HIP - ___110____

GENERAL CORRESPONDENCE

YEAR(S): ____2008-2009____

THE SANTA FE
NEW MEXICAN
Founded 1849

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Jim Griswold
NM EMNRD OIL CONSERV
1220 S ST FRANCIS DR
SANTA FE NM 87505

ALTERNATE ACCOUNT: 56689
AD NUMBER: 00268731 ACCOUNT: 00002212
LEGAL NO: 86017 P.O. #: 52100-00000137
283 LINES 1 TIME(S) 246.40
AFFIDAVIT: 7.00
TAX: 20.11
TOTAL: 273.51

OK to Pay

AFFIDAVIT OF PUBLICATION

STATE OF NEW MEXICO
COUNTY OF SANTA FE

I, L. Paquin, being first duly sworn declare and say that I am Legal Advertising Representative of THE SANTA FE NEW MEXICAN, a daily newspaper published in the English language, and having a general circulation in the Counties of Santa Fe and Los Alamos, State of New Mexico and being a newspaper duly qualified to publish legal notices and advertisements under the provisions of Chapter 167 on Session Laws of 1937; that the publication # 86017 a copy of which is hereto attached was published in said newspaper 1 day(s) between 09/24/2008 and 09/24/2008 and that the notice was published in the newspaper proper and not in any supplement; the first date of publication being on the 24th day of September, 2008 and that the undersigned has personal knowledge of the matter and things set forth in this affidavit.

/S/ L. Paquin
LEGAL ADVERTISEMENT REPRESENTATIVE

Subscribed and sworn to before me on this 24th day of September, 2008

Notary Pamela Anne Beach

Commission Expires: May 31, 2011

OFFICIAL SEAL
Pamela Anne Beach
NOTARY PUBLIC
STATE OF NEW MEXICO
My Commission Expires: 5-31-11

NOTICE OF PUBLICATION

STATE OF NEW MEXICO ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT OIL CONSERVATION DIVISION

Notice is hereby given that pursuant to New Mexico Water Quality Control Commission Regulations (20.6.2.3106 NMAC), the following discharge permit application(s) has been submitted to the Director of the New Mexico Oil Conservation Division ("NMOCD") 1220 S. Saint Francis Drive, Santa Fe, New Mexico 87505, Telephone (505) 476-3440:

(GW-147) El Paso Natural Gas Company, 3801 Atrisco Blvd NW, Albuquerque, New Mexico 87120 has submitted an application for renewal of the discharge plan for their Deming Compressor Station located in the SW/4 of the SE/4 of Section 32, Township 23 South, Range 11 West, NMPM (Luna County) - approximately 14 miles west of Deming, New Mexico. The facility will be used for the compression of pipeline quality natural gas. Materials generated and/or stored at the facility include but may not be limited to: new and used lubricating oils, coolant water, filters, paints, detergents, and cleaning supplies. The aquifer beneath this facility lies at an approximate depth of 200 feet below ground surface with a concentration of total dissolved solids less than 400 milligrams per liter. The discharge plan addresses how process materials and waste will be properly handled, stored, and disposed of, including how spills, leaks, and other accidental discharges to the surface will be managed in order to protect

(HIP-110) Public Service Company of New Mexico (PNM), Alvarado Square, Albuquerque, New Mexico 87158-2104, has submitted an application for an individual Hydrostatic Test Discharge Permit for testing of their Santa Fe Replacement Pipeline, a newly constructed natural gas pipeline. Approximately 8 miles of new 20-inch pipe will be hydrostatically tested using water from the City of Santa Fe. PNM will remove the testing wastewater from the pipeline within Section 23 of Township 17 North, Range 8 West, NMPM (Santa Fe County). This location can be found by taking Caja Del Rio Road north past the Marty Sanchez Golf Course to a location 0.25 miles past the intersection with Paseo de Estrellas Road. There is an unmarked access road to the east that leads to the collection location 700 feet from Caja Del Rio Road. Approximately 399,000 gallons of wastewater will be generated from the hydrostatic test and tested prior to disposal. Due to the new pipe and water to be used during the testing, the discharge water is expected to meet Water Quality Control Commission (WQCC) water quality standards and will be trucked to the Marty Sanchez Golf Course and discharged into a lined irrigation pond for reuse. If WQCC water quality standards are not met the test wastewater will be hauled to an approved disposal location. Groundwater most likely to be affected by an accidental discharge is at a depth of approximately 250 to 400 feet below ground surface with a total dissolved solids, concentration of approximately 172 to 264 mg/l. The plan consists of a description of the method and location for retention, and testing of water and solids, including how spills, leaks, and other accidental discharges to the surface will be managed in order to protect fresh water.

The NMOCD has determined that the application is administratively complete and has prepared a draft permit. The NMOCD will accept comments and statements of interest regarding this application and will create a facility-specific mailing list for persons who wish to receive future notices. Persons interested in obtaining further information, submitting comments or requesting to be on a facility-specific mailing list for future notices may contact the Environmental Bureau Chief of the Oil Conservation Division at the address given above. The administrative completeness determination and draft permit may be viewed at the above address between 8:00 a.m. and 4:00 p.m. Monday through Friday or may also be viewed at the NMOCD web site http://www.emnrd.state.nm.us/ocd/. Persons interested in obtaining a copy of the application and draft permit may contact the NMOCD at the address given above. Prior to ruling on any proposed discharge permit or major modification, the Director shall allow a period of at least thirty (30) days after the date of publication of this notice, during which interested persons may submit comments or request that NMOCD hold a public hearing. Requests for a public hearing shall set forth the reasons why a hearing should be held. A hearing will be held if the Director determines that there is significant public interest.

If no public hearing is held, the Director will approve or disapprove the proposed permit based on information available including all comments received. If a public hearing is held, the director will approve or disapprove the proposed permit based on information in the permit application and information submitted at the hearing.

Para obtener mas información sobre esta solicitud en espan ol, sírvase comunicarse por favor: New Mexico Energy, Minerals and Natural Resources Department (Depto. Del Energia, Minerals y Recursos Naturales de Nuevo México), Oil Conservation Division (Depto. Conservacio n Del Petróleo), 1220 South St. Francis Drive, Santa Fe, New México (Contacto: Dorothy Phillips, 505-476-3461).

GIVEN under the Seal of New Mexico Oil Conservation Commission at Santa Fe, New Mexico, on this 18th day of September 2008.

STATE OF NEW MEXICO
OIL CONSERVATION DIVISION

S E A L
Mark Fesmire,
Director
Legal No. 86017
Pub. Sept. 24, 2008

New Mexico Energy, Minerals and Natural Resources Department

Bill Richardson
Governor

Joanna Prukop
Cabinet Secretary
Reese Fullerton
Deputy Cabinet Secretary

Mark Fesmire
Division Director
Oil Conservation Division

September 18, 2008

Ms. Marcelle Fiedler
PNM
Alvarado Square MS2104
Albuquerque, New Mexico 87158-2104

Re: Hydrostatic Test Discharge Permit HIP-110
Public Service Company of New Mexico
PNM Santa Fe Replacement Line
Section 23, Township 17 North, Range 8 East, NMPM,
Santa Fe County, New Mexico

Dear Ms. Fiedler:

The New Mexico Oil Conservation Division (OCD) has received Public Service Company of New Mexico's (PNM) request, dated April 7, 2008, for authorization to discharge approximately 399,000 gallons of wastewater generated from a hydrostatic test of approximately 8 miles of a new 20-inch natural gas transmission pipeline, approximately 6 miles east of Santa Fe, New Mexico. The proposed discharge/collection site is approximately 700 feet off of Caja Del Rio Road located within Section 23, Township 17 North, Range 8 East, NMPM, Santa Fe County, New Mexico. The submittal provided the required information in order to deem the application "administratively" complete. The OCD approves the Santa Fe New Mexican as the newspaper of general circulation for the published notice and the discharge/collection location and the Marty Sanchez Golf Course in Santa Fe, New Mexico as proposed posting locations.

Therefore, the July 2006 New Mexico Water Quality Control Commission (WQCC) regulations notice requirements (20.6.2.3108 NMAC) must be satisfied and demonstrated to the OCD. The hydrostatic test event shall not be initiated until the OCD notice period passes, the permit is issued, and the additional permit fee is paid.

If there are any questions regarding this matter, please do not hesitate to contact me at (505) 476-3487 or brad.a.jones@state.nm.us.

Sincerely,

Brad A. Jones
Environmental Engineer

BAJ/baj
cc: OCD District IV Office, Santa Fe

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

April 7, 2008

Brad Jones
State of New Mexico - Oil Conservation Division
1220 South St. Francis Drive
Santa Fe, NM 87505

RE: PNM Santa Fe Replacement Pressure Test
Notice of Intent to Hydrostatically Test and Discharge

Dear Mr. Jones,

Public Service Company of New Mexico (PNM) is submitting their notice of intent to hydrostatically test and discharge water from the Santa Fe Replacement Gas Line, Santa Fe County, New Mexico. Following the Oil Conservation Division Guidelines for Hydrostatic Test Dewatering, PNM has provided the following information.

Summary of Activities
PNM will hydrostatically test the Santa Fe Replacement Line, a newly constructed gas pipeline that will extend from Caja del Rio Road to the intersection of 599 and I-25 in Santa Fe County, New Mexico. The 8 miles of 20-inch pipe will be hydrostatically tested in two sections using approximately 399,000 gallons of water from a Santa Fe municipal source. The entire pipeline is new pipe.

Name and Address of Discharger
PNM
Michael Prescott
Alvarado Square MS2104
Albuquerque, NM 87158

Location and Legal Description of Discharge

The test water will be collected at Los Alamos Block Valve, within Section 23 T17N R08E. This location can be found by taking Caja Del Rio Road north past the Marty Sanchez golf course to a location ¼ mile past the intersection with Paseo de Estrellas Rd. There is an unmarked access road to the east that leads to the block valve 700 feet from Caja Del Rio Road. If hydrostatic test water meets WQCC standards, and with approval from OCD, the water will be trucked to Marty Sanchez golf course for release into a lined irrigation pond.

Maps

The following maps are included with this permit application.

- Overview of project area (topo map)
- Discharge site (topo and aerial map)
- Floodplain Map
- Geology Map
- Soils Map
- Land Ownership Map

Demonstration of Compliance with Siting Criteria

See attached Discharge Site Map and Certification of Compliance with Siting Criteria completed by a PNM Environmental Scientist.

Compliance with OCD's siting criteria are met because:

1. Hydrostatic test water will not be discharged within 200 feet of any watercourse (see Discharge site map)
2. There are no wells in the vicinity (personal inspection) of the discharge site and the discharge area is not within the 100 year floodplain (see Santa Fe flood plain maps)
3. There are no wetlands within 500 ft (see Discharge site map)
4. There are no mines within section 23 T17N R8E (see NMAMLP email)
5. There are no residences, schools, hospitals, or churches within 500 feet (see Discharge site map)

Description of Activities

The Santa Fe Replacement Line will be hydrostatically tested in two sections using approximately 399,000 gallons of water from a Santa Fe municipal source. Each section will be tested for a minimum of 8 hours. Hydrostatic test water will remain in the pipeline while water is being analyzed to determine if it meets WQCC standards. If the water meets WQCC standards and with approval from OCD, test water will be pumped from the pipeline into a single intermediate holding tank at the discharge location to serve as a transfer station for filling the tanker truck. The test water will then be trucked to the Marty Sanchez Golf Course for discharge into the irrigation pond.

Method & Location for Collection and Retention of Fluids

Hydrostatic test water will be retained within the pipeline while water quality tests are pending. Once results are obtained and approved by OCD, water will be transferred from the pipe into an intermediate staging tank via a directly connected hose. The water will then be transferred from the staging tank to a tanker truck for transport to the Marty Sanchez Golf Course irrigation pond where it will be disposed of.

BMPs to Contain Discharge On Site & Control Erosion

Hoses will be securely connected when transferring water. An intermediate staging tank will be used to buffer the transfer of water from the pipeline into the tanker truck to eliminate unintentional discharge at the transfer area.

Request for Alternate Treatment/Disposal

If the hydrostatic test water does not meet conditions for discharge to the Marty Sanchez irrigation ponds, PNM has made arrangements with Key Energy Services for Class I injection well disposal, if the test water meets Key Energy Services disposal criteria.

Hydrostatic Test Water Sampling Plan

Hydrostatic test water samples will be collected directly from the pipeline. The sampling point will be at the midpoint of the pipeline where the first and second test sections meet. The test water will be analyzed for the constituents identified in NMAC 20.6.2.3103 (A)(B(C). Upon receipt of the analytical results, PNM will submit them to the OCD for approval to discharge.

Expected Quality & Volume of Discharge

The expected volume of the hydrostatic test discharge is approximately 399,000 gallons. Given the unused condition of the pipeline, water quality is expected to be comparable to the quality of the inlet municipal water and will be analyzed to determine if it meets WQCC standards.

Geological Characteristics of Subsurface at Discharge Site

According to the NM Bureau of Mines and Mineral resources geologic map, the project is within the Rio Grande Basin in the Santa Fe Group. Soils in the area include Predawn Loam, on 1 to 4 percent slopes, Tanoan-Encantado complex, on 5 to 15 percent slopes, an Buckhorse-Altazano complex, on 2 to 8 percent slopes, non-flooded and flooded. Predawn loam consists of moderately deep, well-drained soils derived from granite, gneiss, schist, loess, and volcanic ash parent material. The Tanoan-encantado complex consists of very deep, somewhat excessively drained alluvium derived from granite, gneiss, schist, and loess over residuum weathered from basaltic tuff or granitic sandstone. The Buckhorse-Altazano complex consists of very deep, well-drained soils that formed in slope alluvium from granite, gneiss, schist, granitic sandstone, fanglomerate, and mudstone. They are on toe slopes (NRCS soils data). The NM Bureau of Mines and Mineral geologic map may be found:
http://geoinfo.nmt.edu/publications/maps/geologic/state/home.html.
Information about soils was obtained from the NRCS web soil survey website:
http://websoilsurvey.nrcs.usda.gov/app/

Depth & TDS Concentration of Ground Water Most Likely to be Affected by Discharge

According to State Engineer well records, the recorded depth to water from several wells within T17N R08E Section 23 is between 250 feet and 400 feet. Total Dissolved solids range from 172 to 264 Mg/Liter at Santa Fe City well fields, according to the 2006 city of Santa Fe Groundwater Report.

ID of Landowners at and Adjacent to Discharge Site and Collection/Retention Site

Santa Fe Parcel data identifies a total of 39 parcels located within 1/3rd mile of the discharge site. The underlying landowner at the discharge site and the owners of each of the parcels within 1/3rd mile will be notified via certified mail of the hydrostatic test and discharge. Marty Sanchez Golf course has provided written permission for the disposal of the hydrostatic test water, and will be notified prior to the test.

Closing

In the event of a release associated with project activities, PNM will comply with OCD's Release Notification and Corrective Action regulation NMAC 19.15.3.116 to remediate the spill as soon as possible.

A check for $100 is submitted with this notice.

Once OCD rules this application as administratively complete, PNM will provide notice of the permit application in the Santa Fe Observer following requirements in NMAC 20.6.2.3108. In addition, a sign will be placed at the location of the discharge and at the Marty Sanchez Golf Course in Santa Fe, New Mexico providing a synopsis of the public notice.

Thank you for your assistance. If additional information is required please notify me in writing. Please call me at (505) 241-0627 if you have any questions.

Sincerely,

Michael Prescott
Environmental Scientist
Attachment: Location maps
Cc: ESD/DCC

Certification of Compliance with Siting Criteria

I, Michael Prescott, Environmental Scientist with PNM visited the project site in the field on February 19, 2008 and verified that the discharge location, previously identified as the Los Alamos block valve, meets the following siting criteria:

- No wells within 1,000 ft
- No watercourses within 200 ft
- No wetlands within 500ft
- No permanent residence, school, hospital, institution or church within 500 ft

. My observations in the field match the enclosed maps showing where PNM plans remove hydrostatic test water from the pipeline.

Signature	Title	Date
[signature]	Environmental Scientist	4-24-08

Santa Fe Replacement

Project Overview

Discharge Location

New Transmission

0 0.5 1 2 Miles

1:50,000

PNM

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Santa Fe Replacement

Discharge Topo

Discharge Area
200 Foot Buffer
500 Foot Buffer
1000 Foot Buffer

0 250 500 1,000 Feet

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Santa Fe Replacement

Discharge Aerial

Discharge Area
200 Foot Buffer
500 Foot Buffer
1000 Foot Buffer

0 250 500 1,000 Feet

PNM

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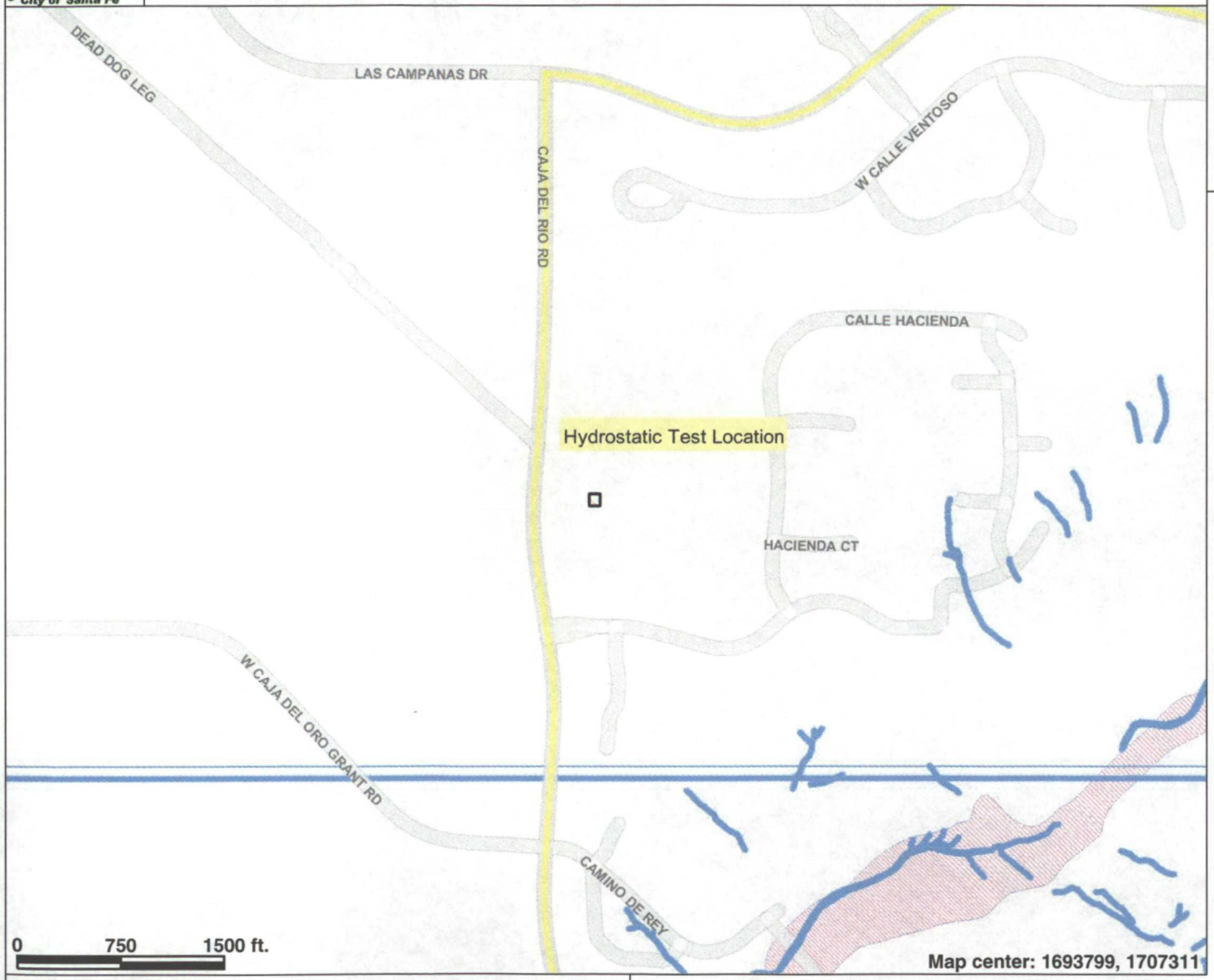
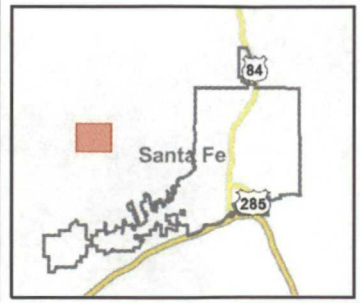
PNM SF bypass Floodpain Map





Legend

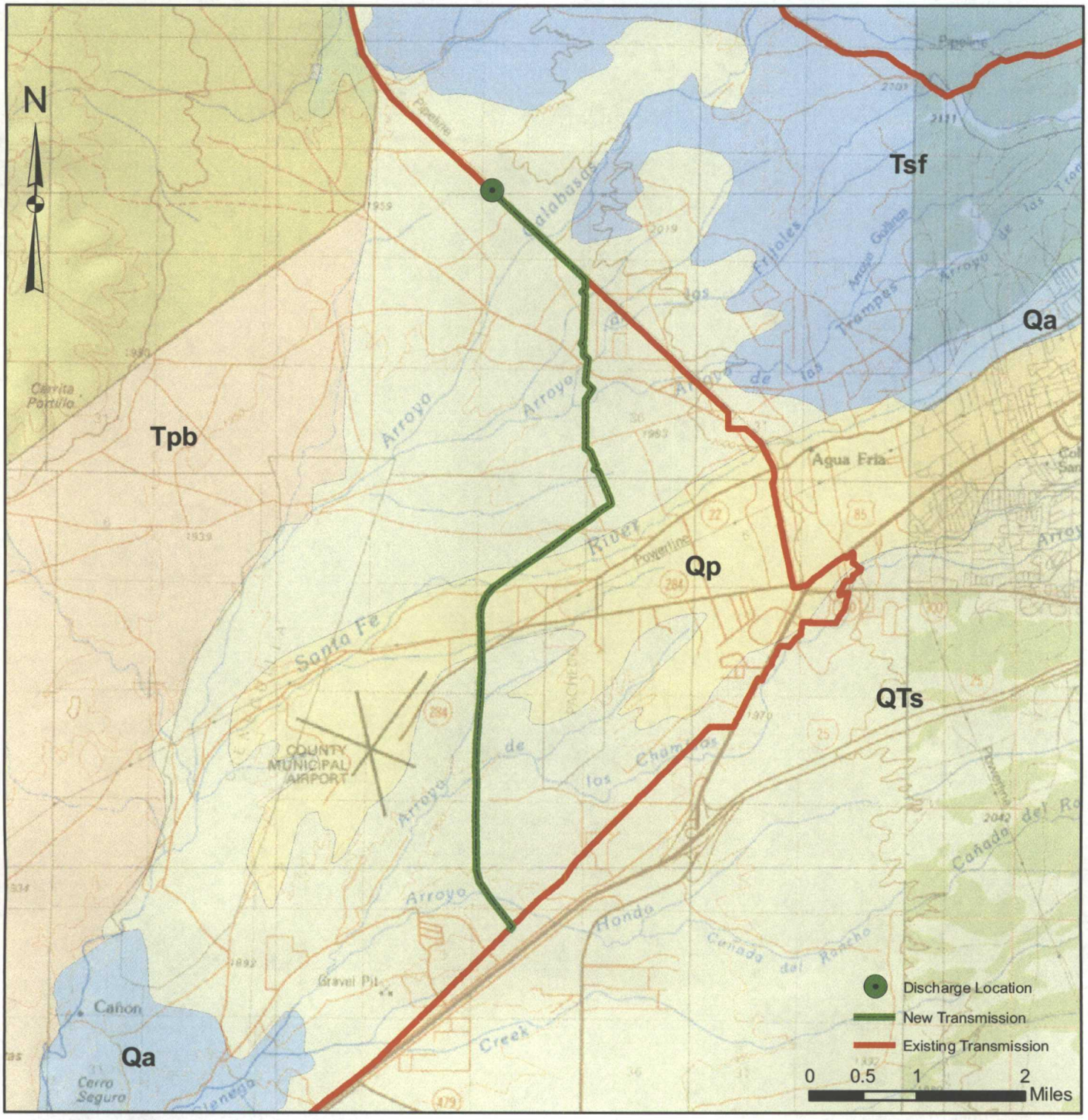
- City Limits
- Arroyos
- Hydrology
- Major Roads and Highways
- Other Roads and Streets
- Santa Fe River
- Flood Zones

N

Scale: 1:13,338

This map is a user generated static output from an Internet mapping site and is for general reference only. Data layers that appear on this map may or may not be accurate, current, or otherwise reliable. THIS MAP IS NOT TO BE USED FOR NAVIGATION.

Notes: Shows location of closest 100 year floodplain in relation to hydrostatic test area.



Santa Fe Replacement

Geology Map

Qa = Alluvium; upper and middle quarternary

Qp = Piedmont alluvial deposits; upper and middle quarternary

QTs = Upper Santa Fe Group. Includes Camp Rice, Fort Hancock, Palomas, Sierra Ladrones, Ancha, Puye, and Alamosa Formations; middle Pleistocene to uppermost Miocene.

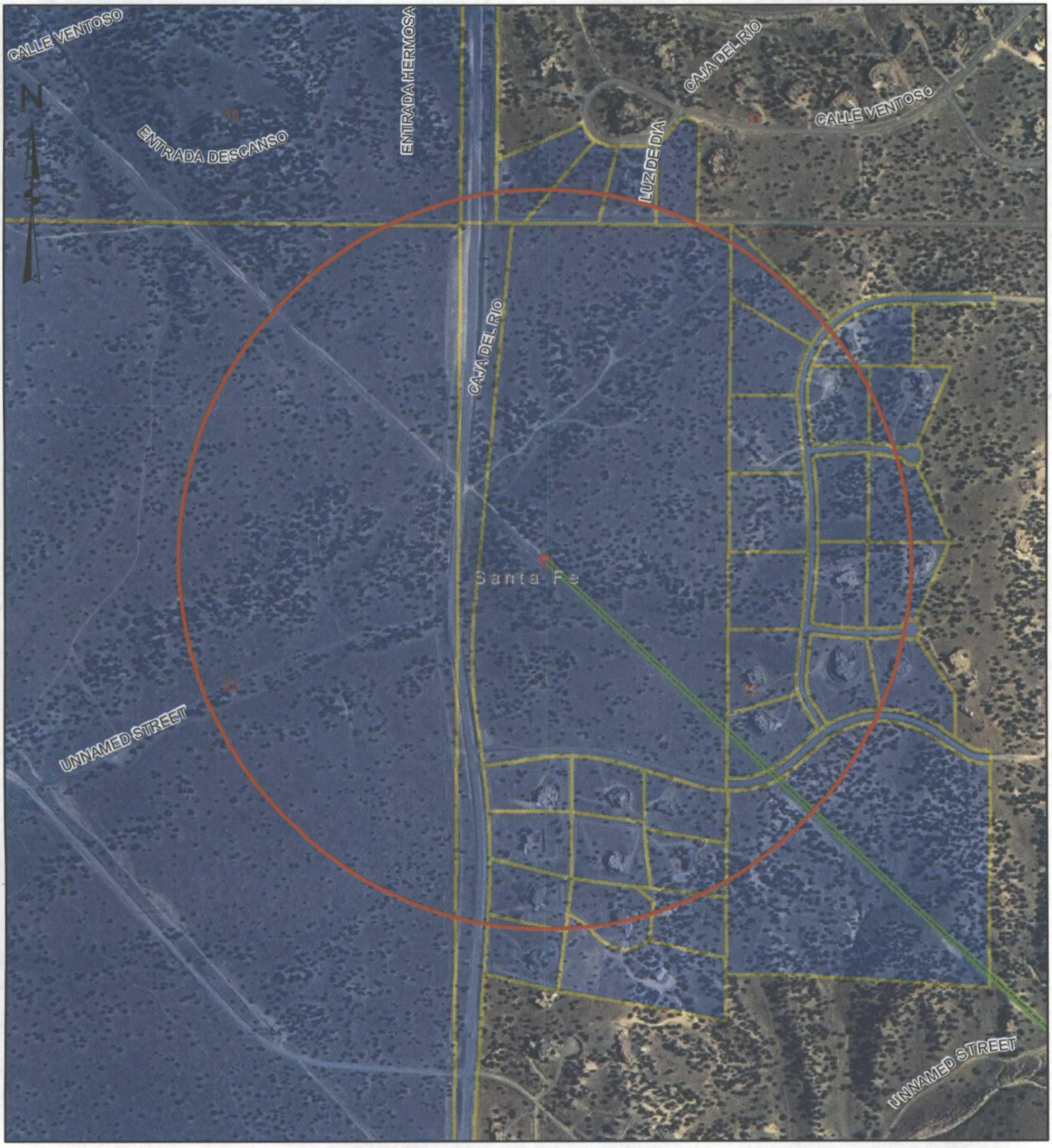
Tsf = Lower and Middle Santa Fe Group; various formations, Miocene and uppermost Oligocene.

Tpb = Basalt and Andosene flows; Pliocene

PNM

A personal commitment to New Mexico

1:80,000



Santa Fe Replacement

Parcel Map

proximal owners

.33 mile buffer of discharge site

New Transmission

Discharge Area

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0 500 1,000 2,000 Feet

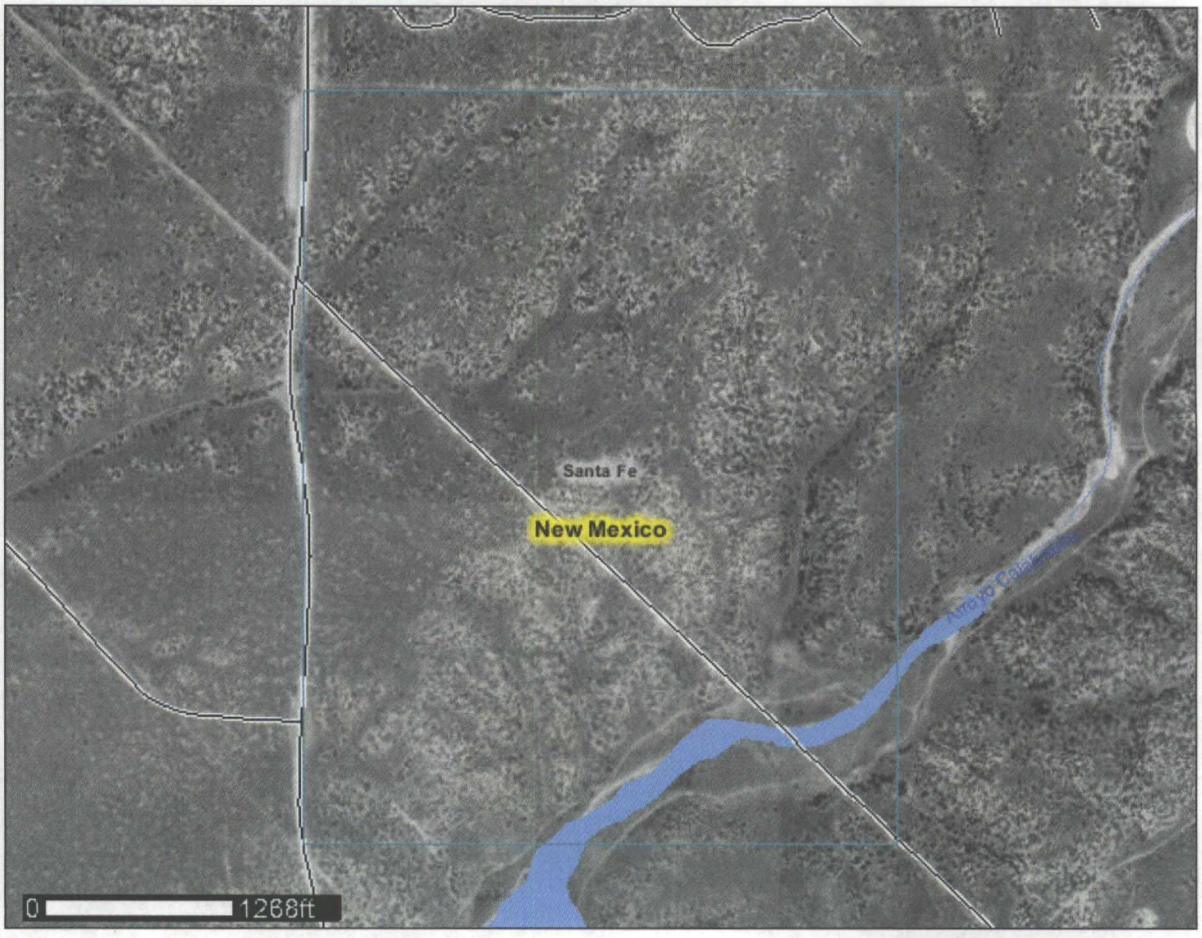
United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Santa Fe Area, New Mexico, Santa Fe County and Part of Rio Arriba County; and Santa Fe County Area, New Mexico



Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Soil Data Mart Web site or the NRCS Web Soil Survey. The Soil Data Mart is the data storage site for the official soil survey information.

Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil scientists classified and named the soils in the survey area, they compared the

individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

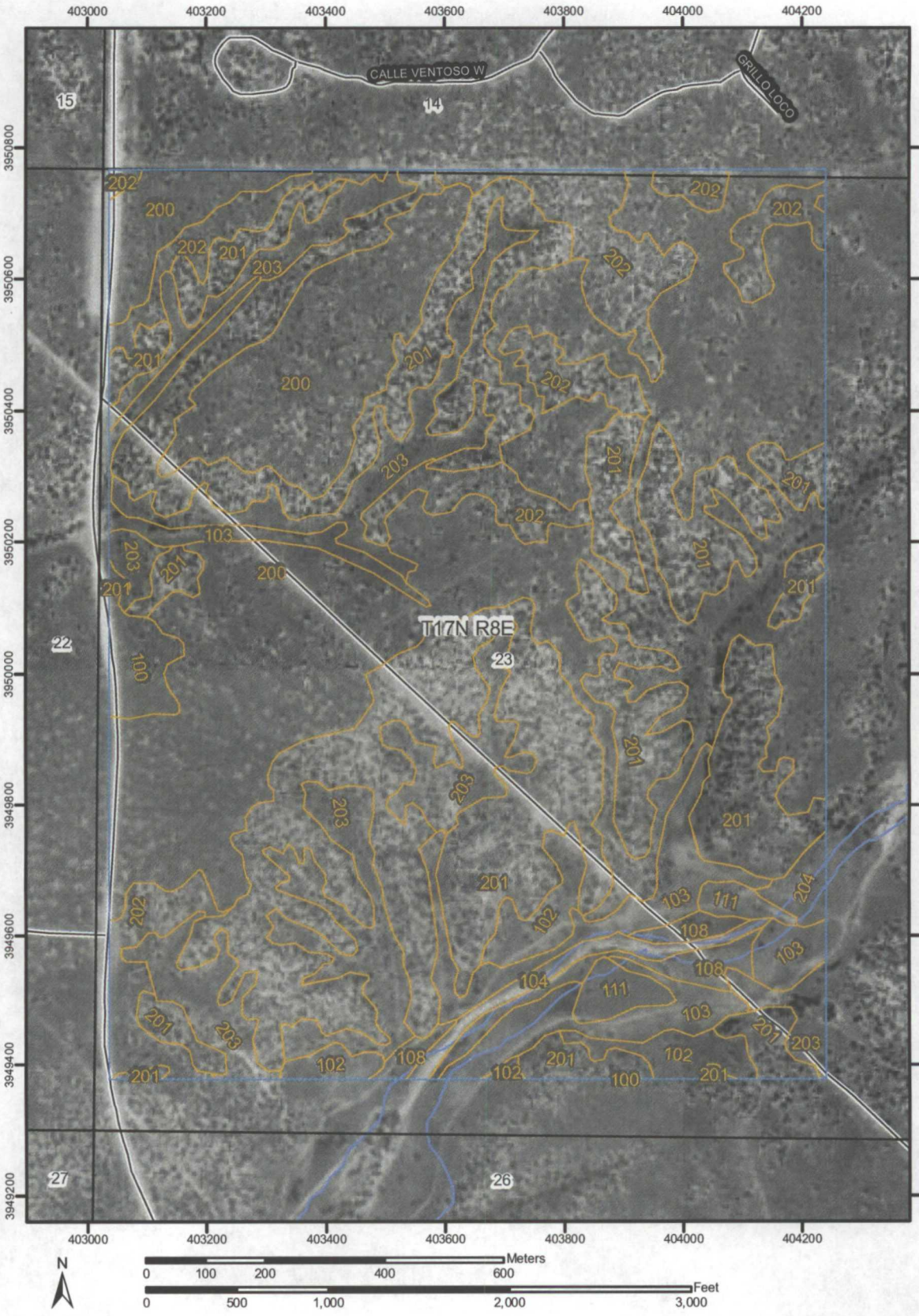
Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map (Santa Fe Replacement Project)



Custom Soil Resource Report
Legend (Santa Fe Replacement Project)

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Units

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other

Special Line Features
- Gully
- Short Steep Slope
- Other

Political Features

Public Land Survey
- Township and Range
- Section

Municipalities
- Cities
- Urban Areas

Water Features
- Oceans
- Streams and Canals

Transportation
- Rails

Roads
- Interstate Highways
- US Routes
- State Highways
- Local Roads
- Other Roads

MAP INFORMATION

Original soil survey map sheets were prepared at publication scale. Viewing scale and printing scale, however, may vary from the original. Please rely on the bar scale on each map sheet for proper map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: http://websoilsurvey.nrcs.usda.gov
Coordinate System: UTM Zone 13N

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Santa Fe Area, New Mexico, Santa Fe County and Part of Rio Arriba County
Survey Area Data: Not available

Soil Survey Area: Santa Fe County Area, New Mexico
Survey Area Data: Version 2, Apr 15, 2007

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

Date(s) aerial images were photographed: 10/6/1996

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend (Santa Fe Replacement Project)

Santa Fe Area, New Mexico, Santa Fe County and Part of Rio Arriba County (NM686)
No soil data available for this soil survey area.

Santa Fe County Area, New Mexico (NM687)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
100	Panky loam, 1 to 4 percent slopes	4.5	1.0%
102	Khapo sandy loam, 3 to 8 percent slopes	10.4	2 3%
103	Zepol silt loam, 0 to 2 percent slopes, flooded	25.9	5.7%
104	Chupe-Riverwash complex, 1 to 3 percent slopes, flooded	4 0	0.9%
108	Zia fine sandy loam, 0 to 2 percent slopes	6.9	1.5%
111	Khapo fine sandy loam, 1 to 3 percent slopes	4 4	1 0%
200	Predawn loam, 1 to 4 percent slopes	163.6	36.2%
201	Tanoan-Encantado complex, 5 to 25 percent slopes	142.5	31.5%
202	Alire loam, 2 to 6 percent slopes	38 8	8.6%
203	Buckhorse-Altazano complex, 2 to 8 percent slopes, non-flooded and flooded	48.9	10.8%
204	Altazano loamy sand, 0 to 2 percent slopes, flooded	2 4	0.5%
Totals for Area of Interest (AOI)		452.3	100.0%

Map Unit Descriptions (Santa Fe Replacement Project)

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability

of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and

relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Santa Fe County Area, New Mexico Version date: 4/15/2007 6:19:24 PM

100—Panky loam, 1 to 4 percent slopes

Map Unit Setting

Elevation: 6,000 to 6,600 feet
Mean annual precipitation: 10 to 13 inches
Mean annual air temperature: 50 to 52 degrees F
Frost-free period: 150 to 170 days

Map Unit Composition

Panky and similar soils: 90 percent

Description of Panky

Setting

Landform: Eroded fan remnants
Landform position (two-dimensional): Summit
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from granite, gneiss, schist, loess, and volcanic ash

Properties and qualities

Slope: 1 to 4 percent
Depth to restrictive feature: 1 to 5 inches to abrupt textural change
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 45 percent
Gypsum, maximum content: 1 percent
Maximum salinity: Very slightly saline to slightly saline (4.0 to 8.0 mmhos/cm)
Sodium adsorption ratio, maximum: 13.0
Available water capacity: Very low (about 0.6 inches)

Interpretive groups

Land capability (nonirrigated): 6c
Ecological site: Loamy (R036XB112NM)

Typical profile

0 to 3 inches: Loam
3 to 8 inches: Clay loam
8 to 11 inches: Clay loam
11 to 17 inches: Loam
17 to 36 inches: Loam
36 to 53 inches: Loam
53 to 66 inches: Loam
66 to 88 inches: Loam
88 to 115 inches: Loam

102—Khapo sandy loam, 3 to 8 percent slopes

Map Unit Setting

Elevation: 5,500 to 6,600 feet
Mean annual precipitation: 10 to 13 inches
Mean annual air temperature: 50 to 52 degrees F
Frost-free period: 150 to 170 days

Map Unit Composition

Khapo and similar soils: 85 percent

Description of Khapo

Setting

Landform: Eroded fan remnants
Landform position (two-dimensional): Toeslope
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Slope alluvium derived from granite, gneiss, schist, loess, and volcanic ash; slope alluvium derived from granite, gneiss, schist, loess, and volcanic ash

Properties and qualities

Slope: 3 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Maximum salinity: Nonsaline to very slightly saline (2.0 to 4.0 mmhos/cm)
Sodium adsorption ratio, maximum: 13.0
Available water capacity: Moderate (about 8.2 inches)

Interpretive groups

Land capability (nonirrigated): 6c
Ecological site: Loamy (R036XB112NM)

Typical profile

0 to 2 inches: Sandy loam
2 to 5 inches: Sandy loam
5 to 11 inches: Sandy clay loam
11 to 29 inches: Fine sandy loam
29 to 43 inches: Fine sandy loam
43 to 72 inches: Fine sandy loam
72 to 89 inches: Sandy loam
89 to 120 inches: Loam

103—Zepol silt loam, 0 to 2 percent slopes, flooded

Map Unit Setting

Elevation: 5,900 to 6,800 feet
Mean annual precipitation: 10 to 13 inches
Mean annual air temperature: 50 to 52 degrees F
Frost-free period: 150 to 170 days

Map Unit Composition

Zepol and similar soils: 85 percent

Description of Zepol

Setting

Landform: Flood plains on eroded fan remnants
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from loess, volcanic ash, pumice, basalt lapilli, granite, and schist

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: Occasional
Frequency of ponding: None
Calcium carbonate, maximum content: 10 percent
Maximum salinity: Nonsaline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water capacity: High (about 10.8 inches)

Interpretive groups

Land capability (nonirrigated): 6c
Ecological site: Loamy (R036XB112NM)

Typical profile

0 to 3 inches: Silt loam
3 to 6 inches: Loam
6 to 12 inches: Silt loam
12 to 22 inches: Silty clay loam
22 to 27 inches: Silt loam
27 to 35 inches: Silt loam
35 to 46 inches: Silt loam
46 to 75 inches: Silt loam
75 to 89 inches: Silt loam
89 to 114 inches: Loam

104—Chupe-Riverwash complex, 1 to 3 percent slopes, flooded

Map Unit Setting

Elevation: 5,500 to 6,800 feet

Mean annual precipitation: 9 to 13 inches
Mean annual air temperature: 50 to 52 degrees F
Frost-free period: 140 to 170 days

Map Unit Composition

Chupe and similar soils: 65 percent
Riverwash: 30 percent

Description of Chupe

Setting

Landform: Flood plains on valley floors
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from granite, gneiss, schist, granitic sandstone and mudstone

Properties and qualities

Slope: 1 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: Occasional
Frequency of ponding: None
Calcium carbonate, maximum content: 3 percent
Maximum salinity: Nonsaline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water capacity: Low (about 3.1 inches)

Interpretive groups

Land capability (nonirrigated): 6s
Ecological site: Sandy (R036XB113NM)

Typical profile

0 to 3 inches: Loamy coarse sand
3 to 10 inches: Gravelly coarse sand
10 to 26 inches: Gravelly coarse sand
26 to 31 inches: Gravelly coarse sand
31 to 37 inches: Gravelly coarse sand
37 to 42 inches: Very gravelly coarse sand
42 to 50 inches: Sandy clay loam
50 to 65 inches: Gravelly loamy coarse sand
65 to 84 inches: Coarse sand
84 to 96 inches: Gravelly coarse sand

Description of Riverwash

Setting

Landform: Flood plains on valley floors
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from mixed

Properties and qualities

Slope: 0 to 2 percent

Drainage class: Excessively drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Frequency of flooding: Frequent
Calcium carbonate, maximum content: 3 percent
Gypsum, maximum content: 3 percent
Maximum salinity: Nonsaline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water capacity: Very low (about 3.0 inches)

Interpretive groups
Land capability (nonirrigated): 8

Typical profile
0 to 10 inches: Gravelly coarse sand
10 to 50 inches: Very gravelly coarse sand
50 to 65 inches: Gravelly sandy loam
65 to 85 inches: Gravelly coarse sand

108—Zia fine sandy loam, 0 to 2 percent slopes

Map Unit Setting
Elevation: 5,600 to 6,500 feet
Mean annual precipitation: 10 to 13 inches
Mean annual air temperature: 50 to 52 degrees F
Frost-free period: 150 to 170 days

Map Unit Composition
Zia and similar soils: 90 percent

Description of Zia

Setting
Landform: Stream terraces on valley floors
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from granitic sandstone and mudstone

Properties and qualities
Slope: 0 to 2 percent
Depth to restrictive feature: 49 to 57 inches to strongly contrasting textural stratification
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: Very rare
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Maximum salinity: Nonsaline to slightly saline (2.0 to 6.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water capacity: Low (about 5.5 inches)

Interpretive groups

Land capability (nonirrigated): 6c
Ecological site: Loamy (R036XB112NM)

Typical profile

0 to 2 inches: Fine sandy loam
2 to 7 inches: Fine sandy loam
7 to 12 inches: Very fine sandy loam
12 to 22 inches: Sand
22 to 40 inches: Very fine sandy loam
40 to 53 inches: Gravelly loam
53 to 69 inches: Stratified loamy sand to loam
69 to 79 inches: Loam
79 to 91 inches: Coarse sandy loam
91 to 99 inches: Gravelly coarse sand

111—Khapo fine sandy loam, 1 to 3 percent slopes

Map Unit Setting

Elevation: 6,100 to 6,800 feet
Mean annual precipitation: 10 to 13 inches
Mean annual air temperature: 50 to 52 degrees F
Frost-free period: 150 to 170 days

Map Unit Composition

Khapo and similar soils: 85 percent

Description of Khapo

Setting

Landform: Stream terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from granitic sandstone and mudstone, and from volcanic ash

Properties and qualities

Slope: 1 to 3 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Maximum salinity: Nonsaline to very slightly saline (2.0 to 4.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water capacity: Moderate (about 8.1 inches)

Interpretive groups

Land capability (nonirrigated): 6c
Ecological site: Loamy (R036XB112NM)

Typical profile

0 to 2 inches: Fine sandy loam
2 to 5 inches: Fine sandy loam
5 to 10 inches: Fine sandy loam
10 to 20 inches: Fine sandy loam
20 to 28 inches: Fine sandy loam
28 to 35 inches: Loam
35 to 41 inches: Sandy loam
41 to 54 inches: Fine sandy loam
54 to 73 inches: Gravelly coarse sandy loam
73 to 99 inches: Stratified loamy sand to loam

200—Predawn loam, 1 to 4 percent slopes

Map Unit Setting

Elevation: 6,500 to 7,300 feet
Mean annual precipitation: 13 to 15 inches
Mean annual air temperature: 47 to 50 degrees F
Frost-free period: 140 to 160 days

Map Unit Composition

Predawn and similar soils: 90 percent

Description of Predawn

Setting

Landform: Eroded fan remnants
Landform position (two-dimensional): Summit
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from granite, gneiss, schist, loess, and volcanic ash

Properties and qualities

Slope: 1 to 4 percent
Depth to restrictive feature: 2 to 6 inches to abrupt textural change; 49 to 59 inches to strongly contrasting textural stratification
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.60 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 50 percent
Gypsum, maximum content: 1 percent
Maximum salinity: Nonsaline to slightly saline (2.0 to 8.0 mmhos/cm)
Sodium adsorption ratio, maximum: 13.0
Available water capacity: Very low (about 0.6 inches)

Interpretive groups

Land capability (nonirrigated): 4c
Ecological site: Loamy (R036XB112NM)

Typical profile

0 to 2 inches: Loam

2 to 4 inches: Loam
4 to 9 inches: Clay loam
9 to 14 inches: Clay loam
14 to 19 inches: Clay loam
19 to 27 inches: Loam
27 to 36 inches: Loam
36 to 52 inches: Gravelly sandy loam
52 to 77 inches: Very gravelly coarse sand
77 to 86 inches: Gravelly loamy sand

201—Tanoan-Encantado complex, 5 to 25 percent slopes

Map Unit Setting

Elevation: 6,400 to 7,500 feet
Mean annual precipitation: 13 to 15 inches
Mean annual air temperature: 47 to 50 degrees F
Frost-free period: 140 to 160 days

Map Unit Composition

Tanoan and similar soils: 45 percent
Encantado and similar soils: 40 percent

Description of Tanoan

Setting

Landform: Eroded fan remnants
Landform position (two-dimensional): Shoulder
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Alluvium derived from granite, gneiss, schist, and loess over residuum weathered from basaltic tuff or granitic sandstone

Properties and qualities

Slope: 5 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Maximum salinity: Nonsaline (0.0 to 1.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water capacity: Low (about 5.1 inches)

Interpretive groups

Land capability (nonirrigated): 4c
Ecological site: Juniperus monosperma-Pinus edulis/Fallugia paradoxa-Chrysothamnus nauseosus/Bouteloua hirsuta-Bouteloua gracilis (F036XB136NM)

Typical profile

0 to 3 inches: Gravelly sandy loam
3 to 7 inches: Loam
7 to 24 inches: Loam

24 to 32 inches: Sandy loam
32 to 57 inches: Loam
57 to 70 inches: Gravelly loamy coarse sand
70 to 84 inches: Gravelly coarse sandy loam

Description of Encantado

Setting

Landform: Eroded fan remnants
Landform position (two-dimensional): Backslope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Colluvium derived from granite, gneiss, and schist over residuum weathered from granitic fanglomerate and sandstone

Properties and qualities

Slope: 10 to 25 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 30 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 4.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water capacity: Very low (about 2.5 inches)

Interpretive groups

Land capability (nonirrigated): 4s
Ecological site: Juniperus monosperma-Pinus edulis/Fallugia paradoxa-Chrysothamnus nauseosus/Bouteloua hirsuta-Bouteloua gracilis (F036XB136NM)

Typical profile

0 to 3 inches: Very gravelly sandy loam
3 to 9 inches: Very gravelly loam
9 to 22 inches: Very gravelly coarse sandy loam
22 to 33 inches: Gravelly loamy coarse sand
33 to 45 inches: Very gravelly loamy coarse sand
45 to 54 inches: Very gravelly loamy coarse sand
54 to 63 inches: Gravelly loamy sand
63 to 85 inches: Very gravelly loamy sand

202—Alire loam, 2 to 6 percent slopes

Map Unit Setting

Elevation: 6,500 to 7,300 feet
Mean annual precipitation: 13 to 15 inches
Mean annual air temperature: 47 to 50 degrees F
Frost-free period: 140 to 160 days

Map Unit Composition

Alire and similar soils: 90 percent

Description of Alire

Setting

Landform: Eroded fan remnants
Landform position (two-dimensional): Summit
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived granite, gneiss, schist, loess, and volcanic ash

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: 2 to 4 inches to abrupt textural change
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 40 percent
Gypsum, maximum content: 1 percent
Maximum salinity: Nonsaline to slightly saline (2.0 to 8.0 mmhos/cm)
Sodium adsorption ratio, maximum: 13.0
Available water capacity: Very low (about 0.3 inches)

Interpretive groups

Land capability (nonirrigated): 4c
Ecological site: Loamy (R036XB112NM)

Typical profile

0 to 2 inches: Loam
2 to 8 inches: Clay loam
8 to 15 inches: Clay loam
15 to 28 inches: Clay loam
28 to 45 inches: Loam
45 to 57 inches: Gravelly loam
57 to 71 inches: Gravelly sandy loam
71 to 105 inches: Gravelly sandy loam

203—Buckhorse-Altazano complex, 2 to 8 percent slopes, non-flooded and flooded

Map Unit Setting

Elevation: 6,400 to 7,200 feet
Mean annual precipitation: 13 to 15 inches
Mean annual air temperature: 47 to 50 degrees F
Frost-free period: 140 to 160 days

Map Unit Composition

Buckhorse and similar soils: 55 percent
Altazano and similar soils: 35 percent

Description of Buckhorse

Setting

Landform: Eroded fan remnants
Landform position (two-dimensional): Toeslope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Slope alluvium derived from granite, gneiss, schist, granitic sandstone, fanglomerate, and mudstone

Properties and qualities

Slope: 2 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): High (2.00 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Maximum salinity: Nonsaline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water capacity: Moderate (about 6.3 inches)

Interpretive groups

Land capability (nonirrigated): 4c
Ecological site: Loamy (R036XB112NM)

Typical profile

0 to 4 inches: Coarse sandy loam
4 to 11 inches: Coarse sandy loam
11 to 22 inches: Loam
22 to 37 inches: Loam
37 to 49 inches: Fine sandy loam
49 to 61 inches: Sandy loam
61 to 83 inches: Stratified gravelly coarse sand to loam

Description of Altazano

Setting

Landform: Inset fans on eroded fan remnants
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Slope alluvium derived from granite, gneiss, schist, granitic sandstone, fanglomerate, and mudstone

Properties and qualities

Slope: 2 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 6.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Calcium carbonate, maximum content: 20 percent

Maximum salinity: Nonsaline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water capacity: Low (about 5.7 inches)

Interpretive groups

Land capability (nonirrigated): 4w
Ecological site: Hills (R036XB124NM)

Typical profile

0 to 2 inches: Gravelly sandy loam
2 to 8 inches: Stratified gravelly loamy coarse sand to gravelly sandy loam
8 to 19 inches: Very gravelly loamy coarse sand
19 to 29 inches: Gravelly sandy loam
29 to 46 inches: Loam
46 to 65 inches: Gravelly loam
65 to 74 inches: Gravelly coarse sandy loam
74 to 90 inches: Gravelly loamy coarse sand

204—Altazano loamy sand, 0 to 2 percent slopes, flooded

Map Unit Setting

Elevation: 6,400 to 7,000 feet
Mean annual precipitation: 13 to 15 inches
Mean annual air temperature: 47 to 50 degrees F
Frost-free period: 140 to 160 days

Map Unit Composition

Altazano and similar soils: 85 percent

Description of Altazano

Setting

Landform: Flood plains on valley floors
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from granite, gneiss, schist, granitic sandstone, fanglomerate, and mudstone

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: 22 to 30 inches to abrupt textural change; 22 to 30 inches to strongly contrasting textural stratification
Drainage class: Somewhat excessively drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: Occasional
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Maximum salinity: Nonsaline (0.0 to 1.0 mmhos/cm)
Sodium adsorption ratio, maximum: 1.0
Available water capacity: Very low (about 2.2 inches)

Interpretive groups

Land capability (nonirrigated): 4c

Ecological site: Hills (R036XB124NM)

Typical profile

0 to 3 inches: Loamy sand
3 to 8 inches: Fine sandy loam
8 to 12 inches: Loamy sand
12 to 18 inches: Stratified sandy loam to loam
18 to 26 inches: Gravelly loamy coarse sand
26 to 29 inches: Loam
29 to 36 inches: Loam
36 to 58 inches: Loam
58 to 76 inches: Gravelly coarse sandy loam
76 to 92 inches: Gravelly coarse sand

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Marty Sanchez
Links de Santa Fe

March 19, 2008

Mr. Michael Prescott,
PNM Resources
Alvarado Square
Albuquerque, NM 87158-2104

Dear Mr. Prescott,

We are in receipt of your letter dated March 12, 2008, and have accepted your request to discharge approximately 400,000 gallons of hydrostatic test water into the irrigation ponds located at Marty Sanchez Links de Santa Fe.

We understand that PNM will provide all equipment necessary to perform the discharge and that you will comply with any and all stipulations requested by our office.

This letter serves as permission to your request.

If you have questions, please feel free to contact Eric Sandoval, Golf Course Superintendent at (505) 955-4475.

Thank you,

Larry Lujan,
MRC Administrative Manager

Cc: Robert Romero, Public Works Department Director
Fabian Chavez, Parks Division Director
Eric Sandoval, Golf Course Superintendent
MRC File

Marty Sanchez
Links de Santa Fe

March 19, 2008

Mr. Michael Prescott,
PNM Resources
Alvarado Square
Albuquerque, NM 87158-2104

Dear Mr. Prescott,

We are in receipt of your letter dated March 12, 2008, and have accepted your request to discharge approximately 400,000 gallons of hydrostatic test water into the irrigation ponds located at Marty Sanchez Links de Santa Fe.

We understand that PNM will provide all equipment necessary to perform the discharge and that you will comply with any and all stipulations requested by our office.

This letter serves as permission to your request.

If you have questions, please feel free to contact Eric Sandoval, Golf Course Superintendent at (505) 955-4475.

Thank you,

Larry Lujan,
MRC Administrative Manager

Cc: Robert Romero, Public Works Department Director
Fabian Chavez, Parks Division Director
Eric Sandoval, Golf Course Superintendent
MRC File

United States Department of Agriculture, Soil Conservation Service. 1961. Land capability classification. U.S. Department of Agriculture Handbook 210.

From: Moiola, Lloyd, EMNRD [lloyd.moiola@state.nm.us]
Sent: Monday, March 10, 2008 2:24 PM
To: Prescott, Michael
Subject: RE: Mine records check request

Hi Michael,

I have searched the New Mexico Abandoned Mine Land Program records and am unable to locate any abandoned mines in T17N R8E, Section 23 of the Agua Fria Quad.

Thanks,

Lloyd Moiola

AML Project Manager

From: Prescott, Michael [mailto:Michael.Prescott@pnmresources.com]
Sent: Monday, March 10, 2008 1:32 PM
To: Moiola, Lloyd, EMNRD
Subject: Mine records check request

Hi Lloyd,

I'm working on a project in section 23 T17N R8E in Santa Fe county, and I'm looking for some confirmation that there are no mines in that section, or if there are, what the locations are. Any chance you can help me out mith this?

Thanks,

Michael Prescott

Environmental Construction and Maintenance

PNM Resources, Inc.

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