

# **APPENDIX D**

## **MOUNT HOPE SOCIOECONOMIC SUPPLEMENTAL ANALYSIS**

# ***BLANKENSHIP CONSULTING LLC***

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## ***Memorandum***

**To:** Angelica D. Rose  
Planning & Environmental Coordinator  
US BLM Battle Mountain District Office

**From:** George Blankenship, BCLLC & Ron Dutton, Sammons/Dutton LLC

**Date:** March 20, 2009

**Subject:** Supplemental information to address Eureka County concerns with the June 2, 2008 Mount Hope Project Socioeconomic Assessment

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Eureka County has raised a number of issues and concerns regarding the June 2, 2008 Mount Hope Project Socioeconomic Assessment prepared by Blankenship Consulting LLC and Sammons/Dutton LLC (the socioeconomic assessment). This memo summarizes the process and results of efforts taken in consultation with Abby Johnson and Rex Massey, consultants to the Eureka County NEPA Committee, to address five areas of those concerns.

1. Mount Hope-related population estimates
2. The characterization of the southern Eureka County economy
3. The description of the Eureka utility infrastructure and existing deficiencies
4. The effects of the Mount Hope Project on the existing Whiskey Flats landfill
5. The assessment and portrayal of the fiscal conditions and potential effects of the project

The individuals identified above worked cooperatively to reach mutually acceptable understandings and resolutions to items #1 through #4. The results of those efforts are presented below. With regard to Item # 5, the group was unable to achieve a similar level of agreement. Consequently, we understand that Eureka County intends to submit additional information on fiscal impacts identified in their report, Eureka County Fiscal Impact Review and Analysis of the Mt. Hope Project (Research and Consulting Services, Inc., December 2008) for the BLM's consideration in the NEPA process. Item # 5 in this memo summarizes the findings of the County's fiscal assessment and identifies our general concerns associated with some of those findings.

1. **Mount Hope-related population estimates:** *Eureka County noted the uncertainties that exist with respect to the Mount Hope Project operations phase resident population projections and some of the household size, employee per household and school age children per household factors used in the socioeconomic assessment. The socioeconomic assessment assumed that 35 percent of the Mount Hope operations workforce would be comprised of households relocating to southern Eureka County and the remainder of the workforce would be comprised of daily and weekly commuters and local hires. The*

*County expressed an interest in assessing the population effects of relocating households comprising a range of 30 to 50 percent of the operations workers.*

*Eureka County also expressed concern about the assumption in the socioeconomic assessment that jobs in the local economy vacated by workers who chose to work at the mine would be filled by increases in labor force participation and the resulting expansion of the local labor force, given the current limited labor availability within the county.*

In response to these concerns, a review of the demographic and household assessment factors was conducted in consultation with the County's consultants and a series of sensitivity analyses (SA) were performed to assess the potential effects on total resident population and school age children of alternative demographic factors and residency assumptions. Per the consensus among the group, the sensitivity analyses focused on the operational phases of the project. The information presented below supplements section 3.2 *Population* of the socioeconomic assessment, focusing on subsection 3.2.2 *Operations Phase Population* and subsection 3.2.3 *School Enrollment*.

Table 1 below summarizes the results of the sensitivity analyses and the following tables provide additional detail about each specific scenario developed as part of the sensitivity analysis process. In all, three scenarios were developed to bound the range of population and school enrollment effects that might reasonably be expected to occur. The population and school enrollment projections contained in the June 2, 2008 Final Mount Hope Socioeconomic Assessment (the socioeconomic assessment) submitted to the BLM are presented as the Base Case, to provide a point of comparison for the sensitivity analyses. The changes in assumptions associated with each sensitivity analysis scenario, include the following:

**SA 1. Modified Base Case – Infill:** SA 1 assumes the share of secondary jobs filled by relocating households would be 50% and the share filled by spouses/partners would be 45% compared to 45% and 50% respectively in the socioeconomic assessment. This analysis also assumes that existing local jobs assumed to be vacated by workers who accept jobs at the mine would be filled by additional relocating worker households. Infill jobs are not accounted for in the Base Case scenario.

Consistent with the socioeconomic assessment and other sensitivity analyses, SA 1 assumes an average of 1.3 jobs per relocating household. Because these relocating households are not expected to fill jobs directly associated with the mine, but rather fill other jobs in the local economy, SA 1 assumes an average household size mid-way between that used for the direct households and those associated with new indirect/induced jobs.

Finally, the projected number of mine-related school-age children in Eureka County during operations is presented as a range of 20% to 23% of the permanent resident population; a change from the 16% of combined resident and weekly commuting population assumed in the Base Case. The allocation of students between elementary and middle/high school students is also presented as a range; 50% to 70% elementary and 50% to 30% for middle/high school, a change from the 70%/30% assumption in the Base Case.

**SA 2. 30 Percent Relocating Households:** This analysis assumes that 30 percent of Mount Hope operations workers would relocate to Eureka County; compared to the 35 percent assumed in the socioeconomic assessment. All other population and household factors remain the same as those used in the socioeconomic assessment, except that the SA 2 scenario incorporates the same ranges of assumptions associated with school-age children described for SA 1 above. SA 2 provides the lower bound of population effects for the sensitivity analyses.

**SA 3. 50 Percent Relocating Households:** This scenario assumes that 50 percent of Mount Hope operations workers would relocate to Eureka County; compared to the 35 percent assumed in the socioeconomic assessment. It also assumes that all jobs vacated by existing local employees who accept employment at the mine would be filled by additional relocating worker households. SA 3 assumes that: the average operations worker persons per household (PPH) would be 2.85 compared to 2.64 in the socioeconomic assessment; the percentage of secondary jobs filled by relocation households would be 35% compared to 45% in the socioeconomic assessment to reflect the substantial increase in second workers associated with the increased number of direct worker relocations; and, the average persons per household (PPH) for relocating households filling secondary jobs would be 2.01 compared to 1.90 in the socioeconomic assessment. The SA 3 scenario incorporates the same ranges of assumptions associated with school-age children described for SA 1 above. SA 3 provides the upper bound of population effects for the sensitivity analyses.

Table 1 on the following page summarizes the key results of the sensitivity analyses, presenting comparative projections associated with different operational phases of the mine in a series of columns. The summary table is followed by more detailed tables showing the derivation of the results for each scenario.

The primary focus of the sensitivity analysis results is the column labeled “Full Production (Yrs. 1 – 10)”. That column represents the potential impacts during the first ten years of operations, a period when the mine would achieve and maintain full production, creating long-term steady job opportunities conducive to household relocation, and to the creation of indirect and induced jobs in the community. As shown, the range of long-term projected population effects range from 584 to 795 residents, including weekly commuters, with a corresponding increase of between 83 and 161 school age children.

The corresponding range of effects during peak production, which is not anticipated to occur for more than two decades, is from 719 to 974 residents and between 103 and 198 school-age children.

One of the County’s objectives in promoting the sensitivity analysis was to identify a range of potential population effects for long-term community planning purposes. Based upon recent demographic research, there appears to be a higher likelihood that the Mount Hope-related population growth and school enrollment effects would be closer to those associated with the Base Case or SA 1 than the lower or higher bound scenarios (SA2 or SA 3).

Note that the difference in county staff required to serve the relocating populations of either the high (SA2) or low (SA 3) population range would be relatively small and the difference in county equipment and infrastructure improvements needed to serve the population associated with either scenario would be similar to that required for the Base Case or Modified Base Case (SA 1).

Also note that although the Eureka County School District would need additional teachers to serve the incremental enrollment associated with the higher bound scenario (SA 3), the district’s elementary and middle/high school facilities would be able to accommodate the projected incremental growth associated with all scenarios during all phases of the project, although the enrollment associated with the high end of the range for the highest bound scenario (SA 3) would exceed the optimum but not the maximum capacity of the middle/high school facility.

**Table 1. Mount Hope Relocating Workers Sensitivity Analysis: Summary across Scenarios**

	Const. Average	Const. Peak Quarter	Operations				Final Processing, Reclamation & Site Closure (2-3 yrs.)
			Full Production (Yrs. 1 - 9)	Full Production (Yrs. 10 - 20)	Peak Production (Yrs. 21 - 25)	Lower Mining & Prod.	
<b>TOTAL POPULATION IMPACT</b>							
<b>Base Case:</b> (Mount Hope Socioeconomic Study)	660	895	603	650	739	362	173
<b>SA 1:</b> Modified Base Case – Infill	660	895	678	729	830	405	196
<b>SA 2:</b> 30% Relocating HHLDS <sup>1</sup>	660	895	584	630	719	351	168
<b>SA 3:</b> 50% Relocating HHLDS <sup>2</sup>	660	895	795	853	974	472	231
<b>SCHOOL AGE CHILDREN</b>							
<b>Base Case:</b> (Socioeconomic Study)	26	37	96	105	118	58	28
<b>SA 1:</b> Modified Base-Case – In-fill <sup>3</sup>	26	37	106 - 122	114 - 131	130 - 149	63 - 73	31 - 35
Elementary (K-6)			74 - 61	80 - 66	91 - 75	44 - 37	16 - 18
Middle/High (7-12)			32 - 61	34 - 65	39 - 74	19 - 36	15 - 17
<b>SA 2:</b> 30% Relocating HHLDS <sup>3</sup>	26	37	83 - 96	90 - 104	103 - 118	50 - 58	24 - 28
Elementary (K-6)			58 - 48	63 - 52	72 - 59	35 - 29	17 - 14
Middle/High (7-12)			25 - 48	27 - 52	31 - 59	15 - 29	7 - 14
<b>SA 3:</b> 50% Relocating HHLDS <sup>3</sup>	26	37	140 - 161	151 - 173	172 - 198	83 - 96	41 - 47
Elementary (K-6)			98 - 81	106 - 87	120 - 99	58 - 48	29 - 24
Middle/High (7-12)			42 - 80	45 - 86	52 - 99	25 - 48	12 - 23

<sup>1</sup> Assumes 30 percent of Mount Hope operations workers relocate to southern Eureka County compared to 35 percent in the socioeconomic assessment. All other assumptions and multipliers are the same.

<sup>2</sup> Assumes 50 percent of Mount Hope operations workers relocate to southern Eureka County compared to 35 percent in the socioeconomic assessment. Also assumes that: the average operations worker persons per household (PPH) would be 2.85 compared to 2.64 in the socioeconomic assessment; the percentage of secondary jobs filled by relocation households would be 35% compared to 45% in the socioeconomic assessment to reflect the substantial increase in second workers associated with the increase in direct worker relocations in this scenario; and, the average PPH for relocating households filling secondary jobs would be 2.01 compared to 1.90 in the socioeconomic assessment to reflect the increase in persons per relocating household with families.

<sup>3</sup> The number of students enrolled in Eureka County schools is presented as a range of 20% to 23% of the permanent resident population and the allocation of students between elementary and middle/high school students is also presented as a range; 50% to 70% elementary and 50% to 30% for middle/high school.

**Base Case (Mount Hope Socioeconomic Study)**

**Projected Mount Hope Project Eureka County Employment, Households, Population & Student Enrollment Effects**

Line			Construction Average	Construction Peak Quarter	Operations			Final Processing, Reclamation & Closure (2-3 yrs.)
					Full Production (~21 yrs)	Peak Employment (Yrs. 21 - 25)	Lower Mining & Production	
1.	Construction Direct	GMI	378	625				
2.	Operations Direct		189	150	371	455	222	107
3.	Secondary jobs multiplier	Assumption	0.22	0.22	0.35	0.35	0.35	0.35
4.	Secondary Jobs	(#1 + #2) x #3	125	170	130	159	78	37
<b>5.</b>	<b>Total Employment</b>	<b>#1 + #3</b>	<b>696</b>	<b>945</b>	<b>501</b>	<b>614</b>	<b>300</b>	<b>144</b>
6.	Local Labor & Daily Commuters <sup>4</sup>	Assumptions	18%	18%	20%	20%	20%	20%
7.	Jobs Filled by Local Labor & Commuters	#5 x #6	128	171	100	122	60	29
8.	New Non-Local Labor Needs	#5 - #7	568	774	401	492	240	115
9.	Avg. Jobs / Household (HHL D)	Assumption	1.12	1.12	1.36	1.36	1.36	1.36
10.	New HHL Ds	#8 / #9	507	691	295	362	178	85
11.	Avg. HHL D Size <sup>5</sup>	Assumption	1.3	1.3	2.04	2.04	2.04	2.04
<b>12.</b>	<b>Total Population Impact</b>	<b>#10 x #11</b>	<b>660</b>	<b>895</b>	<b>603</b>	<b>739</b>	<b>362</b>	<b>173</b>
13.	Population in Construction Camp	GMI	284	470	0	0	0	0
14.	Population in Community	#12 - #13	376	425	603	739	362	173
15.	School Age Children (% of Pop.)	Assumption	4%	4%	16%	16%	16%	16%
<b>16.</b>	<b>Number of Students</b>	<b>#12 x #15</b>	<b>26</b>	<b>37</b>	<b>96</b>	<b>118</b>	<b>58</b>	<b>28</b>
17.	Elementary Students (% Share)	Assumption	80%	80%	70%	70%	70%	70%
18.	Middle/High School (% Share)	Assumption	20%	20%	30%	30%	30%	30%
19.	Elem Students	#16 x #17	21	30	67	83	41	20
20.	Middle/High Students	#16 x #18	5	7	29	35	17	8

<sup>4</sup> Weighted average of construction, operations and secondary, which are disaggregated in Table 3.3, (note that this should read Table 20, and refers to the Mount Hope Project Socioeconomic Assessment).

<sup>5</sup> Reflects average household size for total workforce including single status construction workers and weekly commuters. Average household size for a relocating worker w/family is assumed to be 2.64. Average household size for a relocating secondary worker is assumed to be 1.9. Average household size for construction is assumed to be 1.3.

**Sensitivity Analysis 1. Modified Base Case Assuming Added Relocation to In-Fill Positions Vacated by Local Hires**

Line			Const. Average and Peak Quarter	Operations				Final Processing, Reclamation & Closure (2-3 yrs.)
				Full Production (Yrs. 1 - 9)	Full Production (Yrs. 10 - 20)	Peak Production (Yrs. 21 - 25)	Lower Mining & Prod.	
1.	Construction Direct	GMI	SAME AS THE BASELINE ASSESSMENT					
2.	Operations Direct			371	400 <sup>6</sup>	455	222	107
3.	Secondary jobs multiplier	Assumption		0.35	0.35	0.35	0.35	0.35
4.	Secondary Jobs	(#1 + #2) x #3		130	140	159	78	37
<b>5.</b>	<b>Total Employment</b>	<b>#1 + #3</b>		<b>501</b>	<b>540</b>	<b>614</b>	<b>300</b>	<b>144</b>
6.	Local Labor & Daily Commuters <sup>7</sup>	Assumptions		20%	20%	20%	20%	20%
7.	Jobs Filled by Local Labor & Commuters	#5 x #6		100	107	122	60	29
7a.	In-fill Local Jobs to be Filled	Assumptions		44	47	54	26	13
8.	New Non-Local Labor Needs	#5 - #7 + #7a		445	480	546	266	118
9.	Avg. Jobs / Household (HHL D)	Assumption		1.36	1.36	1.36	1.36	1.36
10.	New HHL Ds	#8 / #9		327	353	402	197	94
11.	Avg. HHL D Size <sup>8</sup>	Assumption		2.07	2.07	2.07	2.07	2.07
<b>12.</b>	<b>Total Population Impact</b>	<b>#10 x #11</b>		<b>678</b>	<b>729</b>	<b>830</b>	<b>405</b>	<b>196</b>
13.	Population in Construction Camp	GMI		0	0	0	0	0
14.	Population in Community	#12 - #13		678	729	830	405	196
14a.	Weekly Commuter	Assumption		148	160	182	89	43
14b.	Resident Population	Assumption		530	569	648	316	153
15.	School Age Children (% of Resident Pop. [14b])	Assumption		20% - 23%	20% - 23%	20% - 23%	20% - 23%	20% - 23%
<b>16.</b>	<b>Number of Students</b>	<b>#12 x #15</b>		<b>106 - 122</b>	<b>114 - 131</b>	<b>130 - 149</b>	<b>63 - 73</b>	<b>31 - 35</b>
17.	Elementary Students (% Share)	Assumption		70% - 50%	70% - 50%	70% - 50%	70% - 50%	70% - 50%
18.	Middle/High School (% Share)	Assumption	30% - 50%	30% - 50%	30% - 50%	30% - 50%	30% - 50%	
19.	Elem Students	#16 x #17	74 - 61	80 - 66	91 - 75	44 - 37	16 - 18	
20.	Middle/High Students	#16 x #18	32 - 61	34 - 65	39 - 74	19 - 36	15 - 17	

<sup>6</sup> Average

<sup>7</sup> Weighted average of construction, operations and secondary, which are disaggregated in Table 20 of the Mount Hope Project Socioeconomic Assessment).

<sup>8</sup> Reflects average household size for total workforce including single status construction workers and weekly commuters. Average household size for a relocating worker w/family is assumed to be 2.64. Average household size for a relocating secondary worker is assumed to be 1.9. Average household size for construction is assumed to be 1.3.

**Sensitivity Analysis 2: 30% of Mt. Hope Direct Jobs Filled by Relocating Households**

Line			Const. Average and Peak Quarter	Operations				Final Processing, Reclamation & Closure (2-3 yrs.)
				Full Production (Yrs. 1 - 9)	Full Production (Yrs. 10 - 20)	Peak Production (Yrs. 21 - 25)	Lower Mining & Prod.	
1.	Construction Direct	GMI	SAME AS THE BASELINE ASSESSMENT					
2.	Operations Direct			371	400 <sup>9</sup>	455	222	107
3.	Secondary jobs multiplier	Assumption		0.35	0.35	0.35	0.35	0.35
4.	Secondary Jobs	(#1 + #2) x #3		130	140	159	78	37
<b>5.</b>	<b>Total Employment</b>	<b>#1 + #3</b>		<b>501</b>	<b>540</b>	<b>614</b>	<b>300</b>	<b>144</b>
6.	Local Labor & Daily Commuters <sup>10</sup>	Assumptions		20%	20%	20%	20%	20%
7.	Jobs Filled by Local Labor & Commuters	#5 x #6		100	107	122	60	29
8.	New Non-Local Labor Needs	#5 - #7		401	433	492	240	115
9.	Avg. Jobs / Household (HHL D)	Assumption		1.34	1.33	1.33	1.33	1.33
10.	New HHL Ds	#8 / #9		300	325	369	181	86
11.	Avg. HHL D Size <sup>11</sup>	Assumption		1.94	1.95	1.95	1.94	1.95
<b>12.</b>	<b>Total Population Impact</b>	<b>#10 x #11</b>		<b>584</b>	<b>630</b>	<b>719</b>	<b>351</b>	<b>168</b>
13.	Population in Construction Camp	GMI		0	0	0	0	0
14.	Population in Community	#12 - #13		584	630	719	351	168
14a.	Weekly Commuter	Assumption		167	180	205	100	48
14b.	Resident Population	Assumption		417	450	514	251	120
15.	School Age Children (% of Resident Pop. [14b])	Assumption		20% - 23%	20% - 23%	20% - 23%	20% - 23%	20% - 23%
<b>16.</b>	<b>Number of Students</b>	<b>#12 x #15</b>		<b>83 96</b>	<b>90 - 104</b>	<b>103 - 118</b>	<b>50 58</b>	<b>24 28</b>
17.	Elementary Students (% Share)	Assumption		70% - 50%	70% - 50%	70% - 50%	70% - 50%	70% - 50%
18.	Middle/High School (% Share)	Assumption		30% - 50%	30% - 50%	30% - 50%	30% - 50%	30% - 50%
19.	Elem Students	#16 x #17	58 - 48	63 - 52	72 - 59	35 - 29	17 - 14	
20.	Middle/High Students	#16 x #18	25 - 48	27 - 52	31 - 59	15 - 29	7 - 14	

<sup>9</sup> Average

<sup>10</sup> Weighted average of construction, operations and secondary, which are disaggregated in Table 20, Page 47 of the Mount Hope Project Socioeconomic Assessment.

<sup>11</sup> Weighted average household size for total workforce: 1.3 for construction and 2.04 during operations. These weighted averages include construction workers living in construction camps and single status weekly commuter operations workers with a household size of 1, relocating construction and operations workers with an average household size of 2.64 and relocating secondary workers with an average household size of 1.9.

**Sensitivity Analysis 3: 50% of Mt. Hope Direct Jobs Filled by Relocating Households**

Line			Const. Average and Peak Quarter	Operations				Final Processing, Reclamation & Closure (2-3 yrs.)
				Full Production (Yrs. 1 - 9)	Full Production (Yrs. 10 - 20)	Peak Production (Yrs. 21 - 25)	Lower Mining & Prod.	
1.	Construction Direct	GMI	SAME AS THE BASELINE ASSESSMENT					
2.	Operations Direct			371	400	455	222	107
3.	Secondary jobs multiplier	Assumption		0.35	0.35	0.35	0.35	0.35
4.	Secondary Jobs	(#1 + #2) x #3		130	140	159	78	37
<b>5.</b>	<b>Total Employment</b>	<b>#1 + #3</b>		<b>501</b>	<b>540</b>	<b>614</b>	<b>300</b>	<b>144</b>
6.	Local Labor & Daily Commuters	Assumptions		20%	20%	20%	20%	20%
7.	Jobs Filled by Local Labor & Commuters	#5 x #6		100	107	122	60	29
7a.	In-fill Local Jobs to be Filled <sup>12</sup>	Assumptions		44	47	54	26	13
8.	New Non-Local Labor Needs <sup>13</sup>	#5 - #7		445	480	546	266	118
9.	Avg. Jobs / Household (HHL D)	Assumption		1.41	1.41	1.41	1.41	1.41
10.	New HHL Ds	#8 / #9		307	331	377	184	89
11.	Avg. HHL D Size <sup>14</sup>	Assumption		2.58	2.57	2.58	2.56	2.60
<b>12.</b>	<b>Total Population Impact</b>	<b>#10 x #11</b>		<b>795</b>	<b>853</b>	<b>974</b>	<b>472</b>	<b>231</b>
13.	Population in Construction Camp	GMI		0	0	0	0	0
14.	Population in Community	#12 - #13		795	853	974	472	231
14a.	Weekly Commuter	Assumption		93	100	114	56	27
14b.	Resident Population	Assumption		702	753	860	416	204
15.	School Age Children (% of 14b)	Assumption		20% - 23%	20% - 23%	20% - 23%	20% - 23%	20% - 23%
<b>16.</b>	<b>Number of Students</b>	<b>#12 x #15</b>		<b>140 - 161</b>	<b>151 - 173</b>	<b>172 - 198</b>	<b>83 - 96</b>	<b>41 - 47</b>
17.	Elementary Students (% Share)	Assumption		70% - 50%	70% - 50%	70% - 50%	70% - 50%	70% - 50%
18.	Middle/High School (% Share)	Assumption	30% - 50%	30% - 50%	30% - 50%	30% - 50%	30% - 50%	
19.	Elem Students	#16 x #17	98 - 81	106 - 87	120 - 99	58 - 48	29 - 24	
20.	Middle/High Students	#16 x #18	42 - 80	45 - 86	52 - 99	25 - 48	12 - 23	

<sup>12</sup> Assumes that all jobs vacated by existing local employees who accept employment at the mine would be filled by additional relocating worker households.

<sup>13</sup> Assumes that the percentage of secondary jobs filled by relocation households would be 35% compared to 45% in the socioeconomic assessment

<sup>14</sup> Assumes average operations worker PPH of 2.85 & average relocating households filling secondary jobs PPH of 2.01 compared to 2.64 & 1.90 respectively in the socioeconomic assessment.

2. *Eureka County feels that the baseline report describes Eureka as more of a “boom and bust” mining community like Battle Mountain, than a “quieter agricultural community,” and they would like to see that description changed.*

In response to Eureka County’s concern, we offer the following supplement to the socioeconomic assessment, which restates section 2.2 *Social and Economic Setting*.

### ***2.2 Social and Economic Setting***

Eureka County is the second least populous county in Nevada with a 2006 estimated population of 1,460 (Nevada State Demographer 2007) and a 2005 resident population density of 0.35 persons per square mile.

The unincorporated town of Eureka, the county seat and largest community in the county, is located in the southern portion of the county. The communities of Beowawe and Crescent Valley are located in the northwestern portion of the county. Farm and ranch households reside on agricultural operations throughout the county (Eureka County 2006a).

The town of Eureka initially developed in conjunction with the mining industry, but has been sustained through the years by the agricultural industry. Although there have been good and bad years, agriculture, principally alfalfa and hay farming, cattle ranching, and to a lesser extent sheep ranching, have historically provided a relatively stable base for the Eureka County economy.

The history of farming in Eureka County is described in the Land Use element of the Eureka County Master Plan as follows.

*Development of the mines brought sheepmen, cattlemen and other settlers who settled in the valleys in Eureka County. Government land programs, including the 1877 Desert Lands Act, the Act of 1888, the Act of 1890, the 1891 Creative Act, and the 1916 Stock Raising Homestead Act, established privately-owned base properties to support permanent range livestock operations and farms*

*Farming was limited to native sub-irrigated meadows and lands irrigated by diverted surface water until supplemental flowing wells were drilled on the Romano Ranch in 1948 and the Flynn Ranch in 1949. In 1949 two irrigation wells were drilled in Diamond Valley in an effort to develop land under Desert Land Entry. By the mid 1950s, pumped irrigation wells were being developed in southern Diamond Valley, Crescent Valley and Pine Valley. By 1965, some 200 irrigation wells had been drilled in Diamond Valley alone. Today, Eureka County’s farming districts support a robust grass, alfalfa and meadow hay industry (Eureka County 2006a).*

European settlement of the area around Eureka began with the discovery of silver-lead deposits near the present town site in the 1860s. Improvements in smelting processes led to a mining boom in the county. By 1878, Eureka was the state's second largest city with a population of over 7,000 and a railroad that connected the town with Palisade to the north. As ore bodies played out Eureka lost most of its population, although mining activity continued around Eureka through the latter part of the 1800s and up until about 1920. From that time until the late 1980s when the Atlas Gold Bar mine began operations, little mining activity occurred in southern Eureka County.

Mining currently plays a large, yet complex role in the economy and culture of Eureka County. The two largest gold mining operations in the state, Barrick Goldstrike's Betze/Post Mine and Newmont Mining's Carlin Trend Complex, are located in northern Eureka County, yet most of the economic activity associated with these mines accrues to Elko County, which is also home to most of the employees. Mining again became a major economic influence in southern Eureka County in 1997 with the development of the Ruby Hill mine adjacent to the Town of Eureka. However, population related impacts were somewhat limited because a number of local residents were able to secure jobs at the mine. Southern Eureka County experienced an economic and population contraction when the Ruby Hill mine ceased mining in 2002 and experienced a modest economic surge when the East Archimedes expansion of the Ruby Hill mine opened in 2006.

Economic and social conditions in Eureka County have also been affected indirectly by mining development in the northern part of the county, which has occurred for over 50 years and began to accelerate during the mid 1980s. The tax revenues that Eureka County and the Eureka County School District have received from the mines in the northern part of the County have allowed the County and the School District to construct new facilities and expand public services throughout the county including the communities of Eureka and Crescent Valley. The influence of the mining revenues from the northern part of the county are reflected in levels of employment, local government spending for goods and services, and county and school district service provision that are higher than would be available without the tax revenues from the northern mines.

Along with agriculture and mining, the legacy of mining's early glory now forms the basis for an emerging third facet of Eureka's economy; a tourism and recreation industry supported by historic attractions, restored buildings and the area's striking natural setting.

As demonstrated by the foregoing, the economy of Eureka County is natural resource-based. Farming, ranching, mining and tourism/recreation all rely on the land and its resources. The traditional uses of these resources complement each other for the most part. Farming and ranching provide a stable population base and support a basic level of local commerce. Mining in the north and periodic surges in mining development in the southern part of the county provide economic activity and local government revenue, which the county has used to upgrade public infrastructure and restore historic buildings and streetscapes. This restoration coupled with the scenic setting and recreation resources have attracted tourists, which in turn, support commercial infrastructure and provide a modest level of local government sales tax revenue.

Although residents are interested in economic development, the increasing urbanization occurring elsewhere in the state, increased environmental and land use regulation by federal land management agencies and the social, economic dislocation and other costs of the bust side of mining booms have "galvanized (Eureka County) residents and their elected representatives to seek mechanisms to manage growth and influence resource management." The county considers these actions "necessary to maintain and enhance local economic security and the rural quality of life which has long typified Eureka County" (Eureka County Economic Development Council 2006).

Additionally, we suggest that section 2.3.1 *Employment* of the socioeconomic assessment should be clarified as follows:

- The first sentence of the first paragraph under section 2.3.1 should be replaced by the following sentence:

“As might be expected, mining dominates the northern Eureka County economy in terms of employment and earnings. This dominance is reflected in the Eureka County employment by place of work statistics, but not in the employment by place of residence statistics discussed in section 2.3.2, which are more reflective of the much smaller and more recent mining presence in southern Eureka County.”

- The first sentence of the second paragraph under section 2.3.1 should be amended to read:

“During the peak employment year of 1997, total employment reached 5,321, driven by record high mining employment of 4,374, which included the startup operations for the Ruby Hill mine in southern Eureka County, although that mine accounted for less than three percent of total mining jobs in Eureka County that year.”

- The third sentence in the second paragraph under section 2.3.1 should be amended to read:

“Mining employment subsequently fell to 2,903 in 2004.”

- The last sentence in the second paragraph under section 2.3.1 should be deleted.

- The paragraph immediately following Figure 3 on page 9 should be moved up to follow the second paragraph under section 2.3.1 *Employment*.

- The following sentence should be added to the end of the first footnote under Table 3.

“The vast majority of these mining jobs have been located at mines in the northern part of Eureka County.”

3. *Eureka County is uncomfortable with the description of the Eureka utility infrastructure in terms of the description of existing deficiencies.*

In response to this concern, we offer the following supplement to the socioeconomic study. This information would supplement section 3.4.8 *Community Infrastructure/Public Works Department* on page 62. Specifically, the following paragraph should be inserted as a third paragraph following the existing two paragraphs at the beginning of section 3.4.8.

Although the *Master Plan for the Town of Eureka Water and Sewer Systems and Devil’s Gate GID (District 1 & 2) Water Systems* identifies a number of existing deficiencies, not all of the improvements identified to correct these deficiencies would have to be implemented immediately. These identified improvements to the existing system would also be necessary to serve new population demands. According to County officials, the Town of Eureka water and sewer systems are largely adequate for the demand they presently serve and are not under any regulatory requirements for improvements. The Devil’s Gate GID District 2 is deficient in compliance with the

Arsenic Rule. The GID board is in the process of making necessary improvements to bring the present system into compliance.

4. *Eureka County would like an expanded discussion of the effects of the Mount Hope Project on the County's Whiskey Flats Landfill.*

To address this concern, we offer the following supplement to the socioeconomic study. This information references section 3.4.8 *Community Infrastructure and Services*, subsection *Solid Waste Disposal* on page 63. Specifically, we suggest that the first paragraph in the *Solid Waste Disposal* subsection be restated as follows.

Demand from the population associated with the Mount Hope Project will reduce the remaining life of the Class II-rated (less than 20-tons per day) Whiskey Flat landfill, but the landfill capacity should be adequate through construction and much of the project's initial operations period. The anticipated increase in Eureka County population associated with the Mount Hope Project during the first 20 years would be about 40 to 45 percent of Eureka County's 2007 population. It is important to note that the Whiskey Flat landfill serves all areas of Eureka County's population, either through waste collection services or directly. With the expansion of the Mount Hope residential subdivision, regular solid waste collection will increase substantially. Additionally, waste from the Mount Hope subdivision construction will also utilize capacity in the landfill. Consequently, assuming similar rates of solid waste generation, the project would shorten the anticipated 30 years of remaining land fill life to just over 20 years. Additional operating staff and/or equipment may be necessary to accommodate the increased volumes of solid waste.

5. *Eureka County is concerned about the extent to which local government expenditures were identified and described in the socioeconomic assessment. Eureka County is uncomfortable with the way the Socioeconomic Assessment portrays County fiscal conditions and believes the assessment portrays the county as having "lots of money and can just fix any impacts." Eureka County has developed preliminary cost estimates to meet the service demands associated with projected Mount Hope-related population growth. (Eureka County Fiscal Impact Review and Analysis of the Mt. Hope Project, Research and Consulting Services, Inc., December 2008).*

*The County's analysis outlines the incremental increases in Eureka County government employees, operational expenses and capital improvements to address direct and indirect impacts of the Mt. Hope Project. Generally, the estimated needs are based on the projected population growth when the project is at full production.*

*The County's fiscal assessment provides estimates of additional staffing requirements and associated operating costs, based on the judgment of County service administrators. The County's fiscal assessment estimates incremental staff needs of as many as 24 full-time equivalent employees.*

*Eureka County's fiscal assessment estimates gross annual operating costs, a large portion of which would be the payroll costs associated with staff, at just over \$2.0 million. The total does not include any additional costs that could be associated with operations of the local health clinic, but neither does it reflect allowances for increased revenues derived from services. The fiscal assessment notes that the water system operating costs could increase substantially if arsenic treatment is required for new*

*water sources. The operating costs are largely variable and could change based upon the actual impacts on service demands and future decisions regarding levels of service by the Board of Eureka County Commissioners.*

*Eureka County's fiscal assessment outlined a number of capital improvements required to address estimated service demands related to population growth from the proposed Mount Hope Project. The combined costs of those improvements are estimated at about \$7.2 million. Some of these costs would occur prior to, or concurrently with, project construction, others would occur later in time as the project operations continue. The major capital expenditure estimates developed by Eureka County are summarized below and are separated into two groups; those improvements supported by general revenue sources and those capital costs associated with utility operations that are supported largely by revenues collected from system users.*

- Capital Costs-General Revenue Sources

<i>Jail Expansion</i>	<i>\$1,500,000</i>
<i>Adm. Improvements-Sheriff's Office</i>	<i>\$ 750,000</i>
<i>Landfill Capacity</i>	<i>\$ 720,000</i>
<i>Major Equipment</i>	<i>\$ 860,000</i>
<i><u>Other Improvements and Equipment</u></i>	<i><u>\$ 150,000</u></i>
<i>Total</i>	<i>\$3,980,000</i>

*Eureka County's fiscal assessment noted that recreation related impacts and those associated with local street and highway improvements are unknown.*

- Capital Costs-Funded By Users

*The County's fiscal assessment allocated the following costs to the Mount Hope Project-related population based on projected population impacts.*

<i>Wastewater Treatment Capacity</i>	<i>\$ 969,500</i>
<i>Allocated Water Storage Capacity</i>	<i>\$ 990,345</i>
<i>Pump Station-Water System</i>	<i>\$ 315,000</i>
<i>Outfall Pipe-Wastewater Treatment</i>	<i>\$ 777,600</i>
<i><u>Effluent Disposal-RIBS</u></i>	<i><u>\$ 200,000</u></i>
<i>Total Costs</i>	<i>\$3,252,445</i>

Regarding Eureka County's concerns with the fiscal section of the socioeconomic study, we offer the following. Eureka County's fiscal impact estimates contain a number of major improvements that the County believes are required to accommodate mine related growth. County services and staffing could also increase substantially as a result of mine related development. However, some of the items identified in the County's fiscal assessment may in part address existing needs or provide higher levels of services to current residents of the community. Others would likely be funded at least in part by developers or by user fees. Moreover, it is possible that more detailed studies and continued cooperative efforts between GMI and the County could identify alternative approaches or reduce the costs to meet some of the County's identified needs.

Eureka County's fiscal assessment was limited to potential County expenditures associated with Mount Hope Project demand. However, as noted in the socioeconomic assessment, the Mount Hope Mine will generate an estimated \$9.5 million in Basic and Supplemental City-County Relief tax (sales and use tax) revenues during the construction phase of the project that would effectively defray the County's initial capital costs. Over the long term, the estimates of projected on-going revenues from ad valorem and sales and use taxes of over \$1.9 million annually, combined with even a modest amount of revenue from net proceeds of mining taxes from the mine, would be sufficient to offset the County's estimates of operating costs.

Finally, we reiterate the statement contained in section 3.6.2 of the socioeconomic assessment ... "It is anticipated that GMI and Eureka County will work cooperatively to identify and quantify specific staff, equipment and capital needs to accommodate the project-related demand."