

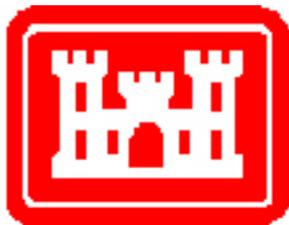
FINDING OF NO SIGNIFICANT IMPACT

AND

ENVIRONMENTAL ASSESSMENT

**VILLAGE OF TIJERAS
PHASE III-B WATER SYSTEM
TIJERAS, BERNALLILLO COUNTY, NEW MEXICO**

Prepared By



**US Army Corps
of Engineers®
Albuquerque District**

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FINDING OF NO SIGNIFICANT IMPACT

VILLAGE OF TIJERAS PHASE III-B WATER SYSTEM TIJERAS, BERNALLILLO COUNTY, NEW MEXICO

The U.S. Army Corps of Engineers (Corps), Albuquerque District, in cooperation with and at the request of the Village of Tijeras (Village), New Mexico, proposes to construct Phase III-B of its municipal water system. This portion of the project is one of four sections designated as A through D. Phase III-A is currently under construction on the south side of Interstate 40 (I-40) within the southern corporate limits of Tijeras. The work to be conducted under Phase III-B is also confined to the south side of I-40. Phases III-C and III-D include future water distribution system improvements required to provide water service to the portions of the Village north of I-40.

Section 593 of the Water Resources Development Act of 199 provides the authority for the U.S. Army Corps of Engineers to enter into cost sharing agreements with non-Federal sponsors on publicly owned environmental projects within central New Mexico. Central New Mexico is defined within the authority as Bernalillo, Sandoval, and Valencia Counties. Under Section 593 authority, assistance may be in the form of design and construction for water related environmental infrastructure and resource protection and development projects including projects for wastewater treatment and related facilities, water supply, conservation and related facilities, stormwater retention and remediation, environmental restoration, and surface water resource protection and development. Project costs are shared on a 75 percent Federal, 25 percent non-Federal basis. The non-federal sponsor receives credit for land, easements, rights-of-way, and relocations toward the non-Federal share of project costs not to exceed 25 percent the total project costs. Additionally, the non-Federal sponsor may receive credit for the reasonable cost of design work completed prior to entering into a project cooperation agreement, however, credit could not exceed six percent of the total construction cost of the project. The non-Federal sponsor assumes 100 percent of project operation and maintenance costs.

The proposed project involves the installation of 14, 975 feet of water line with associated isolation valves, air release/vacuum stations, and fire hydrants within the corporate limits of Tijeras. Most of the construction work would be confined to the shoulders of the road along Cresenciano Road, Camino Municipal Road, Patricia Garcia Road, Vallecitos Road, Armenta Road, Armenta Lane, Primera Agua, Public School Road, and New Mexico Highway Highways 333 and 337. In two locations the water line would not be installed alongside a roadway: 1) Upon leaving the Cresenciano Road shoulder, the line travels south above and parallel to Tijeras Arroyo through front yards of private properties until it reaches Camino Municipal Road; 2). In the second location, the water line leaves the road shoulder at the top of Patricia Garcia Road and continues east through pine-juniper woods until it connects with Vallecitos Road.

Section 404 of the Clean Water Act provides for the protection of waters and wetlands of the United States from impacts associated with discharges of dredged or fill

material into such regulated aquatic areas. Tijeras Canyon Arroyo is a water of the U.S. regulated under the provisions of Section 404. The proposed subsurface installation of the water line would not discharge dredged or fill material into the arroyo. Therefore, no Section 404 permit is required for the planned action.

Construction of the proposed project would not occur in or impact any defined floodplain (i.e., Tijeras Arroyo). Therefore, the work complies with Executive Order 11988, Flood Plain Management.

Concurrence has been received from the U.S. Fish and Wildlife Service under Section 7 of the Endangered Species Act that the work would not affect the Bald Eagle (*Haliaeetus leucocephalus*) and the Mexican Spotted Owl (*Strix occidentalis lucida*).

Two alternatives were considered in the planning process: No Action and the recommended action. No action would not satisfy the purpose and need of the project to provide a dependable supply of potable water to residences and businesses in Tijeras. Since neither alternative involved significant environmental impacts individually or in comparison to each other, the recommended plan has been selected in accordance with the sponsor's preference.

The planned action has been fully coordinated with federal, state, and local agencies with jurisdiction over the physical, biological, and cultural resources of the project area. Based on these factors and others discussed in detail in the Environmental Assessment, I have determined that the planned action to construct Phase III-B of the municipal water system for the Village of Tijeras, New Mexico would have no significant impact on the human environment. Therefore, an Environmental Impact Statement will not be prepared for this project.

Date

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ENVIRONMENTAL ASSESSMENT

VILLAGE OF TIJERAS PHASE II-B WATER SYSTEM TIJERAS, BERNALLILLO COUNTY, NEW MEXICO

I. INTRODUCTION

1.1 BACKGROUND AND LOCATION

The U.S. Army Corps of Engineers (Corps), Albuquerque District, in cooperation with and at the request of the Village of Tijeras (Village), New Mexico proposes to construct Phase III-B of its municipal water system. This portion of the project is one of four sections designated as A through D. Non-federally funded Phase III-A is currently under construction on the south side of Interstate 40 (I-40) within the southern corporate limits of Tijeras. The work to be conducted under Phase III-B is also confined to the south side of I-40 (See Figure 1). Phases III-C and Phase III-D include future water distribution system improvements required to provide water service to the portions of the Village north of I-40.

1.2 AUTHORITY

Section 593 of the Water Resources Development Act of 1999 provides the authority for the U.S. Army Corps of Engineers to enter into cost sharing agreements with non-Federal sponsors on publicly owned environmental projects within central New Mexico. Central New Mexico is defined within the authority as Bernalillo, Sandoval, and Valencia Counties. Under Section 593 authority, assistance may be in the form of design and construction for water related environmental infrastructure and resource protection and development projects including projects for wastewater treatment and related facilities, water supply, conservation and related facilities, stormwater retention and remediation, environmental restoration, and surface water resource protection and development. Project costs are shared on a 75 percent Federal, 25 percent non-Federal basis. The non-federal sponsor receives credit for land, easements, rights-of-way, and relocations toward the non-Federal share of project costs not to exceed 25 percent the total project costs. Additionally, the non-Federal sponsor may receive credit for the reasonable cost of design work completed prior to entering into a project cooperation agreement, however, credit could not exceed six percent of the total construction cost of the project. The non-Federal sponsor assumes 100 percent of project operation and maintenance costs.

1.3 PURPOSE AND NEED

Phase III-B is part of the Village of Tijeras Water Master Plan that was completed in 1991 identifying the production facilities (wells), storage facilities, and

Figure 1

distribution lines that would be required to provide water service to the entire community. Since all of the inhabited structures within the Village utilized individual wells or other independent sources of water, the proposed water line is entirely new and would not replace similar facilities. The facilities would provide safe water and a dependable supply to private residences and commercial businesses.

1.4 REGULATORY COMPLIANCE

The U.S. Army corps of Engineers, Albuquerque District, prepared this Environmental Assessment in compliance with all Federal statutes, regulations, Executive Orders, including the following:

American Indian Religious Freedom Act of 1978 (42 U.S.C. 1996)
Archaeological Resources Protection Act of 1979 (16 U.S.C. 470)
Clean Air Act of 1972, as amended (42 U.S.C. 7401 *et seq.*)
Clean Water Act of 1972, as amended (33 U.S. c. 1251 *et seq.*)
Executive Order 12898, Federal Action to Address Environmental Justice in Minority Populations and Low Income Populations, 1994
Endangered Species Act of 1973, (ESA) as amended (16 U.S.C. 1531 *et seq.*)
Fish and Wildlife Coordination Act of 1958, as amended (16 U.S.C. 661 *et seq.*)
Floodplain Management (Executive Order 11988)
National Environmental Policy Act of 1969, as amended (42 U.S. C. 4321 *et seq.*)
Regulations for Implementing the Procedural Provisions of NEPA (40 CFR 1500 *et seq.*)
National Historic Preservation Act of 1966, as amended (16 U.S.C. 470 *et seq.*)
Native American Graves Protection and Repatriation Act of 1990 (25 U.S.C. 3001 *et seq.*)
Protection and Enhancement of the Cultural Environment (Executive Order 11593)
Protection of Wetlands (Executive Order 11990)

This EA also reflects compliance with all applicable State of New Mexico and local regulations, statutes, policies, and standards for conserving the environment such as water and air quality, endangered plants and animals, and cultural resources.

1.5 ENVIRONMENTAL PROTECTION

All Federal, State, and local construction regulations and guidelines would be followed. All construction would be accomplished using Best Management Practices. Specific measures to provide environmental and cultural resource protection during construction would be included in all contract plans and specifications at the time of detailed design and would be reiterated during pre-construction conferences. These measures provide for the control of noise, air and water pollution, erosion, and aesthetic degradation, as well as protection of cultural resources, vegetation, and fish and wildlife resources including special status species and their habitat. The design criteria of the engineered project would provide for public safety. The project would require a minimal amount of operation and maintenance expense by the sponsor. Timely inspections

concerning operation and maintenance of project features would be incorporated as standard operating procedures.

II. RECOMMENDED ACTION AND ALTERNATIVES

All Federal agencies participating in projects that utilize public funding are mandated by the National Environmental Policy Act to evaluate alternative courses of action so that decision are made in the best interests of the public.

Two project alternatives were considered:

1.) No-action – the proposed installation of water lines under Phase III-B of the Village water system improvements would not be undertaken. No federal funds would be expended and there would be no effect on existing conditions. The planned work is a continuation of water system improvements completed under Phases I and II of the master plan and would result in abandoning the previously identified objective of supplying potable water to the residences and businesses of Tijeras. The no-action alternative has been determined to be contrary to the public interest and, therefore, was eliminated from further consideration.

2.) The Recommended Plan – the Phase III-B facilities consist of 14, 975 feet of water line (10,275 feet of 8-inch and 4, 700 feet of 6-inch line) with associated isolation valves, air release/vacuum stations, and fire hydrants. Also included is a new pressure reducing valve station to maintain the zones created by previous improvements completed under Phases I and II of the water system master plan for the Village. Most of the construction work would be confined to the shoulders of the road along Cresenciano Road, Camino Municipal Road, Patricia Garcia Road, Vallecitos Road, Armenta Road, Armenta Lane, Primera Agua, Public School Road, and New Mexico Highway Highways 333 and 337. In two locations the water line would not be installed alongside a roadway: 1) Upon leaving the Cresenciano Road shoulder, the line travels south above and parallel to Tijeras Arroyo through front yards of private properties until it reaches Camino Municipal Road; 2). In the second location, the water line leaves the road shoulder at the top of Patricia Garcia Road and continues east through pine-juniper woods until it connects with Vallecitos Road. Figure 2 illustrates the locations of the proposed work within the corporate limits of Tijeras.

III. EXISTING ENVIRONMENT AND FORSEEABLE EFFECTS

3.1 PHYSICAL RESOURCES

3.1.1 Physiography and Soils

3.1.1.1. Physiography: The project is located in the Mexican Highland Section of the Basin and Range Physiographic Province (Williams 1986). This Province includes much of central and southwestern New Mexico, and it extends into adjacent areas of Arizona. The Mexican Highland Section includes two large areas of basin-and-range structure and topography separated by the valley of the Rio Grande. The Rio Grande rift

Figure 2

depression coincides with the northern and eastern parts of the section. Block-faulted mountains commonly have Precambrian cores overlain by Paleozoic sedimentary sequences. Sandia Peak (elevation 10,682 feet), the highest point in the section, is at the crest of tilted fault block of this type.

The Village of Tijeras is located approximately 7 miles east of Albuquerque, New Mexico. The canyon is the major east-west travel corridor between Albuquerque in the Rio Grande Valley to the plains of New Mexico that extend from the east base of the Sandia Mountains east to the Texas state line. The town lies at an elevation of 6,000 feet along Tijeras Canyon. The canyon is flanked on the north by the Sandia Mountains and to the south by the Manzanita Mountains. Tijeras Canyon Arroyo, an intermittent stream, courses through the town in an east to west direction.

3.1.1.2 Soils: The general soil map of Bernalillo County places Tijeras Canyon within the Seis-Orthids association (USDA 1973). This association contains soils that are shallow or moderately deep, level to very steep, well drained, very cobbly, stony, and very stony loamy soils. The entire project area is underlain with Monzano loam of the Monzano Series soil. This soil is found at elevations in the range of 6,000 to 7,000 feet. This series consists of deep, well-drained soils in swales formed in recent alluvium derived from mixed rocks, mainly limestone and sandstone. Slopes are 0 to 3 percent. The level or nearly level Monzano loam receives runoff water from adjacent slopes. The depth to the seasonal high water table averages greater than five feet. Runoff is slow, and the hazard of water erosion is moderate. Principal uses are range, wildlife habitat, and watershed. To protect soils from wind and water erosion, all areas disturbed by project activities would be seeded to native vegetation. The no action and preferred alternative would have no significant impact on physiography and soils.

3.1.2 Climate

The Tijeras Ranger Station (WRCC 2000) records from 1971-2000 report that the average temperature in the Tijeras area ranges from a high of 87° F in July to a low of 16° F in December. Precipitation ranges from an average high of 2.64 inches in October to a low of 0.5 inches in June. The driest period is February through June with each month averaging less than one inch of rain. More than half the total annual rainfall occurs during the months of July through October in the form of brief, but heavy, thunderstorms (USDA 1973).

3.1.3 Air Quality and Sound

In 1978 Albuquerque/Bernalillo County was designated a non-attainment area for carbon monoxide (NMED 1996). To combat the air pollution problem, the following measures were implemented in the county: 1.) No Burn Nights prohibited residential wood-burning on nights when weather conditions were likely to trap pollutants near the ground and result in high concentration of CO; 2.) Oxygenated Fuels Program that required that gasoline sold during the winter months contain an additive such as ethanol

or MTBE (methyl tertiary butyl ether) that would convert CO in the exhaust to CO₂; and 3.) Vehicle Inspection and Maintenance Program that required vehicles registered in the county pass an emissions test and be inspected to ensure that pollution control equipment is functioning properly. These measures were successful (and are still in effect) and the county was redesignated an attainment area in 1996. Equipment with water sprinklers would be used during construction to minimize dust. The project activities would result in a temporary but negligible increase in suspended particles. In the long term, as with the no-action alternative, the recommended alternative would have no effect on air quality.

Background noise levels in the project area are moderate to high due to the close proximity of I-40 and its associated motor vehicle traffic. Although construction activity would add to the ambient noise level, the effects would be minor, temporary and cease when construction is completed. The no-action alternative would have no effect on existing noise conditions.

3.1.4 Land Use and Aesthetics

The project site is situated within the semi-urbanized Village of Tijeras. No prime, unique, or locally important farmland exists in the project area. The area consists of small homes on large grassed or otherwise landscaped lots, most of which are accessed by paved state, county, or municipal roads. During construction these aesthetics would be temporarily disrupted by excavation of the pipeline trench in road shoulders or undisturbed uplands. The pipe would be buried and the disturbed area returned to grade and stabilized with native vegetation. Upon completion of the work, the area within the project footprint would shortly return to its original visual condition. The recommended action and the no-action alternatives would have no effect on existing land use and aesthetics of the area.

3.1.5 Hydrology and Water Quality

All work would be accomplished outside Tijeras Canyon Arroyo, the only surface drain in the canyon. The narrow, incised arroyo has intermittent flow and receives surface runoff from adjacent areas and tributary drains flowing from the Sandia and Manzanito Mountains. Best Management Practices would be employed in accordance with state erosion control standards to prevent soil and other erodible materials and surface pollutants from entering the arroyo and streambed.

The Clean Water Act provides for the protection of waters and wetlands of the United States from impacts associated with discharges of dredged or fill material in aquatic habitats, including wetlands, as defined under Section 404(b)(1). Since all work associated with the project would be accomplished outside of aquatic areas regulated by this law, a Section 404 permit would not be needed for the work. Because a Section 404 permit is not necessary, neither is a state water quality certification permit needed under Section 401 of the Clean Water Act. However, the Corps will coordinate with the New

Mexico Environment Department regarding construction activities and schedules to allow the opportunity for monitoring water quality conditions during project construction.

Section 402(p) of the Clean Water Act regulates point source discharges of pollutants into water of the United States and specifies that storm water discharges associated with construction activity be conducted under National Pollutant Discharge Elimination System (NPDES) guidance. Storm water discharges associated with “construction activity” that require a Storm Water Pollution Prevention Plan (SWPP) include discharges associated with Federal construction activities that result in disturbance to one or more acres of land. Project construction would comply with the general conditions of the NPDES guidance. A Notice of Intent would be filed, and a SWPP for the project would be developed and kept on file at the construction site and become part of the permanent project record. The Corps or its contractor would obtain the NPDES permit prior to the commencement of construction activities. In consideration of these measures, the preferred and no-action alternative would have no effect on the hydrology or water quality of surface waters in the project area.

3.2 BIOLOGICAL RESOURCES

3.2.1 Vegetation

The project lies within the Great Basin Conifer Woodland biotic community as described by Brown (1982). The biome is dominated by juniper (*Juniperus*) and pinyon (*Pinyon*). These trees rarely exceed 40 feet in height and primarily grow openly spaced, except at higher elevations. It is one of the most common vegetative types in the Southwest. A single, open spaced layer averaging 15 feet high of juniper (*Juniperus monosperma*) and pinyon pine (*Pinyon edulis*) typically dominates the surrounding hillsides above the Village. Western wheatgrass (*Agropyron smithii*) and blue grama are the principal understory grasses. Shrubs commonly found are cliffrose (*Cowania mexicana*), apache plume (*Fallugia paradoxa*), four-wing saltbush (*Atriplex canescens*), datil (*Yucca baccata*), and Mormon-tea (*Ephedra viridis*). Other herbs and grasses commonly found include globemallows (*Sphaeralcea* spp.), buckwheats (*Eriogonum* spp), and lupines (*Lupinus* spp.). Cactii include various hedgehogs (*Echinocereus* spp.) and prickly pears (*Opuntia* spp.).

Within the urbanized and relatively flat, gently sloping canyon above Tijeras Canyon Arroyo, the vegetative community consists primarily of introduced trees and ornamental shrubs commonly used for residential landscaping. With the exception of junipers and pinyons on the hillsides, dominant vegetation along the construction corridor consists of native grasses (western wheatgrass and blue grama); lawngrass such as bermuda (*Cynodon dactylon*); non-native trees such as Siberian elm (*Ulmus pumila*), saltcedar (*Tamarix* spp), and mulberry (*Morus rubra*).

Because the majority of the water lines would be installed in the shoulders of existing roads, the preferred and no-action alternatives would have no effect on vegetation within the highly urbanized construction corridor.

3.2.2 Vertebrates

Only a few vertebrates are associated with the Great Basin conifer woodland (Brown 1982). These include the pinyon mouse (*Peromyscus truei*), pinyon jay (*Gymnorhinus cyanocephalus*), gray flycatcher (*Empidonax wrightii*), bushy-tailed woodrat (*Neotoma cinerea arizonae*) gray vireo (*Vireo vicinior*), black-throated gray warbler (*Dendroica nigrescens*), Scots oriole (*Icterus parisorum*), and the plateau whiptail (*Cnemidophorus velox*). The preferred and no-action alternatives would have no affect on vertebrates in the project area.

3.2.3. Special Status Species

Three agencies who have primary responsibility for the conservation of animal and plant species in New Mexico are the U.S. Fish and Wildlife Service (USFWS), under authority of the Endangered Species Act of 1973 (as amended); the New Mexico Department of Game and Fish (NMDGF), under the authority of the Wildlife Conservation Act of 1974; and the New Mexico Energy, Mineral and Natural Resources Department, under authority of the New Mexico Endangered Plant Species Act and Rule NONMFRCD 91-1. Each agency maintains a list of animal and/or plant species that have been classified or are candidates for classification as endangered or threatened based on present status and potential threat to future survival and recruitment. Of these species, those with potential to occur in or near the project are given in Table 1.

Table 1: Federal and State of New Mexico species of concern that may occur in the Tijeras, New Mexico area.

Species	Federal Status*	State Status*
Bald Eagle (<i>Haliaeetus leucocephalus</i>)	T	T
Mexican spotted owl (<i>Strix occidentalis lucida</i>)	T	--

*T – Threatened

In New Mexico the Bald Eagle is a winter migrant from the northern border and southward to the Gila, lower Rio Grande, middle Pecos, and Canadian valleys. The Bald Eagle is associated with aquatic ecosystems throughout most of its range and usually nests within two miles of water. The typical diet is fish, with many other prey such as waterfowl and small mammals depending on location, time of year, and population cycles of the prey species (Federal Register 1995). The closest body of water to the project site that would contain suitable aquatic habitat, nesting, and diet requirements would be the Rio Grande, located approximately 10 miles west of Tijeras. Ideal weather for pipeline installation occurs outside of the colder months of December, January and February, when the Bald Eagle is most likely to be present in the state. Due to the absence of

suitable foraging and nesting areas and the time of project construction, the preferred and no-action alternatives would have no effect on the Bald Eagle or its habitat.

The Mexican Spotted Owl is reportedly found year round in New Mexico (NMGF 2002). It has been observed at elevations ranging from 3,700 to 10,000 feet. Habitat consists of caves, cliff ledges, witches' broom, and stick nests in mature, old growth forests. The bird prefers closed canopy mixed conifers, with dense, multi-layered structure; uneven aged stands with snags over downed woody debris within steep canyons. As previously described in paragraph 3.2.1, the forest in Tijeras Canyon consists of openly spaced pinyon and juniper of essentially equal size, one-layered, and with an understory of grasses. Since this is not suitable habitat, the preferred and no-action alternatives would have no effect on the spotted owl.

3.3 CULTURAL RESOURCES

Archaeological sites from all temporal periods could occur within the project area and in fact have been found within a 10-mile radius. Given the variability surrounding agricultural production, the area was most likely used on a short-term basis for hunting, gathering, and resource procurement. Temporary camps would be the most common habitation sites. Survey data suggest that the canyon was not the location of permanent residential sites until quite late in time (Anderson and Oakes in Cordell 1980:36). Archaeological sites from the Paleo-Indian Period are represented by isolated, diagnostic artifacts and by the controversial Sandia Cave remains. Campsites within the canyon proper may exist but are obscured by the more recent heavy alluviation. A few sites and numerous isolated points from the Archaic Period, 5,000 to 6,000 years of hunting and gathering associated with modern fauna following the Paleo-Indian Period, have been found in the canyon (Cordell 1980:7-8).

Anasazi sites dating from as early as A.D. 700 occur in the canyon. Through time the sites increase in size and complexity and by the mid-1200s some were as large as 12 surface rooms with several subsurface pithouses and/or kivas. Based on limited excavation data it appears that the first permanent, year-round occupation of the canyon began in the mid-1200s, and after about A.D. 1275 the number of these small communities increased for a short time. Between A.D. 1313 and 1325 many of the small sites were abandoned and the populace began aggregating at Tijeras Pueblo in the canyon and San Antonio a few miles to the north on the eastern foothills of the Sandias. Within a few years Tijeras Pueblo consisted of approximately 200 rooms in several house blocks, plazas, and a circular great kiva. Much of the pueblo was abandoned by the late 1300s and a new smaller pueblo of about 100 rooms, a plaza, and a rectangular kiva was occupied until about A.D. 1425 (Cordell 1980:7-11).

The initial Spanish contact with New Mexico was the Coronado expedition in 1540 and the first permanent settlement was established in north central New Mexico in 1598. While the population in New Mexico grew slowly, the increasing and expanding European population east of the Mississippi River began to displace Indian groups into the west. Hostilities between (and among) the New Mexico tribal groups, the displaced groups, the

Athabaskans from the north, and Spanish increased. Finally in the mid-1700s, in an attempt to increase protection, Governor Cachupin authorized the founding of buffer towns including Las Trampas, La Luz, San Blas on the Puerco River, Abiquiu, and Truchas. However, it was not until 1763 that a buffer community was established in Tijeras Canyon (Quintana and Kayser in Cordell 1980:43-52).

Between the 1600s and mid-1700s the canyon was used by Faraon Apaches as a staging area for raids on the Rio Abajo settlements, south of Isletta. By 1763 the Comanche replaced the Faraon Apache as the most feared raiders of the Spanish and Pueblo towns. In response to the Comanche threat, Governor Veles approved the petition for a land grant near the western mouth of Tijeras Canyon called Canon de Carnue land grant and a town named San Miguel de Laredo. The initial population consisted of 17 families from the Albuquerque area. In spite of established friendly trading relations with the Carlana Apache and local Pueblo groups, the settlers fled the village in October 1770 following a raid by the Gila Apache. The survivors refused to return and were obligated to tear down their houses in 1771(Quintana and Kayser in Cordell 1980:43-52).

Following several failed petitions to reestablish a community, a community, rather than a town, grant was awarded in 1818 and was again named the Canyon de Carnue Grant. In 1819 two villages were established, San Miguel de Laredo and San Antonio de Padua and were under orders to dig irrigation ditches (acequias), construct houses, and plant fields by early spring. The numbers of residents fluctuated during the next 20 to 30 years as Indian raids, insufficient water, poor soil, and poor harvests made life tenuous at best. In spite of a shorter growing season due to late spring or early fall frosts, settlers preferred to live at higher altitudes than risk water shortages in Carnuel; therefore, populations increased at Tijeras, Canoncito, Ranchitos, and San Antonio. The residents engaged in wood cutting, sheep and goat ranching, buffalo hunting, and working at the mines near Golden and Cerrillos. In the 1870s some residents participated in transporting goods from the railroad terminal in Raton to Albuquerque, a three-month long round trip by ox cart (Quintana and Kayser in Cordell 1980:43-52).

Based on the census of 1880 Carnuel's population had declined while that of the other villages increased. After the nomadic Indians were forced onto reservations, the Tijeras Canyon communities lost their function as buffer communities; however, the poor roads through the canyon left them isolated but unified by the common heritage of land grants and interconnected networks based on kinship. This unity began to unravel in the 1890s when the United States confirmed only 809 hectares of the original 36,437 hectares of land grants and because of changes in the regional economic structure that included mining of coal, lead, zinc, copper, gold, silver, and turquoise; railroad construction; and other wage labor. For a short time the wages brought relative prosperity to the canyon; however, declines in these industries and the loss of cash income forced people to leave or return to subsistence farming. There were more subsistence farmers in the 1930s than at any time since (Quintana and Kayser in Cordell 1980:43-52).

Most of the archaeological work in this area has been surveyed. A file search of the Archaeological Records Management Section in Santa Fe indicated that 13 sites are

in general proximity to the various ROW involved in the water line construction. None of these sites will be affected by the undertaking. Except for Tijeras Pueblo all of them are small sites. Most are special use sites, with sherd scatters, and the isolated rooms representing resource gathering and farming, respectively. Tijeras Pueblo, due to its importance as an archaeological resource, was placed on the New Mexico State Register of Cultural Properties (HPD No. 1494).

A Class III, intensive, linear survey approximately 4,564 m (14,975 feet) long was conducted by two Albuquerque District archaeologists within the ROW of 10 roads and one undisturbed segment all within the Village of Tijeras. The width of each transect varied from 3 to 4.6 m (10 to 15 feet) for all transects adjacent to existing roads and was 15.2 m (50 feet) for the segment crossing undisturbed land over the ridge. The interval between the surveyors was never more than 7 m. Only the southern ROW of NM 333 was surveyed. In all other cases both sides were surveyed in order to provide maximum flexibility for construction. A total of 2.6 HA (6.7 acres) was surveyed. Of this total, 2 HA (5.2 acres) were previously disturbed roadside ROW and 0.6 HA (1.5 acres) were undisturbed land crossing over the ridge between Patricio Garcia Road and Villacitos Road.

With the exception of two isolated Pueblo II-Pueblo III sherds and large quantities of modern roadside debris, no other cultural resource manifestations or archaeological sites were found. Ground surface visibility was excellent. Three previously known sites are in general proximity to various segments of the project; however, none of them will be impacted. The first of the three sites, LA 15169 is approximately 35 m south of the water line location and on top of a small hill. The hill will protect the site from any impacts. Isolated sherd number 2 recovered within the disturbed NM 333 ROW washed down the slope from this site. Site LA 12844, if it still exists, is located between NM 333 and Interstate 40. The water line will be south of NM 333; therefore, this site is in no danger from this project. Site LA 1279 is south of several houses that are south of NM 333. Since the water line will be in the road ROW, the houses will protect this site from any project related impacts.

A Class III archaeological survey of 10 road ROWs and a single undisturbed segment was conducted by two Albuquerque District archaeologists. A total of 13 previously recorded sites are within the general project location; however, none of them will be affected by this undertaking. The data recorded for the two isolated artifacts found in highly disturbed ROW contexts exhausted their information potential. They are not eligible for the National Register of Historic Places. No archaeological sites were found. This project will have no effect on the archaeology of the village, the region, or the state.

3.4 SOCIOECONOMICS

Area wise, Bernalillo County, New Mexico is the smallest county in the state; however, it contains Albuquerque, the largest city in the state. In the year 2000, the state had 1,819,046 residents; of this total, 556,678 people resided in Bernalillo County (U.S.

Census Bureau 2002). Albuquerque dominates the economic climate of the central part of the state. Many of the residents living in the county east side of the Sandia Mountains, including residents of Tijeras, commute to Albuquerque on a daily basis for employment. 13.3 percent of American citizens have incomes below the poverty level. In comparison, 19.3 percent of all New Mexicans and 14.6 percent of residents in Bernalillo County are below the poverty level. The proposed Tijeras municipal water system reflects the improving economic strength of the town and would improve living conditions for all residences by supplying safe and dependable municipal water. The installation of municipal water lines would have an insignificant but positive effect on the socioeconomic base of the town. The no-action alternative would have no effect on the socioeconomic climate of Tijeras

3.5 ENVIRONMENTAL JUSTICE

Executive Order 12898 (Environmental Justice) requires “to the greatest extent practicable and permitted by law, and consistent with the principles set forth in the report on the national Performance Review, each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies and activities on minority populations and low-income populations...” The municipal water system would provide water service to all residents of the Village of Tijeras regardless of socioeconomic status. The construction would not disrupt or displace any residential or commercial structures. The work has been reviewed for compliance with this order and it has been determined that the no-action and the planned action would not adversely affect the health or environment of minority or low-income residents.

3.6 WETLANDS AND FLOODPLAINS

Executive Order 11990 (Protection of Wetlands) requires the avoidance, to the extent possible, of long- and short-term adverse impacts associated with the destruction, modification, or other disturbances of wetland habitats. Tijeras Canyon Arroyo is the primary drainage feature within the project area. Construction would not impact the channel, wetlands, or floodplain of the arroyo.

Executive Order 11988 (Floodplain Management) provides Federal guidance for activities within the floodplains of inland and coastal waters. Preservation of the natural values of floodplains is of critical importance to the nation and the State of New Mexico. Federal agencies are required to “ensure that its planning programs and budget requests reflect consideration of flood hazards and floodplain management.” No floodplain development is likely to result from this project. All construction work would occur outside of the Tijeras Arroyo floodplain. The no-action and planned work would not adversely affect the floodplain of this drainage feature.

3.7 CUMULATIVE EFFECTS OF THE PROJECT

The National Environmental Policy Act defines cumulative effects as "...the impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions regardless of what agency (Federal or non-Federal) or person undertakes such other actions." There would be no change in local land use resulting from the construction of the planned project. The new water line would service existing residences and establishments and is not designed to promote real estate development of unimproved land within the Village of Tijeras. However, the availability of municipal water would make the Village a more attractive location to establish a private residence or commercial business. Existing human uses of the area serviced by the water line would not be impacted by the proposed project. Supplying potable water to the users would ensure the health and safety of the local populace. This benefit would not be realized with the no-action alternative.

Although Phases III-C and III-D of the municipal water system would be constructed in the future, there are no other known future planned federal actions within the Village of Tijeras. Even so, if Federal funding and engineering assistance are requested for the anticipated work, the typical construction corridor would be confined to existing road shoulders or other areas altered by urban development resulting in insignificant, if any, cumulative impacts to the environment. The no-action and the preferred Phase III-B alternatives would have no significant adverse cumulative effects on the physical, biological, or cultural resources of the area when considered with other activities affecting the surrounding natural or human environment regardless of the entity accomplishing the work.

IV. CONCLUSIONS AND SUMMARY

The U.S. Army Corps of Engineers, Albuquerque District, in cooperation with the Village of Tijeras, Bernalillo County, New Mexico, is planning a project that would construct a municipal water line to supply potable water to a portion of the town. The rehabilitation work would be conducted under Section 593 of the Water Resources Development Act of 1966 (Public Law 99-662; 33 U.S.C. *et seq.*), as amended. The act authorizes the Corps to provide assistance in the form of design and construction for water-related environmental infrastructure and resource protection and development projects in central New Mexico. The Village of Tijeras is the project sponsor.

The proposed action evaluated in this Environmental Assessment addresses the method and potential effects of the installation of a municipal water line. With the exception of the positive benefits of the planned action to public health and safety and the increased desirability of living in the Village of Tijeras associated with a reliable source of potable water to users, the effects of the proposed action are similar to the no-action alternative. In consideration of this information, the effects of the proposed action and the no action alternative would not significantly affect the quality of the human environment in the area.

V. PREPARATION, CONSULTATION AND COORDINATION

5.1 PREPARERS

Peter K. Doles, B.S. Civil Engineering - Project Manager; 23 years experience with USACE

Ernest Jahnke, M.S. Biology, P.W.S. – Biologist; 25 years experience with USACE

John Schelberg, Ph.D. Archaeology – Archeologist; 20 years experience with USACE

Molzen-Corvin & Associates, Albuquerque, New Mexico Engineering/Design Village of Tijeras, New Mexico – Project Sponsor

5.2 CONSULTATION AND COORDINATION

Agencies and entities contacted formally or informally in preparation of this Draft Environmental Assessment include:

U.S. Fish and Wildlife Service

New Mexico Environmental Department

Village of Tijeras

New Mexico Division of Game and Fish

New Mexico Highways and Transportation

New Mexico State Historic Preservation Office

New Mexico Department of Energy, Minerals, and Natural Resources

Consultation correspondence with the State Historic Preservation Office is included in Appendix A.

Appendix B contains the Biological Coordination, agency and public responses to the proposed work, and Corps responses to comments and recommendations.

A legal notice requesting public comment on the Draft Environmental Assessment and Finding of No Significant Impact for the proposed project was published in English and Spanish in the *Albuquerque Journal* on October 15, 2002. In addition the DEA was posted on the Albuquerque District Corps of Engineers website at <http://www.spa.usace.army.mil> for a 30 day comment period from October 15, 2002 through November 14, 2002.

VI. BIBLIOGRAPHY

Brown, David E. ed. (1982). (Special Issue) Biotic Communities of the American Southwest – United States and Mexico. Published by the University of Arizona for the Boyce Thompson Southwestern Arboretum. 342 pp.

Cordell, Linda S., Editor. 1980. Tijeras Canyon, Analyses of the Past. Maxwell Museum of Anthropology and the University of New Mexico Press. Albuquerque.

Corps of Engineers. 2002. Draft Environmental Assessment. Village of Tijeras, Phase III-B Water System. Tijeras, Bernalillo County, New Mexico. On file, Albuquerque, New Mexico.

Federal Register. 1995. Bald eagle reclassification.

New Mexico Environmental Department (NMED). 1996. New Mexico Air Quality. 20 pp.

New Mexico Game and Fish (NMGF). 2002. New Mexico Game and Fish BISON-M. Biota Information of New Mexico. <http://www.nmnhp.unm.edu/bisonm/bospmqieru.php>.

U.S. Census Bureau. 2002. State and county Quickfacts. <http://www.quickfacts.census.gov/qfd/states>.

U. S. Department of Agriculture (USDA). 1973. Soil survey of Bernalillo county and parts of Sandoval and Valencia Counties, New Mexico. 101 pp.

Western Regional Climate Center (WRCC). 2002. Temperature and precipitation summaries - Tijeras Ranger Station, New Mexico. <http://www.wrcc@dri.edu>.

Williams, Jerry L, ed. 1986. New Mexico in maps. 409 pp.

APPENDIX A
CULTURAL RESOURCES COORDINATION



DEPARTMENT OF THE ARMY
ALBUQUERQUE DISTRICT, CORPS OF ENGINEERS
4101 JEFFERSON PLAZA, NE
ALBUQUERQUE, NEW MEXICO 87109-3435
FAX (505) 342-3199

October 10, 2002

Engineering and Construction Division
Environmental Resources Branch

Ms. Jan Biella
Acting, State Historic Preservation Officer
New Mexico State Historic Preservation Bureau
228 East Palace Avenue, Room 320
Santa Fe, New Mexico 87501

Dear Ms. Biella:

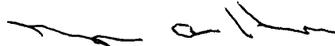
Pursuant to 36 CFR Part 800, the U. S. Army Corps of Engineers (Corps), Albuquerque District, is seeking your concurrence in our determination that there will be No Historic Properties Affected as a result of the proposed construction of water lines within the village of Tijeras, New Mexico. The proposed water line construction will be funded through Section 593 of the Water Resources Development Act of 1999. This Section provides authority for the Corps to enter into cost sharing agreements in Bernalillo, Sandoval, and Valencia Counties in New Mexico. Assistance can be design, construction, or protection of water supply or wastewater treatment facilities. The enclosed cultural resources survey report provides exact locations for each water line segment, the locations of known sites within proximity of the undertaking, and the results of the archaeological survey. With the exception of two isolated Pueblo II - Pueblo III sherds no archaeological material was discovered.

On 21 June 2002, two archaeologists from the Corps conducted a Class III archaeological inventory survey of approximately 4,564 m (14,975 feet) within existing rights-of-way of 10 road segments and one undisturbed segment crossing a steep rocky ridge. The rights-of-way (ROW) widths varied from 3 to 4.6 meters (10 to 15 feet) adjacent to the existing roads. The ROW was 15.2 meters (50 feet) for the segment across the ridge. A total of 2.6 hectares (6.7 acres) was surveyed. Of this total, 2 hectares (5.2 acres) were previously disturbed roadside rights-of-way and 0.6 hectares (1.5 acres) were undisturbed land crossing the ridge.

Searches of the NMHPD Archaeological Records Management Section database, found that 13 archaeological sites occur in the vicinity of the proposed water lines. With the exception of Tijeras Pueblo, all are small, mostly special-use sites consisting of sherd scatters and isolated rooms. Three sites are close to various water line segments but each is protected from project-related impacts by unique, location specific, conditions. LA 15169 is to the south of the NM 333 ROW and on top of a small hill; the water line will be below the hill. LA 12844, if it still exists, is to the north of the NM 333 ROW and between Interstate 40 and NM 333; the water line will be south of the ROW. LA 1279 is south of several houses south of the NM 333 ROW; the houses are between the water line and the site. Based on this information, the Corps is of the opinion that there will be no effect to the cultural resources of New Mexico.

Should previously undiscovered cultural resources be encountered during any construction operation, construction would cease in the immediate vicinity of the resource until its significance and disposition have been evaluated, in consultation with your office pursuant to 36 CFR 800.11. If you have any questions or require additional information, please contact John D. Schelberg of my staff at (505) 342-3359.

Sincerely,



Julie A. Hall
Chief, Environmental Resources

Branch

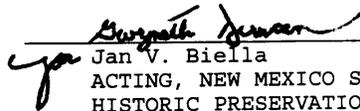
Enclosure

Copy Furnished w/o enclosure:

Don Klima, Director
Advisory Council on Historic Preservation
Office of Planning and Review
12136 W. Bayaud Ave., #330
Lakewood, Colorado 80228-2115

November 22, 2002
Date

I CONCUR


Jan V. Biella
ACTING, NEW MEXICO STATE
HISTORIC PRESERVATION
OFFICER

APPENDIX B

BIOLOGICAL RESOURCES COORDINATION



GARY E. JOHNSON
GOVERNOR

State of New Mexico
ENVIRONMENT DEPARTMENT

Office of the Secretary
Harold Runnels Building
1190 St. Francis Drive, P.O. Box 26110
Santa Fe, New Mexico 87502-6110
Telephone (505) 827-2855
Fax (505) 827-2836



JOHN D'ANTONIO, Jr.
SECRETARY

November 12, 2002

Ernie Jahnke
U.S. Army Corps of Engineers
Albuquerque District
Attn: CESPAC-EC-R
4101 Jefferson Plaza, NE
Albuquerque, NM 87109-3435

FAX: (505) 342-3199

Dear Mr. Jahnke:

RE: VILLAGE OF TIJERAS, PHASE III-B WATER SYSTEM, TIJERAS, BERNALILLO COUNTY, NM

The New Mexico Environment Department (NMED) staff reviewed the information on the above-referenced project included in your October 10, 2002 correspondence to the Department.

Based on that information the review indicates that the proposed project does not appear to conflict with New Mexico's environmental statutes or regulations at this time. We are confident, if reasonable construction practices are used, that the projects will not produce significant environmental effects.

The NMED recommends, however, that all construction projects utilize appropriate Best Management Practices (BMPs) to control or prevent the discharge of pollutants (primarily sediment, oil & grease, and construction materials from construction sites) in storm water from the site. In addition, NMED requires that concrete, asphalt and other such materials be properly disposed of (i.e., not in or adjacent to any watercourse, including dry arroyos).

Finally, please note that while the Department's Drinking Water Bureau (DWB) finds no public health concerns with the concept of the proposed construction, the project will need to comply with the current DWB/NMED regulations, including submittal of construction plans and specifications to DWB, before a public health approval can be issued for its construction.

We appreciate the opportunity to comment on this project.

Sincerely,

A handwritten signature in black ink, appearing to read "Gedi Cibas".

Gedi Cibas, Ph.D.
Environmental Impact Review Coordinator

NMED File No. 1662ER



DEPARTMENT OF THE ARMY
ALBUQUERQUE DISTRICT, CORPS OF ENGINEERS
4101 JEFFERSON PLAZA, NE
ALBUQUERQUE, NEW MEXICO 87109-3435
FAX (505) 342-3199

October 10, 2002

Engineering and Construction Division
Environmental Resources Branch

RECEIVED
2002/10/33
OCT 16 2002

Ms. Joy Nicholopoulos
Field Supervisor
U.S. Fish and Wildlife Service
New Mexico Ecological Services Field Office
2105 Osuna NE
Albuquerque, New Mexico 87113

USFWS-NMESFO

Dear Ms. Nicholopoulos:

In accordance with the Fish and Wildlife Coordination Act and Section 7 of the Endangered Species Act, enclosed are two copies of the Draft Finding of No Significant Impact and Environmental Assessment (EA) entitled, **Village of Tijeras, Phase III-B Water System, Tijeras, Bernalillo County, New Mexico**. Please review this document and submit your **comments by close of business November 14, 2002**.

If you have any questions or require additional information, please contact Mr. Ernest Jahnke at (505) 342-3416.

Sincerely,

Julie A. Hall
Chief, Environmental Resources Branch

Enclosure

NO EFFECT FINDING	
The described action will have no effect on listed species, wetlands, or other important wildlife resources.	
Date	<u>Oct 23, 2002</u>
Consultation #	<u>2-22-03-I-026</u>
Approved by	<u>Brian Henner</u>
U.S. FISH and WILDLIFE SERVICE NEW MEXICO ECOLOGICAL SERVICES FIELD OFFICE ALBUQUERQUE, NEW MEXICO	

GOVERNOR
Gary E. Johnson



DIRECTOR AND SECRETARY
TO THE COMMISSION
Larry G. Bell

STATE OF NEW MEXICO
DEPARTMENT OF GAME & FISH

One Wildlife Way
P.O. Box 25112
Santa Fe, NM 87504

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Causey, NM
Ray Westall
Loco Hills, NM

October 22, 2002

Julie A. Hall
Department of the Army
Albuquerque District, Corps of Engineers
4101 Jefferson Plaza NE
Albuquerque, NM 87109-3455

Re: Village of Tijeras, Phase III-B Water System, Tijeras, Bernalillo County, New Mexico
NMGF No. 8110

Dear Ms. Hall,

In response to your letter dated October 10, 2002 regarding the above referenced project, the Department of Game and Fish (Department) does not anticipate significant impacts to wildlife or sensitive habitats. For your information, we have enclosed a list of sensitive, threatened and endangered species which occur in Bernalillo County.

For more information on listed and other species of concern, contact the following sources:

1. <http://fwic.fw.vt.edu/states/nm.htm>
2. <http://nmnhp.unm.edu/bisonm/bisonquery.php>
3. New Mexico State Forestry Division (505-827-5830) for state-listed plants
4. U.S. Fish and Wildlife Service (505-346-2525) for federally listed wildlife species and critical habitats.

Thank you for the opportunity to review and comment on your project. If you have any questions, please contact me at 505-476-8115 or mwatson@state.nm.us.

Sincerely,

Handwritten signature of Mark L. Watson in cursive script.

Mark L. Watson, Habitat Specialist
Conservation Services Division

MW/ttd

xc: Joy Nicholopolous (New Mexico Ecological Services, USFWS)
Luke Shelby (NW Area Operations Chief, NMGF)

Ecl.

New Mexican Wildlife of Concern - Bernalillo County Page 1 of 2

Common Name	SCIENTIFIC NAME	FWS. NM.		FS. BLM. NM.		FWS.	
		ESA	WCA	R3	NM	Sen	SOC
Rio Grande Chub	<i>Gila pandora</i>	-	-	-	-	S	-
Rio Grande Silvery Minnow	<i>Hybognathus amarus</i>	E	g(hm)	E	S	-	-
Flathead Chub	<i>Platygobio gracilis</i>	-	-	-	S	-	S
Northern Leopard Frog	<i>Rana pipiens</i>	-	-	S	-	-	-
Desert Kingsnake	<i>Lampropeltis getula splendida</i>	-	-	S	-	-	-
Texas Longnose Snake	<i>Rhinocheilus lecontei</i>	-	-	S	-	-	-
Desert Massasauga	<i>Sistrurus catenatus edwardsii</i>	-	-	S	-	-	-
Clark's Grebe	<i>Aechmophorus clarkii</i>	-	-	S	-	-	-
Neotropic Cormorant	<i>Phalacrocorax brasilianus</i>	-	T	S	-	-	-
American Bittern	<i>Botaurus lentiginosus</i>	-	-	S	-	-	-
Least Bittern	<i>Ixobrychus exilis exilis</i>	-	-	S	-	-	-
Snowy Egret	<i>Egretta thula brewsteri</i>	-	-	S	-	-	-
Green Heron	<i>Butorides virescens</i>	-	-	S	-	-	-
Black-crowned Night Heron	<i>Nycticorax nycticorax hoactli</i>	-	-	S	-	-	-
White-faced Ibis	<i>Plegadis chihi</i>	-	-	S	S	-	S
Osprey	<i>Pandion haliaetus carolinensis</i>	-	-	S	-	-	-
Mississippi Kite	<i>Ictinia mississippiensis</i>	-	-	S	-	-	-
Bald Eagle	<i>Haliaeetus leucocephalus</i>	T	mg	T	S	-	-
Northern Goshawk	<i>Accipiter gentilis</i>	-	-	S	S	S	S
Common Black-hawk	<i>Buteogallus anthracinus anthracinus</i>	-	T	S	-	-	-
Swainson's Hawk	<i>Buteo swainsoni</i>	-	-	S	-	-	-
Zone-tailed Hawk	<i>Buteo albonotatus</i>	-	-	S	-	-	-
Ferruginous Hawk	<i>Buteo regalis</i>	-	-	S	S	-	S
American Peregrine Falcon	<i>Falco peregrinus anatum</i>	m	T	S	-	-	-
Sora	<i>Porzana carolina</i>	-	-	S	-	-	-
Whooping Crane	<i>Grus americana</i>	E	mg	E	S	-	-
Western Snowy Plover	<i>Charadrius alexandrinus nivosus</i>	-	-	S	-	-	-
Mountain Plover	<i>Charadrius montanus</i>	PT	-	S	-	S	-
Black-necked Stilt	<i>Himantopus mexicanus</i>	-	-	S	-	-	-
Long-billed Curlew	<i>Numenius americanus americanus</i>	-	-	S	-	-	-
Black Tern	<i>Chlidonias niger surinamensis</i>	-	-	S	-	-	S
Yellow-billed Cuckoo	<i>Coccyzus americanus occidentalis</i>	CW	-	S	-	-	-
Flammulated Owl	<i>Otus flammolus</i>	-	-	S	-	-	-
Burrowing Owl	<i>Athene cucularia hypugaea</i>	-	-	S	-	-	S
Mexican Spotted Owl	<i>Strix occidentalis lucida</i>	T	(h)mg	S	-	S	-
Black Swift	<i>Cypseloides niger borealis</i>	-	-	S	-	-	-
White-eared Hummingbird	<i>Hylocharis leucotis borealis</i>	-	T	S	-	-	-
Belted Kingfisher	<i>Ceryle alcyon</i>	-	-	S	-	-	-
Southwestern Willow Flycatcher	<i>Empidonax traillii extimus</i>	E	h	E	S	-	-
Buff-breasted Flycatcher	<i>Empidonax fulvifrons pygmaeus</i>	-	-	S	-	-	S
Loggerhead Shrike	<i>Lanius ludovicianus</i>	-	-	S	-	-	S
Bell's Vireo	<i>Vireo bellii</i>	-	T	S	-	-	-
Gray Vireo	<i>Vireo vicinior</i>	-	T	S	-	-	-
Gray Catbird	<i>Dumetella carolinensis ruficrissa</i>	-	-	S	-	-	-
American Redstart	<i>Setophaga ruticilla tricolora</i>	-	-	S	-	-	-
Baird's Sparrow	<i>Ammodramus bairdii</i>	-	T	S	S	-	S
Western Small-footed Myotis Bat	<i>Myotis ciliolabrum melanorhinus</i>	-	-	-	S	S	S
Yuma Myotis Bat	<i>Myotis yumanensis yumanensis</i>	-	-	-	S	S	S
Occult Little Brown Myotis Bat	<i>Myotis lucifugus occultus</i>	-	-	S	S	S	S
Long-legged Myotis Bat	<i>Myotis volans interior</i>	-	-	-	S	S	S
Fringed Myotis Bat	<i>Myotis thysanodes thysanodes</i>	-	-	-	S	S	S
Spotted Bat	<i>Euderma maculatum</i>	-	T	S	S	-	S

New Mexican Wildlife of Concern - Bernalillo County Page 2 of 2

Common Name	SCIENTIFIC NAME	FWS ESA	NM WCA	FS R3	BLM NM	NM Sen	FWS SOC
Pale Townsend's Big-eared Bat	<i>Plecotus townsendii pallescens</i>	-	-	S	S	S	S
Big Free-tailed Bat	<i>Nyctinomops macrotis</i>	-	-	-	S	S	S
Gunnison's Prairie Dog	<i>Cynomys gunnisoni</i>	-	-	-	-	S	-
Botta's Pocket Gopher	<i>Thomomys bottae connectens</i>	-	-	-	-	S n	-
New Mexican Jumping Mouse	<i>Zapus hudsonius luteus</i>	-	T	S	S	-	S
Red Fox	<i>Vulpes vulpes</i>	-	-	-	-	S	-
Ringtail	<i>Bassariscus astutus</i>	-	-	S	-	S	-
Western Spotted Skunk	<i>Spilogale gracilis</i>	-	-	-	-	S	-
Rocky Mountain Bighorn Sheep	<i>Ovis canadensis canadensis</i>	-	-	S	-	■	-
Socorro Mountainsnail	<i>Oreohelix neomexicana</i>	-	-	-	-	S n	-
Pearly Checkerspot Butterfly	<i>Charidryas acastus acastus</i>	-	-	-	-	-	S
Slate Millipede	<i>Comanchelus chihuanus</i>	-	-	-	S	S	S

NATIVE WILDLIFE APPARENTLY NO LONGER OCCURRING IN BERNALILLO COUNTY

Shovelnose Sturgeon	<i>Scaphirhynchus platyrhynchus</i>	(extirpated from NM)					
Longnose Gar	<i>Lepisosteus osseus</i>						
Speckled Chub	<i>Macrhybopsis aestivalis aestivalis</i>						
Rio Grande Shiner	<i>Notropis jemezianus</i>						
Phantom Shiner	<i>Notropis orca</i>	(extinct)					
Rio Grande Bluntnose Shiner	<i>Notropis simus simus</i>	(extinct)					
Blue Catfish	<i>Ictalurus furcatus</i>						
Blue Sucker	<i>Cypleptus elongatus</i>						
Gray Redhorse	<i>Moxostoma congestum</i>						
Freshwater Drum	<i>Aplodinotus grunniens</i>	(extirpated from NM)					
Arizona Black-tailed Prairie Dog	<i>Cynomys ludovicianus arizonensis</i>						
Gray Wolf	<i>Canis lupus</i>						
Grizzly Bear	<i>Ursus arctos</i>	(extirpated from NM)					
Black-footed Ferret	<i>Mustela nigripes</i>	(extirpated from NM)					
Hink	<i>Mustela vison energumens</i>	(extirpated from NM)					
Common Hog-nosed Skunk	<i>Conepatus mesoleucus</i>						
Merriam's Elk	<i>Cervus elaphus merriami</i>	(extinct)					
Ovate Vertigo Snail	<i>Vertigo ovata</i>						

TRENCHING GUIDELINES

NEW MEXICO DEPARTMENT OF GAME AND FISH

November 1994

Open trenches and ditches can trap small mammals, amphibians and reptiles and can cause the injury of large mammals. Periods of highest activity for many of these species include night time, summer months and wet weather. Loss of wildlife can be minimized by implementing the following recommendations.

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

State-wide there are 41 threatened, endangered or sensitive species potentially at risk by trenching operations, as shown below (Source: 11/01/94 query of Biota Information System of New Mexico, version 2.5). Risk to these species depends upon a wide variety of conditions at the trenching site, such as trench depth, side slope, soil characteristics, season, and precipitation events.

Trenching Guidelines

Department of Game and Fish

AMPHIBIANS (9 species)

Sacramento Mountain Salamander	<i>Aneides hardii</i> (C2,ST)
Jemez Mountains Salamander	<i>Plethodon neomexicanus</i> (C2,ST)
Colorado River Toad	<i>Bufo alvarius</i> (ST)
Western Boreal Toad	<i>Bufo boreas boreas</i> (C2,SE)
Arizona Southwestern Toad	<i>Bufo microscaphus microscaphus</i> (C2)
Spotted Chorus Frog	<i>Pseudacris clarkii</i> (SE)
Great Plains Narrowmouth Toad	<i>Gastrophryne olivacea</i> (SE)
Chiricahua Leopard Frog	<i>Rana chiricahuensis</i> (C2)
Lowland Leopard Frog	<i>Rana yavapaiensis</i> (C2,SE)

REPTILES (15 species)

Rio Grande River Cooter	<i>Pseudemys concinna gorzugi</i> (ST)
Reticulate Gila Monster	<i>Heloderma suspectum suspectum</i> (SE)
Texas Horned Lizard	<i>Phrynosoma cornutum</i> (C2)
Dunes Sagebrush Lizard	<i>Sceloporus graciosus arenicolous</i> (ST)
Bunch Grass Lizard	<i>Sceloporus scalaris slevini</i> (SE)
Mountain Skink	<i>Eumeces callicephalus</i> (ST)
Giant Spotted Whiptail	<i>Cnemidophorus burti stictogrammus</i> (C2,SE)
Gray-checked Whiptail	<i>Cnemidophorus dixonii</i> (C2,SE)
Blotched Water Snake	<i>Nerodia erythrogaster transversa</i> (ST)
Mexican Garter Snake	<i>Thamnophis eques megalops</i> (C2,SE)
Arid Land Ribbon Snake	<i>Thamnophis proximus diabolicus</i> (ST)
Narrowhead Garter Snake	<i>Thamnophis rufipunctatus</i> (C2,ST)
Green Rat Snake	<i>Senticolis triaspis intermedia</i> (ST)
Mottled Rock Rattlesnake	<i>Crotalus lepidus lepidus</i> (ST)
New Mexico Ridgenose Rattlesnake	<i>Crotalus willardi obscurus</i> (FT,SE)

MAMMALS (17 species)

Arizona Shrew	<i>Sorex arizonae</i> (C2,SE)
Least Shrew	<i>Cryptotis parva parva</i> (ST)
Goat Peak Pika	<i>Ochotona princeps nigrescens</i> (C2)
White-sided Jack Rabbit	<i>Lepus callotis gaillardi</i> (C2,ST)
Peñasco Least Chipmunk	<i>Tamias minimus atristriatus</i> (SE)
Organ Mts. Colorado Chipmunk	<i>Tamias quadrivittatus australis</i> (C2,ST)
Arizona Black-tailed Prairie Dog	<i>Cynomys ludovicianus arizonensis</i> (C2)
Cebolleta Southern Pocket Gopher	<i>Thomomys bottae paguatae</i> (C2)
Guadalupe Southern Pocket Gopher	<i>Thomomys bottae gaudalupensis</i> (C2)
Mearns' Southern Pocket Gopher	<i>Thomomys bottae mearnsi</i> (C2)
Southern Pocket Gopher	<i>Thomomys umbrinus emotus</i> (ST)
Hot Springs Cotton Rat	<i>Sigmodon fulviventer goldmani</i> (C2)
Yellow-nosed Cotton Rat	<i>Sigmodon ochrognathus</i> (C2)
White Sands Wood Rat	<i>Neotoma micropus leucophaea</i> (C2)
Arizona Montane Vole	<i>Microtus montanus arizonensis</i> (SE)
Meadow Jumping Mouse	<i>Zapus hudsonius luteus</i> (C2,ST)
Black-footed Ferret	<i>Mustela nigripes</i> (FE)

KEY TO STATUS:

- FE Federal endangered
- FT Federal threatened
- C1 Federal candidate, group 1
- C2 Federal candidate, group 2
- SE State endangered
- ST State threatened

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October 10, 2002

Engineering and Construction Division
Environmental Resources Branch

Mayor Gloria Chavez
Village of Tijeras
Post Office Box 9
Tijeras, New Mexico 87059

Dear Mayor Chavez:

Enclosed is a copy of the Draft Finding of No Significant Impact and Environmental Assessment (DEA/FONSI) entitled *Village of Tijeras, Phase III-B Water System, Tijeras, Bernalillo County, New Mexico*. The Corps is sending this letter and the DEA/FONSI and requesting comments from those who may have a direct interest in the project (a mailing list is attached for your information). Each addressee may distribute copies of the DEA/FONSI as they deem necessary. All recipients are requested to review the documents and provide written comments to:

Mr. Ernie Jahnke
U.S. Army Engineer District, Albuquerque
Attn: CESPAPMLE
4101 Jefferson Plaza, NE
Albuquerque, New Mexico 87109-3435

The Corps requests that responses be returned within 30 days or less; therefore, replies should be submitted **no later than November 14, 2002**, so that we may incorporate comments, if necessary, and complete National Environmental Policy Act compliance

If you have any questions or need additional information please contact Mr. Jahnke at telephone (505) 342-3416.

Sincerely,

Julie Hall, Chief
Environmental Resources Section

Enclosure

Draft Environmental Assessment and Finding of No Significant Impact for the Village of Tijeras 593– Mailing List

Project Sponsor:

Mayor Gloria Chavez
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Tijeras, New Mexico 87059

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