

**United States Department of the Interior
Bureau of Land Management**

Environmental Assessment

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**Proposed City of Las Cruces East Mesa Public Safety Complex
and Recreation Area**

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November 3, 2014

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Acronyms

ATV	All-Terrain Vehicle
BLM	Bureau of Land Management
CLC	City of Las Cruces
CWA	Clean Water Act
E	Endangered
EA	Environmental Assessment
EPA	United States Environmental Protection Agency
ESA	Environmental Site Assessment
EXPN	Experimental
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FLPMA	Federal Land Policy Management Act
FMS	Facilities Management Section
FWS	United States Fish and Wildlife Service
LA	Laboratory of Anthropology
LCDO	Las Cruces District Office
NAAQS	National Ambient Air Quality Standards
NEPA	National Environmental Policy Act
NM	New Mexico
NMCRIS	New Mexico Cultural Resources Information System
NMDA	New Mexico Department of Agriculture
NMDGF	New Mexico Department of Game and Fish
NMOSE	New Mexico Office of the State Engineer
NMED	New Mexico Environment Department
NMRPTC	New Mexico Rare Plant Technical Council
NRCS	Natural Resources Conservation Service
NRHP	National Register of Historic Places
NWI	National Wetlands Inventory
PFYC	Potential Fossil Yield Classification
PM₁₀	Particulate Matter
PWD	Public Works Department
RMP	Resource Management Plan
R&PP	Recreation and Public Purpose Act
ROW	right-of-way
S	Sensitive
SOC	Species of Concern
SPCC	Spill Prevention Control and Countermeasures
US	United States
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
USGS	United States Geological Survey

1 INTRODUCTION

The City of Las Cruces (CLC) is requesting a Recreation and Public Purposes (R&PP) Act lease and/or conveyance from the Bureau of Land Management (BLM). The proposed land to be used for the new facilities is managed by the BLM Las Cruces District Office (LCDO). Funding for the project is through bonds received by the CLC.

The subject area comprises a block of 346.59 acres of BLM lands northeast of the intersection of Lohman Avenue and Sonoma Ranch Boulevard, in Las Cruces, Doña Ana County, New Mexico (Figures 1-3). The CLC is proposing to construct a public safety complex and recreational area for the East Mesa. The subject area is located within the following legal descriptions:

New Mexico Principal Meridian, New Mexico

T. 23 S., R. 2 E.,

sec. 3, lots 1 and 2, SW1/4NE1/4, N1/2SE1/4NE1/4, SW1/4SE1/4NE1/4,
E1/2W1/2W1/2E1/2SE1/4NW1/4, E1/2W1/2E1/2SE1/4NW1/4, E1/2E1/2SE1/4NW1/4,
E1/2W1/2E1/2NE1/4SW1/4, E1/2E1/2NE1/4SW1/4, E1/2W1/2E1/2SE1/4SW1/4,
E1/2E1/2SE1/4SW1/4, W1/2NE1/4SE1/4, SE1/4NE1/4SE1/4, W1/2SE1/4, and SE1/4SE1/4.

This document complies with the National Environmental Policy Act (NEPA) of 1969, as amended; regulations promulgated by the President's Council on Environmental Quality (40 CFR Part 1500-1508). This environmental assessment (EA) considers potential impacts to the resources occurring on federal, municipal and private lands. The existing conditions are described and the impacts are addressed of both the proposed action and a No Action alternative. Direct and indirect site specific effects of the proposed public safety complex and recreational area are addressed. The impacts are analyzed for long-term and short-term consequences and cumulative impacts. The BLM case file number is NMNM 128496.

1.1 Purpose and Need

The purpose of the proposed action is to provide the CLC with a lease and subsequent patent to design and construct a public safety complex and recreation areas to serve current and future residents of Las Cruces, New Mexico.

The need for the action is established by the BLM's responsibility under the Federal Land Policy and Management Act (FLPMA) to respond to an R&PP lease application submitted by the CLC to design and construct a public safety complex and recreation area on public lands.

1.2 Decision to be Made

The BLM would decide whether or not to grant the lease and subsequently the patent, and if so under what terms and conditions.

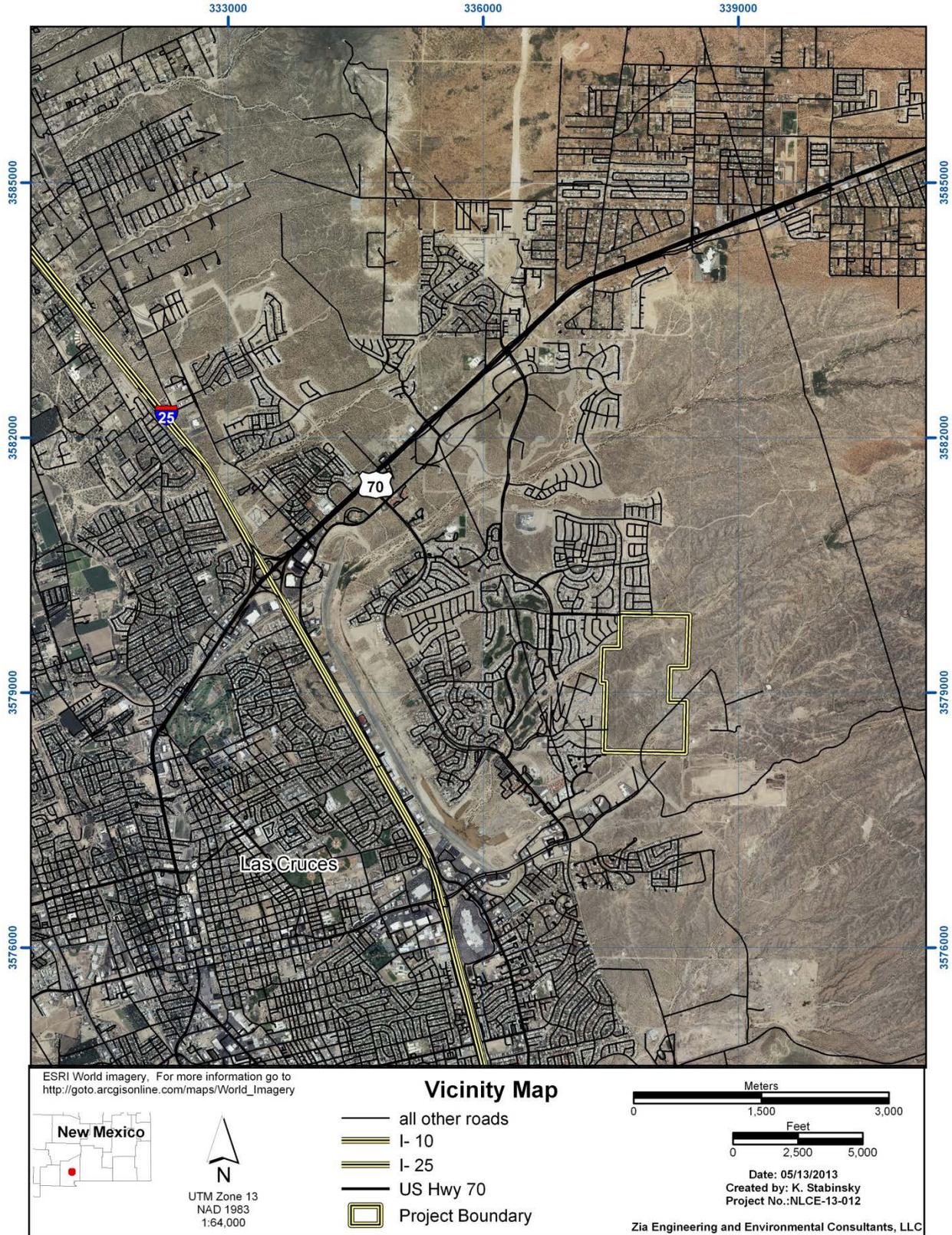


FIGURE 1: SUBJECT AREA VICINITY MAP

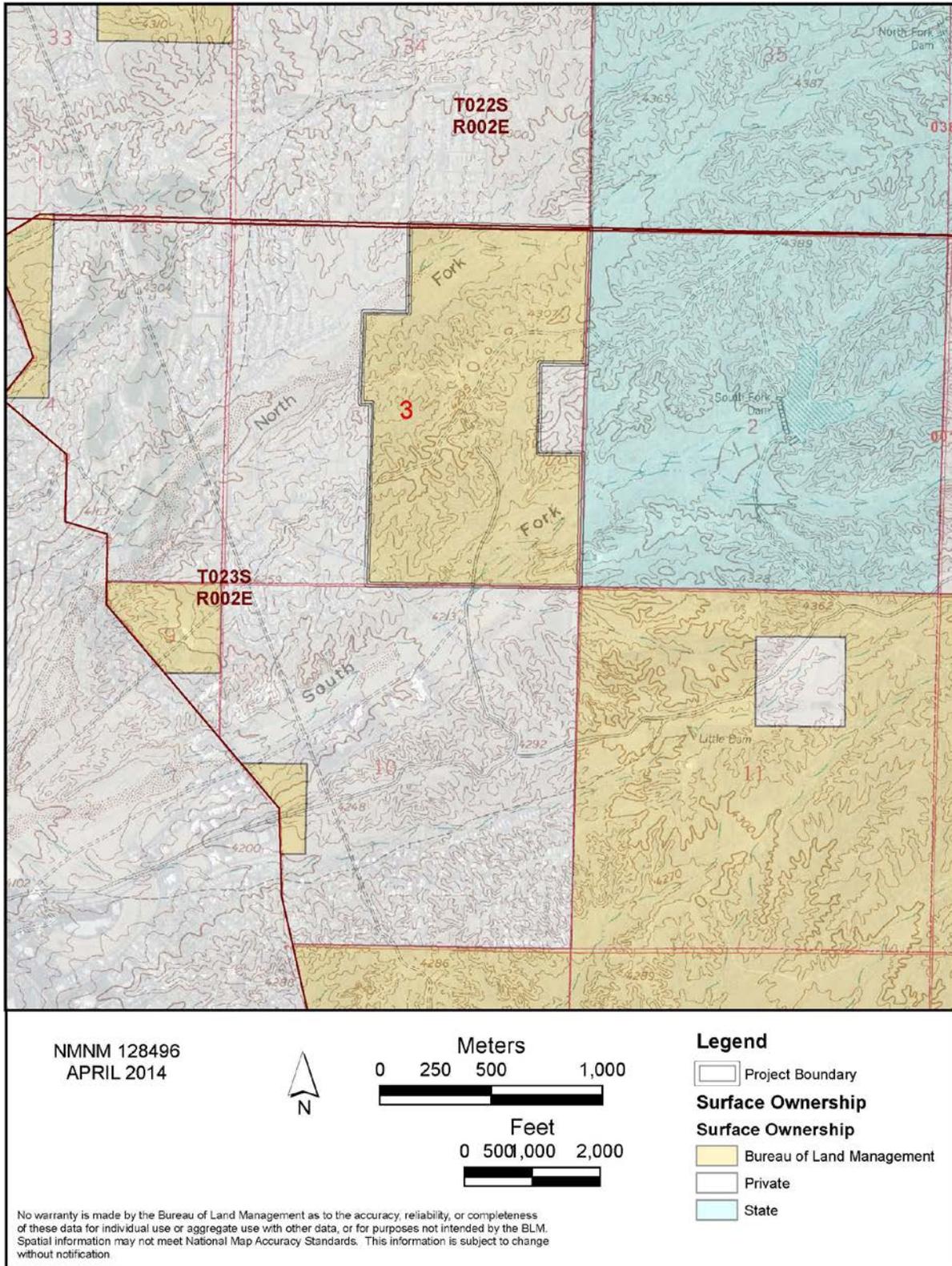


FIGURE 2: SUBJECT AREA TOPOGRAPHIC MAP

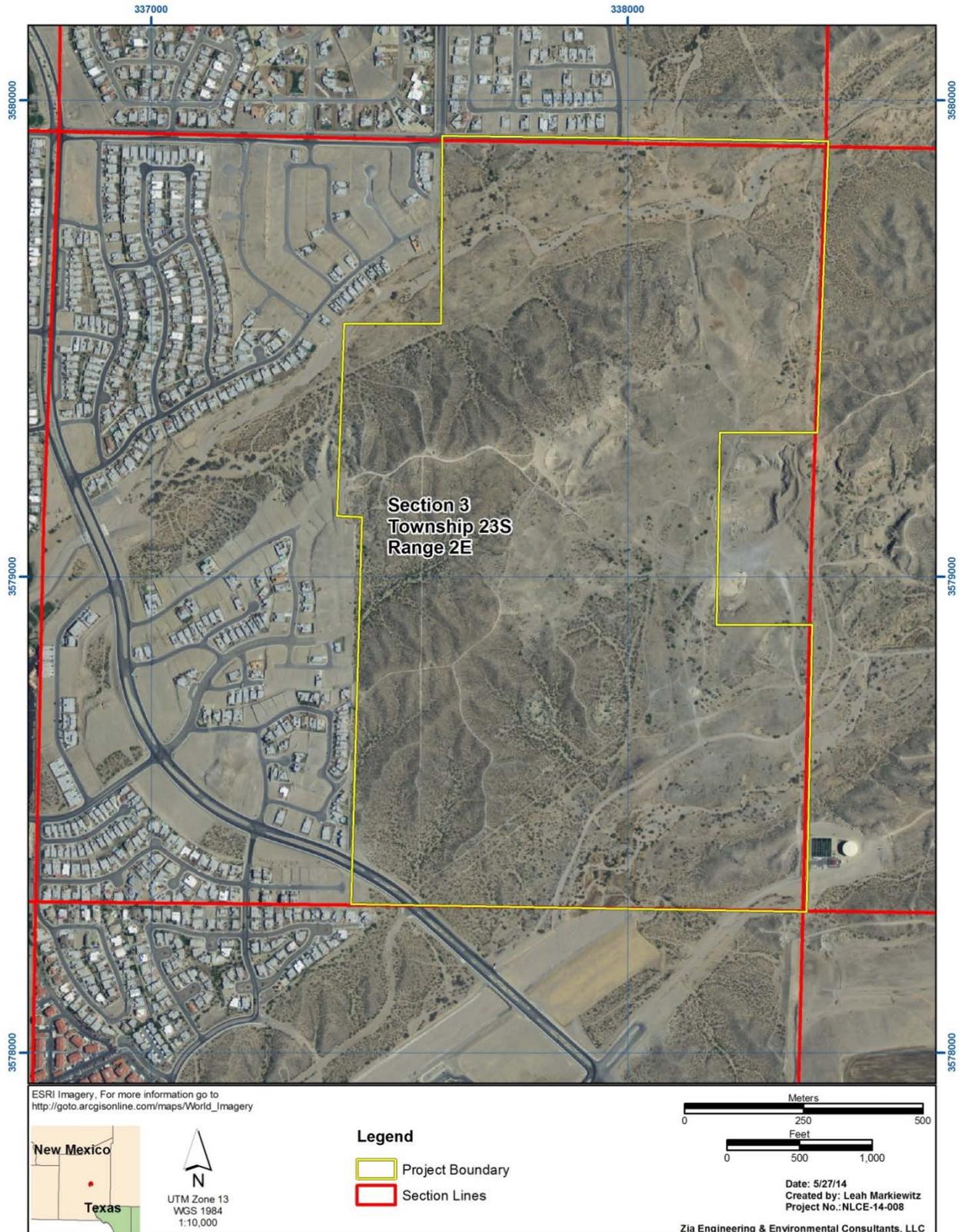


FIGURE 3: SUBJECT AREA AERIAL MAP

1.3 Plan Conformance

The proposed action is in conformance with the BLM Mimbres Resource Management Plan (RMP), approved April 30, 1993, because it is clearly consistent with the following decisions, objectives, and conditions:

- Page 2-9, “Objective: The objective of the lands program is to facilitate the acquisition, exchange, or disposal of public land in order to provide the most efficient management of public resources. . .”
- Page 2-14, “The R&PP Act provides guidelines and procedures for transfer of certain public land to States or their political subdivisions, and to nonprofit corporations and associations to meet their needs for public land required for historical, recreational and public purposes. Under the R&PP Act, BLM has the authority to lease or patent public land to governmental and nonprofit entities for public parks and building sites at less than fair market value. Such applications are processed under the requirements of NEPA and are subject to public review.”
- Appendix C-1, page C-3, “The Mimbres Resource Area will continue to issue patents to qualified governmental and nonprofit entities for public parks, recreational sites, and historical sites under the Recreation and Public Purposes (R&PP) Act, throughout the life of the Resources Management Plan (RMP). These patents may be issued at less than fair market value as outlined 43 CFR 2740. Applications for patent of public land under the R&PP Act will be processed as a Mimbres Resource Area priority under the requirements of the National Environmental Policy Act (NEPA) and will always be subject to public review.” Also, “R&PP applications may be entertained in either retention or disposal zones; yet, a determination must always be made that the disposal action is in the public’s best interest.” The subject lands proposed for this project are identified for disposal in the Mimbres RMP.

The proposed action meets the criteria outline in 43 CFR 2740 in that the lease/conveyance of lands is for recreational or public purposes and the subject land will be developed in accordance with a development plan and compliance with an approved management plan. The proposed action is consistent with the objective of the lands program in facilitating the disposal of public land in order to provide the most efficient management of public resources. The subject parcel would be conveyed under the act with a reservation of the mineral estate to the United States, whereas the Bureau of Land Management would not thereafter convey that mineral estate to the surface owner under the provisions of section 209 of the Federal Land Policy and Management Act of 1976 (43 U.S.C. 1719).

1.4 Scoping and Issues

The Notice of Realty Action (NORA) was published in the Federal Register on December 12, 2013 and allowed for a 45-day comment period. The NORA and letters were mailed to the adjacent landowners, right-of-way holders, and the following entities (Appendix A):

- New Mexico Congressional/Legislators
 - Washington level
 - Local level
- Local Federal and State Agencies
- City/County Government

The NORA was also published in the local newspaper, Las Cruces Sun-News, in the legal notices section, once a week for three consecutive weeks—December 19, 2013; December 26, 2013; and January 2, 2014.

The BLM received eight comments which have been considered and incorporated into this EA (Appendix B).

1.4.1 Internal Scoping

The proposed project was presented to the LCDO NEPA ID Team on December 2, 2013.

1.4.2 External Scoping

Letters were also mailed to nearby residents within a one-mile radius of the proposed project site. Overall public comment received regarding the proposal is positive and supportive. Several commenters expressed support for the proposal because of the numerous benefits to the immediate neighbors and to the community as a whole. Benefits of the project recognized by the commenters include; increased safety and access to safety services provided by Police and Fire facilities and personnel, preservation of habitat and open space in light of continued development on the east side of Las Cruces, preservation and enhancement of recreational opportunities at the site, and inclusion of a buffer zone between the existing residences and the proposed development.

Concerns were expressed in each of the comments received. These concerns primarily include; the presence of motorized vehicles, ball field lighting, and preservation of a buffer zone of a designated width.

1.4.3 Resource Issues Identified

Based on the internal and external scoping efforts, the following issues were identified as relevant for analysis in this EA:

Soils

What is the risk of soil erosion from proposed construction activities and land use?

Minerals

How will the proposed action affect mineral rights within the proposed project area?

Vegetation

What is the potential vegetation impact from construction and operation of the proposed safety complex and recreation area?

Wildlife

What is the potential wildlife impact from construction and operation of the proposed safety complex and recreation area?

Cultural Resources

What are the potential impacts of construction and operation of the proposed safety complex and recreation area on cultural resources (archeological sites, historic structures, and traditional cultural properties) within the project area?

Paleontology

What are the potential impacts of construction and operation of the proposed safety complex and recreation area on paleontological resources within the project area?

Water Quality

What are the potential impacts of construction and operation of the proposed safety complex on surface and groundwater resources?

Air Quality

How would construction and operation of the proposed safety complex and recreation area affect air quality within the project and surrounding areas?

Floodplain

How would construction and operation of the proposed safety complex and recreation area affect floodplains within the project and surround areas?

Hazardous or Solid Wastes

Will construction or operation of the proposed safety complex and recreation area affect known hazardous materials site or create hazardous materials impacts?

Will construction and or operation limit or lower illegal dumping on the proposed project site?

Recreation

How would the construction and operation of the proposed safety complex and recreation area affect recreation activities within the project area?

Will the construction and or operation s affect unauthorized use of the proposed site for such activities as off-road vehicle use or target shooting?

Visual Resources

How would the proposed safety complex and recreation area affect visual resources in the area?

Noise

What affect will the construction and operation of the proposed safety complex and recreation area have on the noise pollution?

Environmental Justice

How will the proposed safety complex and recreation area affect population trends within the east mesa?

How will the proposed safety complex and recreation area serve the community?

Are there any environmental justice impacts with the construction and operation of the proposed safety complex and recreation area?

Land and Access

How would construction and operation of the proposed safety complex and recreation area affect land use or activities within the proposed project area?

2 PROPOSED ACTION AND ALTERNATIVES

2.1 Proposed Action

The CLC is planning to construct a public safety complex and recreation area on the East Mesa near the intersection of Lohman Avenue and Sonoma Ranch Boulevard, in Las Cruces, Doña Ana County, New Mexico. The land is currently owned and managed by the BLM. The property is 346.59 acres. The CLC has requested an R&PP Act lease which would lead to purchase of the land from the BLM. Under the auspices of the R&PP Act, the CLC is to demonstrate to the BLM a plan for development within the property. This plan must then be approved by the BLM, and the approved development must take place prior to the issuance of the patent.

The CLC proposes to construct two types of facilities within the proposed property: public safety complex and recreational facilities (Figures 4 and 5). The public safety complex would include a fire station and police substation. Each facility would be open to the public during normal business hours. The facilities would be operated, managed, and maintained by the City Facilities Management Section (FMS) of the Public Works Department (PWD) to house the fire and police operations.

All operating costs would be covered by the CLC and other entities as part of their regular operating budgets. Maintenance of the facilities would be in accordance with the standard practices of the Building Systems & Maintenance Group of the FMS of the PW.

The recreational facilities would include several trail networks, open space/native habitat areas, sports fields, and a non-motorized mountain bicycle trail area. The open space/native habitat areas would serve as buffers to screen the recreational area from neighboring residential areas. The CLC proposed the use of high efficiency, LED or spill reducing lighting for the sports fields. Final determination of lighting would be done during the design process and would also be presented during a public meeting about the design. The non-motorized mountain bicycle trail area would be located in already disturbed areas of the proposed subject area. All recreational areas would be open from sunrise to sunset every day. Special events may extend the hours of operation for particular occasions. The recreational facilities would be open to use by the public for recreational purposes without discrimination or favor. The CLC Parks and Recreational Department staff would be responsible for the maintenance and operation of the park and open space facilities. Maintenance of trails and roads would be coordinated with the Streets Section of the PWD. Maintenance would be performed regularly to ensure the facilities are safe and remain suitable for their purpose.

A development plan, management plan and timetable for development for the proposed project has been provided in Appendix H.

The following site plan identifies the location of the public safety complex and proposed utilities. The lease would contain a term and condition that would require approval from the authorized officer for any modifications that deviate from the proposed site plan and may require additional NEPA analysis in the form of a DNA, EA, or EIS depending on the modifications. The public would be made aware of any modifications to the proposed recreational locations. All developments and construction will follow all appropriate guidelines developed by the CLC Arroyo Protection Plan.

East Mesa Public Safety Facility and Recreation Area

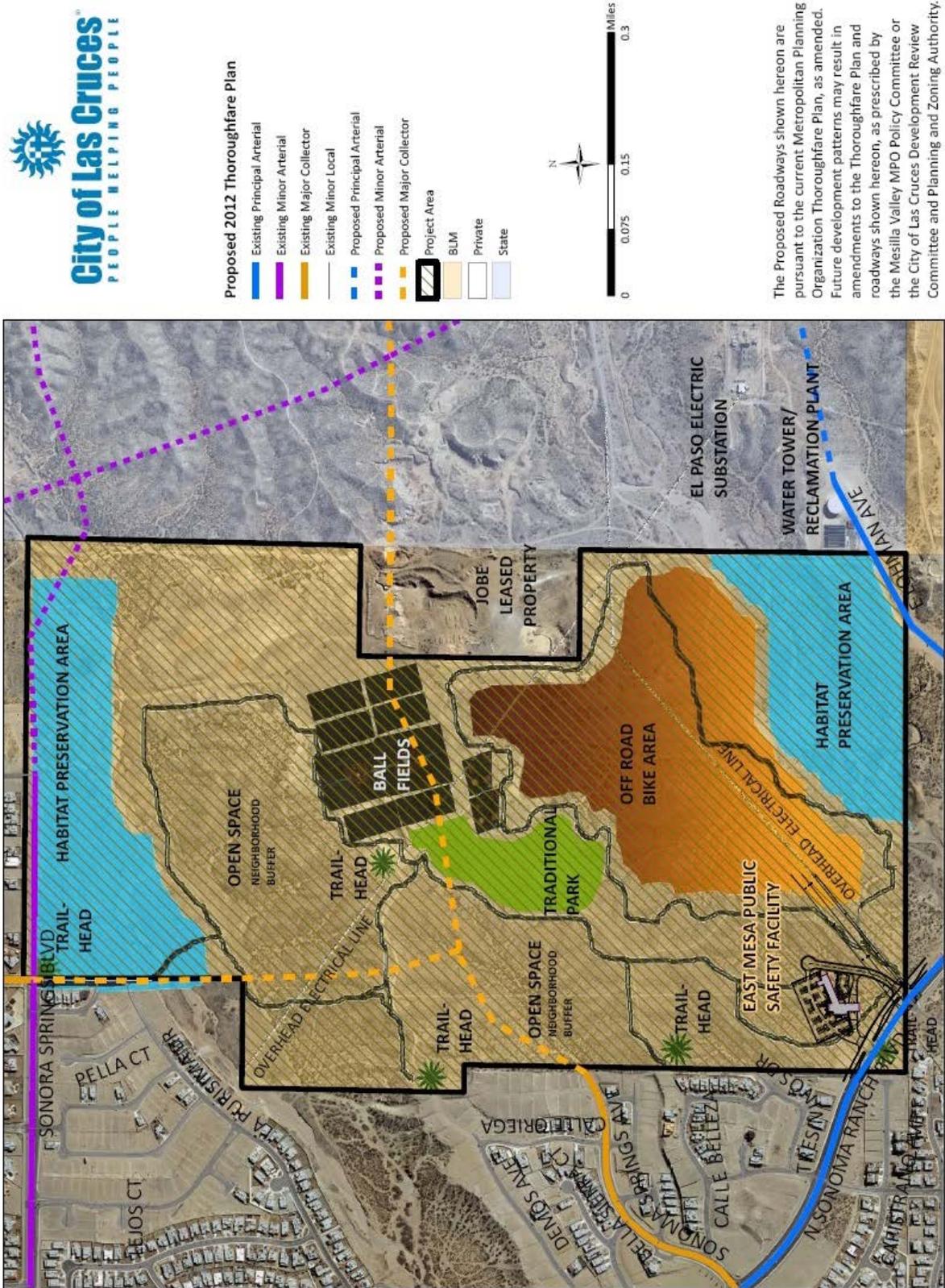


FIGURE 4: CITY OF LAS CRUCES SITE PLAN OF THE PROPOSED SAFETY COMPLEX

2.1.1 Design Features

Where appropriate, design features have been incorporated into stipulations (Appendix I).

2.1.1.1 Vegetation

The subject area would be revegetated with a native seed mixture prescribed by BLM so that conditions may return to their original state at a faster rate. The CLC would contact the appropriate BLM Range Specialist for the prescribed seed mixture to be used for revegetation.

2.1.1.2 Wildlife

Prior to construction, CLC would avoid impact to migratory birds observed in the subject area by conducting a migratory bird survey if work were conducted between the months of March and September. Active nests would be avoided until birds have fledged.

The NMDGF recommends following their trenching guidelines during the construction of open trenches that could potentially trap small mammals, amphibians, and reptiles or could potentially cause injury to larger mammals. Appendix G contains a detailed list of guidelines provided by the NMDGF. Below is an excerpt from the consultation letter with NMDGF.

Periods of highest activity for many of these species include night time, summer months, and wet weather.

- To minimize the amount of open trenches at any given time, keep trenching and back-filling crews close together.
- Trench during the cooler months (October – March). However, there may be exceptions (e.g., critical wintering areas) which need to be assessed on a site-specific basis.
- Avoid leaving trenches open overnight. Where trenches cannot be back-filled immediately, escape ramps should be constructed at least every 90 meters. Escape ramps can be short lateral trenches sloping to the surface or wooden planks extending to the surface. The slope should be less than 45 degrees (100%). Trenches that have been left open overnight, especially where endangered species occur, should be inspected and animals removed prior to back-filling.

Construction efforts would comply with these guidelines, where they apply, to reduce impacts to wildlife species.

2.1.1.3 Noxious Weeds

The CLC would comply with the BLM's efforts for the removal of the African rue to prevent further spreading of this species.

The following mitigation measures would be followed to reduce the spread of noxious weeds within and in the vicinity of the subject area. A complete list of New Mexico noxious weeds is included in Appendix F.

- CLC would be responsible for cleaning all equipment (power or high pressure cleaning) of mud, dirt, and plant parts before moving equipment into the subject area or within noxious weed infested areas within the subject area.

- Gravel and fill materials would come from noxious weed free sources. CLC would inspect gravel pits and fill sources to identify noxious weed-free sources.
- CLC would be responsible for control of noxious weeds on the project site. CLC would be responsible for conducting a pre-construction noxious weed survey to: (1) identify noxious weed species, (2) locations of infestations, (3) acreage of infested areas, and (4) density of plants. The survey would be filed with the BLM LCDO prior to construction.
- Species listed in Appendix F *New Mexico Noxious Weed List* maintained by NMDA shall be used to identify those plants defined as noxious weeds.

2.1.1.4 Special Status Species

If the Texas horned lizard is observed during construction, hand relocation of the species would be conducted to avoid potential impacts.

The subject area contains several areas that are ideal for burrowing owl use such as the arroyos and disturbed areas. These areas would be surveyed within 30-days prior to construction to ensure that burrowing owls have not begun to occupy the areas. If owls are observed, the following approaches taken from the NMDGF burrowing owl guidelines (2007) would be conducted. Additional requirements for each of the following approaches are noted in Appendix C.

1. Design and implement project activities to spatially avoid negative impacts and disturbance to burrowing owls and their habitat.
2. Design and implement project activities to seasonally avoid negative impacts and disturbances to burrowing owls.
3. Relocate burrowing owls that would be negatively impacted by project activities to protected areas of potential burrowing owl habitat.

Additional efforts mentioned in Section 5.1 concerning trenching guidelines (NMDGF 2003) would also pertain to Special Status Species (Appendix G).

2.1.1.5 Cultural Resources

Mitigation measures for the one eligible site would include the development of a data recovery plan. Radiocarbon samples from the site would be taken in an attempt to determine the age the site was occupied. Macro-botanical and micro-botanical samples may provide information regarding diet and seasonal use at the site. A data recovery plan would be written and approved by the applicable agencies, then carried out by personnel meeting the cultural resources standards of the Secretary of Interior.

For the entire subject area, if cultural resources were uncovered during construction activities, work would halt and the SHPO and BLM archaeologist would be contacted. Construction would not resume until clearance was received from SHPO and BLM.

2.1.1.6 Paleontology

According to BLM Regulations concerning the discovery of paleontological resources, the following would be followed. The BLM would be notified immediately if paleontological resources are uncovered during construction.

IM 2009-011 (Oct. 10, 2008) – Assessment and Mitigation of Potential Impacts to Paleontological Resources

I(C)(4)(a): The lessee shall immediately notify the BLM Authorized Officer of any paleontological resources discovered as a result of operations under this authorization. The lessee shall suspend all activities in the vicinity of such discovery until notified to proceed by the Authorized Officer and shall protect the discovery from damage or looting. The lessee may not be required to suspend all operations if activities can be adjusted to avoid further impacts to a discovered locality or be continued elsewhere. The Authorized Officer will evaluate, or will have evaluated, such discoveries as soon as possible, but not later than 10 working days after being notified. Appropriate measures to mitigate adverse effects to significant paleontological resources will be determined by the Authorized Officer after consulting with the operator. Within 10 days, the operator will be allowed to continue construction through the site, or will be given the choice of either (1) following the Authorized Officer's instructions for stabilizing the fossil resource in place and avoiding further disturbance to the fossil resource, or (2) following the Authorized Officer's instructions for mitigating impacts to the fossil resource prior to continuing construction through the project area.

2.1.1.7 Air Quality

Emissions other than dust (PM_{10}) are not anticipated in any significant quantity as a result of construction of the proposed project. Construction vehicle emissions would be controlled with standard engineering practices including exhaust emissions controls. Dust control measures such as watering would be implemented to reduce the amount of fugitive dust released into the air during construction activities. Dust control measures that would be utilized during construction activities would not impact the surrounding environment nor inhibit the regrowth of vegetation.

2.1.1.8 Hazardous or Solid Wastes

Areas of illegal dumping would be removed, and disposed of in accordance with local, state and federal regulations. Improved maintenance activities, signage and/or fencing would be implemented to minimize the potential for future dumping activities.

Appropriate erosion control methods would be developed to minimize erosion and sedimentation issues.

A hazardous materials safety protocol would be developed. Storage facilities for petroleum products, other fuels and chemicals at the safety complex would be appropriately located and protected to prevent accidental spill from entering waterways.

A Spill Prevention Control and Countermeasures (SPCC) plan would be developed and implemented to minimize the potential for hazardous material spills and provide means to handle them in a manner protective of employees and the environment. In the event that a spill does occur during construction, the appropriate state agency would be notified.

2.1.1.9 Visual Impacts

All safety complex structures would be single story. The CLC proposes that all lights for parking lots and ball fields will make use low intensity, energy efficient LED lights.

2.1.1.10 Noise

Noise barriers, including trees, would be used around ball fields and parks to help reduce the noise to nearby neighborhoods.

2.2 No Action Alternative

Under the No Action alternative, the request for a lease and/or purchase would not be granted by the BLM for the proposed property. The CLC would not be able to construct a public safety complex and recreational facility at that location.

2.3 Alternatives Considered but Eliminated from Detailed Analysis

An alternative considered but eliminated from detailed analysis was the option of building a fire station further north along Sonoma Ranch Boulevard. The property was eliminated from consideration for the following reasons:

- An arroyo runs through the middle of the parcel.
- The only available space to build could only accommodate for a fire station, and an additional police station and recreational facilities were still necessary for the residents of the East Mesa.

3 AFFECTED ENVIRONMENT

3.1 Topography, Geology, and Soils

The subject area is located within the Camp Rice Formation of the Rio Grande Rift. This rift runs north-south through the region, and is defined by normal-fault bounded mountain uplifts on either side of the rift. The Camp Rice Formation consists of late Pliocene to early Pleistocene conglomerates and sandstones deposited on alluvial fans and alluvial flats, and crossbedded and horizontally laminated pebbly sand/sandstone and mudstone deposited by the ancestral Rio Grande (Seager and Mack, 1994; Mack et al., 1998a). The surface of the subject area is covered with unconsolidated medium-grained sand and gravel deposits that are heavily dissected by small meandering and braided drainages and ranges from 4,205 to 4,310 feet above mean seal level. Gravels are concentrated on the surface as lag deposits, and are mixed with soils below the surface. Gravels are primarily volcanic, and include rhyolite and andesite, though large chert granules and pebbles are also present.

Additionally, the subject area contains both the North and South Forks of the Las Cruces Arroyo. Flow of water toward the subject area is minimized by the North Fork Dam (1.16 miles northeast), South Fork Dam (0.62 miles northeast) and an unnamed dam (1.09 miles east-northeast) of the subject area. The flow of water leaving the subject area is virtually stopped by the Las Cruces Dam (1.19 miles west) of the subject area.

The subject area consists of five soils mapped by the Natural Resources Conservation Service (NRCS) Web Soil Survey (U.S. Department of Agriculture [USDA] 2009). Specific soil types are noted in Table 1.

TABLE 1: SOILS WITHIN THE SUBJECT AREA

Soil Name	Special Notes
Bluepoint-Caliza-Yturbide complex	Neither farmland of statewide importance or a hydric soil.
Bluepoint loamy sand, 1 to 5 percent slopes	Farmland of statewide importance but not a hydric soil.
Bluepoint loamy sand, 1 to 15 percent slopes	Neither farmland of statewide importance or a hydric soil.
Haplargids, dissected	Neither farmland of statewide importance or a hydric soil.
Riverwash-Arizo complex	Neither farmland of statewide importance or a hydric soil.

3.2 Minerals

All minerals are federally owned. Historically, the parcel was subject to 12 mill site claims, one geothermal lease, one oil and gas lease, several mineral material permits and four permits for specialty stone but none of these are now authorized.

The BLM Mineral Potential of the Las Cruces Complex Report, dated November 2013 (Appendix E), states that the parcel contains a high potential for the occurrence of geothermal and sand and gravel resources. Sand and gravel resources have been mined in the past. The last mining activities on record with the BLM were in 1988 and then a small amount of rock crushing in 2000(BLM 2013). Of the potential occurrences of mineral resources on the subject property, there is no potential for coal, low potential for oil and gas, high potential for geothermal, no potential for sodium and potassium, undetermined potential for metallic minerals with unlikely exploration to occur, undetermined potential for uranium and thorium with unlikely exploration to occur, undetermined potential for nonmetallic minerals/industrial minerals with unlikely exploration to occur, and high potential for common variety minerals (BLM 2013). The closed gravel pits have considerable amounts of exposed soil.

3.3 Vegetation

A biological survey was conducted by Zia Engineering & Environmental Consultants, LLC. (Zia) on May 6-8, 2013 (Appendix C). The findings identified within this report are summarized below.

During the pedestrian survey, approximately 145 acres appeared to be undisturbed. Vegetation within the surveyed area was dominated by creosotebush (*Larrea tridentata*) within the non-disturbed areas (Figure 7) and low woollygrass (*Dasyochloa pulchella*) and Russian thistle (*Salsola tragus*) within the disturbed areas (Figure 8).

Surveys were conducted for both plant and wildlife species. As part of the field investigations, species lists were compiled and a qualitative estimate of abundance (Table 2) or frequency of species occurrence in the subject area (Tables 3 and 4) was developed.

In general, the habitat adjacent to the subject area correlates with the Chihuahuan Desert Scrub vegetation classification of Dick-Peddie (1993). The proposed site has several disturbed sites from former gravel pits. Vegetation observed within the subject area is summarized in Table 5.



FIGURE 6: NORTH END OF THE SUBJECT AREA FACING EAST



FIGURE 7: FORMER GRAVEL PIT ALONG THE EASTERN SIDE OF THE SUBJECT AREA FACING SOUTH.



FIGURE 8: DISTURBANCE IN FORMER GRAVEL PIT CAUSED BY UNAUTHORIZED OHV USE NEAR THE MIDDLE OF THE SUBJECT AREA.

TABLE 2: QUALITATIVE ESTIMATE OF SPECIES ABUNDANCE

Category	Plants	Wildlife
Abundant	Present in large numbers over most or all of the subject area.	Species or sign seen in great numbers throughout the entire subject area.
Common	Easily found in most of the subject area, or in high numbers in select areas.	Species or sign easily found in most of the subject area, or in appropriate habitat.
Uncommon	Present in isolated patches or small numbers.	Species or sign present occasionally in appropriate habitat.
Few	1 or 2 individuals present.	Species sighted only once; is expected to inhabit area only very briefly; or is suspected to occur only in a very limited area.

TABLE 3: OBSERVED PLANT SPECIES

Scientific Name	Common Name	Abundance
Forbs		
<i>Acourtia nana</i>	dwarf desertpeony	Uncommon
<i>Allionia incarnata</i>	trailing windmills	Uncommon
<i>Amaranthus palmeri</i>	carelessweed	Few
<i>Baileya multiradiata</i>	desert marigold	Uncommon
<i>Cevallia sinuata</i>	stinging serpent	Uncommon
<i>Cucurbita foetidissima</i>	buffalo gourd	Few
<i>Datura wrightii</i>	sacred thorn-apple	Uncommon
<i>Dimorphocarpa wislizeni</i>	touristplant	Uncommon
<i>Ericameria nauseosa</i>	rubber rabbitbrush	Few
<i>Eriogonum</i> sp.	wild-buckwheat	Uncommon
<i>Gutierrezia sarothrae</i>	broom snakeweed	Common
<i>Harpagophytum procumbens</i>	devil's claw	Few
<i>Mentzelia multiflora</i>	desert blazingstar	Few
<i>Pectis angustifolia</i>	lemonscent	Uncommon
<i>Peganum harmala</i>	harmal peganum (African rue)	Few
<i>Phacelia</i> sp.	scorpion weed	Few
<i>Salsola tragus</i>	Russian thistle	Abundant
<i>Solanum elaeagnifolium</i>	silverleaf nightshade	Uncommon
<i>Verbesina encelioides</i>	golden crownbeard	Uncommon
<i>Xanthium strumarium</i>	rough cocklebur	Uncommon
Shrubs		
<i>Atriplex canescens</i>	four-wing saltbush	Uncommon
<i>Ephedra trifurca</i>	longleaf ephedra	Few
<i>Fallugia paradoxa</i>	Apache plume	Uncommon
<i>Fouquieria splendens</i>	ocotillo	Uncommon
<i>Larrea tridentata</i>	creosotebush	Abundant
<i>Prosopis glandulosa</i>	honey mesquite	Common
<i>Yucca elata</i>	soaptree yucca	Few

Scientific Name	Common Name	Abundance
<i>Yucca torreyi</i>	Torrey's yucca	Uncommon
Grasses		
<i>Bouteloua barbata</i>	sixweeks grama	Uncommon
<i>Cynodon dactylon</i>	Bermuda grass	Uncommon
<i>Dasyochloa pulchella</i>	low woollygrass	Abundant
<i>Muhlenbergia porteri</i>	bush muhly	Common
<i>Pleuraphis mutica</i>	tobosagrass	Uncommon
<i>Setaria viridis</i>	green bristlegrass	Uncommon
<i>Sorghum halepense</i>	johnsongrass	Few
<i>Sporobolus airoides</i>	alkali sacaton	Common
Cactus		
<i>Cylindropuntia imbricata</i>	tree cholla	Few
<i>Cylindropuntia leptocaulis</i>	Christmas cactus	Few
<i>Echinocereus coccineus</i> var. <i>coccineus</i>	scarlet hedgehog cactus	Few
<i>Ferocactus wislizeni</i>	candy barrelcactus	Few
<i>Opuntia macrocentra</i>	purple prickly-pear	Uncommon
<i>Opuntia phaeacantha</i>	tulip prickly-pear	Uncommon
Trees		
<i>Acacia constricta</i>	whitethorn acacia	Uncommon
<i>Chilopsis linearis</i>	desert willow	Few
<i>Koeberlinia spinosa</i>	crown of thorns	Few
<i>Rhus microphylla</i>	littleleaf sumac	Uncommon

3.3.1 Invasive/Non-native Vegetation

From those species listed on the New Mexico Department of Agriculture (NMDA) Noxious Weed List (2009), a New Mexico B noxious weed species, *Harmal peganum* (African rue), was identified within the subject area. Only one individual African rue plant was identified along one of the dirt roads. Class A or C noxious weed species were not observed during the pedestrian survey.

3.4 Wildlife

Wildlife species observed within the subject area are noted in Table 5. Activity indicators included small to large mammal burrows, scat, owl cough pellets and bird's nests. Large burrows which have the potential to be used by burrowing owls were also identified.

TABLE 4: OBSERVED WILDLIFE SPECIES

Scientific Name	Common Name	Abundance
Reptiles		
<i>Aspidoscelis neomexicana</i>	New Mexico whiptail	Uncommon
<i>Aspidoscelis tessellata</i>	checkered whiptail	Uncommon
Birds		
<i>Amphispiza bilineata</i>	black-throated sparrow	Common
<i>Buteo swainsoni</i>	Swainson's hawk	Few
<i>Callipepla gambelii</i>	Gambel's quail	Common
<i>Campylorhynchus brunneicapillus</i>	cactus wren	Few
<i>Cardinalis sinuatus</i>	Pyrrhuloxia	Few
<i>Chordeiles minor</i>	common nighthawk	Uncommon
<i>Zenaida asiatica</i>	white-winged dove	Abundant
<i>Zenaida macroura</i>	mourning dove	Common
Mammals		
<i>Lepus californicus</i>	black-tailed jackrabbit	Few
<i>Sylvilagus audubonii</i>	desert cottontail	Few

3.5 Special Status Species

Potentially suitable habitat for five federal and/or state listed species is present within the subject area. However, none of these species or signs of their presence were observed in the subject area during the pedestrian survey conducted on May 6-8, 2013.

3.5.1 Special Status Vegetation

Threatened, endangered, and sensitive plant species known to occur in Doña Ana County and listed by the New Mexico Rare Plant Technical Council (NMRPTC), the U.S. Fish and Wildlife Service (USFWS), and BLM were reviewed to assess the potential for these species to occur in the subject area.

Threatened, endangered, and sensitive plant species were not observed during the pedestrian survey conducted on May 6-8, 2013. Furthermore, comparisons of the habitat within the subject area and habitat suitable for threatened, endangered, and sensitive plant species identified that one threatened, endangered, and sensitive plant species may have the potential to grow within the subject area (Table 5, NMRPTC 1999, USFWS 2013a).

TABLE 5: POTENTIAL THREATENED AND ENDANGERED PLANT SPECIES

Scientific Name	Common Name	Status
<i>Peniocereus greggii</i> var. <i>greggii</i>	night-blooming cereus	FWS-SOC; BLM-S; NM-E
FWS ~ U.S. Fish and Wildlife Service; NM ~ New Mexico; BLM ~ Bureau of Land Management; E ~ Endangered; S ~ Sensitive; SOC ~ Species of Concern		(NMRPTC 1999; USFWS 2013a)

Night-blooming cereus cactus

The night-blooming cereus cactus is found mostly in sandy to silty gravelly soils in gently broken to level terrain in desert grassland or Chihuahuan desert scrub (NMRPTC 1999). The cactus has been found throughout the eastern portion of the Chihuahuan Desert on terraces and in washes at elevation between 900 and 1,600 meters above sea level (New Mexico Native Plants Protection Advisory Committee 1984). They are typically found growing up through and supported by shrubs, especially creosotebush and honey mesquite (NMRPTC 1999).

Individual species have been identified within Doña Ana County. Furthermore, the surveyed area contains suitable habitat for the species. However, individual species were not identified within the subject area.

3.5.2 Special Status Wildlife

Special status wildlife species were not observed during the pedestrian survey conducted on May 6-8, 2013. Comparisons of the habitat within the subject area and habitat suitable for special status wildlife species identified that one reptile and two birds may have the potential to located within the subject area (Table 6, NMRPTC 1999, USFWS 2013a).

TABLE 6: POTENTIAL THREATENED AND ENDANGERED WILDLIFE SPECIES

Scientific Name	Common Name	Status
<i>Athene cucularia hypugaea</i>	burrowing owl	FWS-SOC; BLM-S
<i>Falco femoralis septentrionalis</i>	aplomado falcon	FWS-E, EXPN; NM-E
<i>Lanius ludovicianus excubitorides</i>	loggerhead shrike	BLM-S; NM-S
FWS ~ U.S. Fish and Wildlife Service; NM ~ New Mexico; BLM ~ Bureau of Land Management; E ~ Endangered; EXPN ~ Experimental Population; S ~ Sensitive; SOC ~ Species of Concern		(NMRPTC 1999; NMDGF 2013; USFWS 2013a)

Birds

The subject area contained habitat suitable for the aplomado falcon, burrowing owl and loggerhead shrike.

The aplomado falcon has been observed within Doña Ana County. The subject area contains limited habitat for nesting. The falcon prefers to nest in stands of honey mesquite or yuccas. The subject area contains these plants; however, large stands were not observed as well as falcon nests. The subject area does contain suitable foraging habitat.

Burrowing owls are known to occupy arroyos within the CLC. Individual burrowing owls were not observed within the subject area. Several large burrows as well as owl cough pellets were observed within the subject area. However, the burrows did not contain indications of burrowing owl use, and the cough pellets are not confirmed to be burrowing owl pellets.

The loggerhead shrike may forage within the subject area. Individuals were not observed during the pedestrian survey. Nests observed in the subject area can neither be confirmed nor denied to belong to loggerheaded shrikes.

3.6 Cultural Resources

3.6.1 Culture History

There has been a human presence in the American Southwest for well over 12,000 years (Table 7). The earliest evidence of human occupation within the subject area occurs during the Paleoindian period (10,000 to 6,000 B.C.). Paleoindian remains are present in the region, but are rare relative to the material remains found for other later periods (Irwin-Williams 1979). This may be due to one of two, or a combination of two, factors. First, the rarity of Paleoindian artifacts may be a result of the effects of deposition and erosion in the many thousands of years since these people lived and left these deposits. The second factor is that the population during the Paleoindian period may have been substantially smaller than subsequent populations during the Archaic and Formative periods, and so less material remains were left behind.

The Mesilla Valley was likely settled by Spanish colonists in the late 1600s. Due to the location along the Camino Real de Tierra Adentro, the Royal Road that connected Mexico City to Santa Fe, and its fertile soil, the Mesilla Valley was ideal for Spanish settlers seeking farm land. The community of Doña Ana was mentioned in the reports of Spanish Governor Don Antonio de Otermin on his return trip from unsuccessfully attempting to recapture Santa Fe and the province Nuevo México in 1682 (Pearce 1965).

A military presence was established in the El Paso area following Mexican-American War in 1848. Fort Fillmore was established in 1851 and Fort Bliss was established in 1854 (Harris 1993). Fort Selden was built in 1865 to further protect settlers and travelers in the Mesilla Valley from bandits and Indian attacks.

Mining for gold, silver, copper and lead began in earnest in the region's mountain ranges in the late 1840s, joining farming and ranching as major occupations. The area population grew tremendously as transportation methods improved, first with wagon roads in addition to the Camino Real that were in use from 1853 to 1880, and then with railroads in 1881 (Staski 1984).

In 1857, La Mesilla became a major stop for the Butterfield Overland Mail Route, which ran from Missouri to California. From July 1861 to August 1862, La Mesilla was the capital of the Confederate Territory of Arizona, which included all of New Mexico, Arizona, Nevada, California, and part of Texas. After the Union retook the region in August of 1862, La Mesilla became the headquarters for the Military District of Arizona (Haecker and Sick 1989). New Mexico remained a territory of the United States (US) until 1912 when statehood was attained. A large number of the metal and glass artifacts found in the southern New Mexico region date to the territorial and later periods.

TABLE 7: REGIONAL CHRONOLOGY

Period/Phase	Approximate Date	Reference
Paleoindian	Ca. 10,000-6000 B.C.	Irwin-Williams 1979
Archaic	6000 B.C.- A.D. 200	Carmichael 1986
Early	6000-4000 B.C.	Carmichael 1986
Middle	4000-1200 B.C.	O'Laughlin 1980
Late	1200 B.C.-A.D. 200	O'Laughlin 1980
Formative	A.D. 200-1450	Lehmer 1948, LeBlanc and Whalen 1980
Mesilla	A.D. 200-1000	Lehmer 1948, LeBlanc and Whalen 1980, Miller 2005
Doña Ana	A.D. 1000-1275	Lehmer 1948, LeBlanc and Whalen 1980, Miller 2005
El Paso	A.D. 1275-1450	Lehmer 1948, LeBlanc and Whalen 1980, Miller 2005
Protohistoric	A.D. 1450-1659	Beckett and Corbett 1992
Historic	A.D. 1659-present	Wilson and Walt 1989

3.6.2 Cultural Survey

Zia conducted a cultural resources survey of the property between May 6- 8, 2013 (Zia 2013a). The project was conducted under BLM permit 197-2920-12-P. The New Mexico Cultural Resources Information System (NMCRIS) activity number for the project was 127309.

Three previously recorded sites, Laboratory of Anthropology (LA) 78424, LA 145739, and LA 75215 were revisited and updated during the project. Two new sites, LA 175966 and LA 175967, were identified and recorded. Thirty-seven isolated occurrences were also documented.

Previously recorded site LA 75215 is recommended as not eligible for inclusion in the National Register of Historic Places (NRHP). This site has had various impacts as a result of the expansion of previously conducted gravel pit operations. The remaining site area includes a low density lithic scatter with less than 50 artifacts. The site is also located in an area of desert pavement immediately above caliche, suggesting that no subsurface deposits are present. Thermal features were not identified, and the site contains no diagnostic artifacts.

Previously recorded site LA 78424 is recommended as not eligible for inclusion in the NRHP. The site is situated on BLM and New Mexico State Trust lands. The site has been impacted by a power line, an associated road, a sewer line, as well as by previously conducted gravel pit operations. Based on limited testing and arroyo cuts, the cultural remains appear to be situated on desert pavement, with a caliche layer below this, and deep sterile sands below the caliche. Little potential remains for subsurface deposits. Thermal features were not identified, and the site contains no diagnostic artifacts.

Previously recorded site LA 145739 is recommended as not eligible for inclusion in the NRHP. This site was previously determined not eligible, and subsequently destroyed as part of the construction of the Las Cruces Water Reclamation Plant. Nothing remains of this site.

Newly recorded LA 175966 is recommended as not eligible for inclusion in the NRHP. The site contains over 200 artifacts and is located on a stable gravel ridge. Based on limited testing the cultural remains

appear to be situated on the surface. There is little potential for intact subsurface deposits. Thermal features were not identified, and the site contains no diagnostic artifacts.

Newly recorded LA 175967 is recommended as eligible for inclusion in the NRHP. This site contains a limited assemblage, but contains two carbon stains that may be suitable for radiocarbon dating. This site is not located on a desert pavement ridge, but instead on a sandy slope overlooking an arroyo. Because the stains were identified through walking over the area, there is a higher potential for subsurface remains. Additional testing of LA 175967 indicates that subsurface deposits, while limited, are present. The site will require further mitigation through data recovery.

3.7 Paleontology

A paleontological assessment report was completed between December 25-26, 2013 by John Burris, Ph. D., BLM Permit No. NM 13-03C, and Kenneth Heil, BLM Permit No. NM 13-04C. The following information was taken directly from his report (Burris 2014). Figures and references mentioned within these excerpts can be observed in Appendix D.

Geology and Geomorphology

The project area is located just east of an existing housing development (Figure 1). The land surface is undulating, covered with unconsolidated medium-grained sand and gravel deposits that are heavily dissected by small meandering and braided drainages (Figures 2, 3). Gravels are concentrated on the surface as lag deposits, and are mixed with soils below the surface (Figures 4, 5). Gravels are primarily volcanic, and include rhyolite and andesite, though large chert granules and pebbles are also present. Two large, established arroyos are located at the north end and south end of the project area (Figure 6). The entire region is variably covered by creosote, mesquite, yucca, cacti, and grassy vegetation (Figure 7).

The area surveyed has been variably impacted by human activity. ATV [all-terrain vehicle] tracks, dirt roads, small excavation sites, bull-dozed areas, trash, and foot traffic are in evidence (Figures 8-11).

The project location is in the Jornada Basin, one of many north-south trending fault block uplifts along the Rio Grande Rift. The stratigraphically youngest basin fill in the project area is the Camp Rice Formation, though outcrops do not appear at the surface. The Camp Rice formation consists of late Pliocene to early Pleistocene conglomerates and sandstones deposited on alluvial fans and alluvial flats, and crossbedded and horizontally laminated pebbly sand/sandstone and mudstone deposited by the ancestral Rio Grande (Seager and Mack, 1994; Mack et al., 1998a). Mammal fossils place the Camp Rice formation in the Blancan North American Land Mammal Age (Morgan et al., 1998). These sedimentary units have a Class 4 rating in the PFYC system – “Geologic units containing a high occurrence of significant fossils”

Paleontological Surveying Methodology

On the dates listed above John Burris, Paleontologist under contract by Zia Engineering & Environmental Consultants, LLC, and Kenneth

Heil, both BLM-permitted consulting paleontologists (Burris permit # NM 13-03 C; Heil permit # NM 13-04 C), prospected the project area for vertebrate fossils. Drainage walls carved by erosion were examined for bones or teeth. Anthills were examined for microfossils.

A GPS unit and digital camera were used to record the survey.

Paleontological Survey Results – Negative Report

No vertebrate fossils were found along any portion of the project area. Additionally, no known fossil localities exist within 1 mile of the project area.

The project area crosses PFYC [Potential Fossil Yield Classification] Class 4b:

“Class 4 – High. Geologic units containing a high occurrence of significant fossils. Vertebrate fossils or scientifically significant invertebrate or plant fossils are known to occur and have been documented,

but may vary in occurrence and predictability. Surface disturbing activities may adversely affect paleontological resources in many cases.”

“Class 4b – These are areas underlain by geologic units with high potential but have lowered risks of human-caused adverse impacts and/or lowered risk of natural degradation due to moderating circumstances. The bedrock unit has high potential, but a protective layer of soil, thin alluvial material, or other conditions may lessen or prevent potential impacts to the bedrock resulting from the activity.

- Extensive soil or vegetative cover; bedrock exposures are limited or not expected to be impacted.
- Areas of exposed outcrop are smaller than two contiguous acres.
- Outcrops form cliffs of sufficient height and slope so that impacts are minimized by topographic conditions.
- Other characteristics are present that lower the vulnerability of both known and unidentified paleontological resources.”

3.8 Water Quality

3.8.1 Surface Water

The subject area is heavily dissected by small meandering and braided drainages. It does not contain standing surface water. There are no perennial surface waters on the proposed subject area. Surface water is limited to ephemeral and intermittent overland and in-channel flows during rainfall events. The subject area contains both the North and South Forks of the Las Cruces Arroyo, an ephemeral waterway. These arroyos are primarily naturally flowing within the subject area but are structurally channelized southwest of the parcel. Onsite activities such as the gravel pits and unpaved roadways do not appear to have affected the flow of these arroyos. Flow of water toward the subject area is minimized by the North Fork Dam (1.16 miles northeast), South Fork Dam (0.62 miles east) and an unnamed dam (1.09 miles east) of the subject area. The flow of water leaving the subject area is virtually stopped by the Las Cruces Dam (1.19 miles west) of the subject area. During heavy rain events, the Las Cruces Dam could drain out extra water through the use of a drainage pipe.

The subject area is within the El Paso-Las Cruces watershed (United States Environmental Protection Agency [EPA] 2010) (Figure 9). The closest point of the proposed subject area is approximately 4.68 miles from the closest river, the Rio Grande.



FIGURE 9: EL PASO – LAS CRUCES WATERSHED MAP

3.8.2 Groundwater

Desert washes primarily function as areas of overland flow collection and recharge areas for the surrounding watershed. The U.S. Geologic Service (USGS) operates monitoring wells throughout the country. Several active and inactive monitoring wells are located within five miles of subject area (Figure 10). New Mexico Office of the State Engineer (NMOSE) depths to groundwater within 1,500 meters of the subject area were reviewed. Depth to groundwater averages ranges between 144 feet and 202 feet near the proposed subject area.

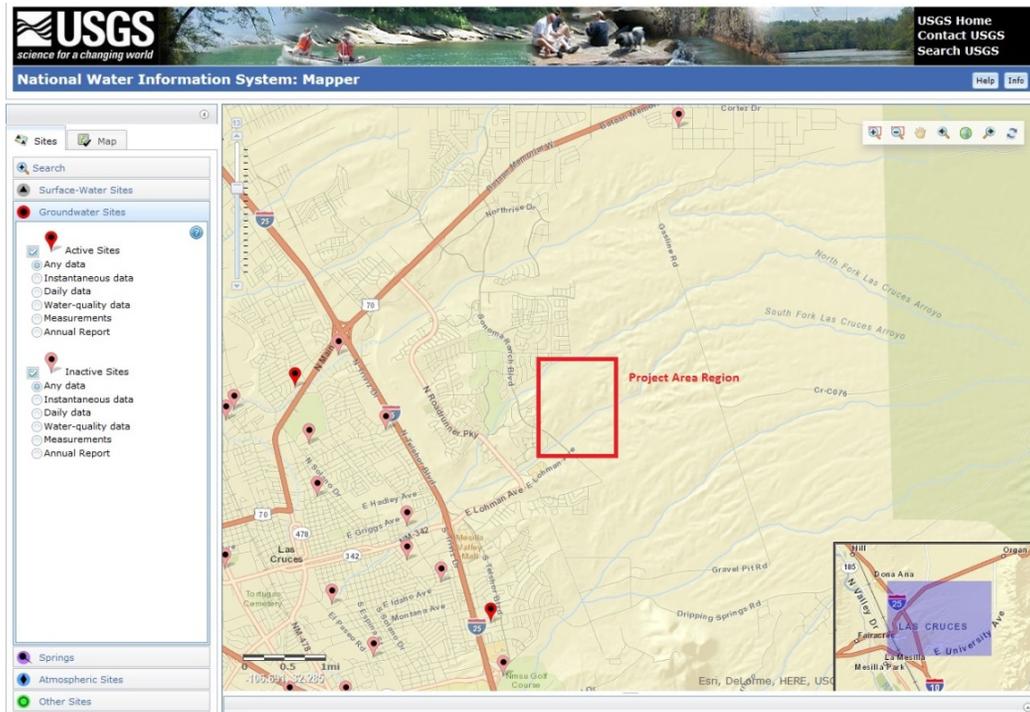


FIGURE 10: USGS MONITORING WELLS NEAR SUBJECT AREA

3.9 Air Quality

Doña Ana County is within the Paso del Norte air shed, which includes El Paso County, Texas and Ciudad Juarez, Mexico. The area of the proposed action is considered an EPA Class II air quality area. A Class II area allows moderate amounts of air quality degradation. There are no Class I quality areas in the vicinity of the subject area. Throughout most of the year, the air quality in the subject area is good and the air is considered clean. Carbon monoxide and ozone levels are elevated on rare occasions when temperature inversions prevent the escape and dispersion of air to the upper atmosphere. During the dry spring months, windstorms and blowing dust can become a problem throughout Doña Ana County.

Excessive dust in the air can impair visibility and, when breathed, be potentially harmful to people with respiratory conditions. To maintain attainment of good air quality, an area must meet criteria set up in the NAAQS. Currently, Anthony, NM is the only area within Doña Ana County that is not in attainment

(New Mexico Environment Department [NMED] 2013). Since the proposed subject area is approximately 24 miles northeast of Anthony, NM, the subject area is not in the nonattainment area identified by NMED.

3.10 Floodplain

Executive Order 11988 (Floodplain Management) (1977) requires Federal agencies to avoid direct or indirect impact of identified floodplains if a practical alternative is available. A floodplain is defined as a low plain area near a water source that is prone to periodic flooding. Two floodplains are typically defined, 100-year floodplain and 500-year floodplain. A 100-year floodplain is defined as an area that is prone to flooding with a one percent chance of flood occurrence any given year. A 500-year floodplain is an area that has a 0.2 percent chance of flood occurrence any given year.

Flood zones are defined by the Federal Emergency Management Agency (FEMA) as zones of flood risk. These are identified on flood insurance rate maps (FIRM) which have been created for flood management and flood insurance purposes.

The subject area is mostly located outside of the noted flood zones (FEMA 1995): Zone A (Figure 11) is located on the northwest and southeast portions of the site. Zone A contains areas with no determined base flood elevations. The rest of the subject area is located within Zone X which is an area designated as a 500-year flood area. Zone A is considered special flood hazard areas that are inundated by 100-year flood events.

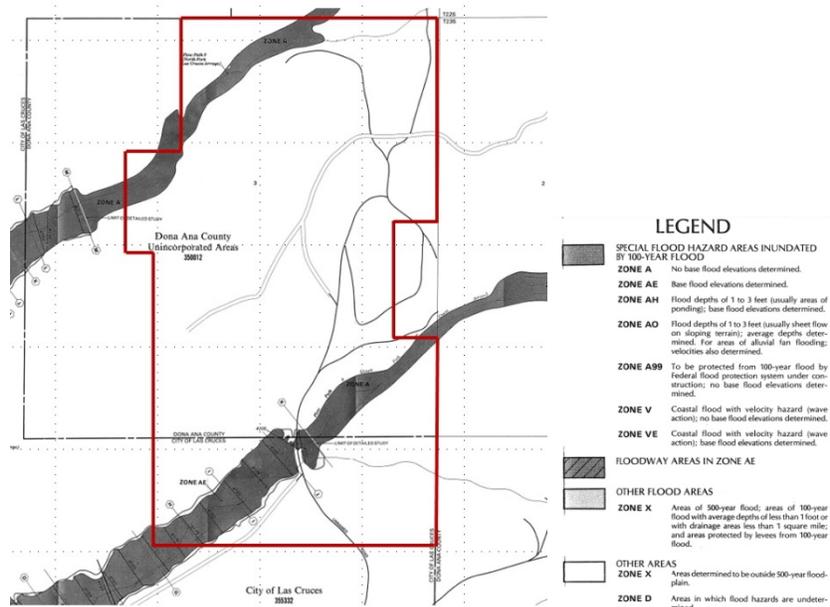


FIGURE 11: FEMA FIRM MAP OF SUBJECT AREA

3.11 Hazardous or Solid Wastes

The proposed subject site is not listed as a hazardous waste handler, active or archived Superfund site, or a facility with toxic and/ or air releases reported. No hazardous, toxic or radioactive wastes are generated or disposed of at the proposed project site. A Phase I Environmental Site Assessment (ESA) was completed by Zia on September 8, 2013 (Zia 2013b). Historical sources indicated that the subject site was undeveloped land with intermittent Arroyos (North Fork and South Fork) from at least 1937 through 1947. In the late 1950s, the west central portion of the property was used for a gravel pit operation, which expanded through most of the western portion of the property from the late 1950s to the early 2000s when the operations closed and the property was reclaimed.

Windblown trash as well as other debris was observed throughout the site. Capped locations from former dumpsites are eroding and illegal dumping activities are exposed (Figure 12). Based on visual observation, debris noted consisted of shotgun shells, 0.22 caliber cartridges, mattresses, clothing, wood, yard waste, plastic, and broken glass. Illegal dumping areas were also observed along two-track roadways throughout the property and in higher concentrations on the southwestern portion of the property. Multiple small excess landscape material piles, push piles from leveling the property, and asphalt were also noted. These dump piles appear to be dumped upon the ground. Additionally, one 4-foot transite pipe was noted. Leakage, spills or other releases from these materials were not observed during the visual reconnaissance. No evidence of staining, noxious odors or hazardous waste disposal was observed within or in the vicinity of the material piles. There appears to be a considerable amount of buried construction debris in the southeastern portion of the property.



FIGURE 12: TRASH AND DEBRIS IN THE SOUTH FORK ARROYO

Zia reviewed a Phase II Environmental Site Assessment completed by AMEC on November 21, 2002. Based on AMEC's sample results, the subsurface debris observed generally appear to be inert. There is no evidence from the previous Phase II ESA that hazardous substances or petroleum products, in excess of *de minimus* conditions, occur on the property. AMEC recommended that "all deleterious material be removed from the site prior to development or property transfer." These materials should be disposed of at an appropriate facility in accordance with applicable federal, state and local guidelines and no additional assessment activities at the site appear to be warranted. Zia agrees with the recommendations of the previous Phase II ESA.

3.12 Recreation

The subject area does not contain a BLM managed recreational area. Local residents walk their pets through the arroyos and unpaved two track roadways, and possibly bike, bird watch and/or partake in nature photography activities within the subject area. The closest recreational areas are Sierra Vista trail approximately 5.2 miles southeast, the Dripping Springs hiking trail approximately 7.0 miles southeast, south Doña Ana Multi-Use Trail approximately 5.26 miles north northwest, the Baylor Pass Trail approximately 6.34 miles north northeast, and the Tortugas Mountain Special Recreation Management Area approximately 3.0 miles southeast of the subject area. The CLC also has several managed trails located nearby such as the Triviz multi-use path approximately 1.5 miles southwest and the Sonoma Ranch walkway approximately 500 feet northwest.

The site suffers from unauthorized OHV use. User created routes and trails crisscross throughout the project area.

3.13 Visual Resources

Visual resources include natural and manmade physical features that give landscapes scenic quality and provide scenic views. Visual resources are interrelated with social and economic values, beliefs, and attitudes, lifestyle, quality of life, well-being, and place-based values, which all influence a viewer's perception of the scenic quality and importance of scenic resources. The BLM manages visual resources based on four distinct Class Objectives. According to the Mimbres Resource Management Plan (1993), the subject area is located within Class III visual resource classification:

Class III Objective. The objective of this class is to partially retain the existing character of the landscape. The level of change to the characteristic landscape should be moderate. Management activities may attract attention but should not dominate the view of the casual observer. Changes should repeat the basic elements found in the predominant natural features of the characteristic landscape.

3.14 Noise

The subject area is located on the East Mesa of Las Cruces, New Mexico. The East Mesa has been the fastest developing area of Las Cruces. Residential homes are continuously being built where Sonoma Ranch Boulevard is the main roadway to reach these neighborhoods. Sonoma Ranch Boulevard dissects the subject area on the southwest end of the parcel.

The noises encompassing the subject area include traffic from the nearby Sonoma Ranch Boulevard, illegal off-road vehicles and firearm shooting. Other noises include sounds from birds, coyotes, pets, and other residential noises from nearby neighborhoods.

3.15 Environmental Justice

In 1994, President Clinton signed Executive Order 12898 which mandates federal agencies to assess the environmental justice for the proposed action as part of its mission. The mission is to identify and address adverse health effects on minority and low-income communities due to the proposed action. Table 8 summarizes the population, ethnic distribution, and income of Doña Ana County, New Mexico in 2010 according to the U.S. Census Bureau (2013).

TABLE 8: U.S. CENSUS QUICKFACTS

People Quickfacts	Doña Ana County	New Mexico
Population (2012 estimate)	214,445	2,085,538
Population, percent change (April 1, 2010 to July 1, 2012)	2.5%	1.3%
Population (2010)	209,233	2,059,179
Race		
White alone, percent 2012	92.5%	83.2%
Black or African American alone, percent 2012	2.1%	2.4%
American Indian and Native Alaska Native alone, percent 2012	2.1%	10.2%
Asian alone, percent 2012	1.3%	1.6%
Native Hawaiian and Other Pacific Islander alone, percent 2012	0.2%	0.2%
Persons reporting two or more races, percent 2012	1.7%	2.4%
Persons of Hispanic or Latino, percent 2012	66.4%	47.0%
White persons not Hispanic, percent 2012	29.4%	39.8%

(U.S. Census Bureau 2013)

Though subject property is uninhabited desert land, the US EPA Environmental Justice Mapper identifies the percentage of minorities within and near the subject area as 40-100 percent (%) with a small section of the subject property and surrounding areas identified as containing 0-10% minority population (EPA 2014a). Additionally, approximately 10-20% of the population within the subject area and surrounding areas live below the poverty level (EPA 2014b).

3.16 Lands and Access

The subject land has been identified for disposal in the Mimbres RMP (1993).

3.16.1 Realty Activities

The lease would be issued subject to all valid existing rights. Patent to the Federal Lands within the lease area, if issued, shall be subject to all valid existing rights at the time of patent, including authorizations granted by the United States, under the terms and conditions in existence at the time of patent. Subject to limitations prescribed by law and regulations (43 CFR 2800), when a parcel is specifically considered for conveyance out of Federal ownership, all ROW holders in the subject parcel shall be formally notified

(certified mail) of the voluntary opportunity to convert a ROW, or the portion thereof, within the subject parcel to a perpetual term (Appendix J).

The following identifies the current ROWs granted on the parcel:

- Right-of-way NMNM 128691 for a transmission line granted to El Paso Electric Company, its successors or assigns, pursuant to the Act of October 21, 1976 (90 Stat. 2776; 43 U.S.C. 1761);
- Right-of-way NMNM 0 554552 for a transmission line granted to El Paso Electric Company, its successors or assigns, pursuant to the Act of October 21, 1976 (90 Stat. 2776; 43 U.S.C. 1761);
- Right-of-way NMNM 077649 for an overhead distribution line granted to El Paso Electric Company, its successors or assigns, pursuant to the Act of October 21, 1976 (90 Stat. 2776; 43 U.S.C. 1761);
- Right-of-way NMNM 083853 for an anchor granted to El Paso Electric Company, its successors or assigns, pursuant to the Act of October 21, 1976 (90 Stat. 2776; 43 U.S.C. 1761);
- Right-of-way NMNM 0 558896 for an overhead distribution line granted to El Paso Electric Company, its successors or assigns, pursuant to the Act of March 4, 1911 (36 Stat. 1253; 43 U.S.C. 961), as amended;
- Right-of-way NMNM 123637 for an underground distribution line granted to granted to El Paso Electric Company, its successors or assigns, pursuant to the Act of October 21, 1976 (90 Stat. 2776; 43 U.S.C. 1761);
- Right-of-way NMNM 093537 for a water transmission pipeline granted to the City of Las Cruces, its successors or assigns, pursuant to the Act of October 21, 1976 (90 Stat. 2776; 43 US.C. 1761);
- Right-of-way NMNM 094745 for a road and utility mains to include gas, sewer, and water lines granted to the City of Las Cruces, its successors or assigns, pursuant to the Act of October 21, 1976 (90 Stat. 2776; 43 US.C. 1761);
- Right-of-way NMNM 106151 for a road with a utility corridor granted to the City of Las Cruces, its successors or assigns, pursuant to the Act of October 21, 1976 (90 Stat. 2776; 43 US.C. 1761).

A ROW application (NMNM 129313) submitted by the City of Las Cruces is currently being processed for construction of Phase II of the 236 sewer interceptor adjacent to the North Fork Arroyo within the proposed R&PP subject area. The proposed sewer line would extend the service length of the existing sewer interceptor. This proposed ROW is not part of the proposed R&PP. If the ROW is issued, prior to patent issuance of the proposed R&PP, the holder of the ROW would be given the opportunity to amend the ROW for conversion to a new term, including perpetuity.

3.16.2 Utilities for Proposed R&PP

The utilities associated specifically with the proposed R&PP would be made part of the proposed R&PP and would not require separate ROWs. Infrastructure would include water, gas, sanitary sewer, and reclaimed water through the CLC Utilities Department. Infrastructure external to the CLC would consist of electricity, through El Paso Electric Company (EPE), and specific to the public safety facility, EPE would utilize their existing easements. Other utilities included are cable and telephone service.

3.16.3 Access

The 350-acre parcel of public land is situated east of the Mission Espada and Mission Santa Clara subdivisions and north of the South Fork subdivision. Access to the proposed subject area would be from Sonoma Ranch Boulevard at the southwest corner of the site and, in the future, from Sonora Springs Boulevard at the north end of the site.

4 ENVIRONMENTAL EFFECTS

4.1 Topography, Geology, and Soils

4.1.1 Proposed Action

Prior to construction commencing, Best Management Practices (BMPs) would be developed and finalized in conjunction with the completion of a Stormwater Pollution Prevention Plan for this proposed action. BMPs would be designed for each type of construction activity and tailored to reduce soil movement to the greatest extent possible. Final construction design will have positive impacts on the subject area such as grass from the parks will help stabilize soils; and planting of vegetation for parks and for ornamental purposes will help revitalize soils as well as increase soil stability. Construction of buildings, parking lots, roads, and trails will impact soils directly by the removal top soil.

4.1.2 No Action Alternative

Under the No Action alternative, construction would not occur and the subject area would remain in its current state.

4.2 Minerals

4.2.1 Proposed Action

The proposed action has the ability to impact the high potential geothermal minerals that are noted within the BLM Minerals Potential report for the subject property as a means of heating for the safety facilities proposed. The design of these facilities has not yet been determined; however the location of the safety complex has been determined. It is unknown if this may be an option that the CLC will use. Per the BLM report (2013), “the proposed R&PP development should not cause surface interference with geothermal development. In fact, geothermal development and the proposed R&PP development could be complimentary as geothermal could be used to heat the proposed fire and police stations.”

The property has the high potential for sand and gravel extraction which has occurred on the property in the past. However, per the BLM Minerals Potential report (2013), the demands for sand and gravel minerals can be met from other sources.

4.2.2 No Action Alternative

Under the No Action alternative, there will remain the potential for use of the geothermal and sand and gravel mineral potentials to be used by other future projects.

4.3 Vegetation

4.3.1 Proposed Action

The proposed action could potentially disturb the entire 346.59 acres of BLM lands. Vegetation would be temporarily disturbed during construction efforts, but are expected to return once construction has been completed.

Mitigation measures are needed to prevent the spread of African rue as well as reduce the spread of other noxious weeds within and in the vicinity of the subject area. These mitigation measures are noted in Section 2.2.1. If mitigation measures are implemented, the proposed project is unlikely to have an adverse effect.

4.3.2 No Action Alternative

Under the No Action alternative, construction would not occur and the subject area would remain in its current state.

4.4 Wildlife

4.4.1 Proposed Action

The proposed action could potentially disturb the entire 346.59 acres of BLM lands Wildlife would be temporarily disturbed during construction efforts, but are expected to return once construction has been completed.

Consultation with the NMDGF recommends mitigation measures during trenching operations for any wildlife that may occur in the area to further insure a lessened impact to wildlife (Appendix A). If mitigation measures are implemented, the proposed project is unlikely to adversely affect wildlife or wildlife habitats.

The subject area has a potential of impacting migratory birds if construction efforts take place during migratory bird breeding season, March 1 to September 30. Mitigation measures would be necessary to prevent impacts.

4.4.2 No Action Alternative

Under the No Action alternative, construction would not occur and the subject area would remain in its current state.

4.5 Special Status Species

4.5.1 Proposed Action

Impacts to any special status species, vegetation or wildlife, are not anticipated during construction efforts. However, two special status species, the Texas horned lizard and the burrowing owl, may require additional mitigation measures if they are identified during construction activities. Burrowing owls are known to inhabit arroyos within the CLC. The CLC is not planning on impacting either the North or

South Forks of the Las Cruces Arroyo. Mitigation measures are needed to prevent impacts to special status species and are noted in Section 5.2.

4.5.2 No Action Alternative

Under the No Action alternative, construction would not occur and the subject area would remain in its current state.

4.6 Cultural Resources

4.6.1 Proposed Action

Sites LA 78424, LA 145739, LA 75215, and LA 175966 were determined not eligible for inclusion in the NRHP. No further work is recommended for these sites. LA 175967 was determined eligible for inclusion in the NRHP and would require mitigation efforts prior to transfer of land from the BLM to the CLC. Mitigation efforts would be conducted at LA 175967. Proposed mitigation measures are discussed in further detail in Section 5.3.

The CLC is proposing to construct their facilities so that cultural resources sites would not be impacted.

4.6.2 No Action Alternative

Under the No Action alternative, construction would not occur and the proposed subject area would remain in its current state. Though, cultural resources would likely not be impacted by the No Action alternative, illegal dumping and off-road activities may pose a threat of looting or disturbance to the known cultural resources within the subject area.

4.7 Paleontology

4.7.1 Proposed Action

Under the Proposed Action, the subject area would be impacted; however, the potential of affecting any paleontological resources is minimal. According to Dr. Burris's paleontological report (2014, Appendix D), the potential of impacting paleontological resources is unlikely.

Development of the project area should proceed without the need for an on-site paleontology monitor. During excavation, vertebrate fossils may be uncovered, at which point excavation or disturbance in a 50 foot radius of the discovery should halt until the BLM-permitted paleontologist can examine the specimen to determine the appropriate next steps. The operator may then be allowed to continue excavation through the site, or will be given the choice of either (1) following the BLM-permitted paleontologist's instructions for stabilizing the fossil resource in place and avoiding further disturbance to the fossil resource, or (2) following the BLM-permitted paleontologist's instructions for mitigating impacts to the fossil resource prior to continuing construction through the project area, which may include halting excavation in the vicinity until the specimen can be safely collected by a BLM-permitted paleontologist.

However, if paleontological resources are uncovered during construction, mitigation measures should be implemented to prevent further impact.

4.7.2 No Action Alternative

Under the No Action alternative, the subject area would remain with the same paleontological classifications and would not be affected by this alternative.

4.8 Water Quality

4.8.1 Proposed Action

The proposed action would include the construction of roadways, trails, structures and associated utilities, parks and parking lots. These improvements may decrease filtration and alter in-channel and overland flow from the current condition and potentially increase runoff into other areas. Installation of vegetation and grasses for parks and ornamental use may encourage a positive impact to groundwater through refurbishment as well as help filter water coming from the reclamation plant. However, new construction would follow the CLC design standards which would address drainage issues which would keep the majority of the water run-off within the property limits and direct flow to areas where water would then percolate down into the groundwater. Negative impacts to groundwater would be of the additional need for water at the safety complex, and water fountains along the trails and the recreational areas. Construction would not impact the local arroyo system as well as in the preserved habitat section so surface water flowing through those arroyos or rain water hitting the preserved habitat would still be able to permeate down to the groundwater. Mitigation measures are required and would be designed in a SWPPP using BMPs for both surface and ground water to prevent adverse impacts.

4.8.2 No Action Alternative

Under the No Action alternative, construction would not occur on BLM land and the subject area would remain in its current state. Off-roading activities are used for illegal dumping, recreation, firearm and archery ranges, and other illegal activities. These activities by use of access by these vehicles would pose a threat to the soil erosion by the continuous use of moving in and out of the arroyos which can affect the embankments. This disturbance could alter natural flow path and stream dynamics, increase soil erosion into the arroyos and allow for high waters to flow outside the arroyos which may cause additional disturbances and erosion to soils. Metals and trash and vehicle fluid leaks left behind by these activities may have an impact to water quality within the subject area.

4.9 Air Quality

4.9.1 Proposed Action

The impact of the proposed action on air quality would be an increased production of airborne particulates due to surface disturbance associated with the proposed project during construction. However, the final completion of all CLC plans would reduce airborne particulates by constructing buildings, parks, trails, and managing the rest of the land.

Airborne dust mobilization would be more likely during the spring and early summer months when high winds favor the mobilization of particulate matter. Increased volumes of airborne dust could affect visibility and degrade local air quality. Equipment used during the proposed project could also contribute to air quality degradation through emissions from internal combustion engines. This affect would vary

with the extent and intensity of these activities. Mitigation measures would be conducted to help control these fugitive dust impacts.

4.9.2 No Action Alternative

Under the No Action alternative, construction would not occur and the subject area would remain in its current state. The current air quality would continue to be an issue in the subject area due to the heavy disturbance areas from the retired gravel pit and the illegal off-road activities.

4.10 Floodplain

4.10.1 Proposed Action

The North and South Forks of the Las Cruces Arroyo would be preserved with the implementation of the CLC Arroyo Preservation Plan. No structures would be built within the mapped flood zones.

4.10.2 No Action Alternative

Under the No Action alternative, construction would not occur and the subject area would remain in its current state.

4.11 Hazardous and Solid Wastes

4.11.1 Proposed Action

No significant adverse effects from hazardous materials and solid waste are anticipated as a result of the Proposed Action.

4.11.2 No Action Alternative

Under the No Action alternative, the request for a lease to patent agreement would not be granted by the BLM for the proposed property. The CLC would not be able to construct the safety complex and recreational facility at the location. Conditions at the proposed subject area would remain the same.

4.12 Recreation

4.12.1 Proposed Action

The proposed action would positively impact recreation. The proposed action would create several trail networks, open space/native habitat areas, sports fields, and a non-motorized mountain bicycle trail area. The open space/native habitat areas would serve as buffers to screen the recreational area from neighboring residential areas. These recreational facilities would be open to use by the public for recreational purposes. Maintenance would be performed regularly to ensure the facilities are safe and remain suitable for their purpose.

4.12.2 No Action Alternative

Under the No Action alternative, construction would not occur and the subject area would remain in its current state. The property would remain as is.

4.13 Visual Resources

4.13.1 Proposed Action

Visual impacts would be partially impacted by the proposed buildings for the police and fire stations. Additionally, lights from the parks and ball fields would impact residents. All buildings would be one story, which will not dominate the landscape. More than half of the 346 acres is proposed to be open space or a habitat preservation area. These areas would preserve the visual aspect of the local residents and be a positive impact.

4.13.2 No Action Alternative

Under the No Action alternative, construction would not occur and the subject area would remain in its current state. The property would remain as is.

4.14 Noise

4.14.1 Proposed Action

The proposed action would increase the noise in the area during construction times as well as when the recreational opportunities are in operation. The construction noise would cease upon completion and would not continue to impact local residents. Noise from the recreational opportunities depends on the popularity of the trails, ball fields, parks, and non-motorized mountain bicycle areas. The installation of trees and noise barriers would be conducted to reduce noise from the recreational areas.

The area would also have an increase in vehicle traffic not only from the recreational site use, but also from the use of the police and fire stations. Sirens from these safety complexes may also be heard when either department is responding to an emergency. At times, either department may not sound their siren out of courtesy for residents; however, in an emergency, these departments can choose to sound their sirens.

4.14.2 No Action Alternative

Under the No Action alternative, the subject area would continue to have the same noises as it currently does. Sonoma Ranch Boulevard still dissects the subject area and traffic noises would still be heard.

4.15 Environmental Justice

4.15.1 Proposed Action

The proposed action is designed to provide additional services to the residents of the East Mesa. Safety and recreational activities would increase and be a positive impact to the community. Therefore, the proposed action would not adversely impact minority and low-income individuals within the subject area or surrounding area.

4.15.2 No Action Alternative

Under the No Action alternative, construction would not occur and the subject area would remain in its current state. Environmental justice issues would not exist under the No Action alternative.

4.16 Lands and Access

4.16.1 Proposed Action

At the time of conveyance, the existing ROWs located within the subject parcel would be transferred to a new landowner. The holders of those ROWs would be notified by the BLM that land ownership has been transferred. The disposal would be subject to all valid existing rights of record.

4.16.2 No Action Alternative

Under the No Action alternative, construction would not occur and the subject area would remain in its current state.

4.17 Cumulative Impacts

Residential and commercial development off Sonoma Ranch Boulevard within the east mesa of Las Cruces has experienced significant growth over the past 20 years. This has had, and will continue to have, an effect on the vistas to the east of the subject property. Additionally the BLM will continue to implement management actions within the new Organ Mountain – Desert Peaks National Monument.

Wildlife

Cumulative impacts on wildlife populations include the disturbance from machinery during construction and the increase of motor vehicle use in the area. Management and use of the new national monument would continue to provide suitable habitat for wildlife.

Water

Cumulative impacts would mean the increase development within the surrounding areas would include construction of commercial and residential properties, roadways, trails, structures and associated utilities. These improvements would decrease runoff into other areas. New construction would follow the CLC design standards which would address drainage issues, and keep the majority of the water run-off within each parcel limits and direct flow into areas where water would then percolate down into the groundwater. Increased population would also cause an increase in the need for potable water to the area. Water conservation measures, would need to be continued and/or implemented to ensure a sustained water supply. By the increase of use in the neighboring area, the CLC reclamation plant will produce more reclaimed water which can offset some of the water demands required to maintain vegetation in the area.

Floodplains

Cumulative impacts to the floodplains appear minimal, as the CLC Arroyo Preservation Plan and buildings standards would prevent structures from being constructed within the floodplains of the North Fork and South Fork Arroyos.

5 INDIVIDUALS, ORGANIZATIONS, TRIBES OR AGENCIES CONSULTED

Agency consultation and coordination is summarized in Table 9. Copies of agency responses are included in Appendix A.

TABLE 9: INDIVIDUALS / ORGANIZATIONS CONSULTED

Individual / Organization	Title/ Location	Response
Jim Hyatt	Resource Advisory Council, LC District	No response received
Paul Turner	Resource Advisory Council, LC District	No response received
Michael Quintana	Resource Advisory Council, LC District	No response received
Howard Bartoo	Resource Advisory Council, LC District	No response received
Anthony Popp	Resource Advisory Council, LC District	No response received
William Boykin	Resource Advisory Council, LC District	No response received
Timothy Eastep	Resource Advisory Council, LC District	No response received
Gregg Magee	Resource Advisory Council, LC District	No response received
Norman Walsh	Resource Advisory Council, LC District	No response received
Billy Garrett	Resource Advisory Council, LC District	No response received
Honorable Tom Udall	US Senator	No response received
Honorable Martin Heinrich	US Senator	No response received
Honorable Steve Pearce	US Representative	No response received
Honorable Lee Cotter	NM Senator District 36	No response received
Honorable Bill Soules	NM Senator District 37	No response received
Honorable Mary K Papen	NM Senator District 38	No response received
Phillip Archuleta	NM Representative, District 36	No response received
Nate Cote	NM Representative, District 53	No response received
Doreen Gallegos	NM Representative, District 52	No response received
Mary Helen Garcia	NM Representative, District 34	No response received
Rodolpho Martinez	NM Representative, District 39	No response received
Bill McCamley	NM Representative, District 33	No response received
Terry McMillian	NM Representative, District 37	No response received
Jeff Steinborn	NM Representative, District 35	No response received
Commissioner	New Mexico State Land Office	No response received
Julia Brown	County Manager, Doña Ana County	No response received
El Paso Electric Co., Las Cruces, NM	NMNM 077649, NMNM 083853, NMNM 123637, NMNM 0 558896	No response received
El Paso Electric Co., El Paso, TX	NMNM 128691, NMNM 0554552	No response received
City of Las Cruces	NMNM 093537, NMNM 094745, NMNM 106151, NMNM 129313 (pending)	No response received
Ken Miyagishima	Mayor, CLC	No response received
Robert Garza	City Manager, CLC	No response received
Sharon Thomas	City Counselor, District 6, CLC	No response received

Letters were also mailed to nearby residents within a one-mile radius. Their names and addresses are not included within this report for privacy. Additionally, the public had the opportunity to contact the LCDO and provide input on this project. The project was listed on the New Mexico BLM Website NEPA Log: http://www.blm.gov/nm/st/en/prog/planning/nepa_logs.html.

6 LIST OR PREPARERS

6.1 Zia Engineering & Environmental Consultants, LLC

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6.3 Bureau of Land Management

Frances Martinez, Realty Specialist

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Appendix A

Evidence of Coordination

Appendix B

Public Participation

Appendix C

Biological Report

Appendix D

Paleontological Report

Appendix E
BLM Mineral Report
Mineral Potential of the Las Cruces
Safety Complex

Appendix F

NMDA Noxious Weed List

Appendix G

New Mexico Department of Game and Fish Guidelines

Appendix H

Development Plan

Management Plan

Appendix I

R&PP Stipulations

R&PP Terms and Conditions

Appendix J

Conversion of Rights-of-Way