

**STATE OF NEW MEXICO
SECRETARY OF THE DEPARTMENT OF ENVIRONMENT**

**IN THE MATTER OF THE
APPLICATION OF THE
SANDOVAL COUNTY PUBLIC
WORKS DEPARTMENT FOR A
SOLID WASTE FACILITY PERMIT
FOR THE SANDOVAL COUNTY
LANDFILL**

**APPLICATION FOR PERMIT RENEWAL AND MODIFICATION
SANDOVAL COUNTY LANDFILL**

APRIL 2015 (UPDATED FEBRUARY 2016)

**VOLUME IV:
SITING AND LAND USE**

Prepared For:

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Submitted To:

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Solid Waste Bureau - Permit Section
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Prepared By:

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**APPLICATION FOR PERMIT RENEWAL AND MODIFICATION
SANDOVAL COUNTY LANDFILL**

APRIL 2015 (UPDATED FEBRUARY 2016)

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SANDOVAL COUNTY LANDFILL**

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SANDOVAL COUNTY LANDFILL**

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SANDOVAL COUNTY LANDFILL**

**VOLUME IV: SITING AND LAND USE
SECTION 1: SITING CRITERIA**

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**APPLICATION FOR PERMIT RENEWAL AND MODIFICATION
SANDOVAL COUNTY LANDFILL**

**VOLUME IV: SITING AND LAND USE
SECTION 1: SITING CRITERIA**

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**APPLICATION FOR PERMIT RENEWAL AND MODIFICATION
SANDOVAL COUNTY LANDFILL**

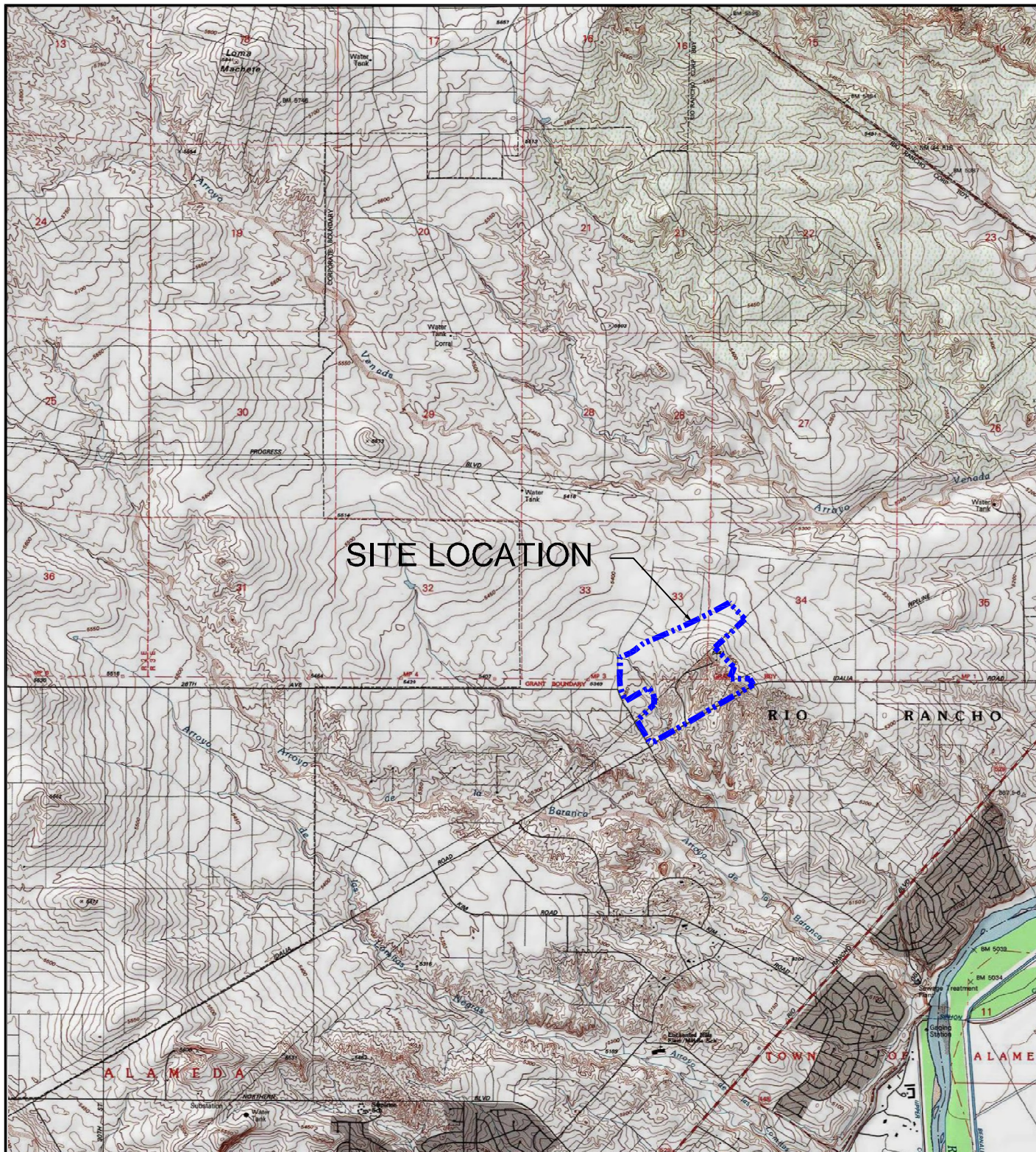
**VOLUME IV: SITING AND LAND USE
SECTION 1: SITING CRITERIA**

1.0 INTRODUCTION

The Sandoval County Landfill (SCLF) is an existing solid waste facility operating in compliance with its current Permits, SWM-050304 and SWM-050304 (SP), and the New Mexico Environment Department (NMED) Solid Waste Rules (20.9.2-2.9.10 NMAC). SCLF is located at 2708 Iris Road NE in Rio Rancho, New Mexico (NM), and occupies 178.3 acres \pm (**Figure IV.1.1**). SCLF is publicly owned and operated by the County of Sandoval (“the County”), and is currently permitted to accept municipal solid waste (MSW), including construction and demolition debris (C&D) and tires, and two special wastes: petroleum contaminated soils (PCS) and sludge.

1.1 Site History

SCLF has been in operation since approximately 1970. In 1983, SCLF was registered as a landfill with NMED. The 114 acre \pm site was first permitted (SWM-050304) by Roy F. Weston, Inc. (Weston) to NMED standards (i.e., 20 NMAC 9.1) in 1998. The SCLF Permit was modified and renewed by Gordon Environmental, Inc. (GEI) as approved by NMED in 2005 [SWM-050304 and SWM-050304 (SP)]. The 2005 Modification included a 63 acre \pm lateral expansion of the facility boundary to the north, which resulted in a 178.3 acre \pm facility containing a 112.5 acre \pm disposal area. In addition to the expansion, the 2005 Permit included the addition of in-vessel composting services to divert organic waste from incoming waste streams for beneficial uses. The County is currently seeking to renew and modify the SCLF Permit compliant with the current Solid Waste Rules (i.e., 20.9.2-20.9.10 NMAC) to include an additional lateral and vertical expansion of the solid waste disposal boundary to include a new Unit IV disposal area which will overlap Units I, II, and III and include a portion of the former Public Service Company of New Mexico (PNM) utilities easement. Once approved, the modification will result in a 122.5-acre \pm disposal area (i.e., a 10-acre expansion), however there will be no changes to the existing 178.3-acre \pm solid waste facility boundary.



LEGEND

--- SITE BOUNDARY

NOTES:

1. GEOGRAPHIC COORDINATES FOR THE CENTER OF THE SITE:
35.3092°N, 106.6198°W.
2. MAP REFERENCES:
MAP BASE FROM USA TOPO MAPS, 1:24000
USA TOPOGRAPHIC SERVICES, TOPOI MAP
3. SITE BOUNDARY FROM THE 2014 VACATION PLAT 093013
RRE BOOK 25 PAGE 65 SANDOVAL COUNTY LANDFILL

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SITE LOCATION MAP

SANDOVAL COUNTY LANDFILL
RIO RANCHO, NEW MEXICO



Gordon Environmental, Inc.

Consulting Engineers

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Fax: 505-867-6991

DATE: 03/24/2015

CAD: SITE LOC MAP.dwg

PROJECT #: 211.00.01

DRAWN BY: DMI

REVIEWED BY: DRT

FIGURE IV.1.1

APPROVED BY: IKG

gel@gordonenvironmental.com

The siting compliance of the original site was demonstrated in the NMED-approved Application for Permit (Roy F. Weston, Inc., (Weston) 1998). The subsequent Permit Renewal and Modification (GEI 2005) included an additional acreage for a total solid waste facility boundary encompassing $178.3 \pm$ acres, and updated and confirmed the siting characteristics in accordance with the Solid Waste Regulations (i.e., Section 302.A of 20 NMAC 9.1) The NMED-approved 2005 siting documentation is provided as **Attachment IV.1.A**.

1.2 Purpose

This **Volume IV.1** provides updated compliance demonstrations for each of the siting criteria listed in 20.9.4.9 NMAC (08/2007). Data previously provided and approved for the previous SCLF Permits are summarized and affirmed in this Application. In addition, this Application for Permit Renewal and Modification provides updates which address changes in site conditions and regulatory requirements (e.g. seismic impact zones) since the previous siting compliance demonstrations. Responses to each of the Siting Criteria are also summarized in **Volume I.4**. Additional site characterization documentation is provided in **Section 2** of this **Volume** (Land Use), which includes the new “Vulnerable Area Assessment” conducted in compliance with 20.9.3.8.D NMAC (**Attachment IV.2.B**).

1.3 Siting Compliance

The first public notice for the SCLF facility was issued in association with the Permit Application prepared by Weston, on or about 07/03/1996 (i.e., based on Notice of Application letters). On the date of the first public notice, per 20.9.4.9.A NMAC, no portion of the proposed SCLF disposal area was located in conflict with the current siting criteria, as approved by NMED in the 1998 Permit (Weston), and also approved in 2005 Permit (GEI). For the current Application for Permit Modification and Renewal, SCLF is not proposing a lateral expansion of the solid waste facility boundary. Therefore, new field studies (e.g., biology, cultural resources, geology, etc.) are not required as part of this Application. General siting updates including current siting maps, and review of current literature for water wells, seismic zones, flood zones, etc.; and the demographic documentation as provided in the Vulnerable Area Assessment (VAA; **Volume IV.2**).

2.0 MAXIMUM SIZE

20.9.4.8 NMAC states that:

“The Secretary shall not issue a permit for any solid waste facility larger than five hundred acres.”

The approximate geographic coordinates for the center of the SCLF site are a: Latitude 35.307°N and Longitude 106.622°W. The SCLF “solid waste facility” (20.9.2.7.S(11) NMAC) footprint encompasses approximately 178.3 acres ± of land located within portions of the Sections 33 and 34, Township 13 North, Range 3 East of the New Mexico Prime Meridian, Sandoval County, NM as shown on **Figure IV.1.1**. The SCLF “solid waste disposal area” (20.9.2.7.S(10) NMAC) consumes approximately 122.5 acres ± of the 178.3 acre ± solid waste facility footprint.

3.0 FLOODPLAINS, WETLANDS AND WATERCOURSES

20.9.4.9.A(1) NMAC states that:

“no municipal, construction and demolition, or special waste landfill or monofill shall be located where, on the date of the first public notice as required in 20.9.3 NMAC, any portion of the proposed disposal area is in a floodplain, within 500 feet of a wetlands, or within 200 feet of a watercourse.”

3.1 Floodplains

A floodplain is defined in 20.9.2.7.F(2) NMAC as:

“the lowland and relatively flat areas adjoining inland and coastal water that are inundated by the 100 year flood. The 100 year flood has a one percent chance of recurring in any given year or a flood or a flood of magnitude equaled or exceeded once in 100 years on the average over a significantly long period.”

The applicable portion of the most current Federal Emergency Management Agency (FEMA) Flood Zone Map for Sandoval County, NM is provided as **Figure IV.1.2**. The FEMA map indicates that there are no flood hazards within or immediately adjacent to the site. The closest flood zone is located approximately 2,600 feet (ft) south of the SCLF solid waste disposal boundary in the Arroyo de la Baranca. This flood area is designated “Zone A” by FEMA: areas with a 1% annual chance of flooding over the life of a 30-year mortgage.



LEGEND

- SITE BOUNDARY
- DISPOSAL AREA



AREA WITH A 1% ANNUAL CHANCE OF FLOODING OVER THE LIFE OF A 30-YEAR MORTGAGE. BECAUSE DETAILED ANALYSES ARE NOT PERFORMED FOR SUCH AREAS; NO DEPTHS OR BASE FLOOD ELEVATIONS ARE SHOWN WITHIN THESE ZONES.

NOTES:

1. GEOGRAPHIC COORDINATES FOR THE CENTER OF THE SITE:
35.3092°N, 106.6198°W.
2. IMAGE REFERENCE:
2011 NAIP AERIAL MOSAIC OF SANDOVAL COUNTY.
3. VECTOR REFERENCE:
FEMA NFHL DATABASE 35043 SANDOVAL COUNTY, 11/05/2014.
4. SITE BOUNDARY FROM THE 2014 VACATION PLAT 033013
RRE BOOK 25 PAGE 65 SANDOVAL COUNTY LANDFILL.

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FEMA FLOOD ZONE MAP

SANDOVAL COUNTY LANDFILL
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| DATE: 03/24/2015 | CAD: FEMA.dwg | PROJECT #: 211.00.01 |
| DRAWN BY: DMI | REVIEWED BY: GEI | |
| APPROVED BY: IKG | gei@gordonenvironmental.com | FIGURE IV.1.2 |

3.2 Wetlands

Wetlands are defined in 20.9.2.7.W(5) NMAC as:

“those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions.”

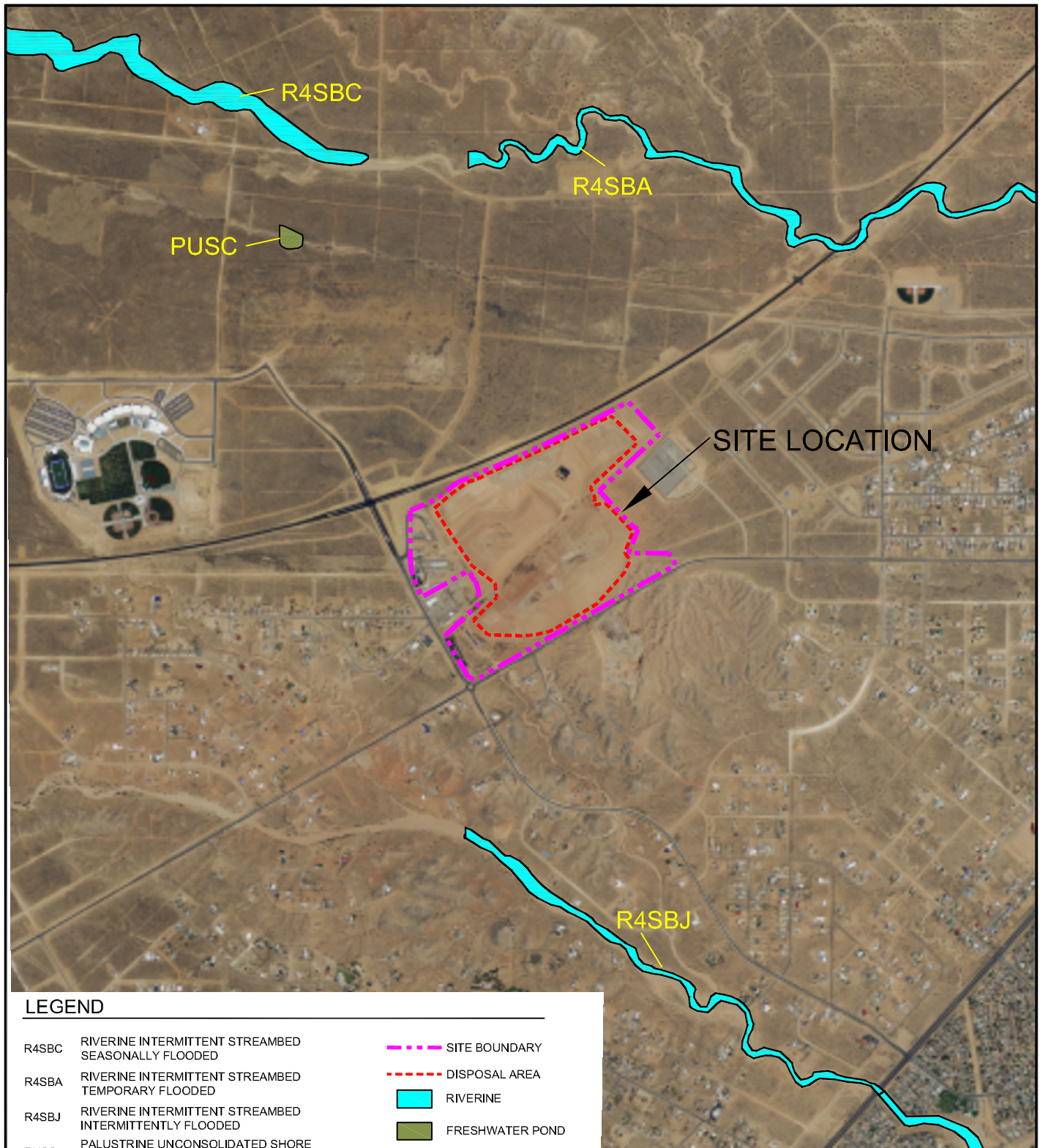
A review of the United States Fish & Wildlife Service National Wetlands Inventory (NWI) Map for Rio Rancho, NM and field observations indicate that there are no wetlands within 500 feet of the solid waste disposal boundary. As shown on **Figure IV.1.3**, the closest NWI-designated wetland is located approximately 2,600 ft to the south of the SCLF solid waste disposal boundary in the Arroyo de la Baranca. NWI designates this wetland as “R4SBJ”: *“riverine intermittent stream bed, intermittently flooded”*.

3.3 Watercourses

Watercourse is defined by 20.9.2.7.W(2) NMAC as:

“any river, creek, arroyo, canyon, draw, or wash, or any other channel having definite banks and beds, with visible evidence of continuous or intermittent flow of water.”

SCLF is located greater than 200 ft from the nearest watercourse, as depicted on the United States Geological Survey (USGS) Quadrangle Map provided in **Figure IV.1.1**. As described in the NMED-approved 2005 Siting Document (**Attachment IV.1.A**), GEI coordinated with the Army Corps of Engineers (ACOE) to evaluate a drainage feature that originated at the northwest corner of the 2005 “expansion area”, which received off-site run-off from an upgradient area measuring less than 42 acres. On 10/6/2003, the Regulatory Project Manager from the Albuquerque District of ACOE visited the site to examine this and other drainage features. It was determined that these units had perennial shrubs growing in the flow zone, and that they lacked defined channel beds and ordinary high water marks. Based on these observations, it was determined that these features are not “Waters of the United States”, and thus not regulated under the provisions of Section 404 of the Clean Water Act. A copy of the ACOE letter report is included in **Attachment IV.1.A**.



LEGEND

| | | |
|-------|---|-------------------|
| R4SBC | RIVERINE INTERMITTENT STREAMBED SEASONALLY FLOODED | --- SITE BOUNDARY |
| R4SBA | RIVERINE INTERMITTENT STREAMBED TEMPORARY FLOODED | --- DISPOSAL AREA |
| R4SBJ | RIVERINE INTERMITTENT STREAMBED INTERMITTENTLY FLOODED | ■ RIVERINE |
| PUSC | PALUSTRINE UNCONSOLIDATED SHORE SEASONALLY FLOODED | ■ FRESHWATER POND |

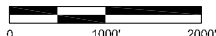
NOTES:

1. GEOGRAPHIC COORDINATES FOR THE CENTER OF THE SITE:
35.3092°N, 106.6198°W.
2. IMAGE REFERENCE:
2011 NAIP AERIAL MOSAIC OF SANDOVAL COUNTY.
3. VECTOR REFERENCE:
US FISH AND WILDLIFE SERVICE, NATIONAL WETLANDS INVENTORY
DATA 2014.
4. SITE BOUNDARY FROM THE 2014 VACATION PLAT 093013
RRE BOOK 25 PAGE 65 SANDOVAL COUNTY LANDFILL

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WETLANDS LOCATION MAP

SANDOVAL COUNTY LANDFILL
RIO RANCHO, NEW MEXICO



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CAD: WETLANDS.dwg

PROJECT #: 211.00.01

DRAWN BY: DMI

REVIEWED BY: DRT

APPROVED BY: IKG

gel@gordonenvironmental.com

FIGURE IV.1.3

4.0 DEPTH TO WATER TABLE

20.9.4.9.A(2) NMAC states that “no municipal, construction and demolition, or special waste landfill or monofill shall be located where, on the date of the first public notice as required in 20.9.3 NMAC, any portion of the proposed disposal area is where the top of the uppermost aquifer will be closer than 100 feet to the bottom of the fill, or for construction and demolition landfills that do not accept more than 25 tons per day annual average, where the top of the uppermost aquifer will be closer than 50 feet to the bottom of the fill.”

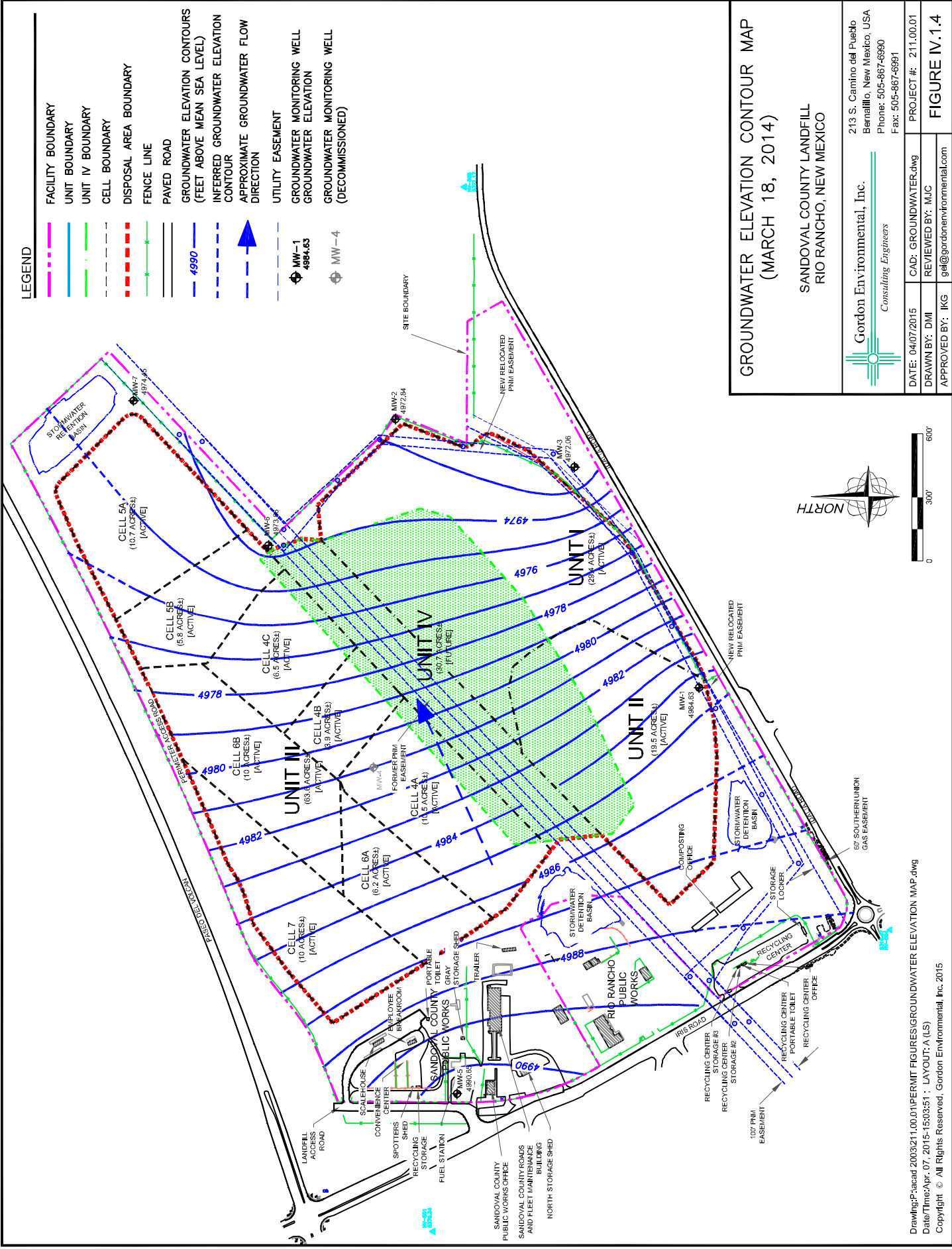
**20.9.2.7.W(3) NMAC defines “water table” as:
“that surface in unconfined ground water at which the pressure is atmospheric; defined by the levels at which water stands in wells that penetrate the water just far enough to hold standing water.”**

The depth to the seasonal high water table at the SCLF site property ranges from approximately 337 to 447 ft below ground surface (bgs) based on over 15 years of reliable site-specific groundwater monitoring. These depths are based on current (2014) water level measurements from six monitoring wells at the site. A water level contour map is provided as **Figure IV.1.4** which identifies the most recent (2014) groundwater elevations, and the surface elevations at each monitoring well, demonstrating that the depth to water exceeds 300 ft bgs and is not closer than 100 ft to the bottom of the fill.

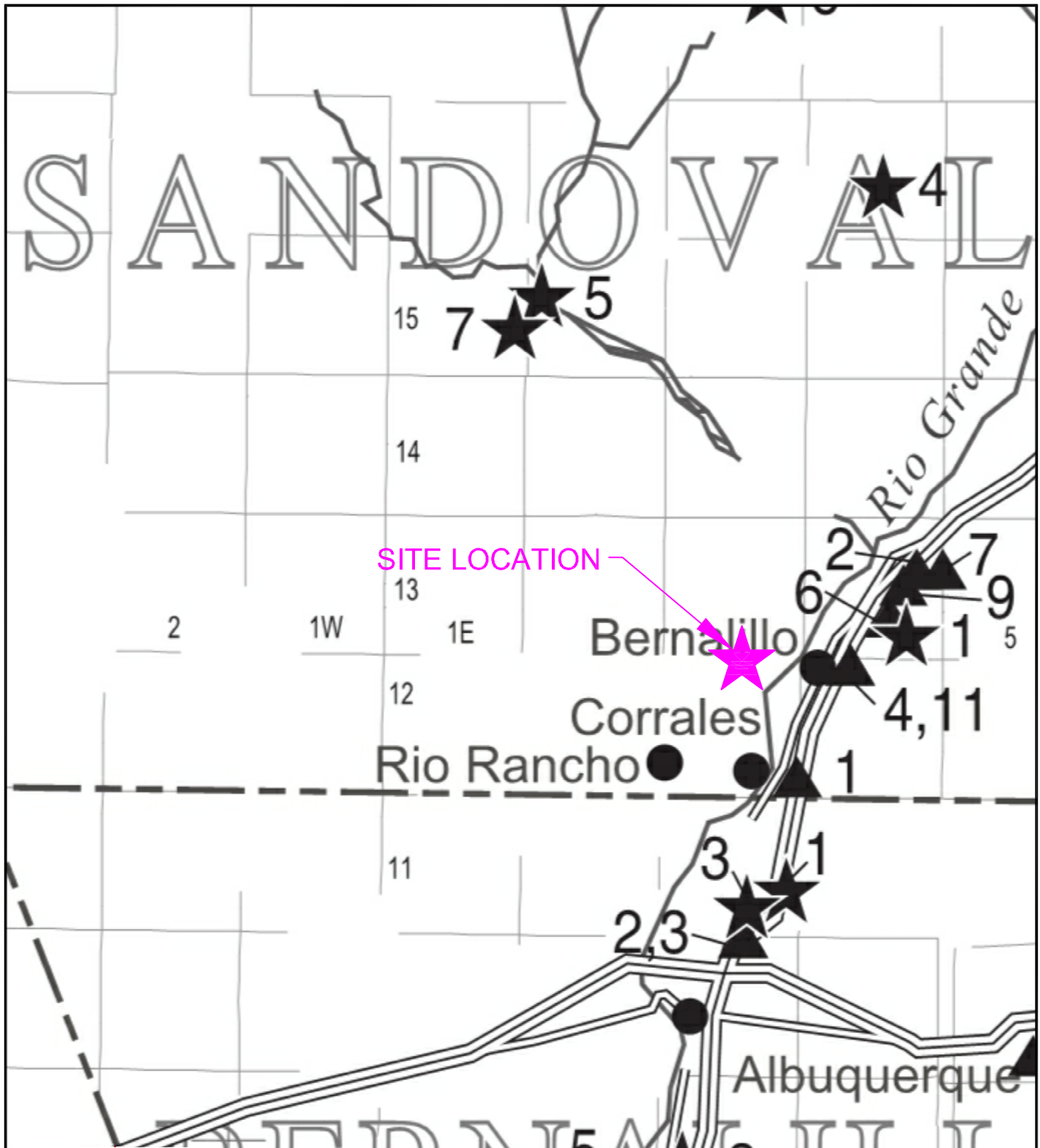
5.0 SUBSURFACE MINES

20.6.4.9.A(3) NMAC states that “no municipal, construction and demolition, or special waste landfill or monofill shall be located where, on the date of the first public notice as required in 20.9.3 NMAC, any portion of the proposed disposal area is where new, abandoned, or exploration subsurface mines registered with the New Mexico department of energy, minerals and natural resources may pose a risk of subsidence or instability.”

Subsurface mines are not present at or near the SCLF site. The *Mines, Mills & Quarries in New Mexico* map (**Figure IV.1.5**) provided by the NM Energy, Minerals, and Natural Resources Department (EMNRD) indicates that the closest surface mining site is a sand and gravel operation approximately 4 miles southeast of the landfill site. Correspondence from EMNRD included in **Attachment IV.1.A** confirms that no known current or past subsurface mining operations exist in the vicinity of the proposed landfill.



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LEGEND

- ★ SITE LOCATION
- ★ INDUSTRIAL MINERALS MINING AND MILLING
- ▲ AGGREGATE AND STONE MINING



NOMINAL SCALE



MAP REFERENCE:
MINES, MILLS AND QUARRIES IN NEW MEXICO
SPRING 2001; NEW MEXICO BUREAU OF GEOLOGY AND MINERAL RESOURCES
NEW MEXICO INSTITUTE OF MINING AND TECHNOLOGY SOCORRO, NEW MEXICO
Drawing: P:\acad 2003\211.00.01\PERMIT FIGURES\MINES AND MILLS.dwg
Date/Time: Apr. 07, 2015-06:35:21; LAYOUT: A (P)
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MINES MILLS AND QUARRIES MAP

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|------------------|-----------------------------|----------------------|
| DATE: 04/07/2015 | CAD: MINES AND MILLS.dwg | PROJECT #: 211.00.01 |
| DRAWN BY: DMI | REVIEWED BY: DRT | |
| APPROVED BY: IKG | gel@gordonenvironmental.com | FIGURE IV.1.5 |

6.0 HOLOCENE FAULTS

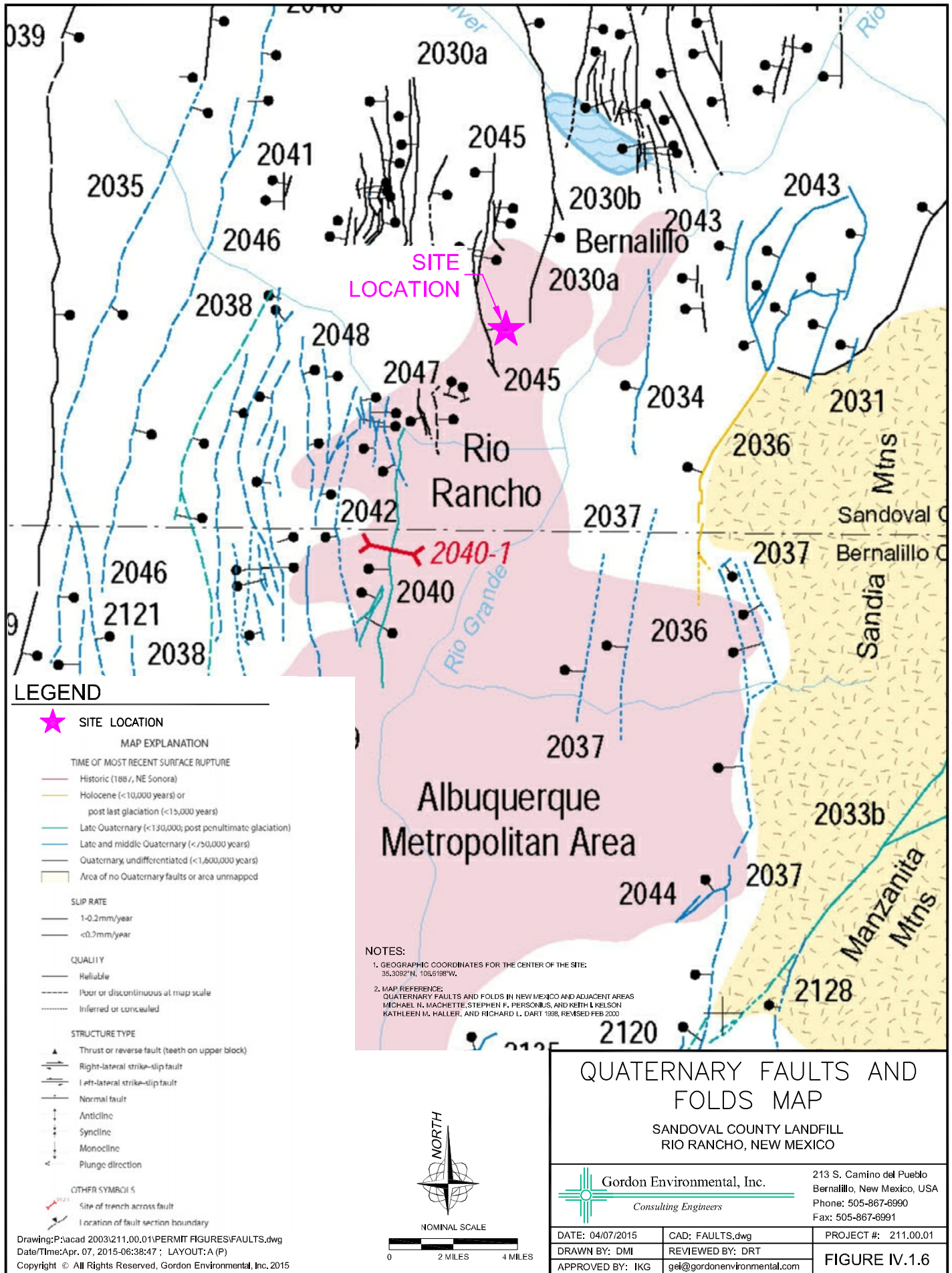
20.9.4.9.A(4) NMAC states that “no municipal, construction and demolition, or special waste landfill or monofill shall be located where, on the date of the first public notice as required in 20.9.3 NMAC, any portion of the proposed disposal area is “within 200 feet of a fault that has had a displacement within Holocene time (i.e., the past 11,000 years), unless the owner or operator demonstrates the secretary that an alternative setback of less than 200 feet will prevent damage to the structural integrity of the facility and will be protective of public health, welfare and the environment.”

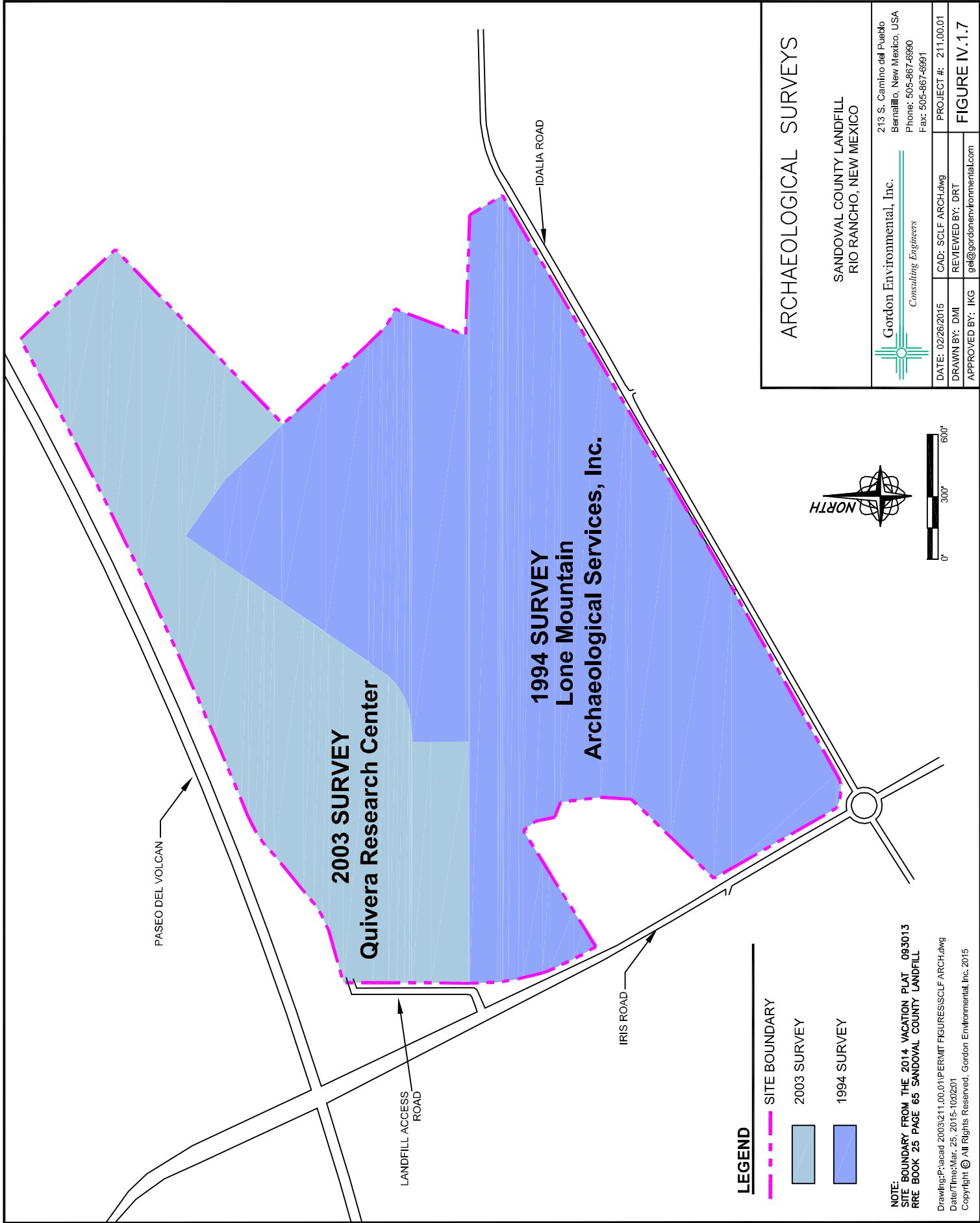
As shown on the applicable portion of the *Quaternary Faults and Folds in New Mexico* map provided by the United States Geological Survey (USGS) (**Figure IV.1.6**), SCLF is not located within 200 ft of a fault that has had a displacement within Holocene time (i.e., the last 11,000 years). The closest fault that has seen displacement within Holocene time is located approximately 7.5 miles east of SCLF.

7.0 ARCHAEOLOGICAL SURVEYS

20.9.4.9.A(5) NMAC states that “no municipal, construction and demolition, or special waste landfill or monofill shall be located where, on the date of the first public notice as required in 20.9.3 NMAC, any portion of the proposed disposal area is within historically or archaeologically significant sites, unless in compliance with the Cultural Properties Act, NMSA 1978, Sections 18-6-1 to 18-6-23 and the Prehistoric and Historic Sites Preservation Act, NMSA 1978, Sections 18-8-1 to 18-8-8.”

Two cultural resources surveys have been conducted for SCLF, encompassing the entire 178.3-acre ± site, and SCLF is not located within an historically or archaeologically significant area. As identified in **Figure IV.1.7**, the first survey was conducted by Lone Mountain Archaeological Services, Inc. (LMAS) in 1994 on 124 acres ± in conjunction with the original Permit (Weston, 1998). LMAS identified seven (7) isolated objects and twelve (12) archaeological sites. Nine (9) of the archaeological sites were recommended as eligible to the National Register of Historic Places. The State Historic Preservation Office (SHPO) granted clearance for the site in 1995 as documented in **Attachment IV.1.A**, provided that required that additional testing and data recovery be performed and reported for ten (10) of the 12 identified sites. LMAS conducted an extensive excavation and data recovery program that is documented in *"Excavations at Lru-Kish Kachreu and Other Sites at the Sandoval County Landfill"* (1997).





ARCHAEOLOGICAL SURVEYS

SANDOVAL COUNTY LANDFILL
RIO RANCHO, NEW MEXICO



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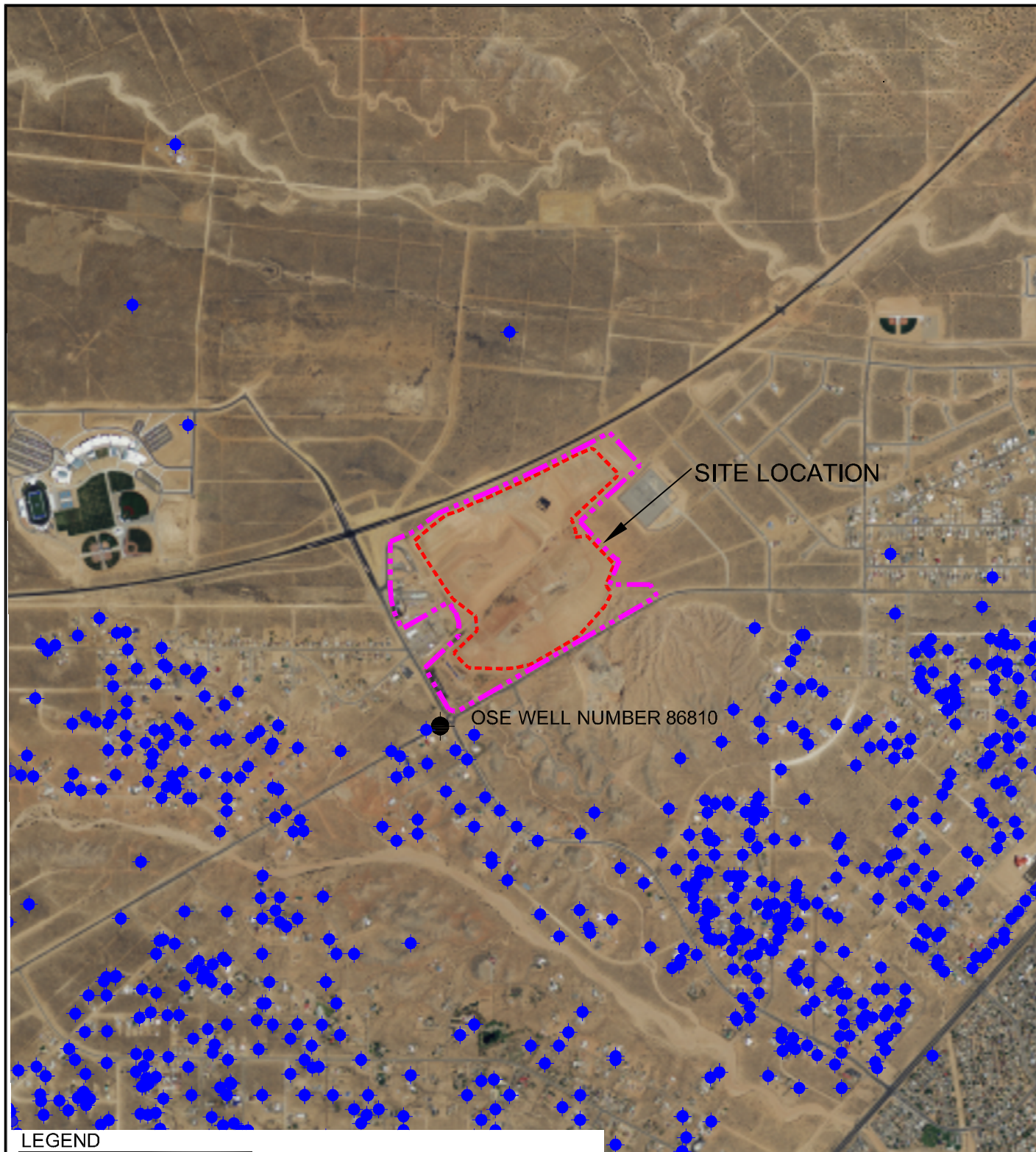
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| DATE: 02/26/2015 | CAD: SCLE ARCH.dwg | PROJECT #: 211.00.01 |
| DRAWN BY: DMI | REVIEWED BY: DRT | FIGURE IV.1.7 |
| APPROVED BY: IKG | gael@gordonenvironmental.com | |

The Quivera Research Center (Quivera) conducted an archaeological survey for the additional 63 acres ± 2005 expansion project in October of 2003. Quivera's reports is included in **Attachment IV.1.A**. One (1) isolated object and no archaeological sites were encountered during this survey. A finding of "No Historical Properties Affected" was issued by SHPO for this survey (**Attachment IV.1.A**), and no further action was required for the survey area. Excavation and development of the existing landfill footprint has revealed no additional artifacts.

8.0 DISTANCE TO WATER WELLS

20.9.4.9.A(6) NMAC and 20.9.4.9.A(7) NMAC state that “no municipal, construction and demolition, or special waste landfill or monofill shall be located where, on the date of the first public notice as required in 20.9.3 NMAC, any portion of the proposed disposal area is within 1000 feet of a public water supply well of a private drinking water supply well with a sustainable yield of 100 gallons per minute of more, or within 250 feet of a public water supply or private well with a maximum sustainable yield of less than 100 gallons per minute.”

The New Mexico Water Rights Reporting System (NMWRRS) database, maintained by the NM Office of the State Engineer (NMOSE) was reviewed to identify water supply wells in the vicinity of SCLF. A current Well Location Map, based on NMOSE data, is provided as **Figure IV.1.8**. There are wells identified within the SCLF vicinity, and the closest well, RG 86810, is located approximately 927 ft southwest of the solid waste disposal boundary (**Figure IV.1.8**). Well RG 86810 was installed in 2006 to a depth of 498 ft bgs; and depth to water was measured at 318 ft bgs. At an estimated yield of 30 gallons per minute (gpm), the well is likely not viable for domestic drinking water purposes; and no information is provided by NMWRRS regarding the use of the well. As a result of these findings, the SCLF solid waste disposal boundary is not located within 1,000 ft of a public or private drinking water supply well with a sustainable yield of 100 gpm or more; and is not located within 250 ft of a public or private drinking water well with a sustainable yield of less than 100 gpm.



LEGEND

- SITE BOUNDARY
- DISPOSAL AREA
- ● WELL LOCATION

NOTES:

1. GEOGRAPHIC COORDINATES FOR THE CENTER OF THE SITE:
35.3092°N, 106.6198°W.
2. IMAGE REFERENCE:
2011 NAIP AERIAL MOSAIC OF SANDOVAL COUNTY.
3. WATER WELL DATA REFERENCE:
NMOSE WATER WELL ESRI SHAPE FILE - DATED APRIL, 2014
4. SITE BOUNDARY FROM THE 2014 VACATION PLAT 093013
RRE BOOK 25 PAGE 65 SANDOVAL COUNTY LANDFILL

Drawing: P:\acad 2003\211.00.01\PERMIT FIGURES\WELLS.DWG
Date/Time: Mar. 25, 2015-10:55:42 ; LAYOUT: A (P)

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WELL LOCATION MAP

SANDOVAL COUNTY LANDFILL
RIO RANCHO,, NEW MEXICO



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| | | |
|------------------|-----------------------------|----------------------|
| DATE: 03/25/2015 | CAD: WETLANDS.dwg | PROJECT #: 211.00.01 |
| DRAWN BY: DMI | REVIEWED BY: DRT | |
| APPROVED BY: IKG | get@gordonenvironmental.com | FIGURE IV.1.8 |

9.0 DISTANCE TO AIRPORTS

20.9.4.9.A(8) NMAC states that “no municipal, construction and demolition, or special waste landfill or monofill shall be located where, on the date of the first public notice as required in 20.9.3 NMAC, any portion of the proposed disposal area is within the distance to airports set by the federal aviation administration unless the landfill owner or operator demonstrates that the federal aviation administration does not object to construction and operation of the landfill at the proposed site.”

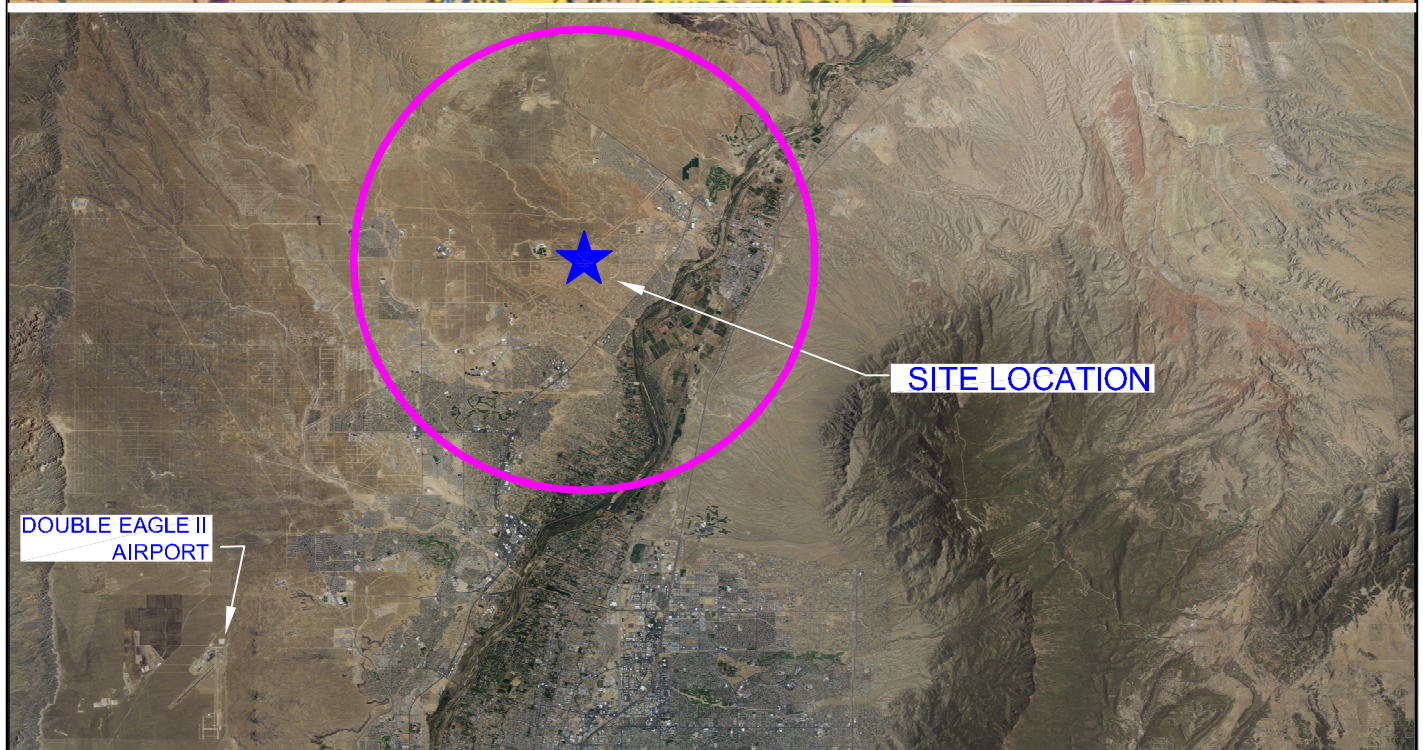
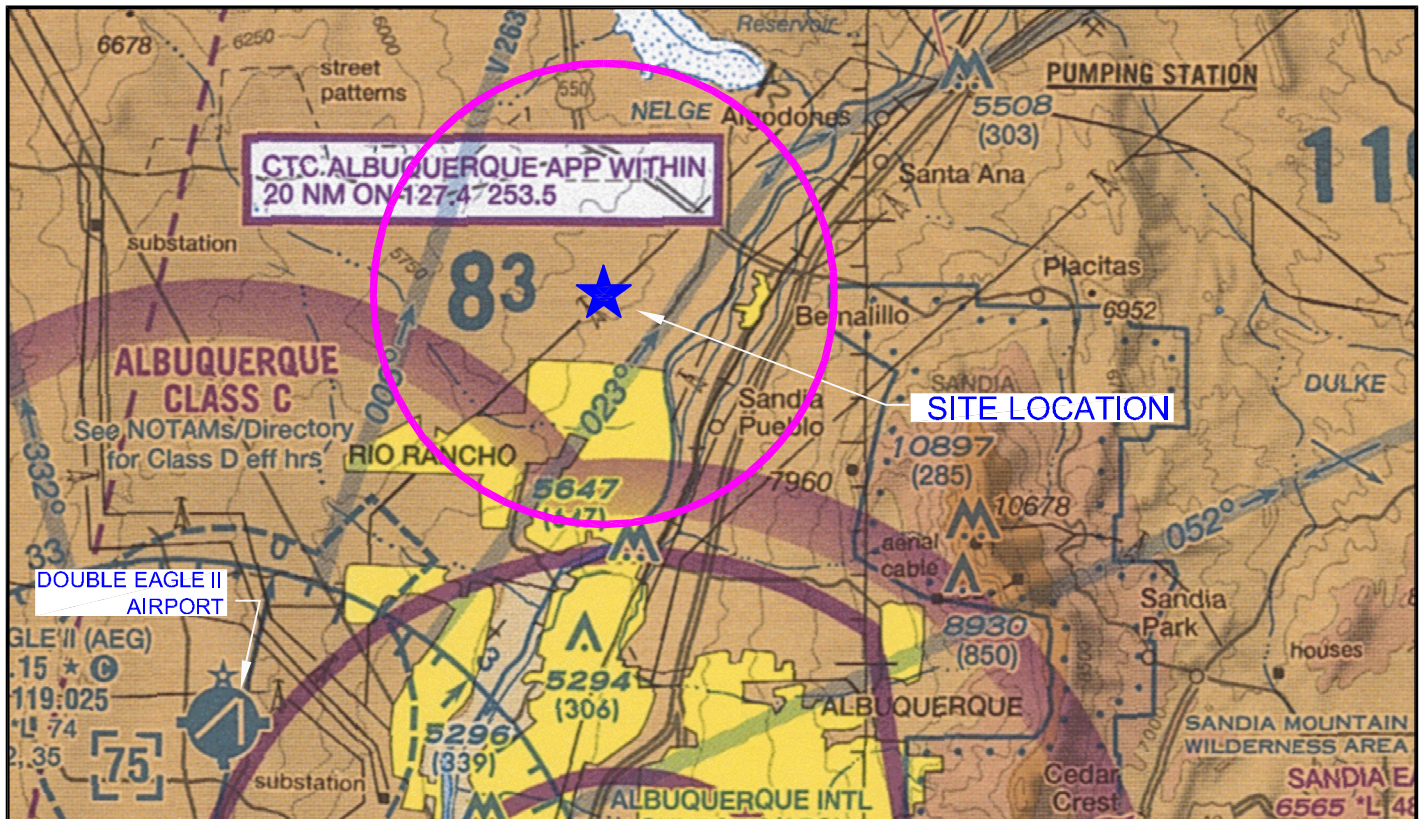
The Federal Aviation Administration (FAA) rules regulate landfills within 5,000 ft of a runway for piston-driven aircraft, or within 10,000 ft of a runway with turbine or pure jet powered aircraft traffic. The FAA also requires notice of a landfill within 6 miles of a public use airport.

The Airport Location Map, provided as **Figure IV.1.9** identifies that SCLF and the nearest “non-public use” airport is located over 14 miles to the south (i.e., the Double Eagle II Airport). Therefore, SCLF is not located within the distance to airports set by the FAA for setbacks or FAA notification. The Albuquerque International Sunport is the nearest public use airport meeting FAA definitions, and it is located approximately 18 miles south of SCLF.

10.0 DISTANCE TO STRUCTURES

20.9.4.9.A(9) NMAC states that “no municipal, construction and demolition, or special waste landfill or monofill shall be located where, on the date of the first public notice as required in 20.9.3 NMAC, any portion of the proposed disposal area is within 50 feet of the facility property boundaries nor within 500 feet of a permanent residence, school, hospital, institution or church.”

The Land Use Setbacks aerial photo provided as **Figure IV.1.10** identifies the existing and proposed site boundary, SCLF solid waste disposal limits, and the required setbacks. SCLF disposal areas are located a minimum of 50 ft from the SCLF site boundary. The SCLF disposal areas are not located within 500 ft of a permanent residence, school, hospital, institution or church. Since the 1998 approval of the initial SCLF Permit. Residential growth is moving toward SCLF with full knowledge of its existence and potential longevity. Currently, the closest structure to the SCLF disposal boundary is a residence located 523 ft to the south (**Figure IV.1.10**). The nearest residence to the west is >850 ft from the SCLF waste disposal boundary.



LEGEND

 SIX MILE RADIUS

 SITE LOCATION

 PUBLIC AIRPORT

IMAGE REFERENCE: 2011 NAIP COLOR MOSAICS FOR SANDOVAL COUNTY AND BERNALILLO COUNTY RESAMPLED TO 10 METER RESOLUTION

MAP REFERENCE: FAA SECTIONAL RASTER AERONAUTICAL CHART ALBUQUERQUE 94 NORTH 2014

Drawing: P:\acad 2003\211.00.01\PERMIT FIGURES\AIRPORT LOC.dwg

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0 2.5 MILES 5 MILES

AIRPORT LOCATION MAP

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RIO RANCHO, NEW MEXICO



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DATE: 03/25/2015

CAD: AIRPORT LOC.dwg

PROJECT #: 9405

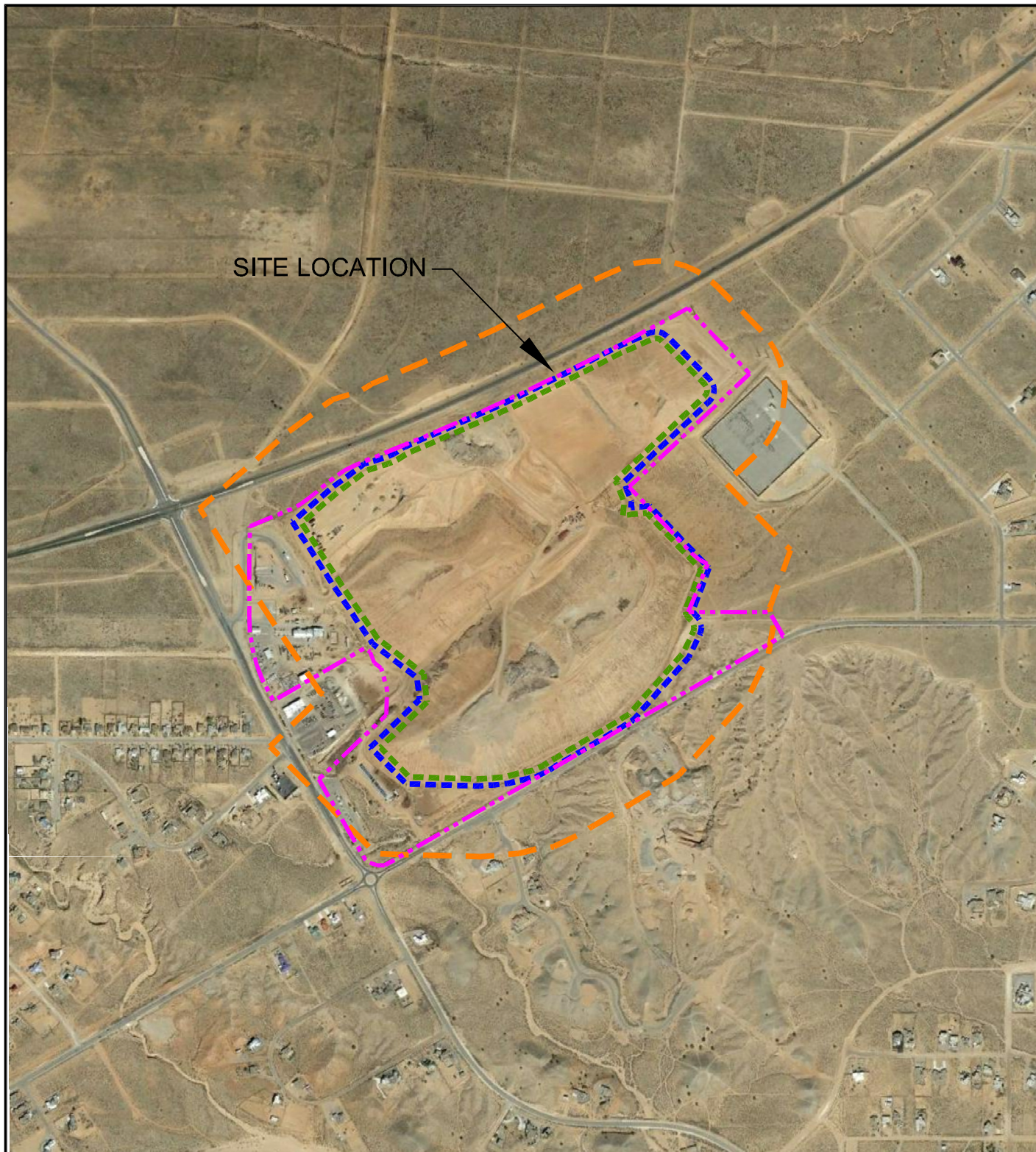
DRAWN BY: DMI

REVIEWED BY: DRT

APPROVED BY: IKG

get@gordonenvironmental.com

FIGURE IV.1.9



LEGEND

- SITE BOUNDARY
- DISPOSAL AREA BOUNDARY
- 50' SETBACK FROM DISPOSAL AREA
- 500' SET BACK FROM DISPOSAL AREA

NOTES:

1. GEOGRAPHIC COORDINATES FOR THE CENTER OF THE SITE:
35.3092°N, 106.6198°W.
2. IMAGE REFERENCE:
2013 GOOGLE EARTH IMAGE.
3. SITE BOUNDARY FROM THE 2014 VACATION PLAT 093013
PRE BOOK 25 PAGE 65 SANDOVAL COUNTY LANDFILL.

Drawing: P:\acad 2003\211.00.01\PERMIT FIGURES\SETBACKS.DWG
Date/Time: Mar. 24, 2015-13:50:15 ; LAYOUT: A (P)
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LAND USE SETBACKS

SANDOVAL COUNTY LANDFILL
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| DRAWN BY: DMI | REVIEWED BY: DRT | |
| APPROVED BY: IKG | get@gordonenvironmental.com | FIGURE IV.1.10 |

11.0 ACTIVE ALLUVIAL FANS

20.9.4.9.A(10) NMAC states that *“no municipal, construction and demolition, or special waste landfill or monofill shall be located where, on the date of the first public notice as required in 20.9.3 NMAC, any portion of the proposed disposal area is in an active alluvial fan (i.e., areas being currently aggraded by either permanent or intermittent streams.”*

20.9.2.7.A(6) NMAC defines alluvial fan as:
“a low, outspread, relatively flat to gentle sloping mass of loose sediment, shaped like an open fan or a segment of a cone, deposited by a stream at a place where it issues from a narrow mountain valley upon a plain or broad valley.”

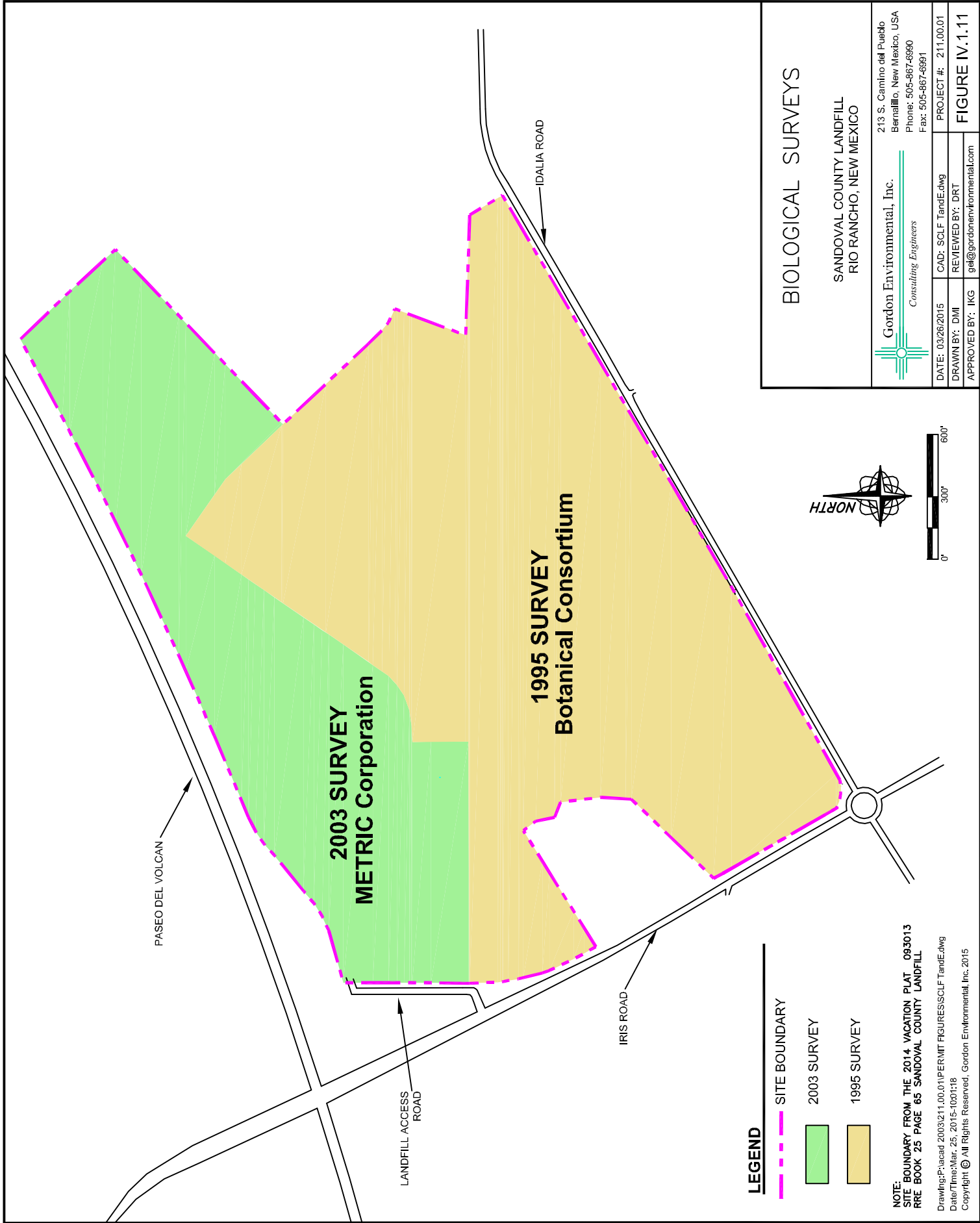
The SCLF facility is not located in an area of active alluvial fans. Site inspections and review of surface geology and examination of the USGS Bernalillo and Loma Machete Quadrangle Map (**Figure IV.1.1**) are conclusive that the site possesses none of the requisite characteristics for active alluvial fans, including permanent or intermittent streams; typically characteristic of runoff from mountainous terrain.

12.0 THREATENED AND ENDANGERED SPECIES

20.9.4.9.A(11) NMAC states that *“no municipal, construction and demolition, or special waste landfill or monofill shall be located where, on the date of the first public notice as required in 20.9.3 NMAC, any portion of the proposed disposal area is within areas that will result in the destruction or adverse modification of the critical habitat of endangered or threatened species as identified in either 50 CFR Part 17 or by the New Mexico department of game and fish in its most recent biennial review.”*

SCLF is not located where any portion of the disposal area is within areas that will results in the destruction or adverse modification of the critical habitat of threatened and endangered species. Two focused surveys identified in **Figure IV.1.11**, and a recent request for review by the New Mexico Department of Game and Fish (NMDGF) have demonstrated there are no threatened and endangered species present on or around the SCLF. In addition, the site area has been completely disturbed by landfill operational activities for over 40 years.

In 1995, the Botanical Consortium performed a threatened and endangered species survey on 124 acres ± of SCLF property corresponding with the original Permit Application (**Figure IV.1.11**). This survey concludes that no protected species are present in or around the surveyed property, and a copy of the report is included in **Attachment IV.1.A**).



METRIC Corporation conducted an additional survey for threatened and endangered species, rare plants and wildlife on the 63 acres ±landfill extension in 2003. This survey also found no threatened or endangered species present in or around the surveyed property, and a copy of the METRIC report is included in **Attachment IV.1.A**).

Based on a recent review of the critical habitat website maintained by the United States Fish and Wildlife Service (<http://crithab.fws.gov/ecos/home.action>), five species were identified for which critical habitat exists in Sandoval County, NM:

- Rio Grande Silvery Minnow (riverine habitat)
- Yellow-Billed Cuckoo (riparian habitat)
- New Mexico Meadow Jumping Mouse (riparian habitat)
- Mexican Spotted Owl (riparian or canyon habitat)
- Jemez Mountains Salamander (forest habitat)

In brief, these species require riparian, riverine, and forest habitats as noted above. These types of habitats do not exist within the SCLF solid waste facility footprint, which has been described by Botanical Consortium (1995) as a sandy terrace slope west of the Rio Grande Valley, covered with mixed grasses and shrubs. At the request of the Solid Waste Bureau, a letter was sent to NMDGF requesting review of critical habitat of threatened or endangered species on 03/03/2015. In an email dated 03/03/2015, NMDGF responded that the Department does not anticipate adverse effects to wildlife or habitats from implementation of the SCLF project. NMDGF correspondence is provided in **Attachment IV.1.B**.

13.0 SEISMIC IMPACT ZONES

20.9.4.9.A(12) states that *“no municipal, construction and demolition, or special waste landfill or monofill shall be located where, on the date of the first public notice as required in 20.9.3 NMAC, any portion of the proposed disposal area is within seismic impact zones, unless the owner or operator demonstrates that all containment structures, including liners, leachate collection systems, and surface water control systems, designed to resist the maximum horizontal acceleration in lithified earth material for the site.”*

20.9.2.7.S(4) NMAC defines seismic impact zones as: *“an area with 10 percent or greater probability that the maximum horizontal acceleration in lithified earth material, expressed as a percentage of the earth’s gravitational pull (g), will exceed 0.10g in 250 years”*.

SCLF is located within a seismic impact zone as defined by 20.9.2.7.S(4) NMAC, as is most of New Mexico. The current (USGS 2008) Seismic Impact Zone Map is provided as **Figure IV.1.12**. The current peak horizontal ground acceleration with 10% probability of exceedance in 250 years is 0.2044 (g) for the SCLF site vs. the regulatory threshold of 0.10g. This data was obtained from the USGS Earthquake Hazards Program website (<http://earthquake.usgs.gov/hazards/apps/map/>). Due to the location within a seismic impact zone, GEI has demonstrated that the facility is designed to resist the maximum horizontal acceleration in lithified earth material for the site. The Slope Stability Analysis is provided in **Volume III.3**.

14.0 UNSTABLE AREAS

20.9.4.9.A(13) NMAC states that “no municipal, construction and demolition, or special waste landfill or monofill shall be located where, on the date of the first public notice as required in 20.9.3 NMAC, any portion of the proposed disposal area is within an unstable area, unless the owner or operator demonstrates that engineering measures have been incorporated into the landfill design to ensure that the integrity of the structural components of the landfill will not be disrupted.”

20.9.2.7.U NMAC defines “unstable area” as:

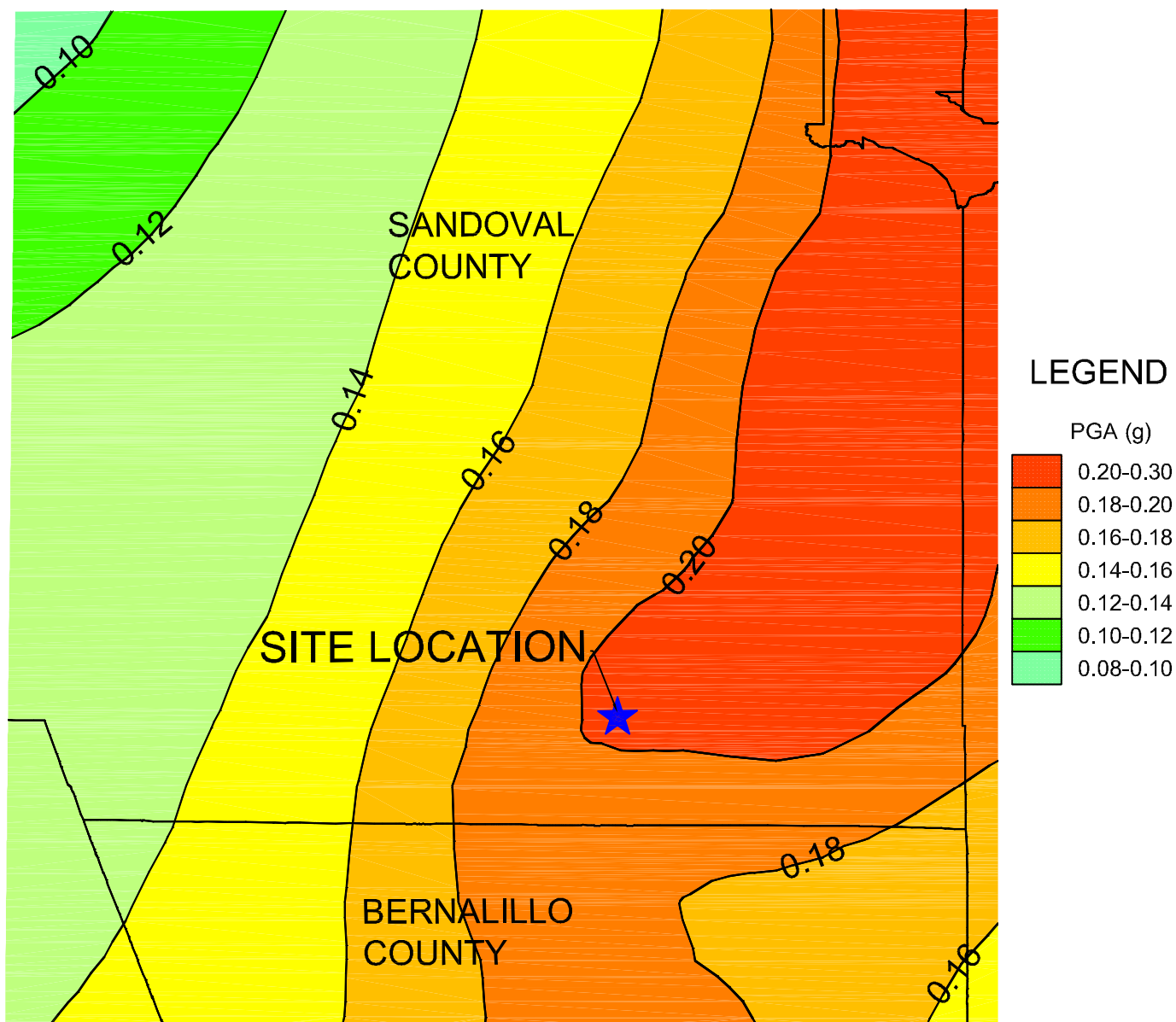
“a location that is susceptible to natural or human-induced events or forces capable of impairing the integrity of some or all of the landfill structural components responsible for preventing releases from a landfill. Examples of unstable areas are poor foundation conditions, areas susceptible to mass movements, and Karst terrain areas where Karst topography, with its characteristic surface and subterranean features, is developed as a result of dissolution of limestone, dolomite, or other soluble rock. Characteristic physiographic features present in Karst terrains include, but are not limited to, sinkholes, sinking streams, caves, large springs, and blind valleys.”

Unstable areas include poor foundation conditions, areas susceptible to mass movements, and Karst terrain areas (20.9.2.7.U NMAC).

14.1 Poor Foundation Conditions

20.9.2.7.P(4) NMAC defines “poor foundation conditions” as:

“those areas where features exist which indicate that a natural or man-made event may result in inadequate foundation support for the structural components of the landfill.”



Peak Horizontal Ground Acceleration (g) with 10% Probability of Exceedence in 250 Years

NOTES:

1. SEISMIC DATA FROM: USGS NATIONAL HAZARD MAPPING PROJECT GIS DATA and Petersen, Mark D., Frankel, Arthur D., Harmsen, Stephen C., Mueller, Charles S., Haller, Kathleen M., Wheeler, Russell L., Wesson, Robert L., Zeng, Yuehua, Boyd, Oliver S., Perkins, David M., Luco, Nicolas, Field, Edward H., Wills, Chris J., and Rukstales, Kenneth S., 2008, Documentation for the 2008 Update of the United States National Seismic Hazard Maps: U.S. Geological Survey Open-File Report 2008-1128, 61.
2. GEOGRAPHIC COORDINATES FOR THE CENTER OF THE SITE:
35.3092° N, 106.6198° W
3. PEAK HORIZONTAL GROUND ACCELERATION (g) with 10% PROBABILITY OF EXCEEDENCE IN 250 YEARS FOR THE SITE = 0.2044 g



0 5 miles 10 miles

SEISMIC IMPACT ZONE MAP

SANDOVAL COUNTY LANDFILL
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| DATE: 03/24/2015 | CAD: SEISMIC SANDOVAL.dwg | PROJECT #: 211.00.01 |
| DRAWN BY: DMI | REVIEWED BY: DRT | |
| APPROVED BY: IKG | gel@gordonenvironmental.com | |

FIGURE IV.1.12

Field reconnaissance of the project site, examination of soils samples collected during drilling, and regional data indicate that there are no significant near-surface deposits of highly expansive soils or collapsing soils, or other features that would impact the integrity of the landfill structural components. SCLF is not located within an unstable area as defined by 20.9.2.7.P(4) NMAC (poor foundation conditions).

14.2 Areas Susceptible to Mass Movements

20.9.2.7.A(8) NMAC defines “areas susceptible to mass movement” as:
“those areas of influence (i.e., areas characterized as having an active or substantial possibility of mass movement) where the movement of earth material at, beneath, or adjacent to the landfill unit, because of natural or man-induced events, results in the downslope transport of soil and rock material by means of gravitational influence. Areas of mass movement include, but are not limited to, landslides, avalanches, debris slides or flows, solifluction, block sliding, and rock fall.”

Site investigations and review of applicable published maps and literature indicate that there is not sufficient relief in the area surrounding the Facility for mass movements to occur under foreseeable climatic and geologic conditions. Visual inspections by qualified professionals of the landfill site during surface and subsurface investigations; as well as review of applicable published maps and literature, indicate no landslide deposits and no evidence of circular, planar or wedge-type mass movements of earth material. SCLF is not located in an area susceptible to mass movements.

14.3 Karst Terrain Areas

In addition, there is no evidence for Karst terrain in the vicinity of SCLF. Karst is the term used to describe the surface expression of soluble limestone, dolomite or gypsum areas where the roofs of caves collapse to create sinkholes. Based on mapping provided by Davies and others (1984, “Engineering Aspects of Karst”), the closest potential Karst terrain is approximately 13.7 miles north/northeast of the site.

**APPLICATION FOR PERMIT RENEWAL AND MODIFICATION
SANDOVAL COUNTY LANDFILL**

**VOLUME IV: SITING AND LAND USE
SECTION 1: SITING CRITERIA**

ATTACHMENT IV.1.A

GORDON ENVIRONMENTAL, INC., 2005.

**APPLICATION FOR PERMIT, SANDOVAL COUNTY LANDFILL,
VOLUME IV.1: SITING DATA**

APPLICATION FOR PERMIT SANDOVAL COUNTY LANDFILL

VOLUME IV: SITING AND LAND USE SECTION 1: SITING CRITERIA

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| IV.1.B | NMEMNRD LETTER RE: ABSENCE OF MINES |
| IV.1.C | CULTURAL RESOURCE SURVEY OF A 160 LANDFILL, SANDOVAL COUNTY, NEW MEXICO |
| IV.1.D | SHPO CLEARANCE LETTER (1994 SURVEY) |
| IV.1.E | AN ARCHAEOLOGICAL SURVEY OF 62.3 ACRES OF THE SANDOVAL COUNTY LANDFILL |
| IV.1.F | SHPO CLEARANCE LETTER (2003 SURVEY) |
| IV.1.G | AN ENDANGERED SPECIES SURVEY OF SANDOVAL COUNTY LANDFILL EXPANSION, SANDOVAL COUNTY, NEW MEXICO, 1995 |
| IV.1.H | SURVEY FOR THREATENED AND ENDANGERED, OR RARE PLANTS AND WILDLIFE AT THE PROPOSED SANDOVAL COUNTY LANDFILL EXPANSION AREA |

SITING CRITERIA

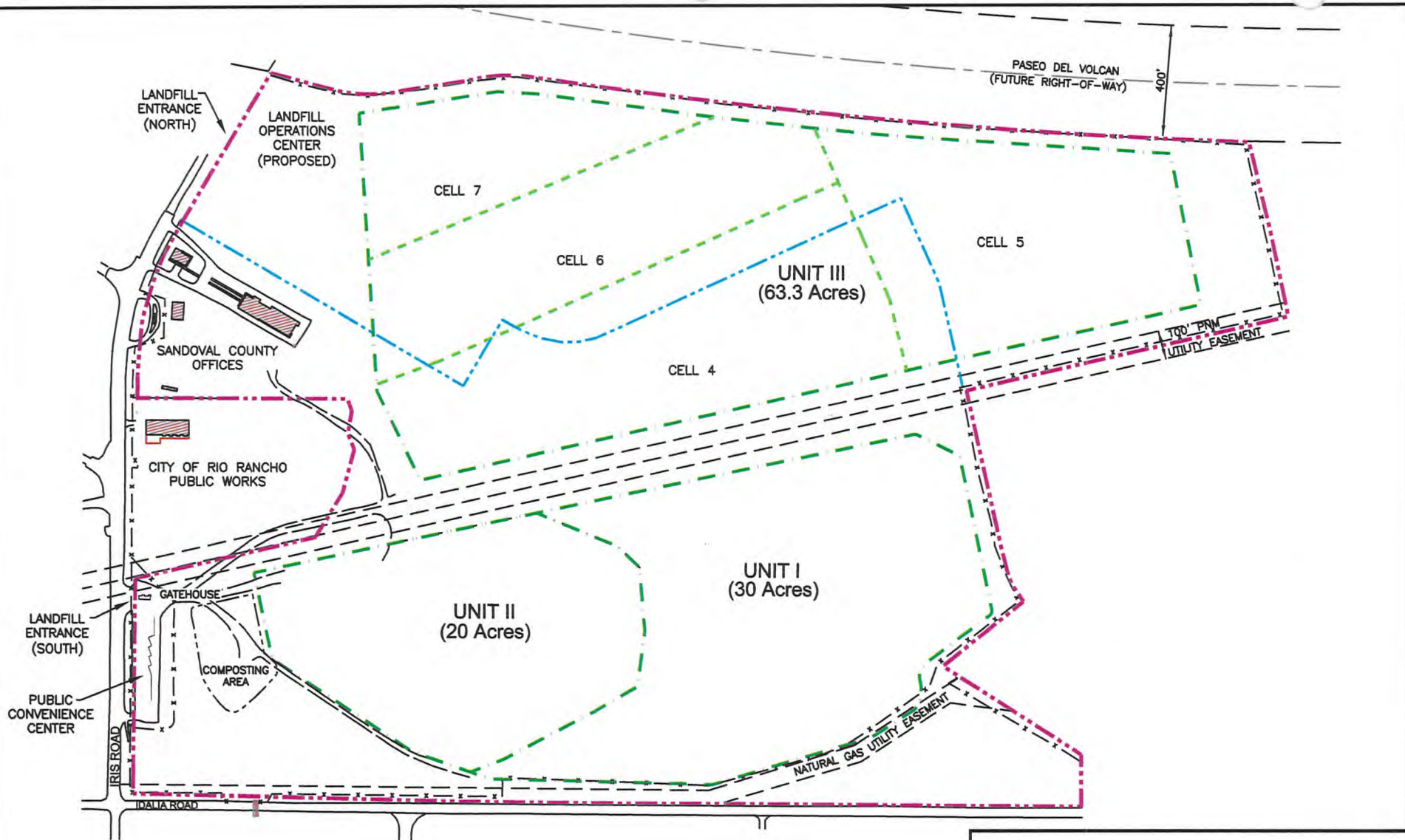
1.0 INTRODUCTION

The Sandoval County Landfill (SCLF) is an existing solid waste facility operating pursuant to NMED Permit No. SWM-050304. The compliance of the original 124 ± acre site was demonstrated in the approved Application for Permit (Weston 1997).

This Application for Permit is seeking approval to continue landfill operations by completing Unit II and development of a lateral expansion to the north (Unit III). The lateral expansion is located partially within the current solid waste facility boundary north of the 100' PNM easement. The expansion also includes a 63 ± acre tract contiguous with the north facility boundary that was acquired by the County for this purpose. The north property line of the new combined parcels (177 ± acres) is the southern boundary of the 400' designated right-of-way for the Paseo del Volcan extension (see **Figure IV.1.1**, Site Plan).

This Application for Permit provides detailed site characterization information for the lateral expansion area. This includes focused field investigations for endangered species, drainage features, archaeological resources, drainage features, and hydrogeology. This Application also confirms the siting compliance for the entire facility. Data previously provided and approved for the original SCLF permit is confirmed in this Application. In addition, this Application and particularly Volume IV, provides updates which address changes in conditions or regulatory requirements since the 1997 siting compliance demonstrations. This includes updates that address traffic improvements, land use trends, Army Corps of Engineers 404 (stormwater) definitions, and changes to the national seismic impact zone mapping.

This Section (**Volume IV, Section 1**) provides compliance demonstrations for each of the siting criteria listed in Subpart III, Section 302.A of the New Mexico Environment Department Solid Waste Management Regulations [20 NMAC 9.1]. Responses to each of the Subpart III Siting Criteria are also summarized in **Volume I, Section 3**.



LEGEND

| | |
|--|------------------------|
| --- | PROPERTY BOUNDARY |
| --- | FORMER PROPERTY LINE |
| --- | UNIT BOUNDARY |
| --- | PROPOSED CELL BOUNDARY |
| --- | FENCE LINE |
| --- | UTILITY EASEMENT |



SITE PLAN

SANDOVAL COUNTY LANDFILL
RIO RANCHO, NEW MEXICO



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| DATE: 06/15/04 | CAD: H SITEMAP.dwg | PROJECT #: 211.02.01 |
| DRAWN BY: JFP | REVIEWED BY: ANY | |
| APPROVED BY: IKG | gei@gordonenvironmental.com | FIGURE IV.1.1 |

2.0 MAXIMUM SIZE

Section 301 of 20 NMAC 9.1 states that:

“The Secretary shall not issue a permit for any solid waste facility larger than five hundred acres.”

Figure IV.1.1 is a site plan illustrating the SCLF and the proposed facility boundaries. The site encompasses approximately 177 ± acres in Sections 33 and 34, Township 13 North, Range 3 East of the New Mexico Principal Meridian and certain tracts within the platted Rio Rancho Estates located in the Town of Alameda Land Grant.

3.0 FLOODPLAINS, WETLANDS AND WATERCOURSES

Section 302.A.1 of 20 NMAC 9.1 states that:

“no municipal or special waste landfill shall be located in floodplains, within 500 feet of wetlands, or 200 feet of a watercourse.”

3.1 Floodplains

A floodplain is defined in 20 NMAC 9.1 105.AC as:

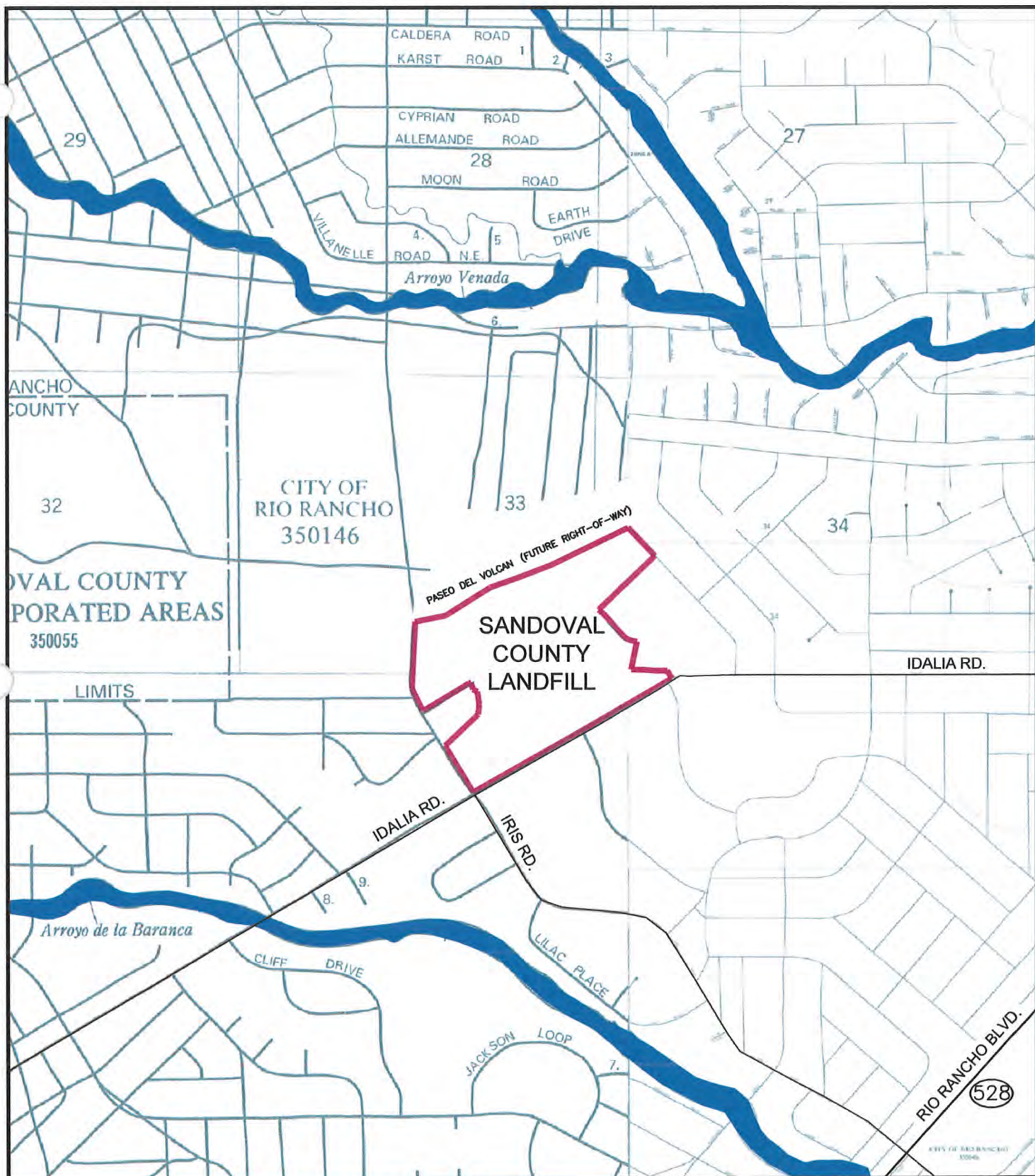
“the lowland and relatively flat areas adjoining inland and coastal waters that are inundated by the 100 year flood. The 100 year flood has a one percent chance of recurring in any given year of a flood of magnitude equaled or exceeded once in 100 years on the average over a significantly long period”.

As shown on Figure IV.1.2, the Sandoval County Landfill is located outside of any 100-year floodplains, according to the applicable Federal Emergency Management Agency maps (35043C925, 35043C0902, and 35043C0904, all updated in 1996). The site is located on elevated ground approximately ½ mile south of a localized floodplain associated with the Arroyo Venada and ¼ mile north of a narrow floodplain associated with the Arroyo de la Barranca.

3.2 Wetlands

Wetlands are defined in 20 NMAC 9.1 105.CN as:

“those areas that are inundated or saturated by surface or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions”



MAP ADAPTED FROM FEMA 100-yr FLOODPLAIN MAPS,
NO. 35043C0925, 35043C0902, AND 35043C0904 - 1996

100-Year FLOODPLAIN



0' 1000' 2000'
SCALE: 1" = 2000'

FEMA 100-yr FLOODPLAIN MAP

SANDOVAL COUNTY LANDFILL RIO RANCHO, NEW MEXICO



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| DRAWN BY: JFP | REVIEWED BY: ANY | |
| APPROVED BY: IKG | gei@gordonenvironmental.com | |

FIGURE IV.1.2

There are no areas meeting the definition of wetland on or adjacent to the facility property. **Figure IV.1.3** is the applicable Wetland Location Map derived from the U.S. Department of the Interior's National Wetland Inventory map series. This map, along with site investigations, indicates that there are no wetland environments within 500 feet of the site. Isolated, "intermittent stream" (R4SB) wetland zones were identified along Arroyo de la Baranca (southwest of the site) and along Arroyo Venada (north of the site).

3.3 Watercourses

Watercourse is defined by 105.CK:

"watercourse" means any river, creek, arroyo, canyon, draw, or wash, or any other channel having definite banks, with visible evidence of continuous or intermittent flow of water"

There are no defined watercourses on or within 200' of the lateral expansion area. The Army Corps of Engineers (ACOE) was contacted to evaluate a drainage feature that originates at the northwest corner of the expansion area (**Figure IV.1.4**). This feature receives off-site run-off from an upgradient area measuring less than 42 acres.

On October 6, 2003, the Regulatory Project Manager from the Albuquerque District of the ACOE visited the site to examine this and other drainage features. It was determined that these units had perennial shrubs growing in the flow zone, and that they lacked defined channel beds and ordinary high water marks. Based on these observations, it was determined that these features were not waters of the United States and not regulated under the provisions of Section 404 of the Clean Water Act. A copy of this report is provided as **Attachment IV.1.A**.

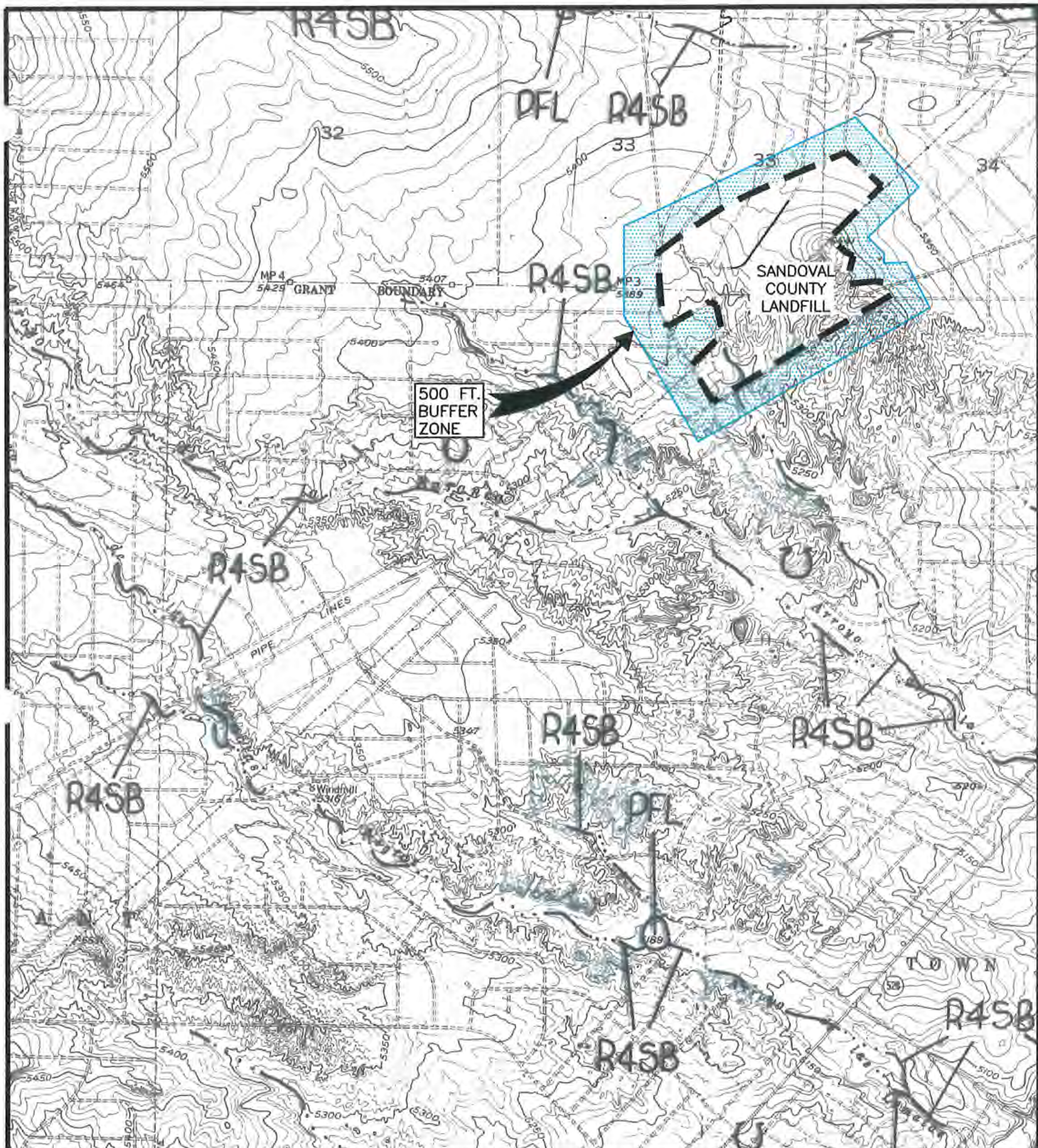
4.0 DEPTH TO WATER TABLE

Section 302.A.2 of 20 NMAC 9.1 states that:

"no municipal or special waste landfill shall be located where depth to seasonal high water table will be closer than 100 feet to the bottom of the fill."

20 NMAC 9.1, Section 105.CL defines "water table" as:

"that surface in unconfined ground water at which the pressure is atmospheric; defined by the levels at which water stands in wells that penetrate the water just far enough to hold standing water."



DATA SUPPLIED BY U.S. DEPARTMENT OF THE INTERIOR - NATIONAL WETLAND INVENTORY MAP BASED ON: BERNALILLO, (1990) AND LOMA MACHETE, (1954, PHOTO REVISED 1972), USGS 7.5' SERIES (1:24,000 Scale)

LEGEND

R4SB - RIVERINE - INTERMITTENT - STREAMBED
PFL - PALUSTRINE - FLAT
U - UPLAND - (NON-WETLAND)



NOT TO SCALE

WETLANDS LOCATION MAP

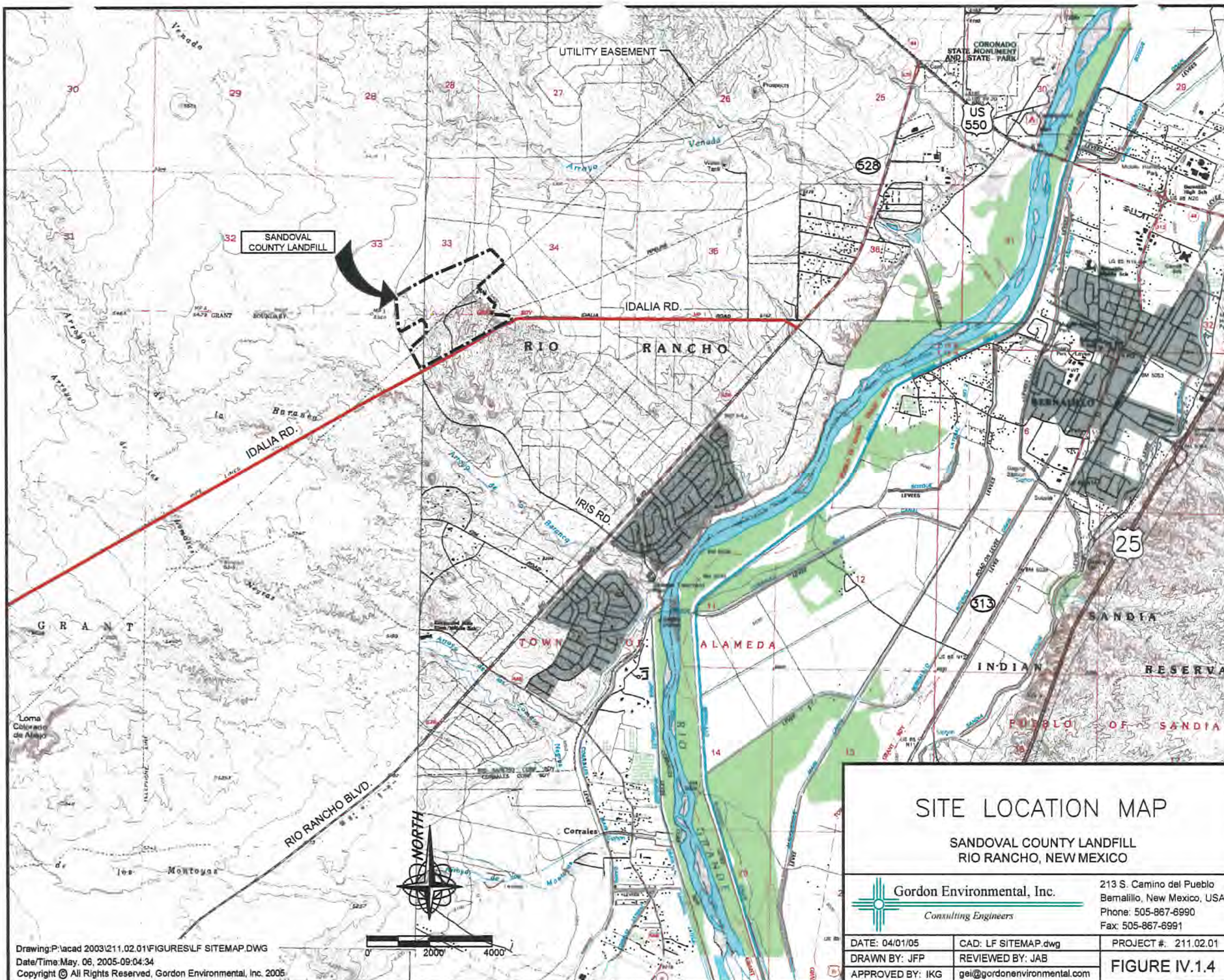
SANDOVAL COUNTY LANDFILL
RIO RANCHO, NEW MEXICO



Gordon Environmental, Inc.
Consulting Engineers

213 S. Camino del Pueblo
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Phone: 505-867-6990
Fax: 505-867-6991

| | | |
|------------------|-----------------------------|----------------------|
| DATE: 06/30/04 | CAD: PA_Wetlands.dwg | PROJECT #: 211.02.01 |
| DRAWN BY: JFP | REVIEWED BY: IKG | FIGURE IV.1.3 |
| APPROVED BY: ANY | gei@gordonenvironmental.com | |



The depth to a seasonal high water table under the Sandoval County Landfill property ranges from 330 to 440 feet below ground surface (fbgs). These depths are based on the development and water readings from seven monitoring wells on the site. **Figure IV.1.5** is a contour map showing the most recent groundwater elevations, and the surface elevations at each monitoring well, demonstrating that the depth to water exceeds 300'.

5.0 SUBSURFACE MINES

Section 302.A.3 of 20 NMAC 9.1 states that:

“no municipal or special waste landfill shall be located where subsurface mines registered with the New Mexico Department of Energy, Minerals and Natural Resources as listed on the Mines, Mills and Quarries Map are considered to be a problem.”

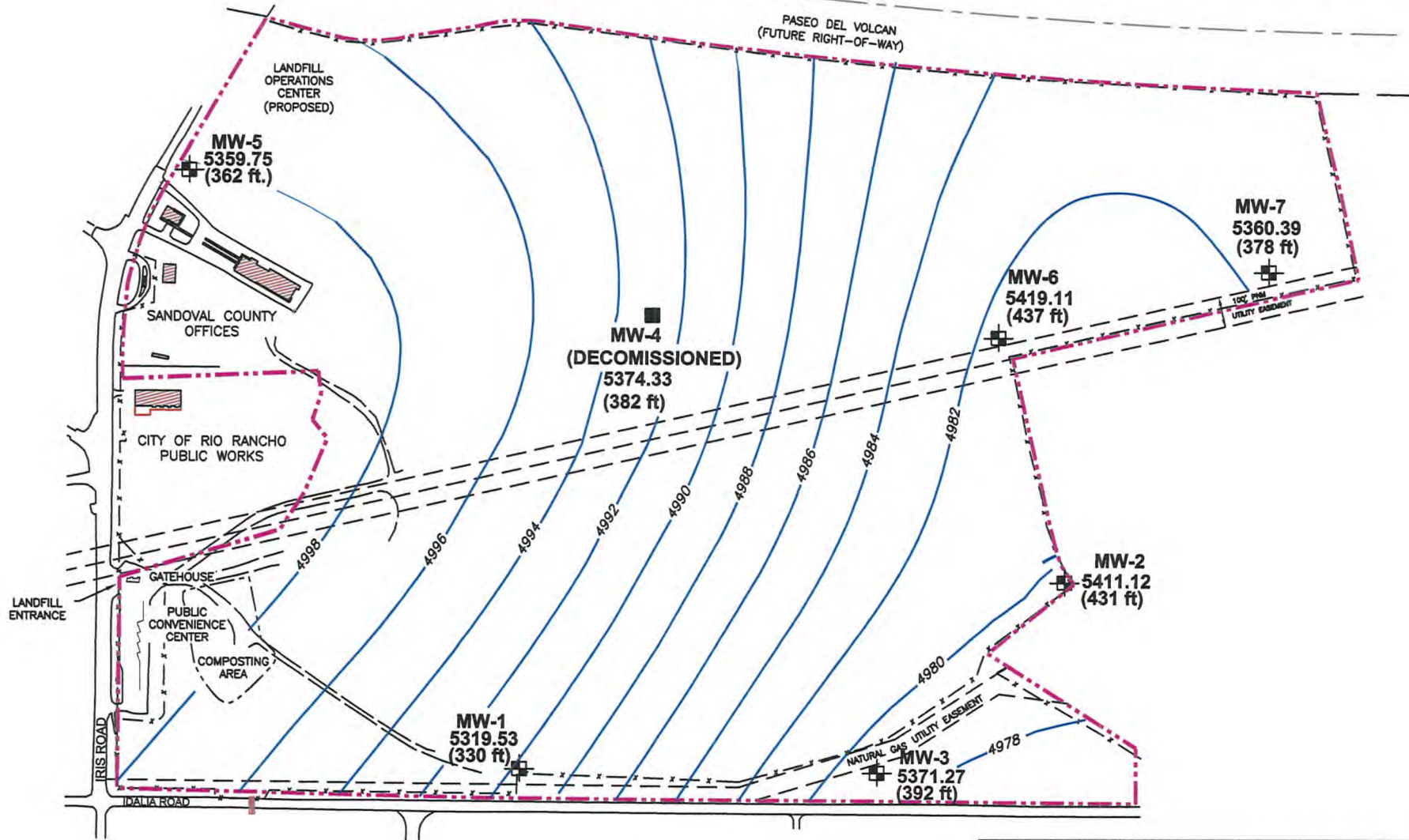
Figure IV.1.6 is the Sandoval County portion of the map “Mines, Mills, & Quarries in New Mexico” by the New Mexico Bureau of Mines and Mineral Resources. This map indicates no subsurface mines in the area of the landfill. The nearest surface mining site is a sand and gravel operation approximately 4 miles southeast of the landfill site. Correspondence from the New Mexico Energy Minerals and Natural Resources Department (NMEDNRD) confirms that no known current or past subsurface mining operations exist in the vicinity of the proposed landfill (**Attachment IV.2.B**).

6.0 HOLOCENE FAULTS

Section 302.A.4 of 20 NMAC 9.1 states that:

“no municipal or special waste landfill shall be located within 200 feet of a fault that has had a displacement within Holocene time (i.e., within the last 11,000 years), unless the owner or operator demonstrates to the Secretary that an alternative setback of less than 200 feet will prevent damage to the structural integrity of the facility and will be protective of public health, welfare and the environment.”

Based on site investigations and published detailed geologic mapping by the New Mexico Bureau of Mines and Mineral Resources, the SCLF is not located within 200 feet of a fault that has experienced displacement within Holocene time. **Figure IV.1.7** (Young Faults Location Map) confirms the absence of Holocene faults near the Sandoval County Landfill site. A discussion on faulting in the area is provided in **Volume V**.



LEGEND

| | |
|--|--|
| | PROPERTY BOUNDARY |
| | GROUNDWATER MONITORING WELL SURFACE ELEVATION DEPTH TO WATER |
| | JUNE 6, 2004 GROUNDWATER ELEVATION CONTOUR (ftal) |
| | FENCE LINE |
| | UTILITY EASEMENT |
| | ROAD |
| | CENTERLINE OF ROAD |



SITE MONITORING WELLS AND POTENTIOMETRIC CONTOURS

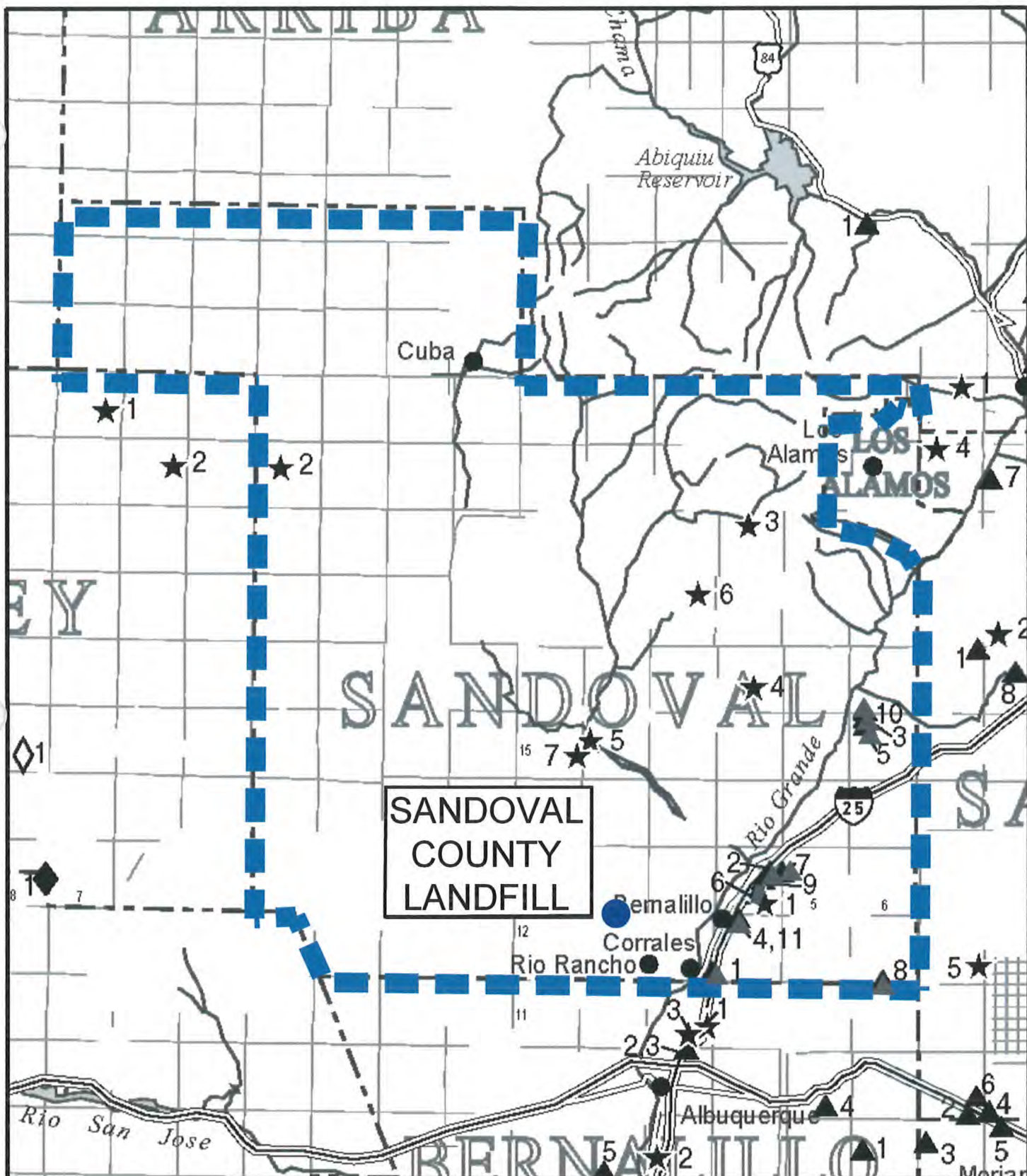
SANDOVAL COUNTY LANDFILL
RIO RANCHO, NEW MEXICO



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| | | |
|------------------|-----------------------------|----------------------|
| DATE: 02/16/05 | CAD: SCLF MWELLS.dwg | PROJECT #: 211.02.01 |
| DRAWN BY: JFP | REVIEWED BY: JAB | |
| APPROVED BY: IKG | gei@gordonenvironmental.com | FIGURE IV.1.5 |



LEGEND

| | |
|----------------------------|----------------|
| ○ SURFACE MINE | △ QUARRY/ MILL |
| ■ MINE/ MILL &/ or SMELTER | ▲ QUARRY |
| □ MINE | |

SOURCE: "MINES, MILLS & QUARRIES IN NEW MEXICO"
NEW MEXICO ENERGY, MINERALS & NATURAL RESOURCES (2001)



NOT TO SCALE

MINE LOCATION MAP

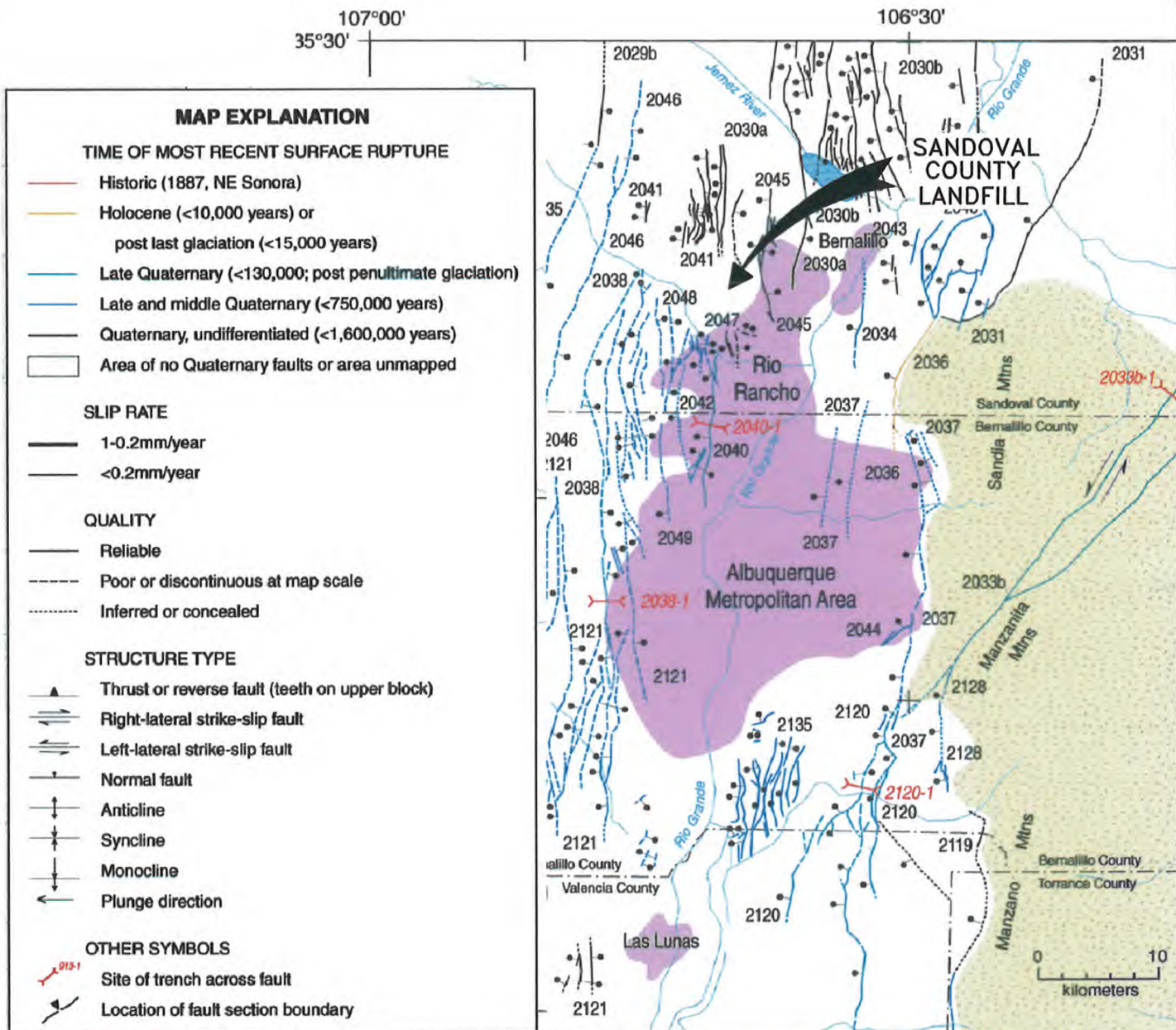
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| | | |
|------------------|-----------------------------|----------------------|
| DATE: 06/21/04 | CAD: PA_Mines.dwg | PROJECT #: 211.02.01 |
| DRAWN BY: JFP | REVIEWED BY: JAB | |
| APPROVED BY: IKG | gei@gordonenvironmental.com | FIGURE IV.1.6 |



INFORMATION SUPPLIED BY MICHAEL MACHETTE
USGS PHOTO REVISED 2001.



NOT TO SCALE

YOUNG FAULT MAP

SANDOVAL COUNTY LANDFILL
RIO RANCHO, NEW MEXICO



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| | | |
|------------------|-----------------------------|----------------------|
| DATE: 06/29/04 | CAD: PA_FAULTS.dwg | PROJECT #: 211.02.01 |
| DRAWN BY: JFP | REVIEWED BY: JAB | |
| APPROVED BY: IKG | gei@gordonenvironmental.com | FIGURE IV.1.7 |

7.0 ARCHAEOLOGICAL SURVEYS

Section 302.A.5 of 20 NMAC 9.1 states that:

“no municipal or special waste landfill shall be located within historically or archaeologically significant sites, unless in compliance with the Cultural Properties Act and the Prehistoric and Historic Sites Preservation Act.

To demonstrate compliance with the above provision, there have been two archaeological surveys for the SCLF properties (Figure IV.1.8). The first survey, (Attachment IV.1.C), was conducted by Lone Mountain Archaeological Services, Inc. in 1994 in conjunction with the original permitting. This survey was performed on the property proposed for initial permitting (Weston, 1997). Seven isolated objects and twelve archaeological sites were identified, nine of which (archaeological sites) were recommended as eligible to the National Register of Historic Places.

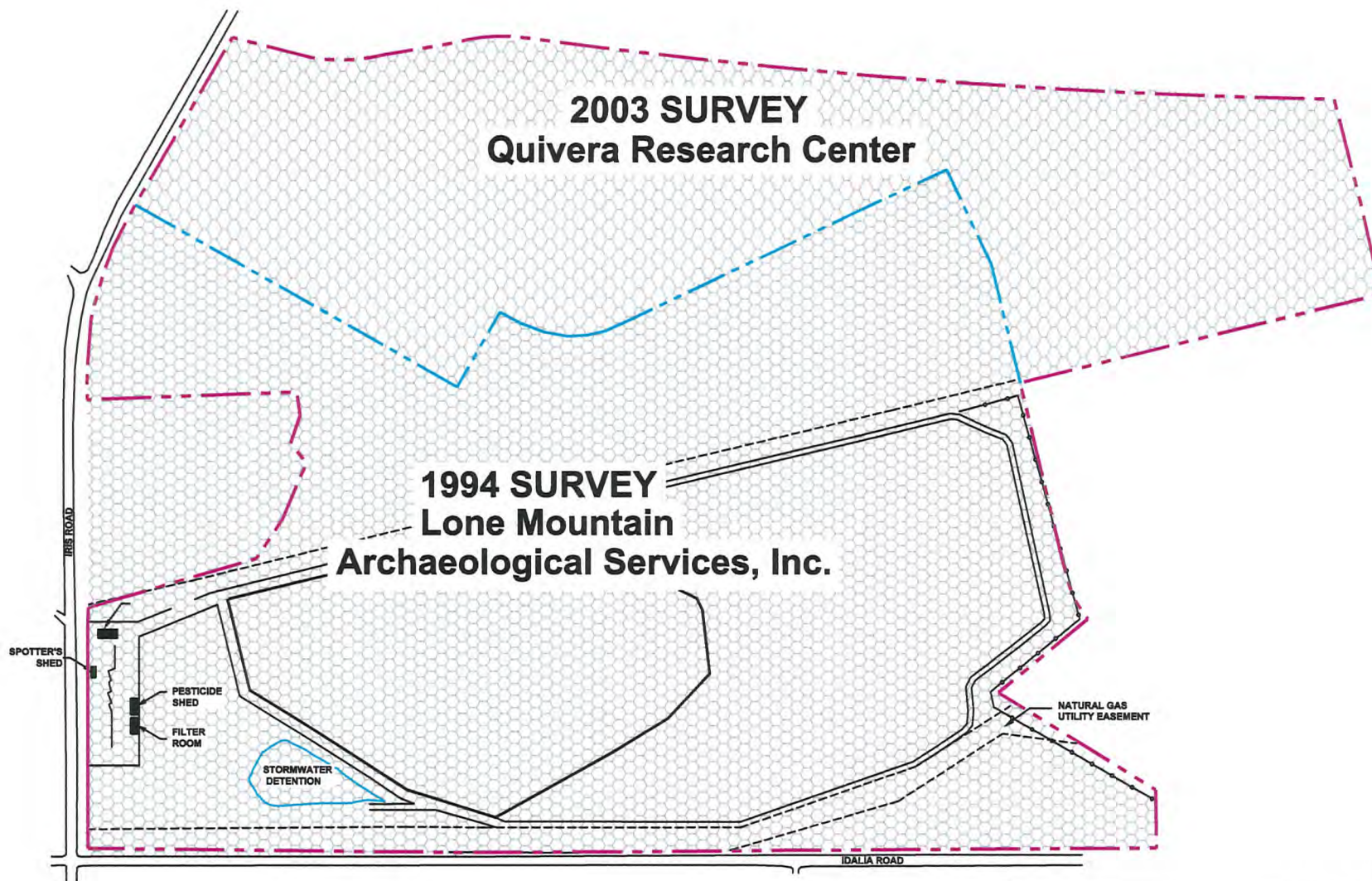
The State Historic Preservation Office (SHPO) granted clearance for the site in 1995 (Attachment IV.1.D) provided additional testing and data recovery was performed on ten of the twelve sites. Lone Mountain conducted an extensive excavation and data recovery program that is documented in *“Excavations at Lru-Kish Kachreu and Other Sites at the Sandoval County Landfill”* in 1997.

The Quivera Research Center conducted an archaeological clearance survey for the additional 63 ± acres extension in October of 2003 (Attachment IV.1.E). One isolated object and no archaeological sites were encountered during this survey. A finding of “No Historical Properties Affected” was issued by SHPO for this survey (Attachment IV.1.F), and no further action is required for this survey area.

8.0 DISTANCE TO WATER WELLS

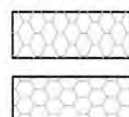
Sections 302.A.6&7 of 20 NMAC 9.1 state that:

“no municipal or special waste landfill shall be located within 1,000 feet of public water supply well or private well that pumps 100 gallons per minute or more; or within 350 feet of a public water supply well or private well that pumps less than 100 gallons per minute.”



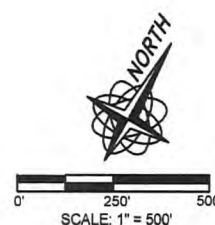
LEGEND

- PROPERTY LINE
- - - FORMER PROPERTY LINE
- - - UTILITY EASEMENT
- - - FENCE LINE



2003 SURVEY

1994 SURVEY



ARCHAEOLOGICAL SURVEYS

SANDOVAL COUNTY LANDFILL
RIO RANCHO, NEW MEXICO



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| | | |
|------------------|-----------------------------|----------------------|
| DATE: 06/29/04 | CAD: SCLF ARCH.dwg | PROJECT #: 211.02.01 |
| DRAWN BY: JFP | REVIEWED BY: JAB | |
| APPROVED BY: IKG | gei@gordonenvironmental.com | FIGURE IV.1.8 |

Inspection of recent aerial photography of the area surrounding the facility, and ground reconnaissance of the area within 1,000 feet of the facility boundary, indicate that there are no public or private water supply wells within 1,000 feet of the facility boundary. The City of Rio Rancho has extended municipal water supply service to the new domiciles being constructed west and south of the Facility; as well as the Landfill and Public Works infrastructure on and adjacent to the site.

In addition, a search of records provided by the New Mexico State Engineer's Office indicates no record of either public water supply wells or private wells that pump more than 100 gallons per minute within 1,000 feet of the Facility; or wells pumping less than 100 gallons per minute within 350 feet of the site.

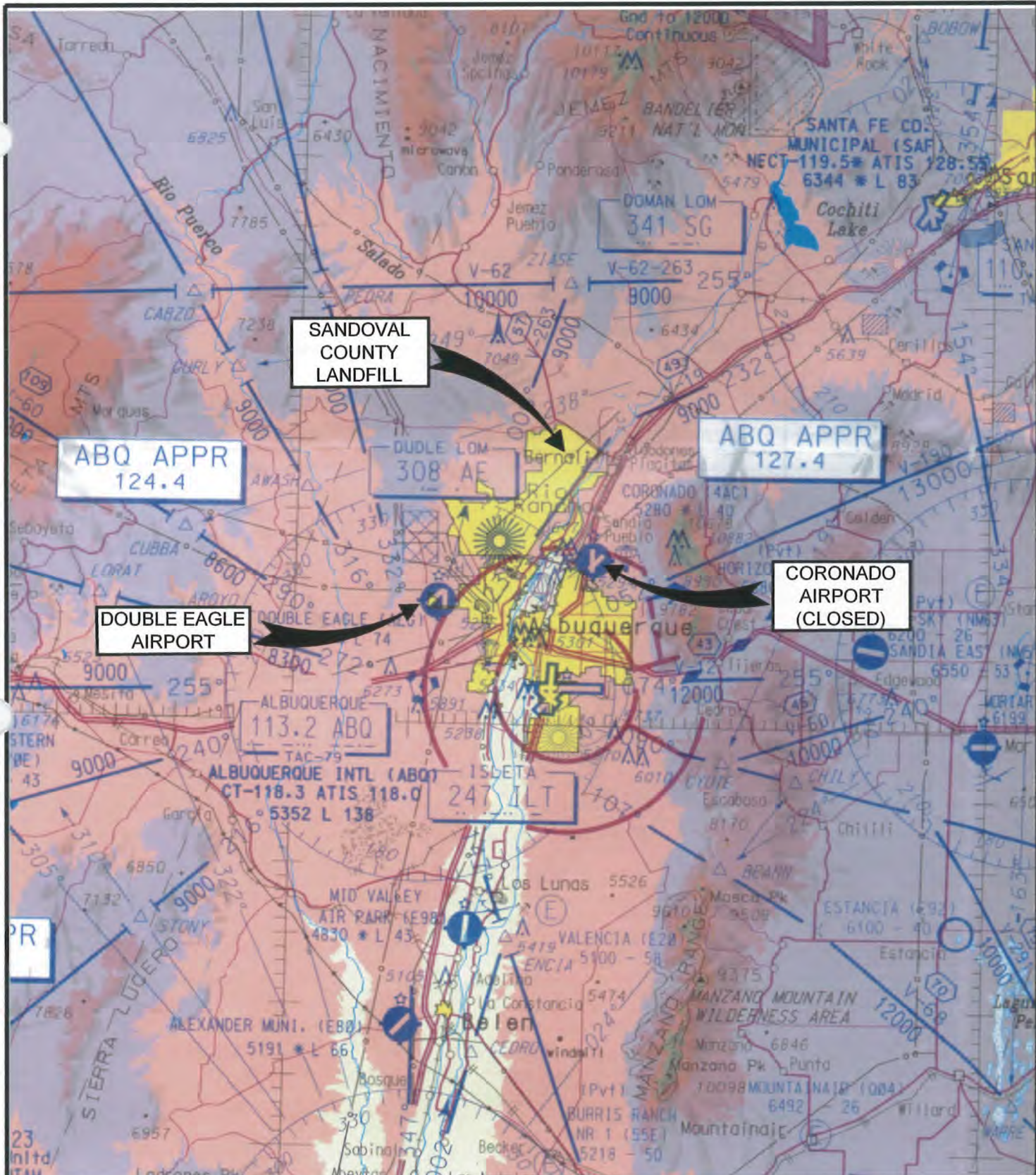
9.0 DISTANCE TO AIRPORTS

Section 302.A.8 of 20 NMAC 9.1 states that:

“no municipal or special waste landfill shall be located within the distance to airports set by the Federal Aviation Administration requirements.”

FAA rules prohibit landfills within 5,000 feet of a runway for piston-driven aircraft or within 10,000 feet of a runway with turbine or pure jet powered aircraft traffic. The FAA also requires notice of a landfill within 6 miles of public use airport (20 NMAC 9.1 Section 201.B.5).

The Airport Location Map (**Figure IV.1.9**), adapted from the 2001-2002 New Mexico Aeronautical Chart, identifies the locations and runway orientations for local airports. The nearest FAA-approved airport to the SCLF is the Double Eagle Airport. This airport is located 14.4 miles southwest of the Facility, therefore, FAA notification is not required. The Double Eagle Airport is a 4,400-acre, privately-owned facility serving both piston-driven and turbo-prop airplanes. The airport's two runways serve approximately 50,000 annual operations comprised of training, military, air ambulance, charter, private and corporate flights. The Albuquerque International Sunport is the nearest public use airport meeting FAA definitions, and it is located approximately 18 miles south of the SCLF. The Coronado Airport shown on **Figure IV.1.9** is no longer in operation.



MAP ADAPTED FROM NEW MEXICO AERONAUTICAL CHART (2002)

AIRPORT LOCATION MAP

SANDOVAL COUNTY LANDFILL
RIO RANCHO, NEW MEXICO



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Consulting Engineers

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| | | |
|------------------|-----------------------------|----------------------|
| DATE: 06/29/04 | CAD: AIRPORT LOC.dwg | PROJECT #: 211.02.01 |
| DRAWN BY: JFP | REVIEWED BY: ANY | |
| APPROVED BY: IKG | gei@gordonenvironmental.com | FIGURE IV.1.9 |



10.0 DISTANCE TO STRUCTURES

Section 302.A.9 of 20 NMAC 9.1 states that:

“no municipal or special waste landfill shall be located within at least 50 feet from the property boundaries and at least 500 feet from the nearest permanent residence, school, hospital, institution or church in existence at the time of initial application.”

The solid waste boundary will not be located within 50 feet of a property boundary or within 500 feet of the listed off-site structures existing at the time of original permitting. A detailed description of surrounding land uses is provided in **Volume IV, Section 2, Land Use and Zoning.**

11.0 ACTIVE ALLUVIAL FANS

Section 302.A.10 of 20 NMAC 9.1 states that:

“no municipal or special waste landfill shall be located in an active alluvial fan, i.e., those being currently aggraded by either permanent or intermittent streams.”

20 NMAC 9.1, Section 105.E defines alluvial fan as:

“a low, outspread, relatively flat to gentle sloping mass of loose rock material, shaped like an open fan or a segment of a cone, deposited by a stream at a place where it issues from a narrow mountain valley upon a plain or broad valley.”

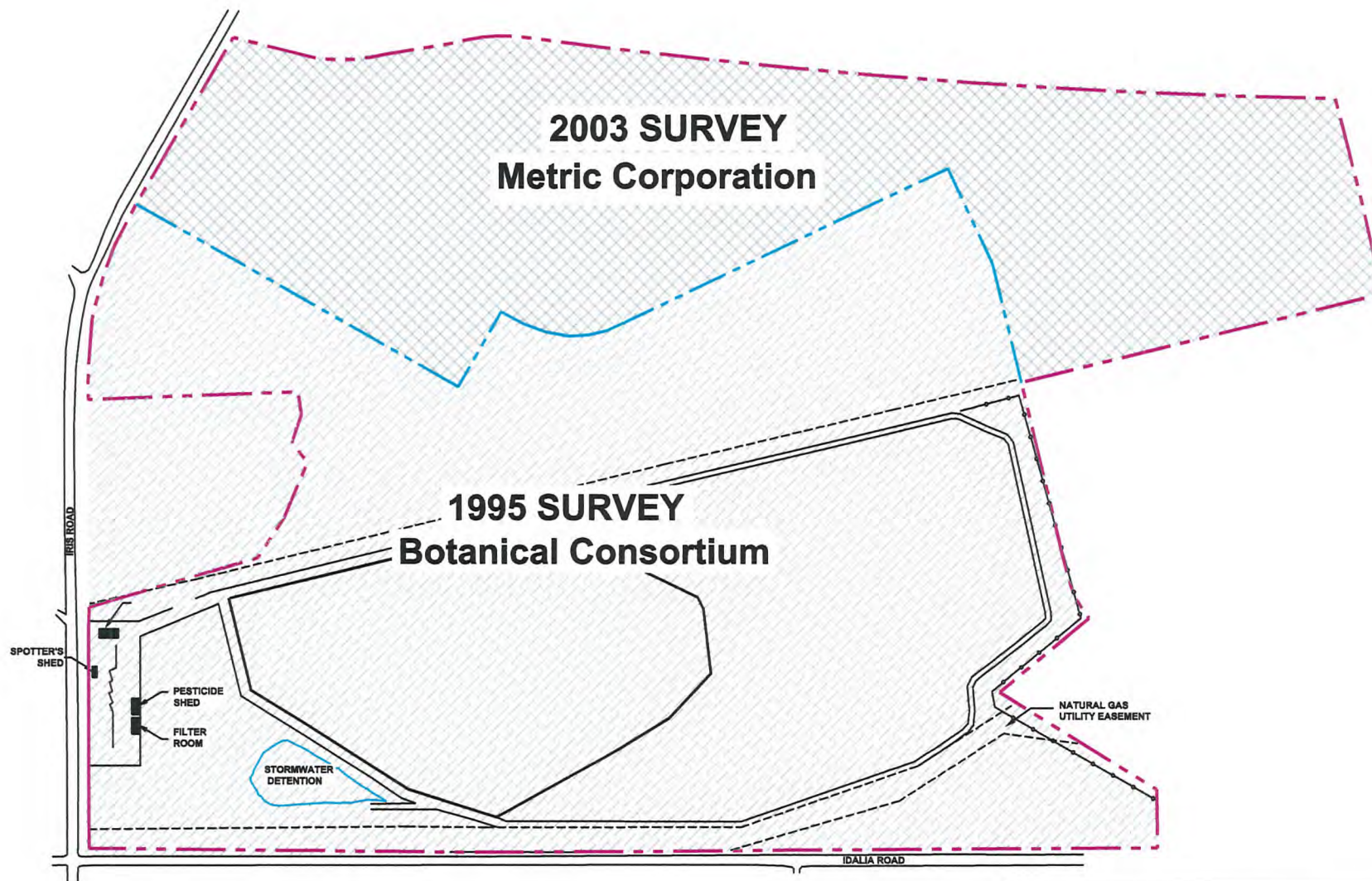
The Facility is not located in an area of an active alluvial fan. Site inspections and examination of the USGS Bernalillo and Loma Machete Quadrangle maps are conclusive that the site possesses none of the requisite characteristics.

12.0 THREATENED AND ENDANGERED SPECIES

Section 302.A.11 of 20 NMAC 9.1 states that:

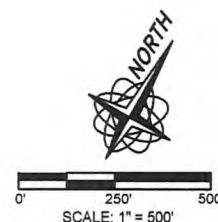
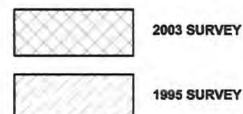
“no municipal or special waste landfill shall be located within areas that will result in the destruction or adverse modification of the critical habitat of endangered or threatened species as identified in either 50 CFR Part 17 or the latest version of the Handbook of Species Endangered in New Mexico”

Two focused surveys have demonstrated there are no threatened and endangered species present on or around the SCLF. In 1995, the Botanical Consortium performed a threatened and endangered species survey on 124 ± acres of SCLF property corresponding with the original Permit Application (Figure IV.1.10). This survey concludes that no protected species are present in or around the surveyed property (Attachment IV.1.G).



LEGEND

- PROPERTY LINE
- FORMER PROPERTY LINE
- UTILITY EASEMENT
- FENCE LINE



THREATENED AND ENDANGERED SPECIES SURVEYS

SANDOVAL COUNTY LANDFILL
RIO RANCHO, NEW MEXICO



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Phone: 505-867-6990
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| | | |
|------------------|-----------------------------|----------------------|
| DATE: 06/29/04 | CAD: SCLF TandE.dwg | PROJECT #: 211.02.01 |
| DRAWN BY: JFP | REVIEWED BY: JAB | |
| APPROVED BY: JKG | gei@gordonenvironmental.com | FIGURE IV.1.10 |

METRIC Corporation conducted a survey for threatened and endangered species, rare plants and wildlife on the 63 ± acres landfill extension in 2003. This survey also found no threatened or endangered species present in or around the surveyed property (Attachment IV.1.H).

13.0 SEISMIC IMPACT ZONES

Section 302.A.12 of 20 NMAC 9.1 states that:

“no municipal or special waste landfill shall be located within seismic impact zones, unless the owner or operator demonstrates that all containment structures, including liners, leachate collection systems, and surface water control systems are designed to resist the maximum horizontal acceleration in lithified earth material for the site.”

Updated mapping by the United States Geologic Survey (USGS) places the SCLF in a potential seismic impact zone (Figure IV.1.11). Seismic Impact Zone is defined in 20 NMAC 9.1 § BR as:

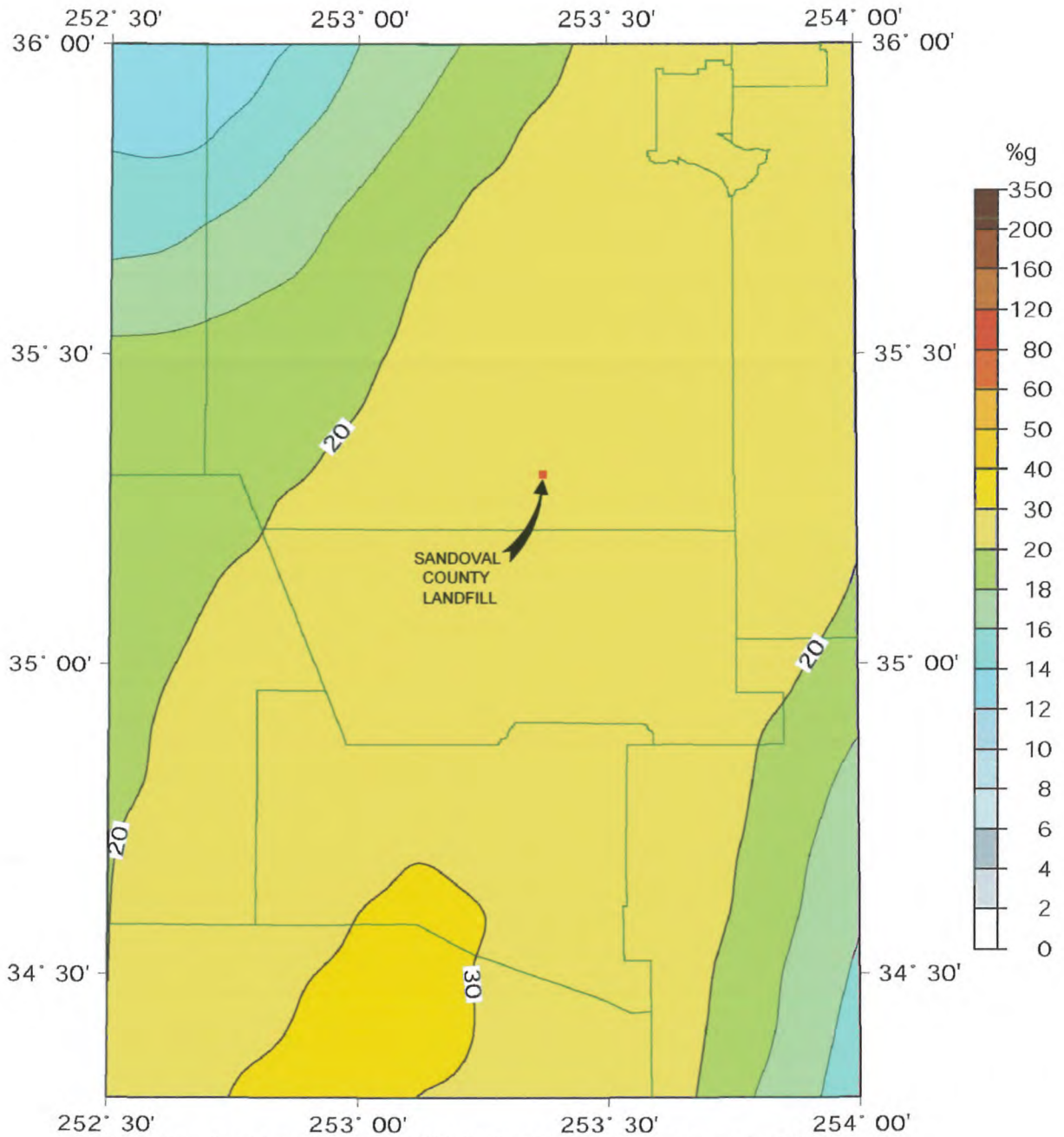
“seismic impact zone” means an area with ten percent or greater probability that the maximum horizontal acceleration in lithified earth material, expressed as a percentage of the earth’s gravitational pull, will exceed 0.10g in 250 years;

The most current mapping places most of the region in a potential seismic impact zone. Based on the latitude and longitude of the SCLF, the site’s rating of 0.22g is above the 0.10g standards. The Section 300 Siting Criteria allow for siting within the defined seismic impact zone provided that design demonstrations are made. More specifically, the environmental control systems are “designed to resist the maximum horizontal acceleration in lithified earth material for the site.” Volume III, Section 2 documents that each of the environmental control systems is designed accordingly.

14.0 UNSTABLE AREAS

Section 302 A.13 of 20 NMAC 9.1 states that:

“no municipal or special waste landfill shall be located within an unstable area unless the owner or operator demonstrates that engineering measures have been incorporated into the municipal or special waste landfill design to ensure that the integrity of the structural components of the municipal or special waste landfill will not be disrupted.”

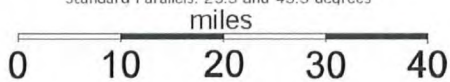


Peak Acceleration (%g) with 10% Probability of Exceedance in 250 Years

site: NEHRP B-C boundary

U.S. Geological Survey
National Seismic Hazard Mapping Project - 1996

Albers Conic Equal-Area Projection
Standard Parallels: 29.5 and 45.5 degrees



SEISMIC IMPACT ZONE

SANDOVAL COUNTY LANDFILL
RIO RANCHO, NEW MEXICO



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|------------------|-----------------------------|----------------------|
| DATE: 06/29/04 | CAD: SCLF SEISMIC.dwg | PROJECT #: 211.02.01 |
| DRAWN BY: JFP | REVIEWED BY: JAB | |
| APPROVED BY: IKG | gei@gordonenvironmental.com | FIGURE IV.1.11 |

20 NMAC 9.1, Section 105.CG defines "unstable area" as:

"a location that is susceptible to natural or human induced events or forces capable of impairing the integrity of some or all of the landfill structural requirements responsible for preventing releases from a landfill. Examples of unstable areas are poor foundation conditions, areas susceptible to mass movements, and Karst terrain areas where Karst topography, with its characteristic surface and subterranean features, is developed as a result of dissolution of limestone, dolomite, or other soluble rock. Characteristic physiographic features present in Karst terrains include, but are not limited to, sinkholes, sinking streams, caves, large springs, and blind valleys.

14.1 Poor Foundation Conditions

20 NMAC 9.1, Section 105.BG defines "poor foundation conditions" as

"those areas where features exist which indicate that a natural or man-induced event may result in inadequate foundation support for the structural components of the landfill".

Field reconnaissance of the project site, examination of soils samples collected during drilling, and regional data indicate that there are no significant near-surface deposits of highly expansive soils or collapsing soils, or other features that would impact the integrity of the landfill structural components.

14.2 Areas Susceptible To Mass Movements

20 NMAC 9.1, Section 105.G defines "areas susceptible to mass movement" as

"those areas of influence (i.e., areas characterized as having an active or substantial possibility of mass movement) where the movement of earth material at, beneath, or adjacent to the landfill unit, because of natural or man-induced events, results in the downslope transport of soil and rock material by means of gravitational influence. Areas of mass movement include, but are not limited to, landslides, avalanches, debris slides or flows, solifluction, block sliding, and rock fall".

Site investigations and review of applicable published maps and literature indicate that there is not sufficient relief in the area surrounding the Facility for mass movements to occur under foreseeable climatic and geologic conditions.

14.3 Karst Terrain Areas

Karst is the term used to describe the surface expression of soluble limestone, dolomite or gypsum areas where the roofs of caves collapse to create sinkholes. The solution of carbonate rocks occurs due to flowing groundwater. Soluble limestone is known to exist in southern New Mexico; the most famous example is the Carlsbad Caverns. The depth to Permian Age deposits under the Facility is in excess of 10,000 feet and karst terrain is not evident in the region.

Attachment IV.1.A
Army Corps of Engineers Section 404
Determination Letter



DEPARTMENT OF THE ARMY
ALBUQUERQUE DISTRICT, CORPS OF ENGINEERS
4101 JEFFERSON PLAZA NE
ALBUQUERQUE NM 87109-3435

October 14, 2003

Operations Division
Regulatory Branch

Mr. Peter H. Metzner
President, Metric Corporation
8429 Washington Place NE, Suite A
Albuquerque, New Mexico 87113

Dear Mr. Metzner:

This replies to your October 6, 2003, letter regarding a jurisdictional determination for two unnamed drainages in Rio Rancho, Sandoval County, New Mexico. We have assigned Action No. 2003 00689 to this activity. Sandoval County is proposing to expand their existing landfill into an area which contains these two drainages. The site is located near the intersection of Idalia and Iris Roads.

We have evaluated the information you provided and studied the project description and the other records and documents available to us. I met with you at the site of the two drainages on October 6, 2003. We walked along the channels of the two unnamed drainages down to the boundary of the existing Sandoval County landfill. One of the drainages is shown as an intermittent tributary to the Arroyo de la Baranca on the Loma Machete, New Mexico, 7.5' USGS quadrangle map (Site #1). The area that would be affected by the landfill expansion is located at the headwaters of this drainage. The other drainage is not shown as a waterway on the Bernalillo, New Mexico, 7.5' USGS quadrangle map (Site #2).

Neither of these drainages contain a defined channel bed or channel banks. Perennial shrubs are growing within both channels and they also do not have ordinary high water (OHW) marks. I did not observe any evidence of recent flow in the larger drainage (Site #1), but there was some evidence of recent flow (grass blades knocked flat) in the smaller drainage (Site #2).

Based on my review of the available information, including my observations during our onsite meeting, I have determined that the two sites which we visited on the unnamed drainages do not have defined channel beds and banks and OHW marks and, therefore,

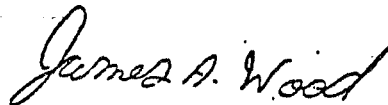
are not waters of the United States. The placement of dredged or fill material into these drainages at these two sites is not regulated under the provisions of Section 404 of the Clean Water Act and a Department of the Army permit will not be required for the landfill expansion. However, based on my observations and the available information, it is likely that these drainages do contain defined channel beds and banks and OHW marks further downstream in the watershed and are considered waters of the United States at these downstream locations.

Our disclaimer of jurisdiction is only for Section 404 of the Federal Clean Water Act. Other Federal, state and local laws may apply to the proposed work. Therefore, you should also contact other Federal, state and local regulatory authorities, if applicable, to determine whether the proposed work may require other authorizations or permits.

This jurisdictional determination will be valid for 5 years from the date of this letter unless new information warrants revision of the determination within that time.

If you have any questions regarding this determination, please feel free to contact me at (505) 342-3280 or e-mail me at james.a.wood@usace.army.mil. For more information about the regulatory program, please see our web site at www.spa.usace.army.mil/reg.

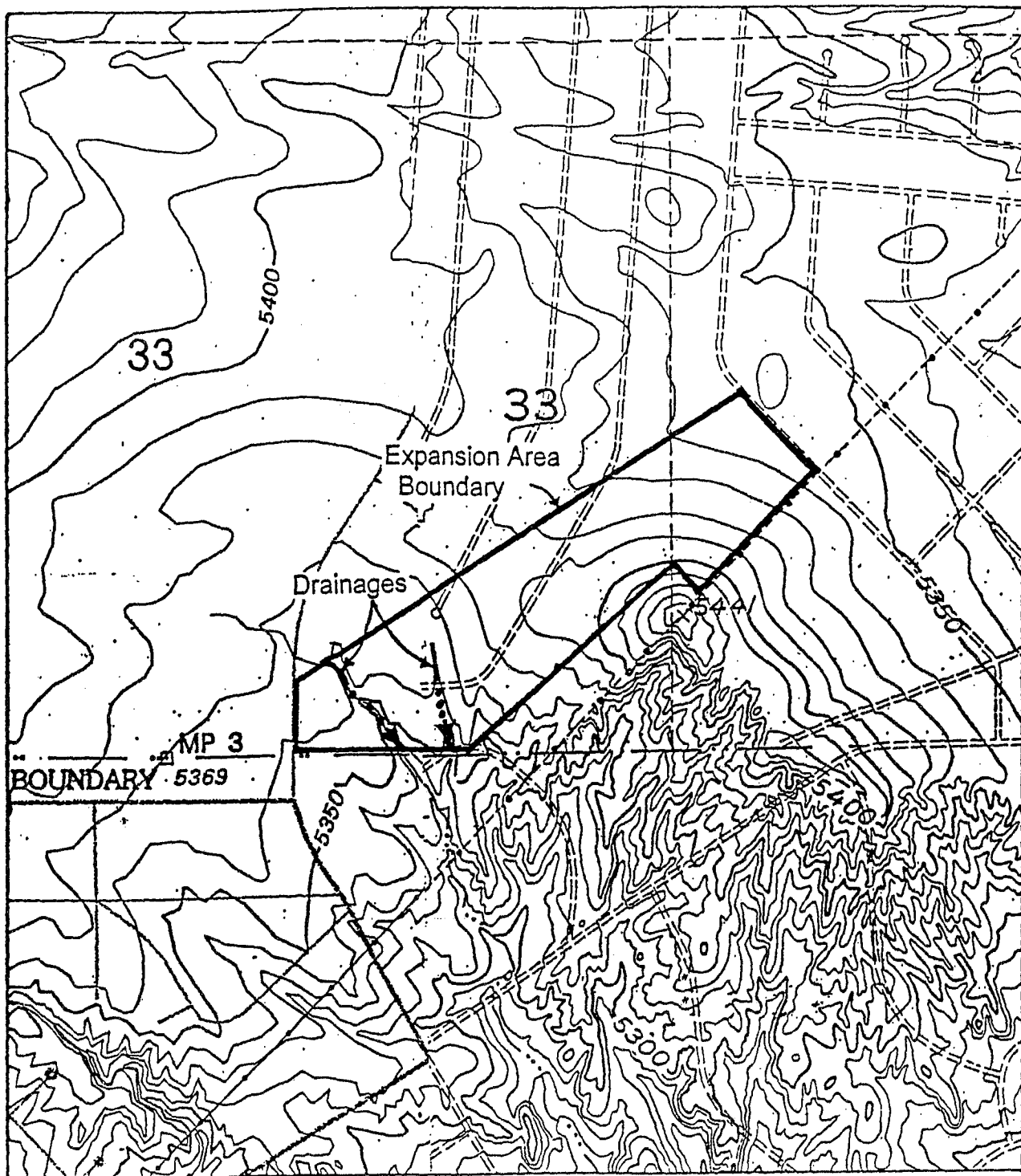
Sincerely,



James A. Wood
Regulatory Project Manager

Copy furnished:

Sandoval County
P.O. Box 40
Bernalillo, NM 87004-0040



Scale: 1 inch = 1000 feet

SUBJECT DRAINAGES
PROPOSED EXPANSION AREA
SANDOVAL COUNTY LANDFILL

Attachment IV.1.B
NMEMNRD Letter Re: Absence of mines



NEW MEXICO ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT

Bill Richardson

Governor

Joanna Prukop

Cabinet Secretary

Bill Brancard

Director

Mining and Minerals Division

April 28, 2004

MAY 26 2004

Mr. Andy Yuhas
Staff Scientist
Gordon Environmental
213 S. Camino del Pueblo
Bernalillo, New Mexico 87004

Subject: Proposed Sandoval County Landfill Site – Sections 33 & 34, T13N, R3E, NMPM, and a portion of Rio Grande Estates within the Town of Alameda Land Grant, Sandoval County, New Mexico

Dear Mr. Yuhas:

I am responding to your letters dated April 14th and April 26th, 2004, in which you requested information pertaining to the permitting of a proposed Sandoval County Landfill site in Rio Rancho, New Mexico.

I have reviewed our records pertaining Sections 33 and 34, T13N R3E, N.M.P.M. and the referenced portion of the Rio Grande Estates within the town of Alameda Land Grant and have found no history of past or current surface or subsurface mining operations in this immediate area. There are existing sand and gravel operations located approximately ½ mile to the south, near Arroyo de la Baranca. We do however, recommend that an on-site inspection be made to document any activities that are not of public record. There also appears to exist several pipelines in the area which should be identified both as to location and product. We do not have this information available in our Department.

I hope this information is beneficial to your permit application. If you have any questions or need additional information, please contact me in Santa Fe at (505) 476-3422.

Sincerely,

A handwritten signature in black ink, appearing to read "Robert M. Evetts", with a stylized flourish at the end.

Robert M. Evetts, P.E.

Abandoned Mine Land Program Manager

Attachment IV.1.C
Cultural Resource Survey of a 160 Landfill
Sandoval County, New Mexico

**CULTURAL RESOURCE SURVEY
OF A 160 LANDFILL
SANDOVAL COUNTY, NEW MEXICO**

Prepared by

**Vicky J. T. Cunningham
and
Deni J. Seymour, Ph.D.**

**LONE MOUNTAIN ARCHAEOLOGICAL SERVICES, INC.
809 ADAMS PLACE SE
ALBUQUERQUE, NM 87108**

REPORT NO. 0010

PERMIT NO. 94-073 and SP-218

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ABSTRACT

Archaeologist with Lone Mountain Archaeological Services, Inc. conducted a Class III cultural resource survey on November 18, 1994 of 160 acres for a landfill expansion project in Sandoval County, New Mexico. The survey, requested by Roy F. Weston, Inc. on behalf of the Sandoval County Landfill, is located partly in Section 33 and 34, T13N, R3E, and partly on the Alameda Grant of USGS Loma Machete and Bernalillo 7.5 quadrangle maps. The scope of work was completed in compliance with the Cultural Properties Act and the Prehistoric and Historic Sites Preservation Act.

Seven isolated occurrences and twelve archaeological site were recorded during the survey. The data potential of the isolated occurrences is considered to have been completely recorded during survey. Nine sites are recommended as eligible to the National Register of Historic Places (LA 107572, LA 107574, LA 107575, LA 107576, LA 107577, LA 107578, LA 107579, LA 107580, and LA 107581). These eligible sites must be avoided or impacts mitigated before landfill expansion. Which of these two options is selected depends on the development plan selected by Sandoval County and on its direct and indirect impacts on these sites.

Three sites are recommended as ineligible to the National Register because sufficient information has been gathered and no additional research value remains (LA 107571, LA 107573, and LA 107582). If the State Historic Preservation Office concurs with these recommendations, no additional archaeological investigations are recommended in the area of the three ineligible sites.

Because sites are located in a dunal setting and because they are situated so close to one another there is a high possibility for cultural material between the designated sites. It is therefore recommended that earth moving activities be monitored near and between sites.

INTRODUCTION

Archaeologists with Lone Mountain Archaeologist Services, Inc. conducted a Class III cultural resource survey on November 18, 1994 of 160 acres for a landfill expansion in Sandoval County, New Mexico. The project area is located outside of Bernalillo, New Mexico approximately three miles southwest of the intersection of State Highway 44 and State Highway 528 (Figure 1). The survey, requested by Roy F. Weston, Inc. (Weston), on behalf of Sandoval County Landfill, is located partly in T13N, R3E, Sections 33 and 34, and partly in the Alameda Grant of USGS Loma Machete and Bernalillo 7.5' quadrangle maps.

ENVIRONMENTAL SETTING

The project area is situated between 5300 and 5441 feet elevation within one mile to the east of Arroyo de la Baranca and just over 2 miles west of the Rio Grande. Set back from the terraces overlooking the Rio Grande, the project area is located among the dune fields of the West Mesa. Low ridges run approximately north-south through the project area, some covered with dunes, others covered with gravels which have been exposed through erosion. A commanding view of the surrounding area is provided by a knoll at the northeastern end of the landfill, the highest point in the project area. From this location the lower, flat terraces hosting the Artificial Leg sites are visible.

Vegetation consists of sandsage, snakeweed, grasses, yucca, various cacti and grasses as well as disturbance species such as tumbleweed. The project area is adjacent to and surrounds the existing Sandoval County landfill and therefore it is not surprising that some of these disturbance species are present.

CULTURAL OVERVIEW

Material for this overview was drawn from several area studies including Cordell (1979) and Vierra (1992).

Paleoindian Period

Human settlement in North America is first identified during the Paleoindian Period (10,500-5,000 B.C.). Paleoindian peoples are characterized as small, nomadic bands of hunter-gatherers who relied in part on hunting now extinct Pleistocene megafauna.

This period was originally identified at sites in northeastern New Mexico. The first conclusive evidence of early man in North America was uncovered at and named for the Folsom type site in the 1920s, which lies northeast of the study area. Folsom sites have been excavated near the study area including one in Rio Rancho. Other evidence has been collected during

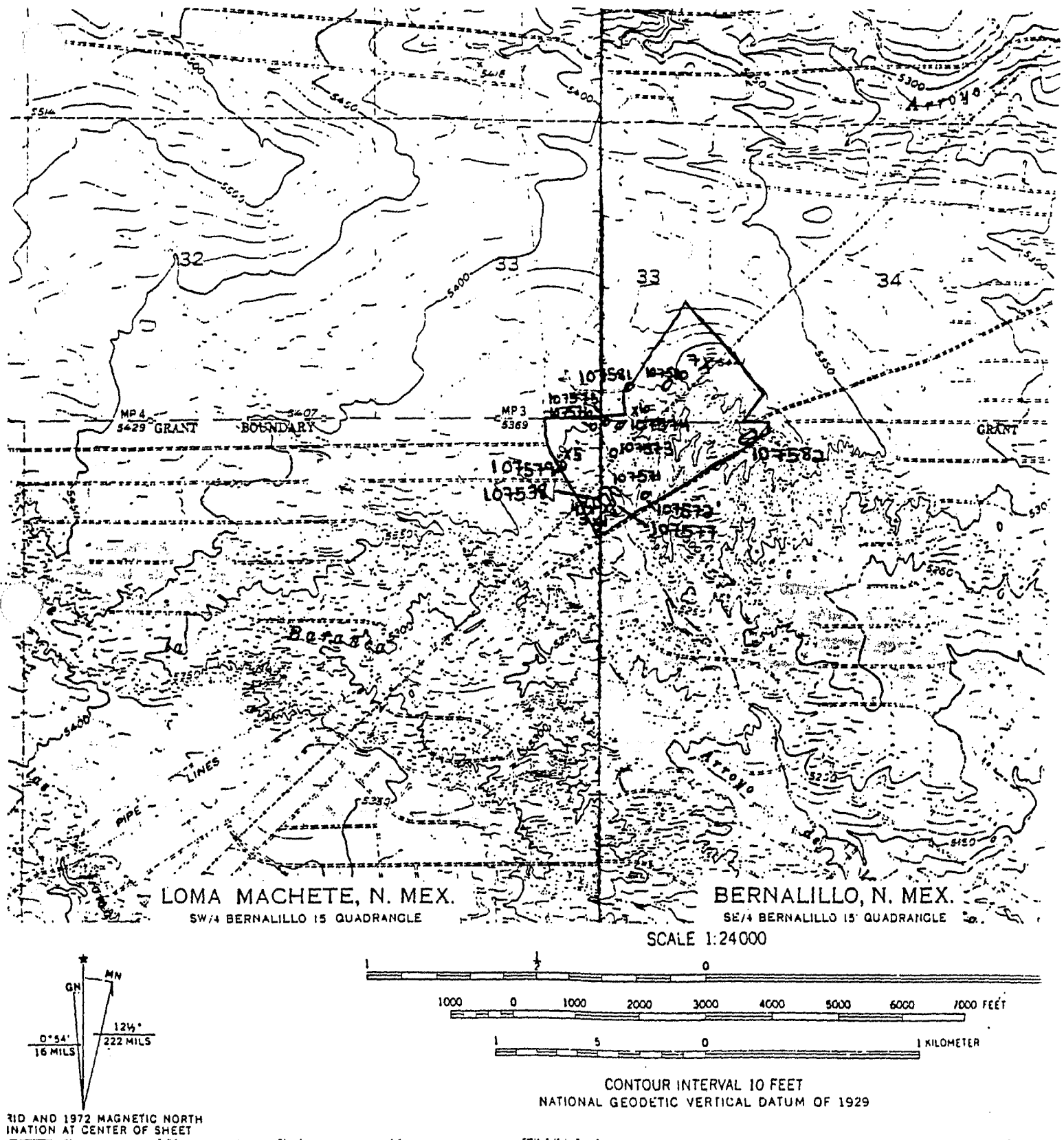


Figure 1. Project Location Map.

regional surveys. Evidence for early man predating Folsom was uncovered in Sandia Cave, near the study area. The type site for the even earlier Clovis complex, identified in 1927, was located to the southeast.

Archaic Period

Although Paleoindian groups always relied on small game and plant foods in addition to large game species, a change in subsistence strategy to full reliance on these food sources marks the transition to the Archaic (5,000 B.C. to A.D. 1000) from the Paleoindian Period. Large scale climatic changes and the extinction of the megafauna caused inhabitants to develop a more diverse subsistence base. This change in food procurement is marked by wide changes in the Archaic tool assemblage. While Paleoindian assemblages consist mainly of projectile points and meat processing tools, a growing number of ground stone implements signaling a greater reliance on plant foods are identified from Archaic sites. Other artifacts and site locations also show increasing diversity.

Early Archaic sites are marked by a variety of large projectile points, similar in appearance to earlier Paleoindian types, but cruder in execution and representing a wider range of forms. Other tool forms include one-handed manos, small scrapers, and leaf-shaped knives (Cordell 1979:25-26).

A number of sites dating to this time period are located near the study area. A variant of the Archaic called the Upper Rio Grande Culture has been defined on the basis of local manifestations of tool assemblages. Sites are generally located well above the flood plain and occur as exposed lithic deposits.

Archaic/Early Ceramic Transition

After A.D. 200, evidence of an emerging reliance on agriculture signals a shift in subsistence technology. Hunting and gathering strategies are augmented by the addition of corn and other crops. Cord marked pottery occasionally appears in sites from this period, and the bow and arrow are added to the tool kit.

Sites identified as Basketmaker II in surrounding areas have been located near the study area where they are also termed Developmental. Basketmaker II was first identified in the San Juan Basin area in northwestern New Mexico and southwestern Colorado. Shallow, round pithouses with masonry walls, corner-notched projectile points and the absence of pottery characterize sites from this period. Sites in the north central area of New Mexico are consistent with those from the type area.

Ceramics first appear in the record during Basketmaker III- Pueblo I times or around A.D. 500. This date is based on a type site west of Bernalillo. Other sites from this period occur in the area and are characterized by the appearance of Lino Gray ceramics. Pithouses, found at a number of sites in the Albuquerque/Bernalillo area, represent the principal dwelling type for this period.

Pueblo Period

Through time, human settlement along the Rio Grande becomes more and more adapted to an agricultural lifestyle. Villages become larger and pottery types proliferate. Pithouses continue to be the primary occupation type during the Pueblo II (A.D. 900-1100) and III (A.D. 1100-1300) periods, but above ground residences become increasingly popular towards the end of the era. Population grows and settlement along the river is increasingly dense.

The Pueblo IV (A.D. 1300-A.D. 1600) period is also known as the Rio Grande Classic and marks a florescence when population along the northern Rio Grande reaches its maximum prehistoric extent. Large aggregated communities, featuring complex architectural forms, are common with the pueblos of Kuaua, Alameda, Puaray, Tijeras and San Antonio occurring near the study area. These pueblos were occupied when the first European explorers arrived in the area in 1540 and continued to be the primary residence for local populations until colonization became established around 1600 and brought radical change to the region.

Protohistoric/Historic Period

The passage of Francisco Vasquez de Coronado through the northern Rio Grande River Valley in 1540-1542 had a significant impact on the Bernalillo area. It is believed that Coronado's expedition, numbering in excess of 1000 people, wintered at or near the pueblo of Alcanfor, which some believe is Kuaua. Other entradas, including those of Chumascado and Rodriguez (1581), Espejo and Beltran (1583) and Onate (1598) also passed through the area. After colonization and before the Pueblo Revolt of 1680, the Bernalillo area was settled by Spanish colonists although Bernalillo is not listed on a 1680 map. Following the reconquest, a villa was established at present day Albuquerque in 1706 which consisted of 12 families who had previously lived in Bernalillo. Bernalillo itself was established by land grant in 1701.

Spanish settlement brought the introduction of new technologies including the use of metal, glazed ceramics, and domestic animals. Site patterns and densities changes reflecting the reorganization of indigenous peoples to meet Spanish labor needs and the rapid reduction in population due to the introduction of Old World diseases.

METHODS

Prior to entering the field a Class I site files check was conducted at the Laboratory of Anthropology. This check revealed no sites in the project area but three sites (LA 55503, LA 99709, and LA 102932) are known from within one mile of the project area. LA 55503 is an Anasazi site of unspecified date with chipped stone artifacts and ceramics. LA 99709 is a chipped stone, ground stone, and ceramic scatter with fire-cracked rock/burned caliche and an undefined rock alignment which dates to the Pueblo IV (A.D. 1330) to Pueblo IV (A.D. 1600) period. LA 102932 consists of a chipped stone scatter with an undefined rock alignment but the date of this site is unknown.

The boundaries of the proposed development were indicated in the field by Randy Gabriel of Weston and Mike Foster and Lee Yardman from the Sandoval County Landfill. The boundaries of the project area had been staked in the distant past but were barely visible during this work. In some areas boundaries were indicated by fence lines and roads. The area was surveyed by individuals walking multiple, parallel non-overlapping transects spaced at 50 ft. (15 m) intervals. Copies of the corresponding USGS quadrangle map and an aerial project map, provided by Weston, were carried in the field for locational reference and to plot any cultural resources found.

For this survey, sites were defined in accordance with the guidelines established by the Cultural Properties Act and the Prehistoric and Historic Sites Preservation Act. Sites are defined as "any" physical location of past human activities or events. Cultural resource sites are extremely variable in size, and range from a cluster of several objects or materials to structures with associated objects and features. A site may consist of secondarily deposited cultural resource remains. Features such as hearths, cairns, rock alignments, masonry concentrations, burned adobe, fire cracked rock (when it appears in a coherent mass suggesting a feature), cists, corrals, pictographs, etc. are recorded as sites.

When cultural remains are encountered, a determination is made as to whether they are an isolated occurrence (IO) or a site. IOs are isolated cultural remains that do not qualify as sites and generally consist of single artifacts or artifact scatters that are of extremely low density and are widely dispersed. If sites are encountered boundaries are defined and a map made. Sites are recorded using a Laboratory of Anthropology site form and black-and-white photographs are taken showing the setting of the site. Trowel tests are excavated in locations most likely to reveal subsurface cultural deposits. A datum spike and aluminum tag is placed in the site and plotted on the site map and the site itself is plotted on the USGS quadrangle map.

RESULTS

The findings of the survey include twelve archaeological sites and seven isolated occurrences as shown in Figure 1. All cultural remains encountered are prehistoric in age.

Site Descriptions

Twelve sites were encountered during the survey of the Sandoval County Landfill. These are briefly described below. All are prehistoric sites and most are not clearly classified as to age but appear to be Archaic/Basketmaker, however, this assessment is based on the presence of chipped stone artifacts, fire-cracked rock, and a lack of ceramics. One site has a single sherd indicating it may date to the Pueblo II through Pueblo III period (A.D. 1200-1300).

Site Number: LA 107571

Field Number: 0010-01

Site Size: 290 x 150 ft (88 x 46 m)

This site consists of a dispersed chipped stone scatter and chipping station located on a ridge top and associated slope. The scatter varies in density throughout the area, increasing in density in areas where naturally occurring lag gravels are present. These locations are generally near the top and edges of the ridge where a change in grade results in the exposure of an underlying stratum of these materials. Core reduction debris abound in these areas. Some variation in material types are apparent but all appear to be locally available in the exposed stratum. A random sample of the surface artifacts (15%) was taken. The local pedernal chert cobbles and gravels appear to be heavily utilized and represent the largest concentration of materials present. Recorded artifacts include: Pedernal chert cortical primary flakes (n=5), partial cortical flakes (n=5), cortical angular debris, two primary irregular cores, and one secondary simple core; one white chalcedony partial cortical flake; and a single orange chert non-cortical secondary flake.

One concentration of artifacts was identified as a chipping station (Feature 1). The area measures approximately 5 x 5 m and is located on an gravel outcrop (knoll) on the ridge. The feature represents a core reduction area; local black and white pedernal chert was utilized. A 35% random surface recording of surface artifacts yield four non-cortical secondary flakes, one cortical piece of angular debris, and one cortical primary flake.

A trowel test on the ridge top revealed the presence of non-cultural sands and gravels for more than 30 cm. For this reason there is minimal potential for subsurface cultural remains on the ridge top. Cultural deposits are possible on the lower slope margins, in the saddles between the ridges where sand overlies the sterile stratum.

Three site have been identified in this general location: 0010-1, 0010-7, and 0010-8. Site boundaries have been established on the basis of the spatial extent of artifacts and features and by the limits of topographic features, particularly ridges and washes. However, these sites are found on adjacent ridges and are similar in size, cultural activities, and topographic and environmental parameters. The sites have been recorded as separate entities, but subsurface cultural remains may be found in the saddles, on ridge slopes, or on connecting ridge segments, and the sites may therefore represent a single, widespread use area where a similar range of activities was conducted.

Site Number: LA 107572

Field Number: 0010-02

Site Size: 25 x 30 ft (8 x 9 m)

This small site is found on a southwestern slope of a low ridge. The site consists of a light and spatially restricted chipped stone scatter and a subsurface basin shaped hearth (Feature 1). Several pieces of possible fire-cracked rock were also found on the gravely surface of a slope

suggesting that additional features may be present. The subsurface hearth (Feature 1) is exposed in the profile of a bull dozer cut, part of the hearth has been removed as a result of these activities. The chipped stone scatter is located on the edge of the ridge where a change in grade has resulted in the exposure of an underlying stratum of naturally occurring chert cobbles and gravels. Some variation in utilized material types is present but all are local materials. A 35% random surface artifact sample was taken: Pedernal chert is represented by a total of two artifacts, a single piece of cortical angular debris and a primary simple core; five white chalcedony artifacts, one cortical primary flake, two partial cortical flakes, and two primary irregular cores; a pink chalcedony partial cortical flake; a tan chert cortical primary flake; a pink quartzite cortical primary flake; and a white quartzite hammerstone with moderate battering on two ends.

Feature 1 consists of basin shaped hearth of unknown dimension. The exposed profile reveals a black-gray ash and charcoal stain approximately 10 cm below the present ground surface; the features itself has a depth of about 25 cm. Charcoal flecks and staining are found in the same stratum on either side of the feature for up to 4 m away. No structures or occupation surfaces were identifiable from scraping the profile but more extensive profile cleaning could reveal additional features. The presence of possible FCR elsewhere on the site provides further evidence for subsurface cultural remains on this site.

Site Number: LA 107573

Field Number: 0010-03

Site Size: 125 x 145 ft (38 x 44 m)

This site consists of a disperse scatter of chipped stone material on a ridge top and slope. Like Site 0010-01, this site appears to be a quarry/core reduction area. Local erosional gravels appear to be the source of all lithic raw materials utilized. A 20% random surface artifact sample was recorded. Recorded artifacts include: two pedernal chert primary irregular cores; five pedernal chert partially cortical flakes and one non-cortical secondary flake; one non-cortical piece of angular debris; a white chalcedony partial cortical flake with bimarginal retouch; and a possible cortical bifacial thinning flake. A trowel test revealed that there is little potential for subsurface cultural fill and no evidence of features was noted on the surface.

Site Number: 107574

Field Number: 0010-04

Site Size: 100 x 180 ft (30 x 55 m)

This site is a dispersed, low density chipped stone and ground stone scatter on an alluvial fan on the eastern slope of a ridge. The site appears to be an area of core reduction with other activities indicated by the presence of a unifacial, unshaped sandstone mano. This is one of two pieces of groundstone found during the survey. This tool is clearly expedient and may have been collected from the sandstone eroding from the walls of the adjacent arroyos. With regard to the chipped stone assemblage, local raw materials from erosional gravels were utilized. Chipped stone artifacts include: a black basalt partial cortical flake, a gray chalcedony non-cortical

secondary flake, a non-cortical Pedernal chert secondary flake and primary irregular core, and a red chert secondary irregular core.

Feature 1 is a chipping station on the southeastern margin of the site. The area is in a aeolian "blowout" and measures approximately 5 m in diameter. Artifacts from the chipping station were recorded separately and consisted of red chert core reduction flakes. A 75% surface artifact analysis yielded one cortical primary flake, one partially cortical flake, and four non-cortical secondary flakes. No cores or lithic reduction tools were found in the chipping station boundaries but were recovered from other areas of the site.

Two trowel tests were dug on site to establish if a potential for subsurface cultural deposits existed. Trowel test number one (TT 1) revealed 10 cm of homogenous sand overlying gravel. TT 2 had a continuation of the sand past the 10 cm level. Although no cultural fill was present it is still possible that there are subsurface remains.

Site Number: LA 107575

Field Number: 0010-05

Site Size: 70 x 130 ft (21 x 40 m)

This site is a small disperse lithic scatter with a possible feature. The site is located on a hill top and continues to the southwest along the slope. Local erosional gravels are being utilized for lithic raw materials. This site differs from several of the others in that a wider range of materials are being utilized and observed flakes were non-cortical and may be related to tool production instead of core reduction. A random 55% surface record of artifact found the presents of seven non-cortical secondary flake of white chalcedony (n=3), gray chalcedony (n=2), and black basalt (n=2) one of which is a bifacial thinning flakes. Two cortical primary flakes were recorded; one tan chert and a gray chalcedony. The remaining flake is a partial cortical gray chalcedony.

Feature 1 is a concentrated scatter of burnt quartzite and chert with a total of approximately 10 pieces. Two trowel test were dug on either side of the feature but no cultural fill was found. The feature may be a deflated hearth or may be an indicator that there is subsurface cultural deposits.

Site Number: LA 107576

Field Number: 0010-06

Site Size: 65 x 100 ft (20 x 30 m)

This site is located on a hill top and slope 120 ft (37 m) to the west of 0010-05. The two sites are separated by a drainage, but appear in the similar topographic and environmental locations. Site 0010-06 has two clusters of artifacts that are found in aeolian "blowouts" and are

separated (15 m) by alluvial sands. Two trowel tests in Cluster 1 found the sands to be up to 30 cm in depth. Subsurface deposits may connect the two clusters below dunes.

Artifacts from each cluster were recorded separately. Both clusters show that local erosional gravel were being utilized. Cluster 1 artifacts include: three non-cortical secondary flakes of gray chalcedony (n=2) and white and pink chalcedony (n=1). A gray chalcedony primary irregular core was also found. One white chalcedony primary irregular core and six flakes were found in Cluster 2; two white chalcedony partial cortical flakes, two white chalcedony non-cortical secondary flakes, and two cortical primary flakes, one each of white and Pedernal chert.

There is a possible feature in Cluster 1. It consists of burnt rock, but no evidence of charcoal and ash were found during the trowel test.

Site Number: LA 107577

Field Number: 0010-07

Site Size: 570 x 140 ft (174 x 43 m)

This site, a dispersed lithic scatter of primary core reduction debris, biface reduction debitage, and thermal features, is located on a dune-covered ridge and an associated slope. The scatter varies in density throughout the area, increasing in density in areas where naturally occurring gravels are exposed. These locations are generally near the edges or spine of the ridge where a change in grade results in the exposure of an underlying stratum of these materials. Core reduction debris abounds in these areas. Some variation in material types are apparent but all are locally available within the gravels.

Lithic artifacts total in the 100's, but to condense the data base only a representative sample of surface lithics was recorded. Artifacts found in a 1 m N-S transect (174 m) were predominately Pedernal chert in various stages of flake reduction: cortical primary flakes (n=1), partial cortical flakes (n=4), a non-cortical secondary flake and piece of angular debris, and a primary simple core were recorded. A white chert non-cortical secondary flake and primary irregular core and a tan chert primary simple core make up the remaining recorded assemblage.

Two features are found within the site boundaries. Feature 1 has a tool production activity area (biface thinning flakes) and a probable deflated hearth. The true boundaries of this activity area are undefinable because of bulldozer activities associated with the installation of a powerline on the northern end of the site, but an area estimated of 20 x 22 m has been established using the extent of the artifacts. A core and twelve reduction flakes were recorded, this sample represents a 20% random surface sample of the tool reduction area. Three white chert and one basalt bifacial thinning flakes were recorded; of these, one of the chert flakes has been heat treated. A red chert non-cortical secondary flake has also been heat treated. The remaining recorded lithics include: a non-cortical tan chert angular debris; a partial cortical and a non-cortical secondary basalt flakes; one partial cortical and two non-cortical Pedernal chert

flakes; a white chert non-cortical secondary flake; a pink granular chert non-cortical secondary flake; and a white chalcedony primary irregular core.

A cluster of burnt and cracked rock that is probably the remains of a deflated hearth was also found in this area. Trowel tests revealed sand to over a depth of 10 cm but no ash or charocal was found. The hearth may have been used to the heat treat lithics found on this site and thus adds another dimension to this tool production area.

Feature two is a cluster of possible burnt rock on the south end of the site. A trowel test in the area revealed only non-cultural homogenous sands to a depth of 20 cm. The existence of cultural deposition for this site has been addressed in the Site 0010-1 summary.

Site Number: LA 107578

Field Number: 0010-08

Site Size: 190 x 80 ft (58 x 24 m)

This site is a dispersed lithic scatter with a possible thermal feature that is similar to Sites 0010-1 and 0010-7. The area is linked to core reduction strategies in association with eroding gravel bars. Raw material use varies, but all are available on site. A 30% random surface sample was recorded for the lithics on the site. The sample includes: a piece of cortical Pedernal chert angular debris and a partial cortical flake; a basalt cortical primary flake; a white chert partial cortical flake; a white chalcedony non-cortical secondary flake; and a white quartz cortical primary flake. Cores are represented by a Pedernal chert primary irregular core and a white quartz primary simple core.

A possible feature was found in the northern section of the site. This is a small cluster of fire-cracked rock. Trowel tests did not reveal any ash or charcoal.

Site Number: LA 107579

Field Number: 0010-09

Site Size: 25 x 85 ft (8 x 26 m)

This small sherd, ground stone, and chipped stone scatter with a possible associated feature is situated on a flat sandy area just east of Iris Road. Few artifacts are visible on the surface but relatively high artifact diversity and high spatial integrity characterize this site. The main portion of the site consists of a chipping station, complete with a quartzite hammerstone and a pedernal brownish-white chert core with partially cortical and noncortical flakes of the same material. All of these materials are locally available and represent activities characterized on the other sites in the project area. The remaining chipped stone artifacts on the site are consistent with the others and many are of the same material while others are a plain white chalcedony. Ninety-nine percent of the assemblage was analyzed in the field, however, isolates located nearby may be related to this site.

This site is unique in the project area in that one sherd, a probable Santa Fe Black-on-White sherd (A.D. 1200-1300), was found at the southern end of the site. This sherd provides a more reliable date for this site than is available for any other sites in the survey area although no paint was preserved on the surface of this bowl sherd.

A single mano fragment was noted between the sherd and the chipping station, suggesting that an even wider range of activities may have occurred at this site. This artifact appears to be burned and a second piece of angular rock that may be fire cracked is located nearby. Together these two items indicate the presence of a thermal feature, although no surface discoloration was visible and two trowel tests in the immediate vicinity revealed only homogeneous sand. No features were visible in the profile cut along Iris road but the spatial integrity of the artifacts and the presence of burned rock suggest a strong possibility of buried cultural deposits. Isolated occurrences located to the north and dunes situated to the east suggest that there is a high probability that the site is much larger and that there are buried cultural deposits over a much more extensive area.

Site Number: LA 107580

Field Number: 0010-10

Site Size: 125 x 355 ft (38 x 108 m)

This chipped stone scatter is located in the north portion of the project area among low but extensive dunes. Three loci were defined, each is an area where artifacts are exposed as a result of erosion. Artifact density is low in each of the three loci and few items occur between the three loci. These areas were included in one site because of the high likelihood that cultural material is located in the intervening areas that are not eroded.

Locus A is situated at the eastern edge of the site and is highest in elevation. Artifacts are exposed in a shallow erosion channel that is cutting into the dune-covered ridge. All artifacts were analyzed and include 1 white quartzite hammerstone, and at least two colors of pedernal chert flakes including cortical (n=2), partially cortical (n=1), and noncortical (n=1) flakes and two pieces of angular debris. Materials are located both in the channel and on the sloping margins suggesting that artifacts are eroding out in place. A trowel test along the margin of the wash revealed at least 10 cm of homogeneous sand and no evidence of buried cultural remains.

Locus B is a low density chipped stone scatter near a small juniper tree. Erosion has exposed three flakes: a banded brown chert partially cortical flake and two tan-white cortical flakes. Erosion is less severe in this area than elsewhere on the site likely accounting for the lower density of cultural material present.

Locus C is situated at the eroded western end of the low ridge on which all of these loci are located. Erosion is severe and artifacts are located on the top and slopes of the ridge as well as in the wash at the base of the slope and on the slope of the ridge on the other side of the wash.

Most of the artifacts in this locus were analyzed and include three partially cortical flakes and two pieces of angular debris, all of white chalcedony or pedernal chert.

Site Number: LA 107581

Field Number: 0010-11

Site Size: 45 x 100 ft (14 x 30 m)

This site lies at the boundary of the landfill property and has been exposed as a result of disturbance related to use of a deeply entrenched road that parallels the north end of the property. The site consists of a light scatter of chipped stone artifacts and fire-cracked rock scattered along a narrow linear corridor for 60 meters. Most artifacts are exposed in the base and on the slope of the road cut but some items are present to the north of the road cut and outside the landfill property. These may indicate that there are intact cultural deposits at the site.

The artifact assemblage includes debitage, cores, and a core tool. Approximately 60% of the surface assemblage was analyzed and includes a number of artifacts of white chalcedony and black and white chalcedony including a partially cortical flake (n= 1), angular debris (n=2), noncortical flakes (n=2), and cores (n=3), including a unifacial core tool.

The densest concentration and highest diversity of artifacts occurs at the west end of the site. Fire-cracked rock is also present in this area on the slope of the road cut. Two trowel tests near this FCR did not expose charcoal or ash but demonstrated the depth of the sand deposits. Clearly there is a high likelihood of buried cultural material north of the road and perhaps south of the road on landfill property.

Site Number: LA 107582

Field Number: 0010-12

Site Size: 85 x 660 ft (26 x 201 m)

This site is an extensive quarry area located on the far southeastern edge of the project area. Artifacts are exposed on eroded, gravel-covered ridge fingers that trail down from the higher ridge to the north. The gravels and pebbles exposed are from the sterile, precultural stratum that is found beneath the dunes throughout the project area. As elsewhere in the landfill expansion area, these raw materials were exploited leaving evidence in the form of core reduction debris. Each of the ridge fingers has some lithic debitage present on its middle to lower extent. owing to excessively strong winds only a single 1 x 1 m analysis unit was examined but cursory inspection of the remainder of the project area indicates that this unit is typical of the entire site in density of artifacts, type of artifacts, and materials selected. The 1 x 1 m unit contained five artifacts plus a tested cobble all of brownish white chalcedony. These artifacts included 3 cortical flakes, 1 partially cortical flake, and one piece of angular debris. In addition, this unit contained two pieces from a tested cobble that were refit.

Other naturally occurring materials at this site include quartzites and cherts of a variety of colors. Artifact density varies depending on the availability of nodules on the surface of the site.

No depth is apparent at this site. The slopes are quite steep and the ridge fingers narrow. Raw nodules are present on the surface owing to excessive erosion of top soil and exposure of the underlying precultural layer. This site appears to have served solely as a lithic procurement area where nodules were obtained, tested, and tossed.

Isolated Occurrences

Seven isolated occurrences were recorded during the survey (Table 1). These include a chipping stations and core reduction flakes. A single flake (IO 4) was found eroding from a small ephemeral drainage at a depth of 15 cm below present ground surface. All recorded artifact are of locally available materials that were derived from small raw nodules on the surface or that have eroded out of substrate. The recorded IOs reflect the same use patterns that are identified by the sites.

Table 1
List of Isolated Occurrences

| IO # | Description |
|-------------|---|
| 1 | 1 pedernal chert primary irregular core 1 partial cortical pedernal chert flake (from core) |
| 2 | 2 non-cortical white chert secondary flakes 1 partial cortical pedernal chert flake |
| 3 | 1 partial cortical pedernal chert flake |
| 4 | 1 non-cortical pedernal chert flake |
| 5 | 1 partial cortical pedernal chert flake |
| 6 | 3 partial cortical white chalcedony flake |
| 7 | 1 gray-white chalcedony secondary irregular core 1 white chalcedony primary simple core 1 pink quartzite hammerstone 1 black-white chalcedony non-cortical secondary flake 1 brown quartzite cortical primary flake 1 gray basalt non-cortical secondary flake 1 gray chalcedony non-cortical secondary flake |

Discussion

Most sites encountered in the project area exhibit evidence of primary core reduction activities. Even those with evidence of a wider range of activities also possess evidence suggestive of this activity. This indicates that the natural gravels exposed on ridges in the area were utilized as a source of raw lithic material during at least a portion of prehistory. One site (LA 107579) also possesses a sherd, indicative of a particular time period and perhaps a different or wider range of activities. Another site (LA 107577) shows clear evidence of biface reduction and perhaps sharpening debris, indicating that a wider range of activities, namely tool preparation and maintenance occurred here. One other site (LA 107574) possesses a piece of expediently prepared ground stone, indicating that perhaps this tool was used in chipped stone tool production, core reduction, or for food preparation activities. Another site (LA 107579) has a formal, shaped mano fragment that was burned in a fire pit, again indicating a more diverse range of activities at this site.

Seven sites have evidence of fire-cracked rock (LA 107572, LA 107575, LA 107576, LA 107577, LA 107578, LA 107579, and LA 107581) and on one of these (LA 107572) a basin shaped fire pit is visible in the profile of a bulldozer cut. No fired rock is present in this fire pit at LA 107572 although possible fire-cracked rock is present on the site. This difference in morphology may suggest that two different types of thermal features were used in this area, perhaps indicating different types of activities. Heat-treated flakes on one site suggest a possible use for one type of thermal features, although it is possible that these fire pits were used for other purposes by small groups of people.

Of the 12 sites encountered during this survey diagnostic artifacts were found on only one (LA 107579). This suggests a Pueblo II - Pueblo III date for this site (A.D. 1200-1300). The other sites in the project area are similar, although they lack ceramics. Based solely on the presence of chipped stone, the lack of ceramics, and the presence of fire-cracked rock these sites fit the description of Rio Rancho Phase sites described by Reinhart (1967).

RECOMMENDATIONS

Seven isolated occurrences and twelve archaeological site were recorded in the project area. The data potential of the isolated occurrences is considered to have been completely recorded during survey. Nine sites are recommended as eligible to the National Register of Historic Places (LA 107572, LA 107574, LA 107575, LA 107576, LA 107577, LA 107578, LA 107579, LA 107580, and LA 107581). These eligible sites must be avoided or impacts mitigated before landfill expansion. Which of these two options is selected depends on the development plan selected by Sandoval County and on its direct and indirect impacts on these sites. If sites cannot be avoided a data recovery plan will be required that outlines the research focus and designates a work plan for excavation of these sites. Excavation typically proceeds in two phases including a testing phase and a data recovery phase. Once excavations are complete the adverse impacts to the site will have been mitigated and development may proceed in these areas.

Three sites are recommended as not being eligible to the National Register (LA 107571, LA 107573, and LA 107582). If the State Historic Preservation Office concurs with these recommendations, no additional archaeological investigations will be required in the area of the three ineligible sites.

Monitoring may be required near and between sites even if sites can be avoided. While twelve sites were identified these might just as well be defined as loci in a single larger site as they are similar in nature and close in proximity. As defined, each site is separated from others by clear topographic breaks or a substantial decrease in the density and distribution of cultural material. However, sites are situated in the dunes which are likely to obscure the full extent of cultural remains. Therefore, while boundaries were drawn to correspond to the actual distribution of cultural remains visible on the surface, there is a high likelihood of cultural remains expanding beyond boundaries, particularly because isolated artifacts were found in these adjacent areas. Artifacts of sufficient densities to be designated as sites are often exposed in highly eroded locations where the sand has blown away and the naturally occurring gravels in the underlying stratum have been exposed. Dunes located adjacent to highly eroded areas are also likely to contain intact cultural material. Where densities warranting site designation are found in uneroded locations in the dunes, the impression is gained that there is a substantial amount of unexposed material under the surface. For these reasons, monitoring may be advisable in and between the eligible sites.

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- 1967 The Rio Rancho Phase: A preliminary report on Early Basketmaker Culture in the
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Vierra, Bradley

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Mexico Archaeological Council Special Publication 1. July 1992.

Attachment IV.1.D
SHPO Clearance Letter (1994 Survey)



GARY E. JOHNSON
GOVERNOR

STATE OF NEW MEXICO
OFFICE OF CULTURAL AFFAIRS
HISTORIC PRESERVATION DIVISION

VILLA RIVERA BUILDING
228 EAST PALACE AVENUE
SANTA FE, NEW MEXICO 87503
(505) 827-6320

MICHAEL ROMERO TAYLOR
DIRECTOR

August 7, 1995

David Duran
Permit Section Manager
New Mexico Environment Department
Solid Waste Bureau
P.O. Box 26110
Santa Fe, NM 87502

Dear Mr. Duran:

We are writing to notify your bureau of the completion of the archaeological field work for the proposed Sandoval County landfill, Sandoval County, New Mexico. This work is being conducted in compliance with Section 302 of the New Mexico Solid Waste Management Regulations.

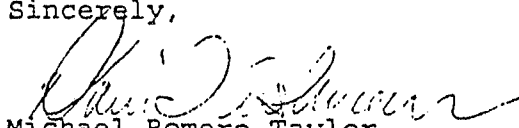
Of the twelve archaeological sites that were found during the survey of the proposed landfill expansion area, ten sites were recommended by our office for additional testing or data recovery. All field work on these sites has been completed to our satisfaction; additional analyses and report production are required to complete the investigation. In our opinion, construction of the landfill may begin pending your approval of the permit application. We recommend that completion of the follow up analyses and report production within twelve months of the issuance of the permit be added as a permit stipulation.

This project has gone extremely well from our perspective. Significant archaeological information has been recovered with a minimum of cost and time delays. We would like to thank Sandoval County, Roy F. Weston, Inc., and Lone Mountain Archaeological Services, Inc., for their close cooperation with our office during this project.

If you have any questions, please contact David Cushman of our staff.

Thank you.

Sincerely,


Michael Romero Taylor
State Historic Preservation Office

MRT/DWC: 47934

Attachment IV.1.E
An Archaeological Survey of 62.3 acres of the
Sandoval County Landfill

AN ARCHEOLOGICAL SURVEY OF 62.3 ACRES OF SANDOVAL COUNTY LAND
IN T13N R3E, SECTIONS 33 AND 34, ADJACENT TO THE EXISTING
SANDOVAL COUNTY LANDFILL,
ON THE ALAMEDA GRANT, SANDOVAL COUNTY, NEW MEXICO
FOR
METRIC CORPORATION

Quivira Research Center Publications 458

Prepared under Contract

between

Quivira Research Associates and METRIC Corporation

State of New Mexico Archaeological Survey Permit #03-004
expires December 31, 2003

NMCRIS Activity No. 85513

by

Carol J. Condie

October 2003

1809 Notre Dame NE
Albuquerque, New Mexico 87106
(505) 255-9264

**AN ARCHEOLOGICAL SURVEY OF 62.3 ACRES OF SANDOVAL COUNTY LAND
IN T13N R3E, SECTIONS 33 AND 34, ADJACENT TO THE EXISTING
SANDOVAL COUNTY LANDFILL,
ON THE ALAMEDA GRANT, SANDOVAL COUNTY, NEW MEXICO
FOR
METRIC CORPORATION**

ABSTRACT

An intensive (100%) archeological survey was conducted by Quivira Research Associates on October 16, 2003 of 62.3 ac of Sandoval County land in T13N R3E Secs. 33 and 34 on the Alameda Grant for the Sandoval County Landfill (via METRIC Corporation), who propose to expand the existing landfill. The purpose of the project was to permit compliance with the National Environmental Policy Act of 1969 and the National Historic Preservation Act of 1966, as amended.

QRA identified six isolated objects (IO) but no previously unrecorded sites. The most recent listing of cultural properties in New Mexico shows no sites on or pending nomination to the State Register of Cultural Properties [SR] or the National Register of Historic Places [NR] in or immediately adjacent to the study area. Archeological Records Management Section [ARMS] files show one site, LA 107581, within the study area. The site was identified by Lone Mountain Archeological Services in 1995. Testing had been initiated at LA 107581 when it was discovered, via a cadastral survey, that the site was on private land. Testing ceased, but enough information had been gained to allow the State Historic Preservation Officer [SHPO] to make a determination that LA 107581 was eligible to the NR under Criterion (d). Numerous additional sites have been recorded (see ARMS files) within a 1-mi radius around the study area, but none are close enough to be affected by project activities.

QRA recommends that clearance be granted for this project with the exception of the area of LA 107581, plus a 30-ft/10-m buffer zone around the site. It is always preferable that sites be avoided, but since avoidance is probably not possible for LA 107581, QRA recommends that a data recovery plan be prepared and submitted to the Cultural Properties Review Committee [CPRC]. Data recovery should be conducted after consultation with the CPRC and the SHPO.

INTRODUCTION

Project description/proposed modification: Sandoval County proposes to expand the existing land fill. Both surface and subsurface modification will occur.

Date fieldwork performed: October 16, 2003.

Sponsoring agency: Sandoval County.

Project sponsor: METRIC Corporation, 8429 Washington Place NE, Suite A, Albuquerque, NM 87113, (505) 828-2801. **Company representative:** Peter H. Metzner.

NMCRIS Activity No.: 85513.

Permit authority: State of New Mexico Archaeological Survey Permit #03-004; expires December 31, 2003.

Field crew: Carol J. Condie (P.I.), Monte S. Ballejos, Landon D. Smith, Dan W. Stiteler, and Erik R. Stout.

Land status: Sandoval County.

Total area surveyed: 62.3 ac/25.2 ha.

Map reference: USGS Bernalillo, NM 7.5' quad, 1972 (35106-C5), and Loma Machete, NM 7.5' quad, 1972 (35106-C6). Scale both maps: 1:24,000. Contour interval both maps: 10 ft.

Location (Fig. 1): Legals: T13N R3E. Sec. 33—all $\frac{1}{4}$'s SW $\frac{1}{4}$ SE $\frac{1}{4}$; SW, NW, and NE $\frac{1}{4}$'s SE $\frac{1}{4}$ SE $\frac{1}{4}$; SW, SE, and NE $\frac{1}{4}$'s NE $\frac{1}{4}$ SE $\frac{1}{4}$. Sec. 34—NW $\frac{1}{4}$ SW $\frac{1}{4}$ SW $\frac{1}{4}$; all $\frac{1}{4}$'s

NW ¼ SW ¼. UTM's: Z-13—Begins @ E352000 N3908120 and runs due E to E352300 N3908120, turns due N and runs to E352300 N3908180, turns ENE and runs to E352440 N3908220, turns NNE and runs to E352660 N3908540, turns SE and runs, with a slight jog, to E352820 N3908380, turns NE and runs to E353200 N3908720, turns NW and runs to E353060 N3908860, turns WSW and runs to E352280 N3908460, turns SW and runs, in a mild lazy C, to E352000 N3908300, turns due S and runs to beginning point.

Prior disturbance: Except for several two-tracks running through the area, prior disturbance is limited.

ENVIRONMENTAL SETTING

Topography and soils: The project area lies in the Mexican Highland Section (Rio Grande Subsection) of the Basin and Range Physiographic Province, a section characterized by "basin-and-range structure and topography..., block-faulted mountains [that] commonly have Precambrian cores overlain by Paleozoic sedimentary sequences..., basin deposits [that may] exceed 5000 ft in thickness..., [and] basalt fields [that are] locally extensive on basin plains...." (Hawley 1986:26). Dane and Bachman (1965) show the geologic formation as Quaternary pediment, terrace, and other deposits of sand, gravel, and caliche. Maker *et al.* (1978:map + pp. 29-30) classify the soil association as Haplargids-Calciorthids-Torripsamments, noting "The soils in this association occur dominantly on gently to strongly sloping and undulating plains in the northern part of the Rio Grande depression, principally in Bernalillo, Valencia, Sandoval, and Socorro counties..., are forming generally in old alluvium that is dominantly coarse to moderately fine-textured..., [and] usually have sandy surface layers [that are] highly susceptible to wind erosion."

Flora/fauna: Brown and Lowe (1980) classify the biotic community as Plains and Great Basin Grassland. Local vegetation consists of an overstory of scattered junipers and an understory of fourwing saltbush, sand sage, snakeweed, Indian rice grass, blue grama, other native grasses, mammillaria, prickly pear, creeping cholla, cane cholla, narrowleaf yucca, winterfat, Brigham tea, feather indigobush, and several unidentified species. We noted several jackrabbits and numerous burrows. Mike Foster, Assistant Director of the landfill, told us they had seen several rattlesnakes and that there is a resident badger.

Ground cover/visibility: Ground cover ranged from 40% to 50%. Visibility was adequate.

Elevation: 5350 ft to 5440 ft.

SURVEY METHODS

The area was surveyed in parallel transects spaced 15 m apart.

PRIOR INVESTIGATIONS

Lone Mountain Archeological Services [LMAS] inspected a portion of the present project area in 1995 during a survey for expansion of the Sandoval County Landfill. LMAS identified 12 sites, LA 107571—107582. One of the sites, LA 107581, proved to lie on private land (and within the present project area). Of the 12 sites LMAS identified, one site (LA 107571) was declared not eligible to the NR, five (LA 107572, 107573, 107574, 107577, and 107582) were determined to be eligible to the NR and were subjected to data recovery, six (LA 107575, 107576, 107578, 107579, 107580, and 107581) were tested to assess their potential for eligibility to the NR. As testing was proceeding, a cadastral survey determined that LA 107581 was entirely on private property and testing was discontinued at that site.

OVERVIEW OF PREHISTORY AND HISTORY

Since no archeological sites were identified during the QRA survey, no overview will be presented here. However, see Cordell (1979) and Stuart and Gauthier (1981) for overviews of the prehistory and history of the general area.

CULTURAL RESOURCES

Previously identified sites in or adjacent to the study area: The only site known to exist within the study area is LA 107581, discussed above under "Prior Investigations...." It will probably be necessary to conduct a data recovery program at this site, since the preferred method of site treatment—avoidance—is not likely to be feasible.

Cultural resources identified by this survey: No archeological sites were identified, but LA 107581 was revisited. Six isolated occurrences (IO) were found. See Appendix I for definitions of sites and IO's. See Appendix II for locations.

ISOLATED OCCURRENCES

IO-1. Tool fragment of opaque white chert (Fig. 2, a).

IO-2. Nosed or turtle back semi-opaque grayish chert scraper (Fig. 2, b) and one item gray chert debris 9 m apart.

IO-3. Four sherds of same brownware vessel in cluster 10 cm in dia. Interior smoothed and faintly polished; exterior was dragged while wet, exposing grains of sand temper.

IO-4. One sherd and five lithics in a 30-m swath running downslope toward a basin that contains a juniper. The sherd shows a pale orange slip on the exterior and interior. The lithics, all chert, consist of two items of debris, one thinning flake, one complete flake (4 cm long by 3.5 cm wide by 1.5 cm thick; no prepared striking platform; > 10% cortex), and one exhausted chert core. [We tried to make a site out of this IO because of the presence of the sherd in association

with the lithics and because the explanation for the juniper could be that it was living on water retained by the floor of a kiva or large pit house. However, after looking at several similar topographic features, we concluded that the basins were blowouts that probably held just enough more moisture than the surrounding topography to sustain junipers.]

IO-5. One chert broken flake, >10% cortex.

IO-6. One chert broken flake, 0% cortex.

RECOMMENDATIONS

QRA recommends that clearance be granted for this project except for the area of LA 107581 plus a 30 ft/10 m buffer. Unless the site can be avoided, a data recovery plan should be designed and implemented after consultation with the SHPO and the CPRC. If unsuspected subsurface cultural deposits are identified anywhere within the project area during project activities, work should cease immediately and the SHPO should be notified. Work should not be resumed until the deposits have been inspected by a qualified archeologist and a treatment plan has been prepared and implemented.

If it is decided that data recovery should be undertaken, QRA believes that appropriate research questions for this lithic site might be to ask whether the lithics reveal tool manufacture, maintenance, or simple use; whether the site is a briefly occupied campsite or whether midden deposits indicate more extensive habitation; what activities took place at the site; and what cultural/temporal period is represented. To help answer these questions, QRA suggests—

1. Pinflag all artifacts to determine areas of greatest density.
2. Hand-excavate 1 m by 1 m test pits in areas of highest artifact density and in any areas of fire-cracked rock or charcoal staining. Collect any charcoal or charcoal-stained earth for radiocarbon dating.
3. Hand-excavate any small hearths, midden deposits, or other features entirely.

4. Survey in and collect all surface artifacts.

5. Follow standard excavation procedures—screen all fill through ¼-in. mesh; maintain field notes; make sketches and take photos, as appropriate; map the site (including locations of excavation units); place date tiles and backfill excavation units; analyze artifacts; have appropriate laboratory analyses conducted; prepare report to state and federal standards.

6. If a blade and operator are available, after all hand excavation is completed, peel entire site in 10-15 cm lifts. Excavate any additional features that appear.

7. In the unlikely event that numerous hearths, extensive midden deposits, or unexpectedly complex features are revealed, cease work and consult with the SHPO to assess whether a more elaborate data recovery plan is appropriate.

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Brown, David E., and Charles H. Lowe

- 1980 Biotic Communities of the Southwest [map]. USDA Forest Service, Rocky Mountain Forest and Range Experiment Station, General Technical Reports RM-78. Washington: USGPO.

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Maker, H. J., H. E. Dregne, V. G. Link, and J. U. Anderson

- 1978 Soils of New Mexico. New Mexico State University Agricultural Experiment Station Research Reports 285. Las Cruces: New Mexico State University.

Stuart, David E., and Rory P. Gauthier

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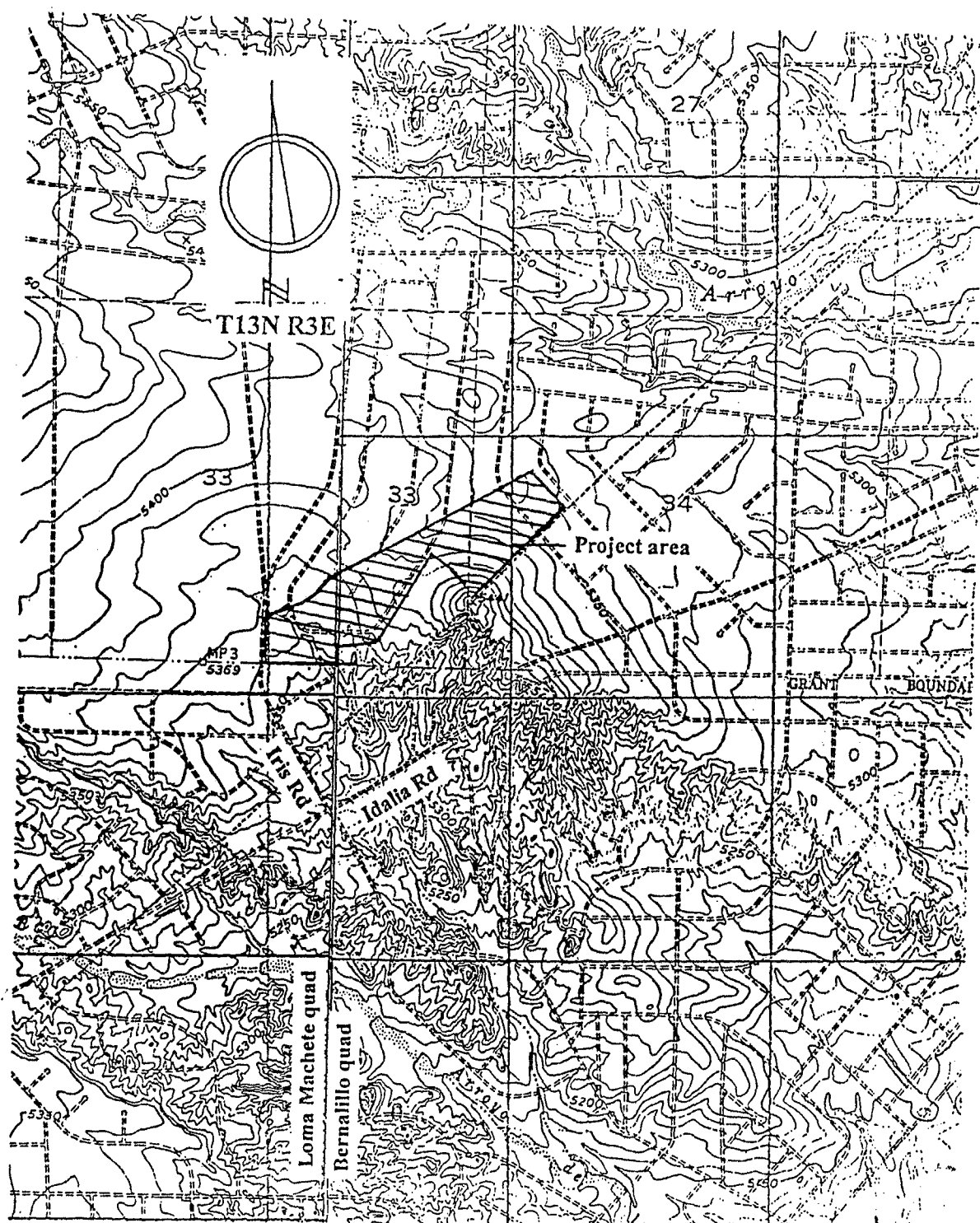


Fig. 1. Portions of USGS Bernalillo, NM 7.5' quad, 1972 (35106-C5) and Loma Machete, NM 7.5' quad, 1972 (35106-C6), showing location of project area in T13N R3E Secs. 33 and 34. Scale both maps: 1:24,000. Contour interval both maps: 10 ft.

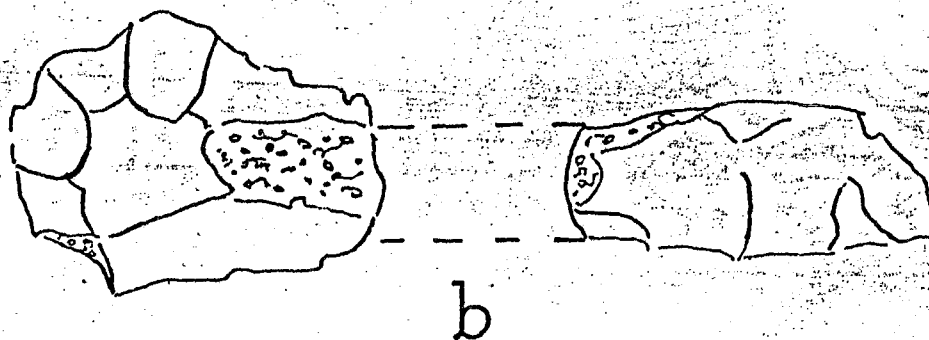
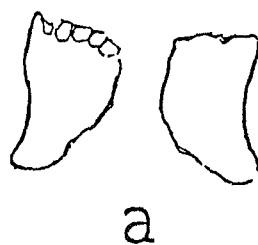


Fig. 2. Chipped stone tools at IO-1 and IO-2. a, Opaque white chert tool fragment; b, semi-opaque grayish chert nosed or turtle back scraper. Both actual size.

APPENDIX I. DEFINITIONS: SITES AND ISOLATED OCCURRENCES

Sites. Defining a cultural resource as a site implies some degree of permanence (even if "permanence" was only overnight). Thus, an accidentally lost projectile point is not a site because there was no (apparent) intentional selection of the location by the loser. The definition of "site" varies from one cultural period to another—e.g., a hearth composed of fire-cracked rock and accompanied by a handful of chert debitage could constitute a Desert Archaic site, but a Pueblo III site might consist of stone structures, kivas, trash dumps, and thousands of sherds. Although designating cultural resources as sites must depend to some extent on the nature of the remains in the local area, a minimum definition requires an assortment of different artifacts in greater or lesser proximity to each other or evidence of deliberate and intentional human use or alteration (i.e., cairns, rock alignments, etc.). In some instances, state or federal guidelines may determine the definition.

Isolated occurrences. Isolated occurrences (IO) contain one or a few artifacts so distant from other cultural remains that they form no part of a recognizable pattern in conjunction with other manifestations in the area. The object(s) may be redeposited. However, designating an artifact "isolated" depends on conditions in the local field situation (e.g., relative artifact density, number of cultural periods represented, density of human use over time, etc.). The research potential of IO's is usually exhausted by recording and describing them and marking their locations on a map.

APPENDIX II. LOCATIONS OF LA 107581 AND IO'S 1-6

[Note: Information on the locations of cultural resources is confidential and is exempt from the Freedom of Information Act. Do not release to public.]

| <u>Site/IO</u> | <u>Legals (all T13N R3E Sec. 33)</u> | <u>UTM's (all Z-13, all NAD 27)*</u> |
|----------------|--------------------------------------|--------------------------------------|
| LA 107581 | SW ¼ SE ¼ SE ¼ | E352450 N3908280 |
| IO-1 | SE ¼ SW ¼ SE ¼ | E352219 N3908121 |
| IO-2 | SE ¼ SW ¼ SE ¼ | E352384 N3908175 |
| IO-3 | NW ¼ SE ¼ SE ¼ | E352607 N3908557 |
| IO-4 | SW ¼ NE ¼ SW ¼ | E352523 N3908444 |
| IO-5 | SW ¼ SW ¼ SE ¼ | E352065 N3908216 |
| IO-6 | SW ¼ SW ¼ SE ¼ | E352040 N3908260 |

*LA 107581 from ARMS. IO-6 scaled. IO's 1-5 from GPS readings.

Map reference

USGS Bernalillo, NM 7.5' quad, 1972 (35106-C5). Scale: 1:24,000. Contour interval: 10 ft.

USGS Loma Machete, NM 7.5' quad, 1972 (35106-C6). Scale: 1:24,000. Contour interval: 10 ft.

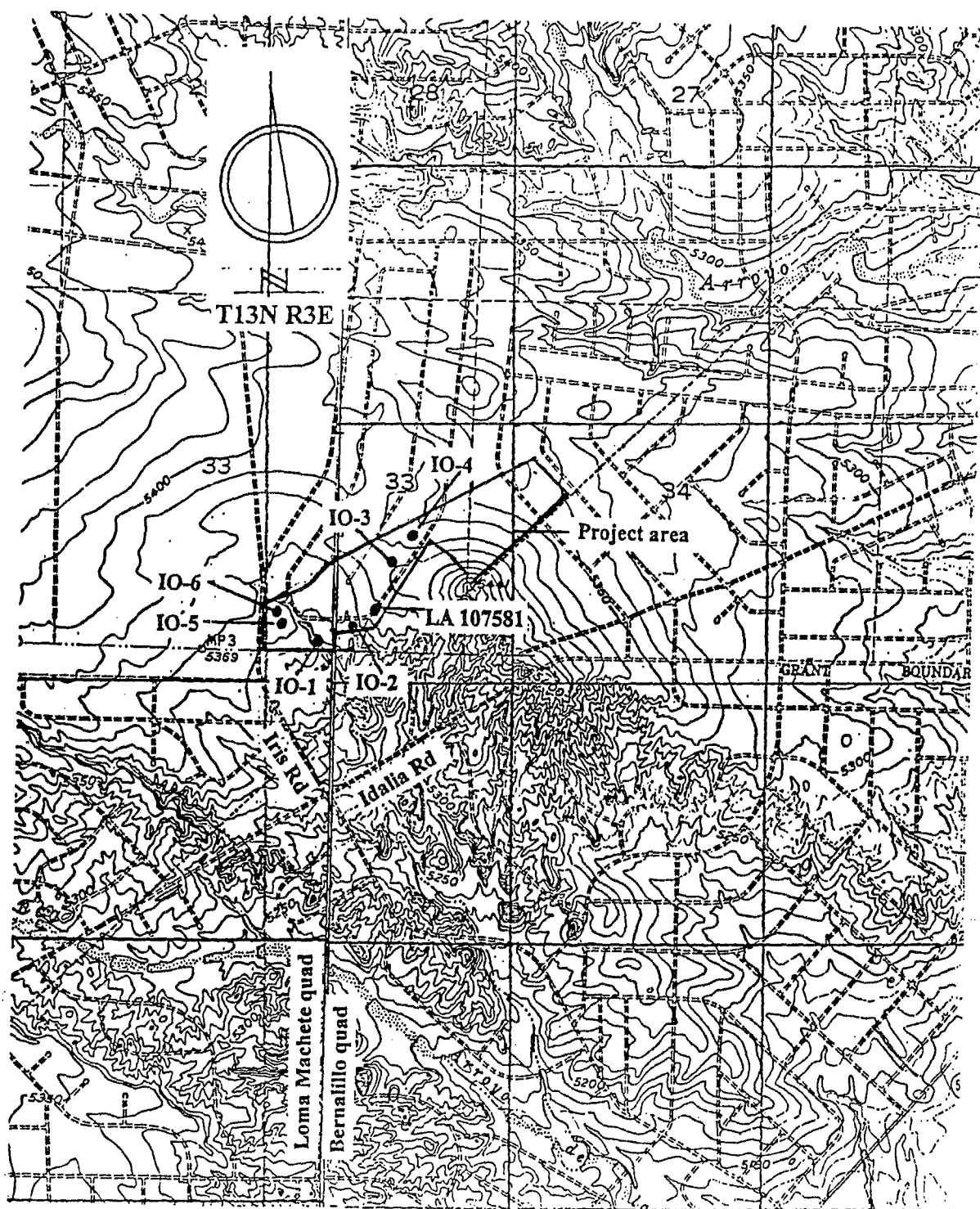


Fig. 3. Portions of USGS Bernalillo, NM 7.5' quad, 1972 (35106-C5) and Loma Machete, NM 7.5' quad, 1972 (35106-C6), showing locations of LA 107581 and IO-s 1-6 in relation to project area in T13N R3E Secs. 33 and 34. Scale both maps: 1:24,000. Contour interval both maps: 10 ft.

Attachment IV.1.F
SHPO Clearance Letter (2003 Survey)

QUIVIRA RESEARCH CENTER

AN ARCHEOLOGICAL SURVEY OF 62.3 ACRES OF SANDOVAL COUNTY LAND
IN T13N R3E, SECTIONS 33 AND 34, ADJACENT TO THE EXISTING
SANDOVAL COUNTY LANDFILL,
ON THE ALAMEDA GRANT, SANDOVAL COUNTY, NEW MEXICO
FOR
METRIC CORPORATION

Quivira Research Center Publications 458

Addendum I: October 28, 2003 Inspection of the LA 107581 Area

James A. Bonner, of Gordon Environmental, Inc., who provide engineering services to the Sandoval County Landfill, notified Peter Metzner, METRIC Corporation, on the morning of October 28, 2003 that it appeared that LA 107581 had been removed. Metzner notified QRA. Erik Stout and Carol Condie conducted a site inspection on the same day. James Bonner met us at the landfill.

As we noted in the survey report, LA 107581 had been partially tested by Lone Mountain Archeological Services in 1995, but testing ceased when a cadastral survey found that the site was on private land. Lone Mountain believed there was evidence of subsurface cultural deposits, although they noted that trowel tests near fire-cracked rock exposed no charcoal or ash. The SHPO determined the site to be eligible to the National Register. QRA recommended that data recovery be conducted prior to initiation of project activities if avoidance was not possible.

When QRA visited the area (on October 28) we had believed during the survey to be the site area, we found that it was not, but we recorded the seven lithics as IO-7 (see below). Our GPS unit was unable to acquire even one satellite on October 28, but Mike Foster, of the Sandoval County Landfill, was able to tell us exactly where the site should have been. The area had been disturbed at some time in the past and we were unable to re-locate the surface artifacts. However, we inspected the disturbed area carefully—but in vain—for any signs of charcoal stains or other subsurface cultural deposits.

We had observed that the Lone Mountain site map and description were inaccurate (e.g., the site measurements were stated as 30 m x 40 m, but the site scales on the map as 25 m x 63 m; the site map shows the dirt 2-track that bisects the site as running N/S, but there are no N/S roads in the project area; etc.) We concluded that the site description may also have been in error regarding subsurface cultural deposits. In any event, lacking subsurface cultural deposits, it appears that the artifact recording and mapping Lone Mountain completed had already extracted the maximum amount of data from the site. QRA recommends that clearance be granted for the project.

IO-7 (recorded on 10-28-03)

Seven lithics in 5 m by 16 m area—chert (3 broken flakes, 1 debris), obsidian (2 broken flakes), basalt (1 debris). Since this is an IO and not a site, we are listing the location of IO-7 in this addendum.

Location: T13N R3E Sec. 33, NW ¼ SE ¼ SE ¼. UTM's (Z 13) E352480 N3908380 (NAD 27).

October 29, 2003

Michelle Ensey
State Historic Preservation Office
228 East Palace Avenue
Santa Fe, NM 87501

Dear Ms. Ensey,

On behalf of Sandoval County, Gordon Environmental, Inc. (GEI) is submitting a copy of the recently completed Archeological Survey Report of 62.3 acres of land that will include future development of the County's Landfill. This report was prepared by Quivera Research Associates (QRA) for the proposed Sandoval County Landfill expansion area. Also enclosed are two copies of completed Laboratory of Anthropology Investigation Records for this survey.

We would like to draw your attention to page 6 and 7 of the report, where data recovery procedures for LA 107581 are proposed. We would next ask you to look at Addendum 1 that reports this site was removed at some time in the past and details QRA's attempt to locate any remaining traces of the now-vanished site. The Addendum also contains QRA's recommendations that clearance be granted for this project.

Sandoval County concurs with QRA's recommendations and requests the concurrence of your office

Very truly yours,
Gordon Environmental, Inc.

No Historic Properties Affected.

Ray Young 11/20/03
for NM State Historic Preservation Officer

I. Keith Gordon
I. Keith Gordon, PE
Principal

Jim Bonner
Jim Bonner
Senior Scientist

Attachment IV.1.G
An Endangered Species Survey of Sandoval County Landfill Expansion
Sandoval County, New Mexico, 1995

**Endangered Species Survey of
Sandoval County Landfill Expansion
Sandoval County, New Mexico
26 March, 1995**

Prepared for:

Roy F. Weston, Inc.

Prepared by:

**Patricia Barlow-Irick
The Botanical Consortium
1655 Flora Vista SW
Albuquerque, New Mexico 87105
and
Jim Stuart,
Independent consultant**

Survey of Sandoval County Landfill Expansion

Sandoval County is proposing to expand its landfill site onto adjacent land. The permit application is being prepared by Roy F. Weston, Inc. The site for this project is in Sections 33 and 34, T. 13 N. R. 3 W in Sandoval County bounded on two sides by Idalia and Iris Streets. The project site sits on a sandy terrace slope west of the Rio Grande Valley. This report summarizes the findings of a biological survey to determine the presence of rare, threatened or endangered species on the proposed area of impact.

Federally Listed Species: The U.S. Fish and Wildlife Service (USFWS), under authority of the Endangered Species Act of 1973 (as amended), maintains a list of animal and plant species which have been classified as Endangered or Threatened based on present status and potential threat to future survival. In a letter dated 13 February 1995, the USFWS identified one Endangered animal species (the bald eagle) which potentially could be affected by the proposed action. In addition, in a letter dated 8 March 1995, the New Mexico Department of Game and Fish (NMGF) listed three additional federally Endangered species (Rio Grande silvery minnow, American peregrine falcon, and whooping crane) and one Threatened species (Mexican spotted owl) which occur in Sandoval County but not necessarily in the project area (Table 1).

Notice of Review Species: In addition to species categorized as Endangered or Threatened, the USFWS also maintains a list of animals and plants placed under Notice of Review (USFWS, 1994). Notice of Review, or "Candidate," species are not afforded protection under the Endangered Species Act, but are considered as possible candidates for federal protection. Category 1 species within this classification are those for which the USFWS has sufficient information to support their listing as Endangered or Threatened and for which publication of proposed rules (protection status) is anticipated. Category 2 species are those for which data on biological vulnerability and threat are not conclusive and for which specific plans for federal protection have not been proposed (and are not likely to be proposed unless additional information becomes available). Notice of Review animal species identified by both the USFWS and NMGF as potentially occurring in the project area include the mountain plover (Category 1) and the Jemez Mountains salamander, white-faced ibis, northern goshawk, ferruginous hawk, western snowy plover, loggerhead shrike, occult little brown bat, spotted bat, Goat Peak pika, and meadow jumping mouse (all Category 2) (Table 1). Notice of Review plant species identified by the USFWS as potentially occurring in the project area include grama grass cactus, gypsum townsendia, and Knight's milkvetch (all Category 2).

State Listed Species: The New Mexico Department of Game and Fish (NMGF), under authority of the Wildlife Conservation Act of 1974, maintains a list of animal species whose prospects for survival or recruitment in New Mexico are in jeopardy (Group 1 species) or may become in jeopardy in the foreseeable future (Group 2 species) (NMGF, 1988). In a letter dated 8 March 1995, the NMGF identified eleven animal species currently listed as State Endangered which occur in Sandoval County and, therefore, potentially could be affected by the proposed action. These species are the Rio Grande silvery minnow, Jemez Mountains salamander, bald eagle, American peregrine falcon, whooping crane, southwestern willow flycatcher, gray vireo, spotted bat, meadow jumping mouse, American marten, and Say's pond snail (Table 1). The Forestry and Resource Conservation Division (NMFRCD) under the authority of the New Mexico Endangered Plant Species Act (NM 75-6-1) of 1985 and attendant regulation NRD Rule 85-3 maintains a list of endangered plant species. Grama grass cactus was identified as being the only plant species of potential concern to the NMFRCD for this site in informal consultation between that Division and Roy F. Weston, Inc.

TABLE 1. Federal or State listed animal species potentially occurring in area of proposed action, or known to occur in Sandoval County, New Mexico. Likelihood of occurrence refers to presence in the project area.

| Species | | Likelihood of Occurrence | Protection Status | |
|---------------------------------|--|--------------------------|-------------------|-------|
| | | | Federal | State |
| MAMMALS | | | | |
| Occult Little Brown Bat | <i>Myotis lucifugus occultus</i> | U | C2 | - |
| Spotted Bat, | <i>Eudermia maculatum</i> | U | C2 | S/ E2 |
| Goat Peak Pika | <i>Ochotona princeps nigrescens</i> | N | C2 | - |
| New Mexico Jumping Mouse, | <i>Zapus hudsonius luteus</i> | N | C2 | S/ E2 |
| American Marten, | <i>Martes americana origenes</i> | N | - | S/ E2 |
| BIRDS | | | | |
| White-faced Ibis, | <i>Plegadis chihi</i> | U | C2 | - |
| Ferruginous Hawk, | <i>Buteo regalis</i> | P | C2 | - |
| Northern Goshawk, | <i>Accipiter gentilis</i> | N | C2 | - |
| Bald Eagle, | <i>Haliaeetus leucocephalus</i> | P | E | S/ E2 |
| American Peregrine Falcon, | <i>Falco peregrinus anatum</i> | P | E | S/ E1 |
| Whooping Crane, | <i>Grus americana</i> | U | E | S/ E1 |
| Western Snowy Plover, | <i>Charadrius alexandrinus nivosus</i> | U | C2 | - |
| Mountain Plover, | <i>Charadrius montanus</i> | U | C1 | - |
| Mexican Spotted Owl, | <i>Strix occidentalis lucida</i> | N | T | - |
| Southwestern Willow Flycatcher, | <i>Empidonax traillii extimus</i> | N | C2 | S/ E2 |
| Loggerhead Shrike, | <i>Lanius ludovicianus</i> | P | C2 | - |
| Gray Vireo, | <i>Vireo vicinior</i> | U | - | - |
| AMPHIBIANS | | | | |
| Jemez Mountains Salamander, | <i>Plethodon neomexicanus</i> | N | C2 | S/ E2 |
| FISH | | | | |
| Rio Grande Silvery Minnow, | <i>Hybognathus amarus</i> | N | E | S/ E2 |
| INVERTEBRATES | | | | |
| Say's Pond Snail, | <i>Lymnaea caeperata</i> | N | - | S/ E |
| PLANTS | | | | |
| Grama grass cactus | <i>Pediocactus papyracanthus</i> | P | C2 | S/ |
| Knight's milkvetch | <i>Astragalus knightii</i> | P | C2 | S/ |
| Gypsum townsendia | <i>Townsendia sp. nov.</i> | N | C2 | S/ |

Likelihood of occurrence in area of proposed action:

P = Probable

U = Unlikely but possible

N = Not present

Protection Status:

E = Federal Endangered

T = Federal Threatened

C1 = Category 1 Notice of Review candidate for federal listing

C2 = Category 2 Notice of Review candidate for federal listing

SE1 = State Endangered Group 1

SE2 = State Endangered Group 2

Methods.

The area was surveyed for plant species on 24 & 25 March, 1995 by Patricia Barlow MS, a professional plant taxonomist and endangered species specialist. The area was surveyed for animal species on 24 March, 1995 by James Stuart, a professional zoologist. The boundaries were determined using a map of the proposed project supplied by Roy F. Weston, Inc. Areas which were disturbed during previous landfill activities were not surveyed. This area was examined by pedestrian survey. Specimens of each plant species encountered were collected for identification. All unknown plant specimens were identified at the University of New Mexico herbarium and verified by comparison with museum specimens. Nomenclature follows Martin and Hutchins, 1980, except for grasses which follow Allred, 1993.

Results:

Floristics

Vegetation and ground cover.

The sandy soils of the escarpment terraces have a native cover of mixed grasses and shrubs. The most common grasses include Indian ricegrass (*Oryzopsis hymenoides*), sand dropseed (*Sporobolus cryptandrus*), and galleta (*Hilaria jamesii*). The most common native shrubs include sand sage (*Artemisia filifolia*), broom snakeweed (*Gutierrezia sarothrae*), and four-wing saltbush (*Atriplex canescens*). Juniper trees (*Juniperus monosperma*) are infrequent and widely scattered. A list of all species encountered is appended to this report.

Sensitive Species

Pediocactus papyracanthus (*Toumeyia papyracantha*), the grama-grass cactus, is found scattered locations in the western half of New Mexico and eastern Arizona, particularly in the Rio Grande valley. These plants occur in open flats, with sandy-gravelly or gypsiferous soils, in grasslands and pinyon-juniper woodlands at 5,000-7,300 feet elevation. This species was listed as a candidate for federal protection in December 1980, but has not been moved from the Category 2 list. Overcollection, overgrazing, and destruction of habitat by urbanization are the major threats to this taxon. This species was proposed to be moved from the State Endangered list to the Rare and Sensitive Species list in January 1994. Grama-grass cactus can be recognized by its long papery upward-pointing spines.

No specimens of *Toumeyia papyracantha* were found during this survey. This site, however, contains suitable habitat for this species. Areas outside the boundaries of this survey, particularly northwest of the landfill site, may have populations of this species and so activities associated with this project should be limited to those areas within the defined project boundaries.

Astragalus knightii, Knight's milkvetch, is found on sandstone outcrops in pinyon-juniper woodland or grama-galleta grasslands at 5,750 to 6,000 feet in elevations. It is endemic to Sandoval County with populations along the upper Rio Puerco drainages on BLM and Laguna Indian Reservation lands. The USFWS lists Knight's milkvetch as a Category 2 candidate, while the State lists it as a Rare and Sensitive Species. This species can be recognized by its red spotted pods, its white and lilac-edged corollas and its small tufted habit.

No specimens of *Astragalus knightii* were found during this survey. Sandstone occurs along the edges of the deeper arroyos in the project site, limiting the potential habitat for this species.

Townsendia sp. nov. (*Townsendia gypsophila*), the gypsum townsendia, is found on Todilto gypsum at the White Mesa outcrop near San Ysidro. This plant, recently discovered and named, was recently proposed for listing. The USFWS treats this species as a Category 2 Candidate, while the State lists it as a Rare and Sensitive Species.

No specimens of *Townsendia gypsophila* were found during this survey. This site provides no suitable habitat for this species.

Wildlife Values:

Animal Species of the Project Area.

Mammals: Several species are characteristic of open grassland habitats in north-central New Mexico and are expected to occur in the project area. Coyote (*Canis latrans*), kit fox (*Vulpes macrotis*), mule deer (*Odocoileus hemionus*), and blacktail jackrabbit (*Lepus californicus*) are among the larger species known to occur in the general area and which may be present near the landfill. Numerous rodent species occur in this habitat including white-tailed antelope squirrel (*Ammospermophilus leucurus*), spotted ground squirrel (*Spermophilus spilosoma*), Botta's pocket gopher (*Thomomys bottae*), silky pocket mouse (*Perognathus flavus*), Ord's kangaroo rat (*Dipodomys ordii*), white-footed mouse (*Peromyscus leucopus*), and white-throated woodrat (*Neotoma albigula*) (Findley et al., 1975). Bats are generally not very common in open grassland away from water, although the pallid bat (*Antrozous pallidus*), big brown bat (*Eptesicus fuscus*), and western pipistrelle (*Pipistrellus hesperus*) probably forage in the area on a regular basis (Findley et al., 1975).

Birds: Many bird species frequent grassland areas of New Mexico, either when breeding or in migration; a few species primarily winter in such habitats. Species known or likely to occur in the project area include northern harrier (*Circus cyaneus*), red-tailed hawk (*Buteo jamaicensis*), American kestrel (*Falco sparverius*), scaled quail (*Callipepla squamata*), burrowing owl (*Athene cunicularia*), common nighthawk (*Chordeiles minor*), western kingbird (*Tyrannus verticalis*), horned lark (*Eremophila alpestris*), Chihuahuan raven (*Corvus cryptoleucus*), western meadowlark (*Sturnella neglecta*), lark bunting (*Calamospiza melanocorys*), and chestnut-collared longspur (*Calcarius ornatus*) (Hubbard, 1978).

Amphibians and Reptiles: Common grassland species of amphibians and reptiles known or expected to occur in the area include tiger salamander (*Ambystoma tigrinum*), Couch's spadefoot toad (*Scaphiopus couchii*), Great Plains toad (*Bufo cognatus*), side-blotched lizard (*Uta stansburiana*), Great Plains skink (*Eumeces obsoletus*), little striped whiptail lizard (*Cnemidophorus inornatus*), glossy snake (*Arizona elegans*), bullsnake (*Pituophis melanoleucus*), and prairie or western rattlesnake (*Crotalus viridis*) (Degenhardt et al., In press).

Potential Effects to Protected Animal Species. Of the 20 Federal and/or State protected species listed in Table 1, four are of probable occurrence in the proposed project area. The bald eagle commonly winters and migrates along the Rio Grande at Bernalillo and at the nearby Jemez Canyon Reservoir; a few eagles also may occasionally forage in rural upland areas adjacent to the Rio Grande and Jemez River valleys, but this non-riparian habitat is not frequented. The proposed action therefore would not affect this species. Ferruginous hawks, American peregrine falcons, and loggerhead shrikes all likely forage in grassland habitats in Sandoval County, but no suitable nesting habitat exists for either species in the project area. Loggerhead shrikes and ferruginous hawks will nest in shrubs or trees in open terrain, such as in the project area. However, the paucity of such nest sites in the area likely precludes their presence here (examination of the few scattered junipers in the area of the proposed action showed no indication of nesting). Also, the existing landfill operation and urbanization of the area near the landfill likely exclude these bird species from using the site on a regular basis.

Seven species are of unlikely but possible occurrence in the project area (Table 1). Both the occult little brown bat and spotted bat potentially forage in areas around Bernalillo but do not require nor generally frequent grassland such as found adjacent to the project site. Similarly, white-faced ibis, whooping crane, and western snowy plover may occasionally occur in open grassland habitat away from water or irrigation, either as migrants or stragglers, but do not nest in nor typically use such areas. Mountain plovers generally nest in shortgrass prairie habitats, however the existing landfill operation and its associated disturbances would likely exclude use of the site of the proposed action by this species. Gray vireos use

shrubland or pinyon-juniper woodland habitats, such as on the slopes of the Sandia and Manzano mountains. Only a few scattered junipers are present near the landfill; the lack of extensive shrubs or woodlands in the project area therefore greatly limits its suitability for this species.

Nine of the species listed in Table 1 are not present in the area of the proposed action and would be unaffected. All occur in habitats far removed from the project site (e.g., Jemez Mountains salamander and Goat Peak pika, both montane species) or in nearby habitats that would not be impacted by project construction and operation. The Rio Grande silvery minnow and southwestern willow flycatcher, both found in the Rio Grande floodplain in Sandoval County, would be protected by the location of the proposed action in an upland site away from the floodplain and by existing and proposed requirements for the prevention of run-off from the landfill.

Conclusions

This project will have no short or long term effects for any threatened or endangered species. No such species are present in or around the project area. Landfill activities should be limited to the designated project site.

The information contained herein is true to the best of my knowledge.

Signed Patricia Burrell-Brick Date 3 April 1995

References:

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- Degenhardt, W. G., C. W. Painter, and A. H. Price. In press. The amphibians and reptiles of New Mexico. University of New Mexico Press, Albuquerque.
- Findley, J.S., A. H. Harris, D. E. Wilson, and C. Jones. 1975. Mammals of New Mexico. University of New Mexico Press, Albuquerque.
- Hubbard, J. P. 1978. Revised check-list of the birds of New Mexico. New Mexico Ornithological Society Publication No. 6.
- Martin, William C. and Charles R. Hutchins. A Flora of New Mexico. A.R. Ganter Verlag, Germany.
- New Mexico Department of Game and Fish (NMGF). 1988. Handbook of Species Endangered in New Mexico. Endangered Species Program. NMGF, Santa Fe.
- Sivinski R. & K. Lightfoot. 1992. Inventory of Rare and Endangered Plants of New Mexico. NM Forestry and Resources Division, Santa Fe, NM.
- U.S. Fish and Wildlife Service (USFWS). 1994. Endangered and Threatened Wildlife and Plants; Animal Candidate Review for Listing as Endangered or Threatened Species; Proposed Rules. Federal Register 59(219): 58982-59028 (November 15).

Species found on the project site.
PLANTS OF THE PROJECT AREA

GRASSES

| | |
|------------------------|-------------------|
| Aristida pansa | Poverty three-awn |
| Aristida purpurea | Purple three-awn |
| Bouteloua curtipendula | Sideoats grama |
| Bouteloua eriopoda | Black grama |
| Bouteloua gracilis | Blue grama |
| Dasyochloa puchella | Fluff grass |
| Hilaria jamesii | Galleta |
| Muhlenbergia torreyi | Ring muhly |
| Muhlenbergia porteri | Bush muhly |
| Muhlenbergia pungens | Needle muhly |
| Oryzopsis hymenoides | Indian ricegrass |
| Sporobolus cryptandrus | Sand dropseed |
| Sporobolus flexuosus | Mesa dropseed |
| Sporobolus giganteus | Giant dropseed |

TREES

| | |
|----------------------|------------------|
| Juniperus monosperma | One-seed juniper |
|----------------------|------------------|

SHRUBS AND CACTI

| | |
|-------------------------|---------------------|
| Artemisia filifolia | Sand sage |
| Atriplex canescens | Four-wing saltbrush |
| Ceratoides lanata | Winterfat |
| Chrysothamnus nauseosus | |
| subsp. bigelovii | Rabbit brush |
| Chrysothamnus puchellus | |
| subsp. baileyi | |
| Coryphantha vivipara | |
| Dalea formosa | Feather dalea |
| Dalea scoparia | Purple sage |
| Dyssodia acerosa | Stinking dogweed |
| Ephedra torreyana | Joint-fir |
| Eriogonum elusum | Wild buckwheat |
| Gutierrezia sarothrae | Broom snakeweed |
| Opuntia clavata | Club cholla |
| Opuntia imbricata | Cholla |
| Opuntia phaeacantha | Prickly pear |
| Opuntia polyacantha | Prickly pear |
| Senecio douglasii | Groundsel |
| Senecio multicapitatus | Groundsel |
| Yucca glauca | Great Plains yucca |

HERBACEOUS PLANTS

| | |
|--------------------------|---------------------|
| Astragalus amphioxys | Milkvetch |
| Astragalus nuttalianus | Nuttal's milkvetch |
| Astragalus wootoni | Wooton's milkvetch |
| Bahia dissecta | Yellow ragweed |
| Berlandia lyrata | Chocolate flower |
| Chenopodium sp. | Goosefoot |
| Cryptantha flava | Yellow hiddenflower |
| Cryptantha minima | Hidden flower |
| Conyza canadensis | Horseweed |
| Croton texensis | Doveweed |
| Cucurbita foeditissima | Buffalo gourd |
| Dithyrea wislizenii | Spectacle-pod |
| Erodium texanum | Crane's bill |
| Franseria acanthicarpa | Spiny ragweed |
| Gaura coccinea | Scarlet Gaura |
| Grindelia aphanactis | Gumweed |
| Haplopappus spinulosus | Spiny goldenweed |
| Helianthus petiolaris | Sunflower |
| Hoffmanseggia jamesii | Hog potatoe |
| Hymenopappus filifolius | White ragweed |
| Lepidium montanum | Peppergrass |
| Linum lewisii | Flax |
| Machaeranthera | |
| tephrodes | Purple aster |
| Malacothrix fendleri | Desert dandelion |
| Melampodium | |
| leucanthemum | Blackfoot Daisy |
| Mentzelia albicaulis | Blazingstar |
| Petalostemum compactum | |
| Phacelia integifolia | Scorpionweed |
| Psilostrophe tagetina | Wooly paperflower |
| Rumex hymenosepalus | Tanner's dock |
| Salsola kali | Tumbleweed |
| Solanum eleagnifolium | Horse nettle |
| Sphaeralcea sp. | Globemallow |
| Stephanomeria pauciflora | Wire-lettuce |
| Thelesperma | |
| megapotamicum | Cota |
| Tidestromia lanuginosa | Espanta vaqueros |
| Verbesina encelioides | Crownbeard |



**UNITED STATES DEPARTMENT OF THE INTERIOR
FISH AND WILDLIFE SERVICE**

NEW MEXICO ECOLOGICAL SERVICES STATE OFFICE
2105 OSUNA NE

ALBUQUERQUE, NEW MEXICO 87113

Telephone: (505) 761-4525

Fax Number: (505) 761-4542

February 13, 1995

Cons. #2-22-95-I-148

Mr. Robert Gabriel
Weston Company
6501 Americas Parkway NE, Suite 800
Albuquerque, New Mexico 87110-1517

Dear Mr. Gabriel:

This responds to your letter dated January 5, 1995, requesting a list of species federally listed or proposed to be listed as threatened or endangered. The proposed action involves the addition of a new cell to the Sandoval County Landfill in Sections 33 and 34, T. 13 N., R. 3 E., in Sandoval County, New Mexico.

We have used the information in your request to narrow the list of species occurring in the project area to those that may be affected by the proposed action. The endangered bald eagle and the following candidate species may be found in the project area:

Category 1 Candidate Species

mountain plover

Category 2 Candidate Species

Mexican meadow jumping mouse
occult little brown bat
spotted bat
ferruginous hawk
northern goshawk
grama grass cactus
gypsum townsendia
Knight's milk-vetch

Category 1 candidates are those species for which the U.S. Fish and Wildlife Service (Service) has substantial information to support their listing as endangered or threatened. Development and publication of proposed rules for these species is anticipated. Category 2 candidates are those species for which the Service has information indicating that proposing to list is possibly appropriate, but for which substantial data on biological vulnerability or threats are not currently available to support the immediate preparation of proposed rules. Candidate species have no legal protection under the Act and are included in this document for planning purposes only. However,

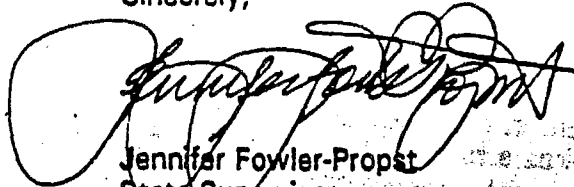
the Service would appreciate receiving any status information available on these species.

We suggest you contact the New Mexico Department of Game and Fish and the New Mexico Energy, Minerals and Natural Resources Department, Forestry and Resources Conservation Division for information concerning fish, wildlife, and plants of State concern.

Wetlands, riparian vegetation, and other sensitive wildlife habitat on or near the site should also be protected. If impacts cannot be avoided, we would appreciate discussing your project in more detail.

If we can be of further assistance, please call Ms. Elizabeth Cervantes at (505) 761-4525.

Sincerely,



Jennifer Fowler-Propst
State Supervisor

Enclosure

cc:

Director, New Mexico Department of Game and Fish, Santa Fe, New Mexico
Director, New Mexico Energy, Minerals and Natural Resources Department, Forestry and Resources Conservation Division, Santa Fe, New Mexico

Species List
Addition of a New Cell to the Sandoval County Landfill
in Sections 33 and 34
Sandoval County, New Mexico
February 10, 1995

Category 1 Candidate

Mountain plover (Charadrius montanus) - This species is primarily found in short grass prairies often associated with prairie dog towns. Nest sites are chosen in flat country with sparse and low-lying vegetation. This bird feeds exclusively on insects; primarily beetles, grasshoppers, and crickets.

Authority: Sandy Williams, New Mexico Department of Game and Fish,
P.O. Box 25112, Santa Fe, New Mexico 87504, (505) 827-9914.

Category 2 Candidates

New Mexican jumping mouse (Zapus hudsonius luteus) - This species occurs at localized sites in the Sandia, Sangre de Cristo, Jemez, and Sacramento Mountains of New Mexico and the White Mountains of Arizona. It also occurs at four sites along the Rio Grande River. This jumping mouse requires a habitat that has a close proximity to permanent free flowing water with vegetation of a diverse composition. The flora consists of primarily grasses, forbs and willow, and tall dense cover with close proximity to higher dry ground that provides suitable nesting and hibernation sites.

Authority: Dr. David Hafner, New Mexico Museum of Natural History,
1801 Mountain Road, NW., Albuquerque, New Mexico, 87104-1375,
(505) 841-8837.

Occult little brown bat (Myotis lucifugus occultus) - This species is a montane dweller and roosts in natural caves, mine tunnels, hollow trees, or buildings.

Authority: Scott Altenbach, University of New Mexico, Department of
Biology, Albuquerque, New Mexico 87131, (505) 277-3411.

Spotted bat (Euderma maculatum) - This bat is found in several national forests in New Mexico. This species tends to occur in remote areas, selecting specialized roosting sites. The presence of streams and nearby cliffs or steep hillsides with loose rocks may be habitat for this bat.

Authority: Scott Altenbach, University of New Mexico, Department of
Biology, Albuquerque, New Mexico 87131, (505) 277-3411.

Ferruginous hawk (Buteo regalis) - This species is found almost statewide during migration. Birds seem to key in on wide open grasslands and prairies, especially for nesting.

Authority: Sandy Williams, New Mexico Department of Game and Fish, P.O. Box 25112, Santa Fe, New Mexico 87504, (505) 827-9914.

Northern goshawk (Accipiter gentilis) - This species utilizes primarily moderate to highly canopied mature coniferous forests with minimal understory. Nest sites are found in forest stands with a high density of large trees and canopy closure.

Authority: Sandy Williams, New Mexico Department of Game and Fish, P.O. Box 25112, Santa Fe, New Mexico 87504, (505) 827-9914.

Grama grass cactus (Pediocactus papyracanthus) - Located primarily in northern, central, and southern New Mexico and central Arizona. At one time, this species may have had a considerably larger range and been more abundant. Increased grazing has decreased the numbers of cactus and perhaps reduced its range. Plants occur in open flats in grasslands and pinyon-juniper woodlands at 5,000-7,300 feet elevation. The plants commonly grow in sandy-gravelly and occasionally in gypseous soils.

Authority: Dr. Robert Sivinski, New Mexico Energy, Minerals and Natural Resources Department, Forestry and Resources Conservation Division, P.O. Box 1948, Santa Fe, New Mexico 87504-1948, (505) 827-7865.

Gypsum townsendia (Townsendia sp. nov.) - This plant grows on nearly pure gypsum at White Mesa, one-half mile south of San Ysidro, Sandoval County, New Mexico.

Authority: Dr. Tim Lowrey, Biology Department, University of New Mexico 87131, (505) 277-3411.

Knight's milkvetch (Astragalus knightii) - This plant is found on open sandstone ledges and cliff terraces, in pinyon pine and juniper woodlands and grama-galleta grassland at 5,750-6,000 feet elevation. Population localities are found along the upper Rio Puerco drainage around the escarpments of the Mesa Pietra.

Authority: Dr. Robert Sivinski, New Mexico Energy, Minerals and Natural Resources Department, Forestry and Resources Conservation Division, P.O. Box 1948, Santa Fe, New Mexico 87504-1948, (505) 827-7865.

83/87/88 18:28

505 827 7801

GAME&FISH ANVLA

GOVERNOR
Gary E. Johnson



STATE OF NEW MEXICO
DEPARTMENT OF GAME & FISH

Village Building
PO Box 27112
Santa Fe, N.M. 87504

DIRECTOR AND SECRETARY
TO THE COMMISSION
Gerald A. Maracchini

(505)
FAX 827-7801

TO: Paul Davis
Western Co.
6501 American Parkway
Albq. NM 87110

FROM: Barbara
Dept of Game & Fish
827-4952

Number of sheets including cover sheet 3

***** COMMENTS***** COMMENTS*****

Sorry for the delay if I
can help with this problem
please call:

March 8, 1995


Mr. Paul Darr
Western & Associates
6501 Americas Parkway
Albuquerque, NM 87110

RE: Sandoval County

This correspondence is in response to your request for comments concerning endangered species, in Sandoval County.

For your information, we are sending a list of wildlife species listed as endangered by New Mexico, and occurring in Sandoval, County. We suggest you contact the New Mexico State Forestry Division (505) 827-5830 regarding state-listed endangered plants and the U. S. Fish and Wildlife Service (505) 761-4525 regarding species of federal concern. Thank you.

Sincerely,


Barbara E. Stadom
Secretary

JAB/bes
Enc.

SANDOVAL COUNTY

Status List of T&E, Proposed & Candidate Species:

18 JAN 1995

| COMMON NAME | SCIENTIFIC NAME | FEDERAL END. | FED.... THREAT. | FED... PROP. | FED.... CAND. | STATE END. | STATE.. THREAT. |
|--|---|-----------------|--------------------|-----------------|------------------|---------------|--------------------|
| Grande Silvery Minnow | <i>Hybognathus amarus</i> | X | - | - | - | - | X |
| Smoky Mountains Salamander | <i>Plethodon neomexicanus</i> | - | - | - | X | - | X |
| White-faced Ibis | <i>Plegadis chihi</i> | - | - | - | X | - | - |
| Golden Eagle | <i>Haliaeetus leucocephalus alascanus</i> | X | - | - | - | - | X |
| Northern Goshawk | <i>Accipiter gentilis</i> (2 esp.) | - | - | - | X | - | - |
| Rufous Hawk | <i>Buteo regalis</i> | - | - | - | X | - | - |
| American Peregrine Falcon | <i>Falco peregrinus anatum</i> | X | - | - | - | X | - |
| Whooping Crane | <i>Grus americana</i> | X | - | - | - | X | - |
| Eastern Snowy Plover | <i>Charadrius alexandrinus nivosus</i> | - | - | - | X | - | - |
| Western Plover | <i>Charadrius westlandi</i> | - | - | - | X | - | - |
| Mexican Spotted Owl | <i>Strix occidentalis lucida</i> | - | X | - | - | - | - |
| Southwestern Willow Flycatcher | <i>Empidonax traillii eximius</i> | - | - | X | - | - | X |
| Loggerhead Shrike | <i>Lanius ludovicianus</i> (3 esp.) | - | - | - | X | - | - |
| Gray Vireo | <i>Vireo vicinior</i> | - | - | - | - | - | X |
| Acoustic Little Brown Bat; Nyctis Spotted Bat | <i>Nyctis lucifagus occultus</i> | - | - | - | X | - | - |
| West Peak Pike | <i>Esox nuculatus</i> | - | - | - | X | - | X |
| Sioux Jumping Mouse | <i>Ochotona princeps nigrascens</i> | - | - | - | X | - | - |
| American Marten | <i>Zapus hudsonius luteus</i> | - | - | - | X | - | X |
| | <i>Martes americana origenes</i> | - | - | - | - | - | X |
| Pool Sasil | <i>Lynx baileyi</i> | - | - | - | - | X | - |

State of New Mexico
ENERGY, MINERALS and NATURAL RESOURCES DEPARTMENT
Santa Fe, New Mexico 87505



28 March, 1995

Robert Gabriel
Roy F. Weston, Inc.
6501 Americas Parkway NE, Suite 800
Albuquerque, NM 87110

Dear Mr. Gabriel,

The Gramagrass cactus (Toumeyia papyracantha), has potential to occur in the area of the proposed Sandoval County Landfill project. I am enclosing a copy of the Inventory of Rare and Endangered Plants of New Mexico for your reference.

We recommend that you conduct an endangered species biological clearance survey before proceeding with any new construction. If during your survey, you encounter any of these plants, we would appreciate knowing their exact locations.

If you have any questions, please do not hesitate to call Karen Lightfoot, Endangered Species Botanist for the State of New Mexico.

Sincerely,

Karen S. Lightfoot
Karen S. Lightfoot

VILLAGRA BUILDING - 408 Galisteo

Forestry and Resources Conservation Division
P.O. Box 1948 87504-1948
827-5830

Park and Recreation Division
P.O. Box 1147 87504-1147
827-7465

2040 South Pacheco

Office of the Secretary
827-5950

Administrative Services
827-5925

Energy Conservation & Management
827-5900

Mining and Minerals
827-5970

Attachment IV.1.H

**Survey for Threatened and Endangered, or Rare Plants and Wildlife
at the Proposed Sandoval County Landfill Expansion Area**

**SURVEY FOR
THREATENED AND ENDANGERED, OR RARE
PLANTS AND WILDLIFE
AT THE PROPOSED
SANDOVAL COUNTY LANDFILL EXPANSION AREA
SANDOVAL COUNTY, NEW MEXICO**

**PREPARED FOR
GORDON ENVIRONMENTAL, INC.
BERNALILLO, NEW MEXICO**

**PREPARED BY
METRIC CORPORATION
ALBUQUERQUE, NEW MEXICO**

NOVEMBER 2003

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SURVEY FOR THREATENED AND ENDANGERED, OR RARE PLANTS AND WILDLIFE AT THE PROPOSED SANDOVAL COUNTY LANDFILL EXPANSION AREA

INTRODUCTION

On October 10, 2003, surveys for federal and state threatened, endangered, or rare plants and wildlife were conducted at the proposed landfill expansion area in Sandoval County, New Mexico. The area is located about 2 miles west of the city of Bernalillo, in the SE 1/4 of Section 33 and SW 1/4 of Section 34, T13N, R3E. The expansion area encompasses approximately 62 acres. The terrain is gently sloping and is at about an elevation of 5400 feet.

Review of the New Mexico Rare Plant Council (NMRPTC), New Mexico Department of Game and Fish (NMDGF), and US Fish and Wildlife Service webpages, and other literature resulted in a list of potential listed (Candidate, Proposed, Threatened, or Endangered) or rare (Special Status, Sensitive, or Concern) species, both federal and state, for Santa Fe County. A qualified biologist with METRIC Corporation walked throughout the survey area searching for rare plants and wildlife, noxious or invasive weeds, and wetlands and noted all identifiable species.

THREATENED AND ENDANGERED PLANTS

Plants

The survey area is located in Plains-Mesa Sand Scrub, a vegetation type that occurs primarily near the shoulders of post-Pleistocene flood plains of rivers such as the Rio Grande (Dick-Peddie 1993). This habitat occupies a long strip on the west side of the Rio Grande from near the southern end of the Jemez Mountains to near the mouth of the Rio Salado. As the name implies the soils are sandy. Characteristic plants of the Plains-Mesa Sand Scrub are sand sage (*Artemisia filifolia*), fourwing saltbush (*Atriplex*

canescens), Torrey's jointfir (*Ephedra torreyana*), sand beardtongue (*Penstemon ambiguus*), and broom dalea (*Psoralea scoparius*). In the survey area, sand sage is the dominant plant, broom dalea is fairly common, and fourwing saltbush is uncommon. Grass cover and diversity is fair to poor, probably due to the ongoing drought and perhaps long-term grazing in the past. The most common grasses are galleta (*Pleuraphis jamesii*), sandhill muhly (*Muhlenbergia pungens*), black grama (*Bouteloua eriopoda*), and mesa dropseed (*Sporobolus flexuosus*), although other grasses are present. A few oneseed juniper trees (*Juniperus monosperma*) grow in the site. No wetland or mesic plant species or noxious weeds were observed in the survey area. A list of the plants observed during the survey is in TABLE 1.

Threatened, endangered, or otherwise rare plants known to occur in Sandoval County in habitats similar to those in the study area are identified in TABLE 2 (New Mexico Rare Plant Technical Council). Although potentially suitable habitat exists for the rare plants, none were observed at the time of the survey. None are federally listed as candidate, proposed, threatened, or endangered.

The plants recognized as rare by the state of New Mexico are now only those listed in the New Mexico Rare Plant Technical Council website (see Literature Cited). This includes plant species that are listed as federal endangered, threatened, candidate, or proposed, species of concern, state endangered, or globally rare. The *Inventory of rare and endangered plants of New Mexico* (Sivinski & Lightfoot 1995), published by the state, is out of date and is no longer used by the state botanist (R. Sivinski, pers. comm.).

Noxious or Invasive Weed Species

The five noxious weeds (Classes A and B) that are known to occur in Sandoval County are listed in TABLE 3 (Lee 1999). No Class A or B noxious plant species were observed in the study area at the time of the survey. One weedy non-native plant species (Russian thistle) was observed during the survey (TABLE 1).

TABLE 1

LIST OF PLANTS OBSERVED IN SURVEYED AREA

| | | |
|--|---|--|
| AGAVACEAE (Agave Family) <i>Yucca glauca</i> SMALL SOAPWEED | <i>Opuntia polyacantha</i> PLAINS PRICKLYPEAR | MALVACEAE (Mallow Family) <i>Sphaeralcea coccinea</i> SCARLET GLOBEMALLOW <i>Sphaeralcea incana</i> GOLDEN GLOBEMALLOW |
| ASTERACEAE (COMPOSITAE; Sunflower Family) <i>Artemisia filifolia</i> SAND SAGEBRUSH <i>Chrysothamnus nauseosus</i> RUBBER RABBITBRUSH <i>Gutierrezia sarothrae</i> BROOM SNAKEWEED | CHENOPODIACEAE (Goosefoot Family) <i>Atriplex canescens</i> FOURWING SALTBUCH <i>Krascheninnikovia lanata</i> (<i>Ceratoides lanata</i> ; <i>Eurotia lanata</i>) WINTERFAT @ <i>Salsola tragus</i> (<i>S. kali</i>) RUSSIAN THISTLE | POACEAE (GRAMINAE; Grass Family) <i>Aristida purpurea</i> FENDLER'S THREEAWN <i>Bouteloua eriopoda</i> BLACK GRAMA <i>Bouteloua gracilis</i> BLUE GRAMA <i>Muhlenbergia porteri</i> BUSH MUHLY <i>Muhlenbergia pungens</i> SANDHILL MUHLY <i>Muhlenbergia torreyi</i> RING MUHLY <i>Oryzopsis hymenoides</i> INDIAN RICEGRASS <i>Pleuraphis (Hilaria)</i> <i>jamesii</i> GALLETA <i>Sporobolus contractus</i> SPIKE DROPSÉED <i>Sporobolus cryptandrus</i> SAND DROPSÉED <i>Sporobolus flexuosus</i> MESA DROPSÉED |
| BORAGINACEAE (Borage Family) <i>Cryptantha crassisejala</i> THICKSEPAL HIDDENFLOWER | CUPRESSACEAE (Cypress Family) <i>Juniperus monosperma</i> ONESEED JUNIPER | |
| BRASSICACEAE (Mustard Family; CRUCIFERAE) <i>Descurainia</i> sp. TANSYMUSTARD | FABACEAE (LEGUMINOSAE; Pea Family) <i>Dalea formosa</i> INDIGOBUSH, FEATHERPLUME <i>Psoralea scoparius</i> (= <i>Dalea scoparia</i>) PURPLE SAGE, BROOM DALEA | |
| CACTACEAE (Cactus Family) <i>Cylindropuntia</i> (<i>Opuntia</i>) <i>imbricata</i> TREE CHOLLA <i>Escobaria</i> (<i>Coryphantha</i>) <i>vivipara</i> SPINYSTAR <i>Grusonia</i> (<i>Opuntia</i>) <i>clavata</i> CLUB CHOLLA | HYDROPHYLLACEAE (Waterleaf Family) <i>Phacelia</i> sp. SCORPIONWEED | |

@ = adventive (alien) plant; most abundant and/or dominant plants in bold

TABLE 2

TARGET RARE PLANTS OCCURRING IN SANDOVAL COUNTY

| Scientific Name | Common Name | Status ¹ | Habitat |
|---------------------------|------------------------------|---------------------|---|
| <i>Astragalus feensis</i> | Santa Fe milkvetch | SSC, rare | dry, sandy or gravelly hillsides among junipers, 5000–6000 ft; central New Mexico |
| <i>Dalea scarlosa</i> | Albuquerque prairieclover | BSS, rare | open sandy or clayey banks and bluffs, roadsides, 4750–4900 ft; central New Mexico only |

¹ BSS = BLM Sensitive Species; SSC = State of New Mexico Species of Concern (informal designation); rare = globally rare according to the New Mexico Rare Plant Technical Council (NMRPTC)

TABLE 3

NOXIOUS OR INVASIVE WEEDS OCCURRING IN SANDOVAL COUNTY

| Common Name | Scientific Name | Class ¹ |
|------------------|----------------------------|--------------------|
| Hoary Cress | <i>Cardaria draba</i> | A |
| Russian Knapweed | <i>Acroptilon repens</i> | B |
| Canada Thistle | <i>Cirsium arvense</i> | A |
| Musk Thistle | <i>Carduus nutans</i> | B |
| Scotch Thistle | <i>Onopordum acanthium</i> | A |

¹ A = Alien plants currently with limited distribution in New Mexico; B = Alien plants found in a portion of New Mexico (Lee 1999)

Wetlands

No wetland plants, no temporarily or permanently saturated soils, and no indications of wetland hydrology were observed in the survey area. Therefore, no Corps of Engineers jurisdictional wetlands were identified.

THREATENED AND ENDANGERED WILDLIFE

No birds were observed but one lizard and four mammals were seen or evidence of their presence was noted in the survey area (TABLE 4). Under the Migratory Bird Treaty Act (16 USC 703–7111), it is unlawful to take, capture, possess or kill any bird species, nest, or egg listed in CFR 10.13. No nests were noted in the survey corridor.

Rare (target) wildlife known to occur in Sandoval County in habitats similar those found in the survey area are listed in TABLE 5. Potentially suitable habitat exists for the species that utilize grasslands, but none were seen. The species mostly likely to be present in the area are burrowing owl and loggerhead shrike, which have been found elsewhere in the vicinity. The other birds may rarely fly over the area, but there is little to attract them.

TABLE 4

TARGET RARE WILDLIFE OCCURRING IN SANDOVAL COUNTY

| Common Name | Scientific Name | Status ¹ | Habitat |
|------------------------|------------------------------------|---------------------|---|
| BIRDS | | | |
| Ferruginous hawk | <i>Buteo regalis</i> | FSC, BSS, FSS | grasslands, scrublands, juniper savanna, agricultural, and riparian |
| Western burrowing owl | <i>Athene cunicularia hypogaea</i> | FSC, BSS | grasslands, open areas, usually with prairie dogs |
| Loggerhead shrike | <i>Lanius ludovicianus</i> | FSC, BSS | grasslands and shrublands |
| MAMMAL | | | |
| Gunnison's prairie dog | <i>Cynomys gunnisoni</i> | SSC | low valley grasslands to parks and meadows in the mountains |

¹ FSC = Federal Species of Concern; BSS = BLM Sensitive Species; FSS = Forest Service Sensitive Species; SSC = State of New Mexico Species of Concern (informal designation)

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Sivinski, R. and K. Lightfoot. 1995. Inventory of rare and endangered plants of New Mexico. New Mexico Forestry and Resources Conservation Division; Energy, Minerals and Natural Resources Department; Santa Fe.

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**APPLICATION FOR PERMIT RENEWAL AND MODIFICATION
SANDOVAL COUNTY LANDFILL**

**VOLUME IV: SITING AND LAND USE
SECTION 1: SITING CRITERIA**

**ATTACHMENT IV.1.B
NMDGF CORRESPONDENCE**

Dacia Tucholke

From: Watson, Mark L., DGF <mark.watson@state.nm.us>
Sent: Friday, March 06, 2015 9:42 AM
To: Dacia Tucholke
Cc: Hayes, Chuck L., DGF; Watson, Mark L., DGF
Subject: RE: Request for Critical Habitat Review - Sandoval County Landfill

Hi Dacia,

The Department does not anticipate adverse effects to wildlife or habitats from implementation of your project.

Thanks for consulting with us.

Mark L. Watson
Terrestrial Habitat Specialist
Division of Ecological and Environmental Planning
NM Department of Game and Fish
P.O. Box 25112
Santa Fe, NM 87504
1 Wildlife Way
Santa Fe, NM 87507
(505) 476-8115
FAX: (505) 476-8128

For NM wildlife info, visit Biota Information System of New Mexico (BISON-M):
Species Accounts, Searches and County Lists (use the "Database Query" option): <http://www.bison-m.org/>
Habitat Handbook Project Guidelines:
http://www.wildlife.state.nm.us/conservation/habitat_handbook/index.htm
New Mexico Wildlife of Concern by Counties List:
http://www.wildlife.state.nm.us/conservation/share_with_wildlife/documents/speciesofconcern.pdf

CONSERVING NEW MEXICO'S WILDLIFE FOR FUTURE GENERATIONS

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From: Dacia Tucholke [mailto:DTucholke@gordonenvironmental.com]
Sent: Tuesday, March 03, 2015 3:05 PM
To: Hayes, Chuck L., DGF
Cc: Watson, Mark L., DGF; Schuman, George, NMENV; Dyer, James, NMENV; Robert Sanchez; Drichelle Pierce
Subject: Request for Critical Habitat Review - Sandoval County Landfill

Dear Mr. Hayes,

Please find attached, a request for review of potential critical habitat for the Sandoval County Landfill in Rio Rancho, New Mexico. Please contact me if you have any questions or need more information. We appreciate your review and input.

Thank you,
Dacia Tucholke

Dacia R. Tucholke
Project Manager
Gordon Environmental, Inc.
213 S. Camino del Pueblo
Bernalillo, NM 87004
P: 505.867.6990
F: 505.867.6991



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March 3, 2015

*Submitted Via Email:
Chuck.hayes@state.nm.us*

New Mexico Department of Game & Fish
Ecological & Environmental Planning Division
Attn: Mr. Chuck Hayes
Assistant Chief for Technical Guidance
One Wildlife Way
Santa Fe, New Mexico 87507

**Re: Sandoval County Landfill
Request for Review
Critical Habitat of Threatened or Endangered Species**

Dear Mr. Hayes:

On behalf of our client, the County of Sandoval (the "County"), Gordon Environmental, Inc. (GEI) plans to submit an Application for a Solid Waste Facility Permit Renewal and Modification to the New Mexico Environment Department's (NMED) Solid Waste Bureau (SWB) for the Sandoval County Landfill (SCLF). SCLF comprises 177 acres \pm located at 2708 Iris Rd NE, in the northwest quadrant of the City of Rio Rancho, NM which is five road miles west of the town of Bernalillo. A Site Location Map is attached for reference. The New Mexico Solid Waste Rules require that the Application for Permit Renewal and Modification address specific siting criteria, including critical habitat of endangered or threatened species, i.e. per 20.9.4.9.A(11) NMAC:

A. No municipal, construction and demolition, or special waste landfill or monofill shall be located where, on the date of the first public notice as required in 20.9.3 NMAC, any portion of the proposed disposal area is:

...

(11) within areas that will result in the destruction or adverse modification of the critical habitat of endangered or threatened species as identified in either 50 CFR Part 17 or by the New Mexico department of game and fish in its most recent biennial review;

Threatened and endangered species surveys were performed at the SCLF site in 1995 by the Botanical Consortium, and by METRIC Corporation in 2003. No threatened or endangered species were identified at those times. Based on a recent review of the critical habitat website (<http://crithab.fws.gov/ecos/home.action>), we have identified five species for which critical habitat exists in Sandoval County, NM:

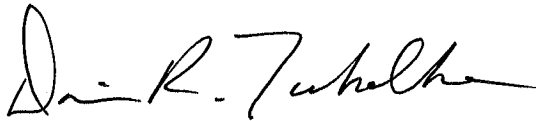
- Rio Grande Silvery Minnow (riverine habitat)
- Yellow-Billed Cuckoo (riparian habitat)
- New Mexico Meadow Jumping Mouse (riparian habitat)
- Mexican Spotted Owl (riparian or canyon habitat)
- Jemez Mountains Salamander (forest habitat)

In brief, these species require riparian, riverine, and forest habitats as noted above. These types of habitats do not appear to exist within the SCLF solid waste facility footprint, which has been described by Botanical Consortium (1995) as a sandy terrace slope west of the Rio Grande Valley, covered with mixed grasses and shrubs.

In response to NMED Solid Waste Bureau's request, GEI is requesting a formal letter response from your agency with regard to 20.9.4.9.A(11) NMAC (as referenced above), and whether critical habitat for threatened or endangered species currently exists within the SCLF site. We appreciate your attention to this matter. Please contact us with any questions or comments at (505) 867-6990, or dtucholke@gordonenvironmental.com.

Very truly yours,

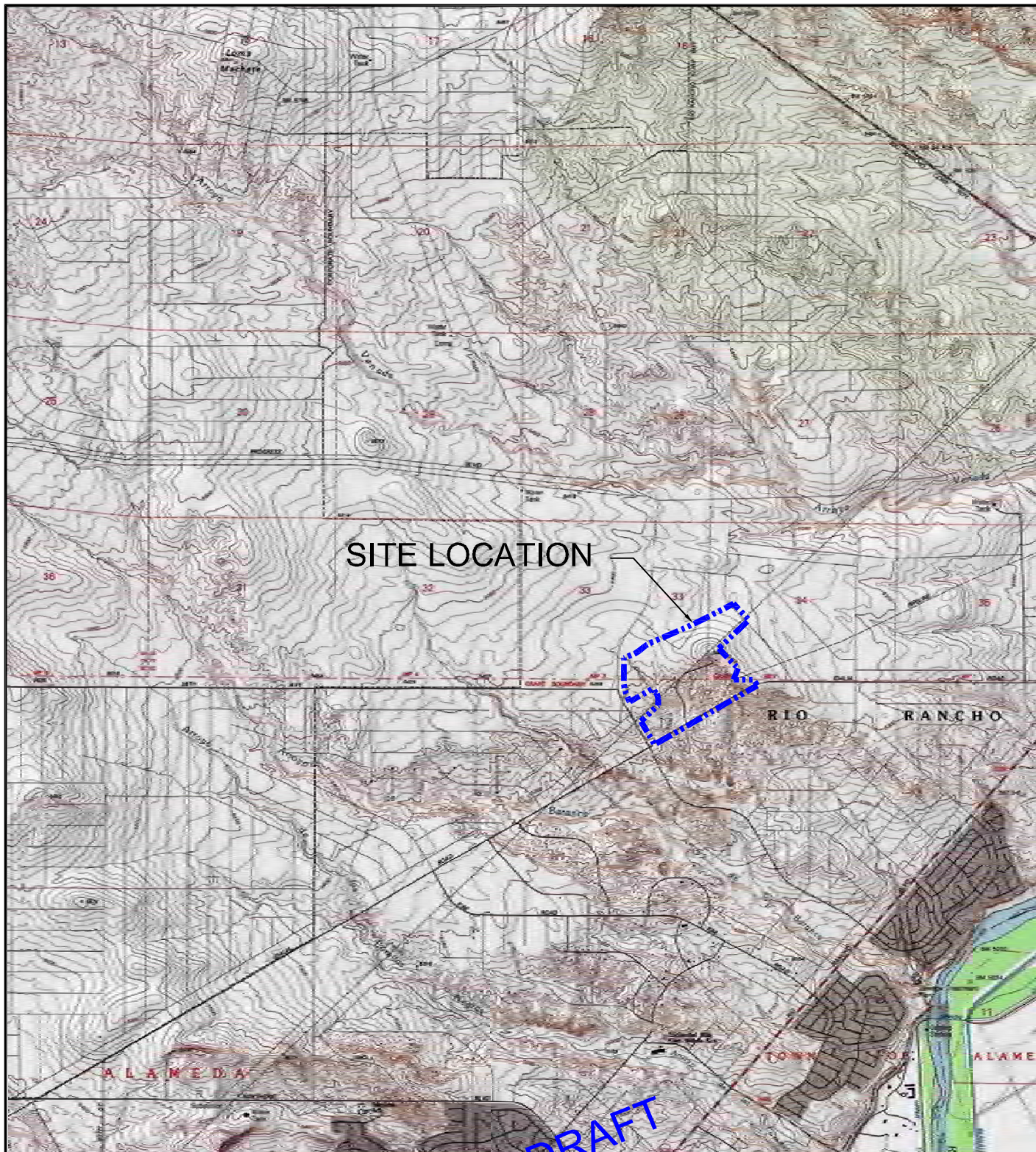
Gordon Environmental, Inc.



Dacia R. Tucholke
Project Manager

cc: George Schuman, Manager, Permit Section, NMED SWB
James Dyer, Hydrologist, NMED SWB
Robert Sanchez, Assistant Director for Solid Waste, Sandoval County Public Works
Department

Attachment: Site Location Map



LEGEND

--- SITE BOUNDARY

NOTES:

1. GEOGRAPHIC COORDINATES FOR THE CENTER OF THE SITE:
35.3092°N, 106.6198°W.

2. MAP REFERENCES:
MAP BASE FROM: USA TOPO MAPS, 1:24000
USA TOPOGRAPHIC SERVICES, TOPO! MAP



Drawing: P:\acad 2003\211.00.01\PERMIT FIGURES\SITE LOC MAP.dwg

Date/Time: Feb. 26, 2015-09:21:14 ; LAYOUT: A (P)

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SITE LOCATION MAP

SANDOVAL COUNTY LANDFILL
RIO RANCHO, NEW MEXICO



Gordon Environmental, Inc.

Consulting Engineers

213 S. Camino del Pueblo
Bernalillo, New Mexico, USA
Phone: 505-867-6990
Fax: 505-867-6991

DATE: 02/26/2015

CAD: SITE LOC MAP.dwg

PROJECT #: 211.00.01

DRAWN BY: DMI

REVIEWED BY: DRT

FIGURE I.1.1

APPROVED BY: IKG

get@gordonenvironmental.com

**APPLICATION FOR PERMIT RENEWAL AND MODIFICATION
SANDOVAL COUNTY LANDFILL**

**VOLUME IV: SITING AND LAND USE
SECTION 2: LAND USE**

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**APPLICATION FOR PERMIT RENEWAL AND MODIFICATION
SANDOVAL COUNTY LANDFILL**

**VOLUME IV: SITING AND LAND USE
SECTION 2: LAND USE**

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| IV.2.C | SECRETARY’S VAA CONCURRENCE LETTER 08/27/2015 |

APPLICATION FOR PERMIT RENEWAL AND MODIFICATION SANDOVAL COUNTY LANDFILL

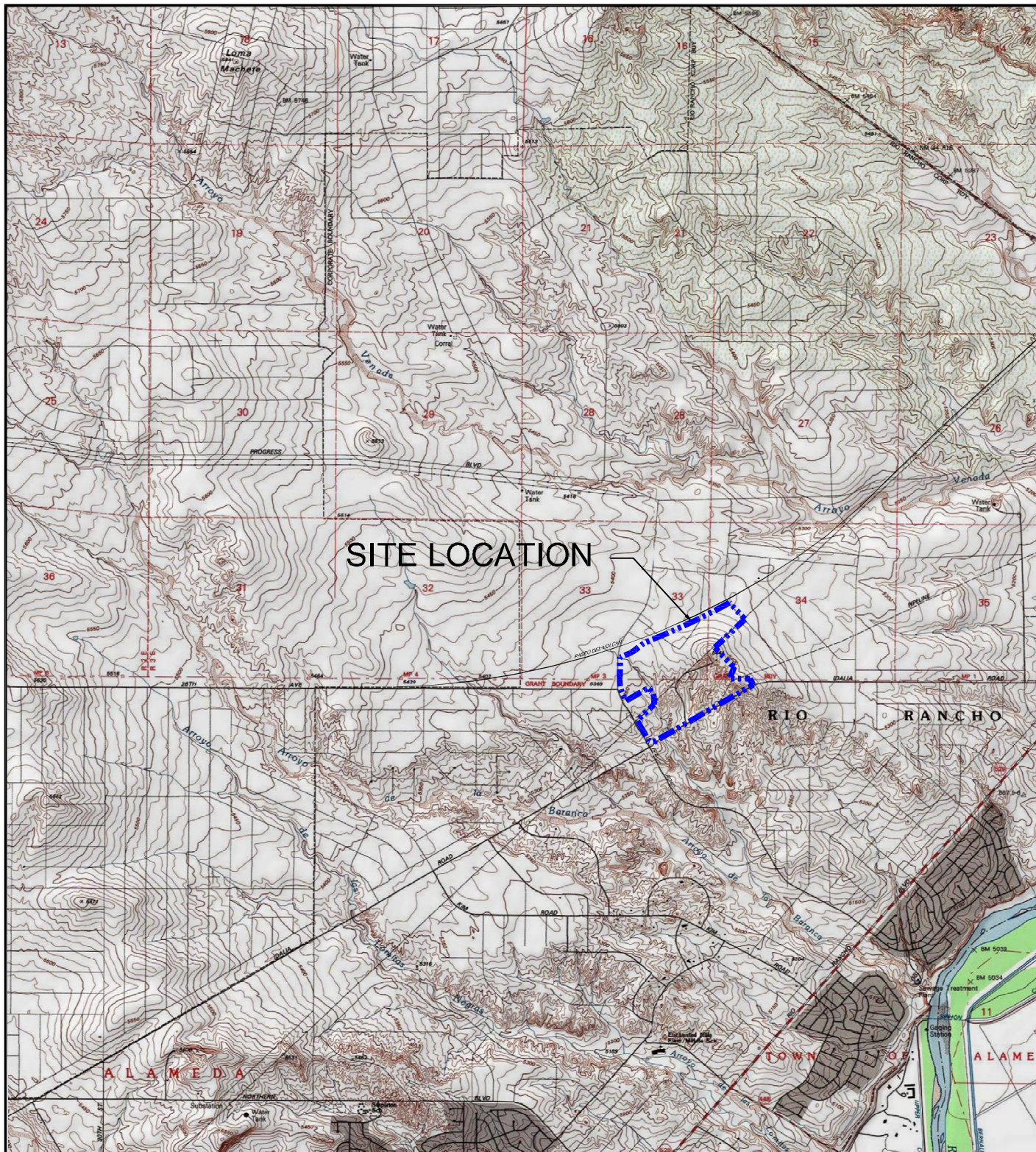
VOLUME IV: SITING AND LAND USE SECTION 2: LAND USE

1.0 INTRODUCTION

The Sandoval County Landfill (SCLF) is an existing solid waste facility operating in compliance with its current Permits, SWM-050304 and SWM-050304 (SP), and the New Mexico Environment Department (NMED) Solid Waste Rules (20.9.2-2.9.10 NMAC). SCLF is located at 2708 Iris Road NE in Rio Rancho, New Mexico (NM), and occupies 178.3 acres \pm (**Figure IV.2.1**). SCLF is publicly owned and operated by the County of Sandoval (the “County”), and is currently permitted to accept municipal solid waste (MSW), including construction and demolition debris (C&D) and tires, and two special wastes: petroleum contaminated soils (PCS) and sludge.

1.1 Site History

SCLF has been in operation since approximately 1970. In 1983, SCLF was registered as a landfill with NMED. The 114 acre \pm site was first permitted (SWM-050304) by Roy F. Weston, Inc. (Weston) to NMED standards (i.e., 20 NMAC 9.1) in 1998. The SCLF Permit was modified and renewed by Gordon Environmental, Inc. (GEI) as approved by NMED in 2005 [SWM-050304 and SWM-050304 (SP)]. The 2005 Modification included a 63 acre \pm lateral expansion of the facility boundary to the north, which resulted in a 178.3 acre \pm facility containing a 112.5 acre \pm disposal area. In addition to the expansion, the 2005 Permit included the addition of in-vessel composting services to divert organic waste from incoming waste streams for beneficial uses. The County is currently seeking to renew and modify the SCLF Permit compliant with the current Solid Waste Rules (i.e., 20.9.2-20.9.10 NMAC) to include an additional lateral and vertical expansion of the solid waste disposal boundary to include a new Unit IV disposal area which will overlap Units I, II, and III and include a portion of the former Public Service Company of New Mexico (PNM) utilities easement. Once approved, the modification will result in a 122.5-acre \pm disposal area (i.e., a 10-acre expansion), however there will be no changes to the existing 178.3-acre \pm solid waste facility boundary.



LEGEND

--- SITE BOUNDARY

NOTES:

1. GEOGRAPHIC COORDINATES FOR THE CENTER OF THE SITE:
35.3092°N, 106.6198°W.
2. MAP REFERENCES:
MAP BASE FROM USA TOPO MAPS, 1:24000
USA TOPOGRAPHIC SERVICES, TOPOI MAP
3. SITE BOUNDARY FROM THE 2014 VACATION PLAT 093013
RRE BOOK 25 PAGE 65 SANDOVAL COUNTY LANDFILL

Drawing: P:\acad 2003\211.00.01\PERMIT FIGURES\SITE LOC MAP.dwg
Date/Time: Apr. 07, 2015-06:27:33 ; LAYOUT: A (P)
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SITE LOCATION MAP

SANDOVAL COUNTY LANDFILL
RIO RANCHO, NEW MEXICO



Gordon Environmental, Inc.
Consulting Engineers

213 S. Camino del Pueblo
Bernalillo, New Mexico, USA
Phone: 505-867-6990
Fax: 505-867-6991

| | | |
|------------------|-----------------------------|----------------------|
| DATE: 03/24/2015 | CAD: SITE LOC MAP.dwg | PROJECT #: 211.00.01 |
| DRAWN BY: DMI | REVIEWED BY: DRT | |
| APPROVED BY: IKG | gel@gordonenvironmental.com | FIGURE IV.2.1 |

1.2 Purpose

The purpose of **Volume IV.2**, Land Use, is to provide a description of general site characteristics, selected physical features, access, climate, land uses, zoning, socioeconomic and demographic characteristics of the area surrounding SCLF. More specifically, this section provides documentation on land use and zoning in response to 20.9.3.8.C(4)(b-d) NMAC. In addition, a “Vulnerable Area Assessment” was conducted for SCLF in 2015 in accordance with 20.9.3.8.D NMAC to update the demographic database; and a summary is provided herein.

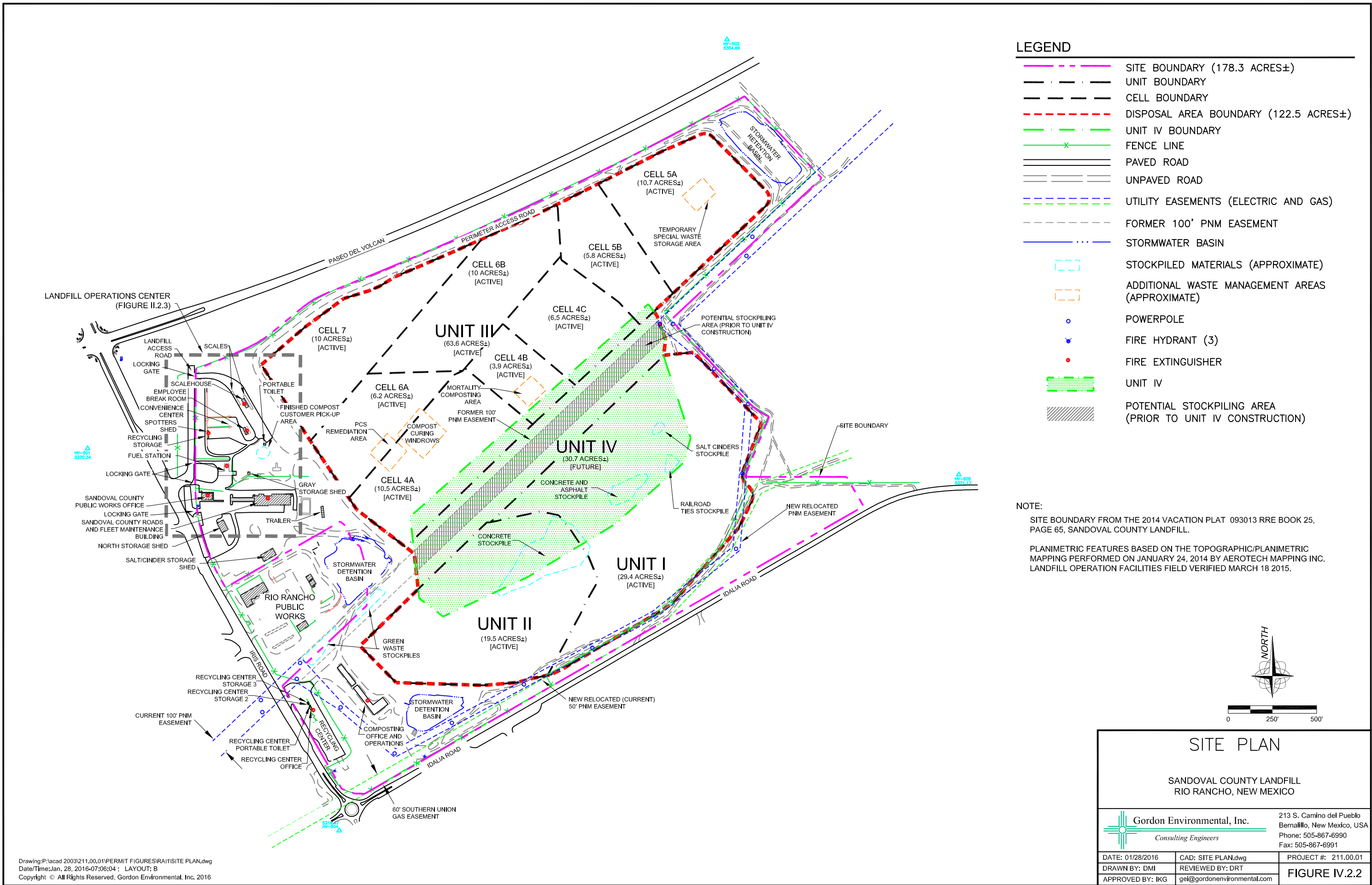
2.0 SITE DESCRIPTION

2.1 Location

SCLF is located at 2708 Iris Road NE in Rio Rancho, NM. The approximate geographic coordinates for the center of the site are: Latitude 35.307°N and Longitude 106.622°W. The SCLF “solid waste facility” (20.9.2.7.S(11) NMAC) footprint encompasses approximately 178.3 acres ± of land located within portions of the Sections 33 and 34, Township 13 North, Range 3 East of the New Mexico Prime Meridian, Sandoval County, NM as shown on **Figure IV.2.1**. The SCLF “solid waste disposal area” (20.9.2.7.S(10) NMAC) represents approximately 122.5 acres ± of the 178.3 acre ± solid waste facility footprint; as shown on the Site Plan (**Figure IV.2.2**). A legal description and survey plat for SCLF is provided in **Attachment IV.2.A**.

2.2 Topography

The existing SCLF is situated between approximately 5,300 and 5,441 feet (ft) above mean sea level (amsl), less than one mile to the north of Arroyo de la Baranca, and approximately two miles west of the Rio Grande (**Figure IV.2.1**). The SCLF is set back from the terraces that overlook the Rio Grande and is located among the dune fields of the west mesa. The west mesa lies in the Mexican Highland Section (Rio Grande subsection) of the Basin and Range Province.



According to Hawley (1986), the topography associated with this area consists of block-faulted mountains that commonly have Precambrian cores overlain by Paleozoic sedimentary sequences and basin deposits that may exceed 5,000 ft in thickness. Dane and Bachman (1965) describe the geologic characteristics of the region as quaternary pediment, terrace and other deposits of sand, gravel and caliche. These soils are commonly found on the gently to strongly sloping and undulating plains in the northern part of the Rio Grande depression, principally in the counties of Bernalillo, Valencia, Sandoval and Socorro.

The topographic high point of the completed Unit IV will be approximately 5,562 ft amsl. That constructed topographic high exceeds, by 121 ft, the naturally occurring topographic high point of the hilltop feature associated with the project which is approximately 5,441 ft amsl.

2.3 Vegetation

Generally, the natural biotic community in which the project is situated can be characterized as Plains and Great Basin Grassland. Local vegetation consists of a sparse over-story of scattered junipers and an inconsistent under-story of four-wing saltbush, sand sage, snakeweed, Indian rice grass, blue grama, other grasses, prickly pear, creeping cholla, cane cholla, narrow leaf yucca, and large outcrops of disturbance related species such as tumbleweeds. The plant species identified at the facility are typical of vegetative patterns in sandy, wind-blown terrace features found in this area.

2.4 Access

The majority of vehicles traveling to SCLF proceed north or south on NM 528, before traveling west on Idalia Road to the new roundabout and then turning north on Iris Road, which leads to the site entrance (**Figure II.9.3**). Both Idalia and Iris Roads are non-restricted, two-lane County roads. Truck traffic and heavy vehicles already represent a high proportion of the local traffic near the site. Traffic associated with SCLF will typically occur during daylight hours.

The primary access route to Idalia Road is NM 528, which is a four-lane asphalt all-weather state highway with a high proportion of truck traffic. Traffic signals and turning lanes at both the Idalia Road and Iris Road intersections with NM 528 facilitate smooth traffic flow to and from the facility. The completion of Paseo del Volcan contiguous with the site's northern

perimeter, and its ultimate extension to the west, will likely result in diversion of some of the existing delivery traffic to the new four-lane highway. It is anticipated that as the population of the area increases, that there will be commensurate incremental increases in solid waste truck volumes and citizen vehicle traffic on primary and secondary haul routes. A detailed Transportation Plan is provided in **Volume II.9**.

2.5 Water Source

Currently water is supplied by the City of Rio Rancho via the municipal water supply line that enters the site approximately midway between the existing landfill entrance and the intersection of Iris/Idalia Roads. There are also three fire hydrants on site used for dust and fire control as discussed in the Contingency Plan (**Volume II.3**).

3.0 CLIMATE

The SCLF is situated in the northern reaches of the Chihuahuan grasslands which is characterized by a temperate continental semi-arid climate. The climate is typical of high desert plateau regions with wide temperature extremes, sunny days and low precipitation. The maximum average temperature for Corrales, NM (**Table IV.2.1**) the closest area with consistent and available climate data.) temperature is 91.7 degrees F and occurs in July. The minimum average temperature occurs in December and is 19.6 degrees F. The annual average precipitation is approximately 10.07 inches, and the majority of which occurs in the form of convection thunderstorms during the summer months (i.e., occurring in the form of “monsoon” storms). Net evapotranspiration in the vicinity of the site is approximately 88 inches per year (Cochiti Dam, 1975-2005).

Based on the Wind Rose (Sandia Lakes, NM) provided as **Figure IV.2.3**, calms (i.e., winds less than 1.3 miles per hour; mph) are predominant for the area approximately 44% of the time. While prevailing winds blow from the south and south/southwest, winds are also common from the southwest, west, northwest, and north. Winds average 1.3-4 mph approximately 35% of the time. Winds blow 4-8 mph approximately 18% of the time, and between 8-13 mph only 3% of the time.

TABLE IV.2.1
Climate Data Summary (Corrales, NM)
Sandoval County Landfill

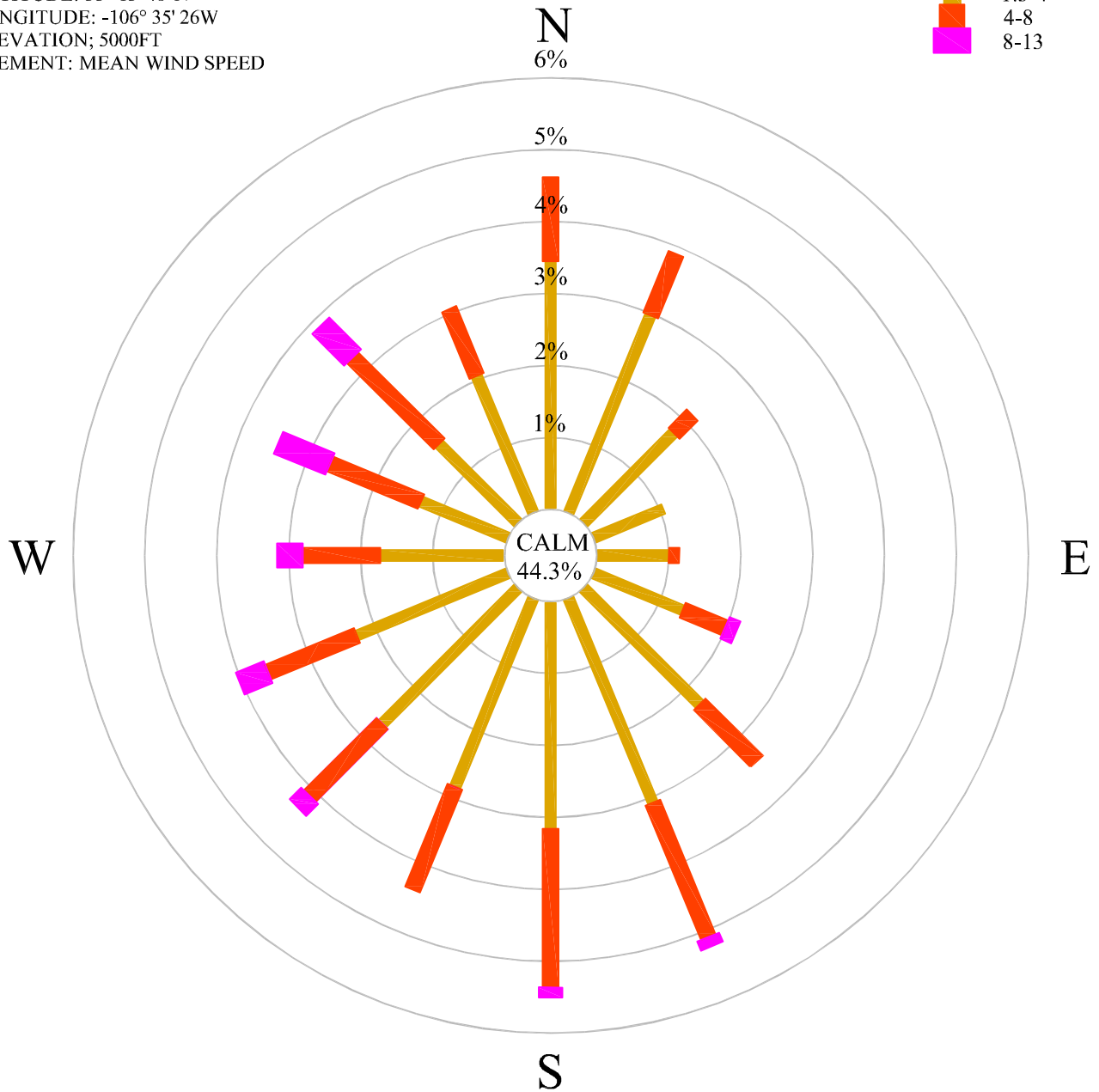
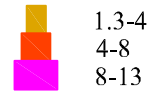
| Corrales, NM | Jan | Feb | Mar | Apr | May | June | July | Aug | Sept | Oct | Nov | Dec | Annual Average |
|---|------------|------------|------------|------------|------------|-------------|-------------|------------|-------------|------------|------------|------------|-----------------------|
| Monthly Average Max Temp (°F) | 49.3 | 55.4 | 63.3 | 71.6 | 80.8 | 89.7 | 91.7 | 88.9 | 83.1 | 71.6 | 58.6 | 48.3 | 71 |
| Monthly Average Min Temp (°F) | 20.2 | 24.1 | 29.2 | 35.3 | 42.8 | 51.1 | 58.3 | 57.8 | 49.1 | 36.7 | 26.6 | 19.6 | 37.6 |
| Monthly Average Precipitation (inches) | 0.4 | 0.45 | 0.71 | 0.67 | 0.56 | 0.67 | 1.45 | 1.87 | 1.07 | 0.98 | 0.62 | 0.62 | 10.07 |

Source: 1982-2010 Monthly Climate Summary for Corrales, NM, WRCC

SANDIA LAKES NEW MEXICO

STATION: SANDIA LAKES NEW MEXICO
 LATITUDE: 33° 13' 48"N
 LONGITUDE: -106° 35' 26W
 ELEVATION: 5000FT
 ELEMENT: MEAN WIND SPEED

MPH



START DATE: MAR. 1, 2004
 END DATE: MAR. 1, 2015
 # OF DAYS: 4048 OF 4048
 # OBS: POSS: 05939 OF 97152
 WESTERN REGIONAL CLIMATE CENTER

WIND ROSE

SANDOVAL COUNTY LANDFILL
 RIO RANCHO, NEW MEXICO TEXT



Gordon Environmental, Inc.
 Consulting Engineers

213 S. Camino del Pueblo
 Bernalillo, New Mexico, USA
 Phone: 505-867-6990
 Fax: 505-867-6991

Drawing: P:\acad 2003\211.00.01\PERMIT FIGURES\WIND ROSE.dwg
 Date/Time: Apr. 07, 2015-06:31:21 ; LAYOUT: A (P)
 Copyright © All Rights Reserved, Gordon Environmental, Inc. 2015

| | | |
|------------------|-----------------------------|----------------------|
| DATE: 04/07/2015 | CAD: WIND ROSE.dwg | PROJECT #: 211.00.01 |
| DRAWN BY: DMI | REVIEWED BY: DRT | FIGURE IV.2.3 |
| APPROVED BY: IKG | gel@gordonenvironmental.com | |

4.0 CONTIGUOUS LAND USES

4.1 Zoning

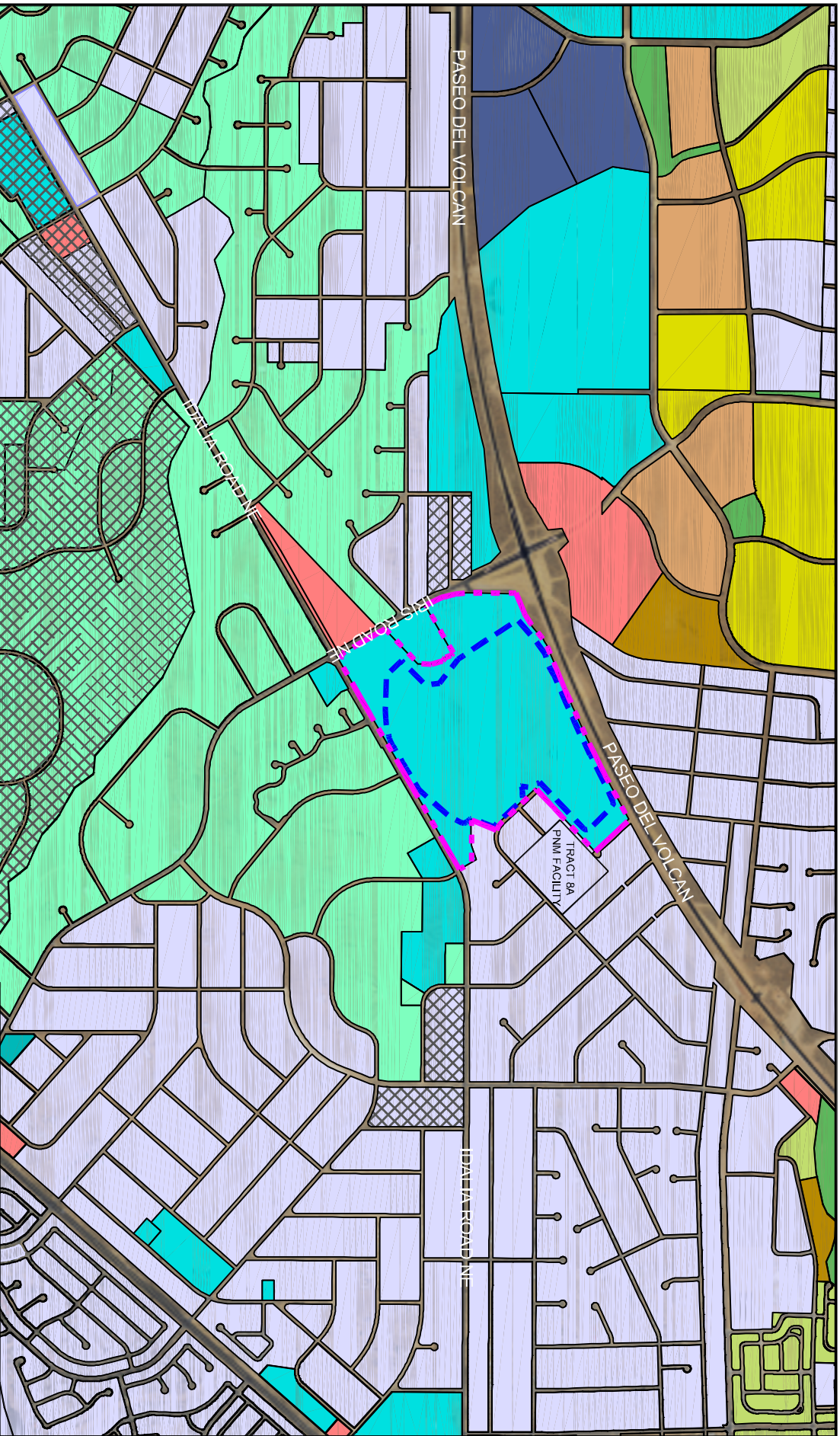
The SCLF site is zoned by the city of Rio Rancho as “SUNR”, special use, non-residential, and is consistent with activities that would occur associated with a solid waste disposal facility and related support activities (**Figure IV.2.4**). Properties adjacent to the existing facilities north of Idalia Road are zoned “R-1” for single family residential development; “E-1”, estate residential (i.e., residential greater than one acre); and “C-1”, retail commercial. Properties directly north of Paseo Del Volcan are zoned “C-1”, retail commercial; “R-6”, multi-family residential; and SU, special use. A large tract of property adjacent to the south side of Idalia Road is also zoned “E-1”, estate residential.

4.2 Adjacent Land Use

Generally, land uses within 1,000 ft of the landfill and proposed expansion include the proposed Paseo del Volcan easement to the north, Sandoval County public works buildings, City of Rio Rancho public works building to the south and west, the PNM facility to the east (Tract 8A), and low to medium density residential properties to the east and west. The northern perimeter of the SCLF is bounded by the proposed Paseo del Volcan right-of-way (400 ft wide).

4.3 Current Setbacks

In compliance with 20.9.4.9.A(9) NMAC, all of the current and proposed landfill cells are located at least 50 ft from the SCLF property boundaries. As of the date of the first public notice (i.e., on or about 07/03/1996) there were no permanent residences, schools, hospitals, churches, or institutions located within 500 ft of the site (see **Volume IV.1**). Since the 1998 approval of the initial SCLF Permit, numerous residences have been constructed in proximity to the facility. Residential growth is moving toward SCLF with full knowledge of its existence and potential longevity. Currently, the closest structure to the SCLF solid waste disposal boundary is a residence located 523 ft to the south (**Figure IV.1.10**). Land use buffer zones are provided by the Paseo del Volcan, Idalia, and Iris roads, associated rights-of-way, and natural topographic features.



LEGEND

- SITE BOUNDARY
- DISPOSAL AREA
- BOUNDARY

- RESIDENTIAL
 - R-1
 - R-4
 - R-2
 - R-6
 - R-3
 - E-1
- COMMERCIAL
 - C-1
- SPECIAL USE
 - SU
- OPEN SPACE
 - OS
- LIGHT INDUSTRIAL
 - M-1

OVERLAY ZONE OZ



VECTOR AND ZONING REFERENCE:
CITY OF RIO RANCHO GIS WEB SITE
Drawing: P:\sacred 2003\211.00.01\PERMIT FIGURES\ZONING.DWG
Date/Time: Mar. 24, 2015 13:14:54 : LAYOUT: A (US)
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ZONING MAP

SANDOVAL COUNTY LANDFILL
RIO RANCHO, NEW, MEXICO



Gordon Environmental, Inc.
Consulting Engineers

213 S. Camino del Pueblo
Bernalillo, New Mexico, USA
Phone: 505-867-6890
Fax: 505-867-6891

| | | |
|------------------|------------------|----------------------|
| DATE: 03/24/2015 | CAD: ZONING.dwg | PROJECT #: 211.00.01 |
| DRAWN BY: DM | REVIEWED BY: DRT | |
| APPROVED BY: IKG | gk@gordonev.com | FIGURE IV.2.4 |

4.4 Existing Infrastructure

The “Modification” portion of this Application for Permit Renewal and Modification is submitted to include a lateral and vertical expansion, resulting in a new “Unit IV” disposal area which will overlap Units I, II, and III and include a portion of the former PNM utilities easement (**Figure IV.2.2**). The easement is approximately 100 ft in width (north/south) and runs southwest to northeast through the SCLF site, bisecting Unit III (north) from Units I and II (south). As shown on the Permit Plans (see Cross-Sections) the maximum height of the proposed SCLF design is 5,562 ft amsl vs. the current maximum design elevation of 5,453 ft amsl, resulting in a maximum vertical expansion of approximately 109 ft (see also **Volume I.1, Table A**). The County and PNM have negotiated an agreement to relocate the overhead electric transmission line that runs through the easement to accommodate the Permit Modification for Unit IV. The power lines have been relocated to the south/southeast perimeters (see **Permit Plans**) in order to facilitate the landfill expansion.

A natural gas line runs parallel to Idalia to within 2,200 ft of the southwest corner of the existing facility at which point it crosses the corner at a 45-degree angle. Unit I operations were set back to accommodate the pipeline crossing. There are no known pipelines traversing through the existing facility. The nearest pipelines to the facility are water service lines running along rights-of-way for Idalia Road, Iris Road, and Chayote Road, which serve the landfill and County Public Works Complex.

5.0 VULNERABLE AREA ASSESSMENT SUMMARY

A Vulnerable Area Assessment (VAA) was conducted for the SCLF site to address each of the three “vulnerable area criteria” in relation to the proposed Permit Renewal and Modification of the SCLF, as required by the current NM Solid Waste Rules (08/2007). A copy of the VAA, submitted to NMED on 3/5/2015 is provided as **Attachment IV.2.B**. The Secretary’s letter of concurrence will be included as **Attachment IV.2.C**. The regulations (20.9.2.7.V(3) NMAC) define a vulnerable area as follows:

A vulnerable area is an area within a four mile radius from the geographic center of a facility or proposed facility that:

(a) has a percentage of economically stressed households greater than the state percentage based on the most recent actual census bureau data within any square mile within the four mile radius surrounding the facility or proposed facility; and
(b) where the New Mexico portion has a population of 50 people or more within any square mile within the four mile radius; and
(c) has within it 3 or more regulated facilities not including the applicant's facility.

Based on the results of this VAA for SCLF, the site does not meet the three regulatory criteria that would categorize the four-mile radius surrounding the site as a “vulnerable area”. In summary, while the site may conceivably meet the criteria for economically stressed households; and does meet the criteria for population density; the four-mile radius from the center of the SCLF site **does not** have within it 3 or more regulated facilities. Therefore, the County is not required to prepare a Community Impact Assessment.

6.0 DEMOGRAPHICS

6.1 Sandoval County

Sandoval County's population continues to rise. As presented in **Table IV.2.2** there is a general increase in population and households. According to the U.S. Census Bureau (USCB), the total population of Sandoval County increased 39% from 89,908 in 2000 to 131,561 in 2010. The male population increased 39% from 43,848 in 2000 to 60,768 in 2010; and the female population increased 38% from 46,060 in 2000 to 63,495 in 2010. The median age increased 7% from 35.1 in 2000 to 37.4 in 2010. The total number of households increased 43% from 31,412 in 2000 to 44,860 in 2010; and the median household income increased 44% from \$44,949 in 2000 to \$57,158 in 2010.

6.2 City of Rio Rancho

SCLF is located within Rio Rancho, NM. According to the USCB, the total population of Rio Rancho increased 69% from 51,765 in 2000 to 87,521 in 2010. The male population increased 58% from 25,106 in 2000 to 39,609 in 2010; and the female population increased 55% from 26,659 in 2000 to 41,447 in 2010. The median age increased 2% from 35.1 in 2000 to 35.7 in 2010. The total number of households increased 57% from 18,971 in 2000 to 29,726 in 2010; and the median household income increased 44% from \$47,169 in 2000 to \$67,956 in 2010 (**Table IV.2.2**).

TABLE IV.2.2
Demographic/Socioeconomic Profile^{1, 2}
City of Rio Rancho and Sandoval County
Sandoval County Landfill

| | 2000 Census | | 2010 Census | | 2013 ACS | | % Change 2000 to 2010 | | % Change 2010 to 2013 | |
|--|---------------|--------------------|---------------|--------------------|---------------|--------------------|--------------------------|--------------------|--------------------------|--------------------|
| | Rio Rancho | Sandoval County | Rio Rancho | Sandoval County | Rio Rancho | Sandoval County | Rio Rancho | Sandoval County | Rio Rancho | Sandoval County |
| Total Population | 51,765 | 89,908 | 87,521 | 131,561 | 89,098 | 133,503 | 69.07% | 46.33% | 1.80% | 1.48% |
| Male | 25,106 | 43,848 | 39,609 | 60,768 | 43,557 | 65,339 | 57.77% | 38.59% | 9.97% | 7.52% |
| Female | 26,659 | 46,060 | 41,447 | 63,495 | 45,541 | 68,164 | 55.47% | 37.85% | 9.88% | 7.35% |
| Median Age (years) | 35.1 | 35.1 | 35.7 | 37.4 | 36.4 | 38.5 | 1.71% | 6.55% | 1.96% | 2.94% |
| Total Households | 18,971 | 31,412 | 29,726 | 44,860 | 32,001 | 47,164 | 56.69% | 42.81% | 7.65% | 5.14% |
| Median Household Income (dollars) | \$47,169 | \$44,949 | \$67,956 | \$57,158 | \$59,883 | \$58,017 | 44.07% | 27.16% | -11.88% | 1.50% |

Notes:

¹ Data Sources: U.S. Census Bureau, Census 2000; U.S. Census Bureau, Census 2010; U.S. Census Bureau, 2008-2013 American Community Survey (ACS 5-Year Estimates).

² Census 2010 did not include collection of economic data (e.g., household income).

**APPLICATION FOR PERMIT RENEWAL AND MODIFICATION
SANDOVAL COUNTY LANDFILL**

**VOLUME IV: SITING AND LAND USE
SECTION 2: LAND USE**

**ATTACHMENT IV.2.A
SCLF LEGAL DESCRIPTION AND SURVEY PLAT
COMMUNITY SCIENCES CORPORATION 06/05/2014**

PURPOSE

The purpose of this plat is to vacate streets, lots and easements as shown hereon in order to consolidate such streets and lots into new Tract A-1-A, the Sandoval County Landfill Site, and to also create easements as shown.

DEDICATION

The real estate shown and described in this plat is surveyed and subdivided with the free consent of and in accordance with the wishes and desires of the undersigned Owner(s) thereof, and the Owner(s) of such real estate do hereby grant any and all easements shown or noted on the plat for the benefit of Tract A-1-A including the right of ingress and egress.

SANDOVAL COUNTY

[Signature]
Chairman, Sandoval County Board of Commissioners

STATE OF NEW MEXICO) SS.

COUNTY OF SANDOVAL)

On this 11th day of July, 2014, before me the undersigned Notary Public in and for said County and State, personally appeared Darryl F. Madalena, who, being by me duly sworn, did say that he is Chairman, Sandoval County Board of Commissioners, Sandoval County, New Mexico, and that said instrument was signed on behalf of said county as the free act and deed of said county.

[Signature]
Notary Public

OFFICIAL SEAL
NOTARY PUBLIC-STATE OF NEW MEXICO

My Commission Expires 6/17/18

RIO RANCHO PLANNING AND ZONING BOARD

The City of Rio Rancho hereby consents to the vacation of the public rights-of-way shown hereon, and consents that they shall become part of the landfill tract, and that all title and interest in said vacated rights-of-way shall revert to and be conveyed to Sandoval County by this vacation action. The City of Rio Rancho hereby consents to the consolidation of all such rights-of-way and eliminated lots and tracts into the one new Tract A-1-A shown hereon and further consents to the granting of easements as shown hereon.

Approved this 5th day of July, 2014.

[Signature]
DAVID HEIL, CHAIRMAN

CITY CLERK'S CERTIFICATE

I, Stephen Ruger, City Clerk of the City of Rio Rancho, New Mexico do hereby certify that the plat shown hereon was approved by the City of Rio Rancho Planning and Zoning Board on this 3rd day of July, 2014.

[Signature]
Stephen Ruger, City Clerk

TREASURER'S CERTIFICATE

I, Laura M. Montoya, Treasurer of Sandoval County, New Mexico do hereby certify that the property taxes have been paid in full or that this property is exempt from taxes.

[Signature]
Sandoval County Treasurer

SURVEYOR'S CERTIFICATE

I, Thomas W. Patrick, New Mexico Professional Surveyor No. 12651, do hereby certify that the plat shown hereon was prepared under my supervision, and that the same is true and correct to the best of my knowledge and belief. This survey conforms to the Minimum Standards for Land Surveying as adopted by the New Mexico State Board of Registration for Professional Engineers and Land Surveyors and to the City of Rio Rancho Subdivision Ordinance.

[Signature]
Thomas W. Patrick, NMPS No.12651
Date 7-08-2014

JURISDICTIONAL AFFIDAVIT

I, Thomas W. Patrick, New Mexico Professional Surveyor No. 12651, do hereby affirm that the property shown and described hereon does lie within the platting and subdivision jurisdiction of the City of Rio Rancho.

[Signature]
Thomas W. Patrick, NMPS No.12651
Date 7-08-2014

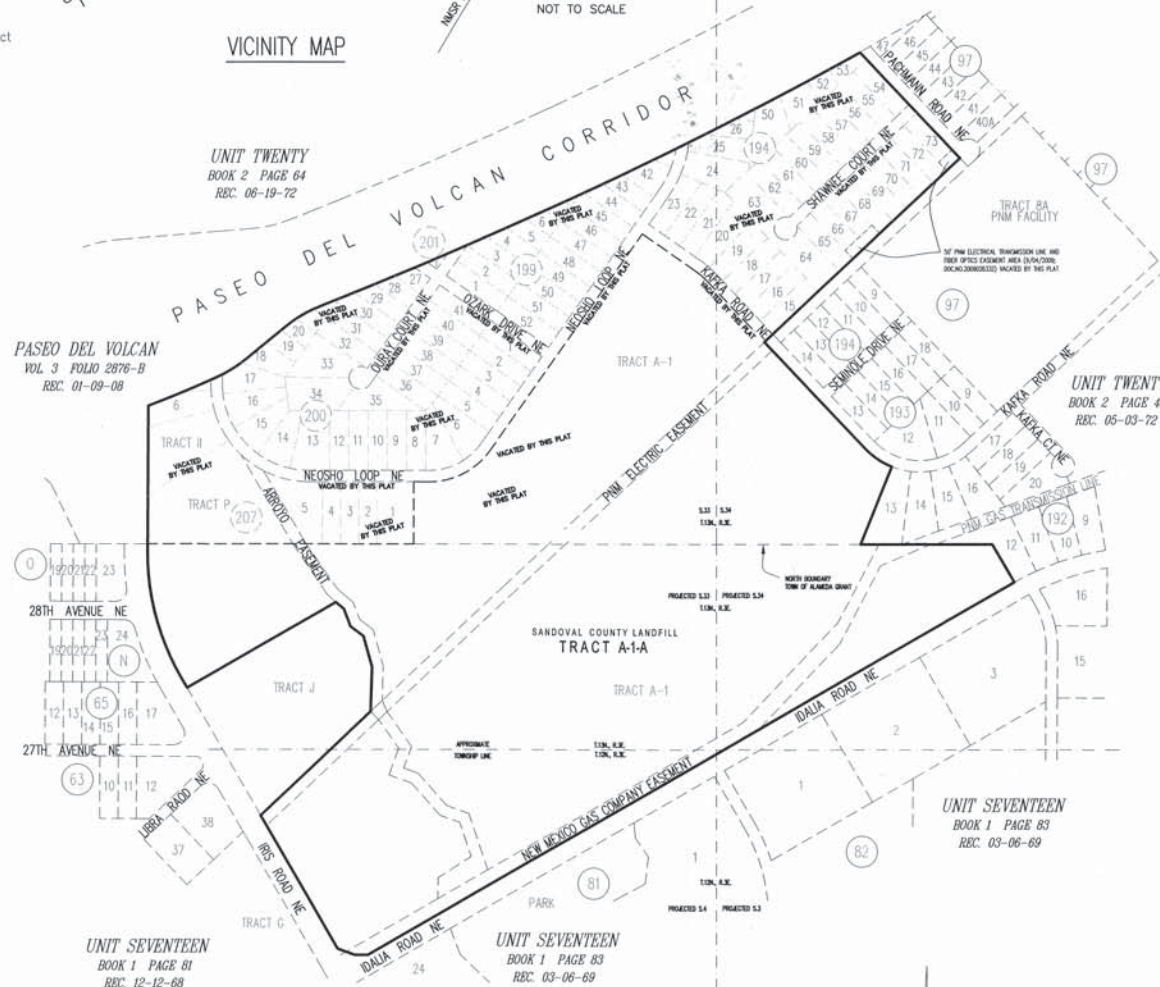
SANDOVAL COUNTY LANDFILL
VACATION PLAT

TRACT A-1-A

A REPLAT OF PORTIONS OF UNIT TWENTY
WITHIN SECTIONS 33 AND 34, T. 13 N., R. 3 E., N.M.P.M.
AND WITHIN PROJECTED SECTIONS 33 AND 34, T. 13 N., R. 3 E., N.M.P.M.
TOWN OF ALAMEDA GRANT
CITY OF RIO RANCHO
SANDOVAL COUNTY, NEW MEXICO AND
A REPLAT OF PORTIONS OF UNIT SEVENTEEN
WITHIN PROJECTED SECTIONS 3 AND 4, T. 12 N., R. 3 E., N.M.P.M.
TOWN OF ALAMEDA GRANT
CITY OF RIO RANCHO
SANDOVAL COUNTY, NEW MEXICO
JULY, 2014

SITE

VICINITY MAP



UTILITY APPROVALS

The Utility Company signatures shown hereon are by authorized Utility Company representatives.

[Signature] 7/18/14
New Mexico Gas Company
[Signature] 7-18-14
Date
[Signature] 7/18/14
Date
[Signature] 7/17/14
Date
[Signature] 7-21-14
Date
City of Rio Rancho

LEGAL DESCRIPTION

A parcel of land being all of Tract A-1, Units Seventeen and Twenty, recorded on April 30, 2009 in Rio Rancho Estates Plat Book No. 22, Page 30, (Vol. 3, Folio 2061-A), being located within projected Sections 3 and 4, Township 12 North, Range 3 East, New Mexico Principal Meridian, City of Rio Rancho, Sandoval County, New Mexico and within projected and standard Sections 33 and 34, Township 13 North, Range 3 East, New Mexico Principal Meridian, Town of Alameda Grant, City of Rio Rancho, Sandoval County, New Mexico,

together with:

A parcel of land being all of Lots 15 thru 24, all of Lots 54 thru 73, portions of Lots 25 thru 27, portions of Lots 50 thru 53, and all of Shawnee Court NE, all in Block 194; all of Lots 1 and 2, all of Lots 46 thru 52 and portions of Lots 3 thru 8 and portions of Lots 41 thru 45, all in Block 199; all of Lots 1 thru 16, all of Lots 31 thru 41 and portions of Lots 17 thru 23 and portions of Lots 27 thru 30, all in Block 200; a portion of Lot 45 in Block 201; all of Ouray Court NE and a portion of Ozark Drive NE; all of Lots 1 thru 5, an arroyo parcel, Tract P and Tract II and a portion of Lots 6 and 7, all in Block 207; portions of Kalka Road NE and Neesho Loop NE; all in Unit Twenty, recorded on June 19, 1972 in Rio Rancho Estates Plat Book No. 2, Page 64, (Vol. 2, Folio 64), within projected Sections 33 and 34, Township 13 North, Range 3 East, New Mexico Principal Meridian, Town of Alameda Grant, City of Rio Rancho, Sandoval County, New Mexico

The aforementioned parcels are more particularly described as follows:

BEGINNING at a point common to the intersection of the easterly right-of-way line of Iris Road NE and the southerly right-of-way line of Paseo Del Volcan, said point being identified as Station 1586+16.53, 346.51 feet right on the Corrected Monumentation Map of Paseo Del Volcan Phase 1 & 2, New Mexico Project No. NH-4007(001), on Sheet 2 of 3, recorded in the office of the County Clerk of Sandoval County, New Mexico on April 30, 2009, in Volume 3, folio 3030;
RUNNING THENCE along said southerly right-of-way line the following eight courses:
1. 318.81 feet along the arc of a 4727.31 foot radius curve to the left; central angle= 3°51'51"; chord bears N67°27'42"E, 318.75 feet to a point of compound curvature;
2. 157.07 feet along the arc of a 602.00 foot radius curve to the left; central angle= 14°56'58"; chord bears N58°05'00"E, 156.63 feet to a point of tangency;
3. N50°36'31"E, 224.37 feet to a point of curvature;
4. 169.52 feet along the arc of a 544.00 foot radius curve to the right; central angle= 17°51'15"; chord bears N59°32'09"E, 168.83 feet to a point of reverse curvature;
5. 602.29 feet along the arc of a 20200.00 foot radius curve to the left; central angle= 1°42'30"; chord bears N67°36'39"E, 602.27 feet;
6. S55°00'11"E, 1.16 feet;
7. N34°59'52"E, 1.87 feet;
8. 2001.29 feet along the arc of a 20200.00 foot radius curve to the left; central angle= 5°40'35"; chord bears N63°54'43"E, 2000.47 feet;
THENCE leaving said southerly right-of-way line S43°16'43"E, 634.93 feet;
THENCE S46°43'08"W, 79.56 feet;
THENCE S46°42'10"W, 400.61 feet;
THENCE S46°41'41"W, 159.89 feet;
THENCE S46°43'22"W, 207.80 feet;
THENCE S46°44'41"W, 321.85 feet;
THENCE S43°16'16"E, 641.37 feet to a point of curvature;
THENCE 140.57 feet along the arc of a 325.00 foot radius curve to the left; central angle= 24°46'54"; chord bears S55°37'27"E, 139.48 feet;
THENCE S21°58'40"W, 367.01 feet;
THENCE S89°56'19"E, 574.93 feet;
THENCE S30°06'46"E, 191.39 feet to a point on the northerly right-of-way line of Idalia Road NE;
THENCE along said northerly right-of-way line S60°01'49"W, 3252.16 feet;
(continued)

PLAT DATA

PROPERTY VACATED OR
COMBINED BY THIS PLAT

| | | | |
|---------------|-----|-------------|----------|
| NO. OF LOTS * | 103 | LOT ACRES | 49.0848 |
| NO. OF TRACTS | 3 | TRACT ACRES | 122.2044 |
| ROADS | 5 | ROAD ACRES | 6.9775 |
| | | TOTAL | 178.2667 |

* Includes all or portions of lots remaining from the Paseo Del Volcan corridor vacation

LEGAL DESCRIPTION (continued)

THENCE N89°27'38"W, 57.65 feet;
THENCE N70°06'47"W, 78.99 to a point on the easterly right-of-way line of Iris Road NE;
THENCE along said easterly right-of-way line N30°00'03"W, 671.41 feet;
THENCE leaving said easterly right-of-way line N46°24'05"E, 659.21 feet;
THENCE N01°44'46"E, 179.18 feet;
THENCE N15°31'24"W, 159.10 feet;
THENCE N53°05'11"W, 59.57 feet;
THENCE N20°58'16"W, 83.30 feet;
THENCE N50°39'19"W, 45.63 feet;
THENCE S60°01'29"W, 748.33 feet to a point on the easterly right-of-way line of Iris Road NE;
THENCE along said easterly right-of-way line N30°15'18"W, 50.09 feet;
THENCE continuing along said easterly right-of-way line 578.86 feet along the arc of a 1095.92 foot radius curve to the right; central angle= 30°15'49"; chord bears N14°51'06"W, 572.16 feet to a point of tangency;
THENCE continuing along said easterly right-of-way line N00°17'52"E, 608.03 feet to a point of curvature;
THENCE continuing along said easterly right-of-way line 29.55 feet along the arc of a 1894.92 foot radius curve to the left; central angle= 0°53'37"; chord bears N00°33'58"E, 29.55 feet to the Point of Beginning.

Contains 178.2667 acres, more or less.

NOTES: UNLESS OTHERWISE INDICATED:

The purpose of this plat is to consolidate properties of Sandoval County into one Tract A-1-A, being currently used as a landfill. All lots, tracts, parcels and rights-of-way for roads within the boundary of this property are being vacated except any arroyo easements, or PNM electric and NMGC easements within the property boundary which remain as originally platted.

All existing easements along property lines being vacated by this plat are also being deleted by this platting action. New easements are being granted as shown.

All property corners are found or set per boundary evidence shown hereon.

Basis of bearings is defined in the Project Control note on Sheet 2.

Distances are horizontal ground distances in feet. Information in parenthesis () is record where different from field survey.

North boundary line of the property is the southerly right-of-way line of Paseo del Volcan, NMPS NH-4007(001), recorded on January 9, 2008 in Book 3, Folio 2876-A, Doc. No. 200800757.

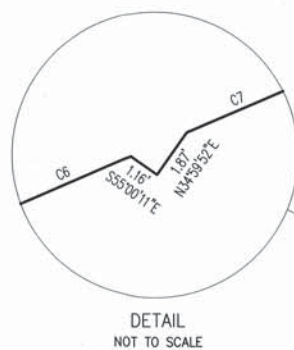
SHEET 1 OF 2

VACATION PLAT
SANDOVAL COUNTY LANDFILL

| | |
|---|--|
| DWG PATH: N919 H2/10/15/10 LANDFILL/SURVEY/LANDFILL VACATION PLAT 06/14 | |
| PROJECT: N919 H2/10/15/10 | DATE: 06/05/2014 |
| SCALE: 1"=400' | CREW: LRG/TWP/RGR |
| GRAB: TWP | DATE: 06/05/2014 |
| JOB NO: N919-01-630 | LAND PLANNING: P.O. Box 1328, Corrales, N.M. 87048 |
| | SURVEYING: (505)897-0000 |

community
sciences
corporation

RRE BOOK 25 PAGE 64



PASEO DEL VOLCAN
VOL 3 FOLIO 2876-B
REC. 01-09-08

SANDOVAL COUNTY LANDFILL
VACATION PLAT
TRACT A-1-A
A REPLAT OF PORTIONS OF UNIT TWENTY
WITHIN SECTIONS 33 AND 34, T. 13 N., R. 3 E., N.M.P.M.
AND WITHIN PROJECTED SECTIONS 33 AND 34, T. 13 N., R. 3 E., N.M.P.M.
TOWN OF ALAMEDA GRANT
CITY OF RIO RANCHO
SANDOVAL COUNTY, NEW MEXICO AND
AND A REPLAT OF PORTIONS OF UNIT SEVENTEEN
WITHIN PROJECTED SECTIONS 3 AND 4, T. 12 N., R. 3 E., N.M.P.M.
TOWN OF ALAMEDA GRANT
CITY OF RIO RANCHO
SANDOVAL COUNTY, NEW MEXICO
JULY, 2014

New property corners are set with a 5/8" rebar with yellow plastic cap stamped "PATRICK PS12651" unless otherwise noted.

- 1 Found No. 5 rebar with red cap stamped LS 8911
- 2 Found No. 5 rebar with tag marked LS 11859 at fence corner
- 3 Found 1/2" dia. iron pipe
- 4 Found 3/4" dia. iron pipe
- 5 Found No. 5 rebar, no cap
- 6 Found No. 4 rebar, no cap
- 7 Found No. 5 rebar with cap stamped LS 10454
- 8 Found 2" diameter aluminum cap with brass tag stamped PS 10464 PCN 2607 attached. Cap stamped "no. as shown" NM Highway Transportation Dept.
- 9 Found 3/8" rebar

CSC CONTROL POINT 102
FOUND 3/4" IRON PIPE N30°06'46"W, 191.39' FROM MOST SOUTHEASTERLY
CORNER OF THIS TRACT A-1-A.
NEW MEXICO STATE PLANE COORDINATES, CENTRAL ZONE, NAD83:
N1567290.65 USFT
E1531232.59 USFT
MODIFIED GROUND COORDINATES:
N1567839.64 USFT
E1531768.86 USFT

CSC CONTROL POINT 113
FOUND NMDOT ALUMINUM CAP N61°00'01"E, 51.89' FROM MOST
NORTHEASTELY CORNER OF THIS TRACT A-1-A.
NEW MEXICO STATE PLANE COORDINATES, CENTRAL ZONE, NAD83
N1569466.23 USFT
E1530701.86 USFT
MODIFIED GROUND COORDINATES:
1570015.97 USFT
E1531237.96 USFT

AVERAGE GROUND-TO-GRID FACTOR= 0.99980958

THE BASIS OF BEARINGS FOR THIS PLAT IS THE LINE BETWEEN THESE CSC CONTROL POINTS 102 AND 113, SAID LINE BEARS N13°42'34"W, A DISTANCE OF 2240.15 FEET. BEARINGS ARE NEW MEXICO STATE PLANE BEARINGS, CENTRAL ZONE, NAD83; DISTANCES ARE GROUND DISTANCES.

| LINE TABLE | | |
|------------|---------|------------|
| LINE | LENGTH | BEARING |
| L1 | 79.56 | S46°43'08" |
| L2 | 159.89 | S46°41'41" |
| L3 | DELETED | |
| L4 | DELETED | |
| L5 | 57.65 | N89°27'38" |
| L6 | 78.99 | N70°06'47" |
| L7 | 179.18 | N01°44'46" |
| L8 | 159.10 | N15°31'24" |
| L9 | 59.57 | N53°05'11" |
| L10 | 83.30 | N20°58'16" |
| L11 | 45.63 | N50°39'19" |
| L12 | 50.09 | N30°15'18" |

| CURVE TABLE | | | | | | |
|-------------|-----------|----------|-----------|----------|---------------|--------------|
| CURVE | RADIUS | LENGTH | DELTA | TANGENT | CHORD BEARING | CHORD LENGTH |
| C1 | 1095.92' | 578.86' | 30°15'49" | 296.35' | N14°51'06"W | 572.10' |
| C2 | 1894.92' | 29.55' | 0°53'37" | 14.78' | N00°33'58"E | 29.55' |
| C3 | 4727.31' | 318.81' | 3°51'51" | 159.47' | N67°27'42"E | 318.75' |
| C4 | 602.00' | 157.07' | 14°56'58" | 78.99' | N58°05'00"E | 156.63' |
| C5 | 544.00' | 169.52' | 17°51'15" | 85.45' | S59°32'09"W | 168.83' |
| C6 | 20200.00' | 602.29' | 1°42'30" | 301.17' | N67°36'39"E | 602.29' |
| C7 | 20200.00' | 2001.29' | 5°40'35" | 1001.47' | N63°54'43"E | 2000.41' |
| C8 | 20200.00' | 51.89' | 0°08'50" | 25.95' | N61°00'01"E | 51.89' |
| C9 | 325.00' | 140.57' | 24°46'54" | 71.40' | S55°37'27"E | 139.44' |

SHEET 2 OF 2

VACATION PLAT
SANDOVAL COUNTY LANDFILL

DWG PATH: N919 HZ/01/630 LANDFILL/SURVEY/LANDFILL VACATION PLAT 09501/

| | |
|----------------------------------|---|
| PROJECT: N919-01-630 DATABASE | <i>community sciences corporation</i> |
| DATE: 05/06/2014 | |
| SCALE: 1"=200' | |
| CREW: LRG/TWP/RGR | |
| DRAWN: TWP | |

JOB NO.: N919-01-630

LAND PLANNING
P.O. Box 1328
Corrales, N.M. 87048

SURVEYING
(505)397-0000

**APPLICATION FOR PERMIT RENEWAL AND MODIFICATION
SANDOVAL COUNTY LANDFILL**

**VOLUME IV: SITING AND LAND USE
SECTION 2: LAND USE**

**ATTACHMENT IV.2.B
VULNERABLE AREA ASSESSMENT
GEI 03/05/2015**

VULNERABLE AREA ASSESSMENT SANDOVAL COUNTY LANDFILL RIO RANCHO, NEW MEXICO

March 2015



Prepared For:

Sandoval County
2708 Iris Road NE
Rio Rancho, NM 87124

Submitted To:

New Mexico Environment Department
Solid Waste Bureau – Permit Section
P.O. Box 5469
Santa Fe, NM 87502-5469
(505) 827-0197

Prepared By:

Gordon Environmental, Inc.
213 S. Camino del Pueblo
Bernalillo, NM 87004
(505) 867-6990





March 5, 2015

Mr. George Schuman
Permit Section Manager
NMED Solid Waste Bureau
P.O. Box 5469
Santa Fe, NM 87502-5469

**Re: Vulnerable Area Assessment
Sandoval County Landfill [211.00.01]**

Dear Mr. Schuman,

On behalf of our client, Sandoval County, Gordon Environmental, Inc. (GEI) is pleased to provide the New Mexico Environment Department (NMED) Solid Waste Bureau (SWB) with the enclosed Vulnerable Area Assessment (VAA) for the Sandoval County Landfill (SCLF). The County of Sandoval is seeking a Permit Renewal and Modification for the SCLF, including a lateral and vertical expansion. The expansion will include development of the Public Service Company of New Mexico (PNM) easement which currently divides the disposal area into Units I/II to the south and Unit III to the north. The new disposal area, Unit IV, is designed to overlap portions of Units I, II, and III, as well as to include a portion of the current PNM easement; however, the lateral expansion does not expand beyond the existing facility boundary (i.e., the easement is included in the currently permitted "solid waste facility boundary").

In summary, as stated in 20.9.3.8.D NMAC, "[a]ny person seeking an initial permit for a landfill or a transformation facility, or for a permit modification of a landfill resulting in a lateral or vertical expansion, excluding an on-site scrap tire monofill, shall first submit to the secretary the information that is necessary for the secretary to determine if the proposed site is in a vulnerable area." The following conclusions are drawn from the results of the VAA for the SCLF:

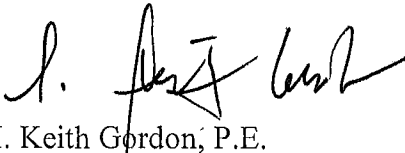
1. The four-mile radius from the center of the SCLF site may have a percentage of economically stressed households greater than the state percentage based on the most recent actual Census Bureau data within any square mile within the four-mile radius surrounding the facility.
2. The four-mile radius from the center of the SCLF site has a population density of greater than 50 people within any square mile.
3. The four-mile radius from the center of the SCLF site does not have within it 3 or more regulated facilities.

As stated in 20.9.3.8.F NMAC, "[i]f the proposed initial landfill or transformation facility permit, or landfill modification resulting in a lateral or vertical expansion is not in a vulnerable area, or is sited in an area that has been designated for the proposed use as the result of a land-use zoning process conducted by the local government that requires a quasi-judicial public hearing, with the opportunity for public participation, the applicant is not required to prepare a community impact assessment."

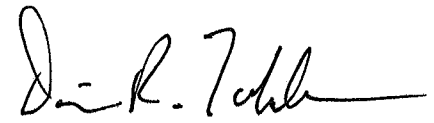
Based on the results of the VAA for the SCLF, the site does not meet all three regulatory criteria that would categorize the four-mile radius surrounding the site as a vulnerable area. Therefore, the Applicant is not required to prepare a Community Impact Assessment.

We appreciate SWB's review of the VAA for the SCLF and look forward to working with you on the SCLF Permit Renewal and Modification. The forthcoming Application will confirm compliance with the applicable 20.9.4.9 NMAC Siting criteria. Please contact us with your comments or questions.

Yours Truly,
Gordon Environmental, Inc.



I. Keith Gordon, P.E.
Principal



Dacia R. Tucholke
Project Manager

Attachment: Vulnerable Area Assessment

cc: Mr. Tommy Mora, Director, Sandoval County Public Works Department
Mr. Robert Sanchez, Assistant Director for Solid Waste, Sandoval County Public Works Department

**VULNERABLE AREA ASSESSMENT
SANDOVAL COUNTY LANDFILL
RIO RANCHO, NEW MEXICO**

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**VULNERABLE AREA ASSESSMENT
SANDOVAL COUNTY LANDFILL
RIO RANCHO, NEW MEXICO**

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|-----------------------|-------------------------------------|
| A | CENSUS MAPS (24 X 36 INCHES) |
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VULNERABLE AREA ASSESSMENT SANDOVAL COUNTY LANDFILL RIO RANCHO, NEW MEXICO

1.0 INTRODUCTION

The Sandoval County Landfill (SCLF) is an existing solid waste facility operating in compliance with its current Permits, SWM-050304 and SWM-050304 (SP), and the New Mexico Environment Department (NMED) Solid Waste Rules (20.9.2-2.9.10 NMAC). SCLF is publicly owned and operated by the County of Sandoval, and is currently permitted to accept municipal solid waste, including construction and demolition debris, and two special wastes: petroleum contaminated soils and sludge. The County of Sandoval is seeking a Permit Renewal and Modification for the SCLF, including a lateral and vertical expansion. The expansion will include development of the Public Service Company of New Mexico (PNM) easement which currently divides the disposal area into Units I/II to the south and Unit III to the north (**Figure 1**). The new disposal area, Unit IV, is designed to overlap portions of Units I, II, and III, as well as include a portion of the current PNM easement; however, the lateral expansion does not expand beyond the existing facility boundary (**Figure 1**).

This Vulnerable Area Assessment (VAA) was prepared to provide a determination as to whether the SCLF is located within a “vulnerable area” as defined in the New Mexico (NM) Solid Waste Rules (the “Rules”). The Rules require that “[a]ny person seeking an initial permit for a landfill or a transformation facility, or for a permit modification of a landfill resulting in a lateral or vertical expansion, excluding an on-site scrap tire monofill, shall first submit to the secretary the information that is necessary for the secretary to determine if the proposed site is in a vulnerable area” (20.9.2.7.V(3) NMAC). The result of a VAA establishes whether or not the Applicant is required to prepare a “Community Impact Assessment” for the site.

1.1 Regulatory Requirements

A site must meet three criteria to be considered to be located within a vulnerable area. The Rules define a vulnerable area as follows:

A vulnerable area is an area within a four-mile radius from the geographic center of a facility or proposed facility that:

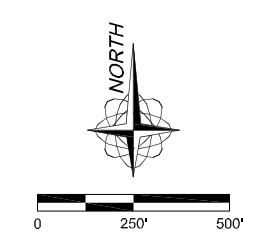


| LEGEND | |
|--------|---------------------------------------|
| | SITE BOUNDARY (178.3 ACRES±) |
| | UNIT BOUNDARY |
| | CELL BOUNDARY |
| | DISPOSAL AREA BOUNDARY (122.9 ACRES±) |
| | UNIT IV BOUNDARY |
| | FENCE LINE |
| | PAVED ROAD |
| | UNPAVED ROAD |
| | UTILITY EASEMENT |
| | FIRE HYDRANT (3) |

NOTE:

SITE BOUNDARY BASED ON THE JULY, 2008 BOUNDARY SURVEY PERFORMED BY SURVEYING CONTROL, INC. OF ALBUQUERQUE NEW MEXICO.

PLANIMETRIC FEATURES BASED ON THE TOPOGRAPHIC/PLANIMETRIC MAPPING PERFORMED ON JANUARY 5, 2012 BY THOMAS R. MANN & ASSOCIATES OF ALBUQUERQUE, NEW MEXICO.



| SITE PLAN | | |
|--|-----------------------------|---|
| SANDOVAL COUNTY LANDFILL RIO RANCHO, NEW MEXICO | | |
| | | 213 S. Camino del Pueblo Bernalillo, New Mexico, USA Phone: 505-867-6990 Fax: 505-867-6991 |
| DATE: 03/03/2015 | CAD: SITE PLAN.dwg | PROJECT #: 211.00.01 |
| DRAWN BY: DMI | REVIEWED BY: DRT | FIGURE 1 |
| APPROVED BY: JKG | gei@gordonenvironmental.com | |

*(a) has a percentage of **economically stressed households** greater than the state percentage based on the most recent actual census bureau data within any square mile within the four mile radius surrounding the facility or proposed facility; and*

*(b) where the New Mexico portion has a **population** of 50 people or more within any square mile within the four mile radius; and*

*(c) has within it 3 or more **regulated facilities** not including the applicant's facility.*
(20.9.2.7.V(3) NMAC)

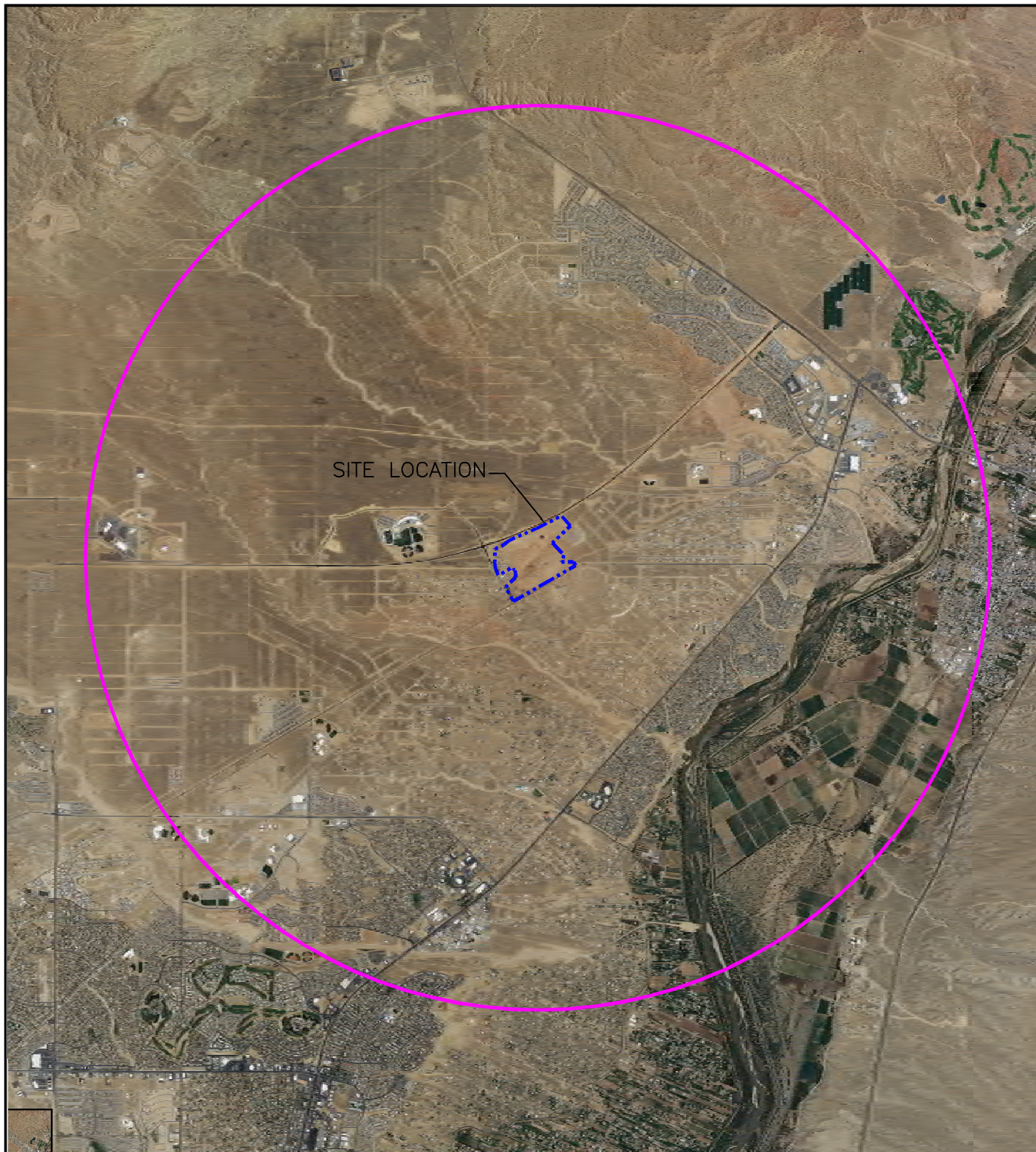
Based on the results of this VAA for SCLF, the site **does not meet** all three regulatory criteria that would categorize the four-mile radius surrounding the site as a vulnerable area. In summary, while the site may meet the criteria for economically stressed households (Section 2.1) and population density (Section 2.2), the four-mile radius from the center of the SCLF site **does not have** within it 3 or more regulated facilities (Section 2.3). Therefore, the Applicant is not required to prepare a Community Impact Assessment.

1.2 Site Location

The SCLF is an existing solid waste disposal facility that encompasses approximately 178.3 acres ± of land located at 2708 Iris Road NE in Rio Rancho, NM. The approximate geographic coordinates for the center of the SCLF site are: Latitude 35.307°N and Longitude 106.622°W. SCLF is constructed, operated, monitored, and inspected in compliance with the Solid Waste Facility Permits granted by the New Mexico Environment Department (NMED) Solid Waste Bureau (SWB) pursuant to the Rules (20.9.2-20.9.10 NMAC). A topographic map showing the SCLF site location and the four-mile radius constituting the potential “vulnerable area” is included as **Figure 2**. In addition, an aerial photograph including the site location and the four-mile radius is included as **Figure 3**.

1.3 Land Use

SCLF is bordered by both vacant lands and low density suburban properties; Paseo del Volcan and its right-of-way comprise the northwest boundary of the site, and Iris and Idalia Roads comprise the southwest and southeast site boundaries, respectively. The largest population center nearest SCLF is Rio Rancho, NM. SCLF is situated within Rio Rancho city limits, and Rio Rancho



LEGEND

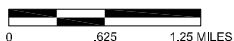
- SITE BOUNDARY
- 4 MILE RADIUS FROM SITE CENTROID

NOTES:

1. GEOGRAPHIC COORDINATES FOR THE CENTER OF THE SITE:
35.3092°N, 106.6198°W.
2. IMAGE REFERENCE:
2011 NAIP AERIAL MOSAIC OF SANDOVAL COUNTY.



Drawing: P:\acad 2003\211.00.01\PERMIT FIGURES\POTENTIAL AREAS AERIAL.dwg
Date/Time: Feb. 27, 2015-07:32:14 ; LAYOUT: A (P)
Copyright © All Rights Reserved, Gordon Environmental, Inc. 2015



POTENTIAL VULNERABLE AREA RADIUS: AERIAL PHOTOGRAPH SANDOVAL COUNTY LANDFILL RIO RANCHO, NEW MEXICO



Gordon Environmental, Inc.
Consulting Engineers

213 S. Camino del Pueblo
Bernalillo, New Mexico, USA
Phone: 505-867-6990
Fax: 505-867-6991

| | | |
|------------------|---------------------------------|----------------------|
| DATE: 02/27/2015 | CAD: POTENTIAL AREAS AERIAL.dwg | PROJECT #: 211.00.01 |
| DRAWN BY: DMI | REVIEWED BY: DRT | FIGURE 3 |
| APPROVED BY: IKG | get@gordonenvironmental.com | |

City Hall is located approximately 3.2 miles west of the facility entrance. The SCLF site is zoned “Special-Use/Non-residential” (SU/NR) by the City of Rio Rancho. The SCLF facility design includes minimum setbacks of 50 feet (ft) from the disposal areas to the property boundary and adjacent properties; and minimum setbacks of 500 ft from a permanent residence, school, hospital, institution or church in compliance with the NMED mandatory setbacks for municipal landfills (20.9.4.9.A(9) NMAC).

2.0 VULNERABLE AREA ASSESSMENT

The potential vulnerable area radius (i.e., four miles) surrounding SCLF was evaluated for the three vulnerable area criteria:

1. Economically Stressed Households
2. Population Density
3. Regulated Facilities

The following sections provide analyses for each of the vulnerable area criteria.

2.1 Economically Stressed Households

An economically stressed household (ESH) is “*a household that reports at or less than 150 percent of the poverty level as set forth in the most recent federal department of health and human services poverty guidelines for a family of four*” (20.9.2.7.E(1) NMAC). Data used for identifying economically stressed households (i.e., number of households and household income) were obtained from the United States Census Bureau. Both Census 2000 and American Community Survey (ACS) 2012 5-year estimates were utilized to evaluate this criterion. While Census 2000 included the collection and reporting for economic data (i.e., Summary File 3), Census 2010 did not include collection of economic data (e.g., household income). Therefore the most reliable and available ACS data were utilized (i.e., the 5-year estimates for 2012). These data were compiled based on 60 months of data collected over the 2008-2012 timeframe.

In order to be conservative, given the change in Census 2010 data collection protocol, two analyses were implemented and are presented herein. Both Census 2000 and ACS 2012 data were evaluated to address this criterion. Census Tracts are the smallest geographical areas for which economic data are available from ACS. Census 2010 data show that Sandoval County is comprised of

twenty-eight (28) Census Tracts: 105.03 through 112; and 9402 through 9409. Thirteen of these Census Tracts are located within, or overlap, the 4-mile radius surrounding SCLF (**Attachment A.1**). It should be noted that select Census Tracts were split, consolidated, or renamed between the 2000 and 2010 Census events. Tract 107.10 was split into Tracts 107.17 and 107.18; Tract 107.11 was split into Tracts 107.21, 107.22, and 107.2; Tracts 105.02 and 9404 were merged to form Tract 111; and Tract 103.01 was renamed Tract 110. **Tables 1, 2, 3, and 4** summarize the household income data for 2000 and 2012. This analysis is considered highly conservative because the actual location of ESHs within the Census Tract (and therefore within the four-mile radius) cannot be specifically defined.

2.1.1 Census 2000

The 2000 Department of Health and Human Services (HHS) Poverty Guidelines (**Attachment B**) were applied to the analysis of Census 2000 data. The 2000 HHS Poverty Guidelines show that for a family or household consisting of four persons, the poverty threshold is \$17,050. Therefore, based on the definition provided in the Rules, an ESH would report at or less than \$25,575 (which is equal to 150% of \$17,050). Household income data for each Census Tract is provided in **Table 1**, including a comparison with New Mexico and Sandoval County. The percentage of ESHs was estimated for each Census Tract, as presented in **Table 2**. In order to accommodate the estimated threshold value of \$25,575, a conservative analysis of household income categories of \$34,999 or less was conducted based on the data sorted. The results presented in **Table 2** indicate that the percentage of ESHs in three of the thirteen Census Tracts (i.e., 105.03, 9404, and 9405) may exceed the estimated percentage for the State of New Mexico (i.e., >51%) for the baseline household income.

2.1.2 American Community Survey 2012 (5-Year Estimates)

The 2012 HHS Poverty Guidelines (**Attachment B**) were applied to the analysis of ACS 2012 data. The 2012 HHS Poverty Guidelines show that for a family or household consisting of four persons, the poverty threshold is \$23,050. Therefore, based on the definition provided in the Rules, an ESH would report at or less than \$34,575 (which is equal to 150% of \$23,050). Household income data for each Census Tract is provided in **Table 3**, including a comparison with New Mexico and Sandoval County. The percentage of ESHs was estimated for each Census Tract, as presented in **Table 4**. In order accommodate the estimated threshold value of \$34,575, household

income categories of \$34,999 or less (the sorting threshold) were analyzed. The results presented in **Table 4** indicate that the percentage of ESHs in three of the thirteen Census Tracts (i.e., 105.03, 107.16, and 9405) may exceed the estimated percentage for the State of New Mexico (i.e., >40%) for household income.

In summary, both data sets (i.e., Census 2000 and ACS 2012) indicate that one or more of the Census Tracts may have a percentage of ESHs that exceeds the estimated percentage for the State of New Mexico. Therefore, the ESH criterion for a vulnerable area is met using either Census 2000 or ACS 2012 data because in each case, the four-mile radius may contain a percentage of ESH greater than the state percentage for either year.

2.2 Population Density

The second criterion for vulnerable areas is a population density of 50 people or more within any square mile within the four-mile radius. Data used for population density were obtained from the United States Census Bureau (Census 2010). Block-level Census data and an aerial photograph were used to evaluate the population density within the potential vulnerable area radius. The population of Sandoval County is 131,561 (Census 2010); and, with an area of approximately 3,710.65 square miles, the County has an overall population density of approximately 35.5 persons/square mile. **Table 5** summarizes the total population for New Mexico, Sandoval County, the City of Rio Rancho, and each of the thirteen Census Tracts which are contained within or overlap the four-mile radius. As shown on **Table 5**, the population in New Mexico, Sandoval County, the City of Rio Rancho, and all 13 of the Census Tracts within 4 miles of SCLF, has increased between 6% and 765% from 2000 to 2010; with the highest growth in Rio Rancho.

Table 6 provides a summary of the population data for each Census Block which is located partially or wholly within the potential vulnerable area radius (**Attachment A.1**). The blocks which fall entirely or partially within the four-mile radius represent a conservative population of approximately 36,896 persons. As shown in **Table 7** and **Attachment A.2**, the population is generally concentrated within areas corresponding to several suburban housing developments to the east and south of SCLF. **Attachment A.2** provides an aerial base map showing the one-square mile boundary superimposed over what appears to be the densest populated area within the

potential vulnerable area radius (i.e., City of Rio Rancho, Loma Colorado subdivision and vicinity).

Table 8 summarizes the populations for those Blocks that fall within or overlap the one-square-mile area shown on **Attachment A.2**. Based on the data provided from Census 2010 and summarized in **Table 8**, the Blocks which fall entirely or partially within the one-square-mile area represent a conservative population of approximately 4,403 persons. In addition, Census Block 2002 of Block Group 2, Census Tract 107.03 (**Attachment A.2**) contains a population (2010) of 223 persons, which is the greatest population of the Blocks situated within the 1 square mile area. Therefore, based on this assessment, the population density criterion is met, because a population density of greater than 50 persons per square mile is represented within the potential vulnerable area radius.

2.3 Regulated Facilities

The third criterion for a vulnerable area is that the four-mile radius has within it three or more regulated facilities, not including the Applicant's facility. A "regulated facility" is defined by 20.9.7.2.R(6) NMAC as a facility that is:

*(a) a **solid waste facility** permitted to construct, operate, or close pursuant to the Solid Waste Act, NMSA 1978, Sections 74-9-1, et. Seq. and 20.9.12-20.9.10 NMAC, or pursuant to the laws or regulations of a neighboring state;*

*(b) a **hazardous waste facility** authorized to operate pursuant to interim status or permitted to construct, operate, or close pursuant to the Hazardous Waste Act, NMSA 1978, Sections 74-4-1, et. Seq. and the New Mexico hazardous waste management regulations, 20.4.1 NMAC, or pursuant to the laws or regulations of a neighboring state, including all units or areas subject to corrective action requirements under the facility permit or order;*

*(c) a site listed on the **National Priorities List** pursuant 42 U.S.C. 9605 or a federal facility is required to take response or remedial action pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. 9601, et. Seq. [i.e., CERCLA "Superfund" site];*

*(d) a facility that has, or is required to obtain a **Title V** air quality permit, 42 U.S.C. 7661 et. Seq. and 20.7.2.70 NMAC. [20.9.7.2.R(6) NMAC]*

The following sections discuss each of the four categories of regulated facilities.

2.3.1 Solid Waste Facilities

Permitted solid waste facilities are regulated by the NMED SWB and include the following categories:

- Permitted Landfills
- Permitted Transfer Stations
- Permitted Processing Facilities
- Permitted Recycling Facilities
- Permitted Composting Facilities

The current list of permitted solid waste facilities maintained by NMED SWB was compiled and reviewed. The Rio Rancho Landfill, located approximately 2.6 miles southwest of the SCLF, is the only other permitted “solid waste facility” [SWM-231402 & SWM-012339(SP)] in Sandoval County.

2.3.2 Hazardous Waste Facilities

Hazardous waste facilities are regulated by the NMED Hazardous Waste Bureau (HWB) and include:

- Department of Defense Facilities
- Department of Energy Facilities
- Other Federal Facilities
- Commercial/Private Facilities

The current list of hazardous waste facilities maintained by the NMED HWB was compiled and reviewed. There are no hazardous waste facilities within the potential vulnerable area radius of 4 miles. The nearest listed hazardous waste facility (Spartan Technologies, Bernalillo County, NM) is located greater than 8 miles southwest of the SCLF.

2.3.3 National Priorities List

The United States Environmental Protection Agency (USEPA) maintains the National Priorities List (NPL) database. The current NPL database for New Mexico was compiled and reviewed; and there are no NPL sites within the potential vulnerable area radius. The nearest identified NPL site (Atchison, Topeka, and Santa Fe Tie Treatment Plant, Bernalillo County, NM) is located greater than 13 miles south of the SCLF.

2.3.4 Title V Air Quality Permit

The NMED Air Quality Bureau maintains a list of Title V Permitted facilities in New Mexico, and the current Title V list was compiled and reviewed. The Rio Rancho Landfill, located approximately 2.6 miles southwest of the SCLF, is the only other Title V Permit holder (Permit No. P208LR1M1) within 4 miles of SCLF.

3.0 VULNERABLE AREA SUMMARY

In summary, as stated in 20.9.3.8.D NMAC, “[a]ny person seeking an initial permit for a landfill or a transformation facility, or for a permit modification of a landfill resulting in a lateral or vertical expansion, excluding an on-site scrap tire monofill, shall first submit to the secretary the information that is necessary for the secretary to determine if the proposed site is in a vulnerable area.” The following conclusions are drawn from the results of the VAA for the SCLF:

1. The four-mile radius from the center of the SCLF site may have a percentage of economically stressed households greater than the state percentage based on the most recent actual Census Bureau data within any square mile within the four-mile radius surrounding the facility.
2. The four-mile radius from the center of the SCLF site has areas with a population density of greater than 50 people within any square mile.
3. The four-mile radius from the center of the SCLF site **does not have** within it 3 or more regulated facilities.

As stated in 20.9.3.8.F NMAC, “If the proposed initial landfill or transformation facility permit, or landfill modification resulting in a lateral or vertical expansion is not in a vulnerable area, or is sited in an area that has been designated for the proposed use as the result of a land-use zoning process conducted by the local government that requires a quasi-judicial public hearing, with the opportunity for public participation, the applicant is not required to prepare a community impact assessment.” Based on the results of the VAA for SCLF, the site **does not meet** all three criteria that would categorize the four-mile radius surrounding the site as a vulnerable area. Therefore, the Applicant is not required to prepare a Community Impact Assessment.

4.0 REFERENCES

1. United States Census Bureau data for Census 2000, Census 2010, and ACS 2012:
<http://www.census.gov/>
2. United States Department of Health and Human Services, poverty guidelines:
<http://aspe.hhs.gov/poverty/>
3. New Mexico Environment Department Solid Waste Bureau, permitted solid waste facilities: <http://www.nmenv.state.nm.us/swb/Facilities.htm>
4. Hazardous Waste Bureau, hazardous waste facilities:
<http://www.nmenv.state.nm.us/HWB/>
5. National Priorities List site for the State of New Mexico:
<http://www.epa.gov/superfund/sites/query/queryhtm/nplfin.htm#NM>
6. New Mexico Environment Department Air Quality Bureau, Title V permit holders:
<http://www.nmenv.state.nm.us/aqb/permit/>

**VULNERABLE AREA ASSESSMENT
SANDOVAL COUNTY LANDFILL
RIO RANCHO, NEW MEXICO**

TABLES

- 1 HOUSEHOLDS BY INCOME (2000)
- 2 PERCENT OF HOUSEHOLDS WITH INCOME AT OR BELOW \$25,575 (2000)
- 3 HOUSEHOLDS BY INCOME (2012)
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- 5 POPULATION TOTALS 2000-2010
- 6 POPULATION BY CENSUS BLOCKS WITHIN THE POTENTIAL VULNERABLE
AREA RADIUS (2010)
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- 8 POPULATION BY CENSUS BLOCKS THAT CONSTITUTE THE DENSEST
SQUARE MILE WITHIN THE RADIUS (2010)

TABLE 1
Households by Income (2000)
Vulnerable Area Assessment
Sandoval County Landfill

| Geography | New Mexico | Sandoval County | Census Tract | | | | | | | | | | | | |
|-------------------------------|------------|-----------------|--------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|------|-------|
| | | | 103.01 | 105.02 | 105.03 | 106.01 | 106.02 | 107.02 | 107.03 | 107.10 | 107.11 | 107.14 | 107.16 | 9404 | 9405 |
| Households Total: | 678,032 | 31,412 | 96 | 1,903 | 1,141 | 1,328 | 1,284 | 1,902 | 2,067 | 879 | 2,515 | 1,345 | 2,060 | 128 | 1,288 |
| Less than \$10,000 | 84,527 | 2,355 | 0 | 87 | 154 | 76 | 28 | 33 | 58 | 27 | 142 | 39 | 168 | 17 | 161 |
| \$10,000 to \$14,999 | 56,773 | 1,494 | 0 | 49 | 94 | 68 | 27 | 47 | 48 | 7 | 90 | 50 | 163 | 9 | 109 |
| \$15,000 to \$24,999 | 107,287 | 3,741 | 0 | 142 | 232 | 119 | 69 | 146 | 131 | 10 | 289 | 148 | 312 | 23 | 277 |
| \$25,000 to \$34,999 | 97,447 | 3,918 | 9 | 207 | 136 | 132 | 104 | 151 | 260 | 94 | 480 | 125 | 246 | 20 | 202 |
| \$35,000 to \$49,999 | 115,315 | 6,441 | 25 | 390 | 236 | 198 | 139 | 336 | 489 | 225 | 745 | 227 | 394 | 24 | 242 |
| \$50,000 to \$74,999 | 111,913 | 7,161 | 38 | 286 | 151 | 247 | 299 | 695 | 575 | 336 | 643 | 335 | 424 | 26 | 205 |
| \$75,000 to \$99,999 | 53,079 | 3,400 | 24 | 298 | 106 | 175 | 195 | 295 | 288 | 96 | 87 | 208 | 243 | 6 | 63 |
| \$100,000 to \$149,999 | 34,045 | 1,959 | 0 | 272 | 24 | 173 | 237 | 165 | 145 | 76 | 39 | 149 | 73 | 3 | 20 |
| \$150,000 to \$199,999 | 8,750 | 425 | 0 | 87 | 0 | 67 | 91 | 19 | 18 | 8 | 0 | 28 | 14 | 0 | 4 |
| \$200,000 or more | 8,896 | 518 | 0 | 85 | 8 | 73 | 95 | 15 | 55 | 0 | 0 | 36 | 23 | 0 | 5 |

Source: U.S. Census Bureau, Census 2000, Summary File 3.

TABLE 2
Percent of Households with Income at or Below \$25, 575 (2000)
Vulnerable Area Assessment
Sandoval County Landfill

| Category | New Mexico | Sandoval County | Census Tract | | | | | | | | | | | | |
|--|------------|-----------------|--------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|------|------|
| | | | 103.01 | 105.02 | 105.03 | 106.01 | 106.02 | 107.02 | 107.03 | 107.10 | 107.11 | 107.14 | 107.16 | 9404 | 9405 |
| Percent of Households with Income at or below \$34,999 | 51% | 37% | 9% | 25% | 54% | 30% | 18% | 20% | 24% | 16% | 40% | 27% | 43% | 54% | 58% |

Notes:

1. The HHS Poverty Guideline (2000) for a family of four is \$17,050; multiplied by 150% = \$25,575.

2. Household income data source: U.S. Census Bureau, Census 2000, Summary File 3.

TABLE 3
Households by Income (2012)
Vulnerable Area Assessment
Sandoval County Landfill

| Geography | New Mexico | Sandoval County | Census Tract | | | | | | | | | | | | |
|-------------------------------|------------|-----------------|--------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-----|-------|-------|
| | | | 105.03 | 106.01 | 106.02 | 107.02 | 107.03 | 107.14 | 107.16 | 107.17 | 107.18 | 107.23 | 110 | 111 | 9405 |
| Households Total: | 763,844 | 46,795 | 1,288 | 1,622 | 1,678 | 2,390 | 2,909 | 1,828 | 2,702 | 3,197 | 1,529 | 3,149 | 675 | 3,126 | 1,386 |
| Less than \$10,000 | 70,369 | 2,720 | 154 | 117 | 7 | 12 | 85 | 95 | 125 | 85 | 105 | 165 | 70 | 185 | 146 |
| \$10,000 to \$14,999 | 48,969 | 2,186 | 118 | 65 | 13 | 28 | 131 | 35 | 243 | 10 | 95 | 29 | 60 | 248 | 116 |
| \$15,000 to \$24,999 | 96,797 | 4,226 | 226 | 109 | 129 | 96 | 144 | 173 | 475 | 158 | 63 | 256 | 68 | 150 | 211 |
| \$25,000 to \$34,999 | 89,020 | 3,777 | 69 | 138 | 21 | 182 | 238 | 93 | 293 | 150 | 33 | 134 | 67 | 160 | 155 |
| \$35,000 to \$49,999 | 111,308 | 7,029 | 221 | 102 | 304 | 239 | 427 | 290 | 332 | 558 | 259 | 526 | 112 | 261 | 246 |
| \$50,000 to \$74,999 | 133,356 | 9,544 | 194 | 270 | 181 | 625 | 654 | 433 | 514 | 641 | 298 | 887 | 144 | 569 | 295 |
| \$75,000 to \$99,999 | 85,103 | 6,355 | 133 | 168 | 214 | 375 | 484 | 212 | 368 | 579 | 223 | 467 | 84 | 461 | 118 |
| \$100,000 to \$149,999 | 80,479 | 6,757 | 145 | 355 | 372 | 476 | 497 | 295 | 170 | 634 | 241 | 539 | 46 | 545 | 52 |
| \$150,000 to \$199,999 | 27,409 | 2,372 | 13 | 123 | 200 | 228 | 225 | 114 | 102 | 135 | 152 | 103 | 17 | 266 | 39 |
| \$200,000 or more | 21,034 | 1,829 | 15 | 175 | 237 | 129 | 24 | 88 | 80 | 247 | 60 | 43 | 7 | 281 | 8 |

Source: U.S. Census Bureau, 2008-2012 American Community Survey.

TABLE 4
Percent of Households with Income at or Below \$34,575 (2012)
Vulnerable Area Assessment
Sandoval County Landfill

| Category | New Mexico | Sandoval County | Census Tract | | | | | | | | | | | | |
|--|------------|-----------------|--------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-----|-----|------|
| | | | 105.03 | 106.01 | 106.02 | 107.02 | 107.03 | 107.14 | 107.16 | 107.17 | 107.18 | 107.23 | 110 | 111 | 9405 |
| Percent of Households with Income at or below \$34,999 | 40% | 28% | 44% | 26% | 10% | 13% | 21% | 22% | 42% | 13% | 19% | 19% | 39% | 24% | 45% |

Notes:

1. The HHS Poverty Guideline (2012) for a family of four is \$23,050; multiplied by 150% = \$34,575.

2. Household income data source: U.S. Census Bureau, 2008-2012 American Community Survey.

TABLE 5
Population Totals 2000-2010³
Vulnerable Area Assessment
Sandoval County Landfill

| Census | New Mexico | Sandoval County | Rio Rancho | Census Tract | | | | | | | | | | | | | |
|-------------------|------------|-----------------|------------|--------------|--------|------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|-------|
| | | | | 103.01 | 105.02 | 9404 | 105.03 | 106.01 | 106.02 | 107.02 | 107.03 | 107.10 | | 107.11 | 107.14 | 107.16 | 9405 |
| 2000 ¹ | 1,819,046 | 89,908 | 51,765 | 227 | 4,672 | 379 | 3,236 | 3,393 | 3,265 | 5,565 | 6,058 | 2,778 | | 6,609 | 3,297 | 4,922 | 3,785 |
| Census | New Mexico | Sandoval County | Rio Rancho | 110 | 111 | | 105.03 | 106.01 | 106.02 | 107.02 | 107.03 | 107.17 | 107.18 | 107.23 | 107.14 | 107.16 | 9405 |
| 2010 ² | 2,059,179 | 131,561 | 87,521 | 1,963 | 6,812 | | 3,425 | 4,331 | 3,998 | 6,522 | 8,319 | 8,996 | 4,803 | 9,954 | 4,698 | 6,048 | 4,249 |
| % Change | 13% | 46% | 69% | 765% | 35% | | 6% | 28% | 22% | 17% | 37% | 397% | | 51% | 42% | 23% | 12% |

Notes:

¹ Source: U.S. Census Bureau, Census 2000, Summary File 1.

² Source: U.S. Census Bureau, Census 2010, Summary File 1.

³ Tracts were either split to form new subdivisions, or consolidated into a single, larger tract as follows:

Tract 107.10 was split into tracts 107.17 and 107.18

Tract 107.11 was split into tracts 107.21, 107.22, and 107.23. Only tract 107.23 is located within 4 miles of SCLF, and is not populated in that area. Therefore, the population increase estimate is grossly overestimated, as it refers to an area of that tract not within 4 miles of the Facility.

Tracts 105.02 and 9404 were consolidated to form tract 111

Tract 103.01 was renamed tract 110

TABLE 6
Population by Census Blocks that Overlap the Potential Vulnerable Area Radius
(2010)

Vulnerable Area Assessment
Sandoval County Landfill

| Census Tract | Block Group | Block | Total Population |
|---------------------|--------------------|--------------|-------------------------|
| 110 | 2 | 2147 | 0 |
| 110 | 2 | 2150 | 0 |
| 110 | 2 | 2151 | 0 |
| 110 | 2 | 2152 | 0 |
| 110 | 2 | 2153 | 0 |
| 110 | 2 | 2154 | 0 |
| 110 | 2 | 2155 | 0 |
| 110 | 2 | 2156 | 0 |
| 110 | 2 | 2157 | 0 |
| 110 | 2 | 2158 | 0 |
| 110 | 2 | 2159 | 0 |
| 110 | 2 | 2160 | 0 |
| 110 | 2 | 2161 | 0 |
| 110 | 2 | 2162 | 0 |
| 110 | 2 | 2163 | 0 |
| 110 | 2 | 2166 | 0 |
| 110 | 2 | 2167 | 0 |
| 110 | 2 | 2168 | 0 |
| 110 | 2 | 2169 | 0 |
| 110 | 2 | 2170 | 0 |
| 110 | 2 | 2171 | 0 |
| 110 | 2 | 2172 | 0 |
| 110 | 2 | 2173 | 0 |
| 110 | 2 | 2174 | 0 |
| 110 | 2 | 2175 | 0 |
| 110 | 2 | 2176 | 0 |
| 110 | 2 | 2177 | 0 |
| 110 | 2 | 2178 | 0 |
| 110 | 2 | 2179 | 0 |
| 110 | 2 | 2182 | 0 |
| 110 | 2 | 2183 | 0 |
| 110 | 2 | 2190 | 0 |
| 110 | 2 | 2191 | 0 |
| 110 | 2 | 2192 | 0 |
| 110 | 2 | 2193 | 0 |
| 110 | 2 | 2198 | 0 |
| 110 | 2 | 2212 | 0 |
| 110 | 2 | 2213 | 0 |
| 110 | 2 | 2214 | 0 |
| 110 | 2 | 2217 | 0 |
| 110 | 2 | 2221 | 0 |
| 110 | 2 | 2223 | 0 |
| 110 | 2 | 2224 | 0 |
| 110 | 2 | 2225 | 0 |
| 110 | 2 | 2226 | 0 |

| Census Tract | Block Group | Block | Total Population |
|--------------|-------------|-------|------------------|
| 110 | 2 | 2227 | 0 |
| 110 | 2 | 2228 | 0 |
| 110 | 2 | 2229 | 0 |
| 110 | 2 | 2230 | 0 |
| 110 | 2 | 2231 | 0 |
| 110 | 2 | 2232 | 0 |
| 110 | 2 | 2233 | 0 |
| 110 | 2 | 2234 | 0 |
| 110 | 2 | 2235 | 0 |
| 110 | 2 | 2236 | 0 |
| 110 | 2 | 2237 | 0 |
| 110 | 2 | 2238 | 0 |
| 110 | 2 | 2239 | 0 |
| 110 | 2 | 2240 | 0 |
| 110 | 2 | 2241 | 0 |
| 110 | 2 | 2242 | 0 |
| 110 | 2 | 2243 | 0 |
| 110 | 2 | 2244 | 0 |
| 110 | 2 | 2245 | 0 |
| 110 | 2 | 2246 | 0 |
| 110 | 2 | 2247 | 0 |
| 110 | 2 | 2248 | 0 |
| 110 | 2 | 2249 | 5 |
| 110 | 2 | 2250 | 0 |
| 110 | 2 | 2251 | 0 |
| 110 | 2 | 2252 | 0 |
| 110 | 2 | 2253 | 0 |
| 110 | 2 | 2254 | 0 |
| 110 | 2 | 2255 | 0 |
| 110 | 2 | 2256 | 0 |
| 110 | 2 | 2257 | 24 |
| 110 | 2 | 2258 | 0 |
| 110 | 2 | 2259 | 0 |
| 110 | 2 | 2260 | 0 |
| 110 | 2 | 2261 | 0 |
| 110 | 2 | 2262 | 0 |
| 110 | 2 | 2263 | 0 |
| 110 | 2 | 2264 | 0 |
| 110 | 2 | 2265 | 0 |
| 110 | 2 | 2266 | 0 |
| 110 | 2 | 2267 | 0 |
| 110 | 2 | 2268 | 0 |
| 110 | 2 | 2269 | 0 |
| 110 | 2 | 2270 | 0 |
| 110 | 2 | 2271 | 0 |
| 110 | 2 | 2272 | 0 |
| 110 | 2 | 2273 | 0 |
| 110 | 2 | 2274 | 0 |
| 110 | 2 | 2275 | 0 |
| 110 | 2 | 2276 | 0 |
| 110 | 2 | 2277 | 0 |
| 110 | 2 | 2278 | 0 |

Table 6
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| Census Tract | Block Group | Block | Total Population |
|--|-------------|-------|------------------|
| 110 | 2 | 2283 | 0 |
| 110 | 2 | 2284 | 0 |
| 110 | 2 | 2285 | 0 |
| 110 | 2 | 2286 | 0 |
| 110 | 2 | 2292 | 0 |
| 110 | 2 | 2456 | 0 |
| 110 | 2 | 2457 | 0 |
| 110 | 2 | 2460 | 0 |
| 110 | 2 | 2464 | 0 |
| 110 | 2 | 2465 | 0 |
| Census Tract 110 - Block Group 2 - Subtotal | | | 29 |
| Census Tract 110 - Total Population | | | 29 |
| 111 | 1 | 1018 | 0 |
| 111 | 1 | 1019 | 0 |
| 111 | 1 | 1165 | 0 |
| 111 | 1 | 1166 | 375 |
| 111 | 1 | 1168 | 23 |
| Census Tract 111 - Block Group 1 - Subtotal | | | 398 |
| 111 | 3 | 3045 | 0 |
| 111 | 3 | 3046 | 0 |
| 111 | 3 | 3047 | 0 |
| 111 | 3 | 3048 | 0 |
| 111 | 3 | 3049 | 0 |
| 111 | 3 | 3050 | 0 |
| 111 | 3 | 3056 | 9 |
| 111 | 3 | 3058 | 0 |
| 111 | 3 | 3059 | 0 |
| 111 | 3 | 3060 | 0 |
| 111 | 3 | 3061 | 0 |
| 111 | 3 | 3062 | 0 |
| 111 | 3 | 3063 | 0 |
| 111 | 3 | 3064 | 0 |
| 111 | 3 | 3065 | 0 |
| 111 | 3 | 3066 | 1 |
| 111 | 3 | 3067 | 0 |
| 111 | 3 | 3068 | 0 |
| 111 | 3 | 3069 | 0 |
| 111 | 3 | 3070 | 0 |
| 111 | 3 | 3071 | 0 |
| 111 | 3 | 3072 | 0 |
| 111 | 3 | 3073 | 0 |
| 111 | 3 | 3074 | 14 |
| 111 | 3 | 3075 | 0 |
| 111 | 3 | 3076 | 2 |
| 111 | 3 | 3077 | 0 |
| 111 | 3 | 3078 | 0 |
| 111 | 3 | 3079 | 6 |
| 111 | 3 | 3080 | 1 |
| 111 | 3 | 3081 | 0 |
| 111 | 3 | 3083 | 0 |

Table 6
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| Census Tract | Block Group | Block | Total Population |
|--|-------------|-------|------------------|
| 111 | 3 | 3085 | 0 |
| 111 | 3 | 3086 | 0 |
| 111 | 3 | 3088 | 0 |
| 111 | 3 | 3089 | 0 |
| 111 | 3 | 3140 | 0 |
| 111 | 3 | 3149 | 0 |
| <i>Census Tract 111 - Block Group 3 - Subtotal</i> | | | 33 |
| Census Tract 111 - Total Population | | | 431 |
| 105.03 | 1 | 1033 | 0 |
| 105.03 | 1 | 1034 | 0 |
| 105.03 | 1 | 1041 | 0 |
| 105.03 | 1 | 1047 | 0 |
| 105.03 | 1 | 1048 | 1 |
| 105.03 | 1 | 1049 | 0 |
| 105.03 | 1 | 1050 | 0 |
| 105.03 | 1 | 1051 | 0 |
| 105.03 | 1 | 1052 | 0 |
| 105.03 | 1 | 1053 | 0 |
| 105.03 | 1 | 1054 | 0 |
| 105.03 | 1 | 1055 | 0 |
| 105.03 | 1 | 1056 | 0 |
| 105.03 | 1 | 1057 | 27 |
| 105.03 | 1 | 1058 | 0 |
| 105.03 | 1 | 1059 | 0 |
| 105.03 | 1 | 1060 | 0 |
| 105.03 | 1 | 1061 | 59 |
| 105.03 | 1 | 1067 | 30 |
| 105.03 | 1 | 1068 | 11 |
| 105.03 | 1 | 1070 | 7 |
| <i>Census Tract 105.03 - Block Group 1 - Subtotal</i> | | | 135 |
| 105.03 | 2 | 2003 | 149 |
| 105.03 | 2 | 2004 | 84 |
| 105.03 | 2 | 2005 | 11 |
| 105.03 | 2 | 2006 | 166 |
| 105.03 | 2 | 2007 | 0 |
| 105.03 | 2 | 2008 | 0 |
| 105.03 | 2 | 2009 | 0 |
| 105.03 | 2 | 2010 | 0 |
| 105.03 | 2 | 2011 | 0 |
| 105.03 | 2 | 2012 | 0 |
| 105.03 | 2 | 2013 | 0 |
| 105.03 | 2 | 2014 | 0 |
| 105.03 | 2 | 2015 | 20 |
| 105.03 | 2 | 2016 | 35 |
| 105.03 | 2 | 2017 | 34 |

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| Census Tract | Block Group | Block | Total Population |
|--|-------------|-------|---------------------|
| 105.03 | 2 | 2018 | 122 |
| 105.03 | 2 | 2019 | 32 |
| 105.03 | 2 | 2020 | 21 |
| 105.03 | 2 | 2021 | 8 |
| 105.03 | 2 | 2022 | 9 |
| 105.03 | 2 | 2023 | 13 |
| 105.03 | 2 | 2024 | 39 |
| 105.03 | 2 | 2025 | 35 |
| 105.03 | 2 | 2035 | 17 |
| 105.03 | 2 | 2036 | 18 |
| 105.03 | 2 | 2037 | 26 |
| 105.03 | 2 | 2038 | 44 |
| 105.03 | 2 | 2040 | 17 |
| 105.03 | 2 | 2041 | 3 |
| 105.03 | 2 | 2042 | 53 |
| 105.03 | 2 | 2043 | 12 |
| 105.03 | 2 | 2044 | 1 |
| 105.03 | 2 | 2049 | 50 |
| 105.03 | 2 | 2050 | 13 |
| <i>Census Tract 105.03 - Block Group 2 - Subtotal</i> | | | <i>1,032</i> |
| Census Tract 105.03 - Total Population | | | 1,167 |
| 106.01 | 1 | 1000 | 23 |
| 106.01 | 1 | 1001 | 52 |
| 106.01 | 1 | 1002 | 3 |
| 106.01 | 1 | 1003 | 0 |
| 106.01 | 1 | 1004 | 0 |
| 106.01 | 1 | 1005 | 4 |
| 106.01 | 1 | 1006 | 17 |
| 106.01 | 1 | 1007 | 31 |
| 106.01 | 1 | 1008 | 15 |
| 106.01 | 1 | 1009 | 53 |
| 106.01 | 1 | 1010 | 9 |
| 106.01 | 1 | 1011 | 9 |
| 106.01 | 1 | 1012 | 67 |
| <i>Census Tract 106.01 - Block Group 1 - Subtotal</i> | | | <i>283</i> |
| 106.01 | 2 | 2000 | 0 |
| 106.01 | 2 | 2001 | 0 |
| 106.01 | 2 | 2002 | 14 |
| 106.01 | 2 | 2003 | 7 |
| 106.01 | 2 | 2004 | 59 |
| 106.01 | 2 | 2005 | 28 |
| 106.01 | 2 | 2006 | 28 |
| 106.01 | 2 | 2007 | 2 |
| 106.01 | 2 | 2008 | 0 |

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| Census Tract | Block Group | Block | Total Population |
|---|-------------|-------|------------------|
| 106.01 | 2 | 2010 | 29 |
| 106.01 | 2 | 2011 | 4 |
| 106.01 | 2 | 2012 | 9 |
| 106.01 | 2 | 2013 | 4 |
| 106.01 | 2 | 2014 | 3 |
| 106.01 | 2 | 2027 | 37 |
| 106.01 | 2 | 2028 | 17 |
| 106.01 | 2 | 2029 | 0 |
| Census Tract 106.01 - Block Group 2 - Subtotal | | | 241 |
| Census Tract 106.01 - Total Population | | | 524 |
| 106.02 | 1 | 1000 | 0 |
| 106.02 | 1 | 1001 | 0 |
| 106.02 | 1 | 1002 | 30 |
| 106.02 | 1 | 1003 | 0 |
| 106.02 | 1 | 1004 | 9 |
| 106.02 | 1 | 1005 | 0 |
| 106.02 | 1 | 1006 | 4 |
| 106.02 | 1 | 1007 | 0 |
| 106.02 | 1 | 1008 | 2 |
| 106.02 | 1 | 1009 | 145 |
| 106.02 | 1 | 1010 | 8 |
| 106.02 | 1 | 1011 | 11 |
| 106.02 | 1 | 1012 | 19 |
| 106.02 | 1 | 1013 | 0 |
| 106.02 | 1 | 1014 | 9 |
| 106.02 | 1 | 1015 | 0 |
| 106.02 | 1 | 1016 | 115 |
| 106.02 | 1 | 1017 | 0 |
| 106.02 | 1 | 1018 | 0 |
| 106.02 | 1 | 1019 | 0 |
| 106.02 | 1 | 1020 | 17 |
| 106.02 | 1 | 1021 | 2 |
| 106.02 | 1 | 1022 | 0 |
| 106.02 | 1 | 1023 | 177 |
| 106.02 | 1 | 1024 | 56 |
| 106.02 | 1 | 1025 | 14 |
| 106.02 | 1 | 1026 | 0 |
| 106.02 | 1 | 1027 | 136 |
| 106.02 | 1 | 1028 | 93 |
| 106.02 | 1 | 1029 | 0 |
| 106.02 | 1 | 1030 | 0 |
| 106.02 | 1 | 1031 | 0 |
| 106.02 | 1 | 1032 | 6 |
| 106.02 | 1 | 1033 | 79 |

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| Census Tract | Block Group | Block | Total Population |
|---|-------------|-------|------------------|
| 106.02 | 1 | 1034 | 63 |
| 106.02 | 1 | 1035 | 0 |
| 106.02 | 1 | 1036 | 1 |
| 106.02 | 1 | 1037 | 0 |
| 106.02 | 1 | 1038 | 0 |
| 106.02 | 1 | 1040 | 247 |
| 106.02 | 1 | 1042 | 69 |
| 106.02 | 1 | 1043 | 181 |
| 106.02 | 1 | 1044 | 34 |
| 106.02 | 1 | 1045 | 7 |
| 106.02 | 1 | 1046 | 167 |
| 106.02 | 1 | 1051 | 24 |
| Census Tract 106.02 - Block Group 1 - Subtotal | | | 1,725 |
| Census Tract 106.02 - Total Population | | | 1,725 |
| 107.02 | 1 | 1000 | 0 |
| 107.02 | 1 | 1001 | 116 |
| 107.02 | 1 | 1002 | 87 |
| 107.02 | 1 | 1003 | 0 |
| 107.02 | 1 | 1004 | 19 |
| 107.02 | 1 | 1005 | 30 |
| 107.02 | 1 | 1006 | 56 |
| 107.02 | 1 | 1007 | 120 |
| 107.02 | 1 | 1008 | 64 |
| 107.02 | 1 | 1009 | 89 |
| 107.02 | 1 | 1010 | 52 |
| 107.02 | 1 | 1011 | 60 |
| 107.02 | 1 | 1012 | 24 |
| 107.02 | 1 | 1013 | 43 |
| 107.02 | 1 | 1014 | 82 |
| 107.02 | 1 | 1015 | 100 |
| 107.02 | 1 | 1016 | 0 |
| 107.02 | 1 | 1017 | 0 |
| 107.02 | 1 | 1018 | 13 |
| 107.02 | 1 | 1019 | 31 |
| 107.02 | 1 | 1020 | 34 |
| 107.02 | 1 | 1021 | 22 |
| 107.02 | 1 | 1022 | 19 |
| 107.02 | 1 | 1023 | 123 |
| 107.02 | 1 | 1024 | 23 |
| 107.02 | 1 | 1025 | 21 |
| 107.02 | 1 | 1026 | 0 |
| 107.02 | 1 | 1027 | 0 |
| 107.02 | 1 | 1028 | 65 |
| 107.02 | 1 | 1029 | 84 |

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| Census Tract | Block Group | Block | Total Population |
|--|-------------|-------|---------------------|
| 107.02 | 1 | 1030 | 35 |
| 107.02 | 1 | 1031 | 13 |
| 107.02 | 1 | 1032 | 30 |
| 107.02 | 1 | 1033 | 23 |
| 107.02 | 1 | 1034 | 0 |
| 107.02 | 1 | 1035 | 51 |
| 107.02 | 1 | 1036 | 44 |
| 107.02 | 1 | 1037 | 0 |
| 107.02 | 1 | 1038 | 25 |
| <i>Census Tract 107.02 - Block Group 1 - Subtotal</i> | | | <i>1,598</i> |
| 107.02 | 2 | 2000 | 0 |
| 107.02 | 2 | 2001 | 0 |
| 107.02 | 2 | 2002 | 269 |
| 107.02 | 2 | 2003 | 108 |
| 107.02 | 2 | 2004 | 18 |
| 107.02 | 2 | 2005 | 58 |
| 107.02 | 2 | 2006 | 63 |
| 107.02 | 2 | 2007 | 0 |
| 107.02 | 2 | 2008 | 32 |
| 107.02 | 2 | 2009 | 35 |
| 107.02 | 2 | 2010 | 23 |
| 107.02 | 2 | 2011 | 75 |
| 107.02 | 2 | 2012 | 60 |
| 107.02 | 2 | 2013 | 65 |
| 107.02 | 2 | 2014 | 89 |
| 107.02 | 2 | 2015 | 84 |
| 107.02 | 2 | 2016 | 51 |
| 107.02 | 2 | 2017 | 56 |
| 107.02 | 2 | 2018 | 65 |
| 107.02 | 2 | 2019 | 57 |
| 107.02 | 2 | 2020 | 23 |
| 107.02 | 2 | 2021 | 0 |
| 107.02 | 2 | 2022 | 0 |
| 107.02 | 2 | 2023 | 0 |
| 107.02 | 2 | 2024 | 0 |
| 107.02 | 2 | 2025 | 32 |
| 107.02 | 2 | 2026 | 43 |
| 107.02 | 2 | 2027 | 48 |
| 107.02 | 2 | 2028 | 86 |
| 107.02 | 2 | 2029 | 60 |
| 107.02 | 2 | 2030 | 47 |
| 107.02 | 2 | 2031 | 23 |
| 107.02 | 2 | 2032 | 7 |
| 107.02 | 2 | 2033 | 30 |

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| Census Tract | Block Group | Block | Total Population |
|---|-------------|-------|------------------|
| 107.02 | 2 | 2034 | 51 |
| 107.02 | 2 | 2035 | 41 |
| 107.02 | 2 | 2036 | 0 |
| 107.02 | 2 | 2037 | 0 |
| 107.02 | 2 | 2038 | 11 |
| 107.02 | 2 | 2039 | 17 |
| 107.02 | 2 | 2040 | 17 |
| 107.02 | 2 | 2041 | 39 |
| 107.02 | 2 | 2042 | 10 |
| 107.02 | 2 | 2043 | 22 |
| 107.02 | 2 | 2044 | 35 |
| 107.02 | 2 | 2045 | 38 |
| 107.02 | 2 | 2046 | 31 |
| 107.02 | 2 | 2047 | 14 |
| 107.02 | 2 | 2048 | 0 |
| 107.02 | 2 | 2049 | 5 |
| 107.02 | 2 | 2050 | 24 |
| 107.02 | 2 | 2051 | 10 |
| 107.02 | 2 | 2052 | 25 |
| 107.02 | 2 | 2053 | 1 |
| 107.02 | 2 | 2054 | 0 |
| 107.02 | 2 | 2055 | 73 |
| 107.02 | 2 | 2056 | 19 |
| 107.02 | 2 | 2057 | 49 |
| 107.02 | 2 | 2058 | 0 |
| 107.02 | 2 | 2059 | 0 |
| 107.02 | 2 | 2060 | 5 |
| 107.02 | 2 | 2061 | 31 |
| 107.02 | 2 | 2062 | 0 |
| 107.02 | 2 | 2063 | 0 |
| 107.02 | 2 | 2064 | 13 |
| 107.02 | 2 | 2065 | 4 |
| 107.02 | 2 | 2066 | 2 |
| 107.02 | 2 | 2067 | 41 |
| Census Tract 107.02 - Block Group 2 - Subtotal | | | 2,235 |
| 107.02 | 3 | 3000 | 0 |
| 107.02 | 3 | 3001 | 0 |
| 107.02 | 3 | 3002 | 0 |
| 107.02 | 3 | 3003 | 0 |
| 107.02 | 3 | 3004 | 0 |
| 107.02 | 3 | 3005 | 0 |
| 107.02 | 3 | 3006 | 36 |
| 107.02 | 3 | 3007 | 0 |
| 107.02 | 3 | 3008 | 0 |

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| Census Tract | Block Group | Block | Total Population |
|--------------|-------------|-------|------------------|
| 107.02 | 3 | 3009 | 0 |
| 107.02 | 3 | 3010 | 0 |
| 107.02 | 3 | 3011 | 0 |
| 107.02 | 3 | 3012 | 0 |
| 107.02 | 3 | 3013 | 0 |
| 107.02 | 3 | 3014 | 0 |
| 107.02 | 3 | 3015 | 0 |
| 107.02 | 3 | 3016 | 0 |
| 107.02 | 3 | 3017 | 0 |
| 107.02 | 3 | 3018 | 0 |
| 107.02 | 3 | 3019 | 0 |
| 107.02 | 3 | 3020 | 0 |
| 107.02 | 3 | 3021 | 0 |
| 107.02 | 3 | 3022 | 0 |
| 107.02 | 3 | 3023 | 0 |
| 107.02 | 3 | 3024 | 0 |
| 107.02 | 3 | 3025 | 0 |
| 107.02 | 3 | 3026 | 0 |
| 107.02 | 3 | 3027 | 368 |
| 107.02 | 3 | 3028 | 0 |
| 107.02 | 3 | 3029 | 0 |
| 107.02 | 3 | 3030 | 0 |
| 107.02 | 3 | 3031 | 0 |
| 107.02 | 3 | 3032 | 0 |
| 107.02 | 3 | 3033 | 0 |
| 107.02 | 3 | 3034 | 0 |
| 107.02 | 3 | 3035 | 0 |
| 107.02 | 3 | 3036 | 21 |
| 107.02 | 3 | 3037 | 20 |
| 107.02 | 3 | 3038 | 0 |
| 107.02 | 3 | 3039 | 0 |
| 107.02 | 3 | 3040 | 0 |
| 107.02 | 3 | 3041 | 31 |
| 107.02 | 3 | 3042 | 2 |
| 107.02 | 3 | 3043 | 0 |
| 107.02 | 3 | 3044 | 8 |
| 107.02 | 3 | 3045 | 369 |
| 107.02 | 3 | 3046 | 17 |
| 107.02 | 3 | 3047 | 2 |
| 107.02 | 3 | 3048 | 0 |
| 107.02 | 3 | 3049 | 0 |
| 107.02 | 3 | 3050 | 12 |
| 107.02 | 3 | 3051 | 24 |
| 107.02 | 3 | 3052 | 0 |

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| Census Tract | Block Group | Block | Total Population |
|--|-------------|-------|---------------------|
| 107.02 | 3 | 3053 | 0 |
| 107.02 | 3 | 3054 | 37 |
| 107.02 | 3 | 3055 | 18 |
| 107.02 | 3 | 3056 | 0 |
| 107.02 | 3 | 3057 | 51 |
| 107.02 | 3 | 3058 | 39 |
| 107.02 | 3 | 3059 | 15 |
| 107.02 | 3 | 3060 | 3 |
| 107.02 | 3 | 3061 | 1 |
| 107.02 | 3 | 3062 | 0 |
| 107.02 | 3 | 3063 | 18 |
| 107.02 | 3 | 3064 | 9 |
| 107.02 | 3 | 3065 | 0 |
| 107.02 | 3 | 3066 | 20 |
| 107.02 | 3 | 3067 | 0 |
| 107.02 | 3 | 3068 | 0 |
| 107.02 | 3 | 3069 | 0 |
| 107.02 | 3 | 3070 | 0 |
| 107.02 | 3 | 3071 | 6 |
| 107.02 | 3 | 3072 | 0 |
| 107.02 | 3 | 3073 | 14 |
| 107.02 | 3 | 3074 | 12 |
| 107.02 | 3 | 3075 | 6 |
| 107.02 | 3 | 3076 | 4 |
| 107.02 | 3 | 3077 | 28 |
| 107.02 | 3 | 3078 | 3 |
| 107.02 | 3 | 3079 | 0 |
| 107.02 | 3 | 3080 | 0 |
| <i>Census Tract 107.02 - Block Group 3 - Subtotal</i> | | | <i>1,194</i> |
| 107.02 | 4 | 4000 | 0 |
| 107.02 | 4 | 4001 | 0 |
| 107.02 | 4 | 4002 | 0 |
| 107.02 | 4 | 4003 | 107 |
| 107.02 | 4 | 4004 | 61 |
| 107.02 | 4 | 4005 | 56 |
| 107.02 | 4 | 4006 | 25 |
| 107.02 | 4 | 4007 | 33 |
| 107.02 | 4 | 4008 | 0 |
| 107.02 | 4 | 4009 | 0 |
| 107.02 | 4 | 4010 | 120 |
| 107.02 | 4 | 4011 | 91 |
| 107.02 | 4 | 4012 | 72 |
| 107.02 | 4 | 4013 | 0 |
| 107.02 | 4 | 4014 | 0 |

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| Census Tract | Block Group | Block | Total Population |
|---|-------------|-------|------------------|
| 107.02 | 4 | 4015 | 133 |
| 107.02 | 4 | 4016 | 36 |
| 107.02 | 4 | 4017 | 22 |
| 107.02 | 4 | 4018 | 78 |
| 107.02 | 4 | 4019 | 26 |
| 107.02 | 4 | 4020 | 27 |
| 107.02 | 4 | 4021 | 90 |
| 107.02 | 4 | 4022 | 0 |
| 107.02 | 4 | 4023 | 47 |
| 107.02 | 4 | 4024 | 22 |
| 107.02 | 4 | 4025 | 56 |
| 107.02 | 4 | 4026 | 33 |
| 107.02 | 4 | 4027 | 26 |
| 107.02 | 4 | 4028 | 20 |
| 107.02 | 4 | 4029 | 0 |
| 107.02 | 4 | 4030 | 0 |
| 107.02 | 4 | 4031 | 0 |
| 107.02 | 4 | 4032 | 0 |
| 107.02 | 4 | 4033 | 0 |
| 107.02 | 4 | 4034 | 0 |
| 107.02 | 4 | 4035 | 25 |
| 107.02 | 4 | 4036 | 63 |
| 107.02 | 4 | 4037 | 28 |
| 107.02 | 4 | 4038 | 65 |
| 107.02 | 4 | 4039 | 89 |
| 107.02 | 4 | 4040 | 44 |
| 107.02 | 4 | 4041 | 0 |
| 107.02 | 4 | 4042 | 0 |
| 107.02 | 4 | 4043 | 0 |
| 107.02 | 4 | 4044 | 0 |
| Census Tract 107.02 - Block Group 4 - Subtotal | | | 1,495 |
| Census Tract 107.02 - Total Population | | | 6,522 |
| 107.03 | 1 | 1000 | 52 |
| 107.03 | 1 | 1001 | 25 |
| 107.03 | 1 | 1002 | 87 |
| 107.03 | 1 | 1003 | 24 |
| 107.03 | 1 | 1004 | 35 |
| 107.03 | 1 | 1005 | 0 |
| 107.03 | 1 | 1006 | 2 |
| 107.03 | 1 | 1007 | 4 |
| 107.03 | 1 | 1008 | 38 |
| 107.03 | 1 | 1009 | 17 |
| 107.03 | 1 | 1010 | 30 |
| 107.03 | 1 | 1011 | 60 |

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| Census Tract | Block Group | Block | Total Population |
|--------------|-------------|-------|------------------|
| 107.03 | 1 | 1012 | 16 |
| 107.03 | 1 | 1013 | 80 |
| 107.03 | 1 | 1014 | 11 |
| 107.03 | 1 | 1015 | 9 |
| 107.03 | 1 | 1016 | 24 |
| 107.03 | 1 | 1017 | 45 |
| 107.03 | 1 | 1018 | 21 |
| 107.03 | 1 | 1019 | 32 |
| 107.03 | 1 | 1020 | 30 |
| 107.03 | 1 | 1021 | 0 |
| 107.03 | 1 | 1022 | 14 |
| 107.03 | 1 | 1023 | 17 |
| 107.03 | 1 | 1024 | 0 |
| 107.03 | 1 | 1025 | 0 |
| 107.03 | 1 | 1026 | 0 |
| 107.03 | 1 | 1027 | 0 |
| 107.03 | 1 | 1028 | 0 |
| 107.03 | 1 | 1029 | 75 |
| 107.03 | 1 | 1030 | 0 |
| 107.03 | 1 | 1031 | 96 |
| 107.03 | 1 | 1032 | 0 |
| 107.03 | 1 | 1033 | 0 |
| 107.03 | 1 | 1034 | 0 |
| 107.03 | 1 | 1035 | 2 |
| 107.03 | 1 | 1036 | 0 |
| 107.03 | 1 | 1037 | 0 |
| 107.03 | 1 | 1038 | 44 |
| 107.03 | 1 | 1039 | 5 |
| 107.03 | 1 | 1040 | 113 |
| 107.03 | 1 | 1041 | 21 |
| 107.03 | 1 | 1042 | 32 |
| 107.03 | 1 | 1043 | 65 |
| 107.03 | 1 | 1044 | 7 |
| 107.03 | 1 | 1045 | 34 |
| 107.03 | 1 | 1046 | 15 |
| 107.03 | 1 | 1047 | 27 |
| 107.03 | 1 | 1048 | 82 |
| 107.03 | 1 | 1049 | 15 |
| 107.03 | 1 | 1050 | 5 |
| 107.03 | 1 | 1051 | 0 |
| 107.03 | 1 | 1052 | 21 |
| 107.03 | 1 | 1053 | 22 |
| 107.03 | 1 | 1054 | 24 |
| 107.03 | 1 | 1055 | 21 |

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| Census Tract | Block Group | Block | Total Population |
|--------------|-------------|-------|------------------|
| 107.03 | 1 | 1056 | 44 |
| 107.03 | 1 | 1057 | 46 |
| 107.03 | 1 | 1058 | 19 |
| 107.03 | 1 | 1059 | 0 |
| 107.03 | 1 | 1060 | 46 |
| 107.03 | 1 | 1061 | 29 |
| 107.03 | 1 | 1062 | 51 |
| 107.03 | 1 | 1063 | 29 |
| 107.03 | 1 | 1064 | 23 |
| 107.03 | 1 | 1065 | 38 |
| 107.03 | 1 | 1066 | 22 |
| 107.03 | 1 | 1067 | 23 |
| 107.03 | 1 | 1068 | 39 |
| 107.03 | 1 | 1069 | 33 |
| 107.03 | 1 | 1070 | 31 |
| 107.03 | 1 | 1071 | 0 |
| 107.03 | 1 | 1072 | 0 |
| 107.03 | 1 | 1073 | 0 |
| 107.03 | 1 | 1074 | 0 |
| 107.03 | 1 | 1075 | 0 |
| 107.03 | 1 | 1076 | 0 |
| 107.03 | 1 | 1077 | 0 |
| 107.03 | 1 | 1078 | 0 |
| 107.03 | 1 | 1079 | 0 |
| 107.03 | 1 | 1080 | 0 |
| 107.03 | 1 | 1081 | 0 |
| 107.03 | 1 | 1082 | 1 |
| 107.03 | 1 | 1083 | 0 |
| 107.03 | 1 | 1084 | 0 |
| 107.03 | 1 | 1085 | 0 |
| 107.03 | 1 | 1086 | 0 |
| 107.03 | 1 | 1087 | 0 |
| 107.03 | 1 | 1088 | 0 |
| 107.03 | 1 | 1089 | 56 |
| 107.03 | 1 | 1090 | 29 |
| 107.03 | 1 | 1091 | 0 |
| 107.03 | 1 | 1092 | 0 |
| 107.03 | 1 | 1093 | 13 |
| 107.03 | 1 | 1094 | 44 |
| 107.03 | 1 | 1095 | 0 |
| 107.03 | 1 | 1096 | 0 |
| 107.03 | 1 | 1097 | 3 |
| 107.03 | 1 | 1098 | 43 |
| 107.03 | 1 | 1099 | 58 |

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| Census Tract | Block Group | Block | Total Population |
|--|-------------|-------|---------------------|
| 107.03 | 1 | 1100 | 141 |
| 107.03 | 1 | 1101 | 39 |
| 107.03 | 1 | 1102 | 0 |
| 107.03 | 1 | 1103 | 0 |
| 107.03 | 1 | 1104 | 53 |
| 107.03 | 1 | 1105 | 24 |
| 107.03 | 1 | 1106 | 89 |
| 107.03 | 1 | 1107 | 0 |
| 107.03 | 1 | 1108 | 11 |
| 107.03 | 1 | 1109 | 25 |
| 107.03 | 1 | 1110 | 2 |
| 107.03 | 1 | 1111 | 37 |
| 107.03 | 1 | 1112 | 56 |
| 107.03 | 1 | 1113 | 0 |
| 107.03 | 1 | 1114 | 0 |
| <i>Census Tract 107.03 - Block Group 1 - Subtotal</i> | | | <i>2,596</i> |
| 107.03 | 2 | 2000 | 174 |
| 107.03 | 2 | 2001 | 62 |
| 107.03 | 2 | 2002 | 223 |
| 107.03 | 2 | 2003 | 126 |
| 107.03 | 2 | 2004 | 19 |
| 107.03 | 2 | 2005 | 115 |
| 107.03 | 2 | 2006 | 44 |
| 107.03 | 2 | 2007 | 0 |
| 107.03 | 2 | 2008 | 0 |
| 107.03 | 2 | 2009 | 44 |
| 107.03 | 2 | 2010 | 0 |
| 107.03 | 2 | 2011 | 32 |
| 107.03 | 2 | 2012 | 78 |
| 107.03 | 2 | 2013 | 72 |
| 107.03 | 2 | 2014 | 110 |
| 107.03 | 2 | 2015 | 22 |
| 107.03 | 2 | 2016 | 25 |
| 107.03 | 2 | 2017 | 34 |
| 107.03 | 2 | 2018 | 44 |
| 107.03 | 2 | 2019 | 48 |
| 107.03 | 2 | 2020 | 60 |
| 107.03 | 2 | 2021 | 60 |
| 107.03 | 2 | 2022 | 32 |
| 107.03 | 2 | 2023 | 21 |
| 107.03 | 2 | 2024 | 0 |
| 107.03 | 2 | 2025 | 0 |
| 107.03 | 2 | 2026 | 0 |
| 107.03 | 2 | 2027 | 0 |

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| Census Tract | Block Group | Block | Total Population |
|--|--------------------|--------------|-------------------------|
| 107.03 | 2 | 2028 | 0 |
| 107.03 | 2 | 2029 | 0 |
| 107.03 | 2 | 2030 | 0 |
| 107.03 | 2 | 2031 | 35 |
| 107.03 | 2 | 2032 | 43 |
| 107.03 | 2 | 2033 | 50 |
| 107.03 | 2 | 2034 | 71 |
| 107.03 | 2 | 2035 | 53 |
| 107.03 | 2 | 2036 | 71 |
| 107.03 | 2 | 2037 | 60 |
| 107.03 | 2 | 2038 | 0 |
| 107.03 | 2 | 2039 | 0 |
| 107.03 | 2 | 2040 | 0 |
| 107.03 | 2 | 2041 | 0 |
| 107.03 | 2 | 2042 | 8 |
| 107.03 | 2 | 2043 | 0 |
| 107.03 | 2 | 2044 | 0 |
| 107.03 | 2 | 2045 | 0 |
| 107.03 | 2 | 2046 | 0 |
| 107.03 | 2 | 2047 | 0 |
| <i>Census Tract 107.03 - Block Group 2 - Subtotal</i> | | | <i>1,836</i> |
| 107.03 | 3 | 3000 | 0 |
| 107.03 | 3 | 3001 | 38 |
| 107.03 | 3 | 3002 | 0 |
| 107.03 | 3 | 3003 | 0 |
| 107.03 | 3 | 3004 | 213 |
| 107.03 | 3 | 3005 | 28 |
| 107.03 | 3 | 3006 | 0 |
| 107.03 | 3 | 3007 | 95 |
| 107.03 | 3 | 3008 | 0 |
| 107.03 | 3 | 3009 | 118 |
| 107.03 | 3 | 3010 | 75 |
| 107.03 | 3 | 3011 | 0 |
| 107.03 | 3 | 3012 | 9 |
| 107.03 | 3 | 3013 | 105 |
| 107.03 | 3 | 3014 | 97 |
| 107.03 | 3 | 3015 | 31 |
| 107.03 | 3 | 3016 | 54 |
| 107.03 | 3 | 3017 | 73 |
| 107.03 | 3 | 3018 | 63 |
| 107.03 | 3 | 3019 | 23 |
| 107.03 | 3 | 3020 | 65 |
| 107.03 | 3 | 3021 | 34 |
| <i>Census Tract 107.03 - Block Group 3 - Subtotal</i> | | | <i>1,121</i> |

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| Census Tract | Block Group | Block | Total Population |
|--------------|-------------|-------|------------------|
| 107.03 | 4 | 4000 | 0 |
| 107.03 | 4 | 4001 | 0 |
| 107.03 | 4 | 4002 | 0 |
| 107.03 | 4 | 4003 | 0 |
| 107.03 | 4 | 4004 | 22 |
| 107.03 | 4 | 4005 | 0 |
| 107.03 | 4 | 4006 | 0 |
| 107.03 | 4 | 4007 | 0 |
| 107.03 | 4 | 4008 | 3 |
| 107.03 | 4 | 4009 | 38 |
| 107.03 | 4 | 4010 | 82 |
| 107.03 | 4 | 4011 | 309 |
| 107.03 | 4 | 4012 | 0 |
| 107.03 | 4 | 4013 | 34 |
| 107.03 | 4 | 4016 | 0 |
| 107.03 | 4 | 4019 | 1 |
| 107.03 | 4 | 4020 | 0 |
| 107.03 | 4 | 4021 | 0 |
| 107.03 | 4 | 4022 | 0 |
| 107.03 | 4 | 4028 | 25 |
| 107.03 | 4 | 4029 | 443 |
| 107.03 | 4 | 4030 | 0 |
| 107.03 | 4 | 4031 | 112 |
| 107.03 | 4 | 4032 | 59 |
| 107.03 | 4 | 4033 | 59 |
| 107.03 | 4 | 4034 | 85 |
| 107.03 | 4 | 4035 | 44 |
| 107.03 | 4 | 4036 | 29 |
| 107.03 | 4 | 4037 | 46 |
| 107.03 | 4 | 4038 | 60 |
| 107.03 | 4 | 4039 | 24 |
| 107.03 | 4 | 4040 | 0 |
| 107.03 | 4 | 4041 | 0 |
| 107.03 | 4 | 4042 | 65 |
| 107.03 | 4 | 4043 | 88 |
| 107.03 | 4 | 4044 | 55 |
| 107.03 | 4 | 4045 | 151 |
| 107.03 | 4 | 4046 | 39 |
| 107.03 | 4 | 4047 | 53 |
| 107.03 | 4 | 4048 | 72 |
| 107.03 | 4 | 4049 | 73 |
| 107.03 | 4 | 4050 | 90 |
| 107.03 | 4 | 4051 | 47 |
| 107.03 | 4 | 4052 | 55 |

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| Census Tract | Block Group | Block | Total Population |
|--|-------------|-------|---------------------|
| 107.03 | 4 | 4053 | 145 |
| 107.03 | 4 | 4054 | 34 |
| 107.03 | 4 | 4055 | 38 |
| 107.03 | 4 | 4056 | 44 |
| 107.03 | 4 | 4057 | 70 |
| 107.03 | 4 | 4058 | 6 |
| 107.03 | 4 | 4059 | 0 |
| 107.03 | 4 | 4060 | 37 |
| 107.03 | 4 | 4061 | 30 |
| 107.03 | 4 | 4062 | 50 |
| 107.03 | 4 | 4063 | 0 |
| <i>Census Tract 107.03 - Block Group 4 - Subtotal</i> | | | <i>2,717</i> |
| Census Tract 107.03 - Total Population | | | 8,270 |
| 107.14 | 2 | 2000 | 250 |
| 107.14 | 2 | 2001 | 253 |
| 107.14 | 2 | 2002 | 134 |
| 107.14 | 2 | 2003 | 0 |
| 107.14 | 2 | 2004 | 56 |
| 107.14 | 2 | 2014 | 82 |
| 107.14 | 2 | 2015 | 0 |
| 107.14 | 2 | 2016 | 0 |
| 107.14 | 2 | 2017 | 0 |
| 107.14 | 2 | 2030 | 110 |
| <i>Census Tract 107.14 - Block Group 4 - Subtotal</i> | | | <i>885</i> |
| Census Tract 107.14 - Total Population | | | 885 |
| 107.16 | 1 | 1000 | 0 |
| 107.16 | 1 | 1001 | 0 |
| 107.16 | 1 | 1002 | 182 |
| 107.16 | 1 | 1003 | 41 |
| 107.16 | 1 | 1004 | 51 |
| 107.16 | 1 | 1005 | 34 |
| 107.16 | 1 | 1006 | 37 |
| 107.16 | 1 | 1007 | 78 |
| 107.16 | 1 | 1008 | 19 |
| 107.16 | 1 | 1009 | 0 |
| 107.16 | 1 | 1034 | 103 |
| <i>Census Tract 107.16 - Block Group 1 - Subtotal</i> | | | <i>545</i> |
| 107.16 | 2 | 2000 | 53 |
| 107.16 | 2 | 2001 | 55 |
| <i>Census Tract 107.16 - Block Group 2 - Subtotal</i> | | | <i>108</i> |
| 107.16 | 3 | 3000 | 99 |
| <i>Census Tract 107.16 - Block Group 3 - Subtotal</i> | | | <i>99</i> |
| Census Tract 107.16 - Total Population | | | 752 |
| 107.17 | 1 | 1000 | 96 |

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| Census Tract | Block Group | Block | Total Population |
|--------------|-------------|-------|------------------|
| 107.17 | 1 | 1001 | 33 |
| 107.17 | 1 | 1002 | 56 |
| 107.17 | 1 | 1003 | 96 |
| 107.17 | 1 | 1004 | 80 |
| 107.17 | 1 | 1005 | 37 |
| 107.17 | 1 | 1006 | 73 |
| 107.17 | 1 | 1007 | 323 |
| 107.17 | 1 | 1008 | 105 |
| 107.17 | 1 | 1009 | 58 |
| 107.17 | 1 | 1010 | 56 |
| 107.17 | 1 | 1011 | 72 |
| 107.17 | 1 | 1012 | 85 |
| 107.17 | 1 | 1013 | 42 |
| 107.17 | 1 | 1014 | 121 |
| 107.17 | 1 | 1015 | 129 |
| 107.17 | 1 | 1016 | 61 |
| 107.17 | 1 | 1017 | 62 |
| 107.17 | 1 | 1018 | 0 |
| 107.17 | 1 | 1019 | 0 |
| 107.17 | 1 | 1020 | 0 |
| 107.17 | 1 | 1021 | 147 |
| 107.17 | 1 | 1022 | 34 |
| 107.17 | 1 | 1023 | 551 |
| 107.17 | 1 | 1024 | 0 |
| 107.17 | 1 | 1025 | 248 |
| 107.17 | 1 | 1026 | 0 |
| 107.17 | 1 | 1027 | 0 |
| 107.17 | 1 | 1028 | 0 |
| 107.17 | 1 | 1029 | 67 |
| 107.17 | 1 | 1030 | 97 |
| 107.17 | 1 | 1031 | 94 |
| 107.17 | 1 | 1032 | 0 |
| 107.17 | 1 | 1033 | 0 |
| 107.17 | 1 | 1034 | 0 |
| 107.17 | 1 | 1035 | 0 |
| 107.17 | 1 | 1036 | 0 |
| 107.17 | 1 | 1037 | 0 |
| 107.17 | 1 | 1038 | 0 |
| 107.17 | 1 | 1039 | 0 |
| 107.17 | 1 | 1040 | 0 |
| 107.17 | 1 | 1041 | 0 |
| 107.17 | 1 | 1042 | 0 |
| 107.17 | 1 | 1043 | 0 |
| 107.17 | 1 | 1044 | 0 |

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| Census Tract | Block Group | Block | Total Population |
|--|-------------|-------|---------------------|
| 107.17 | 1 | 1045 | 2 |
| 107.17 | 1 | 1046 | 0 |
| 107.17 | 1 | 1047 | 0 |
| 107.17 | 1 | 1048 | 0 |
| 107.17 | 1 | 1049 | 0 |
| 107.17 | 1 | 1050 | 0 |
| 107.17 | 1 | 1051 | 0 |
| 107.17 | 1 | 1052 | 0 |
| 107.17 | 1 | 1053 | 0 |
| 107.17 | 1 | 1054 | 0 |
| <i>Census Tract 107.17 - Block Group 1 - Subtotal</i> | | | <i>2,825</i> |
| 107.17 | 2 | 2004 | 0 |
| 107.17 | 2 | 2005 | 0 |
| 107.17 | 2 | 2007 | 0 |
| 107.17 | 2 | 2008 | 0 |
| 107.17 | 2 | 2009 | 0 |
| 107.17 | 2 | 2010 | 0 |
| 107.17 | 2 | 2011 | 0 |
| 107.17 | 2 | 2012 | 0 |
| 107.17 | 2 | 2013 | 0 |
| 107.17 | 2 | 2014 | 0 |
| 107.17 | 2 | 2023 | 0 |
| 107.17 | 2 | 2024 | 0 |
| 107.17 | 2 | 2025 | 0 |
| 107.17 | 2 | 2041 | 0 |
| 107.17 | 2 | 2042 | 0 |
| 107.17 | 2 | 2043 | 0 |
| 107.17 | 2 | 2044 | 0 |
| 107.17 | 2 | 2045 | 0 |
| 107.17 | 2 | 2046 | 0 |
| 107.17 | 2 | 2047 | 0 |
| 107.17 | 2 | 2048 | 0 |
| 107.17 | 2 | 2049 | 254 |
| 107.17 | 2 | 2050 | 53 |
| 107.17 | 2 | 2051 | 84 |
| 107.17 | 2 | 2052 | 34 |
| 107.17 | 2 | 2053 | 31 |
| 107.17 | 2 | 2054 | 80 |
| 107.17 | 2 | 2055 | 0 |
| 107.17 | 2 | 2056 | 49 |
| 107.17 | 2 | 2057 | 0 |
| 107.17 | 2 | 2058 | 0 |
| 107.17 | 2 | 2059 | 191 |
| 107.17 | 2 | 2060 | 17 |

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| Census Tract | Block Group | Block | Total Population |
|--------------|-------------|-------|------------------|
| 107.17 | 2 | 2061 | 274 |
| 107.17 | 2 | 2062 | 31 |
| 107.17 | 2 | 2063 | 33 |
| 107.17 | 2 | 2064 | 0 |
| 107.17 | 2 | 2065 | 0 |
| 107.17 | 2 | 2066 | 0 |
| 107.17 | 2 | 2067 | 35 |
| 107.17 | 2 | 2068 | 75 |
| 107.17 | 2 | 2069 | 29 |
| 107.17 | 2 | 2070 | 33 |
| 107.17 | 2 | 2071 | 20 |
| 107.17 | 2 | 2072 | 0 |
| 107.17 | 2 | 2073 | 259 |
| 107.17 | 2 | 2074 | 129 |
| 107.17 | 2 | 2075 | 126 |
| 107.17 | 2 | 2076 | 2 |
| 107.17 | 2 | 2077 | 49 |
| 107.17 | 2 | 2078 | 58 |
| 107.17 | 2 | 2079 | 76 |
| 107.17 | 2 | 2080 | 27 |
| 107.17 | 2 | 2081 | 37 |
| 107.17 | 2 | 2082 | 122 |
| 107.17 | 2 | 2083 | 36 |
| 107.17 | 2 | 2084 | 116 |
| 107.17 | 2 | 2085 | 53 |
| 107.17 | 2 | 2086 | 66 |
| 107.17 | 2 | 2087 | 56 |
| 107.17 | 2 | 2088 | 96 |
| 107.17 | 2 | 2089 | 0 |
| 107.17 | 2 | 2090 | 66 |
| 107.17 | 2 | 2091 | 206 |
| 107.17 | 2 | 2092 | 89 |
| 107.17 | 2 | 2093 | 90 |
| 107.17 | 2 | 2094 | 132 |
| 107.17 | 2 | 2095 | 0 |
| 107.17 | 2 | 2096 | 0 |
| 107.17 | 2 | 2097 | 0 |
| 107.17 | 2 | 2098 | 0 |
| 107.17 | 2 | 2099 | 134 |
| 107.17 | 2 | 2100 | 59 |
| 107.17 | 2 | 2101 | 150 |
| 107.17 | 2 | 2102 | 0 |
| 107.17 | 2 | 2103 | 97 |
| 107.17 | 2 | 2104 | 52 |

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| Census Tract | Block Group | Block | Total Population |
|---|-------------|-------|------------------|
| 107.17 | 2 | 2105 | 82 |
| 107.17 | 2 | 2106 | 68 |
| 107.17 | 2 | 2107 | 54 |
| 107.17 | 2 | 2108 | 101 |
| 107.17 | 2 | 2109 | 122 |
| 107.17 | 2 | 2110 | 0 |
| 107.17 | 2 | 2111 | 0 |
| 107.17 | 2 | 2112 | 0 |
| 107.17 | 2 | 2113 | 0 |
| 107.17 | 2 | 2114 | 0 |
| 107.17 | 2 | 2115 | 84 |
| 107.17 | 2 | 2116 | 0 |
| 107.17 | 2 | 2117 | 0 |
| 107.17 | 2 | 2118 | 0 |
| 107.17 | 2 | 2119 | 0 |
| 107.17 | 2 | 2120 | 0 |
| 107.17 | 2 | 2121 | 0 |
| 107.17 | 2 | 2122 | 0 |
| 107.17 | 2 | 2123 | 0 |
| 107.17 | 2 | 2124 | 0 |
| 107.17 | 2 | 2125 | 0 |
| 107.17 | 2 | 2126 | 59 |
| 107.17 | 2 | 2127 | 0 |
| 107.17 | 2 | 2128 | 0 |
| 107.17 | 2 | 2129 | 0 |
| 107.17 | 2 | 2130 | 0 |
| 107.17 | 2 | 2133 | 0 |
| Census Tract 107.17 - Block Group 2 - Subtotal | | | 4,276 |
| 107.17 | 3 | 3000 | 62 |
| 107.17 | 3 | 3001 | 0 |
| 107.17 | 3 | 3002 | 75 |
| 107.17 | 3 | 3003 | 265 |
| 107.17 | 3 | 3004 | 36 |
| 107.17 | 3 | 3005 | 90 |
| 107.17 | 3 | 3006 | 0 |
| 107.17 | 3 | 3007 | 64 |
| 107.17 | 3 | 3008 | 210 |
| 107.17 | 3 | 3009 | 6 |
| 107.17 | 3 | 3010 | 0 |
| 107.17 | 3 | 3011 | 45 |
| 107.17 | 3 | 3012 | 60 |
| 107.17 | 3 | 3013 | 0 |
| 107.17 | 3 | 3014 | 1 |
| 107.17 | 3 | 3015 | 0 |

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| Census Tract | Block Group | Block | Total Population |
|---|-------------|-------|------------------|
| 107.17 | 3 | 3016 | 160 |
| 107.17 | 3 | 3017 | 44 |
| 107.17 | 3 | 3018 | 0 |
| 107.17 | 3 | 3019 | 54 |
| 107.17 | 3 | 3020 | 34 |
| 107.17 | 3 | 3021 | 93 |
| 107.17 | 3 | 3022 | 36 |
| 107.17 | 3 | 3023 | 0 |
| 107.17 | 3 | 3024 | 105 |
| 107.17 | 3 | 3025 | 37 |
| 107.17 | 3 | 3026 | 0 |
| 107.17 | 3 | 3027 | 49 |
| 107.17 | 3 | 3028 | 42 |
| 107.17 | 3 | 3029 | 32 |
| 107.17 | 3 | 3030 | 0 |
| 107.17 | 3 | 3031 | 0 |
| 107.17 | 3 | 3032 | 0 |
| 107.17 | 3 | 3033 | 0 |
| 107.17 | 3 | 3034 | 0 |
| 107.17 | 3 | 3035 | 38 |
| 107.17 | 3 | 3036 | 42 |
| 107.17 | 3 | 3037 | 97 |
| Census Tract 107.17 - Block Group 3 - Subtotal | | | 1,777 |
| Census Tract 107.17 - Total Population | | | 8,878 |
| 107.18 | 1 | 1001 | 0 |
| 107.18 | 1 | 1005 | 0 |
| 107.18 | 1 | 1006 | 0 |
| 107.18 | 1 | 1007 | 0 |
| 107.18 | 1 | 1008 | 0 |
| 107.18 | 1 | 1009 | 0 |
| 107.18 | 1 | 1010 | 0 |
| 107.18 | 1 | 1011 | 0 |
| 107.18 | 1 | 1012 | 0 |
| 107.18 | 1 | 1013 | 0 |
| 107.18 | 1 | 1014 | 0 |
| 107.18 | 1 | 1015 | 0 |
| 107.18 | 1 | 1016 | 0 |
| 107.18 | 1 | 1017 | 0 |
| 107.18 | 1 | 1018 | 0 |
| 107.18 | 1 | 1021 | 0 |
| 107.18 | 1 | 1022 | 1 |
| 107.18 | 1 | 1023 | 0 |
| 107.18 | 1 | 1024 | 0 |
| 107.18 | 1 | 1025 | 0 |

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| Census Tract | Block Group | Block | Total Population |
|--------------|-------------|-------|------------------|
| 107.18 | 1 | 1026 | 0 |
| 107.18 | 1 | 1027 | 0 |
| 107.18 | 1 | 1028 | 0 |
| 107.18 | 1 | 1029 | 0 |
| 107.18 | 1 | 1030 | 0 |
| 107.18 | 1 | 1031 | 0 |
| 107.18 | 1 | 1032 | 0 |
| 107.18 | 1 | 1033 | 0 |
| 107.18 | 1 | 1034 | 0 |
| 107.18 | 1 | 1035 | 0 |
| 107.18 | 1 | 1036 | 0 |
| 107.18 | 1 | 1037 | 0 |
| 107.18 | 1 | 1038 | 0 |
| 107.18 | 1 | 1039 | 0 |
| 107.18 | 1 | 1040 | 0 |
| 107.18 | 1 | 1041 | 0 |
| 107.18 | 1 | 1042 | 0 |
| 107.18 | 1 | 1043 | 0 |
| 107.18 | 1 | 1044 | 0 |
| 107.18 | 1 | 1045 | 0 |
| 107.18 | 1 | 1046 | 0 |
| 107.18 | 1 | 1047 | 0 |
| 107.18 | 1 | 1048 | 0 |
| 107.18 | 1 | 1049 | 0 |
| 107.18 | 1 | 1050 | 0 |
| 107.18 | 1 | 1051 | 0 |
| 107.18 | 1 | 1052 | 0 |
| 107.18 | 1 | 1053 | 0 |
| 107.18 | 1 | 1054 | 0 |
| 107.18 | 1 | 1055 | 0 |
| 107.18 | 1 | 1056 | 0 |
| 107.18 | 1 | 1057 | 0 |
| 107.18 | 1 | 1058 | 0 |
| 107.18 | 1 | 1059 | 0 |
| 107.18 | 1 | 1060 | 0 |
| 107.18 | 1 | 1061 | 0 |
| 107.18 | 1 | 1062 | 0 |
| 107.18 | 1 | 1063 | 0 |
| 107.18 | 1 | 1064 | 0 |
| 107.18 | 1 | 1065 | 0 |
| 107.18 | 1 | 1066 | 0 |
| 107.18 | 1 | 1067 | 0 |
| 107.18 | 1 | 1068 | 0 |
| 107.18 | 1 | 1069 | 0 |

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| Census Tract | Block Group | Block | Total Population |
|--------------|-------------|-------|------------------|
| 107.18 | 1 | 1070 | 0 |
| 107.18 | 1 | 1071 | 0 |
| 107.18 | 1 | 1072 | 0 |
| 107.18 | 1 | 1073 | 0 |
| 107.18 | 1 | 1075 | 0 |
| 107.18 | 1 | 1077 | 0 |
| 107.18 | 1 | 1078 | 0 |
| 107.18 | 1 | 1079 | 0 |
| 107.18 | 1 | 1080 | 0 |
| 107.18 | 1 | 1081 | 0 |
| 107.18 | 1 | 1082 | 0 |
| 107.18 | 1 | 1083 | 0 |
| 107.18 | 1 | 1084 | 0 |
| 107.18 | 1 | 1085 | 0 |
| 107.18 | 1 | 1086 | 0 |
| 107.18 | 1 | 1087 | 0 |
| 107.18 | 1 | 1088 | 0 |
| 107.18 | 1 | 1089 | 0 |
| 107.18 | 1 | 1090 | 0 |
| 107.18 | 1 | 1091 | 0 |
| 107.18 | 1 | 1092 | 0 |
| 107.18 | 1 | 1093 | 0 |
| 107.18 | 1 | 1094 | 0 |
| 107.18 | 1 | 1095 | 0 |
| 107.18 | 1 | 1096 | 0 |
| 107.18 | 1 | 1097 | 0 |
| 107.18 | 1 | 1098 | 0 |
| 107.18 | 1 | 1099 | 0 |
| 107.18 | 1 | 1100 | 0 |
| 107.18 | 1 | 1101 | 0 |
| 107.18 | 1 | 1102 | 0 |
| 107.18 | 1 | 1103 | 0 |
| 107.18 | 1 | 1104 | 0 |
| 107.18 | 1 | 1105 | 0 |
| 107.18 | 1 | 1106 | 0 |
| 107.18 | 1 | 1107 | 0 |
| 107.18 | 1 | 1108 | 0 |
| 107.18 | 1 | 1109 | 0 |
| 107.18 | 1 | 1110 | 0 |
| 107.18 | 1 | 1111 | 0 |
| 107.18 | 1 | 1112 | 0 |
| 107.18 | 1 | 1113 | 0 |
| 107.18 | 1 | 1114 | 0 |
| 107.18 | 1 | 1115 | 0 |

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| Census Tract | Block Group | Block | Total Population |
|--------------|-------------|-------|------------------|
| 107.18 | 1 | 1116 | 0 |
| 107.18 | 1 | 1117 | 0 |
| 107.18 | 1 | 1118 | 0 |
| 107.18 | 1 | 1119 | 0 |
| 107.18 | 1 | 1120 | 0 |
| 107.18 | 1 | 1121 | 0 |
| 107.18 | 1 | 1122 | 4 |
| 107.18 | 1 | 1123 | 0 |
| 107.18 | 1 | 1124 | 0 |
| 107.18 | 1 | 1125 | 0 |
| 107.18 | 1 | 1126 | 0 |
| 107.18 | 1 | 1127 | 0 |
| 107.18 | 1 | 1128 | 0 |
| 107.18 | 1 | 1129 | 0 |
| 107.18 | 1 | 1130 | 0 |
| 107.18 | 1 | 1131 | 0 |
| 107.18 | 1 | 1132 | 0 |
| 107.18 | 1 | 1133 | 0 |
| 107.18 | 1 | 1134 | 0 |
| 107.18 | 1 | 1135 | 0 |
| 107.18 | 1 | 1136 | 0 |
| 107.18 | 1 | 1137 | 0 |
| 107.18 | 1 | 1138 | 0 |
| 107.18 | 1 | 1139 | 0 |
| 107.18 | 1 | 1140 | 0 |
| 107.18 | 1 | 1141 | 0 |
| 107.18 | 1 | 1142 | 0 |
| 107.18 | 1 | 1143 | 0 |
| 107.18 | 1 | 1144 | 0 |
| 107.18 | 1 | 1145 | 0 |
| 107.18 | 1 | 1146 | 0 |
| 107.18 | 1 | 1147 | 0 |
| 107.18 | 1 | 1148 | 0 |
| 107.18 | 1 | 1149 | 0 |
| 107.18 | 1 | 1150 | 0 |
| 107.18 | 1 | 1151 | 0 |
| 107.18 | 1 | 1152 | 0 |
| 107.18 | 1 | 1153 | 0 |
| 107.18 | 1 | 1154 | 0 |
| 107.18 | 1 | 1155 | 0 |
| 107.18 | 1 | 1156 | 0 |
| 107.18 | 1 | 1157 | 0 |
| 107.18 | 1 | 1158 | 0 |
| 107.18 | 1 | 1159 | 0 |

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| Census Tract | Block Group | Block | Total Population |
|--------------|-------------|-------|------------------|
| 107.18 | 1 | 1160 | 0 |
| 107.18 | 1 | 1161 | 0 |
| 107.18 | 1 | 1162 | 0 |
| 107.18 | 1 | 1163 | 1 |
| 107.18 | 1 | 1164 | 0 |
| 107.18 | 1 | 1165 | 0 |
| 107.18 | 1 | 1166 | 0 |
| 107.18 | 1 | 1167 | 0 |
| 107.18 | 1 | 1168 | 0 |
| 107.18 | 1 | 1169 | 0 |
| 107.18 | 1 | 1170 | 0 |
| 107.18 | 1 | 1171 | 0 |
| 107.18 | 1 | 1172 | 0 |
| 107.18 | 1 | 1173 | 0 |
| 107.18 | 1 | 1174 | 0 |
| 107.18 | 1 | 1175 | 95 |
| 107.18 | 1 | 1176 | 60 |
| 107.18 | 1 | 1177 | 0 |
| 107.18 | 1 | 1178 | 0 |
| 107.18 | 1 | 1179 | 0 |
| 107.18 | 1 | 1180 | 0 |
| 107.18 | 1 | 1181 | 0 |
| 107.18 | 1 | 1182 | 0 |
| 107.18 | 1 | 1183 | 0 |
| 107.18 | 1 | 1184 | 0 |
| 107.18 | 1 | 1185 | 0 |
| 107.18 | 1 | 1186 | 0 |
| 107.18 | 1 | 1187 | 0 |
| 107.18 | 1 | 1188 | 0 |
| 107.18 | 1 | 1189 | 0 |
| 107.18 | 1 | 1190 | 0 |
| 107.18 | 1 | 1191 | 0 |
| 107.18 | 1 | 1192 | 0 |
| 107.18 | 1 | 1193 | 0 |
| 107.18 | 1 | 1194 | 135 |
| 107.18 | 1 | 1195 | 0 |
| 107.18 | 1 | 1196 | 0 |
| 107.18 | 1 | 1197 | 0 |
| 107.18 | 1 | 1198 | 0 |
| 107.18 | 1 | 1199 | 0 |
| 107.18 | 1 | 1200 | 0 |
| 107.18 | 1 | 1201 | 0 |
| 107.18 | 1 | 1202 | 0 |
| 107.18 | 1 | 1203 | 0 |

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| Census Tract | Block Group | Block | Total Population |
|--------------|-------------|-------|------------------|
| 107.18 | 1 | 1204 | 0 |
| 107.18 | 1 | 1205 | 0 |
| 107.18 | 1 | 1206 | 0 |
| 107.18 | 1 | 1207 | 0 |
| 107.18 | 1 | 1208 | 0 |
| 107.18 | 1 | 1209 | 0 |
| 107.18 | 1 | 1210 | 0 |
| 107.18 | 1 | 1211 | 0 |
| 107.18 | 1 | 1212 | 0 |
| 107.18 | 1 | 1213 | 0 |
| 107.18 | 1 | 1214 | 0 |
| 107.18 | 1 | 1215 | 0 |
| 107.18 | 1 | 1216 | 0 |
| 107.18 | 1 | 1217 | 0 |
| 107.18 | 1 | 1218 | 0 |
| 107.18 | 1 | 1219 | 0 |
| 107.18 | 1 | 1220 | 0 |
| 107.18 | 1 | 1221 | 0 |
| 107.18 | 1 | 1222 | 0 |
| 107.18 | 1 | 1223 | 0 |
| 107.18 | 1 | 1224 | 0 |
| 107.18 | 1 | 1225 | 0 |
| 107.18 | 1 | 1226 | 0 |
| 107.18 | 1 | 1227 | 0 |
| 107.18 | 1 | 1228 | 0 |
| 107.18 | 1 | 1236 | 0 |
| 107.18 | 1 | 1237 | 0 |
| 107.18 | 1 | 1242 | 0 |
| 107.18 | 1 | 1244 | 0 |
| 107.18 | 1 | 1245 | 0 |
| 107.18 | 1 | 1246 | 0 |
| 107.18 | 1 | 1247 | 0 |
| 107.18 | 1 | 1248 | 0 |
| 107.18 | 1 | 1249 | 0 |
| 107.18 | 1 | 1250 | 0 |
| 107.18 | 1 | 1251 | 0 |
| 107.18 | 1 | 1252 | 0 |
| 107.18 | 1 | 1253 | 0 |
| 107.18 | 1 | 1254 | 0 |
| 107.18 | 1 | 1255 | 0 |
| 107.18 | 1 | 1256 | 0 |
| 107.18 | 1 | 1257 | 0 |
| 107.18 | 1 | 1258 | 0 |
| 107.18 | 1 | 1259 | 0 |

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| Census Tract | Block Group | Block | Total Population |
|--------------|-------------|-------|------------------|
| 107.18 | 1 | 1260 | 0 |
| 107.18 | 1 | 1261 | 0 |
| 107.18 | 1 | 1262 | 0 |
| 107.18 | 1 | 1263 | 0 |
| 107.18 | 1 | 1264 | 0 |
| 107.18 | 1 | 1265 | 0 |
| 107.18 | 1 | 1266 | 0 |
| 107.18 | 1 | 1269 | 0 |
| 107.18 | 1 | 1270 | 0 |
| 107.18 | 1 | 1271 | 0 |
| 107.18 | 1 | 1272 | 0 |
| 107.18 | 1 | 1273 | 0 |
| 107.18 | 1 | 1274 | 0 |
| 107.18 | 1 | 1275 | 0 |
| 107.18 | 1 | 1276 | 0 |
| 107.18 | 1 | 1277 | 0 |
| 107.18 | 1 | 1278 | 0 |
| 107.18 | 1 | 1279 | 0 |
| 107.18 | 1 | 1280 | 0 |
| 107.18 | 1 | 1281 | 4 |
| 107.18 | 1 | 1284 | 3 |
| 107.18 | 1 | 1285 | 0 |
| 107.18 | 1 | 1286 | 0 |
| 107.18 | 1 | 1287 | 0 |
| 107.18 | 1 | 1288 | 0 |
| 107.18 | 1 | 1289 | 0 |
| 107.18 | 1 | 1290 | 0 |
| 107.18 | 1 | 1291 | 0 |
| 107.18 | 1 | 1292 | 0 |
| 107.18 | 1 | 1293 | 0 |
| 107.18 | 1 | 1294 | 0 |
| 107.18 | 1 | 1295 | 0 |
| 107.18 | 1 | 1296 | 0 |
| 107.18 | 1 | 1297 | 0 |
| 107.18 | 1 | 1298 | 0 |
| 107.18 | 1 | 1299 | 0 |
| 107.18 | 1 | 1300 | 0 |
| 107.18 | 1 | 1301 | 0 |
| 107.18 | 1 | 1302 | 0 |
| 107.18 | 1 | 1303 | 0 |
| 107.18 | 1 | 1304 | 0 |
| 107.18 | 1 | 1305 | 0 |
| 107.18 | 1 | 1306 | 0 |
| 107.18 | 1 | 1307 | 0 |

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| Census Tract | Block Group | Block | Total Population |
|--------------|-------------|-------|------------------|
| 107.18 | 1 | 1308 | 0 |
| 107.18 | 1 | 1309 | 0 |
| 107.18 | 1 | 1310 | 0 |
| 107.18 | 1 | 1311 | 0 |
| 107.18 | 1 | 1312 | 0 |
| 107.18 | 1 | 1313 | 0 |
| 107.18 | 1 | 1314 | 0 |
| 107.18 | 1 | 1315 | 0 |
| 107.18 | 1 | 1316 | 0 |
| 107.18 | 1 | 1317 | 0 |
| 107.18 | 1 | 1318 | 0 |
| 107.18 | 1 | 1319 | 0 |
| 107.18 | 1 | 1320 | 0 |
| 107.18 | 1 | 1321 | 0 |
| 107.18 | 1 | 1322 | 0 |
| 107.18 | 1 | 1323 | 0 |
| 107.18 | 1 | 1324 | 0 |
| 107.18 | 1 | 1325 | 7 |
| 107.18 | 1 | 1326 | 188 |
| 107.18 | 1 | 1327 | 35 |
| 107.18 | 1 | 1328 | 44 |
| 107.18 | 1 | 1329 | 51 |
| 107.18 | 1 | 1330 | 0 |
| 107.18 | 1 | 1331 | 0 |
| 107.18 | 1 | 1332 | 0 |
| 107.18 | 1 | 1333 | 0 |
| 107.18 | 1 | 1334 | 0 |
| 107.18 | 1 | 1335 | 0 |
| 107.18 | 1 | 1336 | 0 |
| 107.18 | 1 | 1337 | 0 |
| 107.18 | 1 | 1338 | 0 |
| 107.18 | 1 | 1339 | 0 |
| 107.18 | 1 | 1340 | 0 |
| 107.18 | 1 | 1341 | 0 |
| 107.18 | 1 | 1342 | 0 |
| 107.18 | 1 | 1343 | 0 |
| 107.18 | 1 | 1344 | 0 |
| 107.18 | 1 | 1345 | 0 |
| 107.18 | 1 | 1346 | 0 |
| 107.18 | 1 | 1347 | 0 |
| 107.18 | 1 | 1348 | 0 |
| 107.18 | 1 | 1349 | 0 |
| 107.18 | 1 | 1350 | 23 |
| 107.18 | 1 | 1351 | 0 |

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| Census Tract | Block Group | Block | Total Population |
|--------------|-------------|-------|------------------|
| 107.18 | 1 | 1352 | 0 |
| 107.18 | 1 | 1353 | 0 |
| 107.18 | 1 | 1354 | 3 |
| 107.18 | 1 | 1355 | 45 |
| 107.18 | 1 | 1356 | 10 |
| 107.18 | 1 | 1357 | 36 |
| 107.18 | 1 | 1358 | 0 |
| 107.18 | 1 | 1359 | 0 |
| 107.18 | 1 | 1360 | 2 |
| 107.18 | 1 | 1361 | 0 |
| 107.18 | 1 | 1362 | 0 |
| 107.18 | 1 | 1363 | 0 |
| 107.18 | 1 | 1364 | 0 |
| 107.18 | 1 | 1365 | 135 |
| 107.18 | 1 | 1366 | 0 |
| 107.18 | 1 | 1367 | 30 |
| 107.18 | 1 | 1368 | 5 |
| 107.18 | 1 | 1369 | 84 |
| 107.18 | 1 | 1370 | 38 |
| 107.18 | 1 | 1371 | 46 |
| 107.18 | 1 | 1372 | 42 |
| 107.18 | 1 | 1373 | 0 |
| 107.18 | 1 | 1374 | 0 |
| 107.18 | 1 | 1375 | 6 |
| 107.18 | 1 | 1376 | 1 |
| 107.18 | 1 | 1377 | 0 |
| 107.18 | 1 | 1378 | 2 |
| 107.18 | 1 | 1379 | 3 |
| 107.18 | 1 | 1380 | 10 |
| 107.18 | 1 | 1381 | 65 |
| 107.18 | 1 | 1382 | 195 |
| 107.18 | 1 | 1383 | 65 |
| 107.18 | 1 | 1384 | 63 |
| 107.18 | 1 | 1385 | 10 |
| 107.18 | 1 | 1386 | 70 |
| 107.18 | 1 | 1387 | 0 |
| 107.18 | 1 | 1388 | 0 |
| 107.18 | 1 | 1389 | 0 |
| 107.18 | 1 | 1390 | 0 |
| 107.18 | 1 | 1391 | 39 |
| 107.18 | 1 | 1392 | 0 |
| 107.18 | 1 | 1393 | 95 |
| 107.18 | 1 | 1394 | 120 |
| 107.18 | 1 | 1395 | 79 |

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| Census Tract | Block Group | Block | Total Population |
|--------------|-------------|-------|------------------|
| 107.18 | 1 | 1396 | 38 |
| 107.18 | 1 | 1397 | 12 |
| 107.18 | 1 | 1398 | 5 |
| 107.18 | 1 | 1399 | 52 |
| 107.18 | 1 | 1400 | 0 |
| 107.18 | 1 | 1401 | 0 |
| 107.18 | 1 | 1402 | 0 |
| 107.18 | 1 | 1403 | 0 |
| 107.18 | 1 | 1404 | 0 |
| 107.18 | 1 | 1405 | 0 |
| 107.18 | 1 | 1406 | 0 |
| 107.18 | 1 | 1407 | 0 |
| 107.18 | 1 | 1408 | 25 |
| 107.18 | 1 | 1409 | 0 |
| 107.18 | 1 | 1410 | 0 |
| 107.18 | 1 | 1411 | 0 |
| 107.18 | 1 | 1412 | 0 |
| 107.18 | 1 | 1413 | 27 |
| 107.18 | 1 | 1414 | 36 |
| 107.18 | 1 | 1415 | 27 |
| 107.18 | 1 | 1416 | 36 |
| 107.18 | 1 | 1417 | 21 |
| 107.18 | 1 | 1418 | 24 |
| 107.18 | 1 | 1419 | 22 |
| 107.18 | 1 | 1420 | 16 |
| 107.18 | 1 | 1421 | 0 |
| 107.18 | 1 | 1422 | 0 |
| 107.18 | 1 | 1423 | 19 |
| 107.18 | 1 | 1424 | 17 |
| 107.18 | 1 | 1425 | 68 |
| 107.18 | 1 | 1426 | 11 |
| 107.18 | 1 | 1427 | 37 |
| 107.18 | 1 | 1428 | 34 |
| 107.18 | 1 | 1429 | 17 |
| 107.18 | 1 | 1430 | 39 |
| 107.18 | 1 | 1431 | 32 |
| 107.18 | 1 | 1432 | 24 |
| 107.18 | 1 | 1433 | 16 |
| 107.18 | 1 | 1434 | 0 |
| 107.18 | 1 | 1435 | 16 |
| 107.18 | 1 | 1436 | 0 |
| 107.18 | 1 | 1437 | 14 |
| 107.18 | 1 | 1438 | 0 |
| 107.18 | 1 | 1439 | 0 |

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| Census Tract | Block Group | Block | Total Population |
|--------------|-------------|-------|------------------|
| 107.18 | 1 | 1440 | 0 |
| 107.18 | 1 | 1441 | 0 |
| 107.18 | 1 | 1442 | 0 |
| 107.18 | 1 | 1443 | 0 |
| 107.18 | 1 | 1444 | 0 |
| 107.18 | 1 | 1445 | 0 |
| 107.18 | 1 | 1446 | 0 |
| 107.18 | 1 | 1447 | 0 |
| 107.18 | 1 | 1448 | 0 |
| 107.18 | 1 | 1449 | 12 |
| 107.18 | 1 | 1450 | 0 |
| 107.18 | 1 | 1451 | 0 |
| 107.18 | 1 | 1452 | 0 |
| 107.18 | 1 | 1453 | 0 |
| 107.18 | 1 | 1454 | 0 |
| 107.18 | 1 | 1455 | 0 |
| 107.18 | 1 | 1456 | 0 |
| 107.18 | 1 | 1457 | 107 |
| 107.18 | 1 | 1458 | 0 |
| 107.18 | 1 | 1459 | 35 |
| 107.18 | 1 | 1460 | 6 |
| 107.18 | 1 | 1461 | 5 |
| 107.18 | 1 | 1462 | 0 |
| 107.18 | 1 | 1463 | 0 |
| 107.18 | 1 | 1464 | 0 |
| 107.18 | 1 | 1465 | 0 |
| 107.18 | 1 | 1466 | 10 |
| 107.18 | 1 | 1467 | 0 |
| 107.18 | 1 | 1468 | 0 |
| 107.18 | 1 | 1469 | 0 |
| 107.18 | 1 | 1470 | 0 |
| 107.18 | 1 | 1471 | 0 |
| 107.18 | 1 | 1472 | 53 |
| 107.18 | 1 | 1473 | 112 |
| 107.18 | 1 | 1474 | 135 |
| 107.18 | 1 | 1475 | 49 |
| 107.18 | 1 | 1476 | 73 |
| 107.18 | 1 | 1477 | 25 |
| 107.18 | 1 | 1478 | 24 |
| 107.18 | 1 | 1479 | 0 |
| 107.18 | 1 | 1480 | 0 |
| 107.18 | 1 | 1481 | 0 |
| 107.18 | 1 | 1482 | 0 |
| 107.18 | 1 | 1483 | 0 |

Table 6
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| Census Tract | Block Group | Block | Total Population |
|--------------|-------------|-------|------------------|
| 107.18 | 1 | 1484 | 0 |
| 107.18 | 1 | 1485 | 0 |
| 107.18 | 1 | 1486 | 0 |
| 107.18 | 1 | 1487 | 0 |
| 107.18 | 1 | 1488 | 0 |
| 107.18 | 1 | 1489 | 0 |
| 107.18 | 1 | 1493 | 0 |
| 107.18 | 1 | 1494 | 0 |
| 107.18 | 1 | 1495 | 0 |
| 107.18 | 1 | 1496 | 0 |
| 107.18 | 1 | 1497 | 0 |
| 107.18 | 1 | 1498 | 0 |
| 107.18 | 1 | 1499 | 0 |
| 107.18 | 1 | 1500 | 0 |
| 107.18 | 1 | 1501 | 31 |
| 107.18 | 1 | 1502 | 0 |
| 107.18 | 1 | 1503 | 3 |
| 107.18 | 1 | 1504 | 33 |
| 107.18 | 1 | 1505 | 0 |
| 107.18 | 1 | 1506 | 0 |
| 107.18 | 1 | 1507 | 0 |
| 107.18 | 1 | 1508 | 0 |
| 107.18 | 1 | 1509 | 76 |
| 107.18 | 1 | 1510 | 84 |
| 107.18 | 1 | 1511 | 0 |
| 107.18 | 1 | 1512 | 0 |
| 107.18 | 1 | 1513 | 0 |
| 107.18 | 1 | 1539 | 0 |
| 107.18 | 1 | 1540 | 0 |
| 107.18 | 1 | 1541 | 0 |
| 107.18 | 1 | 1542 | 0 |
| 107.18 | 1 | 1543 | 0 |
| 107.18 | 1 | 1544 | 0 |
| 107.18 | 1 | 1547 | 0 |
| 107.18 | 1 | 1548 | 62 |
| 107.18 | 1 | 1549 | 55 |
| 107.18 | 1 | 1550 | 47 |
| 107.18 | 1 | 1551 | 33 |
| 107.18 | 1 | 1552 | 0 |
| 107.18 | 1 | 1562 | 44 |
| 107.18 | 1 | 1563 | 34 |
| 107.18 | 1 | 1564 | 6 |
| 107.18 | 1 | 1565 | 9 |
| 107.18 | 1 | 1566 | 46 |

Table 6
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| Census Tract | Block Group | Block | Total Population |
|--------------|-------------|-------|------------------|
| 107.18 | 1 | 1567 | 33 |
| 107.18 | 1 | 1568 | 50 |
| 107.18 | 1 | 1569 | 32 |
| 107.18 | 1 | 1570 | 38 |
| 107.18 | 1 | 1571 | 17 |
| 107.18 | 1 | 1572 | 115 |
| 107.18 | 1 | 1573 | 21 |
| 107.18 | 1 | 1574 | 0 |
| 107.18 | 1 | 1575 | 0 |
| 107.18 | 1 | 1576 | 0 |
| 107.18 | 1 | 1577 | 0 |
| 107.18 | 1 | 1578 | 0 |
| 107.18 | 1 | 1579 | 31 |
| 107.18 | 1 | 1580 | 29 |
| 107.18 | 1 | 1581 | 19 |
| 107.18 | 1 | 1582 | 0 |
| 107.18 | 1 | 1583 | 73 |
| 107.18 | 1 | 1584 | 8 |
| 107.18 | 1 | 1585 | 0 |
| 107.18 | 1 | 1586 | 50 |
| 107.18 | 1 | 1587 | 26 |
| 107.18 | 1 | 1588 | 12 |
| 107.18 | 1 | 1589 | 16 |
| 107.18 | 1 | 1590 | 0 |
| 107.18 | 1 | 1591 | 7 |
| 107.18 | 1 | 1592 | 0 |
| 107.18 | 1 | 1593 | 21 |
| 107.18 | 1 | 1594 | 5 |
| 107.18 | 1 | 1595 | 0 |
| 107.18 | 1 | 1596 | 0 |
| 107.18 | 1 | 1597 | 0 |
| 107.18 | 1 | 1598 | 0 |
| 107.18 | 1 | 1599 | 0 |
| 107.18 | 1 | 1600 | 0 |
| 107.18 | 1 | 1601 | 0 |
| 107.18 | 1 | 1602 | 0 |
| 107.18 | 1 | 1603 | 0 |
| 107.18 | 1 | 1604 | 0 |
| 107.18 | 1 | 1605 | 0 |
| 107.18 | 1 | 1606 | 0 |
| 107.18 | 1 | 1607 | 0 |
| 107.18 | 1 | 1608 | 0 |
| 107.18 | 1 | 1609 | 0 |
| 107.18 | 1 | 1610 | 0 |

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| Census Tract | Block Group | Block | Total Population |
|--|--------------------|--------------|-------------------------|
| 107.18 | 1 | 1611 | 0 |
| 107.18 | 1 | 1612 | 0 |
| 107.18 | 1 | 1613 | 0 |
| 107.18 | 1 | 1614 | 0 |
| 107.18 | 1 | 1615 | 0 |
| 107.18 | 1 | 1616 | 0 |
| 107.18 | 1 | 1617 | 0 |
| 107.18 | 1 | 1618 | 0 |
| 107.18 | 1 | 1619 | 0 |
| 107.18 | 1 | 1620 | 0 |
| 107.18 | 1 | 1621 | 0 |
| 107.18 | 1 | 1622 | 0 |
| 107.18 | 1 | 1623 | 0 |
| 107.18 | 1 | 1624 | 0 |
| 107.18 | 1 | 1625 | 0 |
| 107.18 | 1 | 1626 | 0 |
| 107.18 | 1 | 1627 | 0 |
| 107.18 | 1 | 1628 | 0 |
| 107.18 | 1 | 1629 | 0 |
| 107.18 | 1 | 1630 | 0 |
| 107.18 | 1 | 1631 | 0 |
| 107.18 | 1 | 1632 | 0 |
| 107.18 | 1 | 1633 | 0 |
| 107.18 | 1 | 1634 | 0 |
| 107.18 | 1 | 1635 | 54 |
| 107.18 | 1 | 1636 | 0 |
| 107.18 | 1 | 1637 | 0 |
| 107.18 | 1 | 1638 | 0 |
| 107.18 | 1 | 1639 | 0 |
| 107.18 | 1 | 1640 | 0 |
| 107.18 | 1 | 1641 | 0 |
| 107.18 | 1 | 1642 | 0 |
| 107.18 | 1 | 1643 | 0 |
| 107.18 | 1 | 1644 | 0 |
| 107.18 | 1 | 1645 | 0 |
| 107.18 | 1 | 1646 | 0 |
| 107.18 | 1 | 1647 | 0 |
| 107.18 | 1 | 1648 | 0 |
| 107.18 | 1 | 1649 | 0 |
| 107.18 | 1 | 1650 | 0 |
| <i>Census Tract 107.18 - Block Group 1 - Subtotal</i> | | | <i>4,501</i> |
| Census Tract 107.18 - Total Population | | | 4,501 |
| 10723 | 3 | 3202 | 0 |
| 10723 | 3 | 3203 | 0 |

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| Census Tract | Block Group | Block | Total Population |
|--|-------------|-------|------------------|
| 10723 | 3 | 3204 | 0 |
| 10723 | 3 | 3208 | 0 |
| 10723 | 3 | 3211 | 0 |
| 10723 | 3 | 3212 | 0 |
| 10723 | 3 | 3213 | 0 |
| <i>Census Tract 107.23 - Block Group 3 - Subtotal</i> | | | <i>0</i> |
| Census Tract 107.23 - Total Population | | | 0 |
| 9405 | 1 | 1000 | 0 |
| 9405 | 1 | 1001 | 0 |
| 9405 | 1 | 1002 | 0 |
| 9405 | 1 | 1003 | 0 |
| 9405 | 1 | 1004 | 0 |
| 9405 | 1 | 1005 | 0 |
| 9405 | 1 | 1006 | 8 |
| 9405 | 1 | 1007 | 0 |
| 9405 | 1 | 1008 | 91 |
| 9405 | 1 | 1009 | 71 |
| 9405 | 1 | 1010 | 17 |
| 9405 | 1 | 1011 | 3 |
| 9405 | 1 | 1012 | 2 |
| 9405 | 1 | 1013 | 35 |
| 9405 | 1 | 1014 | 3 |
| 9405 | 1 | 1015 | 88 |
| 9405 | 1 | 1016 | 0 |
| 9405 | 1 | 1017 | 0 |
| 9405 | 1 | 1018 | 0 |
| 9405 | 1 | 1019 | 0 |
| 9405 | 1 | 1020 | 0 |
| 9405 | 1 | 1021 | 42 |
| 9405 | 1 | 1022 | 0 |
| 9405 | 1 | 1023 | 0 |
| 9405 | 1 | 1024 | 0 |
| 9405 | 1 | 1025 | 101 |
| 9405 | 1 | 1026 | 48 |
| 9405 | 1 | 1027 | 23 |
| 9405 | 1 | 1028 | 75 |
| 9405 | 1 | 1029 | 44 |
| 9405 | 1 | 1030 | 33 |
| 9405 | 1 | 1031 | 36 |
| 9405 | 1 | 1032 | 1 |
| 9405 | 1 | 1033 | 0 |
| 9405 | 1 | 1034 | 0 |
| 9405 | 1 | 1035 | 0 |
| 9405 | 1 | 1036 | 8 |

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| Census Tract | Block Group | Block | Total Population |
|--|-------------|-------|------------------|
| 9405 | 1 | 1037 | 0 |
| <i>Census Tract 9405- Block Group 1 - Subtotal</i> | | | 729 |
| 9405 | 2 | 2000 | 72 |
| 9405 | 2 | 2001 | 90 |
| 9405 | 2 | 2002 | 0 |
| 9405 | 2 | 2003 | 90 |
| 9405 | 2 | 2004 | 17 |
| 9405 | 2 | 2005 | 4 |
| 9405 | 2 | 2006 | 0 |
| 9405 | 2 | 2007 | 13 |
| 9405 | 2 | 2008 | 0 |
| 9405 | 2 | 2009 | 274 |
| 9405 | 2 | 2010 | 233 |
| 9405 | 2 | 2011 | 0 |
| 9405 | 2 | 2012 | 39 |
| 9405 | 2 | 2013 | 18 |
| 9405 | 2 | 2015 | 4 |
| 9405 | 2 | 2018 | 39 |
| 9405 | 2 | 2019 | 11 |
| 9405 | 2 | 2020 | 27 |
| 9405 | 2 | 2021 | 6 |
| 9405 | 2 | 2022 | 39 |
| 9405 | 2 | 2023 | 17 |
| 9405 | 2 | 2024 | 13 |
| 9405 | 2 | 2025 | 0 |
| 9405 | 2 | 2026 | 89 |
| 9405 | 2 | 2027 | 69 |
| 9405 | 2 | 2028 | 17 |
| 9405 | 2 | 2029 | 40 |
| 9405 | 2 | 2030 | 40 |
| 9405 | 2 | 2031 | 111 |
| 9405 | 2 | 2032 | 144 |
| 9405 | 2 | 2033 | 99 |
| 9405 | 2 | 2034 | 48 |
| 9405 | 2 | 2035 | 114 |
| 9405 | 2 | 2036 | 47 |
| 9405 | 2 | 2037 | 0 |
| 9405 | 2 | 2038 | 0 |
| 9405 | 2 | 2039 | 2 |
| 9405 | 2 | 2040 | 0 |
| 9405 | 2 | 2041 | 45 |
| 9405 | 2 | 2042 | 15 |
| 9405 | 2 | 2043 | 6 |
| 9405 | 2 | 2044 | 0 |

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| Census Tract | Block Group | Block | Total Population |
|---|--------------------|--------------|-------------------------|
| 9405 | 2 | 2045 | 0 |
| 9405 | 2 | 2046 | 0 |
| <i>Census Tract 9405- Block Group 2 - Subtotal</i> | | | <i>1,892</i> |
| 9405 | 3 | 3016 | 44 |
| 9405 | 3 | 3017 | 75 |
| 9405 | 3 | 3018 | 220 |
| 9405 | 3 | 3020 | 49 |
| 9405 | 3 | 3021 | 0 |
| 9405 | 3 | 3022 | 0 |
| 9405 | 3 | 3023 | 21 |
| 9405 | 3 | 3024 | 4 |
| 9405 | 3 | 3025 | 19 |
| 9405 | 3 | 3026 | 73 |
| 9405 | 3 | 3029 | 0 |
| 9405 | 3 | 3030 | 45 |
| 9405 | 3 | 3031 | 30 |
| 9405 | 3 | 3032 | 11 |
| <i>Census Tract 9405- Block Group 3 - Subtotal</i> | | | <i>591</i> |
| Census Tract 9405 - Total Population | | | 3,212 |
| TOTAL POPULATION | | | 36,896 |

Source: U.S. Census Bureau, Census 2010, Summary File 1.

TABLE 7
Blocks with Population ≥50 Persons Within the Four-Mile Radius
Vulnerable Area Assessment
Sandoval County Landfill

| Census Tract | Block Group | Block | Total Population |
|--------------|-------------|-------|------------------|
| 111 | 1 | 1166 | 375 |
| 105.03 | 1 | 1061 | 59 |
| 105.03 | 2 | 2003 | 149 |
| 105.03 | 2 | 2004 | 84 |
| 105.03 | 2 | 2006 | 166 |
| 105.03 | 2 | 2018 | 122 |
| 105.03 | 2 | 2042 | 53 |
| 105.03 | 2 | 2049 | 50 |
| 106.01 | 1 | 1001 | 52 |
| 106.01 | 1 | 1009 | 53 |
| 106.01 | 1 | 1012 | 67 |
| 106.01 | 2 | 2004 | 59 |
| 106.02 | 1 | 1009 | 145 |
| 106.02 | 1 | 1016 | 115 |
| 106.02 | 1 | 1023 | 177 |
| 106.02 | 1 | 1024 | 56 |
| 106.02 | 1 | 1027 | 136 |
| 106.02 | 1 | 1028 | 93 |
| 106.02 | 1 | 1033 | 79 |
| 106.02 | 1 | 1034 | 63 |
| 106.02 | 1 | 1040 | 247 |
| 106.02 | 1 | 1042 | 69 |
| 106.02 | 1 | 1043 | 181 |
| 106.02 | 1 | 1046 | 167 |
| 107.02 | 1 | 1001 | 116 |
| 107.02 | 1 | 1002 | 87 |
| 107.02 | 1 | 1006 | 56 |
| 107.02 | 1 | 1007 | 120 |
| 107.02 | 1 | 1008 | 64 |
| 107.02 | 1 | 1009 | 89 |
| 107.02 | 1 | 1010 | 52 |
| 107.02 | 1 | 1011 | 60 |
| 107.02 | 1 | 1014 | 82 |
| 107.02 | 1 | 1015 | 100 |
| 107.02 | 1 | 1023 | 123 |
| 107.02 | 1 | 1028 | 65 |
| 107.02 | 1 | 1029 | 84 |
| 107.02 | 1 | 1035 | 51 |
| 107.02 | 2 | 2002 | 269 |

| Census Tract | Block Group | Block | Total Population |
|---------------------|--------------------|--------------|-------------------------|
| 107.02 | 2 | 2003 | 108 |
| 107.02 | 2 | 2005 | 58 |
| 107.02 | 2 | 2006 | 63 |
| 107.02 | 2 | 2011 | 75 |
| 107.02 | 2 | 2012 | 60 |
| 107.02 | 2 | 2013 | 65 |
| 107.02 | 2 | 2014 | 89 |
| 107.02 | 2 | 2015 | 84 |
| 107.02 | 2 | 2016 | 51 |
| 107.02 | 2 | 2017 | 56 |
| 107.02 | 2 | 2018 | 65 |
| 107.02 | 2 | 2019 | 57 |
| 107.02 | 2 | 2028 | 86 |
| 107.02 | 2 | 2029 | 60 |
| 107.02 | 2 | 2034 | 51 |
| 107.02 | 2 | 2055 | 73 |
| 107.02 | 3 | 3027 | 368 |
| 107.02 | 3 | 3045 | 369 |
| 107.02 | 3 | 3057 | 51 |
| 107.02 | 4 | 4003 | 107 |
| 107.02 | 4 | 4004 | 61 |
| 107.02 | 4 | 4005 | 56 |
| 107.02 | 4 | 4010 | 120 |
| 107.02 | 4 | 4011 | 91 |
| 107.02 | 4 | 4012 | 72 |
| 107.02 | 4 | 4015 | 133 |
| 107.02 | 4 | 4018 | 78 |
| 107.02 | 4 | 4021 | 90 |
| 107.02 | 4 | 4025 | 56 |
| 107.02 | 4 | 4036 | 63 |
| 107.02 | 4 | 4038 | 65 |
| 107.02 | 4 | 4039 | 89 |
| 107.03 | 1 | 1000 | 52 |
| 107.03 | 1 | 1002 | 87 |
| 107.03 | 1 | 1011 | 60 |
| 107.03 | 1 | 1013 | 80 |
| 107.03 | 1 | 1029 | 75 |
| 107.03 | 1 | 1031 | 96 |
| 107.03 | 1 | 1040 | 113 |
| 107.03 | 1 | 1043 | 65 |
| 107.03 | 1 | 1048 | 82 |
| 107.03 | 1 | 1062 | 51 |
| 107.03 | 1 | 1089 | 56 |
| 107.03 | 1 | 1099 | 58 |

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| Census Tract | Block Group | Block | Total Population |
|--------------|-------------|-------|------------------|
| 107.03 | 1 | 1100 | 141 |
| 107.03 | 1 | 1104 | 53 |
| 107.03 | 1 | 1106 | 89 |
| 107.03 | 1 | 1112 | 56 |
| 107.03 | 2 | 2000 | 174 |
| 107.03 | 2 | 2001 | 62 |
| 107.03 | 2 | 2002 | 223 |
| 107.03 | 2 | 2003 | 126 |
| 107.03 | 2 | 2005 | 115 |
| 107.03 | 2 | 2012 | 78 |
| 107.03 | 2 | 2013 | 72 |
| 107.03 | 2 | 2014 | 110 |
| 107.03 | 2 | 2020 | 60 |
| 107.03 | 2 | 2021 | 60 |
| 107.03 | 2 | 2033 | 50 |
| 107.03 | 2 | 2034 | 71 |
| 107.03 | 2 | 2035 | 53 |
| 107.03 | 2 | 2036 | 71 |
| 107.03 | 2 | 2037 | 60 |
| 107.03 | 3 | 3004 | 213 |
| 107.03 | 3 | 3007 | 95 |
| 107.03 | 3 | 3009 | 118 |
| 107.03 | 3 | 3010 | 75 |
| 107.03 | 3 | 3013 | 105 |
| 107.03 | 3 | 3014 | 97 |
| 107.03 | 3 | 3016 | 54 |
| 107.03 | 3 | 3017 | 73 |
| 107.03 | 3 | 3018 | 63 |
| 107.03 | 3 | 3020 | 65 |
| 107.03 | 4 | 4010 | 82 |
| 107.03 | 4 | 4011 | 309 |
| 107.03 | 4 | 4029 | 443 |
| 107.03 | 4 | 4031 | 112 |
| 107.03 | 4 | 4032 | 59 |
| 107.03 | 4 | 4033 | 59 |
| 107.03 | 4 | 4034 | 85 |
| 107.03 | 4 | 4038 | 60 |
| 107.03 | 4 | 4042 | 65 |
| 107.03 | 4 | 4043 | 88 |
| 107.03 | 4 | 4044 | 55 |
| 107.03 | 4 | 4045 | 151 |
| 107.03 | 4 | 4047 | 53 |
| 107.03 | 4 | 4048 | 72 |
| 107.03 | 4 | 4049 | 73 |

Table 7
Page 3 of 7

| Census Tract | Block Group | Block | Total Population |
|--------------|-------------|-------|------------------|
| 107.03 | 4 | 4050 | 90 |
| 107.03 | 4 | 4052 | 55 |
| 107.03 | 4 | 4053 | 145 |
| 107.03 | 4 | 4057 | 70 |
| 107.03 | 4 | 4062 | 50 |
| 107.14 | 2 | 2000 | 250 |
| 107.14 | 2 | 2001 | 253 |
| 107.14 | 2 | 2002 | 134 |
| 107.14 | 2 | 2004 | 56 |
| 107.14 | 2 | 2014 | 82 |
| 107.14 | 2 | 2030 | 110 |
| 107.16 | 1 | 1002 | 182 |
| 107.16 | 1 | 1004 | 51 |
| 107.16 | 1 | 1007 | 78 |
| 107.16 | 1 | 1034 | 103 |
| 107.16 | 2 | 2000 | 53 |
| 107.16 | 2 | 2001 | 55 |
| 107.16 | 3 | 3000 | 99 |
| 107.17 | 1 | 1000 | 96 |
| 107.17 | 1 | 1002 | 56 |
| 107.17 | 1 | 1003 | 96 |
| 107.17 | 1 | 1004 | 80 |
| 107.17 | 1 | 1006 | 73 |
| 107.17 | 1 | 1007 | 323 |
| 107.17 | 1 | 1008 | 105 |
| 107.17 | 1 | 1009 | 58 |
| 107.17 | 1 | 1010 | 56 |
| 107.17 | 1 | 1011 | 72 |
| 107.17 | 1 | 1012 | 85 |
| 107.17 | 1 | 1014 | 121 |
| 107.17 | 1 | 1015 | 129 |
| 107.17 | 1 | 1016 | 61 |
| 107.17 | 1 | 1017 | 62 |
| 107.17 | 1 | 1021 | 147 |
| 107.17 | 1 | 1023 | 551 |
| 107.17 | 1 | 1025 | 248 |
| 107.17 | 1 | 1029 | 67 |
| 107.17 | 1 | 1030 | 97 |
| 107.17 | 1 | 1031 | 94 |
| 107.17 | 2 | 2049 | 254 |
| 107.17 | 2 | 2050 | 53 |
| 107.17 | 2 | 2051 | 84 |
| 107.17 | 2 | 2054 | 80 |
| 107.17 | 2 | 2059 | 191 |

Table 7
Page 4 of 7

| Census Tract | Block Group | Block | Total Population |
|---------------------|--------------------|--------------|-------------------------|
| 107.17 | 2 | 2061 | 274 |
| 107.17 | 2 | 2068 | 75 |
| 107.17 | 2 | 2073 | 259 |
| 107.17 | 2 | 2074 | 129 |
| 107.17 | 2 | 2075 | 126 |
| 107.17 | 2 | 2078 | 58 |
| 107.17 | 2 | 2079 | 76 |
| 107.17 | 2 | 2082 | 122 |
| 107.17 | 2 | 2084 | 116 |
| 107.17 | 2 | 2085 | 53 |
| 107.17 | 2 | 2086 | 66 |
| 107.17 | 2 | 2087 | 56 |
| 107.17 | 2 | 2088 | 96 |
| 107.17 | 2 | 2090 | 66 |
| 107.17 | 2 | 2091 | 206 |
| 107.17 | 2 | 2092 | 89 |
| 107.17 | 2 | 2093 | 90 |
| 107.17 | 2 | 2094 | 132 |
| 107.17 | 2 | 2099 | 134 |
| 107.17 | 2 | 2100 | 59 |
| 107.17 | 2 | 2101 | 150 |
| 107.17 | 2 | 2103 | 97 |
| 107.17 | 2 | 2104 | 52 |
| 107.17 | 2 | 2105 | 82 |
| 107.17 | 2 | 2106 | 68 |
| 107.17 | 2 | 2107 | 54 |
| 107.17 | 2 | 2108 | 101 |
| 107.17 | 2 | 2109 | 122 |
| 107.17 | 2 | 2115 | 84 |
| 107.17 | 2 | 2126 | 59 |
| 107.17 | 3 | 3000 | 62 |
| 107.17 | 3 | 3002 | 75 |
| 107.17 | 3 | 3003 | 265 |
| 107.17 | 3 | 3005 | 90 |
| 107.17 | 3 | 3007 | 64 |
| 107.17 | 3 | 3008 | 210 |
| 107.17 | 3 | 3012 | 60 |
| 107.17 | 3 | 3016 | 160 |
| 107.17 | 3 | 3019 | 54 |
| 107.17 | 3 | 3021 | 93 |
| 107.17 | 3 | 3024 | 105 |
| 107.17 | 3 | 3037 | 97 |
| 107.18 | 1 | 1175 | 95 |
| 107.18 | 1 | 1176 | 60 |

Table 7
Page 5 of 7

| Census Tract | Block Group | Block | Total Population |
|--------------|-------------|-------|------------------|
| 107.18 | 1 | 1194 | 135 |
| 107.18 | 1 | 1326 | 188 |
| 107.18 | 1 | 1329 | 51 |
| 107.18 | 1 | 1365 | 135 |
| 107.18 | 1 | 1369 | 84 |
| 107.18 | 1 | 1381 | 65 |
| 107.18 | 1 | 1382 | 195 |
| 107.18 | 1 | 1383 | 65 |
| 107.18 | 1 | 1384 | 63 |
| 107.18 | 1 | 1386 | 70 |
| 107.18 | 1 | 1393 | 95 |
| 107.18 | 1 | 1394 | 120 |
| 107.18 | 1 | 1395 | 79 |
| 107.18 | 1 | 1399 | 52 |
| 107.18 | 1 | 1425 | 68 |
| 107.18 | 1 | 1457 | 107 |
| 107.18 | 1 | 1472 | 53 |
| 107.18 | 1 | 1473 | 112 |
| 107.18 | 1 | 1474 | 135 |
| 107.18 | 1 | 1476 | 73 |
| 107.18 | 1 | 1509 | 76 |
| 107.18 | 1 | 1510 | 84 |
| 107.18 | 1 | 1548 | 62 |
| 107.18 | 1 | 1549 | 55 |
| 107.18 | 1 | 1568 | 50 |
| 107.18 | 1 | 1572 | 115 |
| 107.18 | 1 | 1583 | 73 |
| 107.18 | 1 | 1586 | 50 |
| 107.18 | 1 | 1635 | 54 |
| 9405 | 1 | 1008 | 91 |
| 9405 | 1 | 1009 | 71 |
| 9405 | 1 | 1015 | 88 |
| 9405 | 1 | 1025 | 101 |
| 9405 | 1 | 1028 | 75 |
| 9405 | 2 | 2000 | 72 |
| 9405 | 2 | 2001 | 90 |
| 9405 | 2 | 2003 | 90 |
| 9405 | 2 | 2009 | 274 |
| 9405 | 2 | 2010 | 233 |
| 9405 | 2 | 2026 | 89 |
| 9405 | 2 | 2027 | 69 |
| 9405 | 2 | 2031 | 111 |
| 9405 | 2 | 2032 | 144 |
| 9405 | 2 | 2033 | 99 |

Table 7
Page 6 of 7

| Census Tract | Block Group | Block | Total Population |
|---------------------|--------------------|--------------|-----------------------------|
| 9405 | 2 | 2035 | 114 |
| 9405 | 3 | 3017 | 75 |
| 9405 | 3 | 3018 | 220 |
| 9405 | 3 | 3026 | 73 |

TABLE 8
Population by Census Blocks that Constitute the Densest Square Mile
Within the Radius (2010)
Vulnerable Area Assessment
Sandoval County Landfill

| Census Tract | Block Group | Block | Total Population |
|---------------------|--------------------|--------------|-------------------------|
| 10703 | 1 | 1038 | 44 |
| 10703 | 1 | 1039 | 5 |
| 10703 | 1 | 1040 | 113 |
| 10703 | 1 | 1041 | 21 |
| 10703 | 1 | 1042 | 32 |
| 10703 | 1 | 1043 | 65 |
| 10703 | 1 | 1072 | 0 |
| 10703 | 1 | 1073 | 0 |
| 10703 | 1 | 1074 | 0 |
| 10703 | 1 | 1075 | 0 |
| 10703 | 1 | 1076 | 0 |
| 10703 | 1 | 1077 | 0 |
| 10703 | 1 | 1078 | 0 |
| 10703 | 1 | 1108 | 11 |
| 10703 | 1 | 1109 | 25 |
| 10703 | 1 | 1110 | 2 |
| 10703 | 1 | 1111 | 37 |
| 10703 | 1 | 1112 | 56 |
| 10703 | 2 | 2000 | 174 |
| 10703 | 2 | 2001 | 62 |
| 10703 | 2 | 2002 | 223 |
| 10703 | 2 | 2003 | 126 |
| 10703 | 2 | 2004 | 19 |
| 10703 | 2 | 2005 | 115 |
| 10703 | 2 | 2006 | 44 |
| 10703 | 2 | 2009 | 44 |
| 10703 | 2 | 2012 | 78 |
| 10703 | 2 | 2013 | 72 |
| 10703 | 2 | 2014 | 110 |
| 10703 | 2 | 2015 | 22 |
| 10703 | 2 | 2016 | 25 |
| 10703 | 2 | 2017 | 34 |
| 10703 | 2 | 2018 | 44 |
| 10703 | 2 | 2019 | 48 |
| 10703 | 2 | 2020 | 60 |
| 10703 | 2 | 2021 | 60 |
| 10703 | 2 | 2022 | 32 |
| 10703 | 2 | 2023 | 21 |
| 10703 | 2 | 2024 | 0 |
| 10703 | 2 | 2031 | 35 |

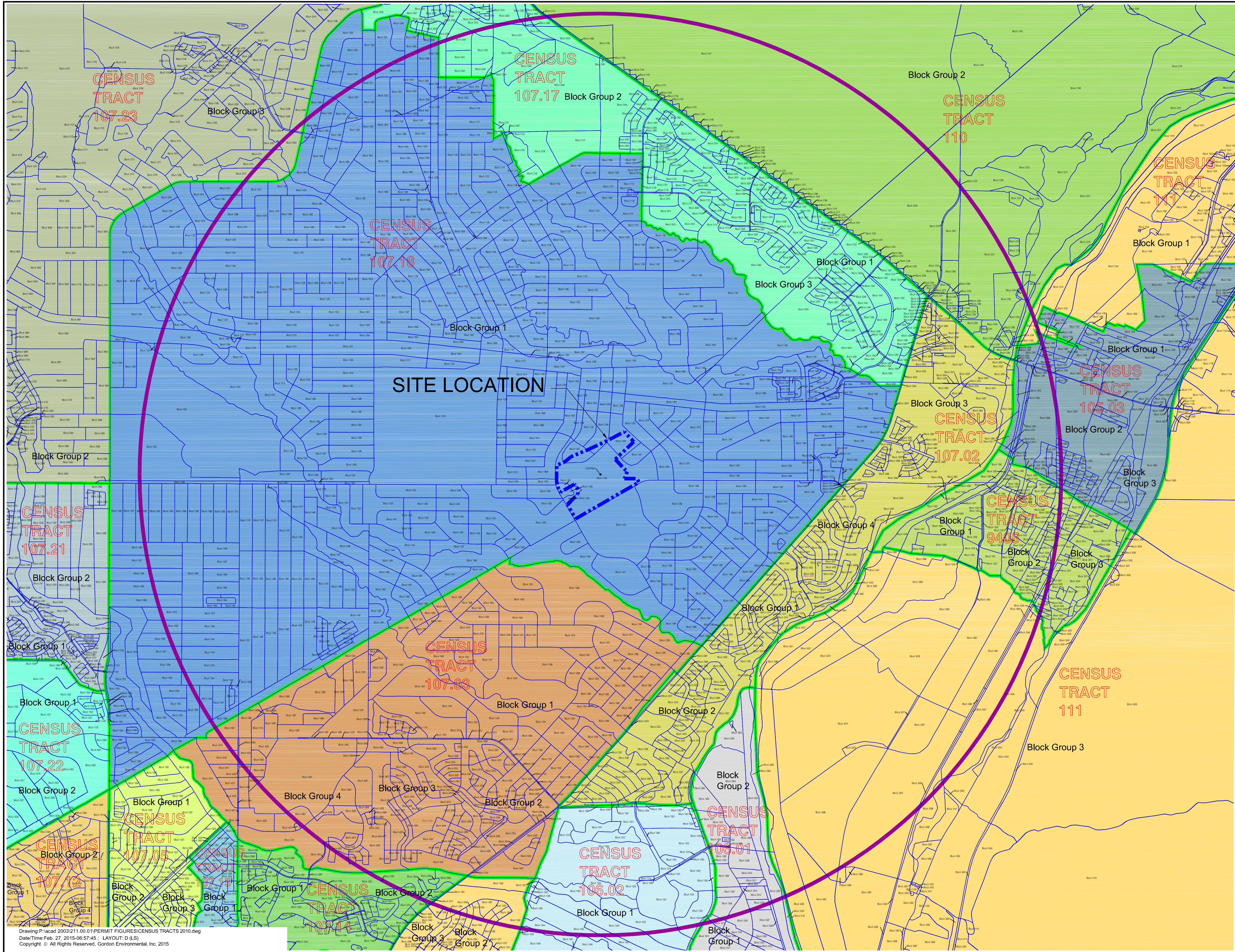
| Census Tract | Block Group | Block | Total Population |
|--|-------------|-------|------------------|
| 10703 | 2 | 2032 | 43 |
| 10703 | 2 | 2033 | 50 |
| 10703 | 2 | 2034 | 71 |
| 10703 | 2 | 2035 | 53 |
| 10703 | 2 | 2036 | 71 |
| 10703 | 2 | 2037 | 60 |
| 10703 | 2 | 2038 | 0 |
| 10703 | 3 | 3000 | 0 |
| 10703 | 3 | 3001 | 38 |
| 10703 | 3 | 3004 | 213 |
| 10703 | 3 | 3005 | 28 |
| 10703 | 3 | 3006 | 0 |
| 10703 | 3 | 3007 | 95 |
| 10703 | 3 | 3008 | 0 |
| 10703 | 3 | 3009 | 118 |
| 10703 | 3 | 3010 | 75 |
| 10703 | 3 | 3011 | 0 |
| 10703 | 3 | 3012 | 9 |
| 10703 | 3 | 3013 | 105 |
| 10703 | 3 | 3014 | 97 |
| 10703 | 3 | 3015 | 31 |
| 10703 | 3 | 3016 | 54 |
| 10703 | 3 | 3017 | 73 |
| 10703 | 3 | 3018 | 63 |
| 10703 | 3 | 3019 | 23 |
| 10703 | 3 | 3020 | 65 |
| 10703 | 3 | 3021 | 34 |
| 10703 | 4 | 4029 | 0 |
| 10703 | 4 | 4031 | 112 |
| 10703 | 4 | 4037 | 46 |
| 10703 | 4 | 4040 | 0 |
| 10703 | 4 | 4043 | 88 |
| 10703 | 4 | 4044 | 55 |
| 10703 | 4 | 4045 | 151 |
| 10703 | 4 | 4046 | 39 |
| 10703 | 4 | 4047 | 53 |
| 10703 | 4 | 4048 | 72 |
| 10703 | 4 | 4049 | 73 |
| 10703 | 4 | 4050 | 90 |
| 10703 | 4 | 4051 | 47 |
| 10703 | 4 | 4053 | 145 |
| 10703 | 4 | 4054 | 34 |
| 10703 | 4 | 4057 | 70 |
| Total Population - One Square Mile Area | | | 4,403 |

Source: U.S. Census Bureau, Census 2010, Summary File 1.

**VULNERABLE AREA ASSESSMENT
SANDOVAL COUNTY LANDFILL
RIO RANCHO, NEW MEXICO**

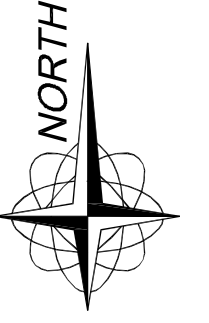
**ATTACHMENT A
CENSUS MAPS (24 X 36-INCHES)**

- A.1 CENSUS MAP 2010
- A.2 CENSUS MAP 2010: AERIAL PHOTOGRAPH




- LEGEND**
- SITE BOUNDARY
 - 4 MILE RADIUS FROM CENTROID
 - CENSUS TRACTS
 - CENSUS BLOCK GROUPS
 - CENSUS BLOCKS

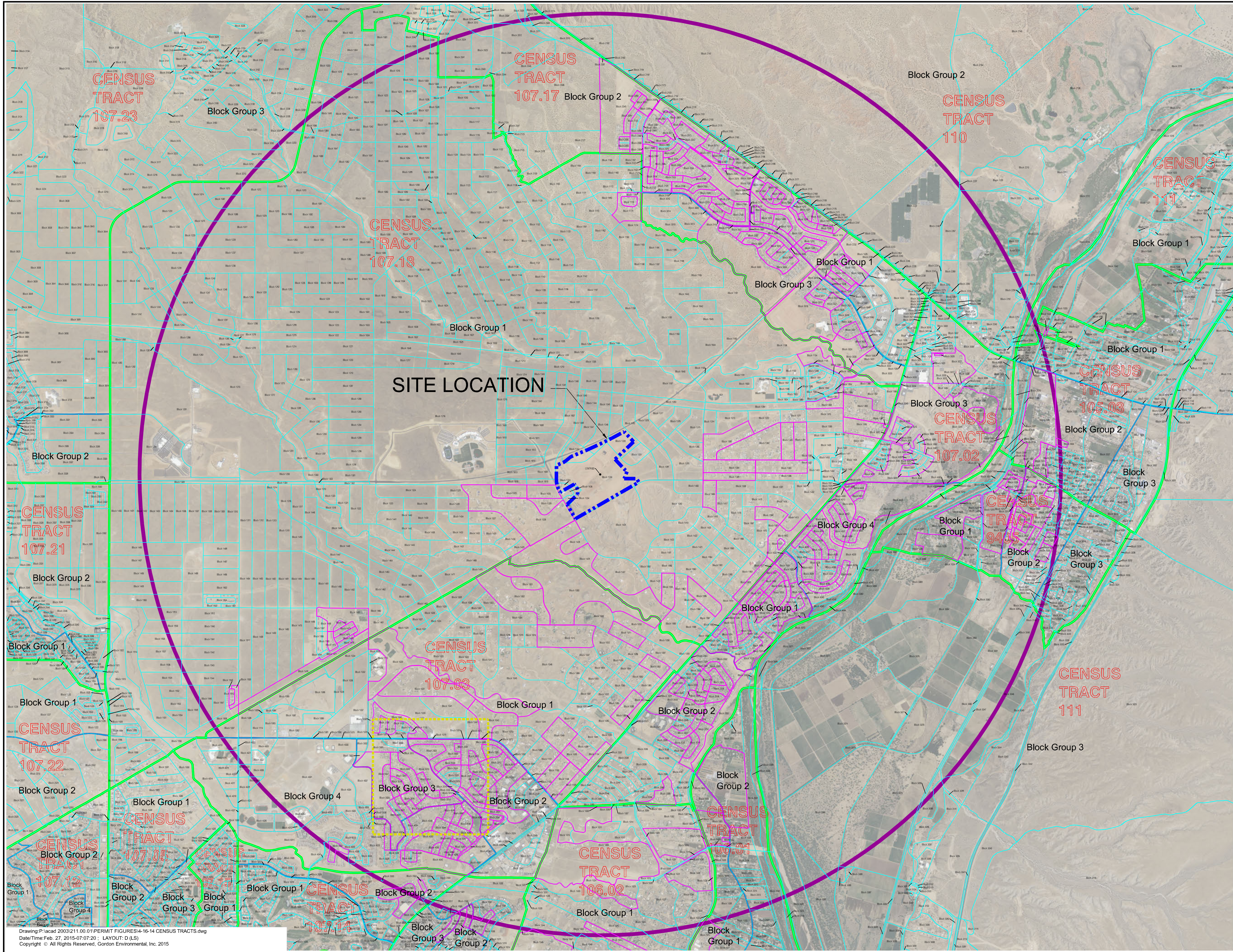
NOTES:
1. CENSUS DATA REFERENCE:
U.S. Department of Commerce, U.S. Census Bureau, Geography Division, 2010, TIGER/Line Shapefile, 2010, 2010 county, Sandoval County, NM, 2010 Census Block County-based 2010/c/addition vector digital data
http://www2.census.gov/geo/tiger/TIGER2010/TABBLOCK10/U_2010_35043_tblock10.zip
2. APPROXIMATE GEOGRAPHIC COORDINATES OF THE CENTER OF THE SITE:
35.3092N,106.6196W



CENSUS MAP 2010

SANDOVAL COUNTY LANDFILL
RIO RANCHO, NEW MEXICO

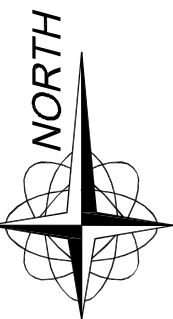
| | | |
|--|-----------------------------|---|
|  Gordon Environmental, Inc. Consulting Engineers | | 213 S. Camino del Pueblo Bernillo, New Mexico, USA Phone: 505-867-6990 Fax: 505-867-6991 |
| DATE: 02/24/2015 | CAD: CENSUS TRACTS 2010.dwg | PROJECT #: 211.00.01 |
| DRAWN BY: DMI | REVIEWED BY: DRT | ATTACHMENT A.1 |
| APPROVED BY: IKG | ge@gordonenvironmental.com | |



LEGEND

- SITE BOUNDARY
- 4 MILE RADIUS FROM CENTROID
- CENSUS TRACTS
- CENSUS BLOCK GROUPS
- CENSUS BLOCKS
- ONE SQUARE MILE AREA
- POPULATION ≥ 50 PEOPLE FOR BLOCKS WITHIN OR OVERLAPPING 4-MILE RADIUS / BLOCK NUMBER

- NOTES:
- CENSUS DATA REFERENCE:
U.S. Department of Commerce, U.S. Census Bureau, Geography Division, 2010, TIGER/Line Shapefile, 2010, 2010 county, Sandoval County, NM, 2010 Census Block County-based 2010</edition vector digital data
http://www2.census.gov/geo/tiger/TIGER2010/TLBLBLOCK10/1_2010_35043_tblock10.zip
 - APPROXIMATE GEODATIC COORDINATES OF THE CENTER OF THE SITE:
35.3092°N, 106.6198°W
 - AERIAL PHOTOGRAPHY REFERENCE: NAIP 2011 COLOR AERIAL MOSAIC OF SANDOVAL COUNTY.



0 2000' 4000'

CENSUS MAP 2010:
AERIAL PHOTOGRAPH

SANDOVAL COUNTY LANDFILL
RIO RANCHO, NEW MEXICO

Gordon Environmental, Inc.
Consulting Engineers
213 S. Camino del Pueblo
Bernalillo, New Mexico, USA
Phone: 505-867-6990
Fax: 505-867-6991

| | | |
|------------------|----------------------------|----------------------|
| DATE: 02/24/2015 | CAD: CENSUS TRACTS.dwg | PROJECT #: 211.00.01 |
| DRAWN BY: DMI | REVIEWED BY: DRT | ATTACHMENT A.2 |
| APPROVED BY: IKG | ge@gordonenvironmental.com | |

**VULNERABLE AREA ASSESSMENT
SANDOVAL COUNTY LANDFILL
RIO RANCHO, NEW MEXICO**

**ATTACHMENT B
HHS POVERTY GUIDELINES (2000, 2012)**



THE 2000 HHS POVERTY GUIDELINES

One Version of the [U.S.] Federal Poverty Measure

[[Latest Poverty Guidelines](#)]

[[Prior Poverty Guidelines and Federal Register References Since 1982](#)]

[[Frequently Asked Questions \(FAQs\)](#)]

[[Further Resources on Poverty Measurement, Poverty Lines, and Their History](#)]

[[Computations for the 2000 Poverty Guidelines](#)]

There are two slightly different versions of the federal poverty measure:

- The poverty thresholds, and
- The poverty guidelines.

The **poverty thresholds** are the original version of the federal poverty measure. They are updated each year by the **Census Bureau** (although they were [originally developed by Mollie Orshansky](#) of the Social Security Administration). The thresholds are used mainly for **statistical** purposes — for instance, preparing estimates of the number of Americans in poverty each year. (In other words, all official poverty population figures are calculated using the poverty thresholds, not the guidelines.) [Poverty thresholds since 1973 \(and for selected earlier years\)](#) and [weighted average poverty thresholds since 1959](#) are available on the Census Bureau's Web site. For an example of how the Census Bureau applies the thresholds to a family's income to determine its poverty status, see "[How the Census Bureau Measures Poverty](#)" on the Census Bureau's web site.

The **poverty guidelines** are the other version of the federal poverty measure. They are issued each year in the *Federal Register* by the **Department of Health and Human Services (HHS)**. The guidelines are a simplification of the poverty thresholds for use for **administrative** purposes — for instance, determining financial eligibility for certain federal programs. (The full text of the *Federal Register* notice with the 2000 poverty guidelines is [available here](#).)

The poverty guidelines are sometimes loosely referred to as the "federal poverty level" (FPL), but that phrase is ambiguous and should be avoided, especially in situations (e.g., legislative or administrative) where precision is important.

Key differences between poverty thresholds and poverty guidelines are outlined in a table under [Frequently Asked Questions](#) (FAQs). See also the [discussion of this topic](#) on the Institute for Research on Poverty's web site.

NOTE: The poverty guideline figures below are NOT the figures the Census Bureau uses to calculate the number of poor persons.
The figures that the Census Bureau uses are the [poverty thresholds](#).

2000 HHS Poverty Guidelines

| Size of Family Unit | 48 Contiguous States and D.C. | Alaska | Hawaii |
|---------------------------------|-------------------------------|----------|----------|
| 1 | \$8,350 | \$10,430 | \$ 9,590 |
| 2 | 11,250 | 14,060 | 12,930 |
| 3 | 14,150 | 17,690 | 16,270 |
| 4 | 17,050 | 21,320 | 19,610 |
| 5 | 19,950 | 24,950 | 22,950 |
| 6 | 22,850 | 28,580 | 26,290 |
| 7 | 25,750 | 32,210 | 29,630 |
| 8 | 28,650 | 35,840 | 32,970 |
| For each additional person, add | 2,900 | 3,630 | 3,340 |

SOURCE: Federal Register, Vol. 65, No. 31, February 15, 2000, pp. 7555-7557.

The separate poverty guidelines for Alaska and Hawaii reflect Office of Economic Opportunity administrative practice beginning in the 1966-1970 period. Note that the poverty thresholds — the original version of the poverty measure — have never had separate figures for Alaska and Hawaii.

The poverty guidelines apply to both aged and non-aged units. The guidelines have never had an aged/non-aged distinction; only the Census Bureau (statistical) poverty thresholds have separate figures for aged and non-aged one-person and two-person units.

Programs using the guidelines (or percentage multiples of the guidelines — for instance, 125 percent or 185 percent of the guidelines) in determining eligibility include Head Start, the Food Stamp Program, the National School Lunch Program, the Low-Income Home Energy Assistance Program, and the Children's Health Insurance Program. Note that in general, cash public assistance programs (Temporary Assistance for Needy Families and Supplemental Security Income) do NOT use the poverty guidelines in determining eligibility. The Earned Income Tax Credit program also does NOT use the poverty guidelines to determine eligibility. For a more detailed list of programs that do and don't use the guidelines, see the [Frequently Asked Questions](#) (FAQs).

The poverty guidelines (unlike the poverty thresholds) are designated by the year in which they are issued. For instance, the guidelines issued in February 2000 are designated the 2000 poverty guidelines. However, the 2000 HHS poverty guidelines only reflect price changes through calendar year 1999; accordingly, they are approximately equal to the Census Bureau poverty thresholds for calendar year 1999. (The 1999 thresholds are expected to be issued in final form in September or October 2000; a preliminary version of the 1999 thresholds is now available from the Census Bureau.)

The [computations for the 2000 poverty guidelines](#) are available.

Go to [Further Resources](#) on Poverty Measurement, Poverty Lines, and Their History

Go to [Frequently Asked Questions](#) (FAQs).

Return to the main [Poverty Guidelines, Research, and Measurement](#) page.

Last updated: 01/29/10

2012 HHS Poverty Guidelines

One Version of the [U.S.] Federal Poverty Measure

[[Federal Register Notice, January 26, 2012](#) — Full text]
[[Prior Poverty Guidelines and Federal Register References Since 1982](#)]
[[Frequently Asked Questions \(FAQs\)](#)]
[[Further Resources on Poverty Measurement, Poverty Lines, and Their History](#)]
[[Computations for the 2012 Poverty Guidelines](#)]

There are two slightly different versions of the federal poverty measure:

- The [poverty thresholds](#), and
- The [poverty guidelines](#).

The **poverty thresholds** are the original version of the federal poverty measure. They are updated each year by the **Census Bureau** (although they were [originally developed by Mollie Orshansky](#) of the Social Security Administration). The thresholds are used mainly for **statistical** purposes — for instance, preparing estimates of the number of Americans in poverty each year. (In other words, all official poverty population figures are calculated using the poverty thresholds, not the guidelines.) [Poverty thresholds since 1973 \(and for selected earlier years\)](#) and [weighted average poverty thresholds since 1959](#) are available on the Census Bureau's Web site. For an example of how the Census Bureau applies the thresholds to a family's income to determine its poverty status, see "[How the Census Bureau Measures Poverty](#)," on the Census Bureau's web site.

The **poverty guidelines** are the other version of the federal poverty measure. They are issued each year in the *Federal Register* by the **Department of Health and Human Services (HHS)**. The guidelines are a simplification of the poverty thresholds for use for **administrative** purposes — for instance, determining financial eligibility for certain federal programs. The [Federal Register notice of the 2012 poverty guidelines](#) is available.

The poverty guidelines are sometimes loosely referred to as the "federal poverty level" (FPL), but that phrase is ambiguous and should be avoided, especially in situations (e.g., legislative or administrative) where precision is important.

Key differences between poverty thresholds and poverty guidelines are outlined in a table under [Frequently Asked Questions](#) (FAQs). See also the [discussion of this topic](#) on the Institute for Research on Poverty's web site.

NOTE: The poverty guideline figures below are NOT the figures the Census Bureau uses to calculate the number of poor persons. The figures that the Census Bureau uses are the [poverty thresholds](#).

2012 Poverty Guidelines for the 48 Contiguous States and the District of Columbia

| Persons in family/household | Poverty guideline |
|--|-------------------|
| 1 | \$11,170 |
| 2 | 15,130 |
| 3 | 19,090 |
| 4 | 23,050 |
| 5 | 27,010 |
| 6 | 30,970 |
| 7 | 34,930 |
| 8 | 38,890 |
| For families/households with more than 8 persons, add \$3,960 for each additional person. | |

2012 Poverty Guidelines for Alaska

| Persons in family/household | Poverty guideline |
|--|-------------------|
| 1 | \$13,970 |
| 2 | 18,920 |
| 3 | 23,870 |
| 4 | 28,820 |
| 5 | 33,770 |
| 6 | 38,720 |
| 7 | 43,670 |
| 8 | 48,620 |
| For families/households with more than 8 persons, add \$4,950 for each additional person. | |

2012 Poverty Guidelines for Hawaii

| Persons in family/household | Poverty guideline |
|--|-------------------|
| 1 | \$12,860 |
| 2 | 17,410 |
| 3 | 21,960 |
| 4 | 26,510 |
| 5 | 31,060 |
| 6 | 35,610 |
| 7 | 40,160 |
| 8 | 44,710 |
| For families/households with more than 8 persons, add \$4,550 for each additional person. | |

SOURCE: *Federal Register*, Vol. 77, No. 17, January 26, 2012, pp. 4034-4035

The separate poverty guidelines for Alaska and Hawaii reflect Office of Economic Opportunity administrative practice beginning in the 1966-1970 period. Note that the poverty thresholds — the original version of the poverty measure — have never had separate figures for Alaska and Hawaii. The poverty guidelines are not defined for Puerto Rico, the U.S. Virgin Islands, American Samoa, Guam, the Republic of the Marshall Islands, the Federated States of Micronesia, the Commonwealth of the Northern Mariana Islands, and Palau. In cases in which a Federal program using the poverty guidelines serves any of those jurisdictions, the Federal office which administers the program is responsible for deciding whether to use the contiguous-states-and-D.C. guidelines for those jurisdictions or to follow some other procedure.

The poverty guidelines apply to both aged and non-aged units. The guidelines have never had an aged/non-aged distinction; only the Census Bureau (statistical) poverty thresholds have separate figures for aged and non-aged one-person and two-person units.

Programs using the guidelines (or percentage multiples of the guidelines — for instance, 125 percent or 185 percent of the guidelines) in determining eligibility include Head Start, the Food Stamp Program, the National School Lunch Program, the Low-Income Home Energy Assistance Program, and the Children's Health Insurance Program. Note that in general, cash public assistance programs (Temporary Assistance for Needy Families and Supplemental Security Income) do NOT use the poverty guidelines in determining eligibility. The Earned Income Tax Credit program also does NOT use the poverty guidelines to determine eligibility. For a more detailed list of programs that do and don't use the guidelines, see the [Frequently Asked Questions](#) (FAQs).

The poverty guidelines (unlike the poverty thresholds) are designated by the year in which they are issued. For instance, the guidelines issued in January 2012 are designated the 2012 poverty guidelines. However, the 2012 HHS poverty guidelines only reflect price changes through calendar year 2011; accordingly, they are approximately equal to the Census Bureau poverty thresholds for calendar year 2011. (The 2011 thresholds are expected to be issued in final form in September 2012; a preliminary version of the 2011 thresholds is now available from the Census Bureau.)

The [computations for the 2012 poverty guidelines](#) are available.

The poverty guidelines may be formally referenced as "the poverty guidelines updated periodically in the *Federal Register* by the U.S. Department of Health and Human Services under the authority of 42 U.S.C. 9902(2)."

Go to [Further Resources on Poverty Measurement, Poverty Lines, and Their History](#)

Go to [Frequently Asked Questions \(FAQs\)](#)

Return to the main [Poverty Guidelines, Research, and Measurement](#) page.

Last updated: 02/09/12

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[The White House](#) | [USA.gov](#) | [Flu.gov](#)

U.S. Department of Health & Human Services – 200 Independence Avenue, S.W. – Washington, D.C. 20201

**APPLICATION FOR PERMIT RENEWAL AND MODIFICATION
SANDOVAL COUNTY LANDFILL**

**VOLUME IV: SITING AND LAND USE
SECTION 2: LAND USE**

**ATTACHMENT IV.2.C
SECRETARY'S VAA CONCURRENCE LETTER
(PENDING)**



SUSANA MARTINEZ
Governor

JOHN A. SANCHEZ
Lt. Governor

**NEW MEXICO
ENVIRONMENT DEPARTMENT**

1190 Saint Francis Drive, Room N2150

P.O. Box 5469

Santa Fe, New Mexico 87502-5469

Phone (505) 827-0197 Fax (505) 827-2902

www.env.nm.gov



RYAN FLYNN
Secretary

BUTCH TONGATE
Deputy Secretary

MEMORANDUM

DATE: August 27, 2015

TO: Ryan Flynn, Cabinet Secretary

FROM: Auralie Ashley-Marx, Chief Solid Waste Bureau *AAAM*

THROUGH: Kathryn Roberts, RPD Division Director *KR*
Butch Tongate, Deputy Cabinet Secretary *BT*

SUBJECT: Solid Waste Bureau Recommendation Regarding Vulnerable Area Determination
Sandoval County Landfill, Permit Renewal and Modification, Rio Rancho,
New Mexico

I have completed a review of the Vulnerable Area Assessment prepared by Gordon Environmental, Inc., for the above referenced facility's permit action (attached). The New Mexico Solid Waste Rules 20.9 Parts 2–10 NMAC (Rules) §20.9.3.8.D requires that *"any person seeking...a permit modification of a landfill resulting in a lateral or vertical expansion...shall first submit to the secretary the information that is necessary for the secretary to determine if the proposed site is in a vulnerable area."*

Because the Sandoval County Public Works Department has applied for facility modification consisting of a lateral and vertical expansion of the above referenced existing landfill, a determination as to whether the facility site is located within a vulnerable area is required of the Cabinet Secretary. As specified by the Rules, the facility must meet *all three criteria* to be considered "in a vulnerable area."

The definition of a "vulnerable area" means an area within a four mile radius from the geographic center of a facility or proposed facility, and:

- a) Has a percentage of economically stressed households greater than the state percentage based on the most recent actual census bureau data within any square mile within the four mile radius surrounding the facility or proposed facility; and
- b) Where the New Mexico portion has a population of 50 people or more within any square mile within the four mile radius; and
- c) Has within it three (3) or more regulated facilities not including the applicant's facility.

The Sandoval County landfill is an existing solid waste management facility that is located within the Rio Rancho city limits, and it is bordered by vacant land and some low density suburban properties. The site encompasses approximately 178 acres of land at: 2708 Iris Road NE, Rio Rancho NM. This facility is zoned "Special-use/Non-residential" by the City. The facility design includes 50 foot setbacks from the disposal area to a property boundary and adjacent properties. Minimum setback of 500 feet from a permanent residence, school, hospital, institution or church is met as prescribed in 20.9.4.9(A)(9) NMAC.

My review of the vulnerable area assessment for the Sandoval County Landfill, received by the Bureau on April 17, 2015 finds that the report is well researched, compressive, and prepared correctly with excellent supporting map attachments A-1 and A-2. I concur with the findings of this Vulnerable Area Assessment Report that two of the three criteria for a vulnerable area have been met as summarized below:

1. **Percentage of Economically Stressed Households:** The Sandoval county Landfill site meets criterion (a).
Two sets of Federal data were evaluated and applied to this assessment, the 2010 Census and the American Community Survey, and the Health and Human Services Poverty Survey because of a change in the way 2010 Census data was collected. Census data for 2000 included the collection and reporting of economic data, Census 2010 did not include collection of household income information. Both sets of data show that the percentage of economically stressed households in three of the thirteen Census tracts partially or totally within the four mile radius may exceed the estimated New Mexico estimated economically stressed households of >40 percent as shown in Table 4 of the Assessment Report.
2. **Population of 50 people or more within any square mile within the four mile radius:** The facility meets criterion (b) as demonstrated in Tables 6, 7, and Attachment-2 in the report. My review of the Census tract data tables and the map in Attachment-2 clearly shows that population is largely concentrated in several housing developments to the east and south of the landfill. A conservative estimate of the Census Blocks which fall wholly or partially within the one-mile square area, and within the four mile-radius is 4,403 persons. Census Block 2002 of Block Group 2, Census tract 107.03 contained a population in 2010 of 223 persons.
3. **Presence of 3 regulated facilities within the four mile radius from the facility:** The facility does not meet criterion (c) because there are not three regulated facilities located within the prescribed radius. The only permitted "regulated facility" as defined in the Solid Waste Rules is the Rio Rancho Landfill which is a New Mexico permitted solid waste facility that also has a Title V Air Quality permit. By Rule 20.9.2.V.3.(c) NMAC, the applicant's facility is excluded from consideration as a regulated facility for this assessment criterion.

A "Regulated facility" is defined in 20.9.2.7.R (6) as:

- (a) a solid waste facility permitted to construct, operate, or close pursuant to the Solid Waste Act, NMSA 1978, Sections 74-9-1, et. seq. and 20.9.2 - 20.9.10 NMAC, or pursuant to the laws or regulations of a neighboring state;
- (b) a hazardous waste facility authorized to operate pursuant to interim status or permitted to construct, operate, or close pursuant to the Hazardous Waste Act, NMSA 1978, Sections 74-4-1, et. seq. and the New Mexico hazardous waste management regulations, 20.4.1 NMAC, or pursuant to the laws or regulations of a neighboring state, including all units or areas subject to corrective action requirements under the facility permit or order;
- (c) a site listed on the National Priorities List pursuant 42 U.S.C. 9605 or a federal facility required to take response or remedial action pursuant to the Comprehensive Environmental Response, Compensation, and Liability Act of 1980, as amended, 42 U.S.C. 9601, et. seq.;
- (d) a facility that has, or is required to obtain a Title V air quality permit, 42 U.S.C. 7661 et seq. and 20.7.2.70 NMAC.

Based on my review of the Vulnerable Area Assessment Report, dated March 5, 2015 and received by the Bureau on April 17, 2015, it is the finding of the Solid Waste Bureau that the Sandoval County Landfill site is not located in a vulnerable area, because the existing facility **meets two of the three** defined "vulnerable area" criteria as required in the Solid Waste Rules.

Therefore, the Bureau recommends that Secretary Flynn complete the attached determination form by checking the Approve box, and signing and dating it. The Secretary's approval of this recommended determination means that this applicant would be exempt from the requirements of 20.9.3.D (1) & (2) NMAC to hold a community meeting and from preparing a community impact assessment.

Attachments: Cabinet Secretary's Vulnerable Area Determination Form
Copy of Sandoval County Landfill Vulnerable Area Assessment



**NEW MEXICO
ENVIRONMENT DEPARTMENT**

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Sandoval County Landfill – Vulnerable Area Determination

APPROVED: ✓
DISAPPROVED: _____

for *Butch Longate*
Ryan Flynn, Cabinet Secretary, New Mexico Environment Department

Date: 9/2/15

Approved means that an appropriate demonstration has been made that this facility is not located in a “vulnerable area” per the Solid Waste Rules definition under 20.9.2.7.V (3) NMAC.

Disapproved means the facility has been found to be located in a “vulnerable area” and must comply with the requirements of 20.9.3.8. D NMAC for community involvement and completion of a community impact assessment.

