

## **EXECUTIVE SUMMARY**



# Executive Summary

## Introduction

This Executive Summary provides a brief overview of the Final Environmental Impact Statement (FEIS) for the Long Canyon Mine Project. As a synopsis of the FEIS for the public, it should not be considered a substitute for review of the complete FEIS.

The FEIS has front matter, seven chapters, and appendices. The front matter includes this Executive Summary, a list of acronyms used in the document, and the Table of Contents. Chapter 1 provides an introduction to the project, including issues developed during scoping. Chapter 2 describes the Proposed Action and Alternatives (i.e., the North Facilities Alternative and the No Action Alternative). Chapter 3 discusses the affected environment and examines each resource identified in the FEIS while Chapter 4 discloses the environmental consequences and potential impacts to those resources under the Proposed Action, North Facilities Alternative, and the No Action Alternative. Chapter 5 discusses the past, present, and reasonably foreseeable future actions occurring within the cumulative effects study area for each resource, and the cumulative effects that would occur when combined with the Proposed Action. Chapter 6 describes the consultation and coordination that was conducted during the EIS process, including a description of the scoping process, the public comment on the EIS, and a list of preparers and reviewers; and Chapter 7 provides public comments that were submitted regarding the DEIS and responses from the BLM; Chapter 8 lists the references cited in the FEIS, a glossary, and the index. The appendices are the last section of the FEIS; they contain supporting documents too large to include in the FEIS text.

Gold-bearing mineralization was first discovered in Long Canyon in 1999. NewWest Gold USA submitted an exploration Plan of Operations to the Bureau of Land Management (BLM) and Nevada Division of Environmental Protection (NDEP) in 2007; the BLM issued an Environmental Assessment (EA), along with a Finding of No Significant Impact (FONSI) regarding the proposed exploration work in July 2008. Exploration continued under various entities until Newmont Mining Corporation, Inc. (Newmont) acquired ownership in 2011 and expanded exploration activities as approved by the BLM through a second EA and FONSI.

Late in 2011, Newmont notified the BLM Elko District Wells Field Office of plans to develop a surface mine with supporting ore processing facilities at the Long Canyon Project site. Following meetings with the BLM, Environmental Protection Agency (EPA), NDEP, Nevada Department of Wildlife (NDOW), and local and community stakeholders, Newmont developed the Plan of Operations for Surface Mining and Ore Processing, the Long Canyon Project (Plan), which was submitted to the BLM in March 2012.

The Plan proposes an open pit gold mine and processing facilities. Construction would take approximately 18 months with mining to continue an additional eight to 13 years. Reclamation and reclamation management would continue for several years after mining is completed.

The BLM has chosen the North Facilities Alternative as its preferred alternative because it generally reduces impacts to the environment.

## Proposed Action

The Proposed Action includes constructing, operating, closing, and reclaiming the following (Figure 2.2-1):

- An open pit that accesses oxide gold ore;
- Ore beneficiation methods (to remove the metal value from the ore) include cyanide heap leaching (to beneficiate lower grade oxide ore) and a cyanide leach mill (to beneficiate higher grade oxide ore);
- Waste rock storage facility (WRSF) to contain all net neutralizing or non-potential acid generating waste rock generated in the mine;
- Synthetic-lined tailings storage facility (TSF) to receive tailings slurry from the mill from which reclaimed water would be recycled back to the mill;
- Mine haul and access roads between the open pit and WRSF, heap leach, and mill facility. No public access would be allowed on the roads within the Plan boundary due to Mine Safety and Health Administration (MSHA) regulations. Public access to the lower Goshute Valley would be via the Shafter exit from I-80 (see Sections 3.13 and 4.13 for greater details on public access);
- Internal service and access roads with no public use on these internal roads;
- A water supply well or wells in Section 3, T35N, R66E, and a supply system for drinking water, water for dust control, ore beneficiation activities, and fire protection;
- Support facilities for temporary ore storage, truck scale, administration office, first aid and safety related facilities, parking, maintenance shop, warehouse, fuel storage, ammonium nitrate and explosives storage, communications facilities, landfill, contractor/construction laydown and office area, and assay lab/sample preparation facility;
- Power supply utilizing the existing electric distribution line and infrastructure owned by Wells Rural Electric Company (WREC) to the Oasis substation, and from Oasis substation, a new power line to the mine site to provide power for the heap leach facility, and other applications;
- Power supply for the mill operations consisting of a gas-turbine electric generating plant and a gas pipeline constructed to bring natural gas from the Ruby Pipeline to the site;
- Alternative water supply and associated facilities for Wendover, Utah and West Wendover, Nevada (Cities) to replace that portion of their current water supply which comes from Big Springs;
- Growth medium (soil) stockpiles and construction material borrow pits; and

- Exploration to further delineate ore zones and target potential mineralized resource areas within the Plan boundary.

The Proposed Action would include a natural gas pipeline from the Ruby Pipeline north of Montello to an electric generating plant within the Plan boundary, which is included in the FEIS as a connected action. Herein, the project area refers to the Plan boundary, power supply pipeline corridor, and Cities alternative water supply. Prior to construction of the on-site mill, high grade ore would be hauled to Newmont's Gold Quarry facility near Carlin for processing. Loaded carbon would be hauled to Gold Quarry and reactivated carbon would then be trucked back from Gold Quarry to the Project.

## **North Facilities Alternative**

The North Facilities Alternative (Figure 2.3-1) was designed in response to several environmental issues raised by the BLM Interdisciplinary (ID) Team and scoping comments. Under the North Facilities Alternative, most of the mine facilities would be moved to the northeastern quadrant of the Plan boundary. This alternative addresses impacts to several wildlife species, cultural resources, and responds to requests from the Cities related to potential impacts to their water supply (Big Springs and groundwater). The North Facilities Alternative includes the following components and considerations:

- All mine facilities except the pit and a borrow pit would be located farther from Big Springs and other surface water features, such as the wetlands;
- The TSF would be surrounded by the WRSF, reducing the total disturbed area of both facilities. Placement of waste rock around the TSF would further increase geotechnical stability of the TSF, and the same design criteria (i.e., liner, slurry water piping), operational management, and closure methods would be used as if the TSF were a standalone facility. For example, all design, construction, operations, and closure features would be the same as described for the Proposed Action described in Section 2.2.6 except that instead of being a freestanding facility, the embankment surrounding and supporting the TSF would be comprised of the WRSF. The under-drainage collection tank and pond associated with the TSF would be exterior to both the TSF and WRSF footprint;
- No major facilities, other than the pit, would be positioned on the bedrock aquifer from which Big Springs emanates; all major facilities would be situated over the alluvial aquifer;
- Ground surface at the north location is approximately 30 to 50 feet higher relative to the water table than where facilities would be located for the Proposed Action;
- Direct Impacts to several cultural sites located in the southern portion of the Plan boundary would be minimized or avoided;
- Activities and noise disturbance near a greater sage-grouse lek would be minimized and this alternative locates mine facilities farther from greater sage-grouse leks;

- The mule deer migration corridor would be enlarged to encompass approximately 2,200 feet between the pit and the WRSF;
- The same power supply design would be employed as for the Proposed Action;
- Municipal water supply wells for the Cities would be located in Section 21, T35N, R66E, same as for the Proposed Action;
- The mine production supply well would be located north in Section 13, T 36N, R66E;
- County Road 790 would terminate at the north project boundary and public access to the Goshute Valley would be the same as described under the Proposed Action;
- Design criteria for individual facilities would be the same as for the Proposed Action; and
- Operations, including exploration operations, and reclamation would be the same as described under the Proposed Action.

Design criteria, operations, and reclamation would be the same as for the Proposed Action. All Best Management Practices (BMPs), Environmental Protection Methods (EPMs), and mitigation actions would be the same as for the Proposed Action.

## **No Action Alternative**

Under the No Action Alternative, the existing Long Canyon Mine Plan would not be authorized by BLM and the activities described in the Proposed Action or the North Facilities Alternative would not occur. Mineral resources would remain undeveloped and the construction and operation of the proposed mining and mineral beneficiation facilities would not occur. Newmont could continue exploration efforts that are already approved.

Selection of the No Action Alternative would not preclude a future filing of a different Plan by Newmont or any other authorized mineral rights holder to mine these minerals. Any future plans of operations would need to be addressed in a separate environmental review under NEPA.

## **Introduction to Resource Impacts**

In Chapter 4 of this FEIS, the environmental consequences of the Proposed Action are evaluated and compared to the Action Alternative and No Action Alternative. The primary environmental impacts for the Proposed Action and Alternatives are outlined in Chapter 4. The section below provides a summary of the potential impacts from the implementation of the Proposed Action and Action Alternatives.

### **Water Resources**

Impacts to water resources may include impacts to surface water, springs, and/or groundwater. Project-related activities have the potential to affect water resources through short- and long-term surface disturbance, as well as groundwater and spring withdrawals for mine use or for

municipal use that would be altered to accommodate mine water supply. Potential impacts to wetlands are described in a separate section, which follows the water resources section.

#### Surface Water (Including Surface Water Quality)

The only stream channel within the Plan boundary categorized as perennial by the United States Geological Survey is Hardy Creek, which depends upon the Johnson Springs system and other influent groundwater to sustain flows in its upper reaches.

Most of the stream channels that are present upstream, within, or downstream of the mining and processing facilities area do not flow year round. Instead, they flow primarily as a result of precipitation runoff, but are also influenced by discharge from the Johnson Springs system. Upgradient area runoff would be routed around the waste rock storage facility (WRSF); tailings storage facility (TSF); heap leach facility; mine administration, shop, and mill facility area; and, as practical, the mine pit area via several diversions and allowed to continue downstream (Newmont, 2012f).

Runoff produced within the mine facilities area would be retained within various sediment basins and collection sumps as shown on Figure 2.2-6 and Newmont Mining Corporation's (Newmont) Stormwater Pollution Prevention Plan (SWPPP) (Appendix 4B) (Newmont, 2012f). These diversions and impoundments would control runoff from several small, unnamed channels that drain surface water from the eastern front of the Pequop Mountains north of the Long Canyon drainage basin, as well as from the Long Canyon drainage area.

Storm runoff leaving Long Canyon would continue via the natural channel between the proposed TSF and a growth medium stockpile. Although extreme high runoff events from this area would be expected only rarely, there would be some potential for the natural Long Canyon flow channel to migrate laterally across the alluvial fan surface between these two features (growth medium stockpile and TSF), perhaps eroding materials and carrying them downstream towards Hardy Creek. The downstream reaches of Sixmile Creek would be diverted around the proposed WRSF. A stormwater diversion channel would also be constructed around the WRSF, as described in Newmont's SWPPP (Newmont, 2012f), which is in Appendix 4B.

During construction of the mining and processing facilities there would be some potential to increase erosion and transport sediments to surface waters, as with almost any type of ground-disturbing activity. However, this would be reduced or minimized due to the nature of surface flows, channel substrate, and BMPs that would be implemented through Newmont's compliance with its Storm Water Pollution Prevention Plan (SWPPP). Hardy Creek is within a closed basin that is itself a depositional feature. As a result of the lack of perennial surface flow, the EPMS specified in the Plan of Operations, and implementation of the Spill Prevention Control and Countermeasures (SPCC) Plan, impacts to surface water quality would be minor.

Current irrigation for the Big Springs Ranch and municipal use for the Cities water from Big Springs and the Johnson Springs system already reduce Hardy Creek's natural flow regime.

Surplus Big Springs flow not currently diverted for use by the Cities is primarily used for operations at Big Springs Ranch or allowed to flow to the wetland areas which are owned by Newmont. Should there be further reduction of surface flows in the Hardy Creek reach due to Newmont's water use, the only surface water rights that would be impacted are those that are controlled by Newmont for the mine and the Big Springs Ranch (which is owned by Newmont). Indirect effects on Hardy Creek stream flow could occur if the mine operations include withdrawal of groundwater that would otherwise contribute to flow from the Johnson Springs system or Hardy Creek. Another potential indirect effect would occur if the construction materials borrow pits excavated adjacent to the perennial stream reach drain water from the alluvium. Reduction in stream flow as a consequence of groundwater pumping for mine or municipal use would also be considered a source of water quality degradation. Tributary channel flow alterations would not have more than a negligible effect on either the overall timing or volume of stream flow in Hardy Creek.

The natural gas power supply pipeline would cross intermittent or ephemeral stream channels in approximately 40 locations. Crossings would include Sixmile Creek, Loray Wash (which would be crossed several times), and Thousand Springs Creek. It is likely that most of these crossings already have culverts in place, and the pipeline would be bored underneath the existing culverts and streambeds using standard practices to protect water quality during construction and leave a streambed that is stable, resulting in a negligible impact.

The Cities' new water supply wells would be drilled immediately south of the Plan boundary. The associated new water line connecting the new wells to the existing water delivery system would not be expected to directly affect surface water resources, although there is the potential for sediment/hydrocarbon release during construction, as described above, and, indirectly, reduction in flow to springs and, subsequently, surface water bodies, as shown in groundwater modeling (Golder, 2014). Minor to moderate direct or indirect impacts to flows in Hardy Creek due to pumping of the mine supply or municipal supply wells may occur because Hardy Creek is fed by groundwater discharge from the Johnson Springs system, including Big Springs.

Impacts to surface water resources resulting from the North Facilities Alternative would be similar to the Proposed Action. However, the facilities would be located further north, closer to the lower reaches of Sixmile Creek and further from the perennial reach of Hardy Creek. This would reduce the chance that an inadvertent release of process chemicals, hydrocarbons, or other contaminants would contact the water in Hardy Creek. One of the northernmost smaller springs in the Johnson Springs system may be located approximately 90 to 160 feet from the footprint of the WRSF with an access road located between the spring and the WRSF. Newmont plans on positioning the WRSF to avoid the springs/wetlands. Therefore, Newmont would avoid impacts to these water resources from the WRSF or the potential for introduction of water into the base of the WRSF from these resources resulting in potential long-term negligible to minor impacts.

### Springs and Groundwater

Potential environmental impacts to springs and groundwater resources during construction and mining operations include: changes in availability of groundwater to downgradient water rights holders, including the Cities and Big Springs Ranch, for municipal water supply, irrigation, and stock; changes in volume and timing of discharge from springs that are fed by groundwater, such as the Johnson Springs system; and changes in groundwater quality resulting from mining activities.

There would be the potential for the flow of springs and availability of groundwater to be reduced through drawdown from mine water use. A numeric model of the expected case predicted a reduction in flow from Big Springs of up to 280 gallons per minute (gpm) as a result of combined pumping of groundwater for the mine and the Cities. Average flow from Big Springs between November 2006 and January 2012 was 1,323 gpm, although readings as low as 400 gpm were recorded in December 2013. Based on other groundwater model pumping scenarios for the Proposed Action, a very conservative and unlikely scenario, with the greatest modeled impact on the spring, Case 4, predicted a reduction of up to 460 gpm from Big Springs at the end of the 25-year post-mining period. Under this scenario, it was assumed that the Shafter well field (on the east side of the basin) would not be used by the Cities during the 25-year post-mining period to supply any of the Cities' increased water use demand (increased due to population growth); Case 4 assumed that all pumping would be from the west side wells near Big Springs. This scenario would consequently increase modeled impacts to Johnson Springs system (including Big Springs) on the west side of the basin beyond what would be reasonably expected. Therefore, the persistence of predicted drawdown during the post-mining periods appears to be related to impacts from long-term municipal demand rather than from mining activities.

Big Springs flow was predicted by the model to be able to continue to provide the current demand by the Cities (450 gpm) for the pumping scenarios considered for the Proposed Action, as shown on Figure 4.2-6 and in Table 4.2-1. Even though the expected case for the Proposed Action (Case 2) shows drawdown at Big Springs increasing over time even after mine closure, the increase after mining is related to increased municipal water use rather than impacts by mining activities. The scenario based solely on water use for mining operations (Case 0) shows that Big Springs flow would return to pre-mining conditions within about five to 10 years after mine closure.

Flows at Big Springs and other springs in the Johnson Springs system would likely be reduced under the Proposed Action. It is projected that long term (25 years after mining) reduction in flow from Big Springs would be about 280 gpm under the most likely pumping scenario. This is a 28 percent reduction in average flow from Big Springs. It is projected that flow from the North and Central spring complexes would be reduced by approximately 10 gpm, which is five percent of their average flow. Combined reduction in flow rates in the Johnson Springs system would be about 22 percent of average flow. Some of these reductions in flow would also occur under the No Action Alternative (Section 4.2.4). When compared to the No Action Alternative, the

projected reduction in flow from the Johnson Springs system under the Proposed Action would be about nine percent. This indicates that the use of groundwater associated with the Proposed Action mining operations would produce a long-term, minor to moderate impact on surface water flow based on the projected flow reduction.

The final pit floor would be excavated to an elevation of approximately 5,700 feet above mean sea level, which is approximately 14 feet above the local water table of the carbonate bedrock aquifer (the basin fill/alluvial aquifer is not present in this area) and Big Springs. Therefore, neither the basin fill/alluvial aquifer nor the carbonate bedrock aquifer would be encountered by open pit mining activities.

The potential for hazardous materials or other wastes to spill and subsequently affect groundwater quality would be negligible through Newmont's implementation of environmental protection measures (EPMs) required by applicable state and federal regulations.

To prevent impacts to groundwater associated with the Proposed Action, the heap leach facility, mill, and TSF would be designed as zero discharge facilities to prevent release of process solutions to the environment; the heap leach and TSF would be synthetically lined. The heap leach facility would include a leak detection system and the TSF would include a tailings under-drain system over the geomembrane liner to collect and transport water that infiltrates through the tailings. Process water would be recycled within the process system and not allowed to discharge into the environment. Because the heap leach and TSF are designed, and would be operated, as zero discharge facilities, they would have negligible potential to impact groundwater or surface water quality.

Precipitation falling on the WRSF during operations would infiltrate the unreclaimed surfaces. However, based on the geochemical analyses conducted within the Plan boundary, the waste rock is net neutralizing and presents a negligible risk for acid rock drainage and metal leaching; therefore, no special handling or disposal procedures are necessary. Based on modeling, the WRSF as currently designed would not degrade waters of the state. A wetland delineation found no waters of the United States within the Plan boundary, which has received concurrence from the United States Army Corps of Engineers (ACOE). With implementation of the proposed design features and EPMS outlined in Chapter 2, the impacts to groundwater resources resulting from operation and maintenance of the Proposed Action are expected to be long-term and negligible to minor.

Impacts to groundwater based on construction of the power supply pipeline are not expected. Based on the groundwater model simulations described under the Proposed Action, pumping of the mine water supply well is expected to have a negligible effect on the groundwater availability to the new water supply wells for the Cities during mining operations.

Under the North Facilities Alternative, mine facilities, except the mine pit and borrow pits, would be located farther from Big Springs and the delineated wetlands. Only the mine pit and borrow

pits would be positioned directly on the bedrock aquifer; all other facilities would be situated over the basin fill/alluvial aquifer. The model predicted the North Facilities Alternative would have less than half the impact of the Proposed Action on Big Springs during startup and 21 percent less impact during operations. As shown on Figure 4.2-6, the North Facilities Alternative pumping scenarios predict flow reductions similar to those predicted for the Proposed Action at Big Springs and Central Springs due to pumping.

### **Wetland and Riparian Resources**

A number of mine-related facilities associated with the Proposed Action would be located adjacent to a wetland boundary including the WRSF, miscellaneous site access and service roads, the mine office shop, the power mill facility, parking areas, and borrow sites (Figure 3.3-1). The Proposed Action would disturb 11 intermittent/ephemeral drainages. Delineated wetlands are located on private land and these drainages are not considered federally jurisdictional or regulated by Section 404 of the Clean Water Act (CWA) (USACE, 2014). These areas would not be regulated by the United States Army Corps of Engineers (ACOE); however, they would be considered waters of the State regulated by NDEP.

The proposed power supply pipeline corridor crosses approximately 70 ephemeral and intermittent drainages including Thousand Springs Creek and Hardy Creek. The pipeline would bore under these drainages; therefore, this direct impact would result in a minor, short-term disturbance to riparian vegetation in the area. EPMs implemented during construction would likely reduce this impact to negligible and short-term.

Direct disturbance to wetlands is not anticipated from the mining and processing facilities. Newmont would avoid direct and indirect impacts to wetland and riparian resources to the extent possible. All process facilities would be self-contained with spill prevention measures in place to prevent any unwanted discharge into wetlands and riparian areas as described in Newmont's SPCC Plan (Appendix 4A). Newmont would avoid surface disturbance to all other wetland and riparian areas to avoid any adverse impacts to these resources. Avoidance and EPMs that would be implemented and uniformly followed would reduce these potential impacts to negligible or minor.

Indirect, short-term impacts would include removing vegetation from upland areas, which would result in an increase of runoff into wetland and riparian areas. The planned EPMs and compliance with the SPCC Plan and SWPPP would reduce impacts to wetlands and riparian areas associated with sediment and spills to negligible.

The predicted reduction in surface flow of Big Springs as a result of the Proposed Action is 280 gpm and is not expected to result in a net loss of flow to the wetlands during mine life because 450 gpm of the spring flow is currently captured and used for municipal water supply by the Cities. The predicted reduction in flow in the North and Central springs is less than 10 gpm, which is less than natural variation in flow, and in the long term, there may be a minor net loss

of wetland area. Newmont would control all of the available water from Big Springs and could change management at any time either to support the mine or its ranching operation.

Predicted decrease in flow would result in less available water for wetlands and some soils would dry out. Potential drying as a result of new groundwater diversions provided by Newmont could lead to long-term moderate to major impacts to riparian/wetland areas within the project area. Conversely, surplus Big Springs flow not currently diverted for use by the Cities is primarily used for operations at Big Springs Ranch or allowed to flow to the wetland areas which are owned by Newmont. Additional water discharged into Hardy Creek or adjacent areas as a result of the life-of-mine agreement with the Cities has the potential to create new wetlands and riparian areas, which may provide similar habitat as the affected wetlands and riparian areas.

The North Facilities Alternative would disturb seven ephemeral/intermittent drainages that would not be considered jurisdictional or regulated under the Clean Water Act. However, these drainages would be considered waters of the State regulated by NDEP. Construction of the North Facilities Alternative is not anticipated to have direct impacts to wetlands or riparian areas; therefore, it is not anticipated to reduce the delineated wetland acreage and riparian resources. Under the North Facilities Alternative, there is a predicted loss of up to 280 gpm from Big Springs that would result in an approximately 28 percent reduction in flows to the spring (Golder, 2013d); however, less water would be used during mine startup, mine operations, and mine closure and reclamation than for the Proposed Action. Impacts as a result of this predicted reduction in flow are the same as for the Proposed Action. Under the North Facilities Alternative, the boundary of the WRSF would be located, at a minimum, 300 feet from the edge of the delineated wetland boundary. The power supply pipeline would not cross the irrigation channel inventoried as wetlands. There would be no direct removal of wetlands under this alternative. No adverse impacts to wetland and riparian areas are anticipated since all proposed disturbance associated with the North Facilities Alternative would occur outside of these areas, and EPMs would be implemented and uniformly followed.

### **Geology and Minerals**

Under the Proposed Action and North Facilities Alternative, local bedrock geology and mineral resources would be directly affected by the removal of 29 million tons (MT) of ore and 460 MT of waste rock from the proposed open pit. Certain unconsolidated construction materials (i.e., clay and gravel) would be removed from the proposed on-site borrow pits. The construction of the TSF, WRSF, and heap leach facility would effectively prevent future utilization of bedrock or unconsolidated mineral resources located under these permanent facilities. The construction of the open pit, TSF, heap leach facility, and WRSF would produce permanent changes to the existing topography of these sites. These would be long-term, major, local impacts on these resources but a negligible to minor impact in the context of the geology and mineral resources in Elko County and Nevada.

## **Soils**

The Proposed Action would directly impact 4,588 acres of soil resources. Upon mine closure, 3,852 of the disturbed acres would be reclaimed. The 736 acres of disturbance associated with the mine pit would not be reclaimed.

Construction of the mining and processing facilities for the North Facilities Alternative would directly impact 3,879 acres of soil resources. Upon mine closure, 3,143 of the disturbed acres would be reclaimed. As with the Proposed Action, 736 acres of disturbance associated with the mine pit would not be reclaimed. Impacts to soils as result of the North Facilities Alternative would be the same as for the Proposed Action.

Physical and chemical changes to soil resources due to construction of mining and processing facilities would occur as a result of removal, stockpiling, and distribution of topsoil for growth medium during reclamation. These changes would result in a change in soil quality due to compaction and a decrease in soil microorganisms.

Stockpiled soils that are used for concurrent reclamation could return to their natural, pre-disturbance conditions relatively quickly. Impacts to these soils would be short-term and minor. Soils that are stored for extended periods would be more affected by compaction, lack of aeration, decreased porosity and permeability, and reduced water-holding capacity. For soils not used for concurrent reclamation, impacts would be long-term and minor to moderate.

An increase in susceptibility to wind erosion would occur during active salvage and reclamation operations, as soil is being removed and replaced. In areas where soil is removed, the increase in wind erosion would last until stabilizing vegetation is reestablished. The increase in erosion potential would be moderate in the short term and minor to moderate in the long term when considering the project area as a whole.

Soil resources could potentially be impacted as a result of accidental spills or leaks of contaminants during their transportation, storage, and use. If such spills or leaks were to occur, Newmont would immediately employ the actions set forth in the SPCC Plan, and therefore, the effects to soil resources would be short-term and minor.

The long-term impacts to soils from construction, operations, maintenance and reclamation activities would be minor to moderate depending on Newmont's success in creating landforms that are stable and capable of facilitating successful soil development.

## **Air Resources**

Under the Proposed Action and North Facilities Alternative, the Long Canyon Mine would require a Class II operating permit from NDEP and would have emissions levels that fall below the Prevention of Significant Deterioration major source threshold.

Operation at the mine site for the Proposed Action and North Facilities Alternative would involve area source emissions. For the North Facilities Alternative, emissions would be slightly decreased due to shorter haulage distances while all other aspects would remain the same as for the Proposed Action. The impact on air quality depends on the location of the sources with respect to the receptors and therefore do not necessarily decrease with the decrease in emissions.

Area source emissions include on-site operational emissions from point sources; combustion sources; and storage silos and process fugitives including crushing and transferring, and conveying and stacking. Further, operations at the mine site include fugitive emissions from drilling, blasting, loading, unloading, wind erosion, haul roads, and dozing. Also included are tailpipe emissions from equipment and haul road vehicles. Greenhouse gas emissions associated with the proposed project primarily would be associated with the consumption of energy (e.g. fuel and electricity) for mining and ore processing over the life of the mine. The proposed project would be expected to have a negligible effect on climate.

Material handling; primary, secondary, and tertiary crushing; conveying; and stacking are potential emission sources of particulate mercury. Controls would be applied to each of the processes to reduce overall particulate emissions, and mercury emissions for these sources were estimated to be in compliance with the Nevada maximum achievable control technology for mercury. Loaded carbon from Long Canyon would be transported to the existing Gold Quarry facilities so all emissions related to carbon handling and refining operations would occur there. Carbon from Long Canyon would be a partial replacement of existing carbon throughput there so the air emissions from these operations would not increase. Sources of hazardous air pollutant emissions for the Long Canyon Mine would include hydrocarbon combustion, constituents found in fugitive dust from ore and waste rock, and process chemicals used on-site. Ozone formation due to atmospheric transformation of project emissions would be minimal.

With the exception of 24-hour particulate matter 2.5 microns in diameter or less ( $PM_{2.5}$ ) for the Proposed Action, and 24-hour  $PM_{2.5}$  and 24-hour  $PM_{10}$  for the North Facilities Alternative, all modeled pollutants were below the EPA Class II increments. This would indicate a minor impact on air quality resources for those pollutants. For 24-hour  $PM_{2.5}$  for the Proposed Action, and 24-hour  $PM_{2.5}$  and 24-hour  $PM_{10}$  for the North Facilities Alternative, the modeled impact remains well below the National Ambient Air Quality Standards so would indicate limited, moderate effects.

The Proposed Action and North Facilities Alternative would result in long-term, minor to moderate air resource impacts. These impacts would be limited to the immediate region surrounding the project area and would not produce long-range impacts. Both the Proposed Action and North Facilities Alternative would meet federal and state air quality standards.

### **Vegetation, Including Noxious and Invasive Weeds and Special Status Plants**

Construction of the Proposed Action would disturb approximately 4,588 acres of vegetation in the Plan boundary, and the North Facilities Alternative would disturb approximately 3,879 acres. The majority of this disturbance would be created by construction of the WRSF, the mine pit, TSF, and the mine support and mill facilities. The project would disturb four different vegetation communities including Big Sagebrush, Black Sagebrush, Woodland, and Greasewood Flat. Effects are considered to be long-term but minor, as these vegetation communities are common and widespread throughout the project area. While wetland and riparian areas are present within the Plan boundary, these communities would be avoided and would not be impacted.

Removal of vegetation and soil compaction would be considered long-term disturbance, lasting for the life of the project until reclamation occurs. The proposed pit is not subject to reclamation; therefore, permanent loss of vegetation affected by the pit would occur.

Special status plants, including Barren Valley collomia and Deeth buckwheat, BLM sensitive plants, and rayless tansy aster, a Nevada Natural Heritage Program at-risk species, have the potential to occur within the project area. However, no special status plants were located during field surveys, so impacts to special status plants would be negligible.

Indirect impacts to vegetation would include the increased potential for noxious and non-native, invasive weed establishment. Implementation of Newmont's Weed Management Plan would reduce the potential for noxious and invasive weed establishment in the project area. All surface disturbance would be reclaimed either concurrently during operations as areas become available, or once mining is complete. The Weed Management Plan includes management strategies and control techniques to prevent or minimize the establishment or spread of weed populations.

Once mining is completed, reclamation activities would include the seeding of disturbed areas with appropriate BLM-approved seed mixes. The seed mix would include both native and non-native species that have been successfully used in reclaiming disturbed areas in the past. The project EPMS would assist in the successful reclamation of disturbed areas following reclamation and closure, and would reduce the spread and establishment of weeds during the project and following reclamation and closure.

### **Wildlife, Including Migratory Birds and Special Status Wildlife**

Direct long-term impacts to wildlife habitat would occur due to mine facilities (e.g., pit, WRSF, TSF, borrow sites), new roads, and natural gas pipeline construction. Reclaimed habitats may provide suitable habitat immediately for some species but may take years to develop to their current function for other species (i.e., provide diverse assemblages of plants with structural diversity). The Proposed Action would disturb approximately 4,588 acres of habitat and the North Facilities Alternative would disturb approximately 3,879 acres of habitat. The open pit would not be reclaimed; therefore, long-term disturbance (habitat removal) to the 736-acre area affected by the pit would occur. The WRSF and TSF would be contoured and seeded.

The loss of 2,574 acres of sagebrush habitat associated with the Proposed Action and 2,048 acres of sagebrush habitat associated with the North Facilities Alternative would result in habitat fragmentation, particularly when impacts occur along transitional ranges, that would be both spatial and temporal.

Most of the wildlife species that inhabit the project area are highly mobile and would likely vacate the area and alter their movement patterns during mine development and operational activities. Species that are slow moving or that tend to retreat underground when approached could be directly affected by construction and mine operations. The increased human activity and noise associated with construction and mining activities would likely cause wildlife to temporarily avoid the area and displace into adjacent, undisturbed suitable habitat, causing increased competition for those resources. Increased vehicular traffic associated with the Proposed Action and North Facilities Alternative has the potential to cause an increase in wildlife-vehicle collisions.

#### Mule Deer

For the Proposed Action, the location of the pit, haul road, and the WRSF in proximity to a known migratory corridor for mule deer, would effectively fragment their seasonal habitat. Likewise, the location of the pit relative to the migratory corridor within Long Canyon could pose additional barriers should the perimeter fencing and/or gate preclude or slow passage. Noise and human activity would be expected to cause deer to avoid areas of active disturbance, particularly during the early phases of mine development. If activities at the mine force deer to move through a narrower corridor along the ridgeline above the mine pit, the deer may be more susceptible to predation by mountain lions, they would likely expend more energy, or they may not move to crucial winter habitat. Newmont has committed to maintaining a gap between the pit and WRSF of 500 feet for the Proposed Action. The direct long-term impacts associated with the mine facility locations during mule deer migration could have a major effect to the Area 7 deer herd. For the North Facilities Alternative, the gap between the mine pit and WRSF would be approximately 2,200 feet; however, the haul road would be located inside this gap. This corridor would allow migrational deer movement and other wildlife movement through the Plan boundary should heavy, early season snow force them to utilize the lower elevation corridor. The direct short- and long-term impacts to mule deer associated with the North Facilities Alternative would be moderate.

#### Elk and Pronghorn Antelope

Elk may show similar avoidance behavior as mule deer. Pronghorn antelope may initially avoid areas of active disturbance, and remain to the east of project disturbance. Fencing erected along the perimeter would allow passage for both elk and pronghorn antelope. Both of these game species would have some direct impacts from removal of available habitat; however, it is not anticipated to be more than negligible impact, particularly after reclamation. Therefore, for the Proposed Action and North Facilities Alternative, the short-term and long-term, direct and indirect impacts to elk and pronghorn antelope are expected to be negligible.

### Mammals

Impacts to small mammals include direct mortality during clearing and grubbing operations and loss of occupied habitat. Mountain lions, secretive by nature, may remain higher in the mountains above the mine site. Lions and other mammals throughout the Plan boundary would experience long-term, direct impacts through displacement as a result of habitat removal and indirect impacts from mine disturbance. For the Proposed Action and North Facilities Alternative, these impacts are not expected to be more than minor to most mammalian species and the impacts would not result in population level impacts.

### Raptors

The project area represents foraging habitat for a number of species of raptors. Direct long-term impacts to raptors may include habitat or nesting substrate removal and mortality as a result of collision. Placement of communication towers may pose a threat of collision to other species of birds; however, the risk is extremely low for migrating and resident raptors, primarily because they are diurnal migrators, and the Goshute Mountains act as a funnel concentrating migrating raptors along the range's spine (Slater, 2013). One prairie falcon nest was identified within the area of the pit; however, this sighting is from 1972 and the nest may no longer exist. For the Proposed Action and North Facilities Alternative, short-term direct effects to raptors are expected to be minor and likely a result of mine disturbance. The long-term direct and indirect impacts are expected to be negligible to minor.

### Migratory Birds

Habitats within the project area support a diversity of migratory birds. The Proposed Action and North Facilities Alternative would remove habitat in the project area. Until reclamation occurs, this habitat would be lost as potential migratory bird nesting and foraging habitat. Most of the mine features would be reclaimed and restored to suitable habitat for many species.

Direct impacts to migratory birds would occur in the form of habitat removal; however, these impacts are not anticipated to be more than negligible in the short- and long-term. Some habitats would recover after reclamation and provide nesting and foraging habitat for migratory birds. Indirect impacts resulting in aquatic habitat or wetland degradation may alter the seasonal uses of a number of bird species. For the Proposed Action and North Facilities Alternative, this impact would be considered a negligible to moderate long-term, indirect impact to migratory birds. Impacts associated with mine disturbance would likely have a long-term, negligible to minor impact to birds, until the mine is reclaimed.

### Reptiles and Amphibians

For the Proposed Action and North Facilities Alternative, direct impacts to reptiles would likely result from land-clearing activities or as a result of increased traffic on roads. While these impacts may be considerable for individuals, they are not likely to result in a population level effect. Direct short- and long-term impacts to reptiles would be negligible. Impacts to the amphibians that may reside adjacent to or within the wetland could occur as an indirect effect

from water extraction for mine operations. These impacts may be minor to moderate depending on the species that occur in the wetlands/springs and to what extent the wetlands are impacted.

### Greater Sage-Grouse

The Proposed Action would disturb approximately 940 acres of mapped Preliminary Priority Habitat on public land and 120 acres of Preliminary General Habitat on public lands. The North Facilities Alternative would disturb approximately 667 acres of this habitat on public land and 155 acres of Preliminary General Habitat on public lands. The majority of this habitat type is Inter-Mountain Basins Big Sagebrush Shrubland followed by Great Basin Xeric Mixed Sagebrush.

Short-term, direct impacts would occur by habitat removal through construction of the project, and through noise during project construction. The Big Springs lek is approximately 0.9 miles from the Proposed Action TSF; 1.7 miles from the southern borrow pit and 0.7 miles from the access road to the south, which would access the Cities' water production wells. The project perimeter fence would be situated within less than 420 feet from the lek. Under the North Facilities Alternative, the pit relative to the lek would be in the same location, approximately 3.86 miles at its closest edge, while the WRSF and TSF would be over five miles away.

Though the construction impacts would be transitory, there is the potential for minor to major disturbance should these activities occur during the breeding season or when nesting and brood-rearing hens are in close proximity to these activities. Fences have been implicated in direct mortality to sage-grouse as a result of collision or indirectly by increasing predation by providing perches for raptors. Communication towers and electrical distribution lines have been implicated as collision hazards to many birds including sage-grouse (Wisdom et al., 2011; Leu and Hanser, 2011; APLIC, 2012; Manville, 2005). For the hens seeking brood-rearing habitat in Hardy Creek or within the pasture/meadow habitat within the springs complex, the borrow sites, fencing, distribution line, and increased human presence may impede access to this habitat. This effect may be a long-term impact depending on how the hens move from nesting/brooding to brood-rearing habitat.

Any disturbance to greater sage-grouse that would preclude birds from attending the lek or limit access to important habitat would be considered moderate to major effect to this Population Management Unit (PMU) because the birds within this PMU have restricted suitable habitat and their numbers are thought to be low. Habitat removal for mine features would cause habitat fragmentation, though the bird's use of the area north of the springs is likely limited.

Short- and long-term noise related impacts would occur at the Big Springs lek and could reduce numbers at the lek or preclude lek attendance, potentially causing the Big Springs lek to become inactive. These impacts would be considered moderate to major during the life of the project. The Proposed Action would result in noise levels approximately four dBA above the impact threshold, while the North Facilities Alternative would result in noise levels approximately two dBA below the impact threshold.

Long-term direct impacts to greater sage-grouse would occur through habitat removal and fragmentation of their habitat. Long-term indirect impacts could result from potential habitat degradation. Given the potential extent of these impacts, they would be considered moderate to major because of this PMU's small population.

Any impacts to the brood-rearing habitat of mesic or wetland systems would be considered a long-term indirect impact, and depending on the amount of habitat altered, a minor to major effect. The only known brood-rearing habitat in Goshute Valley available to Big Springs lek and Little Lake Pass lek is the spring supported wet meadows and Hardy Creek corridor (Roberts, 2013a).

Greater sage-grouse would have habitat fragmentation, would incur disturbance from human presence and noise, and could have increased habitat degradation based on potential changes to brood-rearing habitat found within Hardy Creek and meadows of the spring system as a result of the Proposed Action and North Facilities Alternative. However, most of these impacts would be less severe for the North Facilities Alternative than for the Proposed Action because facilities would be farther from the lek and have a smaller footprint. Nearly every aspect of the mine facilities would be moved north, such as the perimeter fence, WRSF, heap, and mine buildings. Only the borrow sites, the Cities' water supply pipeline, and municipal wells are in the same locations. Nevertheless, short-term and long-term direct and indirect impacts to greater sage-grouse from the North Facilities Alternative would occur. Impacts would be minor to moderate due to habitat removal, habitat fragmentation, and increased anthropogenic disturbances.

Direct impacts to greater sage-grouse would not be anticipated from the pipeline; however, indirect impacts could occur should construction noise travel to leks during the breeding season.

#### Pygmy Rabbit

Sixteen pygmy rabbit burrow complexes have been identified within the Plan boundary. The Proposed Action would cause direct long-term impacts through habitat removal and potentially impact four individual burrows and two complexes. For these complexes, avoidance could be an easy solution, as one complex falls along the edge of a growth medium stockpile, and the other complex within a road to a borrow pit. Impacts from the Proposed Action would cause minor short- and long-term impacts to pygmy rabbit.

Under the North Facilities Alternative, three active pygmy rabbit complexes occur within the locations of the heap and the WRSF; they represent dozens of active burrows and a multitude of inactive or collapsed burrows. Two complexes located within the area of the proposed heap have hundreds of recorded burrows. Two individual inactive or collapsed burrows occur within the core storage facility. Impacts from the North Facilities Alternative would cause minor to moderate short- and long-term impacts to pygmy rabbit.

### Bats

The principal impacts to BLM sensitive bat species would occur to forested habitats, which represent potential roosting habitat for such species as long-eared myotis and silver-haired bats and to bat foraging habitat. The most important bat foraging habitat in the area is the wetlands associated with the spring complex and the adjacent meadows, as these habitats support the greatest insect diversity. The Proposed Action and North Facilities Alternative are designed to minimize or avoid any impacts to these habitat types. The pit and some roads are located in the pinyon-juniper woodland habitat. Impacts to those cliffs and outcrops that do occur in small amounts could also impact bat roosting habitat. However, habitat removal would be unlikely to cause effects to the bat species that may occur in the area, as their roosting habitat types are common throughout the region.

### Mattoni's Blue Butterfly

Occupied Mattoni's blue butterfly habitat has been identified in Long Canyon, with known populations located primarily at elevations higher than those of the proposed mine features. For the Proposed Action and North Facilities Alternative, impacts are not anticipated since no disturbance is proposed within the identified habitats.

### BLM Sensitive Birds

The Proposed Action impacts to sagebrush habitat would remove approximately 2,414 acres of potential sage-thrasher and Brewer's sparrow nesting and foraging habitat, while the North Facilities Alternative would remove approximately 1,888 acres. For the Proposed Action, removal of approximately 763 acres of pinyon-juniper woodland would reduce potential pinyon jay nesting and feeding habitat. The North Facilities Alternative would remove approximately 746 acres of pinyon jay habitat. Impacts to large shrubs, particularly large black greasewood, could impact loggerhead shrike nesting habitat. Loss of these habitat types would not result in more than negligible impacts to these BLM sensitive birds.

### Golden Eagle

Eighteen golden eagle nests have been identified within the 10-mile buffer of the Plan boundary, three of which are located within the Plan boundary. One of the nests in the Plan boundary is located approximately ten feet from the pit footprint of the Proposed Action and North Facilities Alternative. The nest would not intentionally be removed by construction of the pit; however, blasting associated with mining may alter the nest substrate, damaging or removing the nest. Direct take of the nest is not expected, but may occur if the nesting substrate becomes damaged during mining operations. Impacts may still occur if eagles do not use the nest during active mining.

Additionally, direct disturbance to foraging habitat would occur. For the Proposed Action, a total of 3,896 acres of habitat would be disturbed including approximately 2,412 acres of sagebrush habitat and 692 acres of greasewood and salt desert scrub, reducing available prey base. For the North Facilities Alternative, a total of 3,485 acres of habitat would be disturbed including approximately 1,888 acres of sagebrush and 821 acres of greasewood and salt desert scrub.

These long-term impacts would occur through the life of the mine, though some areas would receive concurrent reclamation during mining activities. The available foraging habitat within Goshute Valley is likely able to support foraging of displaced golden eagles within another territory. These long-term direct impacts would be minor because of the amount of foraging habitat available in the area.

#### Ferruginous Hawk

Ferruginous hawks are known to nest in the general area, and western burrowing owls have been observed in the Plan boundary. Direct or indirect impacts to these other raptors are not anticipated as a result of the Proposed Action or North Facilities Alternative.

#### Western Burrowing Owl

Western burrowing owls have been observed in the Plan boundary, but no active burrows have been found. Impacts would be none to negligible in the short- or long-term.

#### Aquatic Species

Direct impacts to aquatic species from the Proposed Action and North Facilities Alternative are not expected. Indirect impacts could result from changes in the aquatic systems that support relict dace or other aquatic species. These impacts could be minor to moderate depending on the resultant effects of water use.

### **Range Resources**

Impacts to range resources would result from the installation of the perimeter fence and other barriers around the Plan boundary, as well as surface-disturbing activities associated with facilities located outside the perimeter fence. The Proposed Action would exclude livestock access to available forage inside the fenced areas resulting in the short-term loss of 558 animal unit months (AUMs). The North Facilities Alternative would result in a short-term loss of 352 AUMs. Areas outside the perimeter fence affected by surface-disturbing activities would include the municipal water supply wells and associated facilities for the Cities and the power supply pipeline corridor.

Direct effects to range resources for the Proposed Action and North Facilities Alternative would result from surface-disturbing activities, increased vehicle traffic, potential damage to range improvements (e.g. fences, gates, and water sources), reduced access to water sources, and expanded road and utility networks. The Proposed Action and North Facilities Alternative would result in the short-term loss of forage during facility construction, operation, and interim and final reclamation of the project area, and a long-term loss of forage from the creation of the open pit that would not be reclaimed. An increase in traffic, especially along the access road, could lead to increased mortality and injuries to livestock, and cause disruptions to livestock management. Vehicle traffic along the access road would disrupt livestock management during seasonal cattle movements between summer and winter grazing areas.

Impacts from increased erosion and spread of noxious weeds could cause the conversion of native vegetative communities resulting in a loss of forage. The conversion of native vegetative communities and associated loss of forage could potentially be a permanent change resulting in a long-term impact. For the Proposed Action and North Facilities Alternative, the open pit would result in a permanent loss of 736 acres of range land, which would be a permanent loss of 25 AUMs within the East Big Springs Allotment.

### **Wilderness Resources**

Federally-designated Wilderness Areas and Wilderness Study Areas do not occur within or near the project area. Approximately 2,537 acres of lands with wilderness characteristics are located within the project area and are part of a contiguous 27,835 acres of lands with wilderness characteristics. The Proposed Action and North Facilities Alternative, including the mining and processing facilities, would not require surface disturbance within the portion of the project area that has been identified as lands with wilderness characteristics. Consequently, these lands with wilderness characteristics would not be fragmented by project activities and the size of the area would not be affected. Thus, with no surface disturbance occurring within lands with wilderness characteristics, there would not be any impacts on naturalness, which is a defining wilderness characteristic criterion.

Members of the general public would be restricted from accessing the area within the fenced or otherwise barricaded perimeter of the Plan boundary for the duration of the proposed project. For the Proposed Action, the public would be unable to access the approximately 372.8 acres of lands with wilderness characteristics that would be located within the fenced or barricaded Plan boundary. For the North Facilities Alternative, the general public would be restricted from approximately 308 acres. Opportunities for solitude and for primitive and unconfined recreation would be reduced as a result of the restricted access to these lands.

The Proposed Action and North Facilities Alternative would increase the amount of visible and audible evidence of humankind that is perceptible from the lands with wilderness characteristics. The increased noise and visibility of the proposed project would result in the loss of opportunities for outstanding solitude, which is a defining element of lands with wilderness characteristics. The Proposed Action and North Facilities Alternative would be expected to have a minor, long-term impact on wilderness resources.

### **Cultural Resources and Paleontology**

Prehistoric and historic sites eligible for listing in the National Register for Historic Places (NRHP) are distributed throughout the project area. Direct impacts to NRHP-eligible prehistoric and historic sites, or unevaluated sites, including disturbance, would occur within the Plan boundary.

Under the mining and processing facilities component of both the Proposed Action and North Facilities Alternative, 103 NRHP-eligible or unevaluated sites would be directly impacted through project construction/operations. Additional sites would be impacted by the construction

of the power supply pipeline. Project impacts could potentially be avoided through construction design modification or mitigated through data recovery studies. Indirect effects could result from improved access to areas within the project area that currently lack road access and from building roads in close proximity to historic properties. With mitigation, impacts to cultural resources would likely be minor to moderate and long-term.

According to the Programmatic Agreement, all sites would be avoided where practicable by detailed project design. If avoidance is not feasible, further mitigation would be undertaken by the Proponent in accordance with the Programmatic Agreement. A Historic Properties Treatment Plan has been developed that includes testing and/or mitigation of sites for resources determined to be adversely affected. During construction activities, any unanticipated cultural resources discovered would require all work within a 100-meter radius of the discovery cease immediately and the BLM Authorized Officer be notified immediately. BLM would then evaluate the discovery in coordination with other consulting parties in order to determine and implement appropriate treatment, if necessary. The Programmatic Agreement has been amended to include an indirect effects study to identify potential adverse effects to the Hastings Cutoff as well as all other historic properties which could have their setting and feeling altered from the project by either visual and/or auditory impacts. Once this indirect effects study is completed, a Historic Properties Treatment Plan would be developed to mitigate the indirect adverse effects on these historic properties from the project.

Paleontological resources could be affected through the disturbance of the ore and waste rock during mining of the pit and construction of associated haul/access roads. Invertebrate fossils in the specific geologic materials that would be disturbed are not likely to be scientifically significant and are likely to be found throughout the outcrop area of these formations in northeast Nevada. It is unlikely that any vertebrate fossils would be encountered, as none are known to occur in the formations that would be disturbed by mining or associated operations. Therefore, potential direct and indirect impacts to bedrock paleontological resources would be negligible.

### **Native American Religious and Traditional**

There are no known potential places of cultural and/or geographic interest to the Tribes within or near the project area. No formal or informal issues or concerns have been raised to date by the various Tribes regarding any religious or traditional cultural property concerns for the project. If Native American concerns emerge through consultation, BLM would consult with the appropriate Tribe(s) and individuals to obtain information about those concerns, the importance of the resource, and what mitigation measures might be appropriate, such that BLM can determine an appropriate course of action taking that information into account. No impacts to Native American religious concerns are anticipated from the Proposed Action or North Facilities Alternative.

## **Land Use, Access, and Transportation**

The dominant land uses in the project area are livestock grazing/ranching, mining, hunting, and dispersed recreation. The project area consists of a combination of public and private lands, with some split estate lands. The portion of the project area on public lands is administered by the BLM Elko District Wells Field Office. Approximately five land use authorizations are within the project area. These land use authorizations are primarily in the form of rights-of-way (ROWs) for transmission lines, roads, and telephone and fiber optic facilities, a Notice of Intent, and a materials site. Additional granting of an approximate 50-foot wide ROW for construction and operation of the power supply pipeline would be required, temporarily affecting the land use in the area crossed by the pipeline ROW corridor. The pipeline would follow existing road ROWs (State Route 233 and County Roads 765 and 790), which would reduce impacts to land use.

The Proposed Action would result in active mining areas being restricted from public access for the life of the mine for the safety of the public and to protect mine property. Approximately 16,739 acres would be fenced or there is a natural barrier that would restrict public access during active mining and reclamation. Post-reclamation land use of the project area would be multiple uses since approximately 3,852 acres would be reclaimed with the Proposed Action and approximately 3,143 acres would be reclaimed with the North Facilities Alternative. These uses would be consistent with local and BLM land use plans and guidelines. The mine pit would remain unreclaimed, resulting in a permanent change from current uses (a reduction in approximately 736 acres available for post-mining uses). The Proponent would construct berms around the unreclaimed pit for the safety of the public.

The North Facilities Alternative would prohibit public access on approximately 12,006 acres during active mining operations and during reclamation operations, which is 4,733 acres less than the Proposed Action. Under the North Facilities Alternative, the length of the power supply pipeline would reduce to 39.2 miles because the power generating plant would be moved north, which would reduce the disturbance area for the power supply pipeline to 238 acres.

For the Proposed Action and North Facilities Alternative, access to the lower Goshute Valley from the Oasis Exit off Interstate 80 (I-80) would not be available for the life of the project. Access would be available from the Shafter Exit off I-80.

Project EPMs would ensure public safety and compliance with Mine Safety and Health Administration regulations regarding access to active mine sites. Once mining operations cease, and the majority of the project area is fully reclaimed, long-term impacts to land use productivity, traffic and access would be minor.

## **Visual Resources**

The construction of the proposed project would require surface disturbances that remove existing vegetation cover from within the project area, which would introduce form, line, color, and texture elements that contrast with the features of the existing landscape. Construction

would also require grading or reshaping of soils and landforms for the construction of roads, open pit, WRSF, TSF, heap leach pad, transmission lines, fences, buildings, and other project facilities, which would also introduce form, line, color, and texture elements that contrast with the features of the existing landscape. The form, line, color, and texture elements introduced during mine construction would generally persist for the life of the project. Visibility of the project operations would also introduce form, line, color, and texture elements that contrast with the features of the existing landscape.

The proposed mining and processing facilities would be located on private land and on BLM-administered public lands that have been designated as Visual Resource Management (VRM) Class IV. Sections of the proposed power line and the proposed main access to the project would be located within the three-mile-wide "Low Visibility Corridor" associated with I-80, which is managed using VRM Class II objectives. Concurrent reclamation during operation of the proposed project would reduce the degree of contrast between the existing landscape features and the proposed project. During final reclamation of the project area, equipment, power lines, structures, and other ancillary facilities would be disassembled and removed from the area. Project features would be graded to contours that resemble surrounding landforms to the extent possible and then seeded to establish vegetation cover. Thus, reclamation would reduce the visibility of the proposed project and lessen the degree of contrast with the existing landscape features.

The Proposed Action would not conflict with established BLM VRM class objectives; however, changes in the scenic quality of the existing landscape due to visibility of the proposed project would be a major impact because several components of the proposed project would be visible, including the proposed mine pit and WRSF from I-80 and would be considered long-term because they would persist during and beyond the life of the proposed project. Several additional components of the project would be located within the "Low Visibility Corridor", including a growth medium stockpile, borrow site, power line, lay-down storage area, the heap leach facility, mine support and mill facilities, natural gas generators, and a portion of the WRSF and TSF. Accordingly, implementation of the North Facilities Alternative would not meet the objectives of the Low Visibility Corridor.

Overall, visual impacts resulting from the Proposed Action or Alternatives would be long-term, and minimal to moderate.

### **Recreation**

The Proposed Action and North Facilities Alternative would result in access restrictions within the entire Plan boundary. For the Proposed Action, access restrictions would affect members of the public who would otherwise use the approximately 7,909 acres of BLM-administered public lands and approximately 8,829 acres of private land within the Plan boundary for recreation.

The impact would change the area available for dispersed recreational uses, but have no impact on developed recreation sites or facilities because they do not exist within the Plan boundary,

nor are there unique recreational opportunities that are not found elsewhere in the vicinity. The Proposed Action and North Facilities Alternative would have only slight changes in the area accessible for dispersed public recreation, and public access to the Plan boundary would be restored once reclamation is complete. There would be no loss of access to developed recreation sites or facilities, or any unique recreation opportunities that are otherwise unavailable elsewhere. Accordingly, the impact on recreation resources resulting from restricted access to the project area would be minor and long-term, but not permanent.

Recreational users unable to access desired resources or opportunities within the Plan boundary would be anticipated to utilize other areas within the Elko District for dispersed recreation. The displacement of recreational users onto public lands outside of the Plan boundary would have an adverse impact on other recreational users that currently use those lands for dispersed recreation. The impact on recreation resources related to displacement of users from within the Plan boundary would be negligible and short-term for the life of the project.

The quality of dispersed recreation on neighboring lands within proximity to the project area may be adversely affected by the visual impacts of the physical presence of the project within the landscape and by increased noise levels during the life of the project. Reclamation of the surface disturbance within the area of analysis would reduce the visual impact beyond the life of the project. However, some components of the project, such as the mine pit, WRSF, TSF, and heap leach, would remain visually evident beyond the life of the project. Visual disruption that persists beyond the life of the project would affect users within the Plan boundary as well, because access to the Plan boundary would be permitted once reclamation is completed. The short- and long-term impact that visual disruptions would have on recreation resources would be negligible because changes in the area that are accessible for dispersed recreation opportunities would be minimal. Changes in the area that are accessible to users that seek primitive recreational experiences from dispersed recreation uses would also be minimal because the Proposed Action and North Facilities Alternative would occur within a landscape containing existing human modifications.

Increased human activity and noise levels would likely displace mule deer, pronghorn antelope, and other game species from use of the Plan boundary and areas within close proximity to the Plan boundary, which would affect recreation resources by reducing the overall area available for successful hunting, which is the most common recreational use of the area. Public access to the Plan boundary would be restricted, which would also prevent hunting or any other recreational activities from occurring within the Plan boundary. The impact that wildlife displacement and restricted access would have on hunting and other recreation activities related to wildlife would be long-term and negligible.

Implementation of the North Facilities Alternative would result in the same effects on recreation that would be expected to result from the Proposed Action. However, the intensity of the effects would differ between the two alternatives because the disturbance area for the North Facilities Alternative would measure approximately 12,006 acres, which is smaller than the approximately

16,739-acre disturbance area for the Proposed Action. Consequently, a smaller area would be closed to public access for recreational use or otherwise under the North Facilities Alternative. Recreationists would be unable to access the dispersed recreation opportunities within this area for the life of the project. Approximately 6,007 acres of the area that would be inaccessible consists of BLM-administered public lands; private land constitutes the other approximately 5,998 acres that would be inaccessible during the life of the project.

### **Socioeconomics**

For the Proposed Action and North Facilities Alternative, the project would create moderate, long-term, positive impacts on the economy of Elko County, Elko City, Wells, West Wendover, and Wendover, Utah. Mine operations would result in beneficial, long-term impacts for individuals seeking stable employment as the mine would provide long-term employment and income throughout the life of the project.

Construction employment and the income generated by construction would have a beneficial, major, and short-term impact for residents and businesses located in the affected area. Over approximately 18 months Newmont would spend about \$601 million and require approximately 350 person-years, of which about 40 percent would be hired from the local workforce. The project would also support an estimated 100 jobs in other industry sectors in the area (indirect and induced effects). The effects to businesses and local governments would be beneficial, moderate and short-term. Businesses would benefit from purchases made by construction workers, and material and equipment purchases made by Newmont.

A majority of construction workers from outside the area would be expected to live in temporary housing and not bring families due to the short-term nature of the construction. Adequate temporary housing is available in the impact study area, but the increased demand may cause a moderate and temporary increase in rental costs. Increased demand for services (public safety, utilities, education, etc.) during the construction phase would be minor and temporary, based on current capacity to provide services.

The operations and maintenance phases of the project would result in approximately 360 full- and part-time (annual average) jobs directly, and over 770 when including indirect and induced employment; this employment would be long-term. An expected increase in population of approximately 847 people (employees and families) would be considered minor and long-term.

In the short-term, housing demand generated by the project would strain the currently available temporary and long-term housing resources in Elko County. Wells, West Wendover, and Elko have planned or platted new subdivisions with infrastructure already in place. Population growth would not be expected to place a strain on public services due to existing capacity and planned expansion; the effects would be minor and short-term, lasting until market forces stabilize to meet additional demand.

The construction, operations, and closure phases of the mine would generate an increase in sales and use tax receipts. This revenue stream impact would be moderate and long-term under the current life-of-mine estimate. The project would also generate net proceeds minerals taxes during operations and Ad Valorem taxes through the life of the project. Overall, tax revenues impact generated over the life of the project would be moderate and long-term.

### **Environmental Justice**

For the Proposed Action and North Facilities Alternative, the project would not result in a disproportionate effect on a minority population or a low-income population. Minority populations identified within the area of analysis consist of the Elko Colony and Wells Colony and the Cities. The project is unlikely to place an undue burden on these populations because the area separating them from the project area is great enough that adverse human health and environmental effects would be expected to dissipate. Because there is no disproportionate effect on an identified minority or low-income population, and because beneficial effects would be distributed equally to all populations, impacts related to environmental justice issues are not anticipated.

### **Hazardous Materials and Waste**

For the Proposed Action and North Facilities Alternative, the project would result in the use of hazardous materials and waste management practices for construction and mine production, with the potential to locally affect the air, water, soil, and biological resources from an accidental spill of hazardous materials and/or solid and hazardous waste during transportation to and from the project area, or during storage or use on the project site. It is anticipated that the Proposed Action and North Facilities Alternative would result in the classification of the mine as a Small Quantity Generator of hazardous waste as defined by the EPA (maximum 220 pounds or 100 kilograms per month). Management of hazardous waste, including storage, disposal and reporting, would be in accordance with Resource Conservation and Recovery Act requirements, as administered by NDEP. Newmont would institute a waste management plan that would identify the wastes generated at the project area and their appropriate means of disposal. A SPCC Plan has been prepared by Newmont that establishes procedures for responding to accidental spills and releases of petroleum products. An Emergency Response Plan has been prepared for the Long Canyon Project that establishes procedures for responding to accidental spills or releases of hazardous materials to minimize health risks and environmental effects. In addition, Newmont has developed numerous environmental standards that set minimum requirements for management of hazardous and non-hazardous materials and waste, and petroleum products. Non-hazardous, solid waste would be managed on-site in a permitted Class III landfill (a disposal site that accepts only industrial solid waste). These management practices would reduce the potential for environmental impacts from hazardous materials and waste to negligible.