely place of residence of the workers at the proposed IMM—considering both existing area residents and those relocating to the area because of the IMM job opportunities.

The place of residence analysis in **Table 4** is based on the assumption that 65 percent of the IMM workers would live locally in Grass Valley. (The next sections describe the total population impact and the local housing demand associated with these workers.) This would include existing residents and newcomers relocating to the City. In the first five years, counting both construction and operations personnel, 170 to 365 workers would live in Grass Valley. The number of Grass Valley residents working at the IMM would peak at about 430 in year six, when construction activity would be underway at the same time that the operations phase would be expanding. During the 14 years of stabilized mine and ceramics production operations (2016-2029) about 260 Grass Valley residents would be working at the mine, on average each year.

[2] State of California Employment Development Department, *Annual Average Industry Employment and Labor Force: Nevada County*, March 2007 benchmark, February 29, 2008.

TABLE 4
PLACE OF RESIDENCE OF WORKERS AT THE PROPOSED IDAHO-MARYLAND MINE: ANNUAL ESTIMATES BY ACTIVITY

	2008	2009	2010	2011	2012	2013	2014	2015	2016 - 29 (14 yrs.)	2030
City of Grass Valley										
Construction	172	172	172	228	228	228	91	91	-	-
Operations	-	137	137	137	137	202	202	260	260	-
Reclamation	-	-	-	-	-	-	-	-	-	13
Total	*172*	*309*	*309*	*364*	*364*	*429*	*293*	*351*	*260*	*13*
Other Nevada County Communities (commuters)										
Construction	88	88	88	116	116	116	47	47	-	-
Operations	-	70	70	70	70	103	103	133	133	-
Reclamation	-	-	-	-	-	-	-	-	-	7
Total	*88*	*158*	*158*	*186*	*186*	*219*	*150*	*180*	*133*	*7*
Total for Nevada County										
Construction	260	260	260	344	344	344	138	138	-	-
Operations	-	206	206	206	206	305	305	393	393	-
Reclamation	-	-	-	-	-	-	-	-	-	20
Total	*260*	*466*	*466*	*550*	*550*	*648*	*442*	*531*	*393*	*20*
Other Counties (commuters)										
Construction	5	5	5	6	6	6	2	2	-	-
Operations	-	4	4	4	4	5	5	7	7	-
Reclamation	-	-	-	-	-	-	-	-	-	-
Total All Workers	**265**	**475**	**475**	**560**	**560**	**660**	**450**	**540**	**400**	**20**

NOTE: When phases overlap, the larger employment number is shown for the annual estimate. Annual estimates are added across phases for the purposes of a conservative or "worst case" analysis. **Detail may not add to total due to independent rounding**.

SOURCE: Hausrath Economics Group based on factors presented in *Socioeconomic Analysis Idaho-Maryland Mine Project, Grass Valley California*, MACTEC Engineering and Consulting, Inc., December 17, 2004.

The rest of the workers would be commuters, most living elsewhere in Nevada County and a few living in nearby counties. According to the patterns evident among the McLaughlin Mine workforce, some of these people would commute on a daily basis from their place of residence. Others would be "weekly commuters" who rent shared housing in Grass Valley during the workweek. (See housing demand discussion below.)

Population in Grass Valley

According to the socioeconomic information collected for the McLaughlin Gold Mine, mine worker households can be expected to include 1.8 dependents on average, for a total average household size of 2.8 people. With this average household size, households associated with mine workers would be larger than the average household in the City of Grass Valley.[3] The McLaughlin Gold Mine information also indicates that not all mine workers relocating to Grass Valley would bring their dependents. The analysis indicates that less than half (46 percent) of workers relocating would move with their families. **Table 5** shows a population scenario for the

[3] The average household size in the City of Grass Valley is about two persons-per-household. The average is low in large part due to the relatively high percentage of the population aged 65 and older.

City of Grass Valley for all phases of IMM construction, operations, and reclamation, using these assumptions about the size of worker households and the propensity of workers to relocate with their dependents.

The table shows annual estimates of the IMM employees who would be living in Grass Valley (existing residents and workers relocating from somewhere else), the dependents associated with those workers (at an average of 1.8 per worker for all of the existing residents and 46 percent of the movers), and the resultant total population of existing residents and households relocating the Grass Valley because of the job opportunities at the proposed mine.

During the seven year construction phase, construction jobs would attract between 90 and 215 people to Grass Valley (workers who are movers and their dependents). As noted above, the need for construction workers would be high from the first years of project development. When added to existing resident workers and their dependents, the number of Grass Valley residents working in IMM construction and the dependents of those working in IMM construction would peak at about 520 people in years four, five, and six.

During the 20 year operations phase, mining jobs would attract between 130 and 250 people to Grass Valley. During the 14-year period of stabilized operations, about 250 people would have been attracted to Grass Valley because of the mine opportunities, and a total of about 600 people living in Grass Valley would have a household member working at the IMM.

Adding the construction and operations phases, for the purposes of a "worst-case" analysis, year six would see the greatest Grass Valley population impact from the proposed mine and ceramics production facility, with about 980 people living in the City who were either working at or dependents of people working at the IMM. Those relocating would total about 400 (workers plus dependents) in both construction and operations. The 400 newcomers would represent a three percent increase in the current population of the city of Grass Valley (13,000 according to the California Department of Finance)[4] and about five percent of the growth forecast for the City of Grass Valley through the year 2020.[5] Considering the proposed IMM project as net additional economic activity, the 400 newcomers living in the City would represent five percent more growth than otherwise projected for the City through 2020.

In addition to this population of full-time residents, some people working at the IMM would live in Grass Valley part-time during their work week, while maintaining a permanent residence outside of the City. This pattern was observed at the McLaughlin Gold Mine operation. These part-time "commuter" residents would total about 120 – 150 during the early phases, stabilizing at about 100 part-time residents.

[4] State of California Department of Finance, *E-5 Population and Housing Estimates for Cities, Counties and the State, 2001-2007, with 2000 Benchmark*. Sacramento, California, May 2007.

[5] Applied Development Economics, *Economic and Fiscal Conditions Study for the City of Grass Valley,* Accepted by the Grass Valley City Council, April 11, 2006.

TABLE 5
IDAHO-MARYLAND MINE POPULATION PROJECTIONS FOR GRASS VALLEY
ANNUAL ESTIMATES BY ACTIVITY

	2008	2009	2010	2011	2012	2013	2014	2015	2016 - 29 (14 yrs.)	2030
Construction										
Employees Living in Grass Valley										
Existing Residents	83	83	83	109	109	109	44	44		
Movers	90	90	90	118	118	118	47	47		
Total	172	172	172	228	228	228	91	91		
Dependents Living in Grass Valley										
Existing Residents	149	149	149	197	197	197	79	79		
Movers	74	74	74	98	98	98	39	39		
Total	223	223	223	295	295	295	118	118		
Total Grass Valley Population										
Existing Residents	232	232	232	306	306	306	122	122		
Movers	164	164	164	216	216	216	87	87		
Total	**395**	**395**	**395**	**522**	**522**	**522**	**209**	**209**		
Operations										
Employees Living in Grass Valley										
Existing Residents		66	66	66	66	97	97	125	125	
Movers		71	71	71	71	105	105	135	135	
Total		137	137	137	137	202	202	260	260	
Dependents Living in Grass Valley										
Existing Residents		118	118	118	118	174	174	225	225	
Movers		59	59	59	59	87	87	112	112	
Total		177	177	177	177	261	261	337	337	
Total Grass Valley Population										
Existing Residents		183	183	183	183	271	271	349	349	
Movers		130	130	130	130	192	192	247	247	
Total		**313**	**313**	**313**	**313**	**462**	**462**	**597**	**597**	
Reclamation										
Employees Living in Grass Valley										
Existing Residents										6
Movers										7
Total										13
Dependents Living in Grass Valley										
Existing Residents										11
Movers										6
Total										17
Total Grass Valley Population										
Existing Residents										17
Movers										13
Total										30
Total All Phases	**395**	**708**	**708**	**835**	**835**	**984**	**671**	**805**	**597**	**30**

NOTE: Based on population impact model used in the *Socioeconomic Analysis Idaho-Maryland Mine Project, Grass Valley California*, MACTEC, December 17, 2004. The analysis presented here, however, assumes 46 percent of movers bring dependents, per housing demand model assumptions also presented in the *Socioeconomic Analysis*. Annual estimates are added across phases for the purposes of a conservative or "worst case" analysis. **Detail may not add to total due to independent rounding.** These estimate do not include commuters who would be part-time residents of Grass Valley, estimated to range from 100 – 150 additional people.

SOURCE: Hausrath Economics Group based on factors presented in *Socioeconomic Analysis Idaho-Maryland Mine Project, Grass Valley California*, MACTEC Engineering and Consulting, Inc., December 17, 2004.

Housing Demand Associated with Workers

Workers who relocate to the Grass Valley area to take jobs at the proposed IMM would add to housing demand in the market area. In addition, because of the likely shorter-term contracts for construction activities and the need for three shifts per day to operate the IMM 24 hours per day, seven days per week, year-round, many workers would be likely to have a permanent residence elsewhere but share rental housing locally during their work week. Among the relevant workforce characteristics influencing estimates of housing demand are:

- Workers could relocate with or without their family
- Worker propensity to purchase or rent housing
- Workers already living outside Grass Valley and workers relocating to communities outside Grass Valley who decide to share rental housing in the City during the work week (most likely with other mine workers)

Given these characteristics of the IMM workforce, the proposed project would result in demand for owner-occupied family housing, rental family housing, and other rental housing (larger units that would be shared and smaller units that would not be shared).

Table 6 presents the estimating factors for these components of housing demand associated with the proposed mine. These assumptions are also derived from the characteristics of the McLaughlin Gold Mine workforce.

TABLE 6
COMPONENTS OF HOUSING DEMAND FROM WORKERS AT THE IDAHO-MARYLAND MINE

Workers who relocate to Grass Valley/Nevada County	
Percent who move with family	46%
Percent who move without family	54%
Workers who relocate <u>with</u> their family to Grass Valley/Nevada County	
Demand for owner occupied housing	10%
Demand for rental housing (not shared)	90%
Workers who relocate <u>without</u> their family to Grass Valley/Nevada County	
Percent choosing to share rental housing	75%
Percent choosing to rent housing on their own	25%
Workers who commute from elsewhere in Nevada County or Nearby Counties	
Percent choosing to share rental housing in Grass Valley	75%
Percent commuting on a daily basis	25%

SOURCE: *Socioeconomic Analysis Idaho-Maryland Mine Project, Grass Valley California,* MACTEC Engineering and Consulting, Inc., December 17, 2004; and Hausrath Economics Group.

Slightly more than half (54 percent) of the workers who would relocate to the Grass Valley area to work at the proposed mine and ceramics production facility would move without their families, reflecting the potential shorter-term nature of the job opportunities, as well as the demands of work that requires 24/7 operations. Of those who relocate with their family, a relatively small number (10 percent) would be in the market for for-sale housing; most would choose rental housing. Workers relocating without family members are assumed to add only to

the demand for rental housing. Most of these workers (75 percent) would choose to share rental housing, and the balance would add to the worker-with-family demand for rental housing that would not be shared.

In addition, some workers would maintain a permanent residence elsewhere in Nevada County or in neighboring counties (about 35 percent of workers as presented in **Table 2**). Some of these workers would be existing residents and others would have relocated because of the job opportunities at the proposed IMM. About 75 percent of these workers with permanent residence elsewhere are assumed to add to demand for shared rental housing in Grass Valley for use during their weekly work-shift at the mine.

Table 7 presents annual estimates of the sources of Grass Valley housing demand associated with the proposed IMM by phase and activity. As described above, housing demand would come from workers relocating to Grass Valley to be employed in mine construction, mine operations, ceramics production, and mine reclamation. Another source of demand for housing in Grass Valley would be from workers who maintained a permanent residence elsewhere but commuted on a weekly basis to Grass Valley to fulfill their work shift. These workers would share rental housing in Grass Valley during their work shift.

During the construction phase, up to five worker households with dependents would be in the market to purchase family housing in Grass Valley. Up to about 50 worker households with dependents would be in the market for family rental housing. Up to about 65 workers without dependents would also be in the rental housing market, most looking to share housing with others. There would be another 40 – 90 workers likely to share rental housing in Grass Valley on a temporary basis, while commuting from elsewhere in Nevada County or from nearby counties.

The operations phase would bring just over five family households to the for-sale housing market in Grass Valley. Most workers would choose to rent—about 129 at stabilized operations, including workers with dependents and workers without dependents. In addition, operations at the IMM would add up to 105 commuters looking for shared rentals in Grass Valley during their work shift.

Table 8 summarizes the housing demand by market segment based on the estimates of these sources. Peak demand for for-sale family housing would occur in year six and would amount to 10 units. Demand during stabilized operations through year 2029 would be less—about six units. The majority of housing demand would be in the rental market. Assuming many shared rentals, demand for rental units would also peak in year six at just over 200 units; demand during the 14 years of stabilized operations would be about 130 units. Most of the demand for rental housing would be for large units—units to accommodate families and units that could house about three workers on average in shared accommodations. In total, during the active phases of IMM construction and operations, housing demand in Grass Valley would range from almost 100 units to about 225 units. Two hundred units represents about three percent of the 2007 housing inventory in the City of Grass Valley and an increment of six percent over the 3,400 unit housing demand projected for the City in *The SDA Study*.

TABLE 7
IDAHO-MARYLAND MINE SOURCES OF HOUSING DEMAND IN GRASS VALLEY
ANNUAL ESTIMATES BY ACTIVITY

	2008	2009	2010	2011	2012	2013	2014	2015	2016 - 29 (14 yrs.)	2030
Construction										
Workers Relocating to Grass Valley	90	90	90	118	118	118	47	47		
Move with family (46%)	41	41	41	54	54	54	22	22		
10% choose to purchase	4	4	4	5	5	5	2	2		
90% choose to rent	37	37	37	49	49	49	20	20		
Move without family (54%)[1]	48	48	48	64	64	64	26	26		
Weekly Commuters - (existing residents and movers)										
From Other Parts of Nevada County	88	88	88	116	116	116	47	47		
From Other Counties	5	5	5	6	6	6	2	2		
Total Commuters	93	93	93	123	123	123	49	49		
Choosing to share rental housing in Grass Valley (75%)	69	69	69	92	92	92	37	37		
Operations										
Workers Relocating to Grass Valley	-	71	71	71	71	105	105	135	135	
Move with family (46%)	-	33	33	33	33	48	48	62	62	
10% choose to purchase	-	3	3	3	3	5	5	6	6	
90% choose to rent	-	29	29	29	29	43	43	56	56	
Move without family (54%)[1]	-	38	38	38	38	57	57	73	73	
Weekly Commuters - (existing residents and movers)										
From Other Parts of Nevada County	-	70	70	70	70	103	103	133	133	
From Other Counties	-	4	4	4	4	5	5	7	7	
Total Commuters	-	74	74	74	74	109	109	140	140	
Choosing to share rental housing in Grass Valley (75%)	-	55	55	55	55	81	81	105	105	
Reclamation										
Workers Relocating to Grass Valley										7
Move with family (46%)										3
10% choose to purchase										0
90% choose to rent										3
Move without family (54%)[1]										4
Weekly Commuters - (existing residents and movers)										
From Other Parts of Nevada County										7
From Other Counties										0
Total Commuters										7
Choosing to share rental housing in Grass Valley (75%)										5

NOTE: The housing demand factors used in the analysis are based on results of surveys conducted for the "Socioeconomic and Employee Monitoring Plan" for the McLaughlin Gold Mine in Lake County, California. **Detail may not add to total due to independent rounding.**

[1] Workers who move without their families are assumed to be in the market for rental housing, because renting is not as great a financial commitment as purchasing. Most of these workers (75 percent) are assumed to share housing with other IMM workers.

SOURCE: Hausrath Economics Group based on factors presented in *Socioeconomic Analysis Idaho-Maryland Mine Project, Grass Valley California*, MACTEC Engineering and Consulting, Inc., December 17, 2004.

TABLE 8
IDAHO-MARYLAND MINE HOUSING DEMAND IN GRASS VALLEY
NUMBER OF UNITS BY MARKET SEGMENT

Market Segment	2008	2009	2010	2011	2012	2013	2014	2015	2016 - 2029 (14 yrs.)	2030
Owner-occupied family housing	*4*	*7*	*7*	*9*	*9*	*10*	*7*	*8*	*6*	*0*
Family rental housing	37	66	66	78	78	92	63	76	56	3
Rental housing (not shared) from movers without family[1]	12	22	22	26	26	30	21	25	18	1
Shared rental housing[2]	36	64	64	76	76	89	61	73	54	3
Subtotal rental housing	*85*	*152*	*152*	*179*	*179*	*212*	*144*	*173*	*128*	*6*
Total Units	**89**	**160**	**160**	**188**	**188**	**222**	**151**	**181**	**134**	**7**

NOTE: The housing demand factors used in the analysis are based on results of surveys conducted for the "Socioeconomic and Employee Monitoring Plan" for the McLaughlin Gold Mine in Lake County, California. **Detail may not add to total due to independent rounding.**

[1] Workers who move without their families are assumed to be in the market for rental housing, because renting is not as great a financial commitment as purchasing. Most of these workers (75 percent) are assumed to share housing with other IMM workers.

[2] Commuters to the IMM are assumed to share rental housing with other mine workers at an average of 2.96 persons per household. This is the average size for shared renter-occupied housing in Grass Valley, i.e., renter housing occupied by more than one person, according to the 2000 Census.

SOURCE: Hausrath Economics Group based on factors presented in *Socioeconomic Analysis Idaho-Maryland Mine Project, Grass Valley California*, MACTEC Engineering and Consulting, Inc., December 17, 2004.

GENERAL PLAN LAND USE ALTERNATIVE – POPULATION AND EMPLOYMENT

The General Plan Land Use Alternative describes an amount of development and associated population and employment that would be expected on the parcels in the IMM project area proposed for annexation to the City of Grass Valley, if they were developed under the City's 2020 General Plan land use designations. These parcels consist of 56.41 acres designated for Business Park (BP) use and 45.31 acres designated for Urban Medium Density (UMD) residential use. The purpose of the General Plan Land Use Alternative analysis is to compare impacts to the City (jobs/housing impacts and fiscal impacts) as a result of the changes to 2020 General Plan land use represented by the proposed IMM project.

The complete Idaho-Maryland Mine annexation proposal includes 101.72 acres of the proposed total IMM project area, plus two additional properties—the Milco property (21.5 acres) and the Ennis property (5.2 acres). The latter two properties are included in the annexation proposal so that unincorporated area islands are not created. The annexation proposes no land use changes for the Milco and Ennis properties; both are designated for Business Park use under the Nevada County General Plan and under the Grass Valley 2020 General Plan. Therefore, these properties are not included in the General Plan Land Use Alternative analysis; development potential and impacts to the City are assumed to be the same with or without the proposed project.

Table 9 shows the key parameters for the General Plan Land Use Alternative. The northern portion of the Idaho-Maryland site is designated for Business Park use in the 2020 General Plan. Just under 400,000 sq. ft. of business park space could be developed on this property, assuming a land coverage ratio consistent with current land use patterns in Grass Valley. This type of space at this location would be expected to accommodate a mix of types of business activities—including office activity, research and development, light industrial, and distribution businesses.

Almost 800 jobs could be accommodated in this business park development, at full occupancy of the space.

The southern portion of the Idaho-Maryland site is designated for Urban Medium Density residential use in the 2020 General Plan. This part of the Idaho-Maryland site is one part of a stretch of land along East Bennett Road outside of current City limits but identified for early annexation. The 2020 General Plan designates the East Bennett area for medium and high density housing to encourage that type of development at a location relatively close to the Town Center. Assuming development in the middle of the allowed density range, about 270 units would be accommodated on this site. Those units would house about 720 residents.

TABLE 9
GENERAL PLAN LAND USE ALTERNATIVE FOR THE IDAHO-MARYLAND SITE

		Grass Valley 2020 General Plan Land Use Designation	Development Potential under 2020 General Plan[1]	Employment or Residential Population[2]
Project Properties Proposed for Annexation				
Northern Idaho-Maryland Area	56.41 ac	Business Park (BP)	370,000 sq. ft.	795 jobs
Southern Idaho-Maryland Area	45.31 ac	Urban Medium Density Residential (UMD)	272 units	721 residents
	101.72 ac			
Other IMM Project Properties				
New Brunswick Site	36.87 ac	Not proposed for annexation at this time		
Round Hole Site	1.00 ac	Already in Grass Valley City limits		
Total Project Area	**139.59 ac**			
Other Pro erties Proposed for Annexation				
Milco Development	21.50 ac	Business Park		
Ennis	5.22 ac	Business Park		

[1] Non-residential development potential estimated assuming existing Grass Valley Business Park floor-area-ratio (FAR) of 0.15-to-one. Residential development potential estimated assuming the mid-point (6 dwelling units per acre) of the allowed density range (4.01 – 8.0 dwelling units per acre).

[2] Employment estimated assuming 465 sq. ft. of building space per employee, assuming Business Park development is occupied by the mix of Office/Research & Development and Light Industrial/Distribution activities suggested for a balanced land use mix for the City. This employment density represents the weighted average building square feet per employee derived from these uses as presented in Table 40, *Economic and Fiscal Conditions Study for the City of Grass Valley*, (aka *The SDA Study*), Applied Development Economics, April 11, 2006. Population estimated based on a household size of 2.65 persons per household, derived from the increase in population and households projected for Grass Valley in *The SDA Study*, Table 23 (Projections of Population Growth) and Table 27 (Projected Household Growth).

SOURCE: Idaho-Maryland Mining Corporation, *Revised Annexation Application for the Idaho-Maryland Mine Project, Grass Valley California*, May 29, 2007; and Hausrath Economics Group.

JOBS/HOUSING BALANCE ANALYSIS

The SDA Study lays out principles and a framework for evaluating the impacts of General Plan changes such as that proposed by the IMM project.[6] The jobs/housing balance impact analysis evaluates how a proposed land development project would influence the City's role as a job center within Western Nevada County. The analysis uses existing conditions as a benchmark and also considers market demand and the City's future development capacity, as established in the General Plan.

Following the approach laid out in *The SDA Study*, this jobs/housing analysis for the proposed IMM project evaluates the project with respect to existing benchmarks and to the General Plan jobs/housing scenario. The analysis compares the proposed project to what would otherwise be expected for the Idaho-Maryland site under the General Plan Land Use Alternative.

Measuring Jobs/Housing Balance in Grass Valley

The SDA Study established key parameters for considering the relationship between jobs and housing in Grass Valley. The study confirmed Grass Valley's role as a center of economic activity and jobs for Western Nevada County, as evidenced by the 2003 jobs/housing ratio of 1.7 (1.7 jobs for every one housing unit).

At the same time, the study's market assessment conducted to influence planning for the Special Development Areas (SDAs) produced two key conclusions about the 2020 General Plan land use allocations. *The SDA Study* concluded that acreage designated for non-residential development far exceeded the supply required to accommodate demand through 2020.[7] The study also concluded that the 2020 General Plan preliminary land use allocations for the SDAs did not provide enough housing to meet updated projections of housing market demand. The April 2006 study resulted in City Council Resolution No. 06-60, establishing preferences for increasing the General Plan housing development potential allocations in the Grass Valley sphere of influence, specifically in the SDAs. At the same time, the resolution provides for a non-residential land supply that, while less than specified in the 2020 General Plan land use allocations, would be adequate to accommodate forecast demand.

Table 10 compares the jobs/housing ratio identified as a benchmark in the SDA Study to the current jobs/housing ratio and the expected future jobs/housing ratio as projected to meet market demand through 2020. This expected future represents an updated 2020 General Plan scenario assuming a more "balanced" land use mix for the SDAs. The decline in the jobs/housing ratio

[6] *Economic and Fiscal Conditions Study for the City of Grass Valley*, prepared for the City of Grass Valley by Applied Development Economics, April 11, 2006, pp. 63 – 65.

[7] Table 37 in *The SDA Study* (page 51) indicates market demand for about 2 million sq. ft. of new business space in Grass Valley through 2020. Buildable commercial infill within existing City limits could accommodate about 860,000 sq. ft. of new development—about 45 percent of forecast demand—assuming continuation of the existing average .15 floor area ratio for building coverage. This would leave just over one million sq. ft. of new business space for absorption within the expanded city limits represented by the sphere of influence, including the SDAs. The original 2020 General Plan land use allocation for the SDAs (about 500 acres allocated for commercial, business park, or industrial use) would accommodate 3.2 million sq. ft. of new business space, also assuming a .15 floor area ratio (Table 35 in *The SDA Study*). This supply would be more than adequate to accommodate projected demand through 2020, representing three times the demand remaining beyond the capacity of infill. Furthermore, this supply in the SDAs does **not** include any new business space that could be accommodated in other parts of the Grass Valley sphere of influence, such as the business park land designated for the northern part of the Idaho-Maryland site.

from 2003 to 2007 (more housing added than jobs), reflects the consequences of the Glenbrook annexation, as well as the pace of job growth relative to housing production during a period in which neither job growth nor housing production kept pace with longer-term trends. The 2020 market demand projection assumes that Grass Valley maintains its position as the economic hub of the Western Nevada / Highway 49 Corridor and that both infill and annexations provide adequate land supply to satisfy what is expected to be continued long-term strong demand for housing near those jobs.

TABLE 10
CITY OF GRASS VALLEY JOBS/HOUSING BALANCE

	Existing City Limits		Future City Limits
	2003[1]	2007[2]	2020[3]
Jobs in Grass Valley	9,644	10,200	13,460
Housing Units in Grass Valley	5,790	6,365	9,155
Grass Valley Jobs/Housing Balance[4]	**1.7**	**1.6**	**1.5**

[1] As calculated in *The SDA Study*, Table 19.

[2] Updated using State of California Department of Finance housing unit estimates for the City of Grass Valley and State of California Employment Development Department wage and salary employment estimates for Nevada County. Jobs estimate for Grass Valley assumes Grass Valley continues to capture 33.5 percent of Nevada County wage and salary employment as estimated in *The SDA Study*, Table 24, page 26.

[3] Constructed from projections in *The SDA Study*: Table 32 (jobs) and Table 33 (housing unit increment added to 2003 housing units). Based on market demand projections and assuming annexations.

[4] City Council Resolution 06-60 indicates preference for a target jobs/housing balance in the range of 1.5 to 1.7 jobs for every one housing unit.

SOURCE: *Economic and Fiscal Conditions Study for the City of Grass Valley*, prepared for the City of Grass Valley by Applied Development Economics, April 11, 2006; Grass Valley City Council, *Resolution 06-60*; and Hausrath Economics Group.

Implications of the Proposed Idaho-Maryland Mine General Plan Amendment

The proposed project would change 2020 General Plan land use designations in the annexation area from Business Park and Urban Medium Density Residential to Manufacturing Industrial (MI). This would reduce the amount of land in the City's sphere of influence designated for future business park and residential development, replacing those planned land uses with mining and manufacturing land uses. After reclamation of the mining site (after 20 years of operation), the property would be available for longer-term development for industrial uses. Although the proposed project would require rezoning to M-2 General Industrial use, the Idaho-Maryland Mine reclamation plan indicates that the property could also be rezoned back to business park and residential use.[8] This jobs/housing analysis assumes there would be no reclamation for residential use. Overall, therefore, the proposed General Plan land use change would increase the acreage in the City's sphere of influence designated for non-residential development and reduce the acreage designated for residential development.

The 2020 General Plan land use mix for the project area (Business Park and Urban Medium Density residential) would have a high jobs/housing balance ratio, ranging from 2.2 to 4.4,

[8] Idaho-Maryland Mining Corporation, *Revised Mineral Project Application*, May 2007, page 3-48.

depending on the density of housing developed (see **Table 11)**. As envisioned in the 2020 General Plan, this land use mix, over the long-term, would contribute to the City's ability to retain and strengthen its role as a regional job center, while providing housing opportunities near jobs, thereby reducing the market pressure for lower density residential development in nearby areas and the need for longer commutes.

TABLE 11
JOBS/HOUSING BALANCE FOR THE GENERAL PLAN LAND USE ALTERNATIVE

Employment (on 56 acres designated BP)	795 jobs	
Housing on 45.3 acre designated UMD Residential:		**Ratio of Jobs to Housing**
assuming 4 units per acre	181 units	4.4 to 1
assuming 8 units per acre	362 units	2.2 to 1

SOURCE: City of Grass Valley 2020 General Plan and Hausrath Economics Group.

Implications for Jobs and Economic Activity in Grass Valley

As noted above, the General Plan land use change proposed by the IMM project would increase the land supply for new business development in Grass Valley's sphere of influence, at the expense of land supply for housing. One way to assess this proposed change is to consider it in the light of on-going planning for the SDAs—the primary locations considered for development of new space for businesses in an expanded Grass Valley.

Throughout the SDA planning process, the City has maintained the importance of ensuring adequate land to accommodate new business activity while residential development potential was emphasized in various specific plan proposals. Based on *The SDA Study's* updated market demand forecasts and assessment of infill development potential, the City established a benchmark land supply ranging from 211 – 300 acres of commercial, business park, or industrial land use throughout the sphere of influence, including the SDAs.[9] The current status of the SDA proposals comes close to this target, showing about 225 acres of land in the combined Loma Rica, Northstar, and SouthHill Village specific plan proposals.[10]

The General Plan land use change proposed by the IMM project would add 45 acres to the land supply to accommodate business growth in Grass Valley's annexation areas. In the context of the concern about land supply to support long-term economic growth in the City, the increase in General Plan land capacity for business activity in this other part of the City's sphere of influence outside the SDAs represents a positive impact.

The ultimate outcome with respect to space for business activity is difficult to predict, however, given the range of economic, infrastructure, and site characteristics represented by land supply generally in the Grass Valley planning area. Uneven terrain, historic development patterns, historic land uses, and natural features combine to have a strong influence on development potential. The relatively limited development capacity of vacant infill sites is direct evidence of

[9] City Council Resolution 06-60.

[10] Presentation to Grass Valley City Council, October 23, 2007 "Decision Making Process for SDAs, Step 4: Review of Loma Rica Proposal" and Presentation to Grass Valley City Council, February 12, 2008, "Status Report on Development Projects: Idaho-Maryland Mine and SDAs".

these constraints. Nevertheless, more intensive development patterns that could be possible on some sites (such as proposed in the most recent draft of the Loma Rica Specific Plan) could enhance the capacity of any particular amount of land to accommodate new business activity and jobs.[11] The fact that the market and economics for this type of development pattern are unproven in recent Grass Valley history suggests that the City should continue with a relatively conservative approach to the General Plan land supply for business development. Careful evaluation for the development potential in other annexation areas, such as the proposed IMM site, could be part of this approach.

Evaluating the Capacity of the IMM Site to Accommodate Business Activity and Jobs

This evaluation starts by simply comparing the number of jobs that would be accommodated in the project area under the General Plan Land Use Alternative and the proposed IMM project. Under the General Plan Land Use Alternative, the land designated for Business Park use (the 56-acre northern portion of the Idaho-Maryland site) would accommodate about 800 jobs at buildout (see **Table 9).** The proposed Idaho-Maryland project would not generate as many total jobs in the City of Grass Valley. Up to 660 people would be working at the project area when construction and early operations phases overlapped. Over the 14 years of stabilized operations, the proposed project would employ about 400 people (see **Table 3**). Furthermore, this business activity would use a larger footprint than the General Plan Land Use Alternative business park—requiring not only the 102–acre Idaho-Maryland site proposed for annexation, but also the New Brunswick and Round Hole sites where necessary mine facilities would be located. The proposed IMM project area totals 140 acres. By these metrics, the proposed project would result in less favorable jobs outcomes for the City than would the General Plan alternative.

This simple comparison is not a complete analysis, however. Over the longer-term, after reclamation, the IMM project area would be made available for industrial or even business park use. Assuming the reclaimed site could be redeveloped as an attractive business location, the General Plan land use change proposed by the project would represent a long-term addition to the City's land supply to accommodate business activity and employment, potentially accommodating more jobs in the 102-acre annexation area (combining the northern and southern Idaho-Maryland sites) than would expected under the General Plan business park scenario for the northern site.

There could be some shorter-term nuances to this conclusion through the 2020 forecast period and beyond, through the period of mine operations. The proposed General Plan land use change to Manufacturing/Industrial and the use of the project area for mining activity and ceramics production would reduce the land supply potential for business park development in Grass Valley's sphere of influence. The 56 acres of BP land use in the northern IM site represents about 20 percent of the approximately 300 acres of land capacity estimated to be needed in the city limits and annexation areas to accommodate demand for business acreage in Grass Valley through 2020.[12] It is unlikely, however, that the reduction in business park land supply (a loss of 56 acres) would result in substantial loss to other locations of business activity and jobs

[11] The December 2007 Loma Rica Specific Plan proposes a much denser development pattern than is typical for recent new development in Grass Valley or than assumed in prior analyses of the development potential for business space. A higher density of development (a floor area ratio of .45-to-1 is proposed) would reduce the land footprint required to accommodate projected business expansion.

[12] *The SDA Study*, April 11, 2006, Table 34, page 42 and City Council Resolution 06-60.

otherwise forecast for Grass Valley through the year 2020. When comparing demand to supply, the capacity analysis in *The SDA Study* appears to not consider specifically this capacity in the sphere of influence outside of the SDAs, treating it as something of a "cushion" of additional capacity.

Nevertheless, assuming no change in market demand, the interim conversion of the business park land supply in the IMM project area might mean more rapid absorption than otherwise expected of business park development in substitute locations, either in existing city limits or in the SDAs. Alternatively, the constraint to near-term annexation land supply for business park development might make marginal infill sites more feasible for development, particularly if there were improvements to infrastructure that removed existing constraints. There might also be potential to increase the development capacity of other land supply designated for business park use. This could occur through more intensive use of the land, assuming topographic and other constraints allowed higher development densities. As described above, longer term, after reclamation, the IMM site could be developed for business park use, relaxing any interim supply constraint for business park development in the City.

Implications of Reduced Land Supply for Housing

From a long-term General Plan buildout perspective, the proposed change in the 2020 General Plan development potential—reducing the City's land supply for housing development—would result in more business activity and jobs relative to housing in the City of Grass Valley, assuming no other changes to General Plan land use. While this could theoretically mean a higher jobs/housing ratio than otherwise expected, and therefore a more robust economy for a time, lack of close-in housing supply potential combined with resultant higher housing prices and rents could eventually dampen economic development potential.

As has been the long-term pattern, business activity and employment in Grass Valley generates demand for housing in the area. With reduced capacity in the City, there would be more residential development than otherwise expected in nearby areas outside the City where there is available land supply. This would be generally lower-density development and would necessitate more commute travel. The likelihood of this outcome depends on housing supply potential in the City. Recent City efforts—workforce housing program, updating the development code, City Council resolutions—have increased incentives and removed impediments to mixed use or infill development, and have signaled an interest in considering more housing development in the SDAs. These and future policy and program initiatives, in combination with strong demand, would result in more mixed use and infill development than otherwise anticipated, because high development costs would be less of a constraint.

During the 2020 General Plan time horizon, reducing the residential development potential in this near-term annexation area would enhance the residential absorption potential for other annexation areas and the SDAs, assuming those areas provided housing that would be a reasonable substitute for the medium to high density housing intended along East Bennett. This might result in pressure to speed up the phasing of development in fringe and peripheral areas, raising issues of extending urban infrastructure sooner than anticipated under the 2020 General Plan.

The 2020 General Plan residential development potential in the proposed Idaho-Maryland site ranges from 180 – 360 units, five to 10 percent of the additional housing units projected for the expanded city limits through 2020 in *The SDA Study*. There may be some ability to recapture this residential development capacity for Grass Valley. As noted above, if demand were not redirected outside the City, stronger demand relative to supply would increase prices and would make some infill and mixed-use projects feasible that would otherwise not be developed because of project economics. Alternatively, in the interest of maintaining more affordable housing price levels, the City could encourage new housing development at the high end of established density ranges and could increase residential development capacity in appropriate locations in other annexation areas.

FISCAL IMPACT ANALYSIS

Using a generally standard model and approach to fiscal impact analysis, this evaluation of the proposed Idaho-Maryland Mine project provides decision-makers with assessment of how this proposed change to General Plan land use would affect the City of Grass Valley tax base, the General Fund budget, and the availability of discretionary revenue relied on to fund on-going public safety, fire protection, community development, public works, parks and recreation, and general government functions. The analysis evaluates the impact of the proposed project relative to the impacts that would be expected from annexation and development of the project area under the General Plan Land Use Alternative.

The fiscal impact analysis estimates costs to the City of Grass Valley to provide local government services to city residents and businesses/employees; estimates City General fund revenues; and compares costs to revenues. The analysis evaluates annual operating and on-going maintenance costs and revenues associated with public services provided by the City's General Fund.

Furthermore, the analysis focuses on the costs that are funded by those discretionary revenues associated with new development and increases in population, employment, and business activity. The most important General Fund discretionary revenue sources are property tax, sales tax, property tax in lieu of vehicle license fee, and transient occupancy tax. Other sources include business license tax, franchise fees, interest, and a number of smaller fee revenue sources. To highlight implications for the City's tax base for discretionary revenue, the fiscal model used in this analysis subtracts from total General Fund revenues and costs those revenues that are either charges for service or not a direct function of growth and new development. An example of the latter would be categorical intergovernmental funding sources.

The proposed project and any new development in the annexation area would pay development impact fees and connection fees that are established by the City of Grass Valley, Nevada County, the Nevada Irrigation District, and other service providers to offset the costs of new infrastructure required.[13] For the City, this would include development impact fees for public safety and general administration facilities, drainage improvements, and transportation impacts and fees and charges for wastewater improvements and services. Alternatively, service providers would require that proposed development install the necessary infrastructure and

[13] Additional funding to cover costs for infrastructure and other capital facilities and equipment beyond the level of service incorporated in impact fees and connection fees would likely be considered during development agreement negotiations.

transfer title to the agency.[14] These one-time revenues and usage charges are not estimated in the fiscal impact analysis, since there would be no **net** cost difference between the proposed project and the General Plan Land Use Alternative, and these dedicated revenue sources do not directly influence the availability of on-going funding for general public services.

Although there are a number of approaches to estimating net fiscal impact, the most common approach is based on per capita average costs and revenues. For most City of Grass Valley General Fund costs of service, the fiscal impact assumptions for this analysis rely on per capita average costs based on existing levels of service as reflected in the 2007/2008 City of Grass Valley Adopted Budget.

The important exception is public safety cost associated with the proposed IMM. The proposed IMM would require unique service responses from both the police department and the fire department, beyond the average level of service provided in Grass Valley. Therefore, police and fire costs are estimated by these departments to provide a level of staffing and training that would enable the City to maintain service levels to the rest of the City while meeting the particular public safety needs of the proposed IMM operation.

The most significant revenue sources—property tax and sales tax—are estimated based on project-specific characteristics; other revenue sources are estimated using a more simplified average approach.

Appendix Tables A.2 – A.7 present the details of the budget analysis used to derive the per capita cost and per capita revenue factors as well as background information on estimates for property tax, sales tax, and other revenue sources.

Results are presented without rounding, for this administrative draft. This preserves necessary detail but is not representative of the accuracy of the estimates.

Annexation Revenue Sharing

Revenue sharing at annexation of the IMM property would be governed by two revenue sharing agreements: the October 2001 *Master Tax Sharing Agreement for Grass Valley Annexations* (October 2001 Agreement) between Nevada County, the City of Grass Valley, and the Nevada Irrigation District, and consented to by the Nevada County Consolidated Fire Protection District and the February 1990 *Master Agreement for Apportionment of Property Tax Revenues due to Jurisdictional Changes*, between Nevada County, the City of Grass Valley, and the Nevada Irrigation District.[15]

The same revenue-sharing formulas would apply with annexation of either the proposed project or the General Plan Land Use Alternative. Both property tax and sales tax revenue would be

[14] This would likely be the case for water lines and meters. (Lisa Tassone, Nevada Irrigation District, personal communication, March 26, 2008).

[15] The annexation revenue sharing agreements are documented in *Resolution No. 01-482* of the Board of Supervisors of Nevada County, adopted October 2, 2001 and *Resolution No. 90-72* of the Board of Supervisors of Nevada County, adopted February 13, 1990. The 2001 resolution governs property tax and sales tax sharing between Nevada County, the City of Grass Valley, the Ophir Hill Fire District, the Nevada County Consolidated Fire District, and the Nevada Irrigation District. The 1990 resolution establishes the apportionment of property taxes at annexation among the County, the City of Grass Valley, and the Nevada Irrigation District.

shared. The October 2001 Agreement specifies different tax sharing formulas for two classifications of the unincorporated lands within the City's Sphere of Influence—Zone A and Zone B—in addition to special treatment for the Glenbrook area and the Nevada County Airport Industrial Park. The IMM property falls within the definition of Zone B: "undeveloped prior to annexation….where the value of the land is greater than the value of the improvements."[16]

The October 2001 Agreement provides for the sharing of **base** property and sales tax revenue, as well as **incremental** property and sales tax revenue. In Zone B areas, base property and sales tax revenues are allocated as follows: 60 percent to the County General Fund and 40 percent to the City of Grass Valley. Incremental property and sales tax revenues are allocated as follows: 10 percent to the County General Fund and 90 percent to the City of Grass Valley. In addition, 100 percent of fire district property tax is transferred to the City at annexation, and (when applicable) the County and the City share equally to provide the Nevada Irrigation District with a share of the property tax at annexation.

This analysis comparing alternative future land use development scenarios for an annexation to the City of Grass Valley is only concerned with the incremental revenue attributable to potential new development in the annexation area. Under either the proposed IMM project or the General Plan Alternative, the amount of base property tax and sales tax revenues shared between the County and the City would be the same, so this analysis does not provide estimates of those revenue sources.

The incremental property tax revenue that would be shared at annexation would be the revenue that would otherwise accrue to the County General Fund. Since some of the project area parcels would also be annexed to the Nevada Irrigation District (NID), the property tax revenue would be shared between three taxing agencies: the City of Grass Valley, NID, and Nevada County. The incremental sales tax revenue would be shared between the City of Grass Valley and Nevada County.

City of Grass Valley

Property tax revenue to the City of Grass Valley at annexation of the IMM properties would be 90 percent of the amount that would otherwise accrue to the County General Fund (based on an average County General Fund property tax share of about 31 percent for the tax rate areas covering the project area), less the City's 50 percent share of the 10 percent of that total property tax that would be allocated to NID for those parcels also annexing to NID, plus the property tax from Ophir Hill Fire District and the Nevada County Consolidated Fire District. (See below for more detail on the treatment of NID and fire district property tax revenue allocations.) This gross property tax distribution would be reduced by the City's contribution to the State Educational Revenue Augmentation Fund (ERAF)—about 18.9 percent in the 2007/2008 tax year.

In addition, the City would receive 90 percent of the incremental sales tax revenue generated by taxable sales transactions that occurred at business locations in the annexation area.

[16] Board of Supervisors of Nevada County, *Resolution No. 01-482*, October 2, 2001"Master Tax Sharing Agreement for Grass Valley Annexations", page 4.

Nevada County General Fund

As noted above, the October 2001 Agreement provides that the Nevada County General Fund would continue to receive a portion of the property tax and sales tax revenue generated in the annexation area: 60 percent of the base property tax and sales tax and 10 percent of the property tax and sales tax increment. This analysis provides an estimate of the annual incremental revenue that would be allocated to the County General Fund at annexation.

Starting from the incremental property tax revenue that would otherwise accrue to the County General Fund (based on the average 31 percent County General Fund property tax share in these tax rate areas), property tax revenue allocated to the County would be determined after deducting the County's share of the transfer to cover a new property tax revenue allocation to NID (see below for detail), allocating 90 percent of the remainder to the City of Grass Valley, and accounting for the County's contribution to ERAF (almost 40 percent of the County's gross property tax allocation for the 2007/2008 tax year).

Fire Districts

For fire protection services (and related property tax revenue distribution), the properties proposed for annexation to the City of Grass Valley are currently in the jurisdiction of either the Ophir Hill Fire District or the Nevada County Consolidated Fire District (NCCFD). Ten parcels covering about 56 acres are within the Ophir Hill Fire District, and five parcels covering 46 acres are within the NCCFD. For these properties, before deductions for ERAF, the property tax share to the Ophir Hill Fire District is about 11 percent of the one percent property tax, and the share to the NCCFD ranges from 7 percent to 9.9 percent of the one percent property tax. (See **Appendix Table A.5**.)

At annexation, the City of Grass Valley would assume fire protection services, and cooperative agreements for fire planning, suppression, and prevention between the City and these districts would continue in force. According to the October 2001 Agreement, annexation of these parcels to the City would mean that 100 percent of the fire districts' property tax revenue would be transferred to the City. The property tax revenue that would accrue to the City's General Fund from these parcels would be subject to the City of Grass Valley shift of revenue to ERAF.

Nevada Irrigation District (NID)

Within the IMM annexation area, six parcels totaling 16.3 acres (16 percent of the total annexation area) are already within the boundaries of the Nevada Irrigation District. The rest of the parcels would be annexed to the NID. From the property already within District boundaries, the NID receives about 5.3 percent of the one percent property tax. According to the 1990 Agreement apportioning property taxes at annexation (reaffirmed in the October 2001 Agreement), when property is annexed to NID, no base year revenue is reapportioned to NID. The District does receive revenue from the incremental property tax in the annexation area—10 percent of what Nevada County would otherwise receive, before any other annexation revenue sharing considerations. In this case where the property would also be annexed to the City of Grass Valley, the NID amount is deducted from the increment to be shared between the County and the City, before the revenue to either the County or the City is determined, i.e., before the 10 percent / 90 percent split described above. The amount allocated to NID is split 50/50 and

deducted equally from the City and County allocations. The NID does not make a property tax contribution to ERAF.

Proposed Idaho-Maryland Mine Project

This fiscal impact analysis assumes both the mining operation and the ceramics production operation are viable businesses. The City of Grass Valley commissioned an *Economic Viability Study* in 2005 that concluded that the project had a "reasonable chance of economic viability".[17] This analysis of local public service costs and revenues represents a planning level assessment of the proposed project, providing a means for decision-makers to compare outcomes under the proposed project to what would otherwise be expected under the General Plan Land Use Alternative.

There are two components of the fiscal impact analysis of the proposed project—costs and revenue attributable to business activity and employment and costs and revenue attributable to the additional residential service population represented by workers and their dependents who move to Grass Valley because of a job opportunity at the mine or ceramics production facility. This residential service population also includes those commuters who would maintain a permanent residence elsewhere but would live in Grass Valley part of the week—during their work shift. For the fiscal impact analysis, the costs and revenues associated with these commuters are calculated assuming 50 percent of the value attributable to a full-time resident.

The only Grass Valley residents that are counted as part of the resident service population for the purposes of the fiscal impact analysis of the proposed project are the those residents that would be new to the City as a result of the project—workers and dependents who would move to Grass Valley and commuters who would live part-time in the City. The costs and revenues associated with people who already live in Grass Valley are not estimated as impacts because those costs and revenues would be expected with or without the proposed project. These people are, however, counted as part of the employment associated with the proposed project. In this way, they do contribute to the estimate of costs and revenue derived on a per-employee basis.

The fiscal impact analysis of the proposed project does **not** include an estimate of the property tax revenue associated with housing in the City occupied by the new residents associated with the proposed IMM. Nevertheless, the increase in housing demand in the City represented by these households would add to the property tax revenue base providing some additional revenue to offset Grass Valley costs.

Comment on Annexation and Cost and Revenue Allocation

Not all of the IMM project area is proposed for annexation at this time. The Idaho-Maryland site proposed for annexation represents the location for almost all of the physical improvements and business activity of the proposed project. It is likely that the New Brunswick site remaining in the County's jurisdiction would eventually be proposed for annexation. Therefore, this fiscal impact analysis treats the entire project as if all parcels were proposed for annexation concurrently.

[17] Bay Area Economics, *Economic Viability Study, Proposed Idaho-Maryland Mine Project, Grass Valley California*, prepared for the City of Grass Valley, July 15, 2005.

A more complicated cost and/or revenue allocation could be analyzed. For example, it might be argued that some assessed value and property tax revenue could be independently attributed to the New Brunswick site. Since that part of the project area is not proposed for annexation at this time, that revenue would accrue to Nevada County and the local fire district, instead of to the City of Grass Valley. The approach used in this fiscal impact analysis reflects a likely longer-term outcome, and is also the only reasonable approach without more information on an appropriate basis for making an alternative allocation.

Comment on the Property Tax Revenue Estimate for a Mining Property

Appraisal and property tax assessment of mining properties are specialized and complex assignments. There are two primary components of the assessed valuation of these properties—the value of the mineral rights and the value of facilities, equipment, and personal property. Mineral rights are assessed differently at various stages of development—exploration, development, and production. Once the production stage is reached, the value of the mineral rights is appraised considering production and projected cash flow based on proved reserves. Each year, values are re-estimated considering additions to proved reserves, depletion, and updated cash flow projections.[18] Improvements to land, as well as fixtures, machinery, and equipment, including the heavy mobile equipment often found in mining operations, are the other major component of the value of a mining property.

The property tax revenue estimate for this analysis of the proposed IMM project takes, of necessity, a highly simplified approach to the estimate of assessed value for both the mining operation and the ceramics production facility. The estimate is based on a confidential business plan prepared in 2005 by the Idaho-Maryland Mining Corporation. (This is the same business plan evaluated by Bay Area Economics to produce the *Economic Viability Study* mentioned above.) While actual property tax assessment of the proposed project would likely treat the mining operation and the ceramics production operation as two separate appraisal units, this simplified analysis combines the two, based on the presentation in the business plan that treats the operations as an integrated whole.

The business plan estimates of capital requirements and operating cash flow projections through full operation provided the basis for a discounted cash flow assessment of the mineral rights value, assuming favorable economic conditions, on-going additions to proved reserves, and productivity over the long-term. As noted above, actual appraisals for assessed value would have a more short-term approach, never considering business prospects beyond those attainable with proved reserves. To partially offset this, the estimate for the fiscal analysis uses a relatively high discount rate to value the mineral rights: 30 percent.[19] This rate is applied to the estimate of net income from operations (mining and ceramics together) provided by the Idaho-Maryland Corporation.[20]

[18] Reserves can be added due to new discoveries and as a result of changes in economic conditions. HEG reviewed the California State Board of Equalization Assessors' Handbook Section 560, *Assessment of Mining Properties* (March 1997) to understand the details of this type of property assessment.

[19] Based on conversation with Don Iverson, appraiser, Sierra County Assessor's Office a discount rate in the range of 25 to 30 percent would reflect the high level of risk associated with initial assessment of a mining operation.

[20] Rather than update the 4th quarter 2004 costs and revenue estimates and projections in the Idaho-Maryland Mine summary business plan, this analysis assumes the same relationship between costs and revenue pertains now (and in the future) as it did when the business plan was prepared. Given the variability of many of the cost and revenue factors, in

The full estimate of assessed value for property tax revenue also incorporates an estimate of the assessed value of site improvements, buildings, and other facilities constructed for the proposed project, and the value of fixtures and equipment, which are substantial for mining and for the type of manufacturing proposed. These estimates are based roughly on selected line items from the business plan estimates of capital costs from initial construction through expansion to a 2,400 ton per day plant for gold mining and ceramics.

City of Grass Valley Fiscal Impact

Positive Impact Overall

The proposed Idaho-Maryland Mine Project would result in positive fiscal impacts for the City of Grass Valley, assuming a profitable mining and ceramics production operation. This conclusion includes costs and revenue associated with the proposed business operations as well as costs and some revenue attributable to the new City residents whose presence in Grass Valley would be a direct result of IMM job opportunities.

Table 12 presents annual cost and revenue estimates for the proposed project from year 1 through year 9, when stabilized operations would begin, and then for years 22 and 23 to show the long-term trend through reclamation. After some negative impact at start-up, fiscal impacts would be positive during the early phases of the proposed project—net revenue to the City of Grass Valley averaging $540,000 per year during years three through eight. This conclusion is highly dependent on the business prospects for mine development and ceramics production. Increases in local assessed value would depend on positive cash flows and production from proven reserves. There might be more years of negative or neutral impact until the business prospects were fully established.[21]

During 14 years of stabilized operations, annual revenue would be almost two times annual cost—contributing a net surplus ranging from $350,000 to $750,000 per year. The net surplus would decline over time as costs would remain constant (in real terms) while assessed value would decline in real terms due to the Proposition 13 limitations on increases in assessed value, depletion of mineral rights over time, and eventual retirement of production facilities and equipment.

particular the price of gold, this is a reasonable approach. Furthermore, given the trend in gold prices since 2005, this could be considered a conservative approach.

[21] As a general rule, HEG defines a fiscally neutral project, i.e., revenues about equal to expenditures, as falling within ± 10 percent of net revenues relative to expenditures. This range reflects an appropriate level of precision, given the assumptions and methodology of fiscal impact analysis and of long-term forecasting in general.

TABLE 12
IDAHO-MARYLAND MINE FISCAL IMPACT ANALYSIS CITY OF GRASS VALLEY ANNUAL GENERAL FUND COSTS AND REVENUES, SELECTED YEARS
(constant 2007/08 dollars)

Year	1	2	3	4	5	6	7	8	9	22	23
Annual Public Service Costs for the City of Grass Valley General Fund											
General Government	$42,409	$71,693	$71,693	$84,534	$84,534	$99,630	$67,929	$81,515	$60,382	$60,382	$3,082
Police	140,000	280,000	280,000	280,000	280,000	280,000	280,000	280,000	280,000	280,000	14,000
Animal Control	3,472	6,224	6,224	7,339	7,339	8,650	5,898	7,077	5,242	5,242	271
Fire	166,700	333,400	333,400	333,400	333,400	333,400	333,400	333,400	333,400	333,400	16,600
Community Development	9,072	15,336	15,336	18,083	18,083	21,312	14,531	17,437	12,916	12,916	659
Streets	16,436	27,784	27,784	32,761	32,761	38,611	26,326	31,591	23,401	23,401	1,194
Engineering	5,974	10,099	10,099	11,908	11,908	14,035	9,569	11,483	8,506	8,506	434
Other Public Works	8,254	13,953	13,953	16,453	16,453	19,391	13,221	15,865	11,752	11,752	600
GF Contrib. to Dev. Services	2,133	3,605	3,605	4,251	4,251	5,010	3,416	4,099	3,037	3,037	155
Parks and Recreation	12,891	23,111	23,111	27,253	27,253	32,119	21,899	26,279	19,466	19,466	1,007
Total General Fund Cost	**$407,340**	**$785,205**	**$785,205**	**$815,982**	**$815,982**	**$852,158**	**$776,189**	**$808,747**	**$758,102**	**$758,102**	**$38,002**
Annual Revenue for the City of Grass Valley General Fund											
Property Tax[1]	$0	$234,197	$352,435	$431,622	$542,111	$608,928	$682,830	$650,015	$614,846	$287,636	$12,525
Transfer Tax	-	-	-	-	-	-	-	-	-	-	-
General Fund Sales Tax[2]	231,385	453,669	449,379	454,373	682,031	687,875	685,249	690,526	682,327	682,327	1,202
In-lieu Vehicle License Fees	-	27,252	78,995	97,490	123,055	139,035	156,738	150,926	144,503	83,905	2,804
Other Revenue[3]	31,197	52,769	52,769	62,215	62,215	73,320	50,001	59,995	44,449	44,449	2,299
Interest[4]	2,626	5,579	7,236	8,357	9,894	10,892	11,548	11,315	10,661	6,783	188
Total General Fund Revenue	**$265,208**	**$775,566**	**$942,913**	**$1,056,157**	**$1,423,507**	**$1,524,249**	**$1,590,566**	**$1,566,976**	**$1,500,986**	**$1,109,300**	**$19,018**
Grass Valley Fire Special Tax[5]	**$76**	**$76**	**$76**	**$76**	**$76**	**$76**	**$76**	**$76**	**$76**	**$76**	**$76**
Net Revenue/(Cost)	**($142,056)**	**($9,562)**	**$157,784**	**$240,252**	**$607,602**	**$672,168**	**$814,453**	**$758,305**	**$742,961**	**$351,275**	**($18,908)**
Net Revenue/(Cost) Percent of Total Cost	**(35%)**	**(1%)**	**20%**	**29%**	**74%**	**79%**	**105%**	**94%**	**98%**	**46%**	**(50%)**

NOTE: **Appendix Tables A.2 – A.7** present detail on the assumptions and methodology for the fiscal impact analysis.

[1] Property tax revenue to the City General Fund according to tax sharing formulas described in the October 2001 Master Tax Sharing Agreement for Grass Valley Annexations. The revenue shown here is net of the City's contribution to the State Educational Revenue Augmentation Fund (ERAF)—about 18.9 percent for the 2007-2008 tax year, according to the City of Grass Valley and the Nevada County Auditor-Controller.

[2] In annexation areas, incremental general fund sales tax revenue is shared between the City and the County. In this analysis, 100 percent of the sales tax revenue is allocated to the City of Grass Valley. If any taxable transactions occurred in the annexation area, such as ceramic tile or aggregate sales, then 10 percent of the sales tax revenue from those transactions would be allocated to the County General Fund and 90 percent would be allocated to the City.

[3] Other Revenue includes all General Fund revenue estimated using per resident or per employee factors (franchise tax, business license tax, fees, and other miscellaneous revenue). See **Appendix Table A.4** for detail.

[4] Revenue from interest is estimated at one percent of all other General Fund net revenue, based on current City budget analysis.

[5] Annual fire special tax revenue at the current annual tax rate (per business), assuming the proposed project consists of two businesses.

SOURCE: City of Grass Valley, Final Adopted Budget, Fiscal Year 2007/2008 and Hausrath Economics Group.

Detail on Costs and Revenues

Public service costs to the City of Grass Valley attributable to the proposed IMM project would total about $760,000 per year during the 14-year period of stabilized operations. Costs could range up to $850,000 per year, in early phases of the project, when construction and operations would overlap. Annual costs in this range represent sic to seven percent of the 2007/2008 General Fund budget (net of fiscal impact analysis adjustments, as described in **Appendix Table A.2**). Unlike a residential subdivision or planned business park development for which local public service costs might be estimated to increase gradually over an extended absorption and occupancy period, the proposed project would generate costs from the early phases, on the basis of the fast-track construction schedule and early phase exploration and mine development activity. Moreover, the nature of the IMM operation would require increasing police and fire protection capabilities during the first phase of exploration and development.

The unique characteristics of the proposed IMM would place special demands on public safety services, requiring higher than average levels of staffing, in addition to specialized training and equipment. Costs for police services (estimated by the Grass Valley Police Department) would be about $280,000 per year; costs for fire services (estimated by the Grass Valley Fire Department) would be about $333,400 per year. Together, these public safety costs account for 80 percent of total annual city costs. (See **Appendix Table A.3.**) For all other service areas, the cost estimates reflect average level of service provided citywide according to the 2007-2008 budget.

General Fund revenue is estimated to range from $265,000 per year to a peak of about $1.6 million per year during the early phases of the project. Annual revenue would average about $1.3 million per year during the period of stabilized operations after eight years of construction, development, and expansion of both mine and ceramic production operations. Property tax and sales tax would contribute the most revenue—combined over $1 million per year during stabilized operations, about 85 percent of total revenue.

Property tax revenue source would be highly dependent on the IMM identifying additional proven reserves and on the operating income from both the mine operation and the ceramics production operation. The simplified long-term assessment used here smoothes over what could be a more volatile source of local public revenue.

There are a number of components to the General Fund sales tax revenue attributable to the proposed project. Overall, sales tax revenue would range from $220,000 to $690,000 per year. The household retail spending of new permanent-resident worker households as well as commuters living part-time in the City would generate sales tax revenue to the City of Grass Valley, as would worker spending on eating and drinking out and convenience items near work. Final retail sales of ceramic tile could be the largest component of local sales tax revenue. If 10 percent of final sales of ceramic tile occurred in Grass Valley, then the City would earn sales tax revenue on the order of $400,000 per year.[22]

Taxable business purchases in Grass Valley attributable to the proposed IMM would also be an important source of local sales tax revenue. The estimated IMM sales tax revenue associated

[22] Most of the sales of ceramic tile would be sales for re-sale, so sales tax would not be assessed on the first transaction in Grass Valley.

with business spending assumes the average pattern for sales tax generated by non-retail business service, repair, wholesale, and manufacturing business activity in Grass Valley, using a sales tax revenue per square foot factor reflecting existing conditions in the City. (See **Appendix Table A.6**) This could be either high or low for the proposed IMM. The mine and the ceramics production activity would be likely to generate a greater than average level of spending for business equipment, industrial machinery, and spare parts. If this spending were captured in Grass Valley, the estimate based on existing averages could be low. On the other hand, if the required machinery, equipment, and parts were highly specialized, they might not be available locally, in which case Grass Valley would not benefit from this spending.[23]

Sales of aggregate material would generate sales tax revenue to Grass Valley, assuming Grass Valley would be the point-of-sale for final sales. Assuming 55,000 tons per year of aggregate sales and a sale price of $8.00 per ton, total sales tax revenue to Grass Valley would be about $4,300 per year.[24] According to the October 2001 Agreement, sales tax revenue from transactions such as this in an annexation area would be shared by the City of Grass Valley (allocated 90 percent of the revenue) and Nevada County (allocated 10 percent of the revenue).

This analysis assumes that gold production and ceramics production would **not** generate sales tax revenue to Grass Valley. The Idaho-Maryland Mine Corporation intends to sell gold doré bars to a gold refining company that would use those bars to produce tradable gold for sale in the commodity markets. The transaction between IMM and the gold refinery would not meet the California State Board of Equalization definition of a final sale.[25]

Annual Revenue to Other Taxing Agencies

The proposed IMM project would add to the property tax revenue base of other taxing entities—the Nevada County General Fund, the Nevada Irrigation District, the Nevada Cemetery District, and various school districts. Annexation to the City of Grass Valley and the Nevada Irrigation District would re-distribute some County General Fund property and sales tax revenue and fire district property tax revenue, according to property tax sharing agreements described above.

At annexation to the City of Grass Valley, 100 percent of the property tax revenue that would otherwise be distributed to either of the fire districts would be transferred to the City of Grass Valley, as the City would assume primary responsibility for fire protection services. This revenue is included in the estimate of property tax revenue to the City of Grass Valley presented in **Table 12**.

The County's 10 percent share of incremental property tax revenue would range from about $9,000 per year up to about $25,000 per year. The annual average property tax revenue to the County during stabilized operations would be about $16,000 per year. Any sales tax revenue from taxable transactions that occurred in the annexation area, such as from ceramic tile and

[23] The presence of a successful IMM business operation in Grass Valley would be likely to stimulate new business activity locally from suppliers and service providers, improving the potential for the City to benefit economically from IMM business spending.

[24] Estimates of aggregate sales volume and sales price per ton provided by the Idaho-Maryland Mining Corporation. HEG inflated the 2004 unit sales price to a more current sales price (2007) based on analysis of data in United State Geological Survey, *2006 Minerals Yearbook—Stone, Crushed.*

[25] Furthermore, sale of gold bullion is exempt from the sales and use tax in California (*California Revenue and Taxation Code, Section 6355).*

aggregate sales would add to this total; 10 percent of that local sales tax revenue would be allocated to the County. This revenue would contribute to offsetting some of the costs for countywide services that would be incurred by Nevada County with development of the proposed project.

Property tax revenue to the NID would range from about $30,000 per year up to $80,000 per year, averaging about $50,000 per year during stabilized operations. In addition to this property tax revenue, the NID would collect water rate charges to cover the cost of providing water service to the proposed IMM. The NID does not anticipate any net deficit of costs over revenues as a result of this project.[26]

General Plan Land Use Alternative

City of Grass Valley Fiscal Impact

The General Plan Land Use Alternative for the Idaho-Maryland site assumes the property would be annexed to the City of Grass Valley and developed according to the Grass Valley General Plan 2020 land use designations for the site—business park development on the northern portion of the site and medium density residential development on the southern portion of the site along East Bennett Road. The result would be positive fiscal impacts for the City of Grass Valley. At buildout, annual revenue would exceed annual cost by about 30 percent (see **Table 13**). The business park development would contribute the most to this positive fiscal outcome. Considered independently, the residential development would be fiscally neutral to the City, with net revenue about equal to net cost.[27]

Annual costs attributable to the General Plan Alternative would total about $724,000 at buildout. For some perspective, this represents about six percent of the 2007/2008 General Fund budget (net of fiscal impact analysis adjustments, as described in **Appendix Table A.2**). For the General Plan Land Use Alternative, all costs are estimated using per capita cost factors representing existing average levels of service citywide. This is a reasonable assumption for planning-level analysis of land uses consistent with the General Plan. Costs for police services would be the largest single component of annual City cost, accounting for almost 40 percent of the total. The housing development and associated residential population would account for most of the annual cost—about $500,000 per year at buildout (just over two-thirds of total annual cost for the General Plan Alternative).

[26] Doug Roderick, Nevada Irrigation District (Engineering), personal communication, March 26, 2008.

[27] As a general rule, HEG defines a fiscally neutral project, i.e., revenues about equal to expenditures, as falling within ± 10 percent of net revenues relative to expenditures. This range reflects an appropriate level of precision, given the assumptions and methodology of fiscal impact analysis and of long-term forecasting in general.

TABLE 13
GENERAL PLAN ALTERNATIVE FISCAL IMPACT ANALYSIS
CITY OF GRASS VALLEY
ANNUAL GENERAL FUND COSTS AND REVENUES AT BUILDOUT
(constant 2007/08 dollars)

	UMD Residential Development	Business Park Development	Total General Plan Alternative
Total Employment		**795**	
Total Housing Units	**272**		
Total New Residents	**721**		
Annual Public Service Costs for the City of Grass Valley General Fund			
General Government	$87,132	$48,098	$135,230
Police	175,398	96,821	272,219
Animal Control	12,614	-	12,614
Fire	79,641	43,963	123,604
Community Development	18,638	10,289	28,927
Streets	33,768	18,640	52,408
Engineering	12,274	6,776	19,050
Other Public Works	16,958	9,361	26,319
GF Contribution to Development Services Fund	4,382	2,419	6,801
Parks and Recreation	46,839	-	46,839
Total Cost	**$487,645**	**$236,367**	**$724,012**
Annual Revenue for the City of Grass Valley General Fund			
Property Tax[1]	$313,380	$74,878	$388,258
Transfer Tax	8,549	916	9,464
General Fund Sales Tax[2]	39,032	277,018	316,050
In-lieu Vehicle License Fees	67,571	17,298	84,869
Other Revenue[3]	64,848	34,994	99,841
Interest[4]	4,934	4,051	8,985
Total General Fund Revenue	**$498,313**	**$409,155**	**$907,468**
City of Grass Valley Fire Special Tax	**$9,689**	**$573**	**$10,262**
Net Revenue/(Cost)	**$20,357**	**$173,361**	**$193,718**
Net Revenue/(Cost) Percent of Total Cost	**4%**	**73%**	**27%**

NOTE: **Appendix Tables A.2 – A.7** present detail on the assumptions and methodology for the fiscal impact analysis.

[1] Property tax revenue to the City General Fund according to tax sharing formulas described in the October 2001 Master Tax Sharing Agreement for Grass Valley Annexations. The revenue shown here is net of the City's contribution to the State Educational Revenue Augmentation Fund (ERAF)—about 18.9 percent for the 2007-2008 tax year, according to the City of Grass Valley and the Nevada County Auditor-Controller.

[2] In annexation areas, incremental general fund sales tax revenue is shared between the City and the County. If establishments located in the business park generated taxable transactions, then 90 percent of the sales tax revenue attributable to those transactions would be allocated to Grass Valley and 10 percent would be allocated to Nevada County. For this analysis, 100 percent of the Grass Valley sales tax revenue attributable to the business park is allocated to Grass Valley. If any of this revenue were attributable to transactions that occurred in the annexation area instead of elsewhere in the City, then revenue to the City would be less than shown here.

[3] Other Revenue includes all General Fund revenue estimated using per resident or per employee factors (franchise tax, business license tax, fees, and other miscellaneous revenue). See **Appendix Table A.4** for detail.

[4] Revenue from interest is estimated at one percent of all other General Fund net revenue, based on current City budget analysis.

SOURCE: City of Grass Valley, Final Adopted Budget, Fiscal Year 2007/2008 and Hausrath Economics Group.

General Fund revenue is estimated at about $900,000 per year at buildout. Property tax would be the largest single revenue source, accounting for almost 45 percent of total annual revenue. Residential development would contribute the most to the property tax revenue base. General fund sales tax, primarily associated with taxable business-to-business sales associated with the economic activity at the business park, is also important to the net positive fiscal impact associated with the General Plan Alternative.[28] General Fund sales tax revenue represents about one-third of total annual revenue at buildout.

As noted above, the bottom line for the General Plan Alternative shows annual revenue just about matching annual cost for the proposed residential development. For the Business Park, annual revenue of about $410,000 is about 70 percent greater than annual cost. **Appendix Tables A.8 – A.10** present annual cost and revenue detail for the General Plan Land Use Alternative, and for each component separately, assuming development and absorption over a ten-year period.

Annual Revenue to Other Taxing Agencies

Development of these parcels under the General Plan Land Use Alternative would add to the property tax revenue base of other taxing entities—the Nevada County General Fund, the Nevada Irrigation District, the Nevada Cemetery District, and various school districts. Annexation to the City of Grass Valley and the Nevada Irrigation District would re-distribute some County General Fund property and sales tax revenue and fire district property tax revenue, according to property tax sharing agreements described above.

At annexation to the City of Grass Valley, 100 percent of the property tax revenue that would otherwise be distributed to either of the fire districts would be transferred to the City of Grass Valley, as the City would assume primary responsibility for fire protection services. This revenue is included in the estimate of property tax revenue to the City of Grass Valley presented in **Table 13**.

Table 14 presents estimates of annual revenue to Nevada County and the Nevada Irrigation District that would be expected under the General Plan Land Use Alternative, assuming annexation to the City of Grass Valley and annexation to the Nevada Irrigation District.

The County's 10 percent share of incremental property tax revenue would total about $15,000 annually at buildout under the General Plan Land Use Alternative. Any sales tax revenue from taxable transactions that occurred in the business park would add to this total; 10 percent of that local sales tax revenue would be allocated to the County. Depending on the type of business activity located in the business park, this could account for more revenue than property tax

[28] The sales tax revenue estimate reflects the existing average pattern for non-retail businesses in Grass Valley. On average, those businesses generate sales tax revenue to the City of Grass Valley at the rate of about $0.75 per square foot. This generally represents business-to-business sales that are taxable. The transactions could occur at the business park or elsewhere in the City. According to the terms of the October 2001 annexation revenue sharing agreement, local sales tax revenue from any taxable transactions that occurred in the Business Park would be shared between the City of Grass Valley (90 percent) and Nevada County (10 percent).

revenue.[29] The General Plan Land Use Alternative would generate about $48,000 in property tax revenue to the NID on an annual basis at buildout.

TABLE 14
GENERAL PLAN ALTERNATIVE FISCAL IMPACT ANALYSIS
SELECTED TAXING AGENCIES
ANNEXATION REVENUE SHARING AT BUILDOUT
(constant 2007/08 dollars)

	UMD Residential Development	Business Park Development	Total General Plan Alternative
Property Tax Revenue to Nevada County[1]	$12,571	$2,541	**$15,112**
Property Tax Revenue to Nevada Irrigation District	$39,537	$8,457	**$47,994**

NOTE: This analysis is not a full-blown fiscal impact analysis for either Nevada County or the Nevada Irrigation District. Each agency would anticipate increased service costs associated with development under the General Plan Land Use designation. For Nevada County, these costs would include costs for countywide functions such as detention, health and human services, property tax assessment, auditor-controller, and elections. The Nevada Irrigation District would provide water supply services.

[1] Based on the October 2001 Agreement, 10 percent of the property tax increment from the annexation area and 10 percent of the incremental sales tax revenue from the annexation area. If establishments located in the business park generated taxable transactions, then 10 percent of the sales tax revenue attributable to those transactions would be allocated to Nevada County. This would add to the annexation revenue sharing amount shown in this table.

[2] In addition to a share of the property tax revenue, the Nevada Irrigation District would collect connection fees and water rate charges set to cover the District's costs to provide water service.

SOURCE: Hausrath Economics Group

Fiscal Impacts Compared

Direct comparison of these fiscal impact results is problematic for a number of reasons. First, the IMM proposal represents a specific project that has well-defined characteristics, while the General Plan Land Use Alternative represents a land use scenario based on planning assumptions determined to be representative of the average of a range of possible outcomes. Second, because there are unique characteristics of the IMM proposal, City departments are able to project service needs and costs specific to the type of activity proposed. This level of specificity is not possible with the General Plan Land Use Alternative. Finally, the revenue base for the proposed project, while quite specific, offers higher than average potential revenue (over a short time horizon), but represents a notably more speculative enterprise than expected in typical business park development.

Nevertheless, analyzing the impacts of the proposed project and the impacts of the General Plan Alternative leads to the following conclusions. Both the proposed IMM project and the General Plan Land Use alternative would have positive fiscal impacts for the City of Grass Valley. The proposed project would have the potential to generate a larger surplus of revenue compared to public service cost and more revenue over a shorter time horizon than would be expected of a

[29] Residents of the General Plan Land Use Alternative UMD housing would also generate General Fund sales tax revenue for the City of Grass Valley. Residents would be expected to spend a percentage of their household income at Grass Valley stores and restaurants. The point-of-sale for this revenue would not be the project area, therefore this sales tax revenue would not be subject to the annexation revenue sharing agreement. All of this sales tax revenue attributable to household retail spending in Grass Valley is allocated to the City of Grass Valley.

traditional business park development or residential subdivision. The trade-off for this potential is the more speculative nature of the proposed mining and ceramics production operation.

The relative fiscal benefit and the implications for the City's tax base are directly related to the relative balance of jobs and housing represented by the IMM project and the General Plan Land Use Alternative. Although the project area would have a higher than average jobs/housing balance under the General Plan Land Use alternative, a mixed use annexation would not result in as positive fiscal results as would the current annexation proposal that not only would introduce new economic activity to the City but also would increase the City's long-term land capacity for business development. Consistent city policy direction to encourage higher-density residential and mixed use development in infill areas, the SDAs, and other annexation areas would be important components of a strategy to offset negative housing market impacts of reducing the long-term land supply for housing in Grass Valley.

APPENDIX A

METHODOLOGY AND ASSUMPTIONS

TABLE A.1

SERVICE POPULATION

ESTIMATES AND ASSUMPTIONS USED TO DERIVE FACTORS FOR GRASS VALLEY FISCAL IMPACT ANALYSIS

Grass Valley population and employment, 2007		
Total population	13,000	
Total employment	10,200	
Service population estimates used to develop per capita cost factors		
City residents	13,000	
City residents and employees	18,100	Residents plus 50 percent of employees

Assumptions/Sources:

Population: State of California, Department of Finance, *E-5 Populaton and Housing Estimates for Cities, Counties, and the State, 2001-2007, with 2000 Benchmark* , May 2007.

Employment: Based on Nevada County estimate of wage and salary employment in State of California, Employment Development Department, *Industry Employment and Labor Force (Annual Average)* , March 2007 benchmark, February 2008.

Assumes 33.5 percent of Nevada County wage and salary employment is located in the City of Grass Valley, consistent with *The SDA Study* (Table 24).

The combined resident and employee service population assumes employee service demand (a proxy for service demand associated with business activity) is equivalent to 50 percent of resident service demand.

This assumption is consistent with *The SDA Study* and the *Multi-Jurisdictional Fiscal Impact Analysis* , Goodwin Consulting Group, August 28, 2001 that provided the basis for the City/County tax sharing agreement.

TABLE A.2

CITY OF GRASS VALLEY FISCAL IMPACT ANALYSIS
PER CAPITA COST FACTORS BASED ON 2007/2008 ADOPTED BUDGET

General Fund Expenditure Category	FY 07-08 Adopted Budget	2007-08 Adjustments[1]	FY 07-08 Adopted Budget Net Spending[2]	Service Population Basis for Per Capita Cost Calculation		Per Resident Cost Factor[3]	Per Employee Cost Factor[4]
General Government	2,187,367	-	2,187,367	Population + Employment at 50%	18,100	$120.85	$60.42
Police (including training)	4,683,222	(280,035)	4,403,187	Population + Employment at 50%	18,100	$243.27	$121.64
Animal Control	268,942	(41,500)	227,442	Population	13,000	$17.50	$0.00
Fire	2,007,521	(8,200)	1,999,321	Population + Employment at 50%	18,100	$110.46	$55.23
Community Development	487,897	(20,000)	467,897	Population + Employment at 50%	18,100	$25.85	$12.93
Streets	851,710	(4,000)	847,710	Population + Employment at 50%	18,100	$46.83	$23.42
Engineering	308,634	(500)	308,134	Population + Employment at 50%	18,100	$17.02	$8.51
Other Public Works	425,718	-	425,718	Population + Employment at 50%	18,100	$23.52	$11.76
G.F. Contribution to Development Services	110,000	-	110,000	Population + Employment at 50%	18,100	$6.08	$3.04
Parks and Recreation except Maintenance	301,247	(2,010)	299,237	Population	13,000	$23.02	$0.00
Parks Maintenance	556,561	(11,265)	545,296	Population	13,000	$41.95	$0.00
Total Expenditures	**$12,188,819**	**($367,510)**	**$11,821,309**			**$676.35**	**$296.94**

NOTES:

1. Consistent with *The SDA Study* fiscal impact analysis methodology (and typical of this type of fiscal impact analysis) adjustments are made to total expenditures and revenue to focus on discretionary general fund tax revenues most influenced by new development and the costs funded by that revenue. Adjustments deducted from total expenditures and revenue include grants, booking fee reimbursements, reimbursement from Nevada City for animal control services, some planning and permit fees that are still booked to the General Fund, as well as transfers in from trust funds that offset some General Fund costs.
2. Adopted budget less adjustments.
3. Adopted budget net spending divided by service population.
4. When employment is part of the service population, one-half (50 percent) of per resident cost factor.
5. The Development Services Fund was created in 2003-2004 to segregate from the General Fund these costs and the associated permit and fee revenue collected to cover costs. This fund has required General Fund support, averaging about $100,000 per year. This line item is included in the General Fund budget cost analysis to recognize this cost and assumes that this level of support funded by General Fund discretionary revenue will continue in the future.

SOURCE: City of Grass Valley, *Adopted Budget 2007-2008* and Hausrath Economics Group.

TABLE A.3

POLICE AND FIRE ANNUAL COSTS - IDAHO-MARYLAND MINE PROJECT

Annual City of Grass Valley Police Department Cost (2007/2008 dollars)	
	Sworn Officers
Number of personnel	2
Annual cost per full-time-equivalent (FTE)	$130,000
Annual California P.O.S.T. training cost per employee	$5,000
Special training for large-scale rescue operations per employee	$5,000
Total annual cost	**$280,000**
Percent of total annual cost	
Year 1	50%
Year 2 - 22	100%
Year 23	5%

Notes/Sources:

Annual cost includes base salary, benefits/incentives, uniforms and all related/necessary equipment.

Other costs for specialized equipment to support large-scale rescue operations could total more than $100,000.

Rex Marks, Captain, City of Grass Valley Police Department, July 17, 2008.

Annual City of Grass Valley Fire Department Cost (2007/2008 dollars)	
Number of personnel	4
Annual cost per full-time-equivalent (FTE)	$75,000
Annual additional operating cost per FTE	$6,100
Total annual staff and related cost	**$324,400**
Annual Rescue Systems 1 training	$9,000
Total annual cost	**$333,400**
Percent of total annual cost	
Year 1	50%
Year 2 - 22	100%
Year 23	5%

Notes/Sources:

Staffing estimate includes 1 additional person for each of three shifts (3 FTE total) to provide a total of four persons on the aerial ladder truck (currently staffed at 3 persons).

Provides for "two in and two out" Cal OSHA requirement for rescue and other critical operations.

Leave and training absences for 3 additional FTE requires another 0.5 FTE.

Maintaining FTE per residential service population requires 0.5 FTE (per calculations below):

Current service population:	13,100	
Increase in service population:	450	(mid-point of range for movers and dependents)
Percentage increase:	3%	
Current FTE staff:	15	
Incremental FTE to maintain level of service:	0.5	

Annual cost includes base salary and benefits.

Additional operating cost per FTE covers operating materials and supplies, auto and building repairs and maintenance, office supplies, telephone, gas and oil costs, assumed to increase proportional to FTE.

Annual Rescue Systems 1 training would be provided to 15 staff at an annual cost of $500 per person.

James Marquis, Fire Chief, City of Grass Valley Fire Department, April 21, 2008, March 17, 2008.

TABLE A.4

CITY OF GRASS VALLEY FISCAL IMPACT ANALYSIS
PER CAPITA REVENUE FACTORS BASED ON 2007/2008 ADOPTED BUDGET

General Fund Revenue	FY 07-08 Adopted Budget	2007-08 Adjustments[1]	FY 07-08 Adopted Budget Net Revenue[2]	Service Population Basis for Per Capita Revenue Calculation		Per Resident Revenue Factor[3]	Per Employee Revenue Factor[4]
Property tax (secured & unsecured)	2,435,350		2,435,350	*not estimated on a per capita basis*		n/a	
Property transfer tax	82,000		82,000	*not estimated on a per capita basis*		n/a	
General Sales Tax	4,400,000		4,400,000	*not estimated on a per capita basis*		n/a	
In-lieu Sales Tax	1,500,000		1,500,000	*not estimated on a per capita basis*		n/a	
Hotel - Motel Tax	650,000		650,000	*not estimated on a per capita basis*		n/a	
PG&E Franchise Tax	146,000	-	146,000	Population + Employment at 50%	18,100	$8.07	$4.03
Cable TV Franchise Tax	110,000	-	110,000	Population	13,000	$8.46	$0.00
Solid Waste Franchise Tax	48,000	-	48,000	Population + Employment at 50%	18,100	$2.65	$1.33
Business License Tax	195,100	-	195,100	*not estimated on a per capita basis*		n/a	
General Sales Tax - Prop 172	95,000	-	95,000	Population	13,000	$7.31	$0.00
Motor Vehicle License Fees	75,000	-	75,000	Population	13,000	$5.77	$0.00
In-lieu Vehicle License Fees	900,000	-	900,000	*not estimated on a per capita basis*		n/a	
Planning Fees	20,000	(20,000)	-	*now in development services fund*		$0.00	$0.00
Fire Department Fees	174,884	(8,200)	166,684	Population + Employment at 50%	18,100	$9.21	$4.60
Engineering/Public Works Fees	4,500	(4,500)	-	Population + Employment at 50%	18,100	$0.00	$0.00
Animal Shelter Fees	55,200	(40,000)	15,200	Population	13,000	$1.17	$0.00
Police Fees	299,812	(154,660)	145,152	Population + Employment at 50%	18,100	$8.02	$4.01
Parks Fees	65,310	(2,010)	63,300	Population	13,000	$4.87	$0.00
Miscellaneous Revenue	170,000	(60,125)	109,875	Population + Employment at 50%	18,100	$6.07	$3.04
Cost Allocation Reimbursement[5]	175,000	-	175,000	Population + Employment at 50%	18,100	$9.67	$4.83
Interest Earnings	150,000	-	150,000	*not estimated on a per capita basis*		n/a	
Payments from Water Fund	146,038	-	146,038	Population + Employment at 50%	18,100	$8.07	$4.03
Payments from Sewer Fund	187,871	-	187,871	Population + Employment at 50%	18,100	$10.38	$5.19
Gas Tax, transfer to General fund	3,000	-	3,000	Population	13,000	$0.23	$0.00
Total Revenue	**$12,088,065**	**($289,495)**	**$11,798,570**			**$89.94**	**$31.07**

NOTES:

1. Consistent with *The SDA Study* fiscal impact analysis methodology (and typical of this type of fiscal impact analysis) adjustments are made to total expenditures and revenue to focus on discretionary general fund tax revenues most influenced by new development and the costs funded by that revenue. Adjustments deducted from total expenditures and revenue include grants, booking fee reimbursements, reimbursement from Nevada City for animal control services, some planning and permit fees that are still booked to the General Fund, as well as transfers in from trust funds that offset some General Fund costs.
2. Adopted budget less adjustments.
3. Adopted budget net revenue divided by service population.
4. When employment is part of the service population, one-half (50 percent) of per resident revenue factor.
5. Represents revenue from other funds that reimburses the General Fund for staff and overhead use by other funds. Revenue is shown here as offset to General Fund cost so that fiscal analysis captures costs funded by discretionary General Fund revenue.

SOURCE: City of Grass Valley, *Adopted Budget 2007-2008* and Hausrath Economics Group.

TABLE A.5

LOCAL PROPERTY TAX REVENUE ASSUMPTIONS

Assumptions:

When a taxing agency is only represented in part of the annexation area, assessed value is allocated to the taxing agency assuming assessed value is directly proportional to land area.

The example below illustrates this allocation for the entire Idaho-Maryland site of **101.72 acres**

Relevant taxing agencies:	Land area of Parcels (pre-annexation)	Percent of Total Land Area
Nevada County General Fund	101.72	100%
Nevada Irrigation District	16.29	16%
Ophir Hill Fire District	55.56	55%
Nevada County Consolidated Fire	46.16	45%

To determine the amount of assessed value and property tax revenue to each agency that is subsequently allocated at annexation, the percent of total land area is applied to the total assessed value.

Correspondence between Assessor's Parcel Number and Tax Rate Area

Parcels proposed for Annexation

Assessor's Parcel Number	Tax Rate Area	Acres
IMM North		
09-550-32	62032	0.48
09-550-37	62019	4.47
09-550-38	62019	40.10
09-550-40	62020	0.13
09-550-39	62020	0.98
09-560-36	78008	10.25
		56.41
IMM South		
09-560-14	78001	6.01
09-560-16	78001	1.20
09-560-18	78008	1.83
09-560-19	78001	3.02
09-560-25	78008	8.67
09-560-29	78001	1.65
09-560-30	78001	3.93
09-560-45	78008	9.64
09-560-46	78008	9.36
		45.31
Total IMM Project Site Annexation Area		**101.72**
Other properties proposed for annexation		
Milco		
09-680-29 through 09-680-34	62019	16.79
09-680-35	62032	0.36
09-680-36	62019	4.35
		21.50
Ennis		
09-560-47	78008	5.22

Sources:

Idaho-Maryland Mining Corporation, *Revised Annexation Application*, Table R-3, May 29, 2007; and Nevada County Auditor-Controller's Office.

Distribution of One Percent Property Tax Increment by Taxing Agency and Tax Rate Area

Taxing Agency	62-019	62-020	62-032	78-001	78-008
Nevada County General Fund	**31.55%**	**31.37%**	**28.44%**	**28.51%**	**30.22%**
Special Districts					
Nevada Irrigation District	**0.00%**	**0.00%**	**6.10%**	**5.29%**	**0.00%**
Nevada Cemetery District	0.530%	0.53%	0.47%	0.53%	0.60%
Resource Conservation District	0.00%	0.00%	0.06%	0.03%	0.0003%
Ophir Hill Fire District	**0.00%**	**0.00%**	**0.00%**	**10.79%**	**11.41%**
Nevada County Consolidated Fire District	**7.00%**	**7.17%**	**9.85%**	**0.00%**	**0.00%**
Schools					
Grass Valley Elementary	30.49%	29.91%	27.57%	0.00%	0.00%
Union Hill Elementary	0.00%	0.00%	0.00%	27.22%	28.67%
Nevada Union High School	19.47%	20.06%	17.60%	17.67%	18.60%
Sierra College District	9.11%	9.07%	8.25%	8.29%	8.73%
County School Service Fund	0.93%	0.94%	1.19%	0.84%	0.89%
Regional Occupation Program	0.92%	0.95%	0.47%	0.83%	0.88%
Total	**100.00%**	**100.00%**	**100.00%**	**100.00%**	**100.00%**

Notes/Sources:

Distribution factors calculated prior to shift to Education Revenue Augmentation Fund (ERAF).

Nevada County Auditor-Controller's Office, Tax Year 2008 data.

TABLE A.5

LOCAL PROPERTY TAX REVENUE ASSUMPTIONS

Proposed Idaho-Maryland Mine

Assessed value based on information presented in a confidential summary business plan prepared by the Idaho-Maryland Mining Corporation, May 31, 2005.

The Assessor's Handbook 560 *Assessment of Mining Properties,* California State Board of Equalization, Mary 1997 provides valuable information on the mining industry, mining accounting, mineral rights and ore reserves, appraisal of mining properties, treatment of mining properties under Proposition 13, and other aspects of this complicated valuation and assessment question.

Other Resources:

Dennis Goldstein,
Don Iverson, appraiser, Sierra County Assessor's Office
Ray Krauss, Resource Management Specialist/Environmental Planner
Dennis Goldstein, attorney, Jeffer, Mangels, Butler & Marmaro

General Plan Alternative - Initial Assessed Value by Use (2007 dollars)

Residential		
Large Single Family	$400,000	per unit
Small Single Family	$240,000	per unit
Business Park	$75	per square foot, assuming one-half office and one-half light industrial

Sources:

Dataquick Information Systems, Custom Report: Annual New Home Sale Data for Nevada County by City, 2005 - 2007.
The SDA Study , April 11, 2006

TABLE A.6

SPENDING AND RETAIL SALES ASSUMPTIONS

Estimating Taxable Retail Spendingin Grass Valley by Grass Valley Households			
	Large Single Family	**Small Single Famly**	
Average House Price	$400,000	$240,000	
Average Household Income	$96,000	$58,000	based on house price assumptions and factors about share of income devoted to housing
Retail spending as percent of income	27%	35%	based on analysis of U.S. Bureau of Labor Statistics, Consumer Expenditure Survey, 2005-2006
Total Annual Retail Spending/Household	$26,000	$20,000	
Retail spending by category			based on analysis of U.S. Bureau of Labor Statistics, Consumer Expenditure Survey, 2005-2006
Eating & Drinking Out	3,986	2,597	15%
Groceries and Convenience	7,450	5,693	29%
Comparison and Specialty	7,821	5,765	30%
Vehicles and supplies	6,603	6,204	26%
Total Retail Spending per Household	**$25,860**	**$20,258**	100%
Estimated Total Spending in Grass Valley			**Percent of Spending Captured in Grass Valley**
Eating & Drinking Out	2,989	1,947	75%
Groceries and Convenience	7,450	5,693	100%
Comparison and Specialty	5,866	4,324	75%
Vehicles and supplies	4,292	4,032	65%
Total Retail Spending per Household in Grass Valley	**$20,597**	**$15,997**	
Taxable Retail Spending per Household in Grass Valley	**$16,100**	**$12,600**	
Local Sales Tax per Household	**$161**	**$126**	1 percent local sales tax rate
Sales Tax per capita	**$61**	**$48**	assuming 2.65 persons per household

Assumptions:

Percentage of spending captured locally in Grass Valley estimated by Hausrath Economics Group.

Estimate of taxable retail spending is based on the assumption that 40 percent of grocery and convenience store sales are taxable.

Estimating Taxable Retail Spending by Workers at Place of Work		
Spending per worker per day	$5	eating & drinking out and incidentals
Equivalent annual taxable sales per worker	$1,300	assuming 260 workdays per year
Annual sales tax revenue per worker	**$13**	1 percent local sales tax rate

Estimating Additional Spending by IMM Commuters Sharing Rental Housing in Grass Valley		
Sales Tax per capita (full-time residents)	$61	see above
Percent that part-time residents would spend	50%	
Sales Tax per capita (part-time residents)	**$30**	

TABLE A.6

SPENDING AND RETAIL SALES ASSUMPTIONS

Estimating Sales Tax from Sale of Ceramic Tiles	**2009-2011**	**2012-2029**
Tile production (tons per day)	600	1,200
Production days per year	350	350
Tile per ton	400	400
Sales price per sq. ft. (2007 dollars)	$2.50	$2.50
Percent sold locally (final sale)	10%	10%
Local Sales Revenue (2007 dollars)	$21,000,000	$42,000,000
Local Sales Tax per year	**$210,000**	**$420,000**

Assumptions:

10 percent of sales are local sales for final sale and therefore taxable. Rough assumption provided by Dave Watkinson, IMMC.

Estimating Sales Tax from Sale of Aggregate Materials		
Aggregate sold (tons per year)	55,000	Idaho-Maryland Mining Corporation, confidential business plan, May 2005
Sales price per ton (2004 dollars)	$6	
Sales price per ton (2007 dollars)	$7.80	
Aggregate Sales Revenue (2007 dollars)	$430,000	
Local Sales Tax per year	**$4,300**	

Assumptions:

10 percent per year increase in average sales price per ton for aggregate materials based on 2005-2006 trend in *2006 Minerals Yearbook (Stone, Crushed)* , United State Geological Survey

Estimating Sales Tax from Non-Retail Business Activity (business-to-business sales)		
Estimated Sales Tax Distribution by Major Category, City of Grass Valley, 2006/07		
Retail Group	$4,423,698	
Non-Store and Part-Time Retailers	9,854	
Business Service and Repair Group	154,440	
Manufacturer and Wholesaleer Group	524,511	
State Adjustments	61	
Total Point of Sale	$5,112,564	
County Pool	1,033,422	
State Pool	7,466	
Total Sales Tax Receipts	**$6,153,452**	
Estimated Sales for Non-Retail Establishments including county pool and state pool		
Business Service and Repair Group	$391,209	
Manufacturer and Wholesaleer Group	1,328,630	
	$1,719,839	
Non-retail space in Grass Valley	2,400,000	sq. ft.
Estimated sales tax per square foot	**$0.72**	

Assumptions/Sources:

Total county and state pool of unallocated sales attributable to non-retail business establishments.

Estimate of business space based on Table 22 in *The SDA Study* (subtotal for commercial service and business park categories).

2003 estimate increased for 2007 based on percentage increase in employment over this period (six percent).

City of Grass Valley, Finance Department, Sales Tax Distribution Estimate

TABLE A.7

OTHER GRASS VALLEY REVENUE SOURCES

Estimating Property Tax in lieu of Vehicle License Fee		
2007-2008 Property Tax in lieu of Vehicle License Fee Revenue to City of Grass Valley	$900,000	
2007-20087 Assessed Value in City of Grass Valley	$1,395,378,826	
Property tax in lieu of VLF per $1,000 Assessed Value	$0.64	
Estimating Real Property Transfer Tax (Documentary Transfer Tax)		
Tax rate in City of Grass Valley	$0.55 per $500 of value on transfer of real property interest	
Estimating Business License Tax		
Business License Tax	$12.60	per employee
Business License Tax annual fee	$15.65	per business
Estimating Interest on the Use of Money and Property		
General Fund revenue net of adjustments	$11,798,570	
Interest earnings	($150,000)	
General Fund revenue net of adjustments net of interest	$11,648,570	
Interest earnings as percent of net General Fund revenue	**1%**	
Estimating Emergency Response Special Fire Tax (voter-approved special tax)		
Annual Tax per Single-Family Residential Unit	$35.62	per unit
Annual Tax per Commercial/Industrial Business	$38.22	per business

Assumptions/Sources:

Number of Businesses IMM Project	2	businesses
Number of Businesses General Plan Alternative	15	businesses

Assuming 25,000 sf per business, per *Multi-Jurisdictional Fiscal Impact Analysis* , Goodwin Consulting Group, August 28, 2001.

City of Grass Valley, *Adopted Budget 2007-2008* and Hausrath Economics Group.

TABLE A.8

GENERAL PLAN ALTERNATIVE FISCAL IMPACT ANALYSIS: COMBINED RESIDENTIAL AND BUSINESS PARK USES
(annual estimates in 2007/08 dollars)

Year	1	2	3	4	5	6	7	8	9	10
Total Employment (cumulative)	**80**	**159**	**239**	**318**	**398**	**477**	**557**	**637**	**716**	**796**
Total New Residents (cumulative)	**144**	**288**	**432**	**577**	**721**	**721**	**721**	**721**	**721**	**721**
Annual Public Service Costs										
General Government	22,236	44,412	66,648	88,945	111,181	115,955	120,789	125,623	130,396	135,230
Police	44,762	89,402	134,163	179,047	223,808	233,418	243,148	252,879	262,488	272,219
Animal Control	2,519	5,039	7,558	10,095	12,614	12,614	12,614	12,614	12,614	12,614
Fire	20,325	40,594	60,919	81,298	101,623	105,986	110,404	114,823	119,186	123,604
Community Development	4,757	9,500	14,257	19,026	23,783	24,804	25,838	26,872	27,893	28,927
Streets	8,618	17,212	25,829	34,470	43,088	44,938	46,811	48,685	50,535	52,408
Engineering	3,132	6,256	9,389	12,530	15,662	16,335	17,015	17,696	18,369	19,050
Other Public Works	4,328	8,644	12,971	17,311	21,639	22,568	23,509	24,449	25,378	26,319
GF Contribution to Dev. Services	1,118	2,233	3,352	4,473	5,591	5,831	6,074	6,317	6,557	6,801
Parks and Recreation	9,355	18,710	28,064	37,484	46,839	46,839	46,839	46,839	46,839	46,839
Total Cost	**$121,149**	**$242,001**	**$363,151**	**$484,679**	**$605,828**	**$629,287**	**$653,042**	**$676,798**	**$700,256**	**$724,012**
Annual Per Capita Revenue										
PG&E Franchise Tax	1,484	2,964	4,449	5,937	7,421	7,740	8,062	8,385	8,704	9,026
Cable TV Franchise Tax	1,218	2,437	3,655	4,882	6,101	6,101	6,101	6,101	6,101	6,101
Solid Waste Franchise Tax	488	975	1,463	1,952	2,440	2,545	2,651	2,757	2,861	2,968
Business License Tax	1,039	2,050	3,090	4,101	5,140	6,151	7,190	8,214	9,241	10,264
General Sales Tax - Prop 172	1,052	2,105	3,157	4,217	5,269	5,269	5,269	5,269	5,269	5,269
Motor Vehicle License Fees	831	1,662	2,492	3,329	4,160	4,160	4,160	4,160	4,160	4,160
Fire Department Fees	1,694	3,384	5,079	6,778	8,472	8,836	9,204	9,573	9,937	10,305
Engineering/Public Works Fees	-	-	-	-	-	-	-	-	-	-
Animal Shelter Fees	168	337	505	675	843	843	843	843	843	843
Police Fees	1,476	2,947	4,423	5,902	7,378	7,695	8,015	8,336	8,653	8,974
Parks Fees	701	1,402	2,104	2,810	3,511	3,511	3,511	3,511	3,511	3,511
Miscellaneous Revenue	1,117	2,231	3,348	4,468	5,585	5,825	6,067	6,310	6,550	6,793
Cost Allocation Reimbursement	1,779	3,553	5,332	7,116	8,895	9,277	9,664	10,050	10,432	10,819
Payments from Water Fund	1,485	2,965	4,450	5,938	7,423	7,742	8,064	8,387	8,706	9,029
Payments from Sewer Fund	1,910	3,815	5,724	7,639	9,549	9,959	10,374	10,790	11,200	11,615
Gas Tax	33	66	100	133	166	166	166	166	166	166
Total Per Capita Revenue	**$16,476**	**$32,893**	**$49,369**	**$65,876**	**$82,352**	**$85,818**	**$89,342**	**$92,851**	**$96,332**	**$99,841**
Other Revenue Sources										
Property Tax	72,838	145,065	216,767	288,018	358,883	364,325	370,022	375,933	382,021	388,258
Transfer Tax	11,968	13,779	15,591	17,402	19,214	9,057	9,159	9,261	9,363	9,464
General Fund Sales Tax	35,513	71,014	106,527	142,028	177,541	205,235	232,942	260,649	288,343	316,050
In-lieu Vehicle License Fees	15,825	31,516	47,094	62,574	77,969	79,257	80,599	81,987	83,413	84,869
Interest	1,526	2,943	4,353	5,759	7,160	7,437	7,821	8,207	8,595	8,985
Total General Fund Revenue	**$154,147**	**$297,210**	**$439,702**	**$581,657**	**$723,119**	**$751,129**	**$789,886**	**$828,888**	**$868,067**	**$907,468**
City of Grass Valley Fire Special Tax	**$2,000**	**$3,997**	**$5,997**	**$7,994**	**$9,994**	**$10,033**	**$10,109**	**$10,147**	**$10,224**	**$10,262**
Net Revenue/(Cost)	**$34,998**	**$59,206**	**$82,548**	**$104,972**	**$127,285**	**$131,874**	**$146,952**	**$162,238**	**$178,034**	**$193,718**
Net Revenue / (Cost) Percent of Cost	**29%**	**24%**	**23%**	**22%**	**21%**	**21%**	**23%**	**24%**	**25%**	**27%**
Property Tax Revenue to NID	$9,087	$18,098	$27,043	$35,933	$44,774	$45,363	$45,984	$46,632	$47,303	$47,994
Property Tax Revenue to Nevada County	$2,874	$5,724	$8,553	$11,365	$14,161	$14,333	$14,516	$14,708	$14,907	$15,112

SOURCE: City of Grass Valley, Adopted Budget Fiscal Year 2007/2008 and Hausrath Economics Group.

TABLE A.9

GENERAL PLAN ALTERNATIVE FISCAL IMPACT ANALYSIS: BUSINESS PARK USE
(annual estimates in 2007/08 dollars)

Year	1	2	3	4	5	6	7	8	9	10
Cumulative Number of Businesses	**2**	**3**	**5**	**6**	**8**	**9**	**11**	**12**	**14**	**15**
Cumulative Total Employment	**80**	**159**	**239**	**318**	**398**	**477**	**557**	**637**	**716**	**796**
Annual Public Service Costs for the City of Grass Valley Attributable to Employment and Business Activity										
General Government	4,834	9,607	14,441	19,215	24,049	28,822	33,656	38,490	43,264	48,098
Police	9,731	19,340	29,071	38,680	48,411	58,020	67,751	77,481	87,091	96,821
Animal Control	-	-	-	-	-	-	-	-	-	-
Fire	4,418	8,782	13,200	17,563	21,981	26,345	30,763	35,181	39,545	43,963
Community Development	1,034	2,055	3,089	4,110	5,144	6,165	7,199	8,233	9,255	10,289
Streets	1,873	3,723	5,597	7,447	9,320	11,170	13,043	14,917	16,767	18,640
Engineering	681	1,353	2,034	2,707	3,388	4,060	4,741	5,422	6,095	6,776
Other Public Works	941	1,870	2,811	3,740	4,681	5,610	6,550	7,491	8,420	9,361
GF Contribution to Dev. Services	243	483	726	966	1,209	1,449	1,693	1,936	2,176	2,419
Parks and Recreation	-	-	-	-	-	-	-	-	-	-
Total Cost	**$23,755**	**$47,214**	**$70,969**	**$94,428**	**$118,183**	**$141,642**	**$165,397**	**$189,153**	**$212,611**	**$236,367**
Annual Per Capita Revenue for the City of Grass Valley Attributable to Employment and Business Activity										
PG&E Franchise Tax	323	641	964	1,283	1,605	1,924	2,246	2,569	2,888	3,210
Cable TV Franchise Tax	-	-	-	-	-	-	-	-	-	-
Solid Waste Franchise Tax	106	211	317	422	528	632	739	845	949	1,055
Business License Tax	1,039	2,050	3,090	4,101	5,140	6,151	7,190	8,214	9,241	10,264
General Sales Tax - Prop 172	-	-	-	-	-	-	-	-	-	-
Motor Vehicle License Fees	-	-	-	-	-	-	-	-	-	-
Fire Department Fees	368	732	1,100	1,464	1,833	2,196	2,565	2,933	3,297	3,665
Engineering/Public Works Fees	-	-	-	-	-	-	-	-	-	-
Animal Shelter Fees	-	-	-	-	-	-	-	-	-	-
Police Fees	321	638	958	1,275	1,596	1,913	2,233	2,554	2,871	3,192
Parks Fees	-	-	-	-	-	-	-	-	-	-
Miscellaneous Revenue	243	483	725	965	1,208	1,448	1,691	1,933	2,173	2,416
Cost Allocation Reimbursement	387	769	1,155	1,537	1,924	2,306	2,693	3,079	3,461	3,848
Payments from Water Fund	323	641	964	1,283	1,606	1,924	2,247	2,570	2,888	3,211
Payments from Sewer Fund	415	825	1,240	1,650	2,066	2,476	2,891	3,306	3,716	4,131
Gas Tax	-	-	-	-	-	-	-	-	-	-
Total Per Capita Revenue	**$3,525**	**$6,990**	**$10,515**	**$13,980**	**$17,505**	**$20,970**	**$24,495**	**$28,004**	**$31,485**	**$34,994**
Other Revenue Sources										
Property Tax	7,748	15,425	23,038	30,590	38,087	45,533	52,932	60,287	67,601	74,878
Transfer Tax	-	102	204	305	407	509	611	712	814	916
General Fund Sales Tax	27,707	55,401	83,108	110,802	138,509	166,203	193,910	221,617	249,311	277,018
In-lieu Vehicle License Fees	1,790	3,563	5,322	7,067	8,799	10,519	12,228	13,927	15,617	17,298
Interest	408	815	1,222	1,627	2,033	2,437	2,842	3,245	3,648	4,051
Total General Fund Revenue	**$41,177**	**$82,296**	**$123,408**	**$164,372**	**$205,340**	**$246,172**	**$287,017**	**$327,793**	**$368,476**	**$409,155**
City of Grass Valley Fire Special Tax	**$76**	**$115**	**$191**	**$229**	**$306**	**$344**	**$420**	**$459**	**$535**	**$573**
Net Revenue/(Cost)	**$17,498**	**$35,197**	**$52,630**	**$70,173**	**$87,463**	**$104,874**	**$122,040**	**$139,099**	**$156,400**	**$173,361**
Net Revenue / (Cost) Percent of Cost	**74%**	**75%**	**74%**	**74%**	**74%**	**74%**	**74%**	**74%**	**74%**	**73%**
Property Tax Revenue to NID	$875	$1,742	$2,602	$3,455	$4,302	$5,143	$5,978	$6,809	$7,635	$8,457
Property Tax Revenue to Nevada County	$263	$523	$782	$1,038	$1,292	$1,545	$1,796	$2,046	$2,294	$2,541

SOURCE: City of Grass Valley, Adopted Budget Fiscal Year 2007/2008 and Hausrath Economics Group.

TABLE A.10

GENERAL PLAN ALTERNATIVE FISCAL IMPACT ANALYSIS: URBAN MEDIUM DENSITY RESIDENTIAL USE
(annual estimates in 2007/08 dollars)

Year	1	2	3	4	5	6	7	8	9	10
Cumulative Total Housing Units	**54**	**109**	**163**	**218**	**272**	**272**	**272**	**272**	**272**	**272**
Cumulative Total Population	**144**	**288**	**432**	**577**	**721**	**721**	**721**	**721**	**721**	**721**
Annual Public Service Costs for the City of Grass Valley Attributable to New Population										
General Government	17,402	34,805	52,207	69,730	87,132	87,132	87,132	87,132	87,132	87,132
Police	35,031	70,062	105,093	140,367	175,398	175,398	175,398	175,398	175,398	175,398
Animal Control	2,519	5,039	7,558	10,095	12,614	12,614	12,614	12,614	12,614	12,614
Fire	15,906	31,812	47,719	63,735	79,641	79,641	79,641	79,641	79,641	79,641
Community Development	3,722	7,445	11,167	14,916	18,638	18,638	18,638	18,638	18,638	18,638
Streets	6,744	13,488	20,233	27,024	33,768	33,768	33,768	33,768	33,768	33,768
Engineering	2,451	4,903	7,354	9,823	12,274	12,274	12,274	12,274	12,274	12,274
Other Public Works	3,387	6,774	10,161	13,571	16,958	16,958	16,958	16,958	16,958	16,958
GF Contribution to Dev. Services	875	1,750	2,625	3,507	4,382	4,382	4,382	4,382	4,382	4,382
Parks and Recreation	9,355	18,710	28,064	37,484	46,839	46,839	46,839	46,839	46,839	46,839
Total Cost	**$97,394**	**$194,787**	**$292,181**	**$390,251**	**$487,645**	**$487,645**	**$487,645**	**$487,645**	**$487,645**	**$487,645**
Annual Per Capita Revenue for the City of Grass Valley Attributable to New Population										
PG&E Franchise Tax	1,162	2,323	3,485	4,654	5,816	5,816	5,816	5,816	5,816	5,816
Cable TV Franchise Tax	1,218	2,437	3,655	4,882	6,101	6,101	6,101	6,101	6,101	6,101
Solid Waste Franchise Tax	382	764	1,146	1,530	1,912	1,912	1,912	1,912	1,912	1,912
Business License Tax	-	-	-	-	-	-	-	-	-	-
General Sales Tax - Prop 172	1,052	2,105	3,157	4,217	5,269	5,269	5,269	5,269	5,269	5,269
Motor Vehicle License Fees	831	1,662	2,492	3,329	4,160	4,160	4,160	4,160	4,160	4,160
Fire Department Fees	1,326	2,652	3,978	5,314	6,640	6,640	6,640	6,640	6,640	6,640
Engineering/Public Works Fees	-	-	-	-	-	-	-	-	-	-
Animal Shelter Fees	168	337	505	675	843	843	843	843	843	843
Police Fees	1,155	2,310	3,464	4,627	5,782	5,782	5,782	5,782	5,782	5,782
Parks Fees	701	1,402	2,104	2,810	3,511	3,511	3,511	3,511	3,511	3,511
Miscellaneous Revenue	874	1,748	2,622	3,503	4,377	4,377	4,377	4,377	4,377	4,377
Cost Allocation Reimbursement	1,392	2,785	4,177	5,579	6,971	6,971	6,971	6,971	6,971	6,971
Payments from Water Fund	1,162	2,324	3,486	4,655	5,817	5,817	5,817	5,817	5,817	5,817
Payments from Sewer Fund	1,495	2,989	4,484	5,989	7,484	7,484	7,484	7,484	7,484	7,484
Gas Tax	33	66	100	133	166	166	166	166	166	166
Total Per Capita Revenue	**$12,952**	**$25,903**	**$38,855**	**$51,896**	**$64,848**	**$64,848**	**$64,848**	**$64,848**	**$64,848**	**$64,848**
Other Revenue Sources										
Property Tax	65,091	129,640	193,729	257,428	320,795	318,791	317,090	315,646	314,420	313,380
Transfer Tax	11,968	13,678	15,387	17,097	18,807	8,549	8,549	8,549	8,549	8,549
General Fund Sales Tax	7,806	15,613	23,419	31,226	39,032	39,032	39,032	39,032	39,032	39,032
In-lieu Vehicle License Fees	14,035	27,953	41,772	55,507	69,170	68,738	68,371	68,060	67,796	67,571
Interest	1,119	2,128	3,132	4,132	5,127	5,000	4,979	4,961	4,946	4,934
Total General Fund Revenue	**$112,970**	**$214,914**	**$316,294**	**$417,285**	**$517,779**	**$504,957**	**$502,868**	**$501,096**	**$499,591**	**$498,313**
City of Grass Valley Fire Special Tax	**$1,923**	**$3,883**	**$5,806**	**$7,765**	**$9,689**	**$9,689**	**$9,689**	**$9,689**	**$9,689**	**$9,689**
Net Revenue/(Cost)	**$17,500**	**$24,009**	**$29,919**	**$34,799**	**$39,822**	**$27,001**	**$24,912**	**$23,139**	**$21,634**	**$20,357**
Net Revenue / (Cost) Percent of Cost	**18%**	**12%**	**10%**	**9%**	**8%**	**6%**	**5%**	**5%**	**4%**	**4%**
Property Tax Revenue to NID	$8,212	$16,356	$24,442	$32,478	$40,473	$40,220	$40,005	$39,823	$39,669	$39,537
Property Tax Revenue to Nevada County	$2,611	$5,201	$7,771	$10,327	$12,869	$12,788	$12,720	$12,662	$12,613	$12,571

SOURCE: City of Grass Valley, Adopted Budget Fiscal Year 2007/2008 and Hausrath Economics Group.