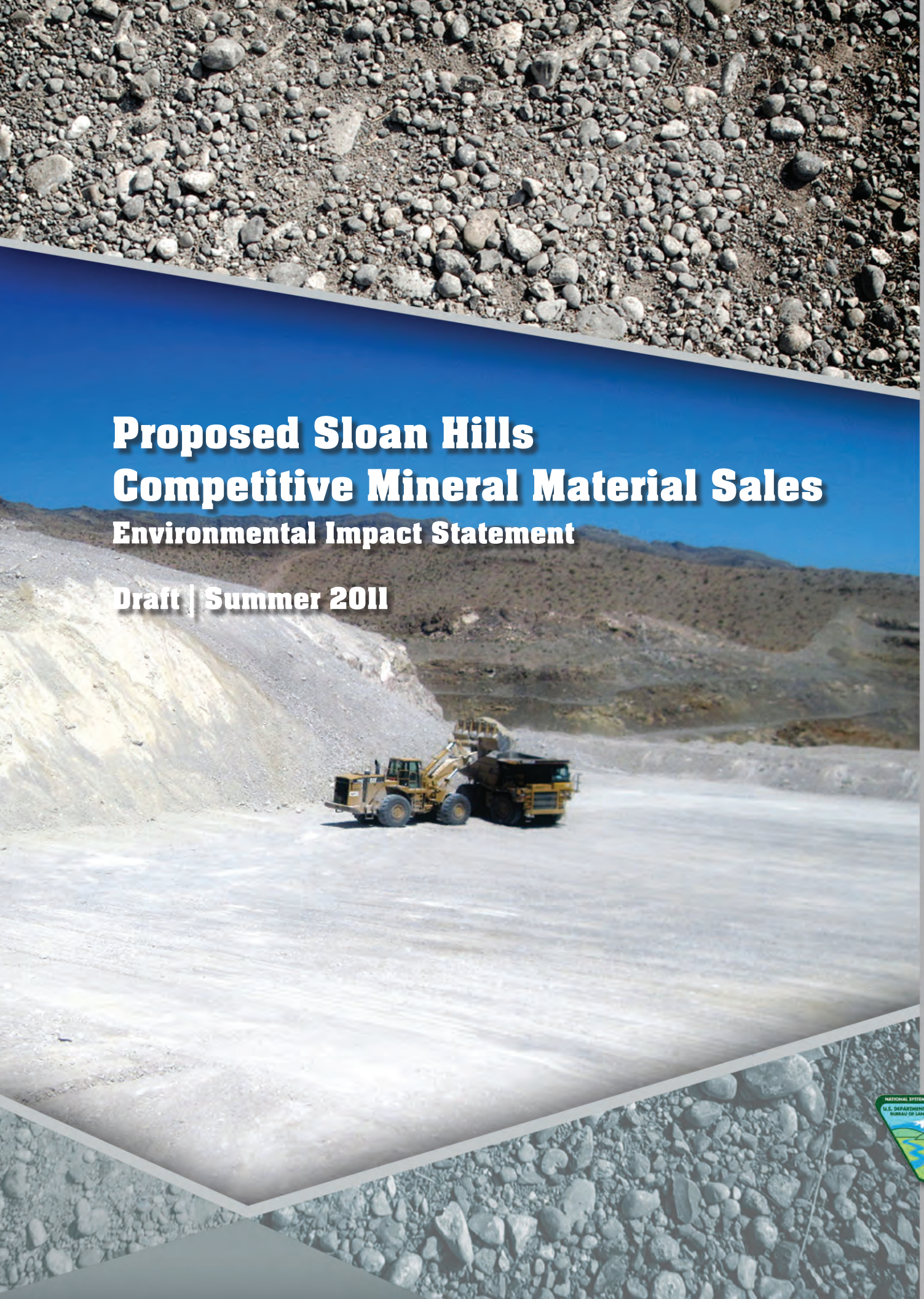
BLM

Proposed Sloan Hills Competitive Mineral Material Sales

Environmental Impact Statement

Draft | Summer 2011



NATIONAL SYSTEM OF PUBLIC LANDS
U.S. DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

Cover photos by Rick Zaninovich and Evan Allen

Cover Sheet

PROPOSED ACTION
Approval of mineral material sales for limestone and dolomite mining in the Sloan Hills area of Clark County, Nevada

LEAD AGENCY
U.S. Department of the Interior, Bureau of Land Management, Las Vegas Field Office

COOPERATING AGENCIES
Las Vegas Valley Water District
Nevada Department of Wildlife
Clark County Department of Aviation
Clark County Department of Air Quality and Environmental Management
City of Henderson

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ABSTRACT
This Draft Environmental Impact Statement (EIS) has been prepared to analyze and disclose potential environmental impacts resulting from approval of the Proposed Sloan Hills Competitive Mineral Material Sales. The alternatives include the sale of the mineral materials on the two parcels (the North Site and the South Site) to two different mining companies (Alternative 1), sale of the mineral materials on the North Site only (Alternative 2), sale of the mineral materials on the South Site only (Alternative 3), sale of the mineral materials on the North Site and South Site to a single mining company (Alternative 4), and denial of the request to sell the mineral materials (No Action Alternative). Impacts from approval of any action alternative would include increases in PM_{10} and other air emissions; alteration of the topography; loss of vegetation, wildlife habitat, and special status species habitat, including desert tortoise habitat; changes to natural drainage patterns and pathways; consumption of water for minerals processes and dust suppression; alteration in the land use pattern and the visual quality of the area; increased noise and vibration levels from heavy equipment and blasting activities; and increased traffic levels on local roads and highways.

COMMENTS
Written comments on the Draft EIS must be received via e-mail or postmarked no later than 120 days after the BLM's publication of the Notice of Availability in the *Federal Register*.

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EXECUTIVE SUMMARY

ES.1 PURPOSE AND NEED

This environmental impact statement (EIS) is being prepared to analyze and disclose potential impacts that could result from the Proposed Sloan Hills Competitive Mineral Material Sales. The Council on Environmental Quality *Regulations for Implementing the Procedural Provisions of National Environmental Policy Act (NEPA)* require that an EIS shall briefly specify the underlying purpose and need to which the federal agency is responding in proposing the alternatives, including the proposed action (40 Code of Federal Regulation [CFR] 1502.13). The Bureau of Land Management's (BLM) Proposed Action is the issuance of a mineral material sales contract(s).

The BLM is responding to applications submitted by CEMEX (formerly Rinker Materials West, LLC) and Service Rock Products Corporation (SRP) to mine the limestone and dolomite in the Sloan Hills area for production of construction aggregates. These applications were submitted in accordance with 43 CFR 3600 and two separate settlement agreements with CEMEX and SRP. The settlement agreements state that both CEMEX and SRP were to submit mining and reclamation plans for competitive mineral material sales contracts and that BLM would commit to considering the proposed sale in good faith and would look favorably upon approving the proposed sale upon complying with all applicable statutes and regulations. The settlement agreements were specific to mineral material sales in the southern half of Section 29 and the northwestern 1/4 of Section 32, Township 23 South, Range 61 East, Mount Diablo Based Meridian. The northeastern 1/4 of Section 32 was later included to meet the volume needs of SRP as stipulated in their settlement agreement.

The purpose of the action proposed in this EIS is for BLM to respond to two mineral material sales applications that were submitted by CEMEX and SRP. BLM has prepared this EIS because they need to fulfill their responsibility under the Materials Act and the Federal Land Policy Management Act. BLM must consider and respond to the applicants' request for a competitive mineral material sales contract.

ES.2 BACKGROUND

The BLM has received applications from two mining companies to mine and process limestone and dolomite of high-grade minerals in the Sloan Hills area of southern Nevada. Two settlement agreements exist that obligate BLM to process the mineral material sales applications submitted by CEMEX and SRP. The Sloan Hills site contains geologic formations of calcium and magnesium carbonates (limestone and dolomite, respectively) that have been identified as suitable for the production of construction aggregate. The Sloan Hills site was selected by the mining applicants because of the large volume of high-quality materials and its proximity to the area where construction materials would be needed most. The mining applicants, CEMEX and SRP, have proposed to mine approximately 126 million tons and 74 million tons of aggregate, respectively, from the Sloan Hills area. The Proposed Action analyzed in

this Draft EIS is the BLM sale of mineral material in the Sloan Hills site by competitive bid. The Proposed Action would not result in the disposal of public lands; the lands proposed for mineral extraction would remain under the administration of the BLM.

ES.3 ALTERNATIVES

NEPA requires the consideration and evaluation of other reasonable ways to meet the proposed objectives while minimizing or avoiding environmental impacts. Therefore, the evaluations of a No Action Alternative and a practical range of other "reasonable" action alternatives are required (40 CFR 1502.14). These alternatives should represent other means of satisfying the stated purpose and need for the Proposed Action, which is to allow the mineral material sales on BLM-administered lands to meet the demand for construction aggregate material in the Las Vegas Valley. Reasonable alternatives are those that are practical or economically and technically feasible to implement.

This EIS analyzes five alternatives: (1) the sale of mineral material in the North Site and the South Site to two mining companies that would operate independently, and the mine pits would eventually merge into a single open pit; (2) the sale of mineral materials in the North Site only; (3) the sale of mineral material in the South Site only; (4) the sale of mineral material in the North Site and the South Site as one contract to a single mining company; and (5) the No Action Alternative. Description of these alternatives are below.

ES.3.1 Alternative 1 (Two Independent Mineral Material Sales)

Alternative 1 consists of two proposed competitive mineral material sales that would result in two open pit dolomite/limestone quarries and associated facilities. Eventually, the two open pits would merge into one open pit. Each mining company would maintain a separate site for facilities and staging, and each would be responsible for acquiring the necessary water rights and other utility and access rights-of-way.

North Site Open Pit Mine

The proposed North Site open pit mine and associated facilities would be located in a 320-acre area in the south 1/2 of Section 29 in Township 23 South, Range 61 East. Once completed, the open pit mine would be approximately 205 acres in size. Ancillary facilities would be located within a 46-acre staging area in the northwest portion of the North Site.

Drilling, Blasting, and Mining. The dolomite and limestone materials on the proposed North Site would be developed using traditional aboveground quarrying techniques, including stripping, drilling, blasting, loading, and hauling of both production and waste mineral products. The North Site pit would be mined in stages over a projected 30-year period. The proposed volume of material to be removed from the property would be approximately 126 million tons, the majority of which would be processed on site and would leave the property as finished products. During the first year of operations, approximately 750,000 tons of aggregate materials would be produced for transportation off site; this would steadily

increase to a peak production level of approximately 5 million tons of aggregate materials by the tenth year of operations.

Transportation of Mineral Material. The crushed aggregate products would be loaded onto highway haul trucks and weighed at onsite scale houses for transportation off site. An estimated 23,438 offsite truck trips would be required to transport the materials during the first year, increasing to an estimated 156,250 truck trips per year by the tenth year at full production levels.

Ancillary Facilities. Several facilities would be constructed to support the mining operations. An office building, truck repair and maintenance building, off-highway shop to repair mining equipment, two scale houses, an employee parking area, a fueling facility and fuel storage area, and an equipment and parts storage area would be located within a 46-acre ancillary facilities area. Initially, a temporary portable crushing and screening plant would be used to prepare the site for the permanent operation. The portable crushing and screening plant would be in operation for approximately 18 months and would then be replaced by a permanent crushing and screening plant.

Utilities. Utilities to be constructed on site include a septic tank sanitation system; a water system to provide water to the site; and new 12-kilovolt (kV) aboveground power lines. Water for the North Site mine could be obtained from several sources: the nearby existing Bernadot well, newly constructed water well(s) with permitted point of diversion(s), or by working with the Las Vegas Valley Water District to secure water. The successful mining applicant would be required to implement a recycling system for water recovery that would recycle 85 to 90 percent of the non-potable water used in the crushing and screening plant.

Access Roads. Access to the North Site mine would be from the west via a new road that would connect to Las Vegas Boulevard. The road (approximately 6,500 feet in length) would be graded to a width of 30 feet and covered with gravel to improve conditions. In addition, all plant and mine roads would be graded to a minimum width of 30 feet and covered with gravel during the site preparation phase. All access roads would be paved as soon as feasible to reduce fugitive dust emissions. Additionally, a turn lane would be constructed along the Interstate 15 (I-15) right-of-way to accommodate the additional traffic that would be entering from Las Vegas Boulevard.

Dust control would be provided by large, high-volume water trucks with water cannons as well as side and rear discharge spray mechanisms. A 10,000-gallon water truck (primary) and an 8,000-gallon water truck (secondary) would be used to wet such critical areas as production shots, haul roads, access roads, and waste areas.

Project Boundary Fence. The North Site project boundary would be enclosed by an 8-foot chain-link fence that would be topped with a single line of barbed wire to prevent unauthorized persons from entering the site. All entrances to the North Site would have a gate that could be locked when the mine is

not operating. Additionally, the project boundary fence could be fitted with U.S. Fish and Wildlife Service-approved desert tortoise exclusionary fence if required by the Biological Opinion.

South Site Open Pit Mine

The proposed South Site open pit mine would be located on a 320-acre parcel of BLM-administered land approximately 1 mile southeast of the Sloan Road exit on I-15. This property is adjacent to the proposed North Site open pit mine, and the dolomite and limestone materials on the proposed South Site mine would be developed using the same methods employed at the North Site.

Drilling, Blasting, and Mining. The South Site open pit mine would be mined in stages over a projected 20-year period. The estimated volume of aggregate material to be mined from the South Site is approximately 74 million tons, the majority of which would be processed on site and would leave the property as finished products. During the first year of operations, approximately 250,000 tons of aggregate materials would be produced for transportation off site; this would steadily increase to a peak production level of approximately 5,000,000 tons of aggregate materials by the tenth year of operations.

Transportation of Mineral Materials. The crushed aggregate products would be loaded onto highway haul trucks and weighed at onsite scale houses for transportation off site. An estimated 7,813 offsite truck trips would be required to transport the materials during the first year, increasing to an estimated 156,250 truck trips per year by the tenth year at full production levels.

Ancillary Facilities. Several facilities would be constructed to support the mining operations. Ancillary facilities would be located within the 44-acre ancillary facility site and would include a crushing and screening plant, office buildings, truck repair and maintenance building, off-highway shop, scale houses, employee parking areas, fueling facilities and fuel storage tanks, and equipment and parts storage areas. Initially, a temporary portable crushing and screening plant would be used to prepare the site for the permanent operation. The portable crushing and screening plant would be in operation for approximately 18 months.

Utilities. Utilities to be constructed on site include a septic tank sanitation system; a water system to bring water to the site; and new 12-kV aboveground power lines. Water for the South Site mine could be obtained from several sources: newly constructed water well(s) with permitted point of diversion(s), or by working with the Las Vegas Valley Water District to secure water. The successful mining applicant would be required to implement a recycling system for water recovery that would recycle 85 to 90 percent of the non-potable water used in the processing of minerals.

Access Roads. Access to the South Site would be from the west via a new road that would connect to Las Vegas Boulevard. The road (approximately 6,000 feet in length) would be graded to a width of 50 feet and covered with gravel to improve conditions. In addition, all plant and mine roads would be graded to a minimum width of 50 feet and covered with gravel. Access roads serving the portable

crushing and screening plant would be paved once the permanent plant is constructed, approximately 18 months after the onset of mining operations. Additionally, a turn lane would be constructed along the I-15 right-of-way to accommodate the additional traffic that would be entering from Las Vegas Boulevard

Project Boundary Fence. The South Site project boundary would be enclosed by an 8-foot chain-link fence that would be topped with a single line of barbed wire to prevent unauthorized persons from entering the site. All entrances to the South Site would have a gate that could be locked when the mine is not operating. Additionally, the project boundary fence could be fitted with U.S. Fish and Wildlife Service-approved desert tortoise exclusionary fence if required by the Biological Opinion.

Two Open Pits Merge

The open pit mines on the North Site and the South Site would be situated immediately adjacent to one another. The boundary between the two pits would be taken down as the mine pits progress; this would be accomplished by establishing a surveyed boundary between the two properties. As the pits progress, excavated rock along the surveyed boundary would be monitored to determine who has the extractive rights to the rock. The two mining companies would then coordinate the extraction rates to ensure the process was safe and does not impede the other operator when extracting along the common boundary. The total surface disturbance from Alternative 1 would be approximately 341 acres.

ES.3.2 Alternative 2 (Sale of North Site Only)

Under this alternative, only the mineral material in the North Site would be sold by competitive bid. This parcel would be developed in a manner similar to the description provided for the North Site. The mineral material in the South Site would not be sold and would therefore not be quarried for construction aggregate materials. The estimated volume of material to be removed from the property is approximately 126 million tons, the majority of which would be processed on site and would leave the property as finished products.

Drilling, Blasting, and Mining. The methodology for mining aggregate materials under Alternative 2 would be the same as described for Alternative 1 except fewer aggregate materials would be produced. Under this alternative, the north 1/2 of Section 32 would not be sold; therefore, the North Site open pit mine would not merge with the South Site open pit mine.

Transportation of Mineral Material. The transportation of saleable mineral material under Alternative 2 would be the same as described for Alternative 1, except fewer truck trips would occur because less aggregate material would be produced. An estimated 15,555 offsite truck trips would be required to transport the materials during the first year, increasing to approximately 160,000 truck trips per year by the tenth year at full production levels.

Other Project Features. The construction of ancillary facilities, utilities, access roads, and project boundary fence would be the same as described for Alternative 1 for the North Site. The total surface disturbance from Alternative 2 would be approximately 221 acres.

ES.3.3 Alternative 3 (Sale of South Site Only)

Under this alternative, only the mineral material in the South Site would be sold by competitive bid. This parcel would be developed according to the description for the South Site under Alternative 1. The mineral material in the North Site would not be sold and would therefore not be quarried for construction aggregate materials. The estimated volume of aggregate material to be mined from the site is approximately 74 million tons, the majority of which would be processed on site and would leave the property as finished products.

Drilling, Blasting, and Mining. The methodology for mining aggregate materials under Alternative 3 would be the same as described for Alternative 1, except there would be less aggregate materials produced. Under this alternative, the south 1/2 of Section 29 would not be sold, and the South Site open pit mine would not merge with the North Site open pit mine.

Transportation of Mineral Materials. The transportation of saleable mineral materials under Alternative 3 would be the same as described for the South Site under Alternative 1, except fewer truck trips would occur because less aggregate material would be produced under Alternative 3. An estimated 7,813 offsite truck trips would be required to transport the materials during the first year, increasing to an estimated 156,250 truck trips per year by the tenth year at full production levels.

Other Project Features. The construction of ancillary facilities, utilities, access roads, and project boundary fence would be the same as described for Alternative 1 for the South Site. The total surface disturbance from Alternative 3 would be approximately 127 acres.

ES.3.4 Alternative 4 (Single Sale of North Site and South Site)

Alternative 4 would be the same as described for Alternative 1 except that BLM would simultaneously sell the mineral material within the North Site and the South Site to a single applicant. The sale of mineral material would be by competitive bid. The combined mineral material mining site would be modified from the plans described for Alternative 1 to include a single 46-acre ancillary facility site, a single unusable rock storage area, a single access and utility corridor, and would eliminate the protocols for the two pits merging. Total surface disturbance for Alternative 4 would be approximately 286 acres.

ES.3.5 Alternative 5 (No Action Alternative)

Under the No Action Alternative, the BLM sale of mineral material would not occur in the Sloan Hills area. Mining operations in the Proposed Action area would not be authorized or approved. No surface

disturbance would occur, and no impacts to the existing physical or biological environment would take place. Nearly 200 million tons of construction aggregate would not be produced in the Sloan Hills area.

ES.4 AFFECTED ENVIRONMENT

Chapter 3 addresses the existing conditions of the human and natural environment that potentially could be affected by the alternatives. The existing conditions of the environment are described based primarily on literature, published and unpublished reports, and agency databases containing the most recent data available. Field reconnaissance and interviews were conducted as necessary to verify specific information. The affected environment is characterized for the following areas:

- Air Resources
- Earth Resources
- Biological Resources
- Water Resources
- Cultural Resources
- Native American Resources
- Land Use
- Visual Resources
- Noise and Vibration
- Transportation
- Socioeconomics
- Special Management Areas
- Recreation

ES.4.1 Environmental Consequences

The information on the existing condition of the environment (Chapter 3, Affected Environment) was used as a baseline by which to measure and identify the potential impacts that could result from implementing the Sloan Hills Competitive Mineral Material Sales. Best management practices, conservation measures, and mitigation (which would be incorporated into a mineral material sales contract), where appropriate, were considered and incorporated into the impacts analysis.

Impacts can be direct, indirect, or cumulative. A direct impact is caused by the action and occurs at the same time and place. An indirect impact occurs later in time. Furthermore, an impact is defined as adverse or beneficial. An impact is considered adverse when the outcome of the action results in undesirable effects. A beneficial impact can result if the current condition is improved or if an existing undesirable effect is lessened.

Terms referring to impact intensity, context, and duration are used in the effects analysis. Unless otherwise stated, the standard definitions for these terms are as follows:

- **Negligible.** The impact is at the lower level of detection; there would be no measurable change.
- **Minor.** The impact is slight but detectable; there would be a small change.
- **Moderate.** The impact is readily apparent; there would be a measurable change that could result in a small but permanent change.
- **Major.** The impact is severe; there would be a highly noticeable, permanent, measurable change.
- **Localized Impact.** The impact occurs in a specific site or area. When comparing changes to existing conditions, the impacts are detectable only in the localized area.
- **Short-Term Effect.** The effect occurs only during or immediately after implementation of the alternative.
- **Long-Term Effect.** The effect could occur for an extended period after implementation of the alternative. The effect could last several years or more and could be beneficial or adverse.

ES.4.2 Alternative 1 (Two Independent Mineral Material Sales)

The primary impacts from the construction and operation of Alternative 1 are described below.

Air Quality

Construction impacts for Alternative 1 would be moderate, short-term, and localized for particulate matter less than 10 microns in diameter (PM_{10}). Mitigated PM_{10} emissions at 50 meters from the project site are below the 49.6-micrograms per cubic meter ($\mu g/m^3$) threshold; however, impacts would be minor near the existing and planned residential development areas and for all other criteria pollutants.

With mitigation, operation of the North Site and South Site under Alternative 1 would be below the thresholds for all criteria pollutants. Combined volatile organic compounds and nitrogen oxides emissions would be below the conformity threshold and would have a minor impact on ozone levels; therefore, impacts are anticipated to be minor and localized at the site border and existing and planned residential communities.

Air emissions, if 24-hour daily operations are required during peak demand times, would be moderate, temporary, and localized for PM_{10} because it exceeds the 49.6 $\mu g/m^3$ threshold for the 24-hour standard and would extend up to 1,536 feet north of the site border; however, impacts are anticipated to be minor at the existing and planned residential communities and for all other criteria pollutants.

Earth Resources

Alternative 1 would substantially alter the topography beyond that resulting from natural erosion and deposition; therefore, the impact to topography would be significant. Approximately 341 acres would be disturbed by mining operations, access roads, ancillary facilities, and other miscellaneous project components and activities.

Biological Resources

Mining activities would affect vegetation communities, and impacts would include the loss of or damage to individual plants and the seed bank, grading and compacting native soil, and permanent loss of habitat. Approximately 341 acres of vegetation would be directly impacted by mining activities and associated facilities, with 136acres to be restored and revegetated during the reclamation phase of the mine. Approximately 205 acres of vegetation in the open pit mines would be permanently lost.

Approximately 6,100 cacti and yucca plants would be removed or destroyed under this alternative. The successful applicant would be required to develop a restoration plan as part of the construction, operations, and maintenance plan that includes the salvage and use of cacti and yucca impacted by this project. Implementation of Alternative 1 would have a moderate, localized, long-term impact on cacti and yucca species. With mitigation measures, impacts associated with noxious weeds are not likely to occur.

Implementation of Alternative 1 would result in direct and indirect impacts on special status plant species. Direct impacts would include the temporary loss of approximately 2 acres of potential rosy two-tone beardtongue habitat as a result of the mining activities.

Mining activities associated with Alternative 1 would cause long-term disturbance to wildlife and wildlife habitat in the Proposed Action area. Wildlife and migratory bird habitat in the footprint of the mine would be permanently removed (approximately 205 acres). Fencing of the mine sites would fragment wildlife habitat, and noise from operation of the sites would increase wildlife exposure to noise and vibration.

Special status wildlife species, including the desert tortoise, western burrowing owl, peregrine falcon, banded Gila monster, chuckwalla, and desert bighorn sheep would be impacted by the proposed project. These species could be harmed if they are present on the site at the time of surface disturbing activities; however, mitigation measures would greatly decrease the likelihood of direct harm. Habitat within the mine footprints would be lost. Increased traffic, noise, and vibrations would potentially degrade habitat outside of the mine footprint making it less suitable for the special status species.

Water Resources

Alternative 1 would impact existing natural drainage patterns and pathways; these would be lost or modified during mining operations across the 640 acres required for mining operations. Alternative 1 would not result in increased potential for flooding or flood-related hazards. The proposed mine sites and access roads are not within the 100-year floodplain of any surface water as determined by the Federal Emergency Management Agency.

Increased soil disturbance associated with construction and mining activities may increase the potential for erosion and transport of soil (sediment) during rainfall/runoff events and suspended sediment loads in the system. There would be the potential for accidental spills of contaminants during construction and mining activities that could be transported off site by surface water flows during precipitation events. Mitigation measures would minimize the potential for transport of contaminants off site during precipitation events.

Alternative 1 could impact groundwater recharge by modifying the land surface. Changes in the permeability of the ground surface could locally reduce groundwater infiltration rates. Less than 15 percent of the rainfall in the Las Vegas valley contributes to recharge at elevations below 5,000 feet (Dettinger, 1989); therefore, changes to the permeability of the ground surface associated with Alternative 1 would not significantly impact groundwater recharge in the Las Vegas Valley Groundwater Basin.

Groundwater quality could be impacted by potential accidental releases of chemical substances and waste products, increased runoff, and use of the septic system. The potential for groundwater quality degradation is minimal because the climate is arid, which reduces the potential for infiltration of chemicals into the ground; the depths of the groundwater are at least 100 feet, and depth to water in an existing onsite well was 596 feet below land surface; and a Hazardous Materials Control Plan would be developed and implemented.

Mining of limestone and dolomite typically requires approximately 100 to 150 acre-feet of water per 1 million tons of mined material. The expected conservation of water supplies and use of recycled water is 85 to 90 percent; therefore, between 1,766 to 2,283 acre-feet of water would be needed over the life of the mine at the North Site with an additional 1,728 to 2,283 acre-feet for the mine at the South Site. If existing wells must be used to obtain water, there may be changes in groundwater levels around the well. Predicted drawdown at the existing wells would range from 2 feet at the farthest wells to 15 feet at the closest well. The changes in available drawdown in the existing wells ranged from 0.4 to 6.7 percent of available drawdown.

Cultural Resources

Implementation of Alternative 1 would impact four cultural resources located within the 640 acres proposed for sale. These resources have been thoroughly recorded and determined ineligible for listing on the National Register of Historic Places (NRHP); therefore, there would be no effects on Historic Properties from the implementation of Alternative 1.

Native American Resources

Based on the results of Native American consultation, literature review, and pedestrian survey, it is unlikely that mining activities at the Sloan Hills site would have direct or indirect impacts on local Native American resources. No sacred lands, traditional cultural properties, or areas associated with traditional usable resources, such as water and toolstone sources, are present in the Proposed Action area. Rock art is also lacking. Native American occupation and use of the project area generally appears to have been minimal due to its lack of exploitable resources (White, 2002).

Land Use

Overall, implementation of Alternative 1 would result in long-term, moderate, but localized impacts to land use in the Proposed Action area. Public facilities within the vicinity of the Proposed Action area may be impacted temporarily during construction of access roads utilities. Two rights-of-way may be impacted where the access roads intersect them. No agricultural lands occur in the project vicinity; therefore, they would not be impacted by implementation of Alternative 1. No long-term loss of access to public facilities, businesses, or residences would occur as a result of Alternative 1.

Visual Resources

Under Alternative 1, the mountain ridge that runs along the eastern edge of the mineral extraction boundary would be left intact until the final 5 years of mine development. This ridge would obscure the view of the mine sites from the residential communities to the northeast of the Proposed Action area and from the North McCullough Wilderness to the east of the Proposed Action area until the final years of mine development. Implementation of Alternative 1 would result in a significant impact on the visual resource setting of the area.

Noise and Vibration

Implementation of Alternative 1 would result in imperceptible short-term noise and vibration impacts according to the U.S. Environmental Protection Agency and natural standards, and moderate to imperceptible long-term noise and vibration impacts according to those same standards. These impacts would be less than significant.

The EPA has determined that in order to protect the public from activity interference and annoyance outdoors, noise levels should not exceed 55 A-weighted decibels (dBA). It is anticipated that short-term sound levels from construction activities would be approximately 43 dBA of equivalent continuous noise levels (L_{eq}) at the nearest residences (approximately 1.2 miles from the limits of the project area) and 46 dBA L_{eq} at the North McCullough Wilderness (approximately 0.8 mile from the limits of the project area); therefore, construction noise is not expected to significantly impact sensitive receptors near the proposed project.

Mining operation activities would include blasting that could generate vibration levels of 91 vibration decibels (VdB) at the Proposed Action area. At the nearest residential uses, approximately 1.2 miles away, the vibration from blasting would equal approximately 28 VdB, which is well below the 65 VdB threshold of perception for many people. Vibration levels at North McCullough Wilderness could reach 33 VdB, which is also well below the 65 VdB threshold of human perception. These would be considered acceptable vibration occurrences and would not significantly impact nearby sensitive receptors.

Transportation

Transportation impacts would include potentially significant traffic impacts of the initial mobilization, site preparation, and mine development phase due to the transportation of heavy equipment that would be used for site excavation.

There would be an estimated 558 truck trips per day to each mine site once they have reached full production (year 10), for an estimated combined total of 1,116 truck trips entering and exiting the mining area via the proposed access road. The addition of more than 1,000 fully loaded truck trips per day over the life of the mines would have a significant impact on the pavement condition and structural integrity of the surrounding roadway network; this would accelerate the structural deterioration of the roads and reduce the lifespan of the pavement. As a consequence, state and county agencies would need to engage in road repairs sooner and more frequently than they would if the project did not occur.

A potentially significant impact would be an acceleration of the structural deterioration and reduction in the lifespan of the surrounding roadway network due to project-related truck traffic. The extent to which the project would contribute to this deterioration is determined by the amount of truck traffic generated by the project. Because Alternative 2 would generate half as much truck traffic as Alternative 1, it would be responsible for approximately half as much damage to the roads.

Socioeconomics

Direct effects to social and economic resources from operation and maintenance of this alternative would be minimal. These effects would be concentrated in Clark County, Nevada, primarily the cities of Las Vegas and Henderson. The estimated number of long-term, full-time employees at the site would be 20 to 30. All new employees are anticipated to reside in the proximity of the Proposed Action area, and no substantial change to employment in the region is anticipated. No effects to population are anticipated as a result of Alternative 1.

Implementation of Alternative 1 would not result in an influx of new taxpayers or changes to property values or local taxes; therefore, no effects to property valuation and taxation are anticipated as a result of Alternative 1.

Based on current electrical service provided by NV Energy and available capacity, impacts to electrical output services would be minor. No long-term impacts on existing utilities are expected. Temporary construction impacts could include traffic delays during the installation of power poles and power lines. Permanent impacts may include visual impacts for travelers and residents along Las Vegas Boulevard. There would be no significant impact to natural gas as a result of Alternative 1.

Special Management Areas

Special management areas would be impacted by increased levels of fugitive dust, changes to the visual character of the area, increased noise levels, and the removal of 640 acres from the Jean Lake/Roach Special Recreation Management Area. The Sloan Canyon National Conservation Area and the North McCullough Wilderness would not be directly impacted by the Proposed Action; however, indirect impacts would occur. Indirect impacts could include impacts to vegetation from fugitive dust, while increased noise levels and changes to the visual character of the area could impact the experience of users of the Sloan Canyon National Conservation Area and the North McCullough Wilderness. Within the wilderness area, indirect impacts to wilderness characteristics of naturalness and a decrease in opportunities for solitude may occur.

Recreation

Implementation of Alternative 1 would affect recreational resources because it would remove 640 acres that were previously available for dispersed recreation. Other impacts, such as increased noise, dust, and traffic, would affect the character and rural, undeveloped “feel” of the surrounding area; this could have negative impacts on people engaged in hiking, camping, birding and other wildlife observation and study, and hunting. The new access roads would provide improved access to the area, which could lead to increased recreational opportunities and increased impacts from human use.

ES.4.3 Alternative 2 (Sale of North Site Only)

Impacts from Alternative 2 would be similar in scope to the anticipated impacts from Alternative 1, but, overall, they would be smaller in scale.

Air Quality

PM_{10} emissions from the construction of Alternative 2 would be moderate, localized, and short-term at the fence line and to 485 feet north of the site; however, impacts would be minor near the existing and planned residential development areas.

During operations, Alternative 2 would be below the thresholds for carbon monoxide, nitrogen oxides, particulate matter less than 2.5 microns in diameter ($PM_{2.5}$), and PM_{10}. The impacts, therefore, are anticipated to be minor and localized at the site border and existing and planned residential communities.

The 24-hour operation of Alternative 2 would also be minor for carbon monoxide, nitrogen oxides, and $PM_{2.5}$. The anticipated PM_{10} impact would exceed the threshold, resulting in a moderate localized impact adjacent to the site border; however, it is not anticipated to exceed thresholds at the existing or planned residences.

Earth Resources

The natural topographic and geomorphic features in the open pit mine area would be permanently changed. The completion of the North Site pit mine would result in a noticeable topographic change in the immediate area of the project. Alternative 2 would substantially alter the topography beyond that resulting from natural erosion and deposition; therefore, the impact to topography would be significant. Approximately 214 acres would be disturbed by mining operations, access roads, ancillary facilities, and other miscellaneous project components and activities.

Biological Resources

Under Alternative 2, approximately 221 acres of vegetation and 648 acres of wildlife and special status species habitat would be directly impacted by the mine and facilities. Approximately 3,900 cacti and yucca plants would be removed or destroyed under this alternative. Other impacts on vegetation communities, wildlife, and special status species would be similar to those described for Alternative 1.

Water Resources

Impacts on water resources from Alternative 2 would be similar to those described for Alternative 1; however, the scope of the impacts would decrease because only the North Site would be developed and operated.

Cultural Resources

Under this alternative, only two of the known cultural resources located in the area of potential effect would be directly affected. The reasons for, and the results of the effects to, cultural resources would be the same as those listed under Alternative 1.

Native American Resources

No direct or indirect impacts to Native American resources are expected as a result of this alternative.

Land Use

Impacts to land use from implementation of Alternative 2 would be similar to those described for Alternative 1. The scope of impacts would decrease because only the North Site would be developed. Impacts to existing rights-of-way would be the same as those described for Alternative 1, except that the access road/utilities would cross a right-of-way in only one location.

Visual Resources

Impacts to visual resources from the implementation of Alternative 2 would be similar to those for Alternative 1. The North Site mine would be developed in a manner similar to Alternative 1 so that the mountain ridge along the eastern edge of the mineral extraction boundary would be left intact until the final 5 years of mine development.

Noise and Vibration

Impacts from noise and vibration would be similar to those described for Alternative 1; however, they would decrease in frequency because only the North Site would be developed, which would decrease blasting occurrences.

Transportation

The impact of Alternative 2 on the volumes of the surrounding roadway network would be considerably less than the traffic impacts for Alternative 1 because only one of the two mine sites would be in operation. Impacts on traffic from the development of Alternative 2 would be minimal.

Socioeconomics

Impacts to employment, population, property valuation, and utilities would be the same as those described for Alternative 1; however, the scope of these impacts would decrease by approximately half because only the North Site would be developed.

Special Management Areas

Impacts on special management areas for Alternative 2 would be similar in scope but smaller in nature to those described for Alternative 1.

Recreation

Impacts on recreation from implementation of Alternative 2 would be similar in scope but smaller in nature than those described for Alternative 1.

ES.4.4 Alternative 3 (Sale of South Site Only)

Impacts from Alternative 3 would be similar in scope to the anticipated impacts from Alternative 1, but, overall, they would be smaller in scale.

Air Quality

PM_{10} emissions from the construction of Alternative 3 would be moderate, localized, and short-term at the fence line and to 485 feet north of the site; however, impacts would be minor near the existing and planned residential development areas.

During operations, Alternative 3 would be below the thresholds for carbon monoxide, nitrogen oxides, $PM_{2.5}$, and PM_{10}. The impacts, therefore, are anticipated to be minor and localized at the site border and existing and planned residential communities.

The 24-hour operation of Alternative 3 would also be minor for carbon monoxide, nitrogen oxides, and $PM_{2.5}$. The anticipated PM_{10} impact would exceed the threshold, resulting in a moderate localized impact adjacent to the site border; however, it is not anticipated to exceed thresholds at the existing or planned residences.

Earth Resources

The natural topographic and geomorphic features in the open pit mine area would be permanently changed. Alternative 3 would substantially alter the topography beyond that resulting from natural erosion and deposition; therefore, the impact to topography would be significant. Approximately 132 acres would be disturbed by mining operations, access roads, ancillary facilities, and other miscellaneous project components and activities.

Biological Resources

Under Alternative 3, approximately 127 acres of vegetation and 324 acres of wildlife and special status species habitat would be directly impacted by the mine and facilities. Approximately 2,250 cacti and yucca plants would be removed or destroyed under this alternative. Other impacts on vegetation communities, wildlife, and special status species would be similar to those described for Alternative 1.

Water Resources

Impacts on water resources from Alternative 3 would be similar to those described for Alternative 1; however, the scope of the impacts would decrease because only the South Site would be developed and operated, and the life of the mine would decrease from 30 years to 20 years.

Cultural Resources

Alternative 3 would involve long-term direct effects to two cultural resources. The reasons for, and the results of the effects to, cultural resources would be the same as those listed for Alternative 1.

Native American Resources

No direct or indirect impacts to Native American resources are expected as a result of this alternative.

Land Use

Impacts to land use from implementation of Alternative 3 would be similar to those described for Alternative 1. The scope of impacts would decrease because only the South Site would be developed. Impacts to existing rights-of-way would be the same as those described for Alternative 1, except that the access road/utilities would cross a right-of-way in only one location.

Visual Resources

Visual resource impacts from the implementation of Alternative 3 would be less in magnitude than the impacts from implementation of either Alternative 1 or Alternative 2. Changes in the visual character of the area from Alternative 3 would be obscured by hills located in the North Site, which would be left intact. Impacts from Alternative 3 would be less than significant.

Noise and Vibration

Impacts from noise and vibration would be similar to those described for Alternative 1; however, they would decrease in frequency because only the South Site would be developed, which would decrease blasting occurrences.

Transportation

Impacts on traffic from Alternative 3 would be approximately 50 percent of those impacts from Alternative 1 and similar to those for Alternative 2.

Socioeconomics

Impacts to employment, population, property valuation, and utilities would be the same as impacts described for Alternative 1; however, the scope of these impacts would decrease by approximately half because only the South Site would be developed.

Special Management Areas

Impacts on special management areas for Alternative 3 would be similar in scope but smaller in nature to those described for Alternative 1; however, impacts from mine operations would last only for 20 years under Alternative 3 rather than the 30 years for the other alternatives.

Recreation

Impacts on recreation from implementation of Alternative 3 would be similar in scope but smaller in nature than those described for Alternative 1.

ES.4.5 Alternative 4 (Single Sale of North Site and South Site)

Impacts from Alternative 4 would be similar in scope and nature to the anticipated impacts from Alternative 1.

Air Quality

PM_{10} emissions from the construction of Alternative 4 would be moderate, localized, and short-term at the fence line and to 485 feet north of the site; however, impacts would be minor near the existing and planned residential development areas.

During operations, Alternative 4 would be below the thresholds for carbon monoxide, nitrogen oxides, $PM_{2.5}$, and PM_{10}. Therefore, the impacts are anticipated to be minor and localized at the site border and existing and planned residential communities.

The 24-hour operation of Alternative 4 would also be minor for carbon monoxide, nitrogen oxides, and $PM_{2.5}$. The anticipated PM_{10} impact would exceed the threshold, resulting in a moderate localized impact adjacent to the site border; however, it is not anticipated to exceed thresholds at the existing or planned residences.

Earth Resources

The natural topographic and geomorphic features in the open pit mine area would be permanently changed. Alternative 4 would substantially alter the topography beyond that resulting from natural erosion and deposition; therefore, the impact to topography would be significant. Approximately 286.1 acres would be disturbed by mining operations, access roads, ancillary facilities, and other miscellaneous project components and activities.

Biological Resources

Under Alternative 4, approximately 286 acres of vegetation and 646 acres of wildlife and special status species habitat would be directly impacted by the mine and facilities. Approximately 5,100 cacti and yucca plants would be removed or destroyed under this alternative. Other impacts on vegetation communities, wildlife, and special status species would be similar to those described for Alternative 1.

Water Resources

Impacts on water resources from Alternative 4 would be the same as those described for Alternative 1, with the exception of water supply. Estimated water use of the mine would range between 3,299 and 4,631 acre-feet over the proposed 30-year operation.

Cultural Resources

Impacts on cultural resources from Alternative 4 would be the same as those described for Alternative 1.

Native American Resources

No direct or indirect impacts to Native American resources are expected as a result of this alternative.

Land Use

Impacts on land use from Alternative 4 would be similar in scope and nature to those described for Alternative 1. The one difference in impacts would be from only one access road/utility crossing of the Los Angeles/Salt Lake Railroad right-of-way.

Visual Resources

Visual resource impacts from the implementation of Alternative 4 would be the same as those for Alternative 1.

Noise and Vibration

Impacts from noise and vibration would be similar in scope and nature to those described for Alternative 1.

Transportation

Impacts on traffic and transportation would be similar in nature to those described for Alternative 1 but would decrease by 30 percent because annual production would be 7 million tons, as opposed to 10 million tons under Alternative 1.

Socioeconomics

Socioeconomic impacts from Alternative 4 would be the same as those described for Alternative 1. Impacts to employment, population, and property valuation would be the same in nature and scope as those described for Alternative 1.

Special Management Areas

Impacts on special management areas from Alternative 4 would be similar in scope and nature to those described for Alternative 1.

Recreation

Impacts on recreation from Alternative 4 would be similar in scope and nature to those described for Alternative 1.

ES.4.6 Alternative 5 (No Action Alternative)

Because no production would occur at the proposed sites, there would be no impacts in the Sloan Hills area associated with the No Action Alternative. Mining applicants may choose to mine mineral materials in an alternate location.

ES.5 CUMULATIVE IMPACTS

Air Quality

Long-term, moderate cumulative air quality impacts could potentially occur from combined operation of the mining alternatives, Southern Nevada Regional Heliport, the I-15 Corridor, and Southern Nevada Supplemental Airport Projects. Plane and helicopter emissions, along with emissions from increased highway traffic in the project vicinity, could combine with mining operation emissions to create undesirable pollutant levels for nearby sensitive receptors; however, the implementation of operational mitigation measures would, overall, reduce long-term air impacts.

Earth Resources

Development and construction from other projects in the region may contribute to further changes in the natural topography. Grading and terracing of hills and mountains for residential developments and golf courses, combined with the proposed mining operations, would affect the overall landscape. Areas that are currently rolling hills and mountains would be terraced and/or reduced in elevation, resulting in a major cumulative effect on topography.

The implementation of the action alternatives would result in the potential for increased soil erosion. Disturbance of surface soils would occur during construction of the projects considered in this cumulative impacts analysis process. Compliance with erosion, stormwater, and water quality best management practices, and air quality requirements during construction, is required throughout Clark County and would minimize the impacts. Overall, the past, present, and foreseeable projects would have a minor cumulative impact on surface soils.

Biological Resources

The cumulative effect of past, present, and future projects on vegetation within and in the vicinity of the Proposed Action area would include the removal of more than 273,000 acres of natural desert habitats, of which a large proportion would be Mojave Desert Scrub habitat. This would permanently remove approximately 8 percent of the Mojave Desert Scrub habitat, or approximately 6 percent of all natural habitats in Clark County. Some localized populations of plant species could be eradicated. Additional vegetation impacts would include a reduction in the local gene pool for many species, which could increase populations' susceptibility to extinction as a result of severe environmental events. Construction would also increase disturbance to soils, creating suitable environs for noxious weeds to invade and spread.

Cumulative impacts on vegetation, wildlife, and special status species would result in the permanent removal of approximately 273,000 acres of vegetation/wildlife habitat and the dispersal of wildlife from construction areas. Some animals, including threatened and/or endangered animals, could be killed or injured during construction. Because the Las Vegas Valley is bounded by mountain ranges, dispersal of wildlife outside of the valley is unlikely (with the exception of avian species and bighorn sheep).

Other cumulative impacts would include fragmentation of habitats and impacts on migratory corridors. Migrating avian species may have to fly longer distances to find suitable roosting or foraging habitats.

The cumulative impact of various development projects in the vicinity would cause wildlife populations in the valley to be depressed as more land is developed and less land is available for dispersal. Over time, some populations could become extirpated (i.e., completely lost) from the Las Vegas Valley; however, compliance with federal, state, and local regulations would require that impacts to threatened or endangered wildlife species be avoided or mitigated for.

Water Resources

Past, present, and future projects could result in beneficial (diverting floodwaters from development) and adverse (increasing surface runoff) effects on the flow of surface water through the Las Vegas Valley. Additionally, they have the potential to cause an increase in surface water pollution. Impacts on surface water would be both temporary and minor (construction-related impacts) and major and long-term (community-scale changes).

Actions that would contribute to cumulative impacts on groundwater resources include the rapid population increase in Clark County and the Sloan 2745 Reservoir site. As the population continues to grow, the demand on available groundwater resources will also increase. Planning efforts of the Nevada Department of Conservation and Natural Resources, Division of Water Resources, in conjunction with the required permitting process for allocation of water rights in the state, would reduce the potential for over-withdrawal of the groundwater basin.

Cultural Resources

Potential cumulative impacts on cultural resources could occur. The Las Vegas Paiute have historically occupied the area immediately surrounding the Proposed Action area, and this subgroup is most closely related to the Proposed Action area. No Historic Properties (i.e., properties eligible or already listed on the NRHP) would be affected by the action alternatives. Additionally, there is a low potential for any aspect of the action alternatives to affect intact subsurface cultural deposits in the Proposed Action area. Similarly, there would be no cumulative impacts to Historic Properties in the vicinity of the Proposed Action area from past, present, or reasonably foreseeable future actions.

Native American Resources

The implementation of past, present, and foreseeable future projects will have a cumulative impact on Native American resources; however, the extent of impact is unknown at this time without input from the local Native American tribes.

Land Use

Cumulative impacts on land use would include altered land use patterns, conversion of undeveloped land to urban land uses, and permanent conversion of natural desert landscapes and open recreational areas to urbanized, developed areas.

Visual Resources

The cumulative impact on visual resources would be the conversion of a natural, desert landscape to an urban, highly developed cityscape; however, this conversion is consistent with city, county, and state

planning efforts, and implementation of any action alternative would not be substantially more noticeable over the long-term than other development projects planned for the region.

Past, present, and reasonably foreseeable future projects would cumulatively result in minor, short-term noise and vibration impacts during construction activities and moderate long-term noise impacts.

Transportation

Past, present, and reasonably foreseeable future projects would cumulatively result in increased traffic volumes on existing roadways in the I-15 South Corridor. Based on the results, however, all roadways are expected to continue to operate at acceptable level of service in 2020 and 2030 with and without the Proposed Action. The increased traffic volumes would likely result in long-term increased noise levels along the existing roadways although mitigation measures (such as construction of noise barriers) would reduce noise to acceptable levels.

Socioeconomics

Cumulative impacts on socioeconomics would include increased water or wastewater rates, increased power requirements, and increased tax rates to fund these projects. These increases would be experienced by residents and businesses in the Las Vegas Valley but would not be considered abnormal cost of living increases. Although there may be an increase in rates, these projects would also result in increased employment and increased local and state tax revenue associated with economic activity generated by any of the action alternatives and other proposed projects.

Special Management Areas

Cumulative impacts on special management areas would occur and would likely have a minor short-term impact on special management areas as a result of restricted access during construction but would have a moderate long-term impact on special management areas as a result of the permanent conversion of previously undeveloped areas into urban land use types and the increase in the number of special management areas users. These projects would diminish the area's wilderness character.

Recreation

Cumulative impacts on recreation in the area would include minor short-term impacts as a result of restricted access during construction and moderate long-term impacts as a result of the permanent conversion of previously available recreational areas into urban land use types and the increase in the number of recreational users.

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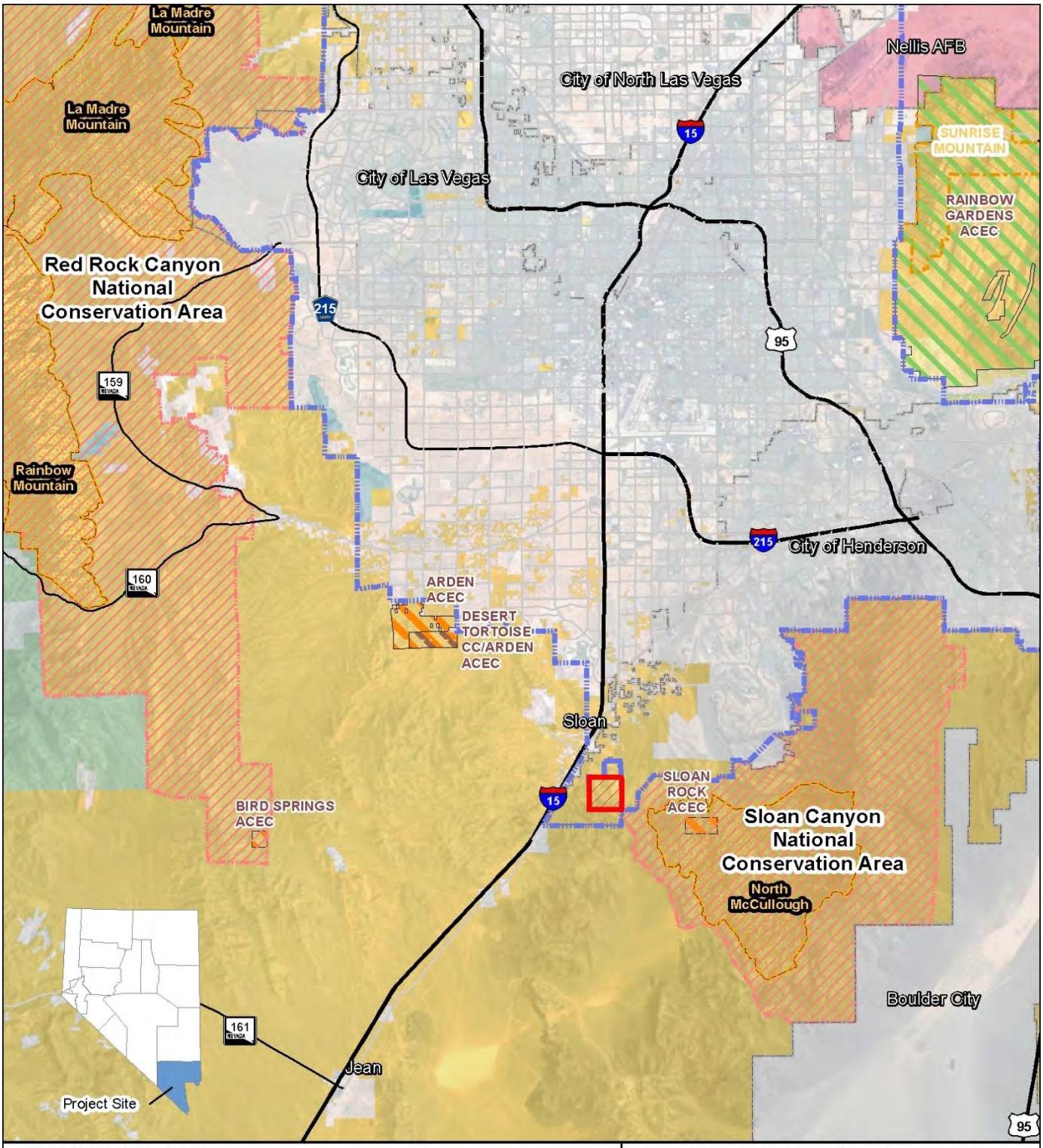
1.0 INTRODUCTION

The United States (U.S.) Bureau of Land Management (BLM) Las Vegas Field Office is responding to two applications submitted; these applications propose to mine mineral material on two parcels of land in the Sloan Hills of southern Nevada (Figure 1.0-1). The mining applicants, CEMEX and Service Rock Products Corporation (SRP), have applied for mineral material sales contracts to mine approximately 126 million tons and 74 million tons of limestone and dolomite, respectively, from the Sloan Hills site. Regulations set forth in the Code of Federal Regulations (CFR) Title 43 Subpart 3602.31 (43 CFR 3602.31) limit the volume of mineral material that the BLM may sell in an individual sale without advertising or calling for bids. This limitation is set at 200,000 cubic yards, which is approximately 409,000 to 489,000 tons (based on an average density range of 4,050 to 4,887 pounds per cubic yard for construction aggregates). The sale requests from CEMEX and SRP exceed the volume limitations for non-competitive sales found at 43 CFR 3602.31; therefore, any sale, if made, would have to be on a competitive basis (through oral bid or auction). As directed by the Federal Land Policy Management Act (FLPMA) of 1976, and in accordance with BLM policy, the BLM will make mineral material available to the public and local governmental agencies whenever possible and wherever environmentally acceptable.

The Proposed Action analyzed in this Draft Environmental Impact Statement (EIS) is the issuance of a mineral material sales contract(s) in the Sloan Hills. The mineral material would be sold to qualified private persons, parties, and/or businesses at a public sale through competitive bid. The Proposed Action would not result in the disposal (i.e., the sale) of public lands; the lands proposed for mineral extraction would remain under the administration of the BLM. This Proposed Action is consistent with 43 CFR 3600, Mineral Materials Disposal, and is authorized under the Materials Act of 1947, the Surface Resources Act of 1955, the Mining and Minerals Policy Act of 1970, and the FLPMA of 1976.

The proposed mineral material sale(s) would occur on BLM-administered land; therefore, the BLM is the decision maker for the Proposed Action. The Authorized Officer of the BLM Las Vegas Field Office has final approving authority for the selected alternative and the Record of Decision (ROD). The decisions to be made are whether the BLM will hold a competitive mineral material sale in the Sloan Hills area and whether the BLM will issue to the successful applicant a mineral material sales contract pursuant to 43 CFR 3600. The environmental analysis in this Draft EIS will provide the decision maker with the information needed to make an informed, reasoned decision in compliance with applicable laws, ordinances, and regulations.



Source: Clark County, Nevada, BLM.

Proposed Action Area
SNPLMA Disposal Boundary
Municipal Boundary
National Conservation Area
Designated Wilderness
Wilderness Study
Biological ACEC
Cultural ACEC
Cultural/Biological ACEC
Desert Tortoise ACEC
Desert Tortoise/Cultural ACEC
Bureau of Indian Affairs
Bureau of Land Management
Bureau of Reclamation
City of Las Vegas
Clark County, Nevada
Department of Defense
Department of Energy
Fish and Wildlife Service
Forest Service
National Park Service
Nevada State
Private

No warranty is made by the Bureau of Land Management as to the accuracy, reliability, or completeness of these data for individual 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.

1 inch = 4 miles

4 2 0 4 Miles

N W E S

Proposed Sloan Hills Competitive Mineral Material Sales Environmental Impact Statement

Figure 1.0-1
Proposed Sloan Hills
Mineral Materials Sale Site

Prepared by: PBSJ

11/25/2009 | TD | X:\Projects\100011108 Sloan Hills EIS\5.0 Maps_Figures_Drawings\GIS\MXD\Fig1.0-1_Gen_Loc.mxd

The BLM as the lead agency has overseen the preparation of this Draft EIS in response to the mining applications and will oversee preparation of the Final EIS. PBS&J, acting as the third-party contractor, has prepared the Draft EIS on behalf of and at the discretion of the BLM and will also prepare the Final EIS. PBS&J has no financial or other interests in the outcome of the proposed project.

The objectives of this Draft EIS are to (1) assess the environmental, social, and economic impacts associated with the Proposed Action, and (2) evaluate a number of reasonable alternatives to determine whether the Proposed Action presents the best approach for the BLM to adopt in terms of mitigating potential impacts while being consistent with BLM's policy to make mineral material available.

1.1 PROJECT HISTORY AND REGULATORY CONTEXT

Rinker Materials West, LLC (Rinker)[1] filed a Mining Plan of Operations (MPO) under 43 CFR 3809 with the BLM Las Vegas Field Office on March 15, 2002. In that MPO, Rinker proposed to mine limestone and dolomite from seven placer claims (which are known as the Bernadot claims) in the Sloan Hills area. These claims were located in portions of Sections 28, 29, and 32 of Township 23 South, Range 61 East. Several factors inhibited the BLM from approving the MPO submitted by Rinker in 2002:

- Four other association placer claims, known as the Black Mountain claims and held by Tyrell Builders, LLC, were adjacent to and underlie a portion of the Bernadot claims. The Black Mountain claims were located in portions of Sections 28 and 29 of Township 23 South, Range 61 East.

- Portions of the lands covered by the mining claims were segregated by BLM from mineral entry (i.e., withdrawn and therefore not available for mineral entry) in 1998 and 2002 due to proposed BLM land transfers.

- A portion of the lands was designated as a community pit by the BLM in 1996.

- The mining applicants were required to demonstrate that the materials are of an uncommon variety subject to location under the Mining Law of 1872.

Holders of mining claims and sites located on lands later withdrawn from mineral entry must prove their right to continue to occupy and use the land for mining purposes. Owners must demonstrate that the mines contain a valuable mineral deposit and/or are used and occupied properly under the General Mining Law as of the date of withdrawal and as of the date of the mineral examination. Under current regulations, mining claims or sites whose discovery, use, or occupation cannot be demonstrated on the date of withdrawal or the date of mineral examination have no valid existing rights and shall be contested by the BLM. Therefore, in order for Rinker to mine the proposed site, they needed to demonstrate that the

[1] On July 10, 2007, CEMEX acquired a 90 percent interest in Rinker Group Limited. Rinker Materials West, LLC, currently operates as a wholly owned subsidiary of CEMEX.

materials proposed for mining are of an uncommon variety pursuant to the Surface Resources Act of 1955 (30 United States Code [USC] 611-615; 43 CFR 3715) and the FLPMA (43 CFR 3809.101) and that the Bernadot mining claims were valid at the time that the lands were segregated or withdrawn from mineral entry. For a mineral deposit to be determined an uncommon variety, it must satisfy specific criteria, including the following:

> …distinct and special value must be reflected in the higher price which the material(s) commands in the marketplace, or by reduced cost or overhead so that the profit to the claimant would be substantially more.

The BLM makes such determinations by completing a Mineral Examination Report and making a Determination of Common Variety. The BLM Las Vegas Field Office completed a Mineral Examination Report for the subject lands on March 9, 2004. The determination of that report concluded that the limestone and dolomite in the Bernadot claims are not of an uncommon variety and, further, that there was not a discovery of marketable limestone on the claims at the time of the segregation (BLM, 2004a). As a result of the findings of the Mineral Examination Report, the BLM initiated contest proceedings against five of the Bernadot claims and the four Black Mountain claims. On December 7, 2005, the Administrative Law Judge in the Office of Hearings and Appeals ruled that the Bernadot association placer claims were improperly staked and were therefore null and void.

The decision was appealed by the Bernadots and Rinker (acting as the intervenor on the Bernadots' behalf) to the Interior Board of Land Appeals on January 5, 2006. Before a decision was issued by the Interior Board of Land Appeals, a settlement agreement between the two parties and the BLM was entered into on September 17, 2007. In the settlement agreement, the Bernadots and Rinker agreed to relinquish mining claims on the lands described in the 2002 MPO submitted by Rinker and agreed not to relocate future mining claims in the same area. In exchange, the BLM agreed to initiate a proposed action to hold a competitive mineral material sale for the extraction of up to 75 million tons of aggregate on an area not to exceed 320 acres within the south 1/2 of Section 29 of Township 23 South, Range 61 East.

On March 29, 2004, the BLM initiated contest proceedings against Tyrell Builders, LLC, to declare the Black Mountain association placer claims invalid. Tyrell Builders and SRP (acting as the intervenor on Tyrell Builders' behalf) settled with the BLM before the case was presented to the Administrative Law Judge. The terms of the settlement agreement stipulate that the Black Mountain association placer claims remain null and void. However, SRP agreed to submit an MPO to mine 50 million tons of aggregate from the northwest 1/4 of Section 32, and BLM agreed to process the application as expeditiously as possible and in accordance with all applicable laws and to hold an open competitive bid for the sale of mineral material in the northwest 1/4 of Section 32. It was later determined that the northwest 1/4 of Section 32 did not contain sufficient limestone and dolomite to mine 50 million tons of construction aggregates, and the proposed MPO mining area was expanded to include the northeast 1/4 of Section 32.

Both settlement agreements stipulate that BLM shall commit to considering the proposed mineral material sale(s) in good faith and shall look favorably on approving the proposed sale upon complying with all applicable statutes and regulations. However, the settlement agreements also state that nothing within the agreements shall be construed as restricting BLM's discretion in approving or denying the proposed mineral material sale(s).

1.2 PURPOSE OF AND NEED FOR THE ACTION

The Council on Environmental Quality (CEQ) Regulations for Implementing the Procedural Provisions of the National Environmental Policy Act (NEPA) require that an EIS shall briefly specify the underlying purpose and need to which the federal agency is responding in proposing the alternatives, including the proposed action (40 CFR 1502.13). The BLM's Proposed Action is the issuance of a mineral material sales contract(s) in the Sloan Hills.

1.2.1 Purpose of the Action

The BLM is responding to applications submitted by CEMEX (formerly Rinker Materials West, LLC) and SRP for a competitive mineral material sale of limestone and dolomite on public lands administered by the BLM in the Sloan Hills area. These applications were submitted in accordance with 43 CFR 3600 and two separate settlement agreements with CEMEX and SRP. In accordance with 43 CFR 3600, the BLM will not dispose of mineral material if it is determined that the aggregate damage to the public lands and resources outweighs the public benefits that BLM expects from the proposed mineral material sale. The BLM is evaluating the issuance of the requested contracts for the sale of mineral material and potential impacts resulting from the proposed externally generated action through the analysis in this EIS.

1.2.2 Need for the Action

The BLM's authority to dispose of mineral materials that are not subject to mineral leasing or location under the mining laws is the Act of July 31, 1947, as amended (30 USC 601 et seq.), commonly referred to as the Materials Act. Section 302 of FLPMA provides the general authority for BLM to manage the use, occupancy, and development of the public lands under the principles of multiple use and sustained yield. To fulfill BLM's responsibility under the Materials Act and FLPMA, BLM must consider and respond to the applicant's request for a competitive mineral material sale contract to construct, operate, maintain, and reclaim construction aggregate mines at the Sloan Hills location (43 CFR 3601.6).

1.2.3 Applicant's Objective

The applicant's objective is to mine high-quality limestone and dolomite at the Sloan Hills site to supply construction aggregate to the southern Las Vegas Valley. The Sloan Hills site was selected as a desirable location for an aggregate mine based on its (1) availability of high-quality formations of limestone and dolomite and potential to produce a high volume of material over a long period of time, (2) proximity to the southern Las Vegas Valley, and (3) accessibility to interstate highways and railroads. Although the

applicant's objective provides useful information, in accordance with BLM policy for an externally generated action, this EIS analyzes BLM's purpose and need, not the applicant's purpose and need (BLM, 2008).

1.2.4 Decision to be Made

The BLM will decide whether mining operations in the Sloan Hills area should be authorized and whether the BLM should issue a competitive mineral material sales contract(s) for the mineral material. The BLM will also determine what terms and conditions (stipulations) should be placed on the contracts to appropriately protect the environment and to provide for reclamation of the site after mining is complete. Although the settlement agreements stated that the BLM would look favorably upon approving the sales, the agreements also stipulate that nothing in the agreements shall be construed as restricting the BLM's discretion in approving or denying the proposed sales.

1.3 AUTHORIZING LEGISLATIONS

The BLM administers federal public land in small and large parcels interspersed among non-federal land (e.g., state, local, and private) in the Las Vegas metropolitan area and in significant federal land holdings surrounding the Las Vegas Valley. Mining of materials on public lands was first authorized by the Mining Law of 1872, as amended (30 USC 22, et seq.). Under this Act, all U.S. citizens 18 years or older have the right to locate a lode or placer mining claim on federal lands open to mineral entry. This Act provides a claimant the right to patent (acquire absolute title to the land) mining claims or sites if they meet the statutory requirements of the Act, and further states that "all valuable mineral deposits in lands belonging to the United States are…open to exploration and development." This Act governs the location of metallic minerals, such as gold, silver, tin, and copper, as well as other minerals, including uranium, building stone other than common varieties, and diamonds.

The BLM recognizes that public lands are an important source of the nation's energy and non-energy mineral resources, some of which are critical and strategic. The BLM is responsible for making public lands available for the orderly and efficient development of these resources while considering environmental impacts in accordance with applicable legislation. The sections below summarize relevant legislation that provides the BLM with the authority to sell mineral material in the Sloan Hills area.

1.3.1 The Act of July 31, 1947 (Materials Act)

The Act of July 31, 1947, as amended (43 CFR 3600; 30 USC 601, et seq.), commonly referred to as Materials Act, establishes procedures for the exploration, development, and disposal of mineral material resources on public lands, and for the protection of the resources and the environment. This Act authorizes the sale of common varieties of minerals, including sand and gravel, clay, petrified wood, stone, and pumicite. Additionally, the Materials Act of 1947 authorizes the BLM to sell mineral material at fair market value and to grant free use permits for mineral material to government agencies.

1.3.2 Surface Resources Act of 1955

The Surface Resources Act of 1955 (30 USC 611-615; 43 CFR 3715) governs the disposal of common variety materials from public lands. This Act states that common varieties of "sand, stone, gravel, pumice, pumicite, or cinders shall not be deemed a valuable mineral deposit within the meaning of the mining laws of the United States so as to give effective validity to any mining claims hereafter located under such laws." Common varieties as defined in this Act do not include deposits of such materials that are valuable because the deposit has some property giving it distinct and special value.

1.3.3 Mining and Minerals Policy Act of 1970

The Mining and Minerals Policy Act of 1970 (Public Law [PL] 91-631) was the first of a series of efforts by the U.S. Congress to address the seeming lack of a coordinated and comprehensive federal minerals policy. The Act directed the Secretary of the Interior to foster and encourage private enterprise in the development of a stable domestic minerals industry and the orderly economic development of domestic mineral resource reserves. The Act also mandated the reclamation of metals and minerals to assure satisfaction of industrial, security, and environmental needs; mining, mineral, and metallurgical research; the study and development of methods for the disposal, control, and reclamation of mineral waste products; and the reclamation of mined land, so as to lessen any adverse impact of mineral extraction and processing upon the physical environment that may result from mining or mineral activities (30 USC 21a). This Act includes all minerals, including sand and gravel, geothermal, coal, and oil and gas.

1.3.4 Federal Land Policy and Management Act of 1976

The FLPMA of 1976 as amended (43 USC 1701, et seq.) reiterates that the Mining and Minerals Policy Act of 1970 (30 USC 21a, et seq.; PL 91-631) will be implemented and directs that public lands be managed in a manner that recognizes the nation's need for domestic sources of minerals and other resources. The Act establishes the land use policies and planning requirements for the BLM to manage federal lands, including implementation of resource management actions required by laws governing specific land uses such as livestock grazing, mining, rights-of-way, recreation and public purposes leases, and permits. The Act requires land use planning to establish and implement land use requirements that provide opportunities for use of public lands and access to resources while protecting sensitive features and the public interests and values in the land and its resources.

1.4 SCOPING AND PUBLIC PARTICIPATION

The CEQ regulations require that "agencies shall make diligent efforts to involve the public in preparing and implementing their NEPA procedures" (40 CFR 1506.6). The public participation process begins with scoping and continues through the ROD. Scoping is the first opportunity in the NEPA process for the public to provide input regarding a proposed action. Scoping is the process used to identify the proposed alternatives and significant issues to be addressed in the EIS. Comments and suggestions received as a result of the scoping process are used to prepare the Draft and Final EIS.

The CEQ Regulations for Implementing the Procedural Provisions of NEPA (40 CFR 1501.7) states that:

> There shall be an early and open process for determining the scope of issues to be addressed and for identifying the significant issues related to a proposed action. This process shall be termed scoping. As soon as practicable after its decision to prepare an environmental impact statement and before the scoping process the lead agency shall publish a notice of intent in the *Federal Register*.

1.4.1 Public Scoping Period

The Notice of Intent to prepare an EIS for the Proposed Rinker and Service Rock Products Competitive Mineral Material Sales[2] was published in the *Federal Register*, Volume 72, Number 111, on July 11, 2007 (Appendix A). The Notice of Intent contained a brief description of the Proposed Action, the mailing address for submittal of written comments, and the deadline for submittal of comments.

Newspaper advertisements announcing the public scoping period were published in the *Las Vegas Review-Journal* on November 20 and December 4, 2007, and in the *Henderson Home News* on November 29, 2007. Flyers were distributed to local agencies and organizations throughout Henderson, and door-hangers were distributed throughout the Las Vegas Valley. The information in the newspaper notices, on the flyers, and on the door-hangers included the locations, dates, and times of public scoping meetings, and a brief description of the Proposed Action.

Scoping meetings were conducted to give the public opportunities to review the possible project alternatives, identify significant environmental issues, and to provide comments and suggestions on the Proposed Sloan Hills Competitive Mineral Material Sales project. Scoping meetings were held at the Henderson Executive Airport Community Meeting Room on December 5 and December 6, 2007. The official close to the public scoping period was January 4, 2008; however, the BLM continues to receive comments through letters and e-mail.

The Scoping Summary Report is in Appendix B. Major issues and concerns identified during the scoping process related to:

- Air quality impacts (e.g., dust/emissions/odors)
- Noise impacts
- Impacts to cultural resources in the Sloan Canyon National Conservation Area (NCA)
- Water supply issues
- Visual and lighting impacts
- Increased local traffic

[2] Because the proposed extraction of aggregate material exceeds the volume limitations for a non-competitive mineral material sale, there is no guarantee that Rinker (now CEMEX) or SRP will be the winning applicants. The name of this Proposed Action was changed after the publication of the Notice of Intent in the *Federal Register* to more accurately reflect that the mineral material sales would be by competitive bid.

- Vibrations from blasting
- Property value impacts
- Impacts to nearby homes, schools, airports, stores, and planned development
- Cumulative impacts of other BLM actions in the area

1.4.2 Lead and Cooperating Agencies

The CEQ regulations (40 CFR 1501) describe the lead and cooperating agency status and emphasize agency cooperation early in the NEPA process. The lead agency is the federal agency that will supervise the preparation of an EIS when more than one agency is involved in a proposed action. The BLM is the lead federal agency for the preparation of this EIS because the BLM has land management responsibilities for the land that is proposed for mineral material sales. The CEQ regulations and BLM policies recommend that the lead federal agency cooperate with other federal, state, and local governments that have jurisdiction by law or special expertise (40 CFR 1501.6). Jurisdiction by law means the other agency has the authority to approve, veto, or finance all or part of the proposed project. Special expertise refers to agencies with a statutory responsibility, agency mission, or related program experience. Any state, tribal, or local agency with jurisdiction by law or special expertise may, by agreement, be a cooperating agency. The benefits of cooperating agency participation include:

- Disclosing relevant information early in the process
- Applying available technical expertise and staff support
- Avoiding duplication with other federal, state, tribal, and local procedures
- Establishing a mechanism for addressing intergovernmental issues

Twelve federal, state, and local agencies were invited to participate in the preparation of this EIS as cooperating agencies:

- City of Henderson
- Clark County Department of Air Quality and Environmental Management (DAQEM)
- Clark County Department of Aviation
- U.S. Environmental Protection Agency (EPA)
- Las Vegas Valley Water District (LVVWD)
- Nevada Division of Environmental Protection (NDEP)
- Nevada Division of Forestry
- Nevada Department of Transportation (NDOT)
- Nevada Department of Wildlife (NDOW)
- Southern Nevada Water Authority (SNWA)[3]

[3] SNWA is a cooperative agency formed by seven member water and wastewater agencies. SNWA responded to the BLM's invitation to participate as a cooperating agency on July 14, 2009. In their response letter, SNWA stated that the LVVWD, one of SNWA's member agencies, was the agency with the appropriate jurisdiction by law to act as a cooperating agency in the development of this EIS.

- U.S. Department of Transportation
- U.S. Fish and Wildlife Service (USFWS)

Six agencies expressed interest in participating as cooperating agencies for the development of this EIS:

- City of Henderson
- DAQEM
- Clark County Department of Aviation
- LVVWD
- NDOT
- NDOW

Since accepting the invitation to participate as a cooperating agency, NDOT has rescinded its acceptance, citing time and budgetary constraints; as a result, four local agencies and one state agency have been designated as cooperating agencies for this EIS.

1.5 RELATED DOCUMENTS

1.5.1 Las Vegas Resource Management Plan and Final Environmental Impact Statement

The Las Vegas Resource Management Plan and Final Environmental Impact Statement (BLM, 1998) addresses ongoing actions, issues, or baseline data in the project area; these are used as background information or incorporated by reference into this EIS as appropriate.

The Las Vegas Resource Management Plan (RMP) provides management guidance for approximately 3.3 million acres of public land administered by the BLM. The RMP was prepared in compliance with the FLPMA of 1976. The RMP identifies and analyzes alternatives for long-term management of public lands and resources administered by the BLM in the planning area, which is defined as the Las Vegas District excluding Red Rock Canyon NCA and the Nellis Range.

In 2009 the BLM began the process of revising the Las Vegas RMP to address the rapid growth in the planning area and the consequent shift in management needs to address this growth. This revision is not expected to have an effect on the action proposed in this EIS.

1.5.2 Las Vegas Valley Disposal Boundary Final Environmental Impact Statement

The Las Vegas Valley Disposal Boundary Final Environmental Impact Statement (BLM, 2004a) analyzed the impacts associated with the disposal and use of BLM-administered lands as directed by the Southern Nevada Public Lands Management Act of 1998 and as amended by the Clark County Conservation of Public Land and Natural Resources Act of 2002. The Las Vegas Valley Disposal Boundary Final EIS provides a framework for BLM to transfer approximately 41,700 acres of public land by 2015. The EIS

addresses issues and baseline data in the vicinity of the Proposed Action area, and some information is incorporated by reference into this EIS as appropriate.

1.6 INTERRELATIONSHIP AND CONFORMANCE WITH RESOURCE MANAGEMENT PLAN

The sale of mineral material on federal public lands in the Las Vegas Valley is addressed under the Las Vegas RMP (BLM, 1998). The BLM Las Vegas Field Office manages public land within its jurisdiction under the general guidelines in the RMP. The Las Vegas RMP provides a framework for managing and allocating resources on BLM land. The RMP was written to meet the requirements of the FLPMA of 1976 and the NEPA of 1969 for comprehensive land use planning of public land. The BLM administers both surface land and federally owned mineral estates on land in the Las Vegas Field Office area.

The Las Vegas RMP describes management guidance for minerals on BLM-administered land. It is BLM policy to make mineral resources available for location and development in accordance with the Mining and Minerals Policy Act of 1970, which requires the federal government to facilitate mineral development to meet national, regional, and local needs. As stated in the RMP, it is the objective of the BLM to provide for orderly exploration and development of valuable minerals on federally owned mineral estates while using appropriate environmental safeguards to allow for the preservation and enhancement of fragile and unique resources (BLM, 1998). The area identified for the Proposed Action is available for saleable mineral development in accordance with the RMP.

The BLM has reviewed the Proposed Action and found it to be in compliance with the guidelines and policies of the RMP and regulations set forth in 43 CFR 3600, Mineral Materials Disposal. The Proposed Action is in conformance with management objectives and directives of the Las Vegas RMP for minerals management. Public lands in the RMP planning area are available for mineral exploration and development. The BLM will continue to meet public demand for exploration and development of mineral materials as specified in mineral management objectives of the Las Vegas RMP.

1.7 ISSUES

Scoping resulted in the identification of a number of issues related to the Proposed Action.

1.7.1 Issues Considered for Further Analysis

The following impact issues identified for analysis in this EIS were determined through scoping, internal meetings, and public comments.

Air Resources. Mining activities have the potential to impact air quality in Clark County. Airborne particulates could increase in the area during mining and may compromise air quality and temporarily

decrease visibility in the Proposed Action area. Exhaust from haul trucks and mining equipment could also temporarily impact air quality in the Proposed Action area.

Earth Resources. Mining activities would impact soils, geology, and topography in the Proposed Action area.

Biological Resources. Mining activities described in Chapter 2 would result in impacts to vegetation, wildlife habitat, and special status species. Incidental take of threatened, endangered, or other special status species may occur.

Water Resources. Mining activities could impact ephemeral washes that are under the jurisdiction of the U.S. Army Corps of Engineers (USACE).

Cultural Resources. Prehistoric and historic cultural resources may be present in the Proposed Action area. Mining activities could have an impact on these resources.

Native American Resources. Native American resources may be present in the Proposed Action area. Mining activities may impact these resources.

Land Use. Impacts to land use, planning, and zoning may occur from mineral material sales in the Proposed Action area.

Visual Resources. Impacts to visual resources may occur from mining activities. Mining may temporarily or permanently detract from the natural setting of the area.

Noise and Vibration. Mining-related noise may disturb sensitive receptors in the vicinity of the Proposed Action area.

Transportation. Mining activities may have impacts to transportation and traffic in Clark County.

Special Management Areas. Mining would occur in proximity to several areas that are managed for special purposes by the BLM. Mining may result in impacts on the quality of these lands.

Recreation. Mining would occur on public lands that are currently open to recreation opportunities.

Socioeconomics. The sale of mineral material may have economic impacts in Clark County. A mine could also affect population and housing in the vicinity of the Proposed Action area.

1.7.2 Issues Dismissed from Further Analysis

The following impact issues were dismissed from further analysis in this EIS, either because these resources are not located in the vicinity of the Proposed Action area or because the sale of mineral material does not have the potential to impact these resources.

Paleontological Resources. The Antiquities Act of 1906, as amended (16 USC 431-433; PL 59-209; 34 Statute 225), is the earliest and most basic legislation for protecting cultural resources on federal lands. Although there is no specific mention of natural or paleontological resources in the Act, or in the Act's uniform rules and regulations (43 CFR 3), "objects of antiquity" has been interpreted to include fossils by several federal agencies. A literature and data review of the Proposed Action area was conducted in July 2008 (Rowland, 2009). The review turned up no record of vertebrate fossils in the Proposed Action area or within 1 mile of the Proposed Action area. Additionally, it was determined that the formations in the Proposed Action area are unlikely to yield significant fossil finds; therefore, this issue was dismissed from further analysis in this EIS (Rowland, 2009).

Wild and Scenic Rivers. The National Wild and Scenic Rivers Act was signed into law on October 2, 1968 (16 USC 1271, et seq.; PL 90-542). The intent of this Act is to preserve certain rivers with outstanding natural, cultural, and recreational values in a free-flowing condition for the enjoyment of current and future generations. Each river designated under this Act is administered with the goal of protecting and enhancing the values that caused it to be designated. No designated wild or scenic rivers are in the Proposed Action area or in the proximity of the Proposed Action area; therefore, there would be no impacts to these resources.

Sole Source or Principal Aquifers. A sole source or principal aquifer is an underground water supply designated by the EPA as the “sole or principal” source of drinking water for an area. Sole or principal source aquifers are defined as those aquifers that supply at least 50 percent of the drinking water consumed in the area overlying the aquifer. The program was established under Section 1424(e) of the Safe Drinking Water Act of 1974 (42 USC 300f). No designated sole source aquifers are in the Proposed Action area or in the proximity of the Proposed Action area; therefore, there would be no impacts to these resources (EPA, 2010a).

Prime and Unique Farmland. The Farmland Protection Policy Act of 1981 (7 USC 4201, et seq.; PL 97-98, Sec. 1539–1549) is intended to minimize the extent to which federal activities contribute to the unnecessary and irreversible conversion of agricultural land to non-agricultural uses. Prime farmland, as a designation assigned by the U.S. Department of Agriculture (USDA), is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops, and is also available for these uses. Prime farmland is prone to conversion when in proximity to urban growth areas, and designation helps growth management and resource conservation efforts to preserve prime farmland resources, maintain local economic diversity, and establish green belts. Unique farmland is defined as land other than prime farmland that is used for production of specific high-value food and fiber crops. No designated prime or unique farmlands are in the Proposed Action area or in the proximity of the Proposed Action area; therefore, there would be no impacts to these resources.

Environmental Justice. Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations (February 11, 1994; 59 *Federal Register* [FR] 7629),

was designed to focus the attention of federal agencies on the human health and environmental conditions in minority and low-income communities. In an accompanying presidential memorandum, the president emphasized that existing laws, including NEPA, provide opportunities for federal agencies to address environmental hazards in minority and low-income communities. In April 1995 the EPA released the document Environmental Justice Strategy, which established EPA-wide goals and defined the approaches by which the EPA would ensure that disproportionately high and adverse human health or environmental effects on minority and low-income communities are identified and addressed. The Proposed Action was reviewed for potential environmental justice issues in accordance with Executive Order 12898, and it was determined that there would be no disproportionately high and adverse impacts on minority or low-income communities; therefore, this issue was dismissed from detailed analysis in this EIS.

Hazardous Materials. An environmental regulatory review of the Proposed Action area was performed to determine evidence of past or present environmental compliance problems and to identify potential hazardous materials problem sites and activities that have been regulated, registered, or otherwise monitored by a federal or state regulatory agency. Based on the regulatory reviews, no past or present facilities with environmental compliance problems were reported in the Proposed Action area.

Mining activities have the potential for hazardous material spills or may require the disposal of hazardous materials. The National Oil and Hazardous Substances Pollution Contingency Plan (42 USC 9605, as amended; 40 CFR 300) provides guidance for the federal government's response to both oil spills and hazardous substance releases. The intent of the Plan is to develop a national response capability and promote overall coordination among the hierarchy of emergency response organizations and response or contingency plans. The successful mining applicant(s) would be required to comply with Occupational Safety and Health Administration standards and hazardous materials use and disposal standards (Comprehensive Environmental Response, Compensation and Liability Act, Superfund Amendments and Reauthorization Act, and the Resource Conservation and Recovery Act of 1976 [24 USC 6901, et seq. {414}]) to reduce the potential for hazardous materials spills. The Proposed Action area does not currently present a hazardous materials environmental concern; therefore, hazardous materials are not further analyzed in this EIS.

1.8 RELEVANT STATUTES, REGULATIONS, AND GUIDELINES

The sections below summarize the additional laws, regulations, executive orders, and other guidance (not previously discussed) that may be applicable to the Proposed Action. Table 1.8-1 summarizes the permits and approvals that may be required for this project.

Table 1.8-1
Permit and Approvals Summary

Issuing Agency	Permit/Approval Required
Federal	
BLM	Mineral Material Sales Contract(s)
	BLM Right-of-Way Temporary Use Permit
	BLM Right-of-Way Grant
	NEPA ROD
USACE	Section 404 of the Clean Water Act Permit
USFWS	Endangered Species Act (ESA) Section 7 Consultation and Approval of the Biological Assessment
	Incidental Take Permit (Biological Opinion)
EPA	Clean Air Act Conformity Determination
State	
Nevada State Historic Preservation Office	National Historic Preservation Act of 1966, Section 106 Consultation and Concurrence of Finding of No Effect
NDOW	Special Permit
NDEP, Bureau of Water Quality Planning	Section 401 State Water Quality Certification
NDEP, Bureau of Water Pollution Control	National Pollutant Discharge Elimination System (NPDES) General Stormwater Permit for Construction
	Commercial Septic Plan Approval (for septic systems over 3,000 gallons in capacity)
	NPDES Temporary Discharge Permit
	Temporary Permit for Working in Waterways
Southern Nevada Health District	Commercial Septic Tank Permit and Individual System for Disposal of Sewage Plan Approval
Nevada Department of Conservation and Natural Resources, Division of Water Resources	Waiver (dewatering well, monitoring well, and/or testing well waiver)
	Certificate of Appropriation
	General Permit for Stormwater Discharges Associated with Industrial Activities to waters of the U.S.
NDEP, Bureau of Mining Regulation and Reclamation	Water Pollution Control Permit
NDOT	NDOT Right-of-Way Encroachment Permit
Nevada Department of Motor Vehicles and Public Safety, Nevada State Fire Marshal Division	Hazardous Material Permit or Roving Permit
Nevada Division of Forestry	Native cacti and yucca commercial salvaging permit and shipping or transportation permit

Table 1.8-1
Permit and Approvals Summary

Issuing Agency	Permit/Approval Required
Clark County	
Department of Air Quality and Environmental Management	Dust Control Permit
	New Source Review Permit
	Authority to Construct Certificate or Operating Permit
Department of Public Works Community Development Division	Offsite Construction Permit
	Encroachment Permit
	Encroachment Permit (Discharge Water)
Development Services	Grading Permit
	Conditional Grading Plan
	Temporary Sign Permit
	Soils Report Submittal and Examination Declaration
	Fence Permit
	Pad Certification for Grading and Earthwork
Regional Flood Control District	Capital Improvement Program Coordination/Drainage Study Review (also check of Federal Emergency Management Agency [FEMA] Maps)
Fire Department	Aboveground Generator Permit
	Fire Department Permit
	Blasting Permit

1.8.1 Environmental Policy

The NEPA of 1969 (42 USC 4321, et seq.) requires federal agencies to consider the environmental consequences of proposed actions in their decision making process. The CEQ was established under NEPA to implement and oversee federal policy in this process. The BLM sale of mineral material on public lands is a federal action that requires NEPA compliance. The purpose of this EIS is to inform agency decision makers and the public about the anticipated significant environmental effects of the Proposed Action, potential measures to mitigate these significant effects, and reasonable alternatives that could reduce the significant environmental impacts of the Proposed Action to a less-than-significant level. This EIS evaluates the potential impacts associated with the proposed sale of mineral material in the Sloan Hills area (Proposed Action) and will fulfill the needs and obligations set forth by NEPA, the CEQ Regulations for Implementing the Procedural Provisions of NEPA (40 CFR 1500-1508), and BLM policies.

The NEPA established a landmark national environmental policy that, among other things, encourages environmental protection and informed decision making by federal agencies. The NEPA process is intended to help public officials make decisions that are based on an understanding of environmental

consequences, and to take actions that protect, restore, and enhance the environment (40 CFR 1500.1(c)). The NEPA procedures ensure that information about environmental impacts is available to public officials and residents before decisions are made on major federal actions that may significantly affect the environment. The CEQ regulations implement the procedural provisions of NEPA.

The CEQ regulations require that a concise public ROD be prepared by the lead agency. The ROD will:

- State what the decision was.
- Identify all alternatives considered by the agency in reaching its decision, specifying the alternative or alternatives that were considered to be environmentally preferable.
- State whether all practicable means to avoid or minimize environmental harm from the alternative selected have been adopted, and if not, why they were not. A monitoring and enforcement program will be adopted and summarized where applicable for any mitigation (40 CFR 1505.2).

Executive Order 11514, Protection and Enhancement of Environmental Quality (March 5, 1970; 35 FR 4247), sets the policy for directing the federal government in providing leadership in protecting and enhancing the quality of the nation's environment.

1.8.2 Air Resources

The Clean Air Act (CAA) of 1970 establishes federal policy to protect and enhance the quality of the nation's air resources to protect human health and the environment (42 USC 7401, et seq.; 42 USC 1857h-7, et seq.; PL 91-604). The CAA sets national primary and secondary ambient air quality standards as a framework for air pollution control. The CAA requires the EPA to set National Ambient Air Quality Standards (NAAQS) for six criteria pollutants to protect the public health and welfare. Hydrographic areas where the criteria pollutants are measured below the NAAQS are considered to be in attainment. Those areas where the criteria pollutants are measured above the NAAQS are considered to be in non-attainment. Clark County is in a non-attainment area for two criteria pollutants (particulate matter and ground-level ozone) and was previously in non-attainment status for carbon monoxide. The EPA requires states with non-attainment areas to develop a State Implementation Plan, which is an enforceable plan that explains how a state will comply with the CAA and bring non-attainment areas back to attainment status. Two State Implementation Plans for Clark County were approved by EPA in early 2004: Clark County Serious Area Carbon Monoxide Plan for the Las Vegas Metropolitan Non-attainment Area and Clark County Serious Area PM-10 Plan for the Las Vegas Metropolitan Non-attainment Area. In March 2008 the EPA significantly strengthened its NAAQS for ground-level ozone. As a result, Clark County is currently working on developing a plan for ground-level ozone and is awaiting new guidance from the EPA in preparing plans and programs designed to meet the new ground-level ozone standard.

The CAA Amendments of 1977 initiated the association of federal department activities with a State Implementation Plan. The 1977 provisions stated that no federal agency could engage in, support in any way, or provide financial assistance for, license, permit, or approve any activity that did not conform to a State Implementation Plan after its approval or promulgation. Section 176(c) of the CAA Amendments of 1990 expanded the scope and content of the conformity provisions by defining conformity to an implementation plan. Specifically, the language asserts that a federal agency cannot approve or support an action that causes or contributes to new violations of any NAAQS, increases the frequency or severity of existing violations of any NAAQS, or delays the timely attainment of any NAAQS or any required interim emission reductions or milestones.

The Clark County DAQEM regulates construction activities that disturb soil in Clark County. A Dust Control Permit for Construction Activities (Dust Control Permit) is required for most soil-disturbing projects. An approved Dust Control Permit must be obtained before soil is disturbed.

Clark County Air Quality Regulation Section 19 sets forth a comprehensive county-wide air quality permitting system to meet the requirements of Title V of the CAA (42 USC 7401, et seq.) and 40 CFR 70. Under Section 19, all major sources in Clark County must apply to the DAQEM for an Air Quality Control Permit. These sources must submit plans showing compliance with all applicable CAA regulations. The DAQEM must then review the plans and application for compliance and subsequently draft a permit. The permit must be issued after review by the EPA.

1.8.3 Biological Resources

The Endangered Species Act of 1973 (16 USC 1531, et seq.; PL 93-205) requires federal agencies that authorize, fund, or carry out actions to avoid jeopardizing the continued existence of endangered or threatened species and to avoid destroying or adversely modifying their critical habitat. Federal agencies must evaluate the effects of their actions on endangered or threatened species of fish, wildlife, and plants, and their critical habitats, and take steps to conserve and protect these species. All potentially adverse impacts to endangered and threatened species must be avoided or mitigated. Federal agencies that propose actions that may adversely affect a listed species are required to consult with the USFWS and obtain an Incidental Take Permit before authorizing the proposed activity.

Special status species are those that are proposed for listing, officially listed as threatened or endangered, or are candidates for listing as threatened or endangered under the provisions of the ESA; those listed by a state in a category such as threatened or endangered implying potential endangerment or extinction; and those designated by each State Director as sensitive (BLM, 2001). Federal land management agencies are mandated to protect and manage threatened, endangered, candidate, proposed, and sensitive species and their habitat. The federal agencies are also required to protect and manage sensitive species jointly identified with the appropriate state agency.

The State of Nevada provides for the protection of species of plants designated as critically endangered and cacti and yucca species under the stipulations set forth in Nevada Revised Statutes (NRS) 527 and Nevada Administrative Code (NAC) 527. Under these regulations, a permit must be obtained from the State Forrester Firewarden for any project that may involve the taking of a plant on the list of fully protected species of native flora (NAC 527.260). The State of Nevada also fully protects some species of wildlife through the stipulations of NRS 503 and NAC 503. Before handling any State of Nevada protected wildlife, obtaining applicably proper authorization from NDOW is required (NRS 503.597 and NAC 503.093).

The Migratory Bird Treaty Act of 1918, as amended (16 USC 703, et seq.), provides for the protection of migratory birds and prohibits their unlawful take or possession. In addition, Executive Order 13186, Responsibilities of Federal Agencies to Protect Migratory Birds (January 17, 2001; 66 FR 3853), directs federal agencies to include impacts to migratory birds in their NEPA analyses.

The Bald and Golden Eagle Protection Act of 1940, as amended (16 USC 668-668d, 54 Stat. 250), provides for the protection of the bald eagle and the golden eagle by prohibiting, except under certain specified conditions, the taking, possession, and commerce of such birds.

The Federal Noxious Weed Act of 1974, as amended (7 USC 2814), provides for the designation of a lead office and a person trained in the management of undesirable plants, establishment and funding of an undesirable plant management program, completion and implementation of cooperative agreements with state agencies, and establishment of integrated management systems to control undesirable plant species.

1.8.4 Water Resources

The Clean Water Act (CWA) of 1972, as amended (33 USC 1251, et seq.), establishes federal limits through the NPDES on the amounts of specific pollutants that are discharged to surface waters in order to restore and maintain the chemical, physical, and biological integrity of the water. An NPDES permit or modification to an existing permit would be required for any change from the current parameters in the quality or quantity of wastewater discharge and/or stormwater runoff. The Act also mandates regulatory requirements for a permit system under Section 404 to place fill material into waters of the U.S.

Nevada Water Quality Regulations implement permitting and monitoring requirements for NPDES, operation of injection wells, groundwater protection requirements, prevention and response requirements for spills, and salinity standards and criteria for the Colorado River Basin.

The Safe Drinking Water Act of 1974 (42 USC 300f, et seq.; PL 93-523) sets primary standards for the quality of public drinking water supplies and establishes a program to prevent contamination of underground drinking water sources. The National Primary Drinking Water Regulations (42 USC 300g; 40 CFR 143) define the maximum allowable concentrations of specified contaminants in public water systems.

Groundwater appropriation is regulated by the Nevada Division of Water Resources in accordance with Nevada Water Laws under NRS Chapters 533 and 534. Under Nevada Water Law, all waters in Nevada belong to the public and may be appropriated by the State Engineer for beneficial use where it is not in conflict with existing rights or proven detrimental to the public interest or may adversely impact domestic wells.

Executive Order 11988, Floodplain Management (May 25, 1977; 42 FR 26951), requires federal agencies to evaluate the potential effects of actions on floodplains and to consider alternatives to avoid adverse effects and incompatible development wherever possible.

Executive Order 11990, Protection of Wetlands (May 25, 1997; 42 FR 26961), requires federal agencies to take action to minimize the destruction, loss, or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands. It is the commitment of the USACE to:

- Achieve the goal of no net loss of our nation's wetlands
- Improve guidance to ensure effective, scientifically based restoration of wetlands impacted by development activities

1.8.5 Cultural Resources

The National Historic Preservation Act of 1966, as amended, (16 USC 470a, et seq., 80 Stat. 915; PL 89-665) requires federal agencies to take into account the effects of their undertakings on historic properties and to afford the Advisory Council on Historic Preservation an opportunity to comment with regard to such undertaking. Implementing regulations for Section 106 of the Act are found at 36 CFR 800 and outline the process that agencies are to follow when evaluating the effects of their undertakings on historic properties and when resolving effects to such properties. Historic properties are defined in the Protection of Historic Properties Act of 1986 (36 CFR 800.16[1][1]) as "…any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places.…"

The Archaeological Resources Protection Act of 1979, as amended, (16 USC 470aa-470mm; 93 Stat. 721; 43 CFR 7; PL 96-65) and its implementing regulations establish a procedure for permitting the recovery of information from archaeological sites and authorize and establish civil and criminal penalties for intentionally or inadvertently damaging an archaeological site without a permit.

The Antiquities Act of 1906 (16 USC 431-433; PL 59-209; 34 Statute 225) and its implementing regulations seek to protect historic and prehistoric ruins, monuments, and objects of antiquity and scientific interest on lands owned or controlled by the U.S. government.

Executive Order 11593, Protection and Enhancement of the Cultural Environment (May 15, 1971; 26 FR 8921), directs federal agencies to locate, inventory, nominate, and protect federally owned cultural

resources eligible for the National Register of Historic Places (NRHP) and to ensure that their plans and programs contribute to the preservation and enhancement of non-federally owned resources.

1.8.6 Native American Resources

The American Indian Religious Freedom Act of 1978, as amended, (42 USC 1996, et seq.; PL 95-341) established the policy of the U.S. "…to protect and preserve for American Indians their inherent right of freedom to believe, express, and exercise [their] traditional religions…including but not limited to access to sites…and the freedom to worship through ceremonial and traditional rites." Section 1(a) of Executive Order 13007, Indian Sacred Sites (May 29, 1996; 61 FR 26771), further directs federal agencies "…to the extent practicable, permitted by law, and not clearly inconsistent with essential agency functions to (1) accommodate access to and ceremonial use of Native American sacred sites by Native American practitioners, and (2) avoid adversely affecting the physical integrity of such sacred sites." Compliance with the Act is thus achieved through consulting with tribal governments and tribal traditional religious practitioners.

The Native American Graves Protection and Repatriation Act of 1990 (25 USC 3001-30013, 104 Stat. 3042; 43 CFR 10; PL 101-601) and its implementing regulations address the rights of lineal descendants and members of Native American tribes to certain Native American human remains and cultural items with which they are affiliated. The Act's implementing regulations at 43 CFR 10 Subpart B address federal agencies' responsibilities when such items may be discovered during intentional permitted excavations, or the unintentional discovery of such items during the course of construction work, and those exposed as a result of erosion. When working on state, county, or private lands, both state and federal agencies are required to comply with NRS Sections 383.150-383.190, Historic Preservation and Archaeology: Protection of Indian Burial Sites, and address the inadvertent discovery of human remains on such lands.

Executive Order 13175, Consultation and Coordination with Indian Tribal Governments (November 9, 2000; 65 FR 67249), directs federal agencies to establish regular and meaningful consultation and collaboration with tribal officials on federal actions that have tribal implications.

1.8.7 Land Use and Natural Resource Management

The FLPMA of 1976, as amended, (43 USC 1701, et seq.) establishes the land use policies and planning requirements for the BLM to manage federal lands, including implementation of resource management actions required by laws governing specific land uses such as livestock grazing, mining, rights-of-way, recreation and public purpose leases, and permits.

The Southern Nevada Public Lands Management Act of 1998, as amended (PL 105-263), provides for the orderly disposal of BLM-administered lands in the Las Vegas Valley, consistent with land use planning and zoning requirements and recommendations.

The Clark County Conservation of Public Land and Natural Resources Act (Clark County Act) of 2002 (PL 107-282) amended the Southern Nevada Public Lands Management Act of 1998 to expand the Las Vegas Valley disposal boundary, established wilderness areas, promoted conservation in Clark County, expanded one preexisting wilderness area, and provided for high-quality development in Clark County. This Act established the 48,438-acre Sloan Canyon NCA and the 14,763-acre North McCullough Wilderness.

The Taylor Grazing Act of 1934, as amended (43 USC 315), regulates grazing use on public lands and provides for improvements of public rangelands.

The Wild Free Roaming Horse and Burro Act of 1971 (PL 92-195) provides for the management, protection, and control of wild horses and burros on public lands and authorizes the adoption of wild horses and burros by private individuals.

1.8.8 Noise

The Noise Control Act of 1972 (42 USC 4901; PL 92-574) establishes a policy to promote an environment free from noise that is harmful to the health or welfare of people. Federal agencies comply with state and local requirements for the control and abatement of environmental noise, where applicable.

1.8.9 Socioeconomics

The CEQ regulations for implementing NEPA state that when economic or social effects and natural or physical environmental effects are interrelated, the EIS will discuss these effects on the human environment (40 CFR 1508.14). The CEQ regulations state that the "human environment shall be interpreted comprehensively to include the natural and physical environment and the relationship of people with that environment." A socioeconomic analysis evaluates how elements of the human environment, such as population, employment, housing, and public services, might be affected by a proposed action.

1.8.10 Special Management Areas

The BLM administers more than 264 million acres of public lands in the U.S. Much of this land is administered for multiple-purpose use and for extractive uses such as mining, logging, grazing, and oil and gas production; however, the BLM is also responsible for administering lands entered in the National Landscape Conservation System. This system includes more than 886 federally recognized areas and approximately 27 million acres of National Monuments, NCAs, Wilderness Areas, Wilderness Study Areas, Wild and Scenic Rivers, National Scenic and Historic Trails, and Conservation Lands of the California Desert. The National Landscape Conservation System was created in 2000 with the mission to "conserve, protect, and restore these nationally significant landscapes that have outstanding cultural, ecological, and scientific values for the benefit of current and future generations." In March 2009,

Congress passed the Omnibus Public Lands Management Act (PL 111-11; H.R. 146), which provides a statutory basis for the National Landscape Conservation System.

The BLM is responsible for managing lands designated as Areas of Critical Environmental Concern (ACEC). The ACEC program was established in 1976 by the FLPMA, which directed the BLM to protect important riparian corridors, threatened and endangered species habitats, cultural and archeological resources, and unique scenic landscapes that the BLM determines are in need of special management attention (43 USC 1701(a)).

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