

following reseeding and revegetation. Impacts to other vegetation communities as a result of drawdown are not expected. Therefore, impacts to overall AUM availability within the allotments as a result of the drawdown are not expected.

- **Impact 3.12.3.3-2: Phreatophyte vegetation would potentially experience a change in species composition and percent cover due to the predicted water table drawdown associated with ground water pumping and subsequent recovery of the water table. Although the lowering of the water table in the area of phreatophytes is not expected to result in a net loss of vegetation in these communities, it is possible that the changes in phreatophyte community would result in a loss of forage productivity. Impacts to other vegetation communities as a result of drawdown are not expected.**

Significance of the Impact: The impact is considered potentially significant. The following mitigation has been identified for this impact.

- **Mitigation Measure 3.12.3.3-2: The BLM would monitor for changes to forage productivity as a result of ground water drawdown associated with Project-related ground water pumping. If the BLM detects a loss of forage productivity attributed to the Project, the BLM would develop and provide EML with a list of appropriate seed mixes for those areas within and outside the Project Area impacted by water table drawdown that should be seeded. The nature of the seed mix may vary depending on the conditions encountered as a result of the drawdown. If the BLM determines reseeding to be necessary, the BLM would coordinate the conditions for reseeding (including a possible two-year grazing closure) with local permittees in order to reduce impacts to AUMs. Mitigation for the potential loss of water available for livestock from stock water rights and other surface waters are described in the Water Resources - Water Quantity impacts discussion (Mitigation Measures 3.2.3.3-2 and 3.2.3.3-3). Mitigation for loss of water available would also mitigate the loss of vegetation (livestock forage).**
- **Effectiveness of Mitigation and Residual Effects: Mitigation measure 3.12.3.3-2 would reduce potential impacts to local permittees from changes in vegetation species composition and percent cover as a result of water table drawdown during Project activities. Monitoring vegetation and possible reseeding with an appropriate seed mix, as well as BLM coordination with local permittees following reseeding, would reduce the long-term impacts to AUMs, although short-term impacts may occur while any reseeding effort is implemented. If a two-year suspension is required, impacts would persist until the suspension is lifted, in an amount proportionate to the amount of AUMs temporarily suspended.**

Mine dewatering, ground water pumping, and subsequent recovery of the water table is expected to draw down the ground water table in an area surrounding the open pit. As discussed in Section 3.2, modeling results show that significant water table drawdown in the aquifer would occur in an area measuring approximately 232 square miles around the Project Area, including the northeast quadrant of Kobeh Valley and the southernmost fringe of Roberts Mountains. Stock water resources within the ten-foot drawdown contour from Proposed Action pumping include water rights within the Romano, Lucky C, Roberts Mountain, 3 Bars, and Santa Fe/Ferguson Allotments. Eighteen existing stock water rights occurring within the ten-foot drawdown area

may experience negative impacts including a reduction in available water or complete water loss as a result of ground water drawdown associated with the Proposed Action (Figure 3.12.1). Table 3.2-7 in the Water Resources - Water Quantity Section identifies the water rights associated with stock water that would be located within the ten-foot drawdown contour from the Proposed Action activities. Twenty-two springs and two segments of perennial streams are also located within the area predicted to be impacted by the ground water drawdown. Livestock that utilize those sources of water could be affected. Springs predicted to be impacted are shown on Figure 3.2.9.

Livestock require water year long to satisfy physiological requirements. The reduction or loss of existing water sources could impact livestock in the Project Area. A reduction in surface water could **also** affect the amount of foraging habitat for livestock, **as discussed previously**.

- **Impact 3.12.3.3-3:** Livestock dependent on existing water sources in the Project Area would potentially experience water stress due to the water table drawdown associated with ground water pumping and subsequent recovery of the water table. Lowering of the water table could result in reduced water available for use in rangeland management.

Significance of the Impact: The impact could be potentially significant. **The following mitigation has been identified for this impact.**

- **Mitigation Measure 3.12.3.3-3:** Mitigation for the potential loss of water availability for livestock from stock water rights and other surface waters are described in the Water Resources - Water Quantity impacts discussion (Mitigation Measures 3.2.3.3-2 and 3.2.3.3-3). **Implementation of any of the specific mitigation outlined in these measures for springs located on private land would be subject to the authorization of the private land owner. Mitigation for loss of water available would also mitigate the loss of vegetation (livestock forage). Additionally, where livestock and wild horse use overlap those mitigation measures identified for wild horses (Mitigation Measure 3.13.3.3-1) would also benefit livestock.**
- **Effectiveness of Mitigation and Residual Effects:** Implementation of Mitigation Measures in Section 3.2.3 would effectively mitigate any reductions in water available for use in rangeland management (i.e., this includes livestock grazing), **with the exception of impacts to forage on private land associated with riparian areas. The BLM cannot require a private land owner to consent to the implementation of mitigation on their private land; therefore, there is a potential loss of forage associated with the riparian areas on private land.** Ongoing monitoring included in the mitigation measures would ensure that adequate water supplies are maintained and available for livestock.

No impacts to existing range improvements other than developed spring sites **and removal of existing fencing within the Project fence** are anticipated.

The evaluation of the potential effects of the pit lake on livestock used a screening level ecological risk assessment (SLERA). The general approach used in the preparation of the SLERA is similar to that developed by the Environmental Sciences Division and Life Sciences Division of Oak Ridge National Laboratory for the U.S. Department of Energy. In addition, the SLERA incorporated more recent toxicity reference values (TRVs) for certain inorganic

chemical constituents derived by the EPA (SRK 2009). Together, these were used to develop species-specific toxicity criteria to which the predicted constituents in the pit water were compared.

Protective criteria for the surrogate species are likely to be protective of local species occupying similar ecological niches at the Project Area. Additionally, it was assumed that the livestock receptors would consume water from the pit lake; and, that this water would constitute 100 percent of each species individual daily water requirements (i.e., no outside sources of water would be utilized over the life of the animal). This is considered an extremely conservative assumption.

The results of the assessment indicate that the most likely predicted water quality of the modeled future pit lake water at the Project Area could represent a low to moderate toxicological threat to livestock based on Nevada's beneficial use standard for livestock watering. However, since this water is not intended to be a livestock watering source **and livestock access would be restricted by the construction of the pit perimeter berm**, and the standards were based on limited toxicological information, the probable risk to livestock from the pit lake created under the Proposed Action would be low.

The majority of disturbed lands within the 14,204-acre enclosure would be reclaimed and available for future grazing. Successful revegetation of disturbed lands would increase plant cover and provide an adequate amount of forage to recover the majority of AUMs lost during the Project. Once vegetation has been successfully re-established (BLM/NDEP standards), the BLM would re-evaluate livestock **grazing** in the Project Area.

3.12.3.3.1 Residual Adverse Impacts

The Proposed Action would result in the unavoidable permanent loss of **32 AUMs from the development of the open pit and the loss of 781 AUMs for approximately 70 years from allotments within the fenced Project Area.**

3.12.3.4 No Action Alternative

Under the No Action Alternative, the proposed Project would not be developed and associated impacts to livestock grazing and production would not occur. EML would continue existing activities under previously permitted Notices, and the area would remain available for future mineral development or for other purposes as approved by the BLM.

3.12.3.4.1 Residual Adverse Impacts

There would be no residual adverse impacts to livestock grazing and production under the No Action Alternative.

3.12.3.5 Partial Backfill Alternative

Impacts to livestock grazing and production would be similar to those described for the Proposed Action; however, the Partial Backfill Alternative would involve the partial backfilling of the open pit to eliminate the pit lake, and the floor of the backfilled open pit (approximately 527 acres) would be reclaimed with growth media and seeded. **Because the pit lake would be**

eliminated, there would be no potential for adverse impacts due to livestock drinking water from the pit lake. Livestock, however, would continue to be excluded from the open pit area, and impacts under this alternative would otherwise be similar to those described for the Proposed Action.

- **Impact 3.12.3.5-1:** Project development and operation under the Partial Backfill Alternative would result in the permanent loss of 32 AUMs and the loss of 781 AUMs for approximately 70 years from allotments within the fenced Project Area.

Significance of the Impact: The impact is considered potentially significant.

No mitigation is proposed for this impact; see Section 3.1.1 for a general discussion of significance and the development of mitigation measures. Also see Section 3.26 for suggested mitigation outside of the BLM's jurisdiction.

Impacts to forage productivity as a result of the predicted water table drawdown associated with ground water pumping and subsequent recovery of the water table under the Partial Backfill Alternative would be similar to those impacts described for the Proposed Action.

- **Impact 3.12.3.5-2:** Phreatophyte vegetation would potentially experience a change in species composition and percent cover due to the predicted water table drawdown associated with ground water pumping and subsequent recovery of the water table. Although the lowering of the water table in the area of phreatophytes is not expected to result in a net loss of vegetation in these communities, it is possible that the changes in phreatophyte community would result in a loss of forage productivity. Impacts to other vegetation communities as a result of drawdown are not expected.

Significance of the Impact: The impact is considered potentially significant. The following mitigation has been identified for this impact.

- **Mitigation Measure 3.12.3.5-2:** The BLM would monitor for changes to forage productivity as a result of ground water drawdown associated with Project-related ground water pumping. If the BLM detects a loss of forage productivity attributed to the Project, the BLM would develop and provide EML with a list of appropriate seed mixes for those areas within and outside the Project Area impacted by water table drawdown that should be seeded. The nature of the seed mix may vary depending on the conditions encountered as a result of the drawdown. If the BLM determines reseeding to be necessary, the BLM would coordinate the conditions for reseeding (including a possible two-year grazing closure) with local permittees in order to reduce impacts to AUMs. Mitigation for the potential loss of water available for livestock from stock water rights and other surface waters are described in the Water Resources - Water Quantity impacts discussion (Mitigation Measures 3.2.3.3-2 and 3.2.3.3-3). Mitigation for loss of water available would also mitigate the loss of vegetation (livestock forage).
- **Effectiveness of Mitigation and Residual Effects:** Mitigation measure 3.12.3.5-2 would reduce potential impacts to local permittees from changes in vegetation

species composition and percent cover as a result of water table drawdown during Project activities. Monitoring vegetation and possible reseeding with an appropriate seed mix, as well as BLM coordination with local permittees following reseeding, would reduce the long-term impacts to AUMs, although short-term impacts may occur while any reseeding effort is implemented. If a two year suspension is required, impacts would persist until the suspension is lifted, in an amount proportionate to the amount of AUMs temporarily suspended.

- **Impact 3.12.3.5-3:** Livestock dependent on existing water sources in the Project Area would potentially experience water stress due to the water table drawdown associated with ground water pumping and subsequent recovery of the water table. Lowering of the water table could result in reduced water available for use in rangeland management.

Significance of the Impact: The impact could be potentially significant. **The following mitigation has been identified for this impact.**

- **Mitigation Measure 3.12.3.5-3:** Mitigation for the potential loss of water availability for livestock is described in the Water Resources - Water Quantity impacts discussion (Mitigation Measures 3.2.3.3-2 and 3.2.3.3-3). **Implementation of any of the specific mitigation outlined in these measures for springs located on private land would be subject to the authorization of the private land owner. Mitigation for loss of water available would also mitigate the loss of vegetation (livestock forage). Additionally, where livestock and wild horse use overlap those mitigation measures identified for wild horses (Mitigation Measure 3.13.3.3-1) would also benefit livestock.**
- **Effectiveness of Mitigation and Residual Effects:** Implementation of Mitigation Measures in Section 3.2.3 would effectively mitigate any reductions in water available for use in rangeland management, **with the exception of impacts to forage on private land associated with riparian areas. The BLM cannot require a private land owner to consent to the implementation of mitigation on their private land; therefore, there is a potential loss of forage associated with the riparian areas on private land.** Ongoing monitoring included in the mitigation measures would ensure that adequate water supplies are maintained and available for livestock.

3.12.3.5.1 Residual Adverse Impacts

Residual impacts for livestock grazing and production under the Partial Backfill Alternative would be the loss of **32 AUMs from the development of the open pit and the loss of 781 AUMs for approximately 70 years from allotments within the fenced Project Area.**

3.12.3.6 Off-Site Transfer of Ore Concentrate for Processing Alternative

Although the Off-Site Transfer of Ore Concentrate for Processing Alternative would result in approximately 20 acres less surface disturbance compared to the Proposed Action, impacts to livestock grazing and production from this alternative would be similar to those for the Proposed Action since the acreage would decrease by only 0.2 percent.

- **Impact 3.12.3.6-1:** Project development and operation under the Off-Site Transfer of Ore Concentrate for Processing Alternative would result in the **permanent loss of 32 AUMs**

and the loss of 781 AUMs for approximately 70 years from allotments within the fenced Project Area.

Significance of the Impact: The impact is considered potentially significant.

No mitigation is proposed for this impact; see Section 3.1.1 for a general discussion of significance and the development of mitigation measures. Also see Section 3.26 for suggested mitigation outside of the BLM's jurisdiction.

Impacts to forage productivity as a result of the predicted water table drawdown associated with ground water pumping and subsequent recovery of the water table under the Off-Site Transfer of Ore Concentrate for Processing Alternative would be similar to those impacts described for the Proposed Action.

- **Impact 3.12.3.6-2:** Phreatophyte vegetation would potentially experience a change in species composition and percent cover due to the predicted water table drawdown associated with ground water pumping and subsequent recovery of the water table. Although the lowering of the water table in the area of phreatophytes is not expected to result in a net loss of vegetation in these communities, it is possible that the changes in phreatophyte community would result in a loss of forage productivity. Impacts to other vegetation communities as a result of drawdown are not expected.

Significance of the Impact: The impact is considered potentially significant. The following mitigation has been identified for this impact.

- **Mitigation Measure 3.12.3.6-2:** The BLM would monitor for changes to forage productivity as a result of ground water drawdown associated with Project-related ground water pumping. If the BLM detects a loss of forage productivity attributed to the Project, the BLM would develop and provide EML with a list of appropriate seed mixes for those areas within and outside the Project Area impacted by water table drawdown that should be seeded. The nature of the seed mix may vary depending on the conditions encountered as a result of the drawdown. If the BLM determines reseeding to be necessary, the BLM would coordinate the conditions for reseeding (including a possible two-year grazing closure) with local permittees in order to reduce impacts to AUMs. Mitigation for the potential loss of water available for livestock from stock water rights and other surface waters are described in the Water Resources - Water Quantity impacts discussion (Mitigation Measures 3.2.3.3-2 and 3.2.3.3-3). Mitigation for loss of water available would also mitigate the loss of vegetation (livestock forage).
- **Effectiveness of Mitigation and Residual Effects:** Mitigation measure 3.12.3.6-2 would reduce potential impacts to local permittees from changes in vegetation species composition and percent cover as a result of water table drawdown during Project activities. Monitoring vegetation and possible reseeding with an appropriate seed mix, as well as BLM coordination with local permittees following reseeding, would reduce the long-term impacts to AUMs, although short-term impacts may occur while any reseeding effort is implemented. If a two year suspension is

required, impacts would persist until the suspension is lifted, in an amount proportionate to the amount of AUMs temporarily suspended.

- **Impact 3.12.3.6-3:** Livestock dependent on existing water sources in the Project Area would potentially experience water stress due to the water table drawdown associated with ground water pumping and subsequent recovery of the water table. Lowering of the water table could result in reduced water available for use in rangeland management.

Significance of the Impact: The impact could be potentially significant. **The following mitigation has been identified for this impact.**

- **Mitigation Measure 3.12.3.6-3:** Mitigation for the potential loss of water availability for livestock is described in the Water Resources - Water Quantity impacts discussion (Mitigation Measures 3.2.3.3-2 and 3.2.3.3-3). **Implementation of any of the specific mitigation outlined in these measures for springs located on private land would be subject to the authorization of the private land owner. Mitigation for loss of water available would also mitigate the loss of vegetation (livestock forage). Additionally, where livestock and wild horse use overlap those mitigation measures identified for wild horses (Mitigation Measure 3.13.3.3-1) would also benefit livestock.**
- **Effectiveness of Mitigation and Residual Effects:** Implementation of Mitigation Measures in Section 3.2.3 would effectively mitigate any reductions in water available for use in rangeland management, **with the exception of impacts to forage on private land associated with riparian areas. The BLM cannot require a private land owner to consent to the implementation of mitigation on their private land; therefore, there is a potential loss of forage associated with the riparian areas on private land.** Ongoing monitoring included in the mitigation measures would ensure that adequate water supplies are maintained and available for livestock.

3.12.3.6.1 Residual Adverse Impacts

The Off-Site Transfer of Ore Concentrate for Processing Alternative would result in the unavoidable permanent loss of **32 AUMs from the development of the open pit and the loss of 781 AUMs for approximately 70 years from allotments within the fenced Project Area.**

3.12.3.7 Slower, Longer Project Alternative

Impacts under the Slower, Longer Project Alternative would be of the same type as the impacts under the Proposed Action, but would last for approximately 115 years.

The number of AUMs lost would be the same as the Proposed Action. However, the potential for resumption of livestock grazing within the fenced Project Area would be prolonged (115 years compared to 70 years). **Based on the longer Project duration, the economic impact to livestock grazing as a result of this alternative would be approximately \$1,876,743 more than the impact under the Proposed Action.**

The 14,204-acre enclosure would not impact AUMs within the 3 Bars, Santa Fe/Ferguson, or Lucky C Allotments but could potentially impact AUMs due to possible impacts to forage and habitat related to water level drawdown.

- **Impact 3.12.3.7-1:** Project development and operation under the Slower, Longer Project Alternative would result in **permanent loss of 32 AUMs and the loss of 781 AUMs for approximately 115 years** from allotments within the Project Area.

Significance of the Impact: The impact is considered potentially significant.

No mitigation is proposed for this impact; see Section 3.1.1 for a general discussion of significance and the development of mitigation measures. Also see Section 3.26 for suggested mitigation outside of the BLM's jurisdiction.

Impacts to forage productivity as a result of the predicted water table drawdown associated with ground water pumping and subsequent recovery of the water table under the Slower, Longer Project Alternative would be similar to those impacts described for the Proposed Action, but of a longer duration.

- **Impact 3.12.3.7-2:** Phreatophyte vegetation would potentially experience a change in species composition and percent cover due to the predicted water table drawdown associated with ground water pumping and subsequent recovery of the water table. Although the lowering of the water table in the area of phreatophytes is not expected to result in a net loss of vegetation in these communities, it is possible that the changes in phreatophyte community would result in a loss of forage productivity. Impacts to other vegetation communities as a result of drawdown are not expected.

Significance of the Impact: The impact is considered potentially significant. The following mitigation has been identified for this impact.

- **Mitigation Measure 3.12.3.7-2:** The BLM would monitor for changes to forage productivity as a result of ground water drawdown associated with Project-related ground water pumping. If the BLM detects a loss of forage productivity attributed to the Project, the BLM would develop and provide EML with a list of appropriate seed mixes for those areas within and outside the Project Area impacted by water table drawdown that should be seeded. The nature of the seed mix may vary depending on the conditions encountered as a result of the drawdown. If the BLM determines reseeding to be necessary, the BLM would coordinate the conditions for reseeding (including a possible two-year grazing closure) with local permittees in order to reduce impacts to AUMs. Mitigation for the potential loss of water available for livestock from stock water rights and other surface waters are described in the Water Resources - Water Quantity impacts discussion (Mitigation Measures 3.2.3.3-2 and 3.2.3.3-3). Mitigation for loss of water available would also mitigate the loss of vegetation (livestock forage).
- **Effectiveness of Mitigation and Residual Effects:** Mitigation measure 3.12.3.7-2 would reduce potential impacts to local permittees from changes in vegetation species composition and percent cover as a result of water table drawdown during Project activities. Monitoring vegetation and possible reseeding with an appropriate seed mix, as well as BLM coordination with local permittees following reseeding, would reduce the long-term impacts to AUMs, although short-term impacts may occur while any reseeding effort is implemented. If a two year suspension is

required, impacts would persist until the suspension is lifted, in an amount proportionate to the amount of AUMs temporarily suspended.

The majority of disturbed lands within the 14,204-acre enclosure would be reclaimed and available for future grazing. Successful revegetation of disturbed lands would increase plant cover and provide an adequate amount of forage to recover the majority of AUMs lost during the Project. Once vegetation has been successfully re-established (BLM/NDEP standards), the BLM would evaluate livestock resumption within the Project Area.

The open pit would result in the permanent loss of approximately 734 acres (644 within the Romano Allotment and 90 acres within the Roberts Mountain Allotment).

As discussed in the Proposed Action, 18 existing stock water rights occurring within the ten-foot drawdown area may experience negative impacts including a reduction in available water or complete water loss as a result of ground water drawdown associated with the Slower, Longer Project Alternative. Livestock require water year long to satisfy physiological requirements. The reduction or loss of existing water sources could impact livestock in the Project Area. A reduction in surface water would affect the amount of foraging habitat for livestock.

- **Impact 3.12.3.7-3:** Livestock dependent on existing water sources in the Project Area would potentially experience water stress due to the water table drawdown associated with ground water pumping and subsequent recovery of the water table. Lowering of the water table could result in reduced water available for use in rangeland management.

Significance of the Impact: The impact could be potentially significant. **The following mitigation has been identified for this impact.**

- **Mitigation Measure 3.12.3.7-3:** Mitigation for the potential loss of water availability for livestock from stock water rights and other surface waters is described in the Water Resources - Water Quantity impacts discussion (Mitigation Measures 3.2.3.3-2 and 3.2.3.3-3). **Implementation of any of the specific mitigation outlined in these measures for springs located on private land would be subject to the authorization of the private land owner. Mitigation for loss of water available would also mitigate the loss of vegetation (livestock forage). Additionally, where livestock and wild horse use overlap those mitigation measures identified for wild horses (Mitigation Measure 3.13.3.3-1) would also benefit livestock.**

- **Effectiveness of Mitigation and Residual Effects:** Implementation of Mitigation Measures in Section 3.2.3 would effectively mitigate any reductions in water available for use in rangeland management), **with the exception of impacts to forage on private land associated with riparian areas. The BLM cannot require a private land owner to consent to the implementation of mitigation on their private land; therefore, there is a potential loss of forage associated with the riparian areas on private land.** Ongoing monitoring included in the mitigation measures would ensure that adequate water supplies are maintained and available for livestock.

No impacts to existing range improvements **other than developed spring sites and removal of existing fencing within the Project fence** are anticipated.

The probable risk to livestock from the pit lake created under the Slower, Longer Project Alternative is the same as for the Proposed Action and would be low.

3.12.3.7.1 Residual Adverse Impacts

The Slower, Longer Project Alternative would result in the unavoidable permanent loss of **32 AUMs from the development of the open pit.**

3.13 Wild Horses

3.13.1 Regulatory Framework

Under the FLPMA, wild horses and burros are one of the multiple uses that the BLM must manage in combination to best meet the public's present and future needs. The FLPMA included the approval for the use of helicopters for gathers and required that a current inventory of wild horses and burros be maintained. The Public Rangelands Improvement Act of 1978 defined excess horses, mandated research, and provided guidance for titles of adopted horses and the adoption process.

3.13.1.1 Wild Free-Roaming Horses and Burros Act

The Wild Free-Roaming Horses and Burros Act of 1971 (WFRHBA) (Public Law 92-195) protects wild free-roaming horses and burros from capture, branding, harassment, or death. This Act also defines the ecological and multiple-use role of the management of wild horses and burros on federal lands and their historical and cultural value. The Act applies to all unbranded and unclaimed horses and burros on public lands administered by the BLM (43 CFR 4700) (BLM 2000). In accordance with the WFRHBA, wild horses are to be managed so as to maintain a thriving natural ecological balance on the range, and protect the range from the deterioration associated with overpopulation.

Herd Management Areas (HMAs) are identified in Land Use Planning for long-term management of wild horses and are designated "Special Management Areas" on public lands. The BLM maintains and manages wild horses **and burros** in HMAs and in Nevada wild horses and burros are found in approximately 100 HMAs, totaling approximately 15,249,265 acres (BLM 2011a). Establishment of HMAs must take into consideration the Appropriate Management Level (AML) for the herd, the habitat requirements of the animals, and the relationships with other uses of public land. The objective of the management of wild horses and burros is to limit the animals' distribution to the Herd Areas (HAs), which are limited to areas of public lands identified as being habitat used by wild horses and burros at the time of the passage of the WFRHBA (43 CFR 47000-5(d)). A herd is defined as one or more stallions and his mares. Management strategies include monitoring, inventory, and removal of excess wild horses or burros through periodic gathers, with an emphasis to limit management activities to the minimal feasible level (BLM 2000).

Wild horse and burro herds increase at relatively high rates because they **have virtually no** natural predators (BLM 2000). The majority of wild horse foals are born between March 1 and July 1, annually. Throughout the HMAs, populations increase by ten to 22 percent annually. AMLs have been established by the BLM's MLFO. According to the WFRHBA, when population inventory, monitoring data, and other data indicate that an over population of wild

horses exists, a gather would be planned to remove excess wild horses and achieve the AML. Other population controls such as fertility control may also be implemented to slow population growth rates and maintain a thriving natural ecological balance on the range and protect the range from the deterioration associated with overpopulation. The BLM prepares the horses and burros for adoption through permanent adoption centers. The BLM is also guided by the Nevada Northeastern Great Basin Resource Advisory Council to promote healthy rangelands through implementation of standards and guidelines for maintaining healthy wild horse and burro herds on HMAs.

3.13.2 Affected Environment

3.13.2.1 Study Methods

This section includes a discussion of wild horse movement, gathers, and existing HMAs within the Project Area. The predicted ten-foot ground water drawdown would also impact the Fish Creek HMA and Kobeh Valley HA. The Roberts Mountain, Whistler Mountain, and Fish Creek HMAs and Kobeh Valley HA are managed jointly by the BLM as a Wild Horse Complex.

3.13.2.2 Existing Conditions

The Project is located within the Roberts Mountain and Whistler Mountain HMAs.

Roberts Mountain HMA

The Roberts Mountain HMA is located 30 miles northwest of Eureka, Nevada, in Eureka County west of SR 278. The HMA consists of 99,990 acres and is 17 miles long by ten miles wide. The HMA shares the eastern boundary with the Whistler Mountain HMA.

The AML for the Roberts Mountain HMA is 150 wild horses. **The 2012 post-foaling population is 273.** Many of the horses in the Roberts Mountain HMA are distributed into the lower elevations of Kobeh Valley during both summer and winter. Several water sources appear to be key in influencing movement patterns. Figures 3.2.2 and 3.2.3 identify known surface water sources available to wild horses within and adjacent to the HMA. Wild horses also move back and forth into the Whistler Mountain HMA and outside of HMA boundaries into the Kobeh Valley HA and the northern portion of the Fish Creek HMA.

Wild horses travel throughout the Roberts Mountain HMA with few impediments to the movement. There are several pasture fences and drift fences throughout the two allotments included within the HMA, but the horses know where the fences are located and travel through open gates and around drift fences. During summer months, horses may move into the higher elevations and foothills that support piñon-juniper and contain springs and ponds. A primary water source used by horses in summer is Mud Springs, a water filled depression that holds water until late summer. During winter months, wild horses often move down to the lower elevations in the southern portion of the HMA as snow accumulates in the mountains. During the winter months, wild horses from the Roberts Mountain HMA have been documented moving south out of the HMA into the northwest portion of Kobeh Valley and joining with wild horses from the Whistler Mountain and Fish Creek HMAs.

The wild horses within the Roberts Mountain HMA are known to be moderate to large in size with good to excellent confirmation. Colors include many buckskins, palominos, roans, and duns in addition to the typical colors of bay, brown, and black (Personal Communication, Shawna Richardson, BLM Wild Horse Specialist, March 20, 2007). Genetic variability of this herd is high and this is likely due to both the past large population size and mixing with other herds. Genetic similarity results suggest a herd with mixed ancestry that is primarily North American which is consistent with the appearance of the horses.

A total of approximately 12,114 acres of the Project is located within the Roberts Mountain HMA. **Approximately 19 percent of the Project Area (excluding the portion of the HMA that occurs within the fenced portion of the Project Area) is located within this HMA.**

Whistler Mountain HMA

The Whistler Mountain HMA is located ten miles northwest of Eureka, Nevada, in Eureka County. The eastern boundary of the Whistler Mountain HMA lies along SR 278. The Whistler Mountain HMA consists of 43,247 acres and is 16 miles long and seven miles wide. The Whistler Mountain HMA shares its western boundary with the Roberts Mountain HMA and wild horses frequently move between the two HMAs. Additionally, no fence exists on the western boundary of the Whistler Mountain HMA in Kobeh Valley, allowing wild horse movement into the valley.

The AML for the Whistler Mountain HMA has been set for 14 to 24 wild horses. **The 2012 population** The AML for the Whistler Mountain HMA was developed with consideration of the movement patterns of the wild horses to ensure that their year round needs are met, and that over-utilization of the vegetation does not occur. The AML was also set at a level to ensure that wild horses are successful in drought years when forage and water may be limited.

The wild horses using the Whistler Mountain HMA and the Kobeh Valley area are strongly associated with the Roberts Mountain HMA. Fencelines separate the Roberts Mountain, Romano, and Lucky C Allotments; however, wild horses have found places to cross the fence by taking advantage of open gates and travel back and forth between the areas. Throughout the year, wild horses move back and forth into the Roberts Mountain HMA, as a result of changes in water supply, presence of livestock, and changes in forage condition and climate. In summer months, it is likely that the wild horses from the Whistler Mountain HMA move west into the Roberts Mountain HMA to access water sources and cooler, higher elevations. Figures 3.2.2 and 3.2.3 identify known surface water sources available to wild horses within and adjacent to the HMA.

In recent years, many wild horses have been observed in the Mount Hope vicinity especially in the spring; however, there may be a number of year-round wild horse residents in certain years. As many as 80 wild horses were estimated to be using the Mount Hope area in the spring of 2001. As many as 76 wild horses were observed both inside and outside of the Whistler Mountain HMA in 1994. During a 1992 population inventory flight, 87 wild horses were observed in the Romano Allotment portion of the Whistler Mountain HMA. Numbers observed in population inventory flights since that time have been low, with the exception of 1998 when 44 wild horses were observed. The population levels and distribution of the horses are also influenced by the Roberts Mountain HMA, which was gathered in 1987, 1995, 2001, and 2008.

A total of approximately 8,943 acres of the Project are located within the Whistler Mountain HMA. **Approximately 12 percent of the Project Area (excluding the portion of the HMA that occurs within the fenced portion of the Project Area) is located within this HMA.**

Fish Creek HMA

The Fish Creek HMA is located a few miles south of Eureka, Nevada, in the Antelope and Little Smoky Valleys and in the Antelope and Fish Creek Mountains. The area is approximately 252,739 acres in size and is 25 miles wide and 28 miles long. However, a small portion of the HMA exists north of U.S. Highway 50, which is separated by highway ROW fences. This portion of the HMA is only 19,300 acres and is managed with the Whistler Mountain and Roberts Mountain HMAs.

The AML for the Fish Creek HMA was established through the **Final Multiple Use Decision (FMUD)** issued by the MLFO September 27, 2004, following the analysis of monitoring data and completion of the Fish Creek Complex Evaluation and Rangeland Health Assessment and Environmental Assessment (EA) #NV062-EA04-69. The total AML for the HMA was established as a range of 107 to 180 wild horses year round.

The portion of the Fish Creek HMA north of U.S. Highway 50 is located within the Kobeh Valley HA and neither the HMA nor the HA are extensively utilized by wild horses. Little water exists within HMA boundaries, and as a result, wild horses do not remain inside the HMA but move throughout Kobeh Valley and drift into the Whistler and Roberts Mountain HMAs. Figures 3.2.2 and 3.2.3 identify known surface water sources available to wild horses within and adjacent to the HMA. Due to lack of available water, a group of wild horses had to be removed from Kobeh Valley in 2001, in an emergency gather. There are no fences dividing the Fish Creek HMA from the Whistler Mountain HMA in Lucky C Allotment (northern portion). The AML for the northern portion of the Fish Creek HMA was established at six to ten wild horses, to account for the incidental use of wild horses in the area, and the lack of perennial water.

A total of approximately 333 acres of the Project are located within the Fish Creek HMA. **Approximately 1.5 percent of the Project Area (excluding the portion of the HMA that occurs within the fenced portion of the Project Area) is located within this HMA.**

Gather History

Four gathers have been completed within the Roberts Mountain HMA in 1987, 1995, 2001, and 2008. One gather was conducted between August 11 and 13, 1987, in which 120 wild horses were removed from within and outside of the HMA boundaries. The entire HMA was not gathered at that time, and the wild horses in the remainder of the HMA were left undisturbed.

The Roberts Mountain HMA was gathered between October 10 and 18, 1995. During this gather, a total of 344 wild horses were captured, and 170 were shipped to the Palomino Valley Center, on Pyramid Lake Highway approximately 20 miles north of Sparks, Nevada.

A total of 580 wild horses were captured in a gather conducted between July 13 and 23, 2001. At the end of the gather, 131 mares, foals and studs were released back to the HMA. During the 2001 wild horse gather on the Roberts Mountain HMA, 28 wild horses were removed from the Lucky C Allotment/Whistler HMA due to the lack of sufficient water (i.e., drought emergency). At the time, it was also estimated that between 60 and 80 wild horses may have moved into

Roberts Mountain HMA from the adjacent Whistler Mountain HMA and were gathered as part of the operation.

The most recent gather was completed between January 17 and 23, 2008. A total of 373 wild horses were captured in total from the Roberts Mountain HMA and Whistler Mountain HMA, with 25 mares and studs returned to the range. Most horses observed were very thin or emaciated due to limited forage and water available due to drought, compounded by deep snow throughout Kobeh Valley; only the healthiest horses were returned to the range.

Prior to 2008, no formal gathers of wild horses had been conducted within the Whistler Mountain HMA by the BLM. The population size of wild horses within the Whistler Mountain HMA is a product of gathers in adjacent areas. In 2001, 28 drought stressed horses were removed from the Whistler Mountain HMA in conjunction with the Roberts Mountain gather. The Kobeh Valley area outside the Fish Creek HMA was also gathered in 1994 at which time 129 horses were captured and 27 horses over the age of ten were released due to the selective removal policy. Gathers of the Kobeh Valley outside the Fish Creek HMA were also completed in 2008. In 2008, 30 wild horses were gathered and removed from the area.

Eleven groups of wild horses totaling 43 adults and nine foals were located during a population inventory in September 2008 in the area proposed to be fenced during the Project. The total 2011 wild horse population of the Roberts Mountain Complex, which includes Roberts Mountain, Whistler Mountain, and North Fish Creek HMAs and the Kobeh Valley HA is estimated to be 307. Population estimates for these HMAs are based on the average annual rate of increase in the HMAs of 17.5 percent.

3.13.3 Environmental Consequences and Mitigation Measures

3.13.3.1 Significance Criteria

Impacts to wild horses and burros would be considered significant if the Proposed Action or alternatives resulted in any of the following:

- Loss of acres, available forage, or water that results in substantial negative effects to the long-term health (including genetic variability) of the wild horses within the Roberts Mountain Complex; or
- Enhancement of, or interference, with the normal distribution and movement patterns of wild horses and burros within an HMA.

3.13.3.2 Assessment Methodology

The environmental consequences to wild horses in the Project Area were evaluated using available Project information. Potential impacts to the HMAs and wild horses were analyzed based on the current wild horse estimates in each of the areas, as well as the number of acres potentially affected by the Proposed Action.

In this environmental consequences discussion the Fish Creek HMA is not considered because 1) there are very few, if any, wild horses in the northern part of the Fish Creek HMA, 2) the northern end of the HMA was cut off by the U.S. Highway 50 fence, 3) there is very little water

on the northern end of the HMA, and 4) there is no direct effect of the Proposed Action to this HMA.

3.13.3.3 Proposed Action

3.13.3.3.1 Loss of Habitat, Available Forage, or Water

Approximately 14,204 acres of wild horse habitat would be directly removed as a result of the fence. Within the fenced area, approximately 13,998 acres are designated as one of two HMAs (Roberts Mountain HMA and Whistler Mountain HMA). A total of approximately 12,113.7 acres of the Project are located within the Roberts Mountain HMA, and approximately 7,836 acres would be excluded within this HMA as a result of the construction of the Project-boundary fence. A total of approximately 8,943 acres of the Project are located within the Whistler Mountain HMA, and approximately 6,162 acres would be excluded within this HMA as a result of the construction of the Project-boundary fence.

Project-related surface disturbance could also result in limiting wild horse access to developed and natural water sources located in the Project Area, and direct impacts could occur as a result of vehicular collisions along access roads. Section 3.2.3.3.1 discusses the specific affects to surface water resources.

Phreatophyte vegetation would potentially experience a change in species composition and percent cover due to the predicted water table drawdown associated with ground water pumping and subsequent recovery of the water table. Lowering of the water table in the area of phreatophytes is not expected to result in a net loss of vegetation in these communities. Additionally, reseeding mitigation proposed in Section 3.12.3 would **improve** the availability of forage for wild horses in areas identified by the BLM. Impacts to other vegetation communities as a result of drawdown are not expected. Therefore, impacts to overall wild horse forage as a result of the drawdown are not expected.

- **Impact 3.13.3.3-1:** Approximately 14,204 acres of wild horse habitat would be directly removed as a result of the fence. **Approximately 232 acres of wild horse habitat in the Project Area** would be potentially affected over the 44-year mine life and subsequent reclamation outside of the fenced portion of the Project, **excluding approximately 124 acres associated with the powerline portion of the Project Area and 50 acres associated with exploration. The location of the 50 acres of surface disturbance associated with exploration cannot be determined at this time. The location of the 124 acres of surface disturbance associated with the powerline would occur with the powerline portion of the Project Area; however, the exact location of this disturbance has not been specified yet. The exact number of acres of surface disturbance for these two Project features within each HMA cannot be calculated at this time.** Impacts to wild horses would also include a loss of access to water within the fenced portion of the Project Area. Impacts to wild horses could last approximately 70 years.

Significance of the Impact: The impact is considered significant for wild horse access to water.

- **Mitigation Measure 3.13.3.3-1:** Specific mitigation for surface water resources identified as being impacted by the Project is listed in Table 3.2-9. In order to further mitigate the loss of habitat and water sources to wild horses through the Project Area, EML would provide alternative water sources for wild horses. Six locations within the Whistler Mountain and Roberts Mountain HMAs have been identified in coordination with the BLM and would be developed as water sources for horses and could also be used by wildlife and livestock in areas historically used by wild horses (Figure 3.13.1). These sites consist of existing stock wells that are not currently functioning or do not have pumps or troughs and two new sources tapped from Project production wells. These sources would provide water where it has not been available previously or where availability has been limited. These sources would replace water sources located within the Project boundary fence that would no longer be available to wild horses. Distribution of wild horse use would also be improved. The Project's Mitigation Plan is included in this EIS as Appendix D.

The development of these six sites is detailed in Appendix D, Attachment 2. Appendix D, Attachment 2 includes a description of how each site would be developed. The sites would be owned and operated by EML. Operations would include periodic inspections and maintenance, turning water on and off, and winterizing water sources as determined through coordination with the BLM. Upon Project completion, improvements associated with the stock watering wells and spring would remain in place for the continued support of wild horses, wildlife, and livestock within the HMAs and grazing allotments. EML would implement the mitigation plan in Appendix D, Attachment 2. Should EML decide not to retain ownership of the associated water rights, agreements would be reached at that time between EML, and those associated with the current grazing privileges on the specific allotment(s), NDOW, and BLM to transfer ownership of these improvements to the appropriate parties.

The selection of new or replacement troughs and tanks would be based on design to reduce evaporation in the summer and reduce freezing in the winter. All pipelines from wellheads to the Project fenceline under this mitigation would be buried below the ground to avoid limiting wild horse movement.

If Project activities caused a water source to become unavailable to wild horses, the Authorized Officer could require a new well to be drilled or another water development to be constructed in the general area to provide adequate water for the wild horses. Should monitoring indicate that wild horses were being negatively impacted by the mining activities, the Mount Lewis Field Manager could require additional measures for the protection of wild horses such as seasonal restrictions during the peak foaling period. Mitigation could include annual, biennial, or quarterly helicopter population inventory flights of the area in addition to on the ground monitoring by BLM and Project personnel. However, the use of a helicopter below 500 feet would not occur between March 1 and June 30 in order to prevent disruption during foaling period, causing orphaned or abandoned foals.

Fences constructed around the Project Area would use white-topped steel posts. Additional reflectors may be necessary if problems with horses impacting fences occur. Fences should be continuous with no breaks (no drift fences). Horses climb steep or rocky terrain and may go around the ends of fences.

Should horses be discovered within the fenced areas, Project personnel would contact the BLM immediately to assist with the removal of the horses. Wild horses could be fence-wise and difficult to push through gates or fence openings. This often results in horses attempting to jump fences and becoming cut by barbed wire. BLM staff have materials to assist in the removal of wild horses. Project personnel would not "haze" wild horses out of fenced areas.

EML would avoid the BLM's Key Management Areas for vegetation monitoring established near Mount Hope and in Kobeh Valley.

Additional mitigation for livestock grazing and production is summarized in Appendix D.

- **Effectiveness of Mitigation and Residual Effects:** Implementation of Mitigation Measure 3.13.3.3-1 would be effective to reduce any impacts to the loss of habitat or resources within the HMA to less than significant. The Mitigation Plan would also ensure the effectiveness of this mitigation measure (Appendix D).

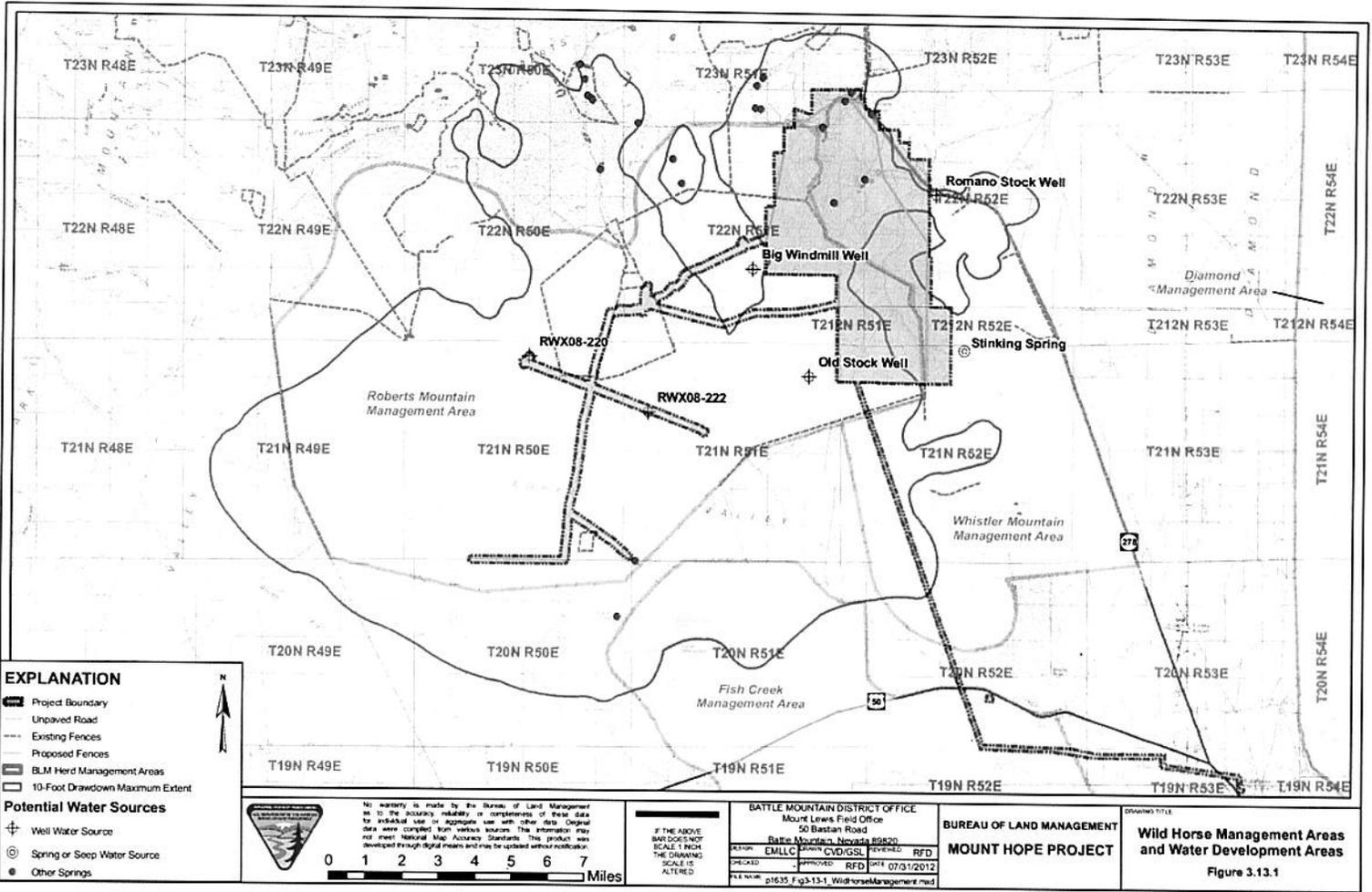
3.13.3.3.2 Impacts to the Normal Distribution and Movement Patterns of Wild Horses

Project-related activities could result in direct impacts to the movement patterns of wild horses. In order to minimize direct impacts to wild horses (i.e., wild horse-machinery collisions), a perimeter fence enclosing 14,204 acres would be constructed during Project activities in the general area, which includes the open pit, WRDFs, and TSFs. The construction of this fence would exclude wild horses during mine operation and reclamation for approximately 70 years. As described in the Proposed Action, the fence would be monitored on a regular basis and repairs made as needed. EML would assist, as requested, in moving these animals out of the Project Area. Construction of the fence would result in the movement of wild horses to other parts of the HMA potentially increasing the use of forage and water resources that may be already limited.

In addition, noise disturbance, human presence, and increased vehicular traffic would be continuous for approximately 44 years during implementation of the Proposed Action. Sudden loud noises such as blasts could cause wild horses to disperse in directions away from the sound. This behavior could send wild horses into unfamiliar terrain. Some wild horses may avoid the area while others may tolerate the noise and continue foraging and breeding activities in the vicinity of the Project Area.

Distribution changes could result in concentrations of wild horses using vegetation resources in certain areas and increased utilization levels. For example, increased human disturbance and unavailable land in the Whistler Mountain HMA and east portion of the Roberts Mountain HMA could result in the population shifting to the west portion of the Roberts Mountain HMA, resulting in larger numbers of wild horses using smaller land areas. As a result, upland forage species could be heavily utilized. Distribution changes could also result in reduced viewing opportunities by the public. Some impacts could occur to wild horses during the peak foaling season if widespread human activity disturbs the population. As a result, new foals could be orphaned or abandoned.

Potential impacts to the normal distribution and movement patterns of wild horses and burros are temporary in nature, and would not result in permanent displacement. Horses and some wildlife



EXPLANATION

- Project Boundary
- Unpaved Road
- Existing Fences
- Proposed Fences
- BLM Herd Management Areas
- 10-Foot Drawdown Maximum Extent

Potential Water Sources

- Well Water Source
- Spring or Seep Water Source
- Other Springs



No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual use or aggregate use with other data. Original data were compiled from various sources. This information may not meet National Map Accuracy Standards. This product was developed through digital means and may be updated without notification.

IF THE ABOVE BAR DOES NOT SCALE 1 INCH THE DRAWING SCALE IS ALTERED

BATTLE MOUNTAIN DISTRICT OFFICE
 Mount Lewis Field Office
 50 Bastian Road
 Battle Mountain, Nevada 89820

APPROVED	EMLLC	PREPARED	CVD/GSL	REVIEWED	RFD
DATE		DATE		DATE	
07/31/2012		07/31/2012		07/31/2012	

FILE NAME: p1635_Fg313-1_WildHorseManagement.mxd

BUREAU OF LAND MANAGEMENT
MOUNT HOPE PROJECT

Drawings Title
Wild Horse Management Areas and Water Development Areas
 Figure 3.13.1

species have shown the ability to adapt to the noise created by mines, road traffic, pumps, and even blasting.

- **Impact 3.13.3.3-2:** Project-related activities, such as the addition of a fence to the Project Area or noise from human presence, blasting, vehicular traffic, or other sources, associated with the Proposed Action could result in wild horse displacement and changes in wild horse use throughout the HMA for the 44-year Project life.

Significance of the Impact: The mitigation outlined above and in Appendix D, Attachment 2 would reduce the potential impacts to the distribution of wild horses. This impact is not considered significant.

No mitigation is proposed for this impact; see Section 3.1.1 for a general discussion of significance and the development of mitigation measures.

3.13.3.3.3 Residual Adverse Impacts

The Proposed Action would result in the unavoidable loss of 734 acres of wild horse foraging habitat resulting from surface disturbance in the open pit area. Approximately 14,204 acres of foraging habitat would be removed in the short term. The reclaimed land would have more grass and forb forage and less mature shrub forage in the short term.

The evaluation of the potential effects of the pit lake on wild horses used a SLERA. The general approach used in the preparation of the SLERA is similar to that developed by the Environmental Sciences Division and Life Sciences Division of Oak Ridge National Laboratory for the U.S. Department of Energy. In addition, the SLERA incorporated more recent TRVs for certain inorganic chemical constituents derived by the EPA (SRK 2009). Together, these were used to develop species-specific toxicity criteria to which the predicted constituents in the pit water were compared.

Protective criteria for the surrogate species are likely to be protective of local species occupying similar ecological niches at the Project Area. Additionally, it was assumed that the wildlife receptors would consume water from the pit lake; and, that this water would constitute 100 percent of each species individual daily water requirements (i.e., no outside sources of water would be utilized over the life of the animal). This is considered an extremely conservative assumption.

The results of the assessment indicate that the most likely predicted water quality of the modeled future pit lake water at the Project Area could represent a low to moderate toxicological threat to wild horses based on Nevada's beneficial use standard for livestock watering. However, since this water is not intended to be a livestock watering source **and livestock access would be restricted by the construction of the pit perimeter berm**, and the standards were based on limited toxicological information, the probable risk to wild horses from the pit lake under the Proposed Action would be low since wild horses could not access the pit lake.

3.13.3.4 No Action Alternative

Under the No Action Alternative, the proposed Project would not be developed and associated impacts to wild horses would not occur. EML would continue existing activities under

previously authorized Notices, and the area would remain available for future mineral development or for other purposes as approved by the BLM.

3.13.3.4.1 Residual Adverse Impacts

There would be no residual adverse impacts to wild horses under the No Action Alternative.

3.13.3.5 Partial Backfill Alternative

Impacts to wild horses would be similar to those described for the Proposed Action, however, the Partial Backfill Alternative would involve the partial backfilling of the open pit to eliminate the pit lake and the floor of the open pit would be reclaimed with growth media and seeded. Although the Proposed Action would have 734 acres that would remain unvegetated in the open pit, under this alternative approximately 527 acres would remain unvegetated following Project completion and reclamation; therefore, impacts to wild horses would be similar to, but less than, those described for the Proposed Action.

- **Impact 3.13.3.5-1:** Approximately 14,204 acres of wild horse habitat would be directly removed as a result of the fence. **Approximately 232 acres of wild horse habitat in the Project Area** would be potentially affected over the 44-year mine life and subsequent reclamation **outside of the fenced portion of the Project, excluding approximately 124 acres associated with the powerline portion of the Project Area and 50 acres associated with exploration. The location of the 50 acres of surface disturbance associated with exploration cannot be determined at this time. The location of the 124 acres of surface disturbance associated with the powerline would occur with the powerline portion of the Project Area; however, the exact location of this disturbance has not been specified yet. The exact number of acres of surface disturbance for these two Project features within each HMA cannot be calculated at this time.** Impacts to wild horses would also include a loss of access to water within the fenced portion of the Project Area.

Significance of the Impact: The impact is considered significant for wild horse access to water.

- **Mitigation Measure 3.13.3.5-1:** Mitigation under the Partial Backfill Alternative would be the same as mitigation under the Proposed Action.
- **Effectiveness of Mitigation and Residual Effects:** Implementation of Mitigation Measure 3.13.3.5-1 would reduce any impacts to the loss of acreage or resources within the HMA to less than significant.
- **Impact 3.13.3.5-2:** Project-related activities, such as the addition of a fence to the Project Area or noise from blasting or other sources, associated with the Partial Backfill Alternative could result in wild horse displacement and changes in wild horse use throughout the HMA for the life of the Project.

Significance of the Impact: The mitigation outlined above and in Appendix D, Attachment 2 would reduce the potential impacts to the distribution of wild horses.

Impacts from the Partial Backfill Alternative would be the same as impacts from the Proposed Action.

No mitigation is proposed for this impact; see Section 3.1.1 for a general discussion of significance and the development of mitigation measures.

3.13.3.5.1 Residual Adverse Impacts

The Partial Backfill Alternative would result in the unavoidable loss of 527 acres of wild horse foraging habitat resulting from surface disturbance in the open pit area. Approximately 14,204 acres of foraging habitat would be removed in the short term. The reclaimed land would have more grass and forb forage and less mature shrub forage in the short term.

3.13.3.6 Off-Site Transfer of Ore Concentrate for Processing Alternative

Although the Off-Site Transfer of Ore Concentrate for Processing Alternative would result in approximately 20 acres less surface disturbance compared to the Proposed Action, impacts to wild horses from this alternative would be similar to those for the Proposed Action since the acreage would decrease by only 0.2 percent.

- **Impact 3.13.3.6-1:** Approximately 14,204 acres of wild horse habitat would be directly removed as a result of the fence. Approximately 232 acres of wild horse habitat in the Project Area would be potentially affected over the 44-year mine life and subsequent reclamation outside of the fenced portion of the Project, excluding approximately 124 acres associated with the powerline portion of the Project Area and 50 acres associated with exploration. The location of the 50 acres of surface disturbance associated with exploration cannot be determined at this time. The location of the 124 acres of surface disturbance associated with the powerline would occur with the powerline portion of the Project Area; however, the exact location of this disturbance has not been specified yet. The exact number of acres of surface disturbance for these two Project features within each HMA cannot be calculated at this time. Impacts to wild horses would also include a loss of access to water within the fenced portion of the Project Area.

Significance of the Impact: The impact is considered significant for wild horse access to water.

- **Mitigation Measure 3.13.3.6-1:** Mitigation under the Off-Site Transfer of Ore Concentrate for Processing Alternative would be the same as mitigation under the Proposed Action.
- **Effectiveness of Mitigation and Residual Effects:** Implementation of Mitigation Measure 3.13.3.6-1 would reduce any impacts to the loss of acreage or resources within the HMA to less than significant. The Mitigation Plan would also ensure the effectiveness of this mitigation measure (Appendix D, Attachment 2).
- **Impact 3.13.3.6-2:** Project-related activities, such as the addition of a fence to the Project Area or noise from human presence, blasting, vehicular traffic, or other sources,

associated with the Proposed Action could result in wild horse displacement and changes in wild horse use throughout the HMA for the life of the Project.

Significance of the Impact: Impacts from the Partial Backfill Alternative would be the same as impacts from the Proposed Action. The mitigation outlined above and in Appendix D, Attachment 2 would reduce the potential impacts to the distribution of wild horses.

3.13.3.6.1 Residual Adverse Impacts

The Off-Site Transfer of Ore Concentrate for Processing Alternative would result in the unavoidable loss of 734 acres of wild horse foraging habitat resulting from surface disturbance in the open pit area. Approximately 14,204 acres of foraging habitat would be removed in the short term. The reclaimed land would have more grass and forb forage and less mature shrub forage in the short term. Impacts of the pit lake water toxicity to wild horses would be the same as the Proposed Action.

3.13.3.7 Slower, Longer Project Alternative

Impacts to wild horses from the Slower, Longer Project Alternative are expected to be similar to impacts from the Proposed Action at the end of the Project; however, impacts from the Slower, Longer Project Alternative would occur over a period approximately twice as long in duration compared to the Proposed Action.

- **Impact 3.13.3.7-1:** Approximately 14,204 acres of wild horse habitat would be directly removed as a result of the fence. **Approximately 232 acres of wild horse habitat in the Project Area** would be potentially affected over the extended mine life and subsequent reclamation **outside of the fenced portion of the Project, excluding approximately 124 acres associated with the powerline portion of the Project Area and 50 acres associated with exploration.** The location of the 50 acres of surface disturbance associated with exploration cannot be determined at this time. The location of the 124 acres of surface disturbance associated with the powerline would occur with the powerline portion of the Project Area; however, the exact location of this disturbance has not been specified yet. The exact number of acres of surface disturbance for these two Project features within each HMA cannot be calculated at this time. Impacts to wild horses would also include a loss of access to water within the fenced portion of the Project Area. Impacts to wild horses could last approximately twice as long as the Proposed Action.

Significance of the Impact: The impact is considered significant for wild horse access to water.

- **Mitigation Measure 3.13.3.7-1:** Specific mitigation for surface water resources that has been identified as being impacted by the Project is listed in Tables 3.2-9 and 3.2-18. Otherwise, the mitigation under the Slower, Longer Project Alternative would be the same as mitigation under the Proposed Action.
- **Effectiveness of Mitigation and Residual Effects:** Implementation of Mitigation Measure 3.13.3.7-1 would reduce any impacts to the loss of acreage or resources within

the HMA to less than significant. The Mitigation Plan would also ensure the effectiveness of this mitigation measure (Appendix D, Attachment 2).

- **Impact 3.13.3.7-2:** Project-related activities, such as the addition of a fence to the Project Area or noise from blasting or other sources, associated with the Slower, Longer Project Alternative could result in wild horse displacement and changes in wild horse use throughout the HMA for the duration of the Project, which would be twice as long as the Proposed Action.

Significance of the Impact: Impacts from the Slower, Longer Project Alternative would be the same as impacts from the Proposed Action. The mitigation outlined above and in Appendix D, Attachment 2 would reduce the potential impacts to the distribution of wild horses.

3.13.3.7.1 Residual Adverse Impacts

The Slower, Longer Project Alternative would result in the unavoidable loss of 734 acres of wild horse foraging habitat resulting from surface disturbance in the open pit area. Approximately 14,204 acres of foraging habitat would be removed during Project activities. The reclaimed land would have more grass and forb forage and less mature shrub forage.

3.14 Land Use

3.14.1 Regulatory Framework

The NEPA requires the consideration of local plans and policies in the assessment of the social and environmental effects of proposals involving federal lands. Federal, state, and local plans and guidelines that apply to land use authorizations and access within the study area include the following: Shoshone-Eureka RMP; 2010 Eureka County Master Plan, including the updated Natural Resources and Federal or State Land Use (Natural Resource and Land Use Plan) and Economic Development elements; and the Land and Resource Management Plan for the Toiyabe National Forest.

The Shoshone-Eureka RMP serves as the guiding policy document for BLM administered lands surrounding the Project Area. The ROD included the following objective relevant to the Proposed Action:

Assure that mineral exploration, development and extraction are carried out in such a way as to minimize environmental and other resource damage and to provide, where legally possible, for the rehabilitation of lands.

The ROD also included the following Management Decision under Locatable Minerals:

All public lands in the planning areas would be open for mining and prospecting unless withdrawn or restricted from mineral entry.

The Growth Management, Public Facilities and Services and Economic Development elements of the 2010 Eureka County Master Plan outline goals that pertain to the Project and include the following:

the HMA to less than significant. The Mitigation Plan would also ensure the effectiveness of this mitigation measure (Appendix D, Attachment 2).

- **Impact 3.13.3.7-2:** Project-related activities, such as the addition of a fence to the Project Area or noise from blasting or other sources, associated with the Slower, Longer Project Alternative could result in wild horse displacement and changes in wild horse use throughout the HMA for the duration of the Project, which would be twice as long as the Proposed Action.

Significance of the Impact: Impacts from the Slower, Longer Project Alternative would be the same as impacts from the Proposed Action. The mitigation outlined above and in Appendix D, Attachment 2 would reduce the potential impacts to the distribution of wild horses.

3.13.3.7.1 Residual Adverse Impacts

The Slower, Longer Project Alternative would result in the unavoidable loss of 734 acres of wild horse foraging habitat resulting from surface disturbance in the open pit area. Approximately 14,204 acres of foraging habitat would be removed during Project activities. The reclaimed land would have more grass and forb forage and less mature shrub forage.

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All public lands in the planning areas would be open for mining and prospecting unless withdrawn or restricted from mineral entry.

The Growth Management, Public Facilities and Services and Economic Development elements of the 2010 Eureka County Master Plan outline goals that pertain to the Project and include the following:

- Encourage new development in Eureka County in a planned and orderly manner consistent with maintenance of existing quality of life, environmental attributes, and fiscal resource limits of the County;
- Encourage new development to areas in or proximate to existing communities where public infrastructure can be efficiently provided and a sense of community can be established or improved;
- Provide for the organized planning, funding, construction, and maintenance of infrastructure at locations consistent with planned land uses and with capacities, which are adequate to meet the needs of these planner land uses;
- Retain and expand existing business and industry; and
- Diversify and expand the Eureka County economy.

The Natural Resources and Land Use Plan focuses on natural resource management on federal and state administered lands in Eureka County. Primary goals of this element are as follows:

To maintain and improve the soil, vegetation and watershed resources in a manner that perpetuates and sustains a diversity of uses while fully supporting the custom, culture, economic stability and viability of Eureka County and its individual citizens.

Facilitate environmentally responsible exploration, development and reclamation of oil, gas, geothermal, locatable minerals, aggregate and similar resources on federal lands.

Other elements in this Master Plan include policies related to the Project. Page 5-9 of the Economic Development Element contains the following policy related to the Project (County of Eureka 2000):

- Eureka County may identify and pursue mining industry induced industrial development opportunities; and
- Eureka County may encourage the productivity of existing “Building Blocks” beginning with such assets of as work force and natural resources including water, minerals, livestock forage, and wildlife.

The Natural Resource and Land Use Plan is an executable policy for natural resource management and land use on federal and state administered lands in Eureka County. The Plan’s intention is to engage in decision making that pertains to any and all publically owned and managed lands and natural resources within its jurisdiction, as provided under law.

The Eureka County Master Plan, including the Natural Resource and Land Use Plan, were originally developed in response to Nevada SB 40, which directed the State Land Use Planning Agency to work with local planning entities to prepare local plans and policies regarding the use of federal lands in Nevada. Policies contained within the Master Plan include providing for economic stability, security and growth, social stability, private property rights, local and private management of resources, recreational opportunities, transportation and utility infrastructure, easements and ROWs, and public access to federal and state lands.

Public lands under BLM jurisdiction are managed “...on the basis of multiple use and sustained yield unless otherwise specified by law” (Sec. 102 (a)(7), FLPMA). Sec. 102 (a)(12) of FLPMA also states that, “the public lands be managed in a manner which recognizes the Nation’s need for domestic sources of minerals, food, timber, and fiber from the public lands including

implementation of the MMPA (84 Stat. 1876, 30 U.S.C. 21a) as it pertains to the public lands". The Project Area is contained within the BLM's BMD MLFO. The current operational land use plan for this region is the RMP (BLM 1986a). The plan covers 4.3 million acres of BLM-administered public lands in parts of Lander, Eureka, and Nye Counties.

BLM 43 CFR Subpart 3715 regulations address the unlawful use and occupancy of unpatented mining claims for non-mining purposes. The regulation limits such use and occupancy to that which is reasonably incident.

BLM 43 CFR 2800 regulations address the lawful use and occupancy of public lands through the BLM issuance of ROWs.

3.14.2 Affected Environment

3.14.2.1 Study Methods

The baseline data presented below is based on information from the Plan, Eureka County planning documents, and the MLFO files.

3.14.2.2 Existing Conditions

Approximately 79 percent of Eureka County lands are administered by the federal government. BLM manages the vast majority of the land in the county, while the USFS manages a small percentage of land in the southwestern corner of the county. BLM-administered public lands comprise approximately 74 percent, or 1,969,762 acres, of total federally owned lands in Eureka County (Eureka County 2000). Private lands comprise approximately 21 percent of the county. As described in the Master Plan, the single greatest surface land use within the county is open space agricultural, which is comprised of private farmland and ranches and a series of designated grazing allotments managed by the BLM. Mining represents the next largest land use with the bulk of mining activity concentrated in northeastern Eureka County.

Land uses within the Project Area consist primarily of livestock grazing and mineral exploration. The Project Area is located approximately 23 miles northwest of the Town of Eureka, which as of 2010, has a population of 610 people. The nearest residences to the Project are the Roberts Creek Ranch **to the west**, Alpha Ranch **to the north**, and residences in Diamond Valley **to the east and southeast**, which are approximately 6.5 miles, 14.5 miles north, and 9.3 miles **from the Project**, respectively. **The area in Diamond Valley with private land, which is where residences are located, is shown on Figure 3.14.1.** Livestock grazing on the Project Area and surrounding allotments in Eureka County is discussed in Section 3.12.

Historical mining occurred within the Project Area from the 1870s through the 1940s. Exxon Minerals Corporation conducted exploration activities in the late 1970s through the early 1980s. Currently, EML is conducting exploration operations within the Project Area. The closest mining operation to the Project Area is the Ruby Hill Mine, which is adjacent to the Town of Eureka, 23 miles southeast of the Project. Most of the other major mines are located approximately 40 miles or more from the Project.

Existing authorizations located within the Project Area are summarized in Table 3.14-1 and shown on Figure 3.14.1.

3.14.3 Environmental Consequences and Mitigation Measures

3.14.3.1 Significance Criteria

The Proposed Action would normally have a significant effect on land use if the following would occur:

- Result in the termination or substantial modification of a land use;
- Conflict with existing land use authorizations;
- Conflict with adopted land use plans and goals of the community where it is located; or
- Disrupt or divide the physical arrangement of an established community.

Table 3.14-1: BLM Rights-of-Way and Other Authorizations within the Project Area

Serial Number	Right-of-Way	Location		Total Width ¹ (feet)	
		Township, Range	Sections		
N-63162	Powerline	T20N, R52E	5, 8, 9, 16, 21, 27, 25-28	180	
NEV-43007	Highway		19-22, 25, 26	400	
NEV-04979	Highway		19-22, 25, 26	400	
NEV-06317	Highway		19-22, 25, 26	400	
N-56725	Road/Material Site		21, 22, 27, 28	60	
N-10758	Telephone Line		20, 25-29, 35, 36	20	
N-5253	Powerline		31-36	125	
N-82778	Well		26	NA	
N-82922	Oil and Gas Lease		4, 5	NA	
N-82923	Oil and Gas Lease		6, 7	NA	
N-82924	Oil and Gas Lease		8, 9	NA	
N-82925	Oil and Gas Lease		15-18	NA	
N-82926	Oil and Gas Lease		19-21	NA	
CC-021890	Highway		T20N, R53E	4, 5, 8, 9, 16, 21, 27, 28, 34	400
N-5253	Powerline			31, 32, 33, 34, 35	125
N-5638	Powerline	1, 2, 4, 5, 9, 12-14, 18, 19, 21, 23, 26-31, 34, 35		50	
N-5700	Power Substation/Powerline	35		NA	
N-10758	Telephone Line	30,31		20	
N-19754 03	Waste Water Ponds	35		NA	
N-19823	Waste Water Delivery Line	35		50	
N-31895	Telephone Line	29, 32		20	
N-37190	Telephone Line	4, 5, 9, 16, 21, 27, 28, 33-35		VAR	
N-48618	Pump/Pipeline	28, 33, 34		50	
N-54498	Road	28, 32, 33		66	
N-58497	Buried Fiber Optic Line	4, 5, 9, 16, 21, 27, 34		20	
N-60801	Pipeline/Road	32		20	
N-60802	Powerline	34, 35		25	
N-61422	Road	19, 29, 31		33	
N-62543	Gravel Pit	32	NA		

Serial Number	Right-of-Way	Location		Total Width ¹ (feet)
		Township, Range	Sections	
N-63162	Powerline		31-36	160
N-66394	Buried Fiber Optic Line		28-30, 33-36	15
N-74176	Powerline		28, 33	25
N-76179	Buried Fiber Optic Line		28-30, 33-36	15
N-79989	GPS Site		31	NA
N-82778	Well		31	NA
N-0 004979	Highway		28-30, 33-36	400
N-0 006317	Highway		28-30, 33-36	400
N-0 006320	Highway		33	400
N-0 006323	Highway		34	400
N-67106	Telephone Line		2, 14, 23, 26, 35	20
N-76760	Oil and Gas Lease		4, 5	NA
N-80158	Oil and Gas Lease		25, 26, 36	NA
N-83410	Oil and Gas Lease		8, 9, 16, 17	NA
N-83411	Oil and Gas Lease		20, 21, 27, 28	NA
N-83412	Oil and Gas Lease	29, 32-34	NA	
N-5638	Powerline	T21N, R50E	2-5	25
N-40118	Well		3	NA
N-40119	Well		23	NA
N-47781	Powerline		2-5, 11, 12	25
N-52399	Road		3-6	66
N-79395	Oil and Gas Lease		5-8	NA
N-47781	Powerline	T21N, R51E	7, 8, 13-17	25
N-79359	Oil and Gas Lease		4-6	NA
N-79360	Oil and Gas Lease		8, 9, 16, 17	NA
N-79361	Oil and Gas Lease		20, 21, 28, 29	NA
N-79362	Oil and Gas Lease		31-33	NA
N-79400	Oil and Gas Lease		7, 18	NA
N-79401	Oil and Gas Lease		19, 30	NA
N-82902	Oil and Gas Lease		14, 16, 24, 26	NA
N-83372	Oil and Gas Lease		1, 2, 11, 12	NA
N-78979	Oil and Gas Lease	T21.N, R52E	2-6	NA
N-5638	Powerline	T22N, R49E	26, 27, 35, 36	25
N-47781	Powerline		26-28, 35, 36	25
N-52399	Road		26, 27, 35, 36	66
N-5638	Powerline	T22N, R50E	31, 32	25
N-47781	Powerline		31, 32	25
N-52399	Road		13, 24, 25, 31, 34-36	66
N-52540	Road		1, 2, 12, 13, 24	VAR
N-53667	Reservoir		13, 24	NA
N-63162	Powerline	T22N, R51E	2, 11, 13, 14, 24, 25, 36	160

Serial Number	Right-of-Way	Location		Total Width ¹ (feet)
		Township, Range	Sections	
N-76363	Oil and Gas Lease		20, 21, 28, 29	NA
N-76364	Oil and Gas Lease		31-33	NA
N-79402	Oil and Gas Lease		19, 30	NA
N-83378	Oil and Gas Lease		16-18	NA
N-83379	Oil and Gas Lease		22, 27	NA
N-83380	Oil and Gas Lease		23-26	NA
N-83381	Oil and Gas Lease		34-36	NA
CC-022478	Highway	T22N, R52E	6-8, 16, 17, 21-23, 26, 27, 35	400
N-12655	Powerline		16-18, 21-24	25
N-58497	Buried Fiber Optic Line		6-8, 16, 17, 21-23, 26, 36	20
N-0 001471	Highway		6	400
N-63162	Powerline	T23N, R51E	1, 11, 12, 14, 23, 26, 35	160
N-83392	Oil and Gas Lease		23-26	NA
N-83394	Oil and Gas Lease		34, 35, 36	NA
N-58497	Telephone Line	T23N, R52E	6, 7, 18, 19, 30, 31	20
N-0 001471	Highway		6, 7, 18, 19, 30, 31	400
N-0 001417	Material Site		31	NA
N-78976	Oil and Gas Lease		19-21, 28-33	NA

¹ NA: Not applicable
VAR: Variable

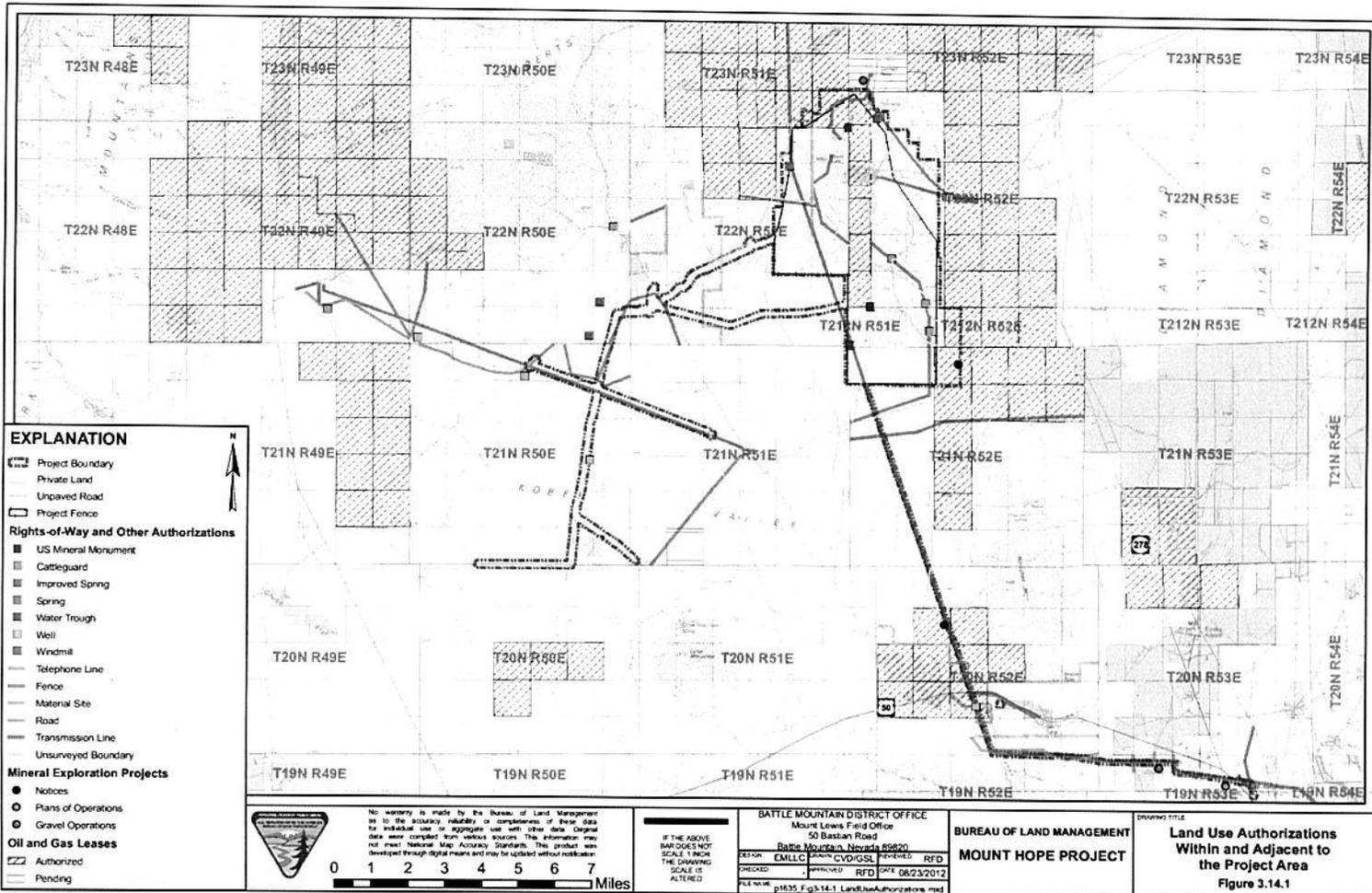
3.14.3.2 Assessment Methodology

The Proposed Action and alternatives are compared with existing land uses, land use plans, any relevant goals, policies, and decisions of those plans, to determine if they would adversely affect these land uses or conflict with existing land use plans. To evaluate impacts to access, the Proposed Action and alternatives were reviewed against existing conditions and federal and county land use plan policies. The significance criteria were then applied to determine if the adverse effects would be considered significant impacts if the Project or an alternative were implemented.

3.14.3.3 Proposed Action

3.14.3.3.1 Short-Term and Long-Term Loss of Public Lands

Implementation of the Proposed Action would result in the temporary disturbance of 8,355 acres of public lands managed for multiple uses and private land within the 14,204-acre fenced portion of the Project Area over as many as 70 years, which includes the mining and reclamation phases of the Project. The locations of the proposed disturbances and area fenced at the end of mining are identified on Figure 2.1.5, and the surface acreage by mine facility component is identified in Table 2.1-1. The fenced area would be temporarily unavailable for current land uses, which consist primarily of livestock grazing and mineral exploration. As outlined in Section 3.12, the Proposed Action would result in the loss of 781 AUMs in the Project Area, which represents a six percent loss of the active grazing preference in the Roberts Mountain and Romano



Allotments. As described in Section 2.1.17, EML would reclaim the Project Area to provide a post-mining surface condition that would be consistent with the expected long-term land uses, wildlife habitat, livestock grazing, **wild horse habitat**, and possible future mining-related activities.

The open pit, which comprises 734 acres, would not be reclaimed to the pre-mining land use. Following the cessation of mining and open pit dewatering, ground water would be allowed to enter and accumulate within the open pit, forming a pit lake. The BLM has no plans to develop this water-filled pit for recreational purposes. As described in the Proposed Action, to ensure public safety and prevent vehicular and deter livestock access, reclamation of the open pit would include construction of a physical perimeter barricade.

- **Impact 3.14.3.3-1:** Public lands currently utilized for livestock grazing, **wild horse habitat**, and mineral exploration would be removed from use as a result of the construction and operation of the Project. The Proposed Action would result in the removal of 14,204 acres from multiple use as a result of the Project facilities and fencing for the life of the Project. In addition, 8,355 acres of disturbance would occur within the fenced portion of the Project Area. Reclamation would be completed for 7,621 acres, or 91 percent, of the disturbed area (Section 2.1.17). Approximately 734 acres of public land in the vicinity of the open pit would not be reclaimed to the pre-mining land use.

Significance of the Impact: This impact is not considered significant.

No mitigation is proposed for this impact; see Section 3.1.1 for a general discussion of significance and the development of mitigation measures.

3.14.3.3.2 Impacts to Land Use Authorizations

The Proposed Action would not result in any impacts or changes to land ownership within the Project Area. As described in the Proposed Action, the Project would result in some changes to the existing ROWs and other authorizations within the Project Area. ROWs proposed for the Project include the following: a 230-kV transmission line from the Machacek Substation to the Project Substation located near the proposed mill; and a ROW (N-63162) amendment associated with the reroute of the 345-kV Falcon-Gondor transmission line. A powerline (ROW N-12655) that extends from SR 278 to the historic Hope Mine would be affected by the construction of the Project processing facilities (Figure 3.14.1). In addition, the BLM has approved three cattle guards and three fences as range improvement and constructed two mineral monuments within the mine area portion of the Project Area that would be altered or removed as part of the Proposed Action (Figure 3.14.1).

The transmission line from Machacek Substation to the Project can be reclaimed after mining. Wells located in the Kobeh Valley Well Field area would be plugged and abandoned at the cessation of mining and reclamation. The Falcon-Gondor transmission line that would be rerouted would be left in place. The BLM would be notified if the ROW or a portion of the ROW would be relinquished by EML. The BLM would subsequently amend the ROW grant as required.

- **Impact 3.14.3.3-2:** Public lands currently occupied by ROWs and other land use authorizations would be altered, which would result in the alteration or removal of up to 15 ROWs and other land use authorizations.

Significance of the Impact: This impact is considered less than significant; however, mitigation measures are considered appropriate.

- **Mitigation Measure 3.14.3.3-2:** EML would, in consultation with the BLM and authorized holders of the affected ROWs, reestablish the structures that would be altered or removed, as appropriate.
- **Effectiveness of Mitigation and Residual Effects:** Implementation of this mitigation measure would be effective at maintaining the impact level as less than significant by reestablishing the authorized structures that would be removed or altered during Project construction and operation.

3.14.3.3.3 Land Use Plans and Goals

Plans and regulations currently in place to guide development in Eureka County include the following: Eureka County Master Plan (2010); Titles 8 and 9 of the Eureka County Code; and the BLM's RMP (BLM 1986a). The Proposed Action would not conflict with any federal land use plans or regulations. EML's proposed use of public lands under the Proposed Action is reasonably incident under the BLM's occupancy regulations at 43 CFR 3715. Some elements of the Proposed Action would be in conformance with Eureka County plans and policies while other elements of the proposed mine could prove inconsistent with these plans and policies. Potential inconsistencies identified by Eureka County are disclosed in Appendix A with a discussion of the efforts to reconcile or the rationale of the decision maker where reconciliation has not been achieved. The Proposed Action would not otherwise impact land use authorizations.

3.14.3.3.4 Disruption or Division of an Established Community

The Proposed Action would not disrupt or divide the physical arrangement of an established community. As described previously in Section 3.14.2.1.1, Existing Conditions, the closest community to the Project Area is the Town of Eureka, approximately 23 miles southeast of the Project Area. The closest residences to the Project Area are the Roberts and Alpha ranches, approximately five miles northwest and north, respectively. The existing land uses within the Project Area consist primarily of livestock grazing, **wild horse habitat**, and mineral exploration. Since there is no established community within the Project Area or within the vicinity of the Project Area, the Proposed Action would not disrupt or divide the physical arrangement of an established community.

3.14.3.3.5 Impacts to Private Land Uses

The Proposed Action has the potential to result in indirect impacts to private lands that are in the vicinity of the Project. Private lands controlled by EML are not included in this analysis (refer to the Proposed Action in Section 2.1 for a description of direct effects to EML's private land). The potential indirect effects are a result of the ground water drawdown resulting for Project pumping activities. Section 3.2.3 of the EIS describes those

ground water effects. The potential indirect effects to private land include the lowering of the water levels in wells (see Section 3.2.3), the reduction of flows in creeks that cross the private land (see Section 3.2.3), or a decrease in vegetation that is reliant of surface water or near surface ground water (see Sections 3.2.3, 3.9.3, and 3.11.3). In addition, there could be a reduction in the water that is available for agricultural irrigation of livestock watering (see Section 3.12.3).

- **Impact 3.14.3.3-3: The Proposed Action would have a potential indirect effect to private land uses as a result of ground water drawdown.**

Significance of the Impact: This impact is considered potentially significant; however, mitigation measures described in Section 3.2.3 are considered appropriate to reduce the impact to less than significant.

No mitigation is proposed for this impact; see Section 3.1.1 for a general discussion of significance and the development of mitigation measures. See Section 3.26 for suggested mitigation outside the BLM's jurisdiction.

3.14.3.3.6 Residual Adverse Impacts

The Proposed Action would result in the unavoidable loss of 734 acres of public lands utilized for livestock grazing, **wild horse habitat**, and mineral exploration resulting from surface disturbance associated with the open pit; however, there would be no residual impacts to land use.

3.14.3.4 No Action Alternative

3.14.3.4.1 Short-Term and Long-Term Loss of Public Lands

Under the No Action Alternative, EML is currently authorized under **seven** Notices to disturb approximately **35** acres of public land as a result of the exploration and development of the Project. Facilities and operations that have been approved but not yet completed would have impacts on land use and access. Public lands managed for multiple uses within the Project Area that have been proposed for surface disturbance and fencing would remain accessible.

No additional public lands would be removed from multiple use management, and impacts to land use would be limited to ongoing permitted mining and exploration activities.

3.14.3.4.2 Impacts to Land Use Authorizations

Under the No Action Alternative, EML is currently authorized under **seven** Notices to disturb approximately **35** acres of public land as a result of the exploration and development of the Project. Continuation of these Notices would be required to adhere to regional and local land use plans and regulations similar to the Proposed Action, which include: the Eureka County Master Plan (2010); the Natural Resources and Federal or State Land Use Element of the Eureka County Master Plan; and the BLM's RMP (BLM 1986a). Therefore, the No Action Alternative would not result in impacts to land use authorizations.

3.14.3.4.3 Land Use Plans and Goals

The No Action Alternative would not conflict with land use plans and regulations currently in place to guide development in Eureka County. These plans and regulations include the following: the Eureka County Master Plan (2010); the Natural Resources and Federal or State Land Use Element of the Eureka County Master Plan; and the BLM's RMP (BLM 1986a). The No Action Alternative would not otherwise impact land use authorizations.

3.14.3.4.4 Disruption or Division of an Established Community

Under the No Action Alternative, EML would continue existing surface disturbing activities within the Project Area. As discussed previously, there is no established community within the Project Area or in the vicinity of the Project Area. Therefore, there would be no impacts to the disruption or division of the physical arrangement of an established community under the No Action Alternative.

3.14.3.4.5 Impacts to Private Land Uses

Under the No Action Alternative there would be no indirect impacts to private lands that are in the vicinity of the Project.

3.14.3.4.6 Residual Adverse Impacts

There would be no residual impacts to land use under the No Action Alternative, other than those impacts caused by permitted operations at the Project.

3.14.3.5 Partial Backfill Alternative

3.14.3.5.1 Short-Term and Long-Term Loss of Public Lands

Implementation of the Partial Backfill Alternative would result in the temporary disturbance of 8,355 acres of public lands managed for multiple uses and private land within the 14,204-acre fenced portion of the Project Area over as much as 70 years, which include the mining and reclamation phases of the Project. The locations of the proposed disturbances and fenced area are identified on Figure 2.1.5. The end of mining surface acreage by mine facility component is identified in Table 2.1-1. The fenced area would be temporarily unavailable for current land uses, which consist primarily of livestock grazing, **wild horse habitat**, and mineral exploration. As outlined in Section 3.12, the Partial Backfill Alternative would result in the loss of 781 AUMs in the Project Area, which represents six percent loss of the active grazing preference in the Roberts Mountain and Romano Allotments. As described in Section 2.1.17, EML would reclaim the Project Area to provide a post-mining surface condition that would be consistent with the expected long-term land uses, wildlife habitat, livestock grazing, **wild horse habitat**, and possible future mining-related activities.

The backfilled portion of the open pit would be reclaimed (527 acres), which would leave the remaining open pit highwalls that would not be reclaimed to the pre-mining land use, which comprises 206 acres; however, to ensure public safety and prevent vehicular and deter livestock access, reclamation of the open pit would include construction of a physical perimeter barricade, which is similar to the Proposed Action. As a result, there would be less of an impact to long-term loss of public lands.

- **Impact 3.14.3.5-1:** Public lands currently utilized for livestock grazing, **wild horse habitat**, and mineral exploration would be removed from use as a result of the construction and operation of the Project. The **Partial Backfill Alternative** would result in the removal of 14,204 acres from multiple use as a result of the Project facilities and fencing. In addition, 8,355 acres of disturbance would occur within the fenced portion of the Project Area. Reclamation would be completed for 7,621 acres, or 91 percent, of the disturbed area (Section 2.1.17). Approximately 734 acres of public land in the vicinity of the open pit would be partially reclaimed, but not available to wildlife habitat pre-mining land use.

Significance of the Impact: This impact is not considered significant.

No mitigation is proposed for this impact; see Section 3.1.1 for a general discussion of significance and the development of mitigation measures.

3.14.3.5.2 Impacts to Land Use Authorizations

The Partial Backfill Alternative would not result in any impacts or changes to land ownership within the Project Area. This alternative would result in some changes to the existing ROWs within the Project Area. Changes to the existing ROWs proposed for the Project include the following: a 230-kV transmission line from the Machacek Substation to the Project Substation located near the proposed mill; and a ROW amendment associated with the reroute of the 345-kV Falcon-Gondor transmission line. In addition, the BLM has authorized three windmills, and three fences as range improvements and constructed three mineral monuments within the mine area portion of the Project Area that would be either altered or removed as part of the Proposed Action.

The transmission line from Machacek Substation to the Project can be reclaimed after mining. Wells located in the Kobeh Valley Well Field area would be plugged and abandoned at the cessation of mining and reclamation. The Falcon-Gondor transmission line that would be rerouted would be left in place. The BLM would be notified if the ROW or a portion of the ROW would be relinquished by EML. The BLM could subsequently amend the ROW grant as required.

- **Impact 3.14.3.5-2:** Public lands currently occupied by ROWs and land use authorizations would be altered, which would result in the alteration or removal of up to 15 ROWs and land use authorizations.

Significance of the Impact: This impact is considered less than significant; however, mitigation measures are considered appropriate.

- **Mitigation Measure 3.14.3.5-2:** EML would, in consultation with the BLM and authorized holders of the affected ROWs, reestablish the structures that would be altered or removed, as appropriate.
- **Effectiveness of Mitigation and Residual Effects:** Implementation of this mitigation measure would be effective at maintaining the impact level as less than significant by reestablishing the authorized structures that would be removed or altered during Project construction and operation.

3.14.3.5.3 Land Use Plans and Goals

Plans and regulations currently in place to guide development in Eureka County include the Eureka County Master Plan (2010); Titles 8 and 9 of the Eureka County Code; and the BLM's RMP (BLM 1986a). The Proposed Action would not conflict with any federal land use plans or regulations. EML's proposed use of public lands under the proposed action is reasonably incident under the BLM's occupancy regulations at 43 CFR 3715. Some elements of the Proposed Action would be in conformance with Eureka County plans and policies while other elements of the proposed mine could prove inconsistent with these plans and policies. Potential inconsistencies identified by Eureka County are disclosed in Appendix A with an indication if each conflict has been reconciled and either the method of reconciliation if it has or the rationale of the decision maker where reconciliation has not been achieved. The Partial Backfill Alternative would not otherwise impact land use authorizations.

3.14.3.5.4 Disruption or Division of an Established Community

The Partial Backfill Alternative would only disturb lands within the Project Area. As previously discussed, there is no established community within the Project Area or within the vicinity of the Project Area. Therefore, the Partial Backfill Alternative would not disrupt or divide the physical arrangement of an established community.

3.14.3.5.5 Impacts to Private Land Uses

The Partial Backfill Alternative has the potential to result in indirect impacts to private lands that are in the vicinity of the Project. Private lands controlled by EML are not included in this analysis (refer to the Proposed Action in Section 2.1 for a description of direct effects to EML's private land). The potential indirect effects are a result of the ground water drawdown resulting for Project pumping activities. Section 3.2.3 of the EIS describes those ground water effects. The potential indirect effects to private land include the lowering of the water levels in wells (see Section 3.2.3), the reduction of flows in creeks that cross the private land (see Section 3.2.3), or a decrease in vegetation that is reliant of surface water or near surface ground water (see Sections 3.2.3, 3.9.3, and 3.11.3). In addition, there could be a reduction in the water that is available for agricultural irrigation of livestock watering (see Section 3.12.3).

- **Impact 3.14.3.5-3: The Partial Backfill Alternative would have a potential indirect effect to private land uses as a result of ground water drawdown.**

Significance of the Impact: This impact is considered potentially significant; however, mitigation measures described in Section 3.2.3 are considered appropriate to reduce the impact to less than significant.

No mitigation is proposed for this impact; see Section 3.1.1 for a general discussion of significance and the development of mitigation measures. See Section 3.26 for suggested mitigation outside the BLM's jurisdiction.

3.14.3.5.6 Residual Adverse Impacts

The Partial Backfill Alternative would result in the unavoidable loss of 734 acres of public lands utilized for livestock grazing, **wild horse habitat**, and mineral exploration, resulting from surface disturbance of the open pit area.

3.14.3.6 Off-Site Transfer of Ore Concentrate for Processing Alternative

3.14.3.6.1 Short-Term and Long-Term Loss of Public Lands

Implementation of the Off-Site Transfer of Ore Concentrate for Processing Alternative would result in the temporary disturbance of 8,355 acres of public lands managed for multiple uses and private land within the 14,204-acre fenced portion of the Project Area over as much as 70 years, which include the mining and reclamation phases of the Project. The locations of the proposed disturbances and fenced area are identified on Figure 2.1.5. The end of mining surface acreage by mine facility component is identified in Table 2.1-1. The fenced area would be temporarily unavailable for current land uses, which consist primarily of livestock grazing, **wild horse habitat**, and mineral exploration. As outlined in Section 3.12, the Off-Site Transfer of Ore Concentrate for Processing Alternative would result in the loss of 781 AUMs which represents a six percent loss of the active grazing preference in the Roberts Mountain and Romano Allotments. As described in Section 2.1.17, EML would reclaim the Project Area to provide a post-mining surface condition that would be consistent with the expected long-term land uses, wildlife habitat, livestock grazing, **wild horse habitat**, and possible future mining-related activities.

The open pit, which comprises 734 acres, would not be reclaimed to the pre-mining land use. Following the cessation of mining and open pit dewatering, ground water would be allowed to enter and accumulate within the open pit, forming a pit lake. The BLM has no plans to develop this water-filled pit for recreational purposes. As described in the Off-Site Transfer of Ore Concentrate for Processing Alternative, to ensure public safety and prevent vehicular and deter livestock access, reclamation of the open pit would include construction of a physical perimeter barricade. As a result, there would be less of an impact to long-term loss of public lands.

- **Impact 3.14.3.6-1:** Public lands currently utilized for livestock grazing, **wild horse habitat**, and mineral exploration would be removed from use as a result of the construction and operation of the Project. The Off-Site Transfer of Ore Concentrate for Processing Alternative would result in the removal of 14,204 acres from multiple use as a result of the Project facilities and fencing. In addition, 8,355 acres of disturbance would occur within the fenced portion of the Project Area. Reclamation would be completed for 7,621 acres, or 91 percent, of the disturbed area (Section 2.1.17). Approximately 734 acres of public land in the vicinity of the open pit would not be reclaimed to the pre-mining land use.

Significance of the Impact: This impact is not considered significant.

No mitigation is proposed for this impact; see Section 3.1.1 for a general discussion of significance and the development of mitigation measures.

3.14.3.6.2 Impacts to Land Use Authorizations

The Off-Site Transfer of Ore Concentrate for Processing Alternative would not result in any impacts or changes to land ownership within the Project Area. As described in the Off-Site Transfer of Ore Concentrate for Processing Alternative, the Project would result in some changes to the existing ROWs within the Project Area. Changes to the existing ROWs proposed for the Project include the following: a 230-kV transmission line from the Machacek Substation to the Project Substation located near the proposed mill; and a ROW amendment associated with the reroute of the 345 kV Falcon-Gondor transmission line. In addition, the BLM has authorized three windmills, and three fences as range improvements and constructed three mineral monuments within the mine area portion of the Project Area that would either be altered or removed as part of the Off-Site Transfer of Ore Concentrate for Processing Alternative.

The transmission line from Machacek Substation to the Project can be reclaimed after mining. Wells located in the Kobeh Valley Well Field area would be plugged and abandoned at the cessation of mining and reclamation. The Falcon-Gondor transmission line that would be rerouted would be left in place. The BLM would be notified if the ROW or a portion of the ROW would be relinquished by EML. The BLM could subsequently amend the ROW grant as required.

- **Impact 3.14.3.6-2:** Public lands currently occupied by ROWs and land use authorizations would be altered, which would result in the alteration or removal of up to 15 ROWs and land use authorizations.

Significance of the Impact: This impact is considered less than significant; however mitigation measures are considered appropriate.

- **Mitigation Measure 3.14.3.6-2:** EML would, in consultation with the BLM and authorized holders of the affected ROWs, reestablish the structures that would be altered or removed, as appropriate.
- **Effectiveness of Mitigation and Residual Effects:** Implementation of this mitigation measure would be effective at maintaining the impact level as less than significant by reestablishing the authorized structures that would be removed or altered during Project construction and operation.

3.14.3.6.3 Land Use Plans and Goals

Plans and regulations currently in place to guide development in Eureka County include the Eureka County Master Plan (2010); Titles 8 and 9 of the Eureka County Code; and the BLM's RMP (BLM 1986a). The Proposed Action would not conflict with any federal land use plans or regulations. EML's proposed use of public lands under the proposed action is reasonably incident under the BLM's occupancy regulations at 43 CFR 3715. Some elements of the Proposed Action would be in conformance with Eureka County plans and policies while other elements of the proposed mine could prove inconsistent with these plans and policies. Potential inconsistencies identified by Eureka County are disclosed in Appendix A with an indication if each conflict has been reconciled and either the method of reconciliation if it has or the rationale of the decision maker where reconciliation has not

been achieved. The Off-Site Transfer of Ore Concentrate for Processing Alternative would not otherwise impact land use authorizations.

3.14.3.6.4 Disruption or Division of an Established Community

The Off-Site Transfer of Ore Concentrate for Processing Alternative would only disturb lands within the Project Area. As previously discussed, there is no established community within the Project Area or within the vicinity of the Project Area. Therefore, the Off-Site Transfer of Ore Concentrate for Processing Alternative would not disrupt or divide the physical arrangement of an established community from the Partial Backfill Alternative.

3.14.3.6.5 Impacts to Private Land Uses

The Off-Site Transfer of Ore Concentrate for Processing Alternative has the potential to result in indirect impacts to private lands that are in the vicinity of the Project. Private lands controlled by EML are not included in this analysis (refer to the Proposed Action in Section 2.1 for a description of direct effects to EML's private land). The potential indirect effects are a result of the ground water drawdown resulting for Project pumping activities. Section 3.2.3 of the EIS describes those ground water effects. The potential indirect effects to private land include the lowering of the water levels in wells (see Section 3.2.3), the reduction of flows in creeks that cross the private land (see Section 3.2.3), or a decrease in vegetation that is reliant of surface water or near surface ground water (see Sections 3.2.3, 3.9.3, and 3.11.3). In addition, there could be a reduction in the water that is available for agricultural irrigation of livestock watering (see Section 3.12.3).

- **Impact 3.14.3.6-3: The Off-Site Transfer of Ore Concentrate for Processing Alternative would have a potential indirect effect to private land uses as a result of ground water drawdown.**

Significance of the Impact: This impact is considered potentially significant; however, mitigation measures described in Section 3.2.3 are considered appropriate to reduce the impact to less than significant.

No mitigation is proposed for this impact; see Section 3.1.1 for a general discussion of significance and the development of mitigation measures. See Section 3.26 for suggested mitigation outside the BLM's jurisdiction.

3.14.3.6.6 Residual Adverse Impacts

The Off-Site Transfer of Ore Concentrate for Processing Alternative would result in the unavoidable loss of 734 acres of public lands utilized for livestock grazing, **wild horse habitat**, and mineral exploration, resulting from surface disturbance of the open pit area.

3.14.3.7 Slower, Longer Project Alternative

Impacts to land use from the Slower, Longer Project Alternative are expected to be similar to impacts from the Proposed Action at the end of the Project; however, impacts from the Slower, Longer Project Alternative would occur over a period approximately twice as long in duration compared to the Proposed Action.

3.14.3.7.1 Short-Term and Long-Term Loss of Public Lands

Implementation of the Slower, Longer Project Alternative would result in the temporary disturbance of 8,355 acres of public lands managed for multiple uses and private land within the 14,204-acre fenced portion of the Project Area over as much as 115 years, which include the mining and reclamation phases of the Project. The locations of the proposed disturbances and fenced area are identified on Figure 2.1.5. The end of mining surface acreage by mine facility component is identified in Table 2.1-1. The fenced area would be temporarily unavailable for current land uses, which consist primarily of livestock grazing, **wild horse habitat**, and mineral exploration. As outlined in Section 3.12, the Slower, Longer Project Alternative would result in the loss of 781 AUMs which represents a six percent loss of the active grazing preference in the Roberts Mountain and Romano Allotments. As described in Section 2.1.17, EML would reclaim the Project Area to provide a post-mining surface condition that would be consistent with the expected long-term land uses, wildlife habitat, livestock grazing, **wild horse habitat**, and possible future mining-related activities.

The open pit, which comprises 734 acres, would not be reclaimed to the pre-mining land use. Following the cessation of mining and open pit dewatering, ground water would be allowed to enter and accumulate within the open pit, forming a pit lake. The BLM has no plans to develop this water-filled pit for recreational purposes. As described in the Slower, Longer Project Alternative, to ensure public safety and prevent vehicular and deter livestock access, reclamation of the open pit would include construction of a physical perimeter barricade. As a result, there would be less of an impact to long-term loss of public lands.

- **Impact 3.14.3.7-1:** Public lands currently utilized for livestock grazing, **wild horse habitat**, and mineral exploration would be removed from use as a result of the construction and operation of the Project. The Slower, Longer Project Alternative would result in the removal of 14,204 acres from multiple use as a result of the Project facilities and fencing. In addition, 8,355 acres of disturbance would occur within the fenced portion of the Project Area. Reclamation would be completed for 7,621 acres, or 91 percent, of the disturbed area (Section 2.1.17). Approximately 734 acres of public land in the vicinity of the open pit would not be reclaimed to the pre-mining land use.

Significance of the Impact: This impact is not considered significant.

No mitigation is proposed for this impact; see Section 3.1.1 for a general discussion of significance and the development of mitigation measures.

3.14.3.7.2 Impacts to Land Use Authorizations

The Slower, Longer Project Alternative would not result in any impacts or changes to land ownership within the Project Area. As described in the Slower, Longer Project Alternative, the Project would result in some changes to the existing ROWs within the Project Area. Changes to the existing ROWs proposed for the Project include the following: a 230-kV transmission line from the Machacek Substation to the Project Substation located near the proposed mill; and a ROW amendment associated with the reroute of the 345 kV Falcon-Gondor transmission line. In addition, the BLM has authorized three windmills, and three fences as range improvements and constructed three mineral monuments within the mine area portion of the Project Area that would either be altered or removed as part of the Slower, Longer Project Alternative.

The transmission line from Machacek Substation to the Project can be reclaimed after mining. Wells located in the Kobeh Valley Well Field area would be plugged and abandoned at the cessation of mining and reclamation. The Falcon-Gondor transmission line that would be rerouted would be left in place. The BLM would be notified if the ROW or a portion of the ROW would be relinquished by EML. The BLM could subsequently amend the ROW grant as required.

- **Impact 3.14.3.7-2:** Public lands currently utilized for ROWs **and other land use authorizations** would be altered, which would result in the alteration or removal of up to 15 ROWs **and other land use authorizations**.

Significance of the Impact: This impact is considered less than significant; however, mitigation measures are considered appropriate.

- **Mitigation Measure 3.14.3.7-2:** EML would, in consultation with the BLM and authorized holders of the affected ROWs **and other land use authorizations**, reestablish the structures that would be altered or removed, as appropriate.
- **Effectiveness of Mitigation and Residual Effects:** Implementation of this mitigation measure would be effective at maintaining the impact level as less than significant by reestablishing the authorized structures that would be removed or altered during Project construction and operation.

3.14.3.7.3 Land Use Plans and Goals

Plans and regulations currently in place to guide development in Eureka County include the Eureka County Master Plan (2010); Titles 8 and 9 of the Eureka County Code; and the BLM's RMP (BLM 1986a). The Proposed Action would not conflict with any federal land use plans or regulations. EML's proposed use of public lands under the proposed action is reasonably incident under the BLM's occupancy regulations at 43 CFR 3715. Some elements of the Proposed Action would be in conformance with Eureka County plans and policies while other elements of the proposed mine could prove inconsistent with these plans and policies. Potential inconsistencies identified by Eureka County are disclosed in Appendix A with an indication if each conflict has been reconciled and either the method of reconciliation if it has or the rationale of the decision maker where reconciliation has not been achieved. The Slower, Longer Project Alternative would not otherwise impact land use authorizations.

3.14.3.7.4 Disruption or Division of an Established Community

The Slower, Longer Project Alternative would not disrupt or divide the physical arrangement of an established community.

3.14.3.7.5 Impacts to Private Land Uses

The Slower, Longer Project Alternative has the potential to result in indirect impacts to private lands that are in the vicinity of the Project. Private lands controlled by EML are not included in this analysis (refer to the Proposed Action in Section 2.1 for a description of direct effects to the EML private land). The potential indirect effects are a result of the

ground water drawdown resulting for Project pumping activities. Section 3.2.3 of the EIS describes those ground water effects. The potential indirect effects to private land include the lowering of the water levels in wells (see Section 3.2.3), the reduction of flows in creeks that cross the private land (see Section 3.2.3), or a decrease in vegetation that is reliant of surface water or near surface ground water (see Sections 3.2.3, 3.9.3, and 3.11.3). In addition, there could be a reduction in the water that is available for agricultural irrigation of livestock watering (see Section 3.12.3).

- **Impact 3.14.3.7-3: The Slower, Longer Project Alternative would have a potential indirect effect to private land uses as a result of ground water drawdown.**

Significance of the Impact: This impact is considered potentially significant; however, mitigation measures described in Section 3.2.3 are considered appropriate to reduce the impact to less than significant.

No mitigation is proposed for this impact; see Section 3.1.1 for a general discussion of significance and the development of mitigation measures. See Section 3.26 for suggested mitigation outside the BLM's jurisdiction.

3.14.3.7.6 Residual Adverse Impacts

The Slower, Longer Project Alternative would result in the unavoidable loss of 734 acres of public lands utilized for livestock grazing, **wild horse habitat**, and mineral exploration, resulting from surface disturbance of the open pit area.

3.15 Recreation and Wilderness Study Areas

3.15.1 Regulatory Framework

Federal, state, and local laws, regulations, guidelines, and procedures that apply to the management of recreation and wilderness resources include the following: Eureka County Master Plan; Nevada Statewide Comprehensive Outdoor Recreation Plan (SCORP); FLPMA; RMP; Land and Resource Management Plan for the Toiyabe National Forest; Wilderness Act of 1964, as amended; BLM Manual 8560/H-8560-1 (Management of Designated Wilderness Areas); BLM Manual 8561 (Wilderness Management Plans); and Interim Management Policy (IMP) for Lands Under Wilderness Review H-8550-1.

The Eureka County 1973 Master Plan, updated in 2010, contains a description of land uses, restrictions on development, and recommendations for future land use planning. The Natural Resources and Federal or State Land Use Element updated in 2000 and again in 2010, was originally developed and included into the Plan in response to Nevada **SB 40** (1983) which directs counties to develop plans and strategies for resources that occur within lands managed by federal and state agencies. Hunting, fishing, and outdoor recreation is specifically addressed in the Natural Resources and Federal or State Land Use Element of the Master Plan, which describes and establishes the following recreation goals:

Provide for multiple recreation uses on Eureka County federal and state administered lands located within its boundaries for residents and visitors to the County. Provide recreational uses including high quality recreational opportunities and experiences at

developed and dispersed/undeveloped recreation sites by allowing historic uses and access while maintaining existing amenities and by providing new recreation sites for public enjoyment. Pursue increased public access opportunities in both motorized and non-motorized settings through the acquisition of ROWs or easements across federal administered lands and private lands at the invitation of the property owner. Recognize that multiple recreation uses are mandated by the multiple use concepts and that adequate outdoor recreation resources must be provided on the federal administered areas; keeping open all existing access roads and the ability to maintain those same roads or accesses (Eureka County 2010).

The Nevada SCORP “provides information and recommendations to minimize uncertainty in the decision-making process of allocating outdoor recreation resources. In Nevada, the SCORP is the framework for the presentation and dissemination of outdoor recreation information on a statewide basis” (Nevada Division of State Parks 2010). Completion of the SCORP completed in 2010 is one of the requirements for the state to maintain eligibility for federal financial assistance through the Land and Water Conservation Fund Act of 1965 and the SCORP guides the expenditure of money provided through this program. The SCORP also provides a means for coordination between recreation providers in the state and enables each provider to assess their operations and to consider issues, actions, activities, and needs on a statewide level. The goal of the SCORP is to increase and improve the quality of outdoor recreation opportunities in Nevada (Nevada Division of State Parks 2010). The SCORP also includes specific strategies to address the most pressing outdoor recreational issues. Strategy Four specifically states, “Promote conservation of statewide water resources and wildland areas. Strive to work with partners to gain landscape level conservation: river, riparian and natural water bodies, and land conservation for wildlife and their habitats” (Nevada Division of State Parks 2010, page 27).

As shown in Figure 3.15.1, there are no designated wilderness areas within or adjacent to the study area for recreation and wilderness; however, the Roberts Mountain Wilderness Study Area (WSA) and a portion of the Simpson Park WSA are within the study area. The BLM’s IMP for Lands Under Wilderness Review (BLM 1995) guides management decisions made for specific areas of public lands under wilderness review by Congress. The policy applies to the following: (a) WSAs identified by the wilderness review required by Section 603 of the FLPMA; (b) WSAs established by Congress; and (c) WSAs identified through the land use planning process in Section 202 of FLPMA. The purpose of the IMP is to prevent impairment of the wilderness values, described in Section 2 (c) of the Wilderness Act of 1964 (P.L. 88/577). WSAs are managed under the IMP until such time as Congress makes a determination regarding wilderness designation. The IMP would apply to the WSAs in the study area; however, there are no WSAs located within the Project Area (Figure 3.15.1).

The study area is located primarily on public land within the Shoshone-Eureka Resource Area. A portion of the study area is also located on **National Forest System** (NFS) lands within the Humboldt-Toiyabe National Forest, which is administered by the Austin Ranger District of the USFS. Recreation policies within the Shoshone-Eureka Resource Area and the Humboldt-Toiyabe National Forest are guided by the BLM’s RMP and the USFS’s Land and Resource Management Plan for the Toiyabe National Forest, respectively. The majority of the lands within the Project Area and the study area are designated for multiple use.

3.15.2 Affected Environment

3.15.2.1 Study Methods

The baseline data presented below are based on information from public agency maps and reports including the Nevada SCORP and from communications with federal, state, county, and community officials.

The study area for recreation and wilderness resources is defined as an area generally bounded by the Simpson Park Range, Pine Valley, Newark Valley and approximately 30 miles south of Eureka, which includes the Fish Creek Range, Mahogany Hills, Ninemile Peak, and the northern portions of the Antelope and Monitor Ranges (Figure 3.15.1). This area was based on topography and inclusion of areas typically used by residents of Eureka and Diamond Valley. All federal, state, local, and private recreation areas are included within the study area and are outlined under the existing conditions subsection.

3.15.2.2 Existing Conditions

3.15.2.2.1 Recreation

Dispersed recreation is the predominant type of recreation within the study area and the surrounding region. The area attracts thousands of visitors annually because a wide variety of outdoor recreation activities occur on BLM-administered lands. There is one developed recreation site, Hickison Petroglyph Recreation Site. All other recreation is of a dispersed nature. The most popular recreation activities include sightseeing, pleasure driving, rock collecting, photography, winter sports, off-highway vehicle (OHV) use, mountain biking, picnicking, camping, fishing, hunting, horseback riding, and hiking. This wide range of opportunities is possible because virtually all of the public lands in the study area are accessible and offer a variety of settings suitable for different recreational activities. Dispersed recreational activities have not required major improvements for recreational purposes, as existing roads and trails are the primary facilities associated with these activities, and visitors usually travel on a previously used or marked motorized vehicle route to reach a recreation site or trailhead. Surface disturbance has occurred as a result of dispersed recreation activities and is evaluated in the cumulative impacts discussion (Chapter 4) to the extent possible. Disturbance from dispersed recreation cannot be readily quantified.

Recreational opportunities are grouped along a continuum of opportunities ranging from intensive vehicle-oriented activities at one end to non-motorized activities undertaken in a primitive setting at the other, although there is often overlap between the two. Table 3.15-1 lists the recreational areas, or portions of recreational areas, within the study area and the estimated annual visitors for 2006.

High Use Recreation Areas

Hickison Petroglyph Recreation Site

The Hickison Petroglyph Recreation Site is located approximately 24 miles east of Austin, Nevada, along U.S. Highway 50. The site is the most popular recreational destination in the study area with more than 21,000 visitors in 2006. Recreational opportunities at this site include