Draft

Environmental Information Document

Wastewater System Improvements
Village of Jemez Springs, New Mexico

Prepared for

Village of Jemez Springs, New Mexico

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1. Purpose of and Need for Project

Daniel B. Stephens & Associates, Inc. (DBS&A) has prepared this environmental information document (EID) for proposed wastewater system improvements for the Village of Jemez Springs (the Village). The proposed project is located south of the Village within Sandoval County, New Mexico (Figure 1). The existing wastewater treatment plant (WWTP) currently receives and treats the entirety of the Village's wastewater.

1.1 Background

In April 2023, the Jemez River overbanked and flooded due to a higher than usual spring runoff of snowpack melting from the headwaters of the river, causing a major line break on the sewer interceptor just upstream of the plant and resulting in flows over 300,000 gallons per day (gpd). That incident and subsequent closed-caption television (CCTV) inspection of sewers revealed deficiencies in the sewer system, such as root intrusion, sags in the sewer lines, rocks in sewer lines, and eroded manholes.

As a result, the Village is in the process of evaluating alternatives to upgrades the wastewater collection system and WWTP, including each component of the plant: lift station, preliminary treatment, sequencing batch reactors, chemical dosing, disinfection, and sludge handling.

The proponent of the project is the Village.

DBS&A has prepared this EID in compliance with the 1969 National Environmental Policy Act (NEPA), the New Mexico Environment Department (NMED) Construction Programs Bureau (CPB) environmental review process guidance (approved by the U.S. Environmental Protection Agency [U.S. EPA] December 15, 2005 and revised January 8, 2014), and other applicable guidelines and regulations. The EID has been prepared to support funding applications for the Jemez Springs wastewater system improvements. Financial assistance, including loans and grants, is being sought from various agencies, including the NMED CPB, which administers the Clean Water State Revolving Fund (CWSRF). The EID has been prepared in support of the preliminary engineering report (PER) that has developed alternatives that will address the needs of the Village wastewater system.

1.2 Project Description

1.2.1 Location

The Village is located in north-central New Mexico, approximately 60 miles north of Albuquerque (Figure 1). The Village is in Sandoval County, and is located directly north of Jemez Pueblo. The WWTP is located adjacent to New Mexico Highway 4 (NM 4), milepost (MP) 14.5, approximately 3 miles south of the Village center. The wastewater collection system covers an area approximately 3.5 miles in length, starting north of the Village center south to the WWTP. The Village is within the Canon de San Diego land grant; therefore, it is not part of the U.S. Township and Range system. The wastewater system is shown on USGS topographic quadrangle maps for Jemez Springs, NM and Ponderosa, NM (Figure 2).

1.2.2 Project Overview

The wastewater system that serves the Village is a gravity sewer collection system that conveys wastewater to the south end of the system to the WWTP. The collection system is thought to date back to the 1960s. The WWTP consists of a sequencing batch reactor (SBR), which was put into service in 2004. Treated wastewater is discharged to the Jemez River. Raw wastewater flows by gravity through the collection system to a wet well at the head of the treatment plant, entering the SBR for treatment. Following treatment, ferric chloride dosing is provided for additional phosphorus removal. Under normal circumstances, the volume of treated water is at approximately half of the capacity of the WWTP. The existing sewer lines were installed in the 1960s, with expansions and repairs made periodically over past 50 years. The existing WWTP was installed in 2004 and an improvements project was completed in 2010.

The proposed project is currently being evaluated as part of the PER; if funding is approved by NMED CPB, construction would be expected to begin in August 2025.

1.3 Purpose and Need for Project

The purpose of the proposed project is to improve the existing WWTP by installing upgrades that will replace malfunctioning, deteriorated, undersized, and outdated features of the plant and collector system. The purpose is also to clear out debris and repair the damage caused to the system from the floods of 2023. Upgrades would provide more permanent solutions to wastewater management by updating and increasing capacity that would be capable of handling sudden, increased flows caused by flooding in the future.

There is a general need for the project, as the collection system and WWTP are aged and in need of renewal. In addition, the snowpack runoff flooding of 2023 overwhelmed the capacity of the system, causing untreated wastewater to flow into the Jemez River. The untreated wastewater overflows and disruption of the WWTP resulted in contamination of the river that impacted wildlife and human health. The flooding was caused by higher than usual winter precipitation that rapidly melted during the spring runoff season. Due to the proximity of the Village and the WWTP and collector system to the Jemez River, this is an ongoing threat with the potential for flooding to occur in any given year. The fluctuation of flows due to seasonal flooding or storm events will continue to impact the plant's efficiency and ability to treat wastewater within the limits of their National Pollutant Discharge Elimination System (NPDES) permit. There is therefore a need to upgrade the infrastructure and increase the capacity of the wastewater system to prevent a recurrence of the April 2023 system breakdown.

2. Alternatives

The PER describes five alternatives:

- Alternative 1: No Action
- Collection Alternative 2: Rehabilitate Critical Areas of the Sanitary Sewer Collection System
- Collection Alternative 3: Replace the Existing Sanitary Sewer Collection System
- WWTP Alternative 2: Renovate Critical Components of the Existing WWTP
- WWTP Alternative 3: Replace the Existing WWTP with a New Treatment System

The recommended alternative (Proposed Action) is a combination of Collection Alternative 2 and WWTP Alternative 2. The Proposed Action will be noted as Alternative 2 in this EID.

This section describes the alternatives for upgrades to the Jemez Springs WWTP and collection systems, with the new required components of the proposed project as described above. This EID examines both Alternative 1 (No Action) and Alternative 2 (the Proposed Action) in relation to potential environmental impacts.

Collection Alternative 3 and WWTP Alternative 3 were not recommended as part of the PER due to higher associated cost and access issues that limit the feasibility of replacing the collection

system. These alternatives are not further evaluated in this EID unless specifically noted in a topic section.

Alternatives 1 and 2 are described in more detail in the following subsections.

2.1 Alternative 1: No Action Alternative

Under the No Action alternative, no upgrades to the Village wastewater system would be completed. The WWTP would continue to see a fluctuation of flows due to seasonal flooding or storm events, which would continue to impact the plant's efficiency and ability to treat wastewater within the limits of their NPDES permit. The sanitary sewer collection system would continue to have frequent breaks and infiltration, and the WWTP's aging infrastructure would continue to deteriorate and operate inefficiently, increasing the need for repairs. The Village will be impacted financially and negative impacts to the environment would continue to occur.

2.2 Alternative 2: Rehabilitate Critical Areas of the Sanitary Sewer Collection System and Renovate Critical Components of the Existing WWTP (Proposed Action)

Alternative 2 (Proposed Action) consists of renovating the existing WWTP and rehabilitating the collection system to improve the level of treatment, improve the solids handling, and provide laboratory and office space for operations personnel. This alternative also includes improvements to the ultraviolet (UV) treatment system and aeration equipment.

The Proposed Action includes the following:

- Cleaning and CCTV inspection of the sanitary sewer collection system
- Rehabilitation of high risk areas and critical components of the sanitary sewer collection system using trenchless methods, including spiral wound pipe lining and pipe bursting
- Rehabilitation of existing manholes that are in critical condition or risk exposure to the environment and Jemez River using the following repair methods:
    - Repair method A: Replace cover, frame, and seal, including internal/external waterproof seal.
    - Repair method B: Make frame height adjustment and replace cover, frame, and seal, including internal/external waterproof seal.

  - Repair method C: Clean and remove roots, and grout and seal leaks and cracks, including waterproof sealant.
  - Repair method D: Reestablish flow channels, bench, pipe connections, and reseal, including waterproof sealant.
  - Repair method E: Apply waterproof coating, including all interior surfaces of the manhole.
- Waterproofing of all manholes located in the floodplain
- Replacement of undersized sewer mains with 8-inch polyvinyl chloride (PVC)
- Influent screening and trash removal, including new concrete wet well, trash grinder, auger monster for trash removal, and small enclosure to protect the lift station and components
- New equipment in the existing SBR tanks
- Sludge dewatering equipment consisting of a new belt filter press
- New buildings to include office space, laboratory, ferric chloride dosing equipment, and belt filter press
- New security fencing around the property
- Electrical improvements to reduce power outages, improve equipment operation, and reduce electricity consumption

3. Affected Environment/Environmental Consequences

The Jemez Springs WWTP and collector system is located in the Village of Jemez Springs, Sandoval County, New Mexico (Figure 1). It is an existing system that services the Village, and is Village-owned and maintained.

Sections 3.1 through 3.12 detail the affected environment of the Project Area for the Proposed Action and the potential environmental consequences of implementing the Proposed Action. Significance is the tool used in evaluations of environmental consequences to determine whether a more intensive study might be required. As in NEPA documentation, the significance of any consequences—adverse or beneficial—is based here on context and intensity. The

following subsections discuss the effects of the recommended project on a resource and whether mitigation measures will be implemented to lessen the significance of an effect. The relationship between short-term benefits and the long-term impact on preserving and enhancing the environmental resources, including commitment of any irreversible and irretrievable resources, are discussed in the following subsections.

3.1 Environmental Setting

The Village is located in the Jemez Mountains along NM 4. The Jemez River runs northeast to southwest on the west side of NM 4 through the extents of the Village. The elevation ranges from approximately 6,200 to 6,250 feet above mean sea level (feet msl) from south to north through the Village. The Project Area is within Sedimentary Mid-Elevation Forests, an ecoregion consisting of low mountain ridges, slopes, and outwash fans. Coursing through are moderate- to high-gradient perennial streams with boulder, cobble, and bedrock substrates (Griffith et al., 2006).

Vegetation of this region includes mostly ponderosa pine forest, including some areas with pinyon pine or junipers. Understory may include Gambel oak, mountain mahogany, antelope bitterbrush, and wood rose. Grasses include mountain muhly, junegrass, Arizona fescue, pine dropseed, and various sedges. Vegetation along the banks of the Jemez River consists mostly of willow (*Salix* spp.) grasses, common horsetail (*Equisetum arvense*), and cottonwood (*Populus deltoides* ssp. *Wislizeni*), with sporadic occurrences of Russian olive (*Elaeagnus angustifolia*) and salt cedar (*Tamarix* sp.), imported to the area for ornamentation and erosion control respectively (USFS, 2007).

Weather is characterized by a cool semiarid climate (WRCC, 2020). Summers are considered mild to warm during the day, and nights are cooler. This region is in a semiarid to subhumid climate. Most of the annual precipitation occurs during the summer in the form of afternoon thunderstorms. Average annual precipitation ranges from 16 to 29 inches (Griffith et al., 2006). In summer (July), average high and low temperatures are 78°F and 44°F, respectively. In winter (January), average high and low temperatures are 37°F and 10°F, respectively, with snow common and sometimes heavy.

The Jemez Springs WWTP and collector system are located near or adjacent to the Jemez River, a tributary of the Rio Grande. The river is perennial, approximately 50 miles long, and is formed by the confluence of the San Antonio Creek and East Fork Jemez River. The two tributary

streams join near Battleship Rock in Cañon de San Diego, north of the Village. From there the river flows south through the Village, Jemez Pueblo, and eventually to the Rio Grande.

Land use of the area consists of recreational, private and public land, livestock grazing, some timber harvesting, and wildlife habitat. The Village is located in the Jemez River Valley and is a tourist destination with natural hot springs, restaurants, shops, lodging, and part- and full-time residences.

Land outside of the Village is a mix of private and public land managed by the U.S. Forest Service. Tribal land belonging to Jemez Pueblo is located approximately 6 miles south of the WWTP.

3.2 Land Use

3.2.1 General Land Use

The Proposed Action is within the Village of Jemez Springs. Land within the Village includes private property used primarily for residential use and business use based on a tourism and recreational economy. The Village owns and operates the WWTP and collection system. The Proposed Action would temporarily impact land use by potentially causing road closures around sanitary sewer lines or manholes. Long-term effects would be insignificant. Construction at the Jemez Springs WWTP would be phased such that no impacts to the use of the plant would occur during construction. The Proposed Action measures would not change land use. No impact, short-term or long-term, would be expected on land use under the No Action alternative.

Because all construction would occur within the roadway right-of-way (ROW) and Village easements, no residential properties would be altered or displaced. Coordination with private businesses and residences in areas of construction outside of the WWTP would be conducted by the Village. Coordination with the New Mexico Department of Transportation (NMDOT) Utilities Section would be conducted for permits and approvals for construction if work occurs in NM 4. Construction crews would maintain access to businesses during the project as necessary.

3.2.2 Growth and Population Trends

As of 2020, the population of the Village was 198, a drop from the estimated population in 2010 of 339 (USCB, 2023). The Village's population dropped from 339 residents in 2010 to 272 in 2015, and then further declined to an estimated 198 residents in 2020 (USCB, 2023).

The WWTP upgrades would provide service for the existing population and are not related to growth; therefore, the Proposed Action would have no effect on the population trends of the future.

3.2.3 Important Farmland

Important farmlands consist of prime farmland, unique farmland, and farmland of statewide or local importance (7 CFR 657.5, 2019). Prime farmland is land that has the best combination of physical and chemical characteristics for producing food, feed, forage, fiber, and oilseed crops, and is available for these uses. The land can be cropland, pastureland, rangeland, forest land, or other land, but not urban built-up land or water. Criteria for defining and delineating farmlands of statewide importance for the production of food, feed, fiber, forage, and oil seed crops are determined by the appropriate state agency or agencies. In some local areas, there is concern for certain additional farmlands for the production of food, feed, fiber, forage, and oilseed crops, even though these lands are not identified as having national or statewide importance.

The Natural Resources Conservation Service (NRCS) was contacted for input on the project and a response is pending.

No important farmlands exist within the Proposed Action area; therefore, the Proposed Action would have no short-term or long-term impacts (NRCS, 2023).

3.2.4 Soils

A desktop review of soils in the area of the Jemez Springs WWTP and collector system showed the following soil series within the Jemez River Valley, listed in order from most abundant to least abundant: Walrees-Abiquiu complex, Jaralosa very fine sandy loam, Zia-San Mateo association, and Wauquie-Vibo complex (Figure 3) (NRCS, 2023).

Walrees-Abiquiu soils are found on swales (Walrees) or stream terraces (Abiquiu) on slopes of 0 to 2 percent. The parent material is stream alluvium derived from sandstone and shale. The soil is somewhat poorly drained, with a profile that ranges from a clay loam/fine sandy loam from 0 to 4 inches, silty clay loam (Walrees)/loamy sand (Abiquiu) from 4 to 23 inches, and a gravelly sand from 23 to 60 inches (Walrees)/stratified extremely cobbly coarse sand to extremely gravelly sand (Abiquiu) 17 to 60 inches. The ecological complex associated with this soil type is riverine ripairian.

Jaralosa very fine sandy loam is found on floodplain steps on valley floors where there are slopes of 0 to 2 percent. The parent material is micaceous alluvium derived from sandstone and siltstone over alluvium derived from granite and/or gneiss and/or schist. The soil is moderately well-drained, with a profile that ranges from a very fine sandy loam from 0 to 1 inches, loamy very fine sand from 1 to 6 inches, very fine sandy loam from 6 to 10 inches, very fine sandy loam from 10 to 16 inches, loamy very fine sand from 16 to 22 inches, very fine sandy loam from 22 to 35 inches, gravelly sand and gravelly coarse sand from 35 to 42 inches, very gravelly coarse sand from 42 to 53 inches, and very gravelly coarse sand from 53 to 84 inches.

The third prominent soil type, Zia-San Mateo association, is found on alluvial fans (Zia) and floodplains, valley sides, alluvial fans (San Mateo). The parent material is eolian deposits over fan alluvium derived from sandstone (Zia) and stream alluvium derived from sandstone and shale (San Mateo). The soil association is well-drained with a profile is fine sandy loam from 0 to 3 inches (Zia)/sandy loam from 0 to 7 inches (San Mateo) and fine sandy loam from 3 to 60 inches (Zia)/clay loam from 7 to 60 inches (San Mateo).

Some of the soils contain very fine particles. When disturbed, the fine particles can be picked up by the wind; these conditions may require control measures (i.e., wetting, sediment fences, or wattles) during the construction phase of the project.

The scope of the Proposed Action includes construction at the Jemez Springs WWTP, which is in an area of highly disturbed ground. Very little construction would occur on previously undisturbed ground, as most of the construction would be within the existing Jemez Springs WWTP, roadway ROW, and utility easements. Construction on undisturbed ground could potentially include parking of construction vehicles or temporary storage of construction material such as dirt from trenching. Pipeline construction would be designed so that temporarily disturbed areas will be returned to pre-construction elevations and native, weed-free vegetation will be reseeded if needed. Boring technology may be used in some areas that would create very little ground disturbance. Best management practices (BMPs) for erosion control will be in place to mitigate construction impacts. With BMPs and mitigation measures, there would be minimal short-term impacts from temporary disturbance and no long-term impacts.

No impact on soils would be expected under the No Action alternative.

3.2.5 Formally Classified Lands

The Jemez Historic Site (formerly Jemez State Monument) is located at the north end of the Village on the east side of NM 4. It is a state-operated historic site that preserves the archaeological remains of the 16th century Native American Gíusewa Pueblo and the 17th century Spanish colonial mission called San José de los Jémez. In addition, the Valles Caldera National Preserve (Preserve) administrative offices are located within the area of the Jemez Springs collector system. While there are other historic sites within the Village, such as the Jemez Hot Springs, no other formally classified lands, including national parks, landmarks, historic sites, wilderness areas, wildlife refuges, wild and scenic rivers, grasslands, state parks, and Native American owned lands, occur in the footprint of the Proposed Action.

If any work is proposed in the area of the state monument, the Village will coordinate with the New Mexico Department of Cultural Affairs and the Preserve administration. For the New Mexico Department of Cultural Affairs, an e-mail was sent to Elizabeth Stone, Regional Manager, and then Marlon Magdalena for comment. For the Preserve, an e-mail was sent to Ranger Sierra for comment. Responses are pending.

Manholes and sewer lines may be rehabilitated in the area of the state monument and the Preserve administrative buildings, and a short-term impact due to ground disturbance at the existing collector system would occur. Long-term benefits would be that an upgraded sewer system would be in place for the facilities.

No impact would be expected on formally classified lands under the No Action alternative.

3.3 Floodplains

The Jemez Springs WWTP and collector system are located within the Jemez River Valley, parallel to and near the Jemez River. The Federal Emergency Management Agency (FEMA) National Flood Hazard Layer (NFHL), a database that contains current effective flood hazard mapping data, shows the southern portion of the treatment plant in a Special Flood Hazard Area subject to inundation by the 1 percent annual chance flood (FEMA, 2008) (Figure 4).

The Sandoval County Floodplain Administrator was contacted and a response is pending.

Because the Proposed Action would mainly take place on existing developed spaces (i.e., roadway ROW and utility easements) and the Project Area floodplain would be returned to existing elevations and conditions following completion, the Proposed Action is expected to

have minimal short-term impacts due to ground disturbance, but no long-term impact on floodplains.

No impacts to floodplains would be expected under the No Action alternative.

3.4 Wetlands

A desktop review identified two types of wetlands and one type of riparian habitat within the area of the Proposed Action (Figure 5):

- *Riverine, Upper Perennial, Rock Bottom, Permanently Flooded (R3RBH)*. The U.S. Fish and Wildlife Service (USFWS) National Wetlands Inventory map shows the Jemez River as within this designation (USFWS, 2023). The riverine system includes all wetlands and deepwater habitats contained within a channel. The designation defines a channel as an open conduit either naturally or artificially created that periodically or continuously contains moving water, or that forms a connecting link between two bodies of standing water.
- *Freshwater Forested/Shrub Wetland (PFO1A)*. The wetland map shows a few areas adjacent to the Jemez River with this designation. It is a palustrine system that includes all non-tidal wetlands dominated by trees, shrubs, persistent emergents, emergent mosses or lichens, and all such wetlands that occur in tidal areas where salinity due to ocean-derived salts is below 0.5 parts per trillion (ppt). It also includes wetlands lacking such vegetation, but with all of the following four characteristics: (1) area less than 8 hectares (20 acres), (2) active wave-formed or bedrock shoreline features lacking, (3) water depth in the deepest part of basin less than 2.5 meters (8.2 feet) at low water, and (4) salinity due to ocean-derived salts less than 0.5 ppt. It is forested, characterized by woody vegetation that is 6 meters tall or taller and within the subclass broad-leaved deciduous, or woody angiosperms (trees or shrubs) with relatively wide, flat leaves that are shed during the cold or dry season. This system's water regime is "temporary flooded" or surface water is present for brief periods (from a few days to a few weeks) during the growing season, but the water table usually lies well below the ground surface for the most of the season.
- *Forested/Shrub Riparian (PFO1A)*. The wetland map shows several areas outside of the Jemez River corridor with this designation. This is not a designated wetland, but a riparian zone dominated by cottonwood trees.

The designated wetlands would be outside of the area of construction. There were no designated wetlands in the WWTP property, and the collector system would be outside of the Jemez River channel.

The Jemez River watershed would not be affected by the Proposed Action. Any disturbed ground would be brought back to the same elevation. No dredge or fill would occur within U.S. Army Corps of Engineers (USACE) jurisdictional Waters of the U.S. as delineated by the ordinary high water mark. No long-term impacts to wetlands or Waters of the U.S. would therefore occur as a result of the Proposed Action or under the No Action alternative.

USACE was contacted for input on potential impacts from the Proposed Action, and they responded that if any work is conducted within a jurisdictional water, coordination with the agency would be required and permitting would be necessary.

3.5 Water Resources

3.5.1 Surface Water

The Jemez River serves as a perennial surface water source in the Project Area. The river flows in a generally southern direction between the Jemez Mountains and the Nacimiento Mountains to join the Rio Grande a few miles north of Bernalillo. Treated wastewater from the WWTP is released into the Jemez River. A variety of springs throughout the area also serve as perennial surface water sources.

The Proposed Action would protect surface water resources by repairing manholes and upsizing collector pipes as necessary to help reduce the risk of another accidental release of untreated sewage water into the Jemez River. The Proposed Action would therefore have a positive, long-term impact on surface water.

A request for input was sent to the NMED Surface Water Quality Bureau and a response is pending.

Under the No Action alternative, the infrastructure would continue to age and deteriorate leading to an increased potential for an accidental release of untreated or partially treated sewage water into the Jemez River. The No Action alternative would therefore have a negative effect on surface water.

3.5.2 Groundwater

The Jemez Mountains have both thermal and nonthermal groundwater. The principal reservoir of geothermal fluids is under the central and western parts of the Valles Caldera. Nonthermal groundwater in Valles Caldera occurs in both perched aquifers and deeper valley-fill aquifers. Subsurface escape of reservoir fluid from near and beneath Valles Caldera forms a discharge plume of reservoir water mixed with dilute groundwater, which extends down Canon de San Diego. The Jemez Fault Zone transports a relatively large portion of this flow. Near Jemez Pueblo, subsurface mineral water merges with the regional aquifer deposits of the Albuquerque Basin. The most extensive and productive aquifer in the region is the thick sequence of valley-fill deposits and interbedded volcanic rocks underlying the Pajarito Plateau on the east side of the mountain mass. The caldera contains both thermal and nonthermal groundwater, and both types discharge from the caldera to the southwest, which follows the trace of the Jemez Fault Zone. The principal geothermal aquifer in the region is located under the central and western parts of the caldera. Water from the more extensive principal aquifers in the valley fill also discharges as spring flow and seepage to the principal stream sources (US DOI, 2000).

While no groundwater is used by the treatment plant, under the Proposed Action, improving and upgrading the treatment plant and collector system would help reduce the risk of future flooding or plant upsets, mitigating the potential for untreated or undertreated wastewater seeping into and contaminating groundwater sources, which could have significant downstream impact. Minor impacts to groundwater would include encountering a shallow groundwater table during manhole rehabilitation or replacement of infrastructure.

A request for input was sent to the NMED Ground Water Quality Bureau (GWQB) and a response is pending.

Under the No Action alternative, no improvements or upgrades would be completed. The risk of flooding, plant upsets due to aging infrastructure, and the release of untreated or undertreated wastewater would continue to present a threat to groundwater resources. The No Action alternative would therefore have a negative, long-term direct effect on groundwater resources.

3.6 Coastal Resources

As specified in 40 CFR 6.302(d) and (f), all federal activities in coastal areas are required to be consistent with approved State Coastal Zone Management Programs. No coastal zones occur in New Mexico.

3.7 Air Quality

The Clean Air Act (CAA) of 1970 mandated that the U.S. EPA establish a list of pollutants for the purpose of establishing national primary and secondary ambient air quality standards. National ambient air quality standards (NAAQS) have been promulgated for six pollutants: carbon monoxide (CO), lead (Pb), ozone (O_3), particulate matter with an aerodynamic diameter less than or equal to 10 microns (PM10), nitrogen dioxide (NO_2), and sulfur dioxide (SO_2). The fundamental method by which U.S. EPA tracks compliance with the NAAQS is through the designation of attainment, nonattainment, maintenance, or unclassifiable areas. If an area is designated as "nonattainment," the corresponding state must develop a State Implementation Plan (SIP) that details the path to attain and maintain the NAAQS.

Sandoval County is currently designated by U.S. EPA as an attainment area for all air pollutants identified in the NAAQS (U.S. EPA, 2023b). The ambient air quality in the area is good, as there are no significant contributing factors other than traffic on NM 4. Occasional high wind conditions may cause increased particulate transport, resulting in moderate to high particulate pollution. Overall, air quality in the area is very good.

BMPs will be implemented to mitigate any demolition, construction, rehabilitation, repair, dredging or filling activities that would have the potential to emit air pollutants. Furthermore, construction and waste disposal activities will be conducted in accordance with applicable local, state, and federal statutes and regulations. If asbestos-cement pipe exists in any disturbed areas and any portions of the existing systems are demolished or removed for replacement or capacity expansion, an asbestos survey will be conducted by a qualified professional. All asphalt, concrete, quarrying, crushing, and screening facilities contracted in conjunction with the Proposed Action will have current and proper air quality permits. If any equipment that is powered by diesel, gasoline, or natural gas engines that exceeds 10 pounds per hour (10 tons per year) is used during the project, the NMED Air Quality Bureau (AQB) Permitting Section will be contacted to determine if a permit is required. In addition, all disturbed areas will be reclaimed following construction completion to avoid long-term problems with erosion and fugitive dust. With the BMPs implemented in accordance with NMED requirements to mitigate

air quality issues, the Proposed Action would have no short-term or long-term impacts on air quality.

U.S. EPA Region 6 was contacted for input on potential air quality effects of implementing the Proposed Action and a response is pending.

A request for input was also sent to the NMED AQB and a response is pending.

The No Action Alternative would have no significant effect on air quality.

3.8 Biological Resources

3.8.1 Vegetation

The GAP/LANDFIRE National Terrestrial Ecosystems, a highly thematically detailed land cover map, was used for vegetation cover of the Project Area. The land cover map is produced by the U.S. Geological Survey (USGS) in collaboration with the LANDFIRE Program (USGS, 2022). Land cover of the Jemez Springs WWTP and collector system is primarily low-intensity development with scattered areas of Western Great Plains Riparian Woodland and Shrubland and Pasture/Hay through the valley area. Outside of the valley, the most common ecoregion vegetation community is Southern Rocky Mountain Pinyon-Juniper Woodland (Figure 6) (USGS, 2004). These land cover classifications (or ecoregions) are described in the following subsections.

3.8.1.1 Developed, Low Intensity

This designation includes areas with a mixture of constructed materials and vegetation. Impervious surfaces account for 20-49 percent of total cover. These areas most commonly include single-family housing units.

3.8.1.2 Western Great Plains Riparian Woodland and Shrubland

This system is found in the riparian areas of medium and small rivers and streams throughout the Western Great Plains. It is likely most common in the Shortgrass Prairie and Northern Great Plains Steppe, but extends west and as far as the Rio Grande in New Mexico and into the Wyoming Basins in the north. It is found on alluvial soils in highly variable landscape settings, from deep cut ravines to wide, braided streambeds. Hydrologically, these sites tended to be more prone to flash floods with less developed floodplains than on larger rivers, and may dry down completely for some portion of the year. Dominant vegetation shares much with generally drier portions of larger floodplain systems downstream, but overall abundance of

vegetation is generally lower. Communities within this system range from riparian forests and shrublands to gravel/sand flats. Dominant species include valley cottonwoods (*Populus deltoides*), willows (*Salix* spp.), silver sagebrush (*Artemisia cana* ssp. *Cana*), western wheat grass (*Pascopyrum smithii*), switchgrass (*Panicum virgatum*), vine mesquite, (*Panicum obutsum*), sand dropseed (*Sporobolus cryptandrus*), and little bluestem (*Schizachyrium scoparium*). These areas are often subjected to heavy grazing and/or agriculture and can be heavily degraded. Salt cedar (*Tamarix* spp.), Russian olive (*Elaeagnus angustifolia*), and less desirable grasses and forbs can invade degraded examples up through central Colorado. Groundwater depletion and lack of fire have resulted in additional species changes.

3.8.1.3 Pasture/Hay

Areas of grasses, legumes, or grass-legume mixtures planted for livestock grazing or the production of seed or hay crops, typically on a perennial cycle. Pasture/hay accounts for greater than 20 percent of total vegetation.

3.8.1.4 Southern Rocky Mountain Pinyon - Juniper Woodland

This southern Rocky Mountain woodland group occurs on dry mountains and foothills in southern Colorado east of the Continental Divide, in mountains and plateaus of northern and central New Mexico, and extends east on breaks in the southeastern Great Plains. The vegetation is characterized by pinyon pine (*Pinus edulis*) that dominates or co-dominates the tree canopy with one-seed juniper (*Juniperus monosperma*). One-seed juniper may dominate stands provided pinyon pine is present with significant cover. Rocky Mountain juniper (*Juniperus scopulorum*) may co-dominate or replace one-seed juniper at higher elevations. Understory layers are variable and may be dominated by shrubs, graminoids, or be absent. Common species include Begelow sagebrush (*Artemisia bigelovii*), mountain mahogany (*Cercocarpus montanus*), Apache plume (*Fallugia paradoxa*), Gambel's oak (*Quercus gambelii*), live oak (*Quercus x pauciloba*), and grasses such as western needlegrass (*Achnatherum nelsonii*), Scribner needlegrass (*Achnatherum scribneri*), blue grama (*Bouteloua gracilis*), Arizona fescue (*Festuca arizonica*), or galleta (*Pleuraphis jamesii*). Stands in this group are found on mountain slopes, mesas, plateaus, and ridges. Severe climatic events occurring during the growing season, such as frosts and drought, are thought to limit the distribution of pinyon-juniper woodlands to relatively narrow altitudinal belts on mountainsides. Elevationally, stands typically occur above the one-seed juniper-only dominated woodlands and savannas. Stands range from near 1,500 to 2900 meters msl with high-elevation stands restricted to relatively warm, dry

ridges and south and west aspects. Soils vary in texture, ranging from stony, cobbly, gravelly sandy loams to clay loam or clay.

In the Proposed Action, construction disturbance would primarily occur in developed region. It would be focused within the boundaries of the existing treatment plant and along the existing collector system. The majority of the treatment plant is already disturbed ground and clearing for construction and heavy equipment usage and access would largely be confined to existing disturbed and trafficked areas. The sewer line rehabilitation would also be mostly confined to existing roadways. Short-term and long-term disturbance to existing native vegetation will therefore be negligible. Any areas disturbed outside of existing disturbed areas, by activities such as parking or staging of construction vehicles, will be reseeded as necessary with a native vegetation seed mix that is certified to be weed-free.

3.8.2 Wildlife

Mammals occurring in the Jemez River Valley would include species that occur in the riparian woodlands and surrounding pinyon-juniper woodlands. Species would typically include small mammals such as bats, squirrels, chipmunks, shrews, mice, gophers, rats, voles, rabbits, raccoon, and skunks, as well as larger mammals such as elk (*Cervus canadensis*), mule deer (*Odocoileus hemionus*), gray fox (*Urocyon cinereoargenteus*), red fox (*Vulpes vulpes*), mountain lion (*Puma concolor*), black bear (*Ursus americanus*), coyote (*Canis latrans*), and bobcat (*Lynx rufus*) (Brown and Lowe, 1977; Brown, 1982).

Resident and migratory birds expected in the area include northern flicker (*Colaptes auratus*), dark-eyed junco (*Junco hyemalis*), red-breasted, white-breasted, and pygmy nuthatches (*Sitta canadensis*, *S. carolinensis*, *S. pygmaea*), western meadowlark (*Sturnella neglecta*), Stellar's and pinyon jay (*Cyanocitta stelleri, Gymnorhinus cyanocephalus*), common raven (*Corvus corax*), American kestrel (*Falco sparverius*), northern harrier (*Circus cyaneus*), bald eagle (*Haliaeetus leucocephalus*), mourning dove (*Zenaida macroura*), lazuli bunting (*Passerina amoena*), black-headed grosbeak (*Pheucticus melanocephalus*), several species of hawks, woodpeckers, warblers, vireos, sapsuckers, flycatchers, wrens, swallows, sparrows, owls, and numerous others (Brown, 1982; U.S. DOI, 2023).

Reptiles, amphibians, and fish occurring in the area include smooth greensnake (*Opheodrys vernalis*), wandering terrestrial garter snake (*Thamnophis elegans vagrans*), plateau lizard (*Sceloporus tristichus*), greater short-horned lizard (*Phrynosoma hernandesi*), many-lined skink (*Eumeces multivirgatus*), tiger salamanders (*Ambystoma tigrinum*), Rio Grande sucker

(*Catostomus plebeius*), Rio Grande chub (*Gila pandora*), rainbow trout (*Oncorhynchus mykiss*), and brown trout (*Salmo trutta*) (U.S. DOI, 2023)

Construction would be contained within the existing wastewater treatment plant and existing collector system, with a potential for small areas of undisturbed ground to be disturbed by construction vehicle parking or temporarily stored construction material. The direct effects (permanent and temporary) of the Proposed Action to non-listed species would include short-term noise increase and ground disturbance during construction. Noise disturbance during construction could affect wildlife in the Project Area. While much of the Project Area is within previously disturbed ground, excavation and earthwork for new structures could disturb vegetation that may provide habitat for wildlife including bird species, most of which are protected under the Migratory Bird Treaty Act. The project has the potential to impact migratory birds, particularly if construction occurs during the nesting season. If construction activities take place during the migratory bird nesting season (March 15 through September 15), a pre-construction nesting bird survey of the Project Area should be completed; if occupied nests are found, they must be avoided until the young have fledged. Following these guidelines, the project would comply with the requirements of the Migratory Bird Treaty Act and should not cause harm or harassment to migratory birds.

The New Mexico Department of Game and Fish (NMDGF) Environmental Review Tool was used as part of the evaluation of impacts on wildlife (NMDGF, 2023). The following paragraphs present recommendations from the tool based on the project location and scope.

Rodent burrows and other underground dens may be disturbed within the Project Area. Besides rodents and other mammals, snakes, lizards, and birds might be present in the area and use burrows in the area; if so, they could be affected during construction. Heavy equipment usage and access would largely be confined to existing roadway surfaces; therefore, disturbance and impact to wildlife habitat from the movement of heavy equipment would be negligible.

Burrowing owl (*Athene cunicularia*) may occur within the project area. Before any ground disturbing activities occur, a preliminary burrowing owl survey will be conducted by a qualified biologist using the NMDGF burrowing owl survey protocol. Should burrowing owls be documented in the project area, the NMDGF or USFWS will be contacted for further recommendations regarding relocation or avoidance of impacts.

If caves, mines, bridges, or other man-made structure suitable as potential bat roosts are encountered within the Proposed Action area, they should not be entered during any time of

year, and no roosting or hibernating bats should be contacted or disturbed. Any dead or injured bats will be reported to the NMDGF, who can facilitate contacts with other appropriate personnel.

Prairie dog colonies may occur within the vicinity of your project area. Both black-tailed prairie dogs (*Cynomys ludovicianus*) and Gunnison's prairie dogs (*Cynomys gunnisoni*) are designated as New Mexico Species of Greatest Conservation Need, and their colonies provide important habitat for other grassland wildlife. Wherever possible, occupied prairie dog colonies should be left undisturbed, and all project activities should be directed off the colony. Any burrows that are located on the project site should be surveyed by a qualified biologist to determine whether burrows are active or inactive and whether burrowing owls may be using the site.

The Proposed Action occurs within or near a riparian area. Because riparian areas are important wildlife habitats, the project footprint will avoid removing any riparian vegetation or creating ground disturbance either directly within or affecting the riparian area.

The Proposed Action occurs within an area where springs or other important natural water features occur. This may result in the presence of a high use area for wildlife relative to the surrounding landscape. To ensure continued function of these important wildlife habitats, the Proposed Action will include measures to avoid the following.

- Altering surface or groundwater flow or hydrology
- Disturbance to soil that modifies geomorphic properties or facilitates invasion of non-native vegetation
- Affecting local surface or groundwater quality
- Creating disturbance to wildlife utilizing these water features. Disturbance to wildlife can be reduced through practices including clustering infrastructure and activity wherever possible, avoiding large visual obstructions around water features, and limiting nighttime project operations or activities

Best management practices will include, at minimum, the following mitigation measures:

- Whenever possible, locate trenching activities within previously disturbed areas, such as existing road or pipeline ROW. To the extent possible, avoid trenching in undisturbed habitat.

- Trench during the cooler months (October through March).
- Use concurrent trenching, pipe- or cable-laying, and backfilling. Keep trenching, pipe- or cable-laying, and backfilling crews as close together as possible to minimize the amount of open trench at any given time. When trenching activities are temporarily halted (e.g., overnight, weekends, holidays, weather shutdowns), protect wildlife from accessing any open trench between digging and backfilling operations by using one or more of the methods described below.
- Avoid leaving trenches open overnight. When trenches cannot be backfilled immediately, escape ramps should be constructed at least every 90 meters and preferably 30 meters. Escape ramps can be constructed parallel or perpendicular to the existing trench. The escape ramp slope should be less than 45 degrees (1:1). If pipe or cable has been installed but backfilling has not occurred, escape ramps may need to be constructed on both sides of the trench, as, unless the pipe is elevated enough to allow animals to move underneath it, the pipe or cable may block access of amphibians, reptiles, and small mammals to the ramps if only constructed on one side.
- Trenches that have been left open overnight should be inspected the following day by a qualified biological monitor and trapped animals removed as soon as possible, especially where state-listed or federally listed threatened or endangered amphibians, reptiles, or small mammals occur. Untrained personnel should not attempt to remove trapped wildlife because of the potential to injure animals and the possibility of injury from venomous snakes. Required tools for removal will include snake tongs for removing snakes and a dip net for capturing and removing amphibians and small mammals. Many animals trapped in a trench will burrow under loose soil. To the extent possible, the biological monitor should disturb loose soil in the trench to uncover and remove trapped animals. Animals should be relocated at least 50 meters away from the open trench in undisturbed habitat.
- When pipe has been laid in the trench, end caps should be placed on the open end(s) of the pipe to preclude animals from entering. Pipe staged outside the trench should be capped until placed in the trench or checked for wildlife before being placed into the trench.
- Most wildlife can be protected by constructing silt fence completely around the open trench. Silt fence should be supported from sagging by t-posts, rebar, or stakes and buried at the base to preclude animals from moving below the fence. If construction of a silt fence is a required best management practice for erosion control, then, to preclude the need for a biological monitor, escape ramps, and concurrent backfilling, the guidelines for silt fence

installation and maintenance in the trenching project guidelines (Attachment 1) should be followed.

With implementation of the above mitigation measures, no significant long-term impacts are expected following the Proposed Action as a result of the construction. If construction is to take place during the nesting season of statutory migratory birds (March through August), a pre-construction survey would be required under the Migratory Bird Treaty Act to prevent any possible harm to occupied nests and flag them for avoidance.

No impact on wildlife would be expected under the No Action alternative.

3.8.3 Threatened and Endangered Species

Online reports were generated for the polygon corresponding to the Jemez Springs WWTP and collector system using the USFWS Information, Planning and Conservation (IPaC) tool and the NMDGF Biota Information System of New Mexico (BISON-M). The IPaC report (USFWS, 2023c) identified no critical habitat located in the Project Area, but lists a total of 9 federal threatened and endangered species (2 of the 9 are candidate species for federal listing) that should be analyzed for potential impacts (Attachment 2). The nearest designated or proposed critical habitat is for the Mexican spotted owl beyond the project area to the west, in the forested watershed above the canyon walls of the Jemez River. There is also critical habitat to the east, within the forested watersheds beyond the Jemez River Valley (USFWS, 2023a). It was therefore determined that while there is not suitable habitat for the Mexican spotted owl in the Project Area, a potential for the species to occur in the Project Area, but only as an occasional occurrence. Table 1 summarizes the potential for federally listed species to be present in the Project Area.

According to BISON-M, 21 state-listed endangered or threatened animal species have the potential to occur in Sandoval County (NMDGF, 2023) (Attachment 2). Based on records of occurrence and habitat associations, there are three species with potential to occur in the Proposed Action Project Area, however only as a low potential for a vagrant occurrence. Table 2 summarizes the potential for state listed species to be present in the Project Area.

There are 4 state endangered plants within Sandoval County (NMEMNRD 2022). None of the endangered plants would have the potential to occur within the Project Area.

New Mexico Energy, Minerals, and Natural Resources Department (NMEMNRD) Forestry Division Botany Program Coordinator Ms. Erika Rowe was contacted to provide input on the Proposed Action and a response is pending.

No impact on threatened and endangered species would be expected under the Proposed Action or the No Action alternative.

3.9 Archaeological, Cultural, and Historic Resources

Cultural resources are historic properties as defined by the National Historic Preservation Act (NHPA), cultural items as defined by the Native American Graves and Repatriation Act (NAGPRA), archaeological resources as defined by Archaeological Resources Protection Act (ARPA), sacred sites as defined in EO 13007 to which access is afforded under American Indian Religious Freedom Act (AIRFA), and collections and associated records as defined in 36 CFR 79.

The Proposed Action may receive federal funding and would therefore be defined as an undertaking under Section 106 of the National Historic Preservation Act of 1966 (NHPA) (54 U.S.C. §306108) and its implementing regulations (36 CFR Part 800). The project may also receive state funding and as such it must comply with state statutes pertaining to cultural resources, including the New Mexico Cultural Properties Protection Act (18-6A-1 through 18-6A-6 New Mexico Statues Annotated [NMSA] 1978), the New Mexico Cultural Properties Act (18-6-1 through 18-6-17 NMSA, as amended through 2005), and the Prehistoric and Historic Sites Preservation Act (18-8-1 through 18-8-8 NMSA 1978). The methods used for implementing these statutes are outlined in the New Mexico Administrative Code (NMAC). The project will also require a utility ROW permit from the NMDOT; therefore, a survey will need to be completed to meet the standards outlined in the NMDOT Guidelines for Cultural Resource Investigations.

The primary findings of the desktop review are summarized as follows:

- Less than 20 percent of wastewater lines and manhole locations have been previously inventoried for cultural resources. The WWTP has not been previously surveyed for cultural resources.
- Two register-listed properties—the Jemez State Monument (Guisewa) and Jemez Hot Springs Mineral Bath House—are located within the literature review area, but neither is likely to be impacted by wastewater improvements.

- Various historic built environment resources in and around the Village are located in the project vicinity, including historic buildings, structures, and acequias. While these resources are unlikely to be impacted by improvements to existing wastewater infrastructure, other historic buildings and structures could be located along these lines.
- A relatively small number of known archaeological sites are within the literature review area, but this finding is mostly due to a lack of previous inventory. The area has been used historically and prehistorically for thousands of years, and many more archaeological sites may be present.
- Few large block cultural resource inventories have been conducted in the area, making it difficult to evaluate the potential for prehistoric archaeological sites.

Background information indicates that the Jemez Springs wastewater collection lines, manholes, WWTP, and other infrastructure located within the Cañon de San Diego are within an area that has been used by humans for thousands of years. The remnants of these long-term activities include prehistoric pueblo sites, Spanish mission churches, historic acequias and irrigation features, and buildings associated with the early historic settlement of Jemez Springs in the late 1800s and its subsequent development as a premier recreational destination. Despite this long and significant history, little of the area has been inventoried for cultural resources, and past studies have focuses primarily on the NM 4 transportation corridor and specific infrastructure projects in the Village and immediate surroundings (Okun, 2023) (Attachment 3).

As funding sources are identified in the future, consultation with relevant state and federal agencies should be undertaken to identify the level of effort and areas of potential effects (APEs) required for cultural resources. When specific stages of the wastewater project are implemented, Class III pedestrian survey may be required to identify cultural resources and ensure their avoidance and protection, particularly along project segments that have not been previously surveyed. Some general guidance can also be offered at this preliminary stage. First, if feasible, all aboveground buildings should be avoided during project construction, and registered properties should be evaluated for potential effects. Acequias and irrigation features should either be avoided or returned to their current condition using similar materials, and work should be coordinated with irrigation associations. Finally, the WWTP should be inventoried in full for the presence of cultural resources. All activities should be coordinated with the New Mexico State Historic Preservation Office (SHPO), and pedestrian cultural resource surveys should meet the state regulations set forth in §4.10.15 NMAC: Standards for Survey and Inventory.

3.10 Socioeconomics/Environmental Justice

3.10.1 Socioeconomic Issues

The estimated population of the Village of Jemez Springs totals 198, and the median household income (MHI) is $88,125 (USCB, 2023). Demographic data, including income and minority population data for Jemez Springs and, for comparison, the state of New Mexico, are summarized in Table 3.

Economic issues evaluated include business, employment, and socioeconomic conditions. The number of low-income residents in Jemez Springs is lower than in New Mexico as a whole. Social issues that might be affected by the Proposed Action include housing, schools, shops, and tourism. The residents of the village would experience no changes to existing public, recreational, or other land use. Implementation of the Proposed Action would result in a short-term positive direct economic effect due to the creation of construction jobs and additional local spending and revenue during construction. There would also be a long-term positive direct effect from the implementation of the Proposed Action, as it would provide residents with an upgraded, technologically up-to-date wastewater treatment system and collection system that will be able to efficiently process wastewater during future flooding events.

The Proposed Action would improve living conditions in the Village of Jemez Springs by providing a safer, better functioning, and more sustainable wastewater treatment system for residents and businesses.

No short-term impact on socioeconomics would be expected under the No Action alternative. In the long term, however, negative socioeconomic impacts would occur in the service area as the WWTP system would continue to deteriorate, unsafe conditions at the plant would persist, the collector system capacity would not function in a flooding event and the overall service provided to customers would become more problematic as repairs would become more frequent.

3.10.2 Environmental Justice

The potential environmental justice (EJ) consequences of the Proposed Action were evaluated using the EJ View tool to generate data to determine the potential for disproportionate effects on minority and low-income populations (U.S. EPA, 2023a). The EJ report (Attachment 4) shows that the WWTP and collector system and a five-mile ring around the area has higher people of color and lower low-income populations relative to the state of New Mexico, the EPA region,

and the U.S. (Table 4). This contradicts somewhat with the demographic data from the U.S. Census Bureau, but is likely due to the inclusion of the surrounding area and the location of the Jemez Pueblo downstream of the WWTP.

Most EJ demographic indexes for the village are higher than compared to the state of New Mexico, the EPA region, and the U.S. as a whole. No other vulnerability indicators were shown to be above the state or the U.S. in general.

The Proposed Action would have no negative, measurable impact on environmental indicators. The Proposed Action would have a positive long-term impact on the Village and the downstream Jemez Pueblo because the project would ensure that raw sewage would not enter the Jemez River after a flooding event. The Proposed Action would therefore have a beneficial impact on the region in terms of environmental justice.

Under the No Action alternative, people of color and low-income populations of the village would experience the deterioration of wastewater treatment services and unreliable service of increasing severity. The risk of untreated sewage water entering the Jemez River would remain, impacting the community of the Jemez Pueblo. The No Action alternative would therefore have a negative impact on environmental justice.

3.11 Other Resources

3.11.1 Public Health and Safety

Inadvertent generation of regulated asbestos waste is possible during the necessary trenching, excavation, and pipe connection activity. These activities have the potential to impact asbestos-containing materials, such as asbestos-cement pipes (sewer, water or conduit). Suspect pipes, fragments or soils contaminated with related fragments or fines will be sampled and analyzed using polarized light microscopy (PLM) to determine if the materials contain greater than 1 percent asbestos. If so, the pipes, fragments and/or contaminated soils will be managed as regulated asbestos waste according to New Mexico Solid Waste Rules (SWR), 20.9.2 through 20.9.10 NMAC, to include proper containerization, labeling, manifesting, transport by an approved commercial hauler, and disposal at a permitted solid waste facility specifically permitted to accept regulated asbestos waste.

With the required BMPs implemented during construction of the Proposed Action, no short-term impacts would be expected.

The Proposed Action would have a beneficial long-term effect on public health and safety. The Proposed Action would provide an upgraded, technologically up-to-date wastewater treatment system and collector system with an increased capacity that would help reduce the risk of a reoccurrence of untreated wastewater overflow into the Jemez River in the event of future flooding. The Proposed Action would also incorporate more safety measures at the wastewater treatment plant to protect workers. The Proposed Action would therefore have a long-term beneficial effect on public health and safety.

Under the No Action alternative, no improvements would be completed, and the system would continue to deteriorate resulting in an increased risk of untreated wastewater entering the Jemez River impacting the health of humans and wildlife and increased safety issues at the plant. The No Action alternative would therefore have a negative effect on health and safety.

3.11.2 Transportation

Project construction would have a temporary direct effect due to lane or road closures that may be required for the effluent pipe installation within existing roadways. The traffic may be affected along NM 4, but only temporarily. As needed, traffic control plans would be developed and work permits would be obtained during construction from the NMDOT and Sandoval County for any temporary roadway lane closures that may be necessary. No long-term effects on traffic would result from the Proposed Action.

Close coordination with the NMDOT Right of Way Bureau will occur as necessary, and the permit process will be followed and implemented. No long-term impact would occur as a result of the Proposed Action.

No impact on transportation would be expected under the No Action alternative.

3.11.3 Noise

Noise ordinances have been issued for Sandoval County and would be adhered to during construction. No construction activities would occur during nighttime hours (from sunset to sunrise) on any day of the week. With the implementation of this noise BMP during construction, no significant increase in the existing noise level would occur that would be considered unlawful. Following construction completion, no significant direct or indirect noise increase would continue; therefore, the Proposed Action would have no long-term, direct effect related to noise.

No impact on noise levels would be expected under the No Action alternative.

3.12 Cumulative Impacts

The Proposed Action would not have any significant irreversible or irretrievable commitments of resources. The Proposed Action is not anticipated to have a long-term impact on population growth or socioeconomic resources. Therefore, there would be no cumulative impact such as increased wastewater discharge or increased traffic. No other projects are planned that would be related to the Proposed Action. No other past, present, or future activities would be impacted by the Proposed Action; therefore, there is no cumulative effect on any resource anticipated from implementation of the Proposed Action.

4. Summary of Mitigation Measures

Mitigation measures are required to reduce potential environmental impacts until they are no longer significant. No significant impacts are anticipated from the implementation of the proposed project, but some mitigation measures will be implemented, as outlined in the following subsections. Mitigation measures have been developed in large part based on agency comments received following requests for input (Attachment 5). All comments received are included in Attachment 5.

4.1 Land Use

Coordination with private businesses and residences in areas of construction outside of the WWTP will be conducted by the Village. Coordination with the New Mexico Department of Transportation (NMDOT) Utilities Section would be conducted for permits and approvals for construction if work occurs in NM 4. An Environmental Certification for Undertakings within NMDOT Rights of Way will be completed in coordination with the NMDOT Environmental Bureau (Attachment 5). Construction crews would maintain access to businesses during the project as necessary.

4.2 Physical Resources Measures

Physical resources measures include the following:

- In accordance with EPA requirements, BMPs will be implemented to minimize the impact of any air pollutants.
- Construction and waste disposal activities will be conducted in accordance with applicable local, state, and federal statutes and regulations.
- All construction crews will be made aware of notification requirements for accidental discharges as specified at 20.6.2.1203 NMAC and be prepared to properly contain and clean up any accidental discharges.
- Dust control will be implemented with use of construction water.
- Construction activities will be restricted to between 7:00 a.m. and 7:00 p.m. for noise control, in adherence to regulations.
- A stormwater pollution prevention plan (SWPPP) will be implemented per EPA-402 and as required by NMED.
- During excavation, any suspect pipes, fragments, or soils contaminated with related fragments or fines will be sampled and analyzed using PLM to determine if the materials contain greater than 1 percent asbestos in accordance with NMED regulations. If asbestos cement pipe is known or detected, an asbestos survey will be conducted by a qualified professional, and the materials will be managed as regulated asbestos waste according to New Mexico Solid Waste Rules.
- Any asphalt, concrete, quarrying, crushing, and screening facilities contracted in conjunction with the Proposed Action will have current and proper air quality permits in accordance with NMED regulations.
- In accordance with NMED Solid Waste regulations, if more than 120 cubic yards of solid waste from any one contiguous area requires excavation, the Solid Waste Bureau may require submission of a Waste Excavation Plan pursuant to 20.9.2.10.A(15) NMAC.
- In the event that generators, light towers, and other equipment powered by diesel, gasoline, or natural gas engines are used in support of this project, the NMED AQB Permitting Section will be contacted to determine if a permit is required.

Existing roads and right-of-way will be used to the extent possible for construction staging, construction material storage, and vehicle driving.

Erosion control measures will be taken as part of construction BMPs.

4.3 Biological Resources Measures

4.3.1 General

The following measures will be implemented to mitigate construction activities:

- Sewer line or other construction disturbance will be designed such that temporarily disturbed areas will be returned to pre-construction elevations and native vegetation that is certified weed-free will be reseeded if needed and as requested by NMED. Native vegetation will approximate pre-disturbance plant community composition or native plant communities appropriate for the site, including from a region that represents potential future climatic conditions at the site, whichever is more beneficial to wildlife. Short-term erosion control seed mixes are available for temporary control of surface erosion during project implementation. Native mixes should be used for temporary as well as permanent erosion control. Native plants and materials should also be used for landscaping. New Mexico grass ecotypes for commercial seeding are available through the Los Lunas Plant Materials Center and New Mexico State University. Seeding guidelines are available from the Natural Resources Conservation Service and the Colorado Natural Areas Program.
- Divert water around construction site whenever possible. Preserve natural areas within the project site. Strive to maintain the natural drainage system of the site, including natural stream channels, wetlands, and floodplains. Design, construct, and maintain the site to protect (or restore) the natural hydrology.
- A vegetated buffer zone will be maintained along all watercourses, including ephemeral arroyos, sufficient to minimize erosion and sediment delivery.
- Rodent burrows and other underground dens may be disturbed within the Project Area. Besides rodents and other mammals, snakes, lizards, and birds might be present in the area and use burrows in the area; if so, they could be affected during construction. Heavy equipment usage and access would largely be confined to existing roadway surfaces; therefore, disturbance and impact to wildlife habitat from the movement of heavy equipment would be negligible.
- Burrowing owl (*Athene cunicularia*) may occur within the project area. Before any ground disturbing activities occur, a preliminary burrowing owl survey will be conducted by a qualified biologist using the NMDGF burrowing owl survey protocol. Should burrowing owls

be documented in the project area, the NMDGF or USFWS will be contacted for further recommendations regarding relocation or avoidance of impacts.

- If caves, mines, bridges, or other man-made structure suitable as potential bat roosts are encountered within the Proposed Action area, they should not be entered during any time of year, and no roosting or hibernating bats should be contacted or disturbed. Any dead or injured bats will be reported to the NMDGF, who can facilitate contacts with other appropriate personnel.
- Prairie dog colonies may occur within the vicinity of your project area. Both black-tailed prairie dogs (*Cynomys ludovicianus*) and Gunnison's prairie dogs (*Cynomys gunnisoni*) are designated as New Mexico Species of Greatest Conservation Need, and their colonies provide important habitat for other grassland wildlife. Wherever possible, occupied prairie dog colonies should be left undisturbed, and all project activities should be directed off the colony. Any burrows that are located on the project site should be surveyed by a qualified biologist to determine whether burrows are active or inactive and whether burrowing owls may be using the site.
- The proposed project occurs within or near a riparian area. Because riparian areas are important wildlife habitats, the project footprint will avoid removing any riparian vegetation or creating ground disturbance either directly within or affecting the riparian area.
- The Proposed Action occurs within an area where springs or other important natural water features occur. This may result in the presence of a high use area for wildlife relative to the surrounding landscape. To ensure continued function of these important wildlife habitats, the Proposed Action will include measures to avoid the following.
  - Altering surface or groundwater flow or hydrology
  - Disturbance to soil that modifies geomorphic properties or facilitates invasion of non-native vegetation
  - Affecting local surface or groundwater quality
  - Creating disturbance to wildlife using these water features. Disturbance to wildlife can be reduced through practices including clustering infrastructure and activity wherever possible, avoiding large visual obstructions around water features, and limiting nighttime project operations or activities

- Whenever possible, locate trenching activities within previously disturbed areas, such as existing road or pipeline right-of-ways. To the extent possible, avoid trenching in undisturbed habitat.
- Trench during the cooler months (October through March).
- Use concurrent trenching, pipe- or cable-laying, and backfilling. Keep trenching, pipe- or cable-laying, and backfilling crews as close together as possible to minimize the amount of open trench at any given time. When trenching activities are temporarily halted (e.g., overnight, weekends, holidays, weather shutdowns), protect wildlife from accessing any open trench between digging and backfilling operations by using one or more of the methods described below.
- Avoid leaving trenches open overnight. When trenches cannot be backfilled immediately, escape ramps should be constructed at least every 90 meters and preferably 30 meters. Escape ramps can be constructed parallel or perpendicular to the existing trench. The escape ramp slope should be less than 45 degrees (1:1). If pipe or cable has been installed but backfilling has not occurred, escape ramps may need to be constructed on both sides of the trench, since, unless the pipe is elevated enough to allow animals to move underneath it, the pipe or cable may block access of amphibians, reptiles, and small mammals to the ramps if only constructed on one side.
- Trenches that have been left open overnight should be inspected the following day by a qualified biological monitor and trapped animals removed as soon as possible, especially where state-listed or federally listed threatened or endangered amphibians, reptiles, or small mammals occur. Untrained personnel should not attempt to remove trapped wildlife because of the potential to injure animals and the possibility of injury from venomous snakes. Required tools for removal will include snake tongs for removing snakes and a dip net for capturing and removing amphibians and small mammals. Many animals trapped in a trench will burrow under loose soil. To the extent possible, the biological monitor should disturb loose soil in the trench to uncover and remove trapped animals. Animals should be relocated at least 50 meters away from the open trench in undisturbed habitat.
- When pipe has been laid in the trench, end caps should be placed on the open end(s) of the pipe to preclude animals from entering. Pipe staged outside the trench should be capped until placed in the trench or checked for wildlife before being placed into the trench.

- Most wildlife can be protected by constructing silt fence completely around the open trench. Silt fence should be supported from sagging by t-posts, rebar, or stakes and buried at the base to preclude animals from moving below the fence. If construction of a silt fence is a required best management practice for erosion control, then, to preclude the need for a biological monitor, escape ramps, and concurrent backfilling, the guidelines for silt fence installation and maintenance in the trenching project guidelines should be followed (Attachment 1).

4.3.2 Threatened and Endangered Species Measures

No mitigation measures are needed for federal or state threatened and endangered species or state sensitive species. No special-status species are likely to occur other than as a vagrant occurrence in the Project Area.

4.4 Socioeconomic/Environmental Justice Measures

There are no mitigation measures planned for socioeconomic/environmental justice.

4.5 Archaeological, Cultural, and Historic Resources Measures

As funding sources are identified in the future, consultation with relevant state and federal agencies should be undertaken to identify the level of effort and APEs required for cultural resources. When specific stages of the wastewater project are implemented, Class III pedestrian survey may be required to identify cultural resources and ensure their avoidance and protection, particularly along project segments that have not been previously surveyed.

If feasible, all aboveground buildings will be avoided during project construction, and registered properties will be evaluated for potential effects. Acequias and irrigation features will either be avoided or returned to their current condition using similar materials, and work will be coordinated with irrigation associations.

The WWTP should be inventoried in full for the presence of cultural resources. All activities will be coordinated with the New Mexico SHPO, and pedestrian cultural resource surveys will meet the state regulations set forth in §4.10.15 NMAC: Standards for Survey and Inventory.

The Class I desktop records review has been sent to the SHPO. Once Class III pedestrian surveys have been completed, the SHPO will be contacted for concurrence with the findings and determination. Measures will be implemented following guidance for the findings.

4.6 Environmentally Sensitive Areas

The Jemez River is an environmentally sensitive area that parallels the existing sewer lines, manholes and WWTP with some areas of the river within at least 70 feet of the infrastructure. No disturbance of the river from construction will be part of the Proposed Action. BMPs will be implemented to prevent any materials from entering the waterway during construction. There are no other environmentally sensitive areas overlapping with the footprint of the project.

4.7 Other Resources

Impacts on local transportation will be mitigated by the following measures:

- A traffic control plan will be implemented for vehicles, pedestrians, and worker safety.
- The Village of Jemez Springs will follow all requirements to obtain approval of a Utility Permit from NMDOT District 6 Traffic Permit Section as necessary. The NMDOT Environmental Certification for Undertakings within NMDOT Rights of Way will be completed and submitted to the NMDOT per the form instructions (Attachment 5). Sandoval County will be coordinated with as necessary for any work conducted on county roads.

4.8 Cumulative Impact Measures

There are no planned cumulative impact measures.

5. Consultation, Coordination, and Public Involvement

5.1 Agencies Consulted

Agencies were initially contacted on October 11, 2023. In all cases where a response was not received, a follow-up e-mail will be sent after 30 days. Agencies contacted to provide input for potential impacts from the Proposed Action consisted of the following:

- Energy, Minerals, and Natural Resources Department, State Forestry Division, Erica Rowe, State Botanist
- FEMA Region 6, Charles Cook

- CFM for Sandoval County, B. Gomez, Sandoval County Floodplain Administrator
- USDA NRCS (Cuba Office, New Mexico Field Office); Nickolas Goodman, District Conservationist
- Office of State Engineer (OSE) (District 1, OSE Water Rights Division), Wayne Canon
- NMDOT Environmental Bureau, Steven Gisler and Gary Funkhouser
- NMDOT Right of Way Bureau, Angela Sandoval, Operations Section Manager
- NMED Air Quality Bureau, Donna Intermont
- NMED Surface Water Quality Bureau, Shelly Lemon, Bureau Chief
- NMED Ground Water Quality Bureau, Justin Ball, Bureau Chief
- NMED Drinking Water Bureau, Joe Martinez, Bureau Chief
- NMED Petroleum Storage Tank Bureau, Lorena Goerger, Bureau Chief
- New Mexico Historic Preservation Office, Deputy State Historic Preservation Officer and State Archaeologist – *Pending, letter to be sent when cultural resources Class I report is complete*
- USACE, Sarrah Kubinec, Albuquerque District Office
- U.S. EPA Region 6, Office of Communities, Tribes and Environmental Assessment, Jeff Riley
- Sandoval County, Joshua Jones, District 5 County Commissioner
- U.S. Forest Service, Jemez Ranger District, Jeremy Golston
- NM Department of Game and Fish, Ecological and Environmental Planning Division, Jack Marchetti, Aquatic/Riparian Habitat Specialist
- NM Department of Cultural Affairs, Elizabeth Stone
- Valles Caldera Visitor Center, Ranger Sierra

Agency responses received to date are provided in Attachment 5. Agencies were sent a reminder e-mail along with a public meeting announcement on November 14, 2023. Agency outreach documentation is included in Attachment 5.

Agencies consulted for a list of special status species and critical habitats are as follows:

- USFWS via the Environmental Conservation Online System's IPaC tool and Critical Habitat online mapper.
- NMDGF via BISON-M and the NMERT

5.2 Public Involvement

A public meeting will be held at the Village on December 20, 2023. Outreach has been conducted for the meeting, including a meeting notice published in the local newspaper. The notice has also been posted on social media, including the Village FaceBook page, and hard copies have been posted around common areas of the village. Outreach will be documented and included in the final EID. The results of the meeting and a 30-day public comment period will be documented, and any comments received will be included and incorporated in the final EID. Documentation will be included in Attachment 6 of the final document.

5.3 Responsiveness Summary

Letters were sent to agencies according to NMED Construction Programs Bureau EID consultation and coordination guidelines for requesting input on potential impacts from the proposed project and required or recommended mitigation measures. The EPA Source Water Protection Branch was not contacted, as the Proposed Action does not lie over a sole-source aquifer (U.S. EPA, 2022). The agency tracking list and all response letters or comments received are included in Attachment 5. A responsiveness summary of all comments received will be completed and included in the final EID.

References

Brown, D.E. 1982. *Desert plants: Biotic communities of the American Southwest-United States and Mexico*. University of Arizona, Superior, Arizona.

Brown, D.E. and C.H. Lowe. 1977. *Biotic communities of the southwest map*. U.S. Forest Service, Ft. Collins, Colorado.

Federal Emergency Management Agency (FEMA). 2008. National Flood Hazard Layer (NFHL). <https://www.fema.gov/national-flood-hazard-layer-nfhl>.

Griffith, G.E., J.M. Omernik, M.M. McGraw, G.Z. Jacobi, C.M. Canavan, T.S. Schrader, D. Mercer, R. Hill, and B.C.Moran. 2006. *Ecoregions of New Mexico* (color poster with map, descriptive text, summary tables, and photographs). U.S. Geological Survey. Scale 1:1,400,000.

Hubbard, J. P. 1978. *Revised check-list of the birds of New Mexico*. New Mexico Ornithological Society Publ. No. 6. 110 p.

National Park Service. 2021. *Wildlife observations for Bandelier National Monument from 1980-present*.

Natural Resources Conservation Service (NRCS). 2023. Web Soil Survey. Available at <http://websoilsurvey.sc.egov.usda.gov/>. Accessed July 2023.

New Mexico Department of Game and Fish (NMDGF). 2020. *Threatened and Endangered Species of New Mexico. 2020 Biennial Review*. October 16, 2020.

NMDGF. 2023. *Environment habitat handbook: Trenching project guidelines*.

NMDGF. 2023a. *New Mexico Department of Game and Fish Environmental Review Tool*. Project ID: NMERT-2756. Accessed October 2023. <https://nmert.org/>.

NMDGF. 2023b. BISON-M County lists. <http://www.bison-m.org/speciesreports.aspx>. Accessed July 2023.

New Mexico Energy, Minerals, and Natural Resources Department (NMEMNRD). 2023. New Mexico state forestry: Endangered plants by county. <https://www.emnrd.nm.gov/sfd/rare-plants/state-rare-plant-list/>. Accessed August 8, 2023.

New Mexico Wildlife Magazine (NMWM). 2019. *Out of range: White-nosed coatis heading north or just heading home?* April 26, 2019.

Okun Consulting Solutions (Okun). 2023. *Village of Jemez Springs wastewater improvement project cultural resource literature review summary, Sandoval County, New Mexico*. Prepared for Daniel B. Stephens & Associates, Inc. November 2023.

U.S. Census Bureau (USCB). 2023. Census Data, Jemez Springs Village, New Mexico. 2020, 2015 and 2010 Census. <https://data.census.gov/all?q=Jemez+Springs+village,+New+Mexico>. Accessed August 2023.

U.S. Department of the Interior (DOI). 2000. *Geothermal hydrology of Valles Caldera and the Southwestern Jemez Mountains, New Mexico*.

U.S. DOI. 2023. National Park Services Species List for Valles Caldera National Preserve. <https://irma.nps.gov/NPSpecies/Reports/SpeciesList/Species%20Full%20List/VALL/5,2,3,1,4,11/true>. Accessed September 2023.

U.S. Environmental Protection Agency (U.S. EPA). 2020. Green book current nonattainment states for all criteria pollutants. <https://www.epa.gov/green-book>. Accessed July 2023.

U.S. EPA. 2023. EJ View ACS summary report. <https://www.epa.gov/environmentaljustice>. Accessed July 2023.

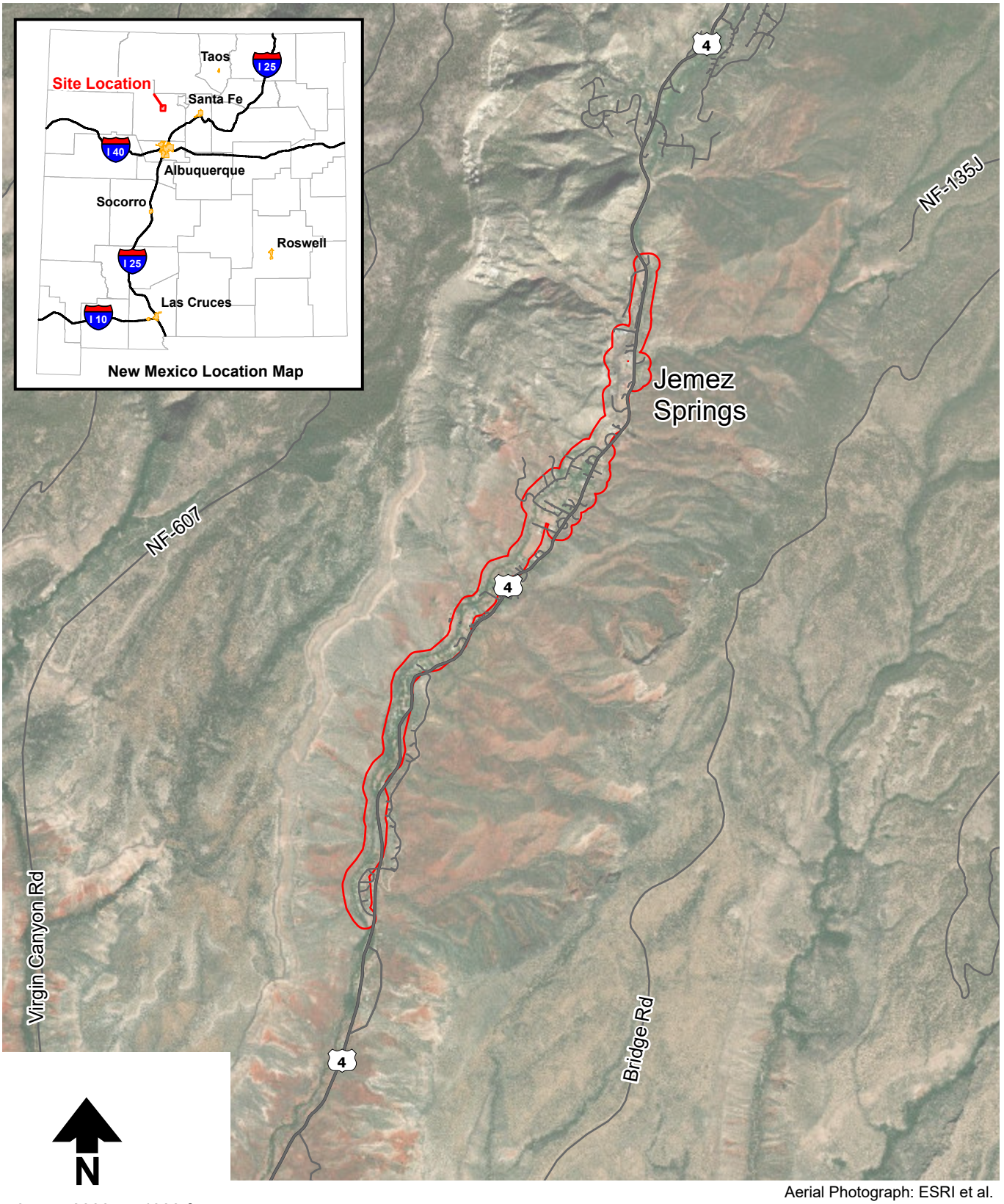
U.S. Fish and Wildlife Service (USFWS). 2023a. Critical habitat portal. Accessed August 10, 2023. <http://ecos.fws.gov/crithab/>.

USFWS. 2023b. National wetlands inventory wetlands mapper. Accessed August 10 2023. <http://www.fws.gov/wetlands/data/mapper.HTML>.

USFWS. 2023c. Information for Planning and Consultation (IPAC). <https://ecos.fws.gov/ipac/>. Accessed August 8, 2023.

U.S. Geological Survey (USGS). 2005. Southwest Regional GAP Analysis Project—Land Cover Descriptions. RS/GIS Laboratory, College of Natural Resources, Utah State University.

Figures



Aerial Photograph: ESRI et al.

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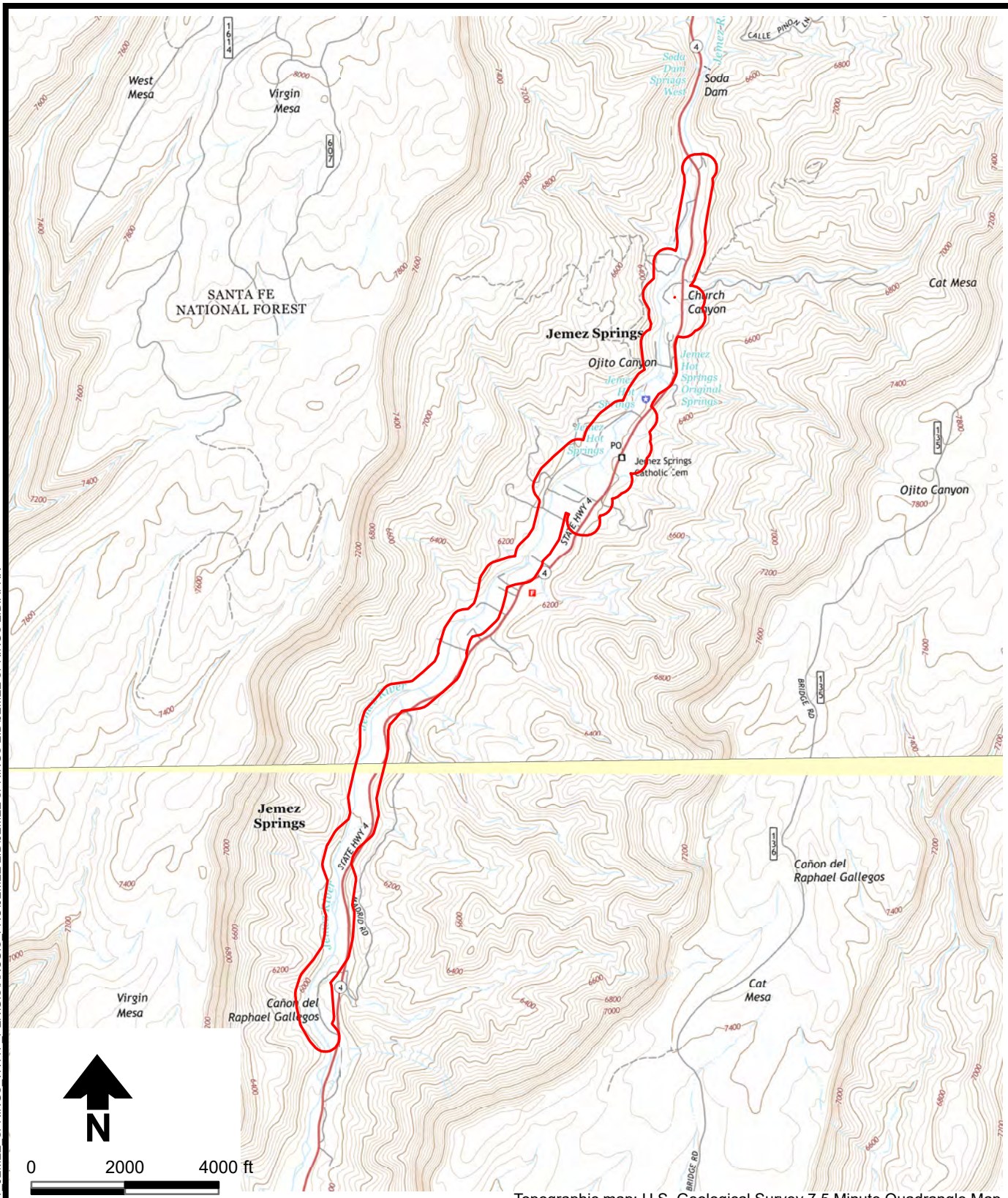
VILLAGE OF JEMEZ SPRINGS
ENVIRONMENTAL INFORMATION DOCUMENT (EID)

Area Map

DBS&A
a Geo-Logic Company

10/13/2023
DB22.2023

Figure 1



Explanation

Project area

Topographic map: U.S. Geological Survey 7.5 Minute Quadrangle Map
NM Jemez Springs, NM Ponderosa
http://rgis.unm.edu/
Accessed October 10, 2023

VILLAGE OF JEMEZ SPRINGS
ENVIRONMENTAL INFORMATION DOCUMENT (EID)

Topographic Map

DBS&A
a Geo-Logic Company

10/13/2023 DB22.2023

Figure 2

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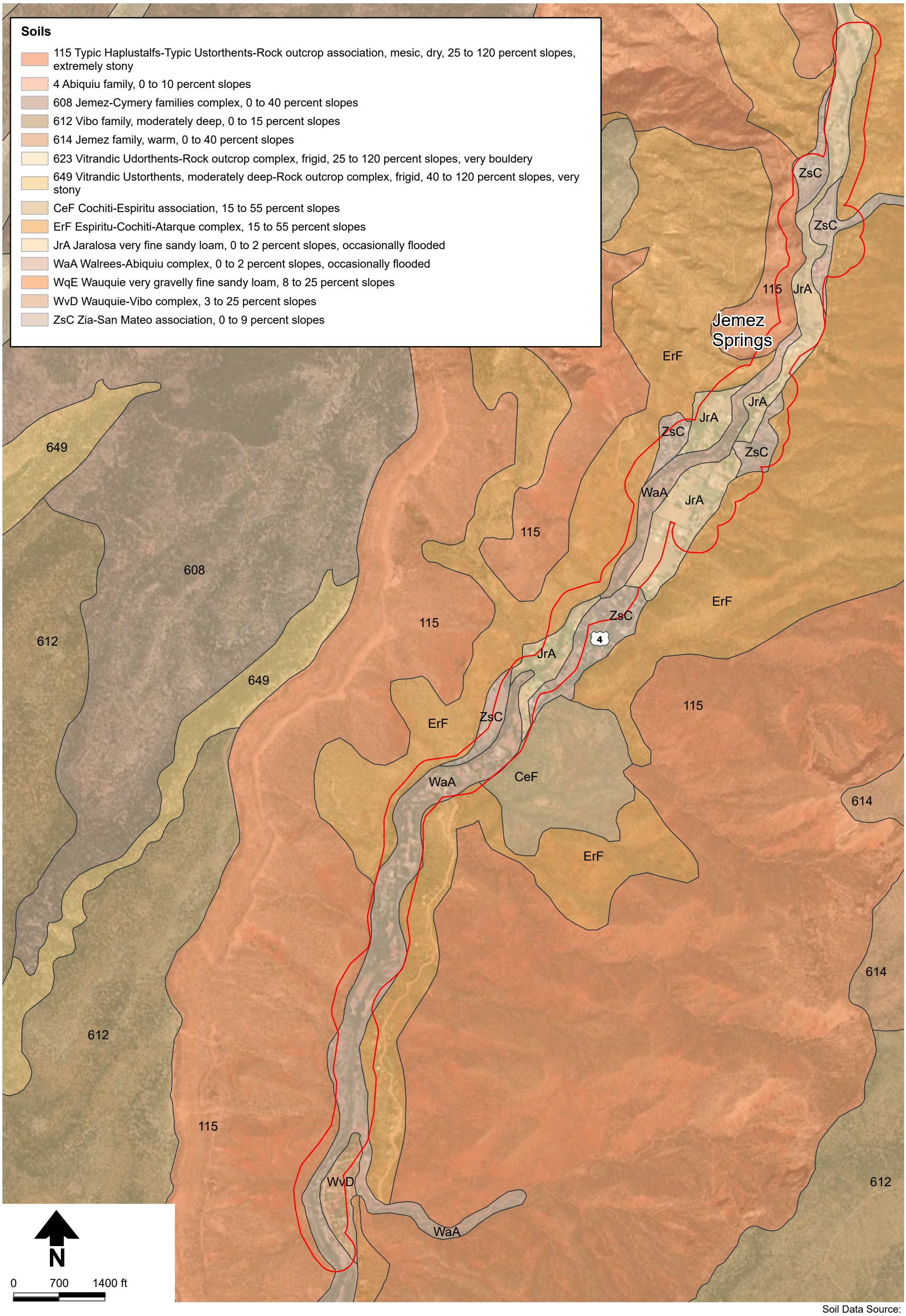

Soil Data Source:
USDA, SSurgo
SSA version est.: 09/08/2022
https://websoilsurvey.sc.egov.usda.gov/
Downloaded December 28, 2022

VILLAGE OF JEMEZ SPRINGS
ENVIRONMENTAL INFORMATION DOCUMENT (EID)
Soils

Figure 3

DBS&A
a Geo-Logic Company

10/13/2023 DB22.2023

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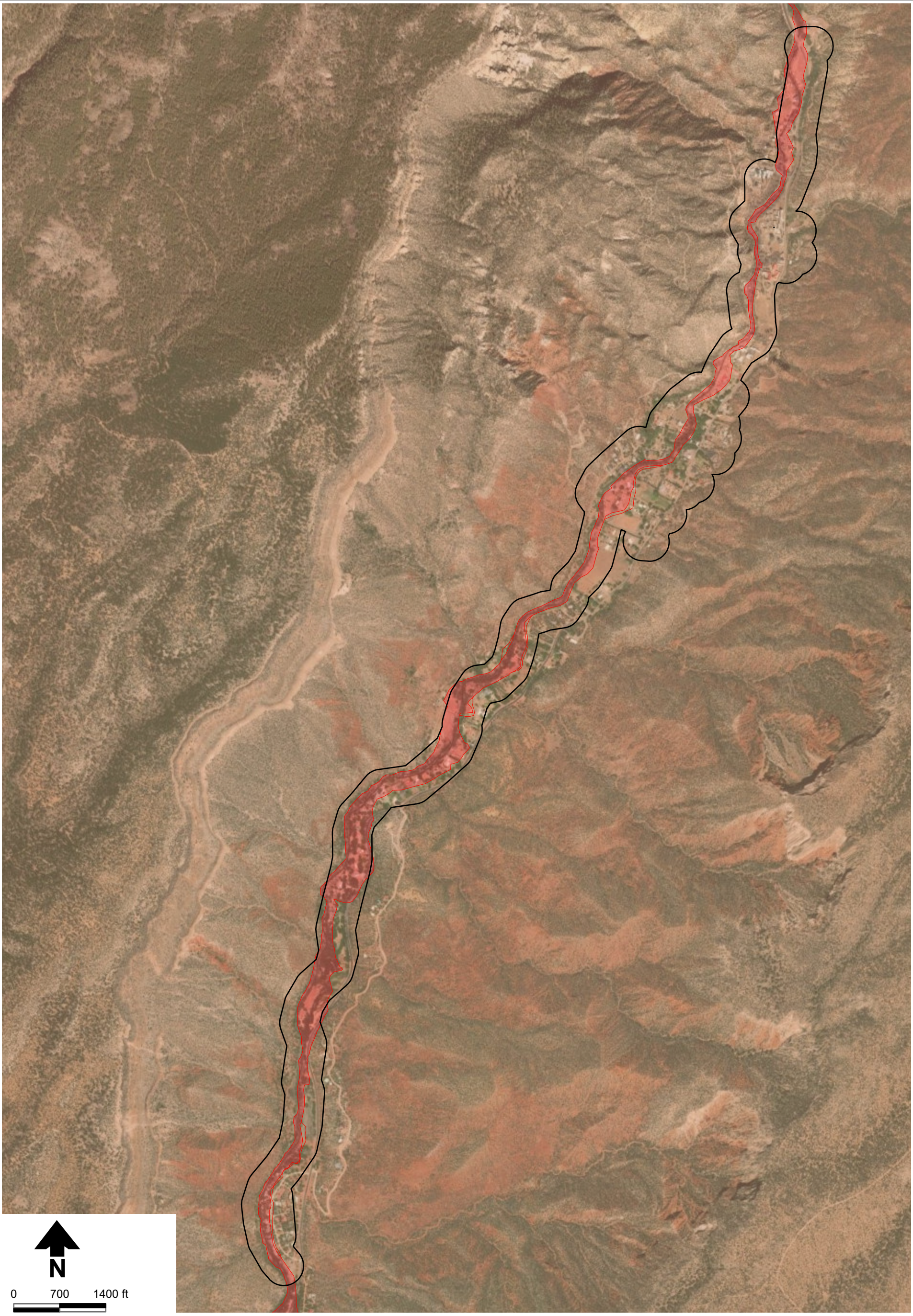


Explanation

Project area

AE Areas of floodways, such as ravines', arroyos', pathway's

X 500 year flood

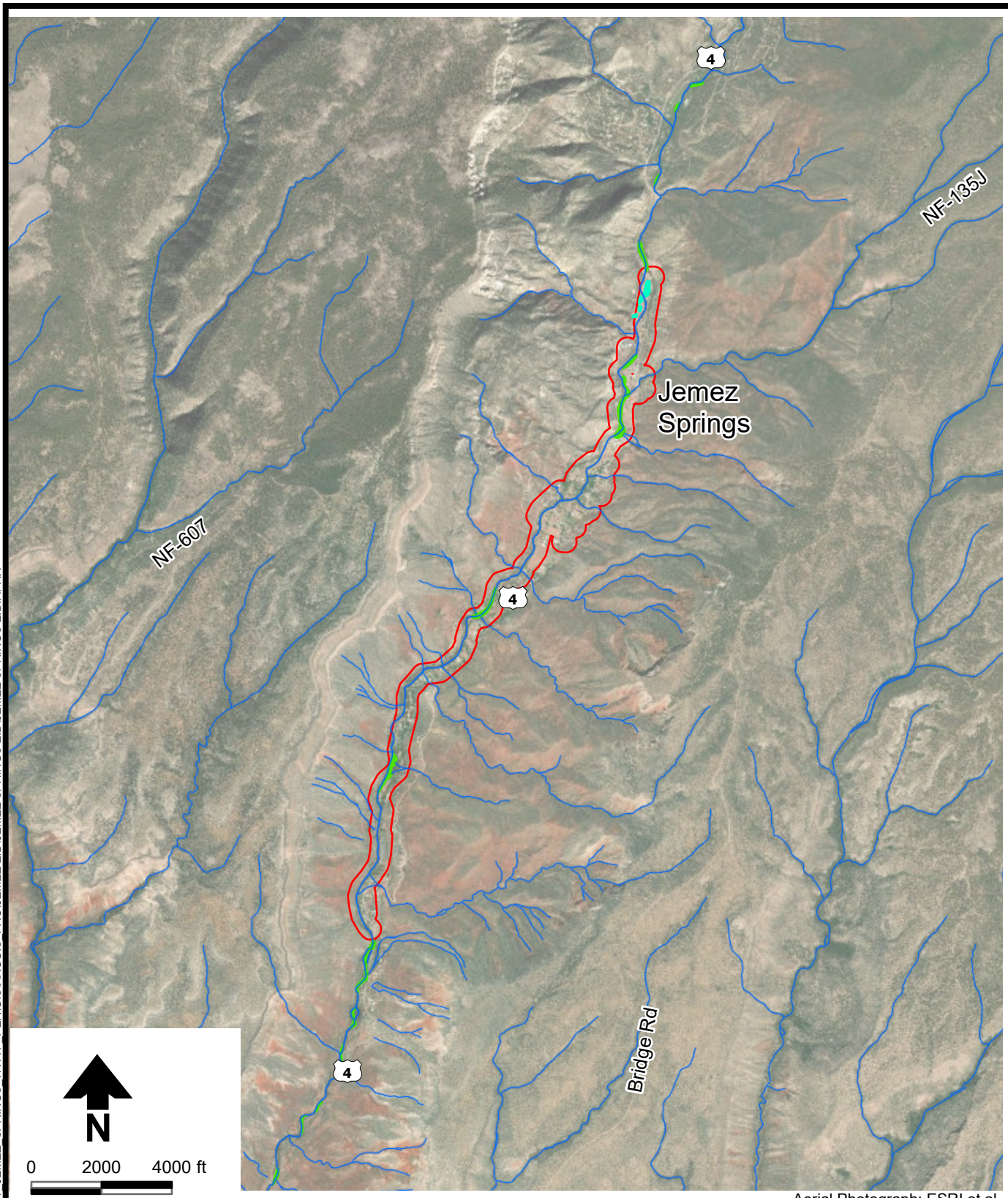
FEMA National Flood Hazard Layer
https://www.fema.gov/flood-maps/national-flood-hazard-layer
Downloaded September 22, 2023

Figure 4

VILLAGE OF JEMEZ SPRINGS
ENVIRONMENTAL INFORMATION DOCUMENT (EID)
Floodplains

DBS&A
a Geo-Logic Company

10/13/2023 DB22.2023



Aerial Photograph: ESRI et al.

Explanation

- Project area
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Riverine

VILLAGE OF JEMEZ SPRINGS
ENVIRONMENTAL INFORMATION DOCUMENT (EID)

Wetlands

DBS&A
a Geo-Logic Company

10/13/2023
DB22.2023

Figure 5

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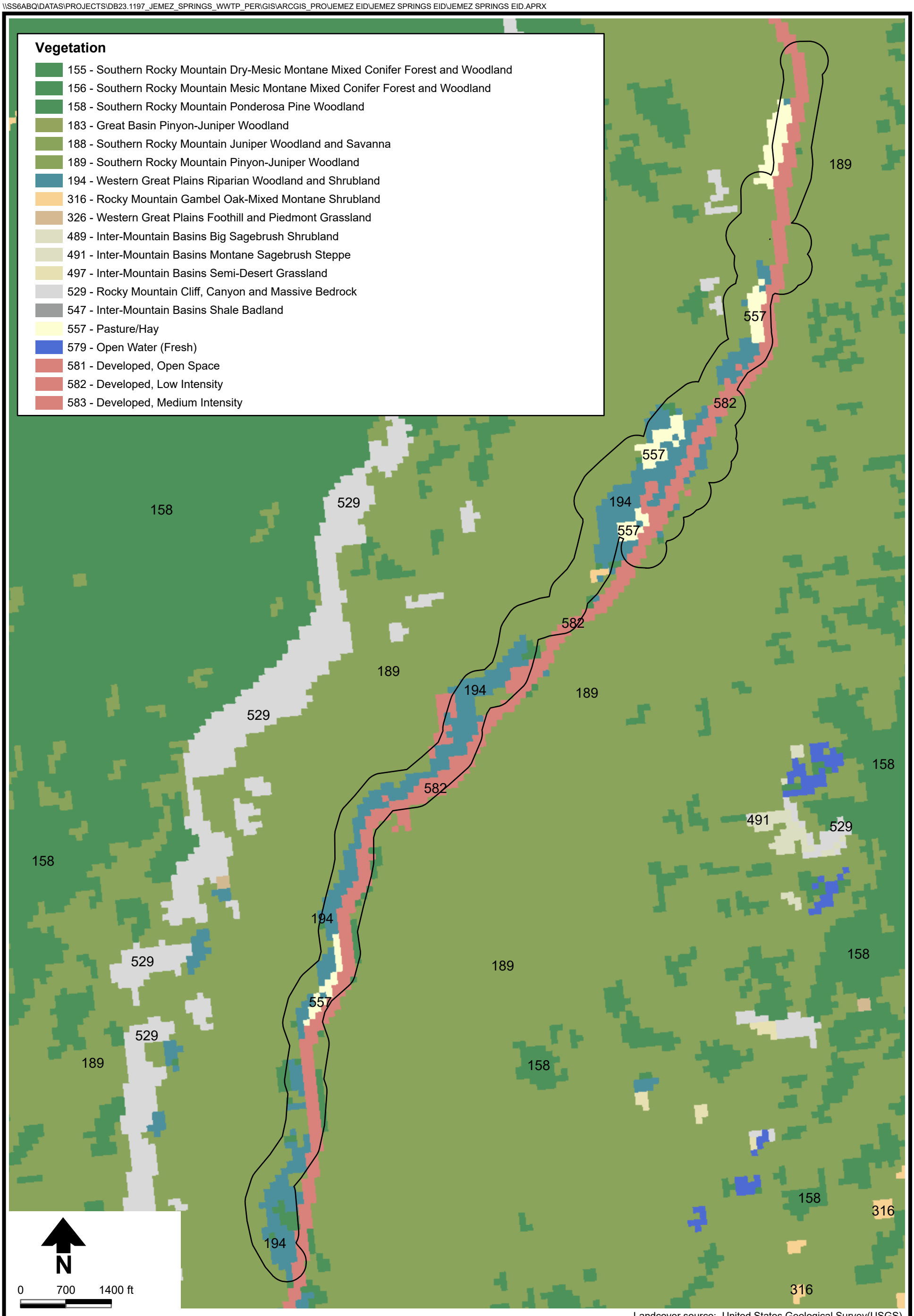

Landcover source: United States Geological Survey(USGS) Gap Analysis Project
https://www.usgs.gov/programs/gap-analysis-project
Accessed: September 22, 2023

VILLAGE OF JEMEZ SPRINGS
ENVIRONMENTAL INFORMATION DOCUMENT (EID)
Vegetation

Figure 6

DBS&A
a Geo-Logic Company

10/13/2023 DB22.2023

Tables

Table 1. Federally Listed Species Included in the Analysis and Likelihood of Occurrence in the Project Area, Page 1 of 3

Species Category	Species	Status	Habitat Associations	Potential for Presence in Project Area
Birds	Mexican spotted owl (*Strix occidentalis lucida*)	FT	Primarily within shaded, mesic, and cool canyons with steep sides that have mixed conifer, pine-oak, and riparian forest types. Forests used for roosting or nesting often contain moderate to high canopy closure, a wide range of tree sizes suggestive of uneven-age stands, large overstory trees of various species, and high plant species richness with adequate levels of residual plant cover to maintain fruits, seeds, and regeneration to provide for the needs of prey species for the owl.	The Project Area is within the Jemez River valley and contains riparian forest. However, it does not contain a moderate to high canopy closure or large overstory of various species or high plant species richness to support prey species. In addition, most of the Project Area is developed and is highly disturbed habitat. There is designated critical habitat for the species beyond the project area to the west, in the forested watershed above the canyon walls of the Jemez River. There is also critical habitat to the east, within the forested watersheds beyond the Jemez River Valley. *Therefore, there is a potential for the Mexican spotted owl to occur in the Project Area, but only as an occasional occurrence.*
	Southwestern willow flycatcher (*Empidonax traillii extimus*)	FE	Habitat for the southwestern willow flycatcher consists of dense riparian vegetation along rivers, streams, or other wetlands, where its diet consists primarily of insects. Suitable vegetation includes dense growth of willows (*Salix* spp.), arrow weed (*Pluchea sericea*), alder (*Alnus* spp.), and saltcedar (*Tamarix ramosissima*).	Unlikely to occur. The Project Area contains riparian vegetation; however, the few areas of wetlands in the area are confined to the Jemez River corridor and are outside of the Project Area. The nearest critical habitat is within segments of the Rio Grande, approximately 32 miles northeast of the Project Area.
	Yellow-billed cuckoo (*Coccyzus americanus*)	FT	The yellow-billed cuckoo is found in riparian habitat with multi-level canopy forest and dense understory.	Unlikely to occur. There is riparian forest present in the Jemez River corridor and throughout the Jemez River Valley, including the Project Area. However, the riparian forest that may overlap the Project Area is not a multi-level canopy forest with a dense understory. The nearest critical habit for the yellow-billed cuckoo is located within a segment of the Rio Grande, approximately 42 miles northeast of the Project Area.

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Table 1. Federally Listed Species Included in the Analysis and Likelihood of Occurrence in the Project Area, Page 2 of 3

Species Category	Species	Status	Habitat Associations	Potential for Presence in Project Area
Mammals	Mexican wolf (*Canis lupus baileyi*)	FE	Mexican gray wolves are generally associated with montane habitat, although they are wide ranging and travel between mountain ranges. No wolves have been documented in the Jemez Mountains.	Unlikely to occur. The Project Area is not within the recovery range of the Mexican gray wolf and the habitat of the Project Area is surrounded by human development and activity; therefore, no wolves are anticipated to occur within the Project Area even as a vagrant occurrence.
	New Mexico meadow jumping mouse (*Zapus hudsonius luteus*)	FE	Habitat specialist using persistent emergent herbaceous wetlands and scrub-shrub wetlands on wet soil along perennial streams. Also uses patches of herbaceous vegetation dominated by sedges along water edges within willow and alder dominated habitats.	Unlikely to occur. The wetlands in the area are confined to the Jemez River corridor and are outside of the Project Area. The Project Area does not contain emergent herbaceous wetlands, scrub-shrub wetlands, or willow and alder habitat containing sedges. There is critical habitat for the New Mexico meadow jumping mouse located upstream along the San Antonio Creek, a tributary of the Jemez River. The southern end of the habitat is approximately 9.5 miles upstream of Jemez Springs.
Fish	Rio Grande silvery minnow (*Hybognathus amarus*)	FE	The Rio Grande silvery minnow is found in the Middle Rio Grande from south of Cochiti Dam to north of Elephant Butte Reservoir.	Unlikely to occur. The Jemez River is a tributary to the Rio Grande; however, the silvery minnow would be restricted from movement upstream of the confluence due to the Jemez Canyon Reservoir located near Bernalillo, approximately 32 miles downstream of the Project Area.
	Rio Grande cutthroat trout (*Oncorhynchus clarkii virginalis*)	FC	The Rio Grande cutthroat trout is a subspecies of cutthroat trout, endemic to the Rio Grande, Pecos, and possibly the Canadian River Basins in New Mexico and Colorado.	Unlikely to occur. The Project Area is outside of the preferred elevation range of the Rio Grande cutthroat trout and no work would be done in the Jemez River.
Reptiles	None			

Table 1. Federally Listed Species Included in the Analysis and Likelihood of Occurrence in the Project Area, Page 3 of 3

Species Category	Species	Status	Habitat Associations	Potential for Presence in Project Area
Amphibians	Jemez Mountains salamander (*Plethodon neomexicanus*)	FE	The species is endemic to the Jemez Mountains, where it occurs in mixed conifer and spruce-fir forests above 7,200 feet in specific microhabitat conditions. Preferred microhabitat is generally characterized by relatively high humidity and soils with a specific rock structure.	Unlikely to occur. The Project Area elevation is below 7,200 feet and is not within the preferred microhabitat. Critical habitat is designated at higher elevations within the Valles Caldera National Preserve and south of the preserve.
Insects	Monarch (*Danaus plexippus*)	FC	Adult monarch butterflies during breeding and migration require a diversity of blooming nectar resources, which they feed on throughout their migration routes and breeding grounds (spring through fall). Monarchs also need milkweed (for both oviposition and larval feeding) embedded within this diverse nectaring habitat. The correct phenology, or timing, in the life cycle of monarchs and blooming of nectar plants and milkweed is important for monarch survival. There are two migrating populations, eastern and western. New Mexico contains spring breeding areas primarily in the eastern third of the state (USFWS, 2020).	The potential for the monarch butterfly to occur within the Project Area and/or Action Area is low because the area is not within the known breeding or migrating corridors of the butterfly. In addition, the potential for milkweed plant species to be present is low, as the majority of the Project Area is on disturbed ground.
Plants	None			

Table 2. State-Listed Species Identified for Project Area
Page 1 of 8

Species Category	Species	Status	Habitat Associations	Potential for Presence in Project Area
Plants	Wood lily (*Lilium philadelphicum*)	SE	The wood lily occurs in a wide variety of habitats from the Appalachian Mountains to the Rocky Mountains, in tallgrass prairies, open woods, thickets, and high mountain meadows. In New Mexico, the species is found in wetter habitat typical of the Rocky Mountains.	Unlikely to occur. The Project Area does not have tallgrass prairies, open woods, thickets, and high mountain meadows, or any wetter habitat typical of the Rocky Mountains.
	Parish's alkali grass (*Puccinellia parishii*)	SE	The Parish's alkali grass requires alkaline springs, seeps, and seasonally wet areas that occur at the heads of drainages or on gentle slopes at 2,600 to 7,200 feet (800 to 2,200 meters) range-wide.	Unlikely to occur. The Project Area does not have habitat containing alkaline springs or seeps or wet headwater areas.
	Clover's cactus (*Sclerocactus cloveriae*)	SE	Sandy clay strata of the Nacimiento Formation in sparse shadscale scrub at 5,000 to 7,200 feet (1,500 to 2,200 meters).	Unlikely to occur. The Project Area does not contain strata from the Nacimiento Formation.
	Gypsum Townsend's aster (*Townsendia gypsophila*)	SE	Weathered gypsum outcrops of the Jurassic-age Todilto and overlying Morrison formations. The largest populations occur on highly gypsiferous soils rather than pure gypsum. Smaller populations grow on Todilto gypsite, a highly pure, crustose form of gypsum.	Unlikely to occur. The Project Area does not contain gypsum outcrops.
Invertebrates	None			
Fish	Rio Grande silvery minnow (*Hybognathus amarus*)	SE/FE	The Rio Grande silvery minnow is found in the Middle Rio Grande from south of Cochiti Dam to north of Elephant Butte Reservoir.	Unlikely to occur. The Jemez River is a tributary to the Rio Grande, however the silvery minnow would be restricted from movement upstream of the confluence due to the Jemez Canyon Reservoir located near Bernalillo, approximately 32 miles downstream of the Project Area.

Table 2. State-Listed Species Identified for Project Area
Page 2 of 8

Species Category	Species	Status	Habitat Associations	Potential for Presence in Project Area
Amphibians	Jemez Mountains salamander (*Plethodon neomexicanus*)	SE/FE	The species is endemic to the Jemez Mountains, where it occurs in mixed conifer and spruce-fir forests above 7,200 feet in specific microhabitat conditions. Preferred microhabitat is generally characterized by relatively high humidity and soils with a specific rock structure.	Unlikely to occur. The Project Area elevation is below 7,200 feet and is not within the preferred microhabitat. Critical habitat is designated at higher elevations within the Valles Caldera National Preserve and south of the preserve.
Mollusks	Wrinkled marshsnail (*Stagnicola caperata*)	SE	Wrinkled marshsnails inhabit vegetated ditches, marshes, streams, and ponds, in areas of perennial water that are typically seasonally dry. In New Mexico, this species is found in the Jemez Mountains where habitat was located in a shallow pond at an elevation of 8,530 feet, Big Costilla Peak in Taos, and the Bitter Lake Wildlife Refuge in Chaves County.	Unlikely to occur. The Project Area is is not located within any surface waters such as the Jemez River and is well below the elevation of the known population in the Jemez Mountains.
	Paper pondshell (*Utterbackia imbecillis*)	SE	Paper-shell mussels are strictly aquatic bivalves that inhabit softer substrates, such as mud, sand, and gravel, of lakes and rivers. In New Mexico, this species is found in the Conchas Reservoir in San Miguel County.	Unlikely to occur. The Project Area and Action Area are far west of the known habitat of the paper pondshell.
Reptiles	None			
Birds	Costa's hummingbird (*Calypte costae*)	ST	Costa's hummingbird is a desert scrub species of the southwestern United States and northern Mexico. In New Mexico it is an uncommon and sporadic breeder in the southwest and south-central mountains. It occurs most regularly in Guadalupe Canyon and in side canyons along the lower Gila River from Cliff south.	Unlikely to occur. The Project Area is far outside of the species' regular distribution in New Mexico.

Table 2. State-Listed Species Identified for Project Area
Page 3 of 8

Species Category	Species	Status	Habitat Associations	Potential for Presence in Project Area
Birds (cont.)	Broad-billed hummingbird (*Cynanthus latirostris*)	ST	In New Mexico, the broad-billed hummingbird is local and uncommon. It is a regular summer resident only in the southwest corner of the state within Guadalupe Canyon; otherwise, vagrant occurrences have been documented at a select few locations around the state including Bandelier National Monument (Sandoval Co.) and as an accidental transient in residential/developed areas. It prefers riparian woodlands at low to moderate elevations.	Unlikely to occur. The nearest known location to the Project Area is Bandelier National Monument, far outside of the Project Area.
	Whooping crane (*Grus americana*)	SE	In New Mexico, whooping cranes occupy desert riparian deciduous woodland, marsh woodlands, especially of cottonwoods, that occur where desert streams provide sufficient moisture for a narrow band of trees and shrubs along the margins. They typically roost with sandhill cranes on sand bars in the Rio Grande. Foraging areas are generally agricultural fields and valley pastures, particularly where there is waste grain or sprouting crops.	Unlikely to occur. The Project Area does not contain agricultural fields or pastures and is far west of the Rio Grande.
	Neotropic cormorant (*Phalacrocorax brasilianus*)	ST	In New Mexico, they are generally found on larger bodies of open water such as reservoirs, where they prey on fish. They nest near or over water in vegetation such as dead snags or trees.	Unlikely to occur. The Project Area does not contain large bodies of open water.

Table 2. State-Listed Species Identified for Project Area
Page 4 of 8

Species Category	Species	Status	Habitat Associations	Potential for Presence in Project Area
Birds (cont.)	Brown pelican (*pelecanus occidentalis*)	ST	The brown pelican is found along seacoasts, lakes, and rivers. This species is a vagrant to New Mexico, having been verified at Bloomfield (San Juan Co.), Snow Lake (Catron Co.), and Bitter Lake National Wildlife Refuge; there are also records of the species near Cliff (Grant Co.), but is mostly found at large lakes or along major rivers, including in the San Juan, Gila, Rio Grande, and Pecos drainages.	Unlikely to occur. The brown pelican is a vagrant in New Mexico and the Jemez River is not a major river.
	Bald eagle (*Haliaeetus leucocephalus*)	ST	The bald eagle is usually found along seacoasts, lakes, and rivers. Nesting sites are usually isolated high in trees, on cliffs, or on pinnacles. The species is also associated with prairie dog colonies in New Mexico. The bald eagle is rare in New Mexico during the spring, summer and fall but somewhat more abundant during the winter season where it is typically found along major rivers such as the Rio Grande, lakes and reservoirs of the state.	While the Jemez River is a perennial waterway, it is not a major river; therefore, *there is a low potential for occurrence of the bald eagle, but only as a vagrant occurrence.*
	Common black hawk (*Buteogallus anthracinus*)	ST	The black hawk is found within wooded habitat along permanent streams. The species summers primarily at lower elevations in the Gila, San Francisco, and Mimbres drainages, which are key habitat areas.	Unlikely to occur. While there is riparian habitat along the permanent Jemez River, the common black hawk is a rare occurrence in Sandoval County.
	Peregrine falcon (*Falco peregrinus*)	ST	Habitat of the peregrine falcon is primarily located in open wetlands near cliffs. In New Mexico, the breeding territories center on cliffs that are in wooded/forested habitats with large "gulfs" of air nearby in which these predators can forage.	The Jemez River has the potential to provide hunting habitat and there are cliffs beyond the Project Area that may provide nesting habitat. The Project Area is near these areas; therefore, *there is a potential for occurrence of the peregrine falcon, although only as a vagrant occurrence.*

Table 2. State-Listed Species Identified for Project Area
Page 5 of 8

Species Category	Species	Status	Habitat Associations	Potential for Presence in Project Area
Birds (cont.)	Northern beardless-tyrannulet (*Camptostoma imberbe*)	SE	In the Southwest, the species typically occurs at lower elevations in dense stands of mesquite (*Prosopis* spp.) and associated growth, typically along stream courses. The Northern Beardless-Tyrannulet typically summers in New Mexico, in the southern part of the state in Eddy, Grant, and Hidalgo counties. One individual Northern beardless-tyrannulet was reported one time (date unknown) in Bandelier National Park, located 24 miles east of the Project Area (NPS, 2021)	Unlikely to occur. The Project Area, does not contain mesquite, and is outside the tyrannulet's typical range.
	Southwestern willow flycatcher (*Empidonax traillii extimus*)	SE/FE	Habitat for the southwestern willow flycatcher consists of dense riparian habitats along rivers, streams, or other wetlands where its diet consists primarily of insects. Suitable vegetation includes dense growth of willows (*Salix* spp.), arrow weed (*Pluchea sericea*), alder (*Alnus* spp.) saltcedar (*Tamarix ramosissima*), and other riparian vegetation.	Unlikely to occur. The Project Area contains riparian vegetation; however, the few areas of wetlands in the area are confined to the Jemez River corridor and are outside of the Project Area. The nearest critical habitat is within segments of the Rio Grande, approximately 32 miles northeast of the Project Area.
	Bell's vireo (*Vireo bellii*)	ST	Bell's Vireo use broad-leafed plants in the Midwest and narrow-leafed riparian plants in the Southwest. Within New Mexico, Bell's Vireo is locally distributed across the southern third of the state (Hubbard 1978). It breeds in riparian areas, typically nesting in low, shrubby vegetation such as willow, mesquite, and tamarisk (NMDGF, 2020). One individual Bell's vireo was reported one time (date unknown) in Bandelier National Park, located 24 miles east of the Project Area (NPS, 2021)	Unlikely to occur. The Project Area is not within the local distribution of the southern third of the state and does not contain mesquite or seepwillows.

Table 2. State-Listed Species Identified for Project Area
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Species Category	Species	Status	Habitat Associations	Potential for Presence in Project Area
Birds (cont.)	Gray vireo (*Vireo vicinior*)	ST	In New Mexico, the gray vireo prefers open pinyon-juniper woodland or juniper savannah with a shrub component. In northwest New Mexico, gray vireos are found in broad-bottomed, flat or gently sloped canyons, in areas with rock outcroppings, or near ridgetops. In these areas, bitterbrush (*Purshia tridentate*), mountain mahogany (*Cercocarpus breviflorus*), Utah serviceberry (*Amelanchier utahensis*) and big sagebrush (*Artemisia tridentata*) are often present. Gray vireos are often found in areas of moderate shrub cover (35-45%) with large amounts of bare ground between herbaceous plants.	Unlikely to occur. The Project Area does not contain pinyon-juniper woodland or juniper savannah with a shrub component.
	Baird's sparrow (*Centronyx bairdii)*	ST	Baird's sparrow breeds in a fairly small geographic area of south-central Canada, Montana, and North and South Dakota. It winters on grasslands of the northern Mexican plateau, primarily in Chihuahua and Durango but including portions of bordering states. The winter range extends into small portions of southeast Arizona, southern New Mexico, and southwest Texas. In New Mexico, Baird's Sparrow has been found on Otero Mesa and in the Animas Valley, and may occur in other areas of suitable winter habitat, particularly in the southeast portion of state (NMPF, 2007).	Unlikely to occur. The Project Area is west and north of the species' known winter range in New Mexico and far outside the breeding distribution.

Table 2. State-Listed Species Identified for Project Area
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Species Category	Species	Status	Habitat Associations	Potential for Presence in Project Area
Mammals	Spotted bat (*Euderma maculatum*)	ST	Known in New Mexico from the Rio Grande, Rio Chama, and Animas River Valleys, the Mogollon Plateau, and the Jemez, San Mateo, and Sacramento Mountains. However, it is undoubtedly more widespread in the state than records indicate. Occupies a wide range of vegetation types, moving downslope after the reproductive season. Preferred habitat consists of meadows in subalpine coniferous forests. In the Mogollon, San Mateo, and Jemez Mountains, spotted bats were netted over streams or water holes in ponderosa or mixed coniferous forest. Bats are cliff dwellers whose diurnal roosts are the cracks and crevices of canyons and cliffs. Also recorded in pinyon-juniper woodlands and open semidesert shrublands. Rocky cliffs are necessary to provide suitable cracks and crevices for roosting, as is access to water.	The Jemez River has the potential to provide hunting habitat and there are cliffs beyond the Project Area that may provide roosting habitat. The Project Area is near these areas; therefore, *there is a potential for occurrence of the spotted bat, although only as a vagrant occurrence*.
	White-nosed coati (*Nasua narica*)	SE	Coatis inhabit woodland areas of the warmer parts of Central America, Mexico, and the extreme southern United States. They also occur in some of the rocky canyons that enter the mountains from the lowlands. In New Mexico the coati inhabits canyons characterized by riparian vegetation such as sycamore, oaks, juniper savanna, mixed coniferous forest, and mixed woodlands.	Unlikely to occur. In 2018 a white-nosed coati was trapped in Corrales, NM, much farther north than would be the usual distribution of the species in New Mexico (NMWM 2019). The coati would not be expected to occur in the Project Area as it is even farther north than the unusual documented occurrence in Corrales, New Mexico.
	Pacific marten (*Martes caurina*)	ST	The Pacific marten occupies primarily mature coniferous forests.	Unlikely to occur. The Project Area is outside of the elevation range of the Pacific marten and there are no mature coniferous forests in the Project Area.

Table 2. State-Listed Species Identified for Project Area
Page 8 of 8

Species Category	Species	Status	Habitat Associations	Potential for Presence in Project Area
Mammals (cont.)	New Mexico meadow jumping mouse (*Zapus luteus luteus*)	SE/FE	The New Mexico meadow jumping mouse is a habitat specialist using persistent emergent herbaceous wetlands and scrub-shrub wetlands on wet soil along perennial streams. Also uses patches of herbaceous vegetation dominated by sedges along water edges within willow and alder dominated habitats.	Unlikely to occur. The wetlands in the area are confined to the Jemez River corridor and are outside of the Project Area. The Project Area does not contain emergent herbaceous wetlands, scrub-shrub wetlands, or willow and alder habitat containing sedges. There is critical habitat for the New Mexico meadow jumping mouse located upstream along the San Antonio Creek, a tributary of the Jemez River. The southern end of the habitat is approximately 9.5 miles upstream from Jemez Springs.

Table 3. Demographic Summary for State of New Mexico/Village of Jemez Springs

	New Mexico	Village of Jemez Springs
Population	2,117,522	198
Native American (%)	10.0	2.0
Black or African American alone (%)	2.2	0.0
Asian (%)	1.8	1.5
Hawaiian/Pacific Islander (%)	0.1	0.0
White alone (%)	51.0	71.2
Hispanic or Latino (%)	47.7	23.7
Economic Data		
Median household income	$51,243	$88,125
Employment rate	54.8%	58.5%
Percentage of population below poverty level [a]	17.6	14.9

Source: U.S. Census, 2023, unless otherwise noted
[a] CDC, 2020

Table 4. Environmental Justice Summary for Area within 5 Miles of Proposed Wastewater Treatment Plant Upgrade

Demographic Indicator	Area within 5 miles of Wastewater Treatment Plant	State Average	EPA Region Average	U.S. Average
People of Color	80%	52%	44%	36%
Low Income Population	39%	41%	36%	31%

Source: U.S. EPA, 2023

Attachment 1

Trenching Guidelines

DBS&A
a Geo-Logic Company

HABITAT HANDBOOK

ABOUT

The New Mexico Department of Game and Fish **Habitat Handbooks** provide conservation measures to minimize impacts of land use and development projects on wildlife and wildlife habitats. This Habitat Handbook addresses minimizing wildlife mortality from open trenches excavated for underground water or oil and gas pipelines, powerlines, or fiber optic communication lines .

The author of this Handbook is Mark Watson.

ERT for NM

The **Environmental Review Tool** (ERT) for New Mexico is a web-based system that quickly screens land use and development projects for potential impacts to wildlife and wildlife habitats. The ERT provides best management practices and guidance to mitigate these impacts. Evaluate your project with the ERT at: **https://nmert.org**.

EEP DIVISION

The Ecological and Environmental Planning Division's Technical Guidance Program coordinates the Department's environmental review process and works with community, private sector, state and federal government, nongovernmental organizations, and other project proponents to protect and enhance wildlife habitats. The Division also implements the **Share with Wildlife program** and maintains the Biota Information System of New Mexico (**BISON-M**), a database of New Mexico's wildlife species. It also participates in the development and application of wildlife-related information management and planning tools.

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Conservation Measures to Avoid Mortality of Wildlife from Trenching Operations

2022

NMDGF biologist, Jim Stuart, removes a bullsnake (*Pituophis catenifer*) from an open trench on Albuquerque's West Mesa, Bernalillo County, NM, 2001. Photo M. Watson.

Open trenches excavated for underground water or oil and gas pipelines, powerlines, or fiber optic communication lines can unintentionally entrap and cause the unnecessary mortality of amphibians, reptiles, and small mammals, and cause injury to large mammals (Romano et al. 2014; Doody et al. 2003; Woinarski et al. 2000; Ayers and Wallace 1997; Enge et al. 1996; Anderson et al. 1952; Hawken 1951; NMDGF unpublished data). Trapped animals can die from exposure, starvation, crushing from pipe-laying, entombment from trench backfilling, drowning, and predation. This unnecessary wildlife mortality can be avoided by implementing conservation measures including: concurrent trenching, pipe-laying, and backfilling operations to minimize the amount of trench left open overnight or longer; constructing escape ramps; and employing biological monitors to remove trapped animals.

Multiple studies in Australia have documented the potential for high levels of wildlife mortality from large-scale trenching activities (Doody et al. 2003; Woinarski et al. 2000; Ayers and Wallace 1997). For example, from 1999 to 2000, a 792 kilometer-long gas pipeline in southeastern Australia was documented to have captured 7,438 individuals of 103 species of vertebrates, including multiple endangered species (Doody et al. 2003).

There are also examples of wildlife being trapped in trenches from New Mexico. In 2001, in Bernalillo County, New Mexico, a fiber optic cable trench approximately 4.8 kilometer-long, 0.25 meter wide, and 1.8 meters deep was documented to have trapped 298 individual reptiles and amphibians (see photos above and below). Two species of toads, 5 species of lizards, and 9 species of snakes were removed from the trench, including 105 glossy snakes (*Arizona elegans*), 41 plains black-headed snakes (*Tantilla nigriceps*), and 68 western massasauga rattlesnakes (*Sistrurus tergiminus*). Since no escape ramps were constructed for the trench and no biological monitor was employed to remove trapped animals, all of these animals would have died had they not been removed by Department biologists and concerned citizens. This would have represented unnecessary wildlife mortality, and the endangerment of these animals could have been avoided with better planning efforts. Furthermore, in 2010 in the Mescalero-Monahans shinnery sands ecosystem of southeastern New Mexico, Romano et al. (2014) surveyed portions of a 65 kilometer-long oil pipeline trench from an area south of Maljamar to Artesia. The trench measured 1.5 meters deep and 0.7 meter wide. A total of 24 individuals of 10 vertebrate species (reptiles, amphibians, and small mammals) were removed from the trench, of which four were found dead. Ecological effects of such events are unknown but may adversely affect local populations.

Western massasauga rattlesnake (*Sistrurus tergeminus*) removed from open trench. Photo M. Watson.

The Biota Information System of New Mexico (**BISON-M**) identifies 88 reptile, amphibian, and small mammal species found in New Mexico that are at risk of mortality from trenching operations (see list **here**). Of these, fourteen are state- or federally-listed amphibian and reptile species or subspecies and an additional nine amphibian and reptile species or subspecies are New Mexico Species of Greatest Conservation Need (NMDGF 2016; see Table 1 below). Horned lizards (*Phrynosoma* spp.) are also vulnerable to entrapment in trenches and are protected from take by Chapter 17 of New Mexico Statues Annotated (17-2-15).

The risk of entrapment to vulnerable species of wildlife depends upon a wide variety of conditions at the trenching site, including: location, season, surrounding vegetation, soils, trench depth, side slope angle, and occurrence of precipitation events. Proponents of projects that include trenching activities should utilize BISON-M, the U.S. Fish and Wildlife Service's Information for Planning and Consultation (**IPaC**) tool, and the Department's New Mexico Environmental Review Tool (**NMERT**) to evaluate potential impacts of the project to state- and federally-listed species and other wildlife vulnerable to trenching activities.

Periods of highest activity for amphibians and reptiles vulnerable to entrapment include summer months and wet weather, and they can be active both day and night. Small mammals subject to entrapment are active year-round and generally most active at night.

Implementing the following general trenching conservation measures will help to minimize unnecessary mortality of wildlife, including to state- and federally-listed species (but does not preclude the need to consult with the U.S. Fish and Wildlife Service on potential impacts to federally-listed species):

- Whenever possible, locate trenching activities within previously disturbed areas, such as existing road or pipeline right-of-ways. To the extent possible, avoid trenching in undisturbed habitat.
- Trench during the cooler months (October – March).
- Utilize concurrent trenching, pipe- or cable-laying, and backfilling. Keep trenching, pipe- or cable-laying, and back-filling crews as close together as possible to minimize the amount of open trench at any given time. When trenching activities are temporarily halted (e.g., overnight, weekends, holidays, weather shut-downs), protect wildlife from accessing any open trenches between digging and back-filling operations by using one or more of the methods described below.
- Avoid leaving trenches open overnight. Where trenches cannot be back-filled immediately, escape ramps should be constructed at least every 90 meters and preferably 30 meters. Escape ramps can be constructed parallel or perpendicular to the existing trench. The escape ramp slope should be less than 45 degrees (1:1; see escape ramp photo below). If pipe or cable has been installed but backfilling has not occurred, escape ramps may need to be constructed on both sides of the trench, since, unless the pipe is elevated enough to allow animals to move underneath it (see photo below), the pipe or cable may block access of amphibians, reptiles, and small mammals to the ramps if only constructed on one side.
- Trenches that have been left open overnight should be inspected the following day by a qualified biological monitor and trapped animals removed as soon as possible, especially where state- or federally-listed threatened or endangered amphibians, reptiles, or small mammals occur. Untrained personnel should not attempt to remove trapped wildlife because of the potential to injure animals and the possibility of injury from venomous snakes. Required tools for removal will include snake tongs for removing snakes and a dip net for capturing and removing amphibians and small mammals. Many animals trapped in the trench will burrow under loose soil. To the extent possible, the biological monitor should disturb loose soil in the trench to uncover and remove trapped animals. Animals should be relocated at least 50 meters away from the open trench, in undisturbed habitat.
- When pipe has been laid in the trench, end caps should be placed on the open end(s) of the pipe to preclude animals from entering. Pipe staged outside the trench should be capped until placed in the trench or checked for wildlife before being placed into the trench.

Escape ramps allow trapped wildlife to leave the trench. Photo M. Watson.

- Most wildlife can be protected from entrapment by constructing silt fence completely around the open trench. Silt fence should be supported from sagging by t-posts, rebar, or stakes and buried at the base to preclude animals from moving below the fence. If construction of a silt fence is a required best management practice for erosion control, then, to preclude the need for a biological monitor, escape ramps, and concurrent backfilling, the below guidelines for silt fence installation and maintenance should be followed:
- Silt fence should be installed before ground-disturbing activities, such as clearing, grubbing, and trenching, occur;
- Silt fence should be constructed of a solid, synthetic, geotextile material and not mesh. Animals can climb mesh and mesh can ensnare wildlife;
- Silt fence should be constructed on both sides of and parallel to the entire length of open trench and on each end;
- Silt fence should be installed with 5-10 centimeters buried and a minimum height of 0.5 meter above ground level;
- Silt fence should be staked and maintained to remain taut throughout the life of the project;
- Silt fence should be constructed as close to the trench as possible and not include large patches of undisturbed habitat;
- Silt fence should be regularly maintained to ensure that the bottom of the fence remains buried and no holes or gaps occur in the fence.
- When feasible, the Department recommends burying power lines, which can significantly reduce wildlife mortality that occurs from electrocution of perching or nesting raptors (hawks, eagles, falcons) and from collision with aerial power lines by birds such as sandhill cranes (*Antigone canadensis*; see **NMDGF 2007 Powerline Project Guidelines**). Burying powerlines should follow the general trenching guidelines provided in this document.

High Priority Species Consideration

Dunes Sagebrush Lizard (*Sceloporus arenicolus*)

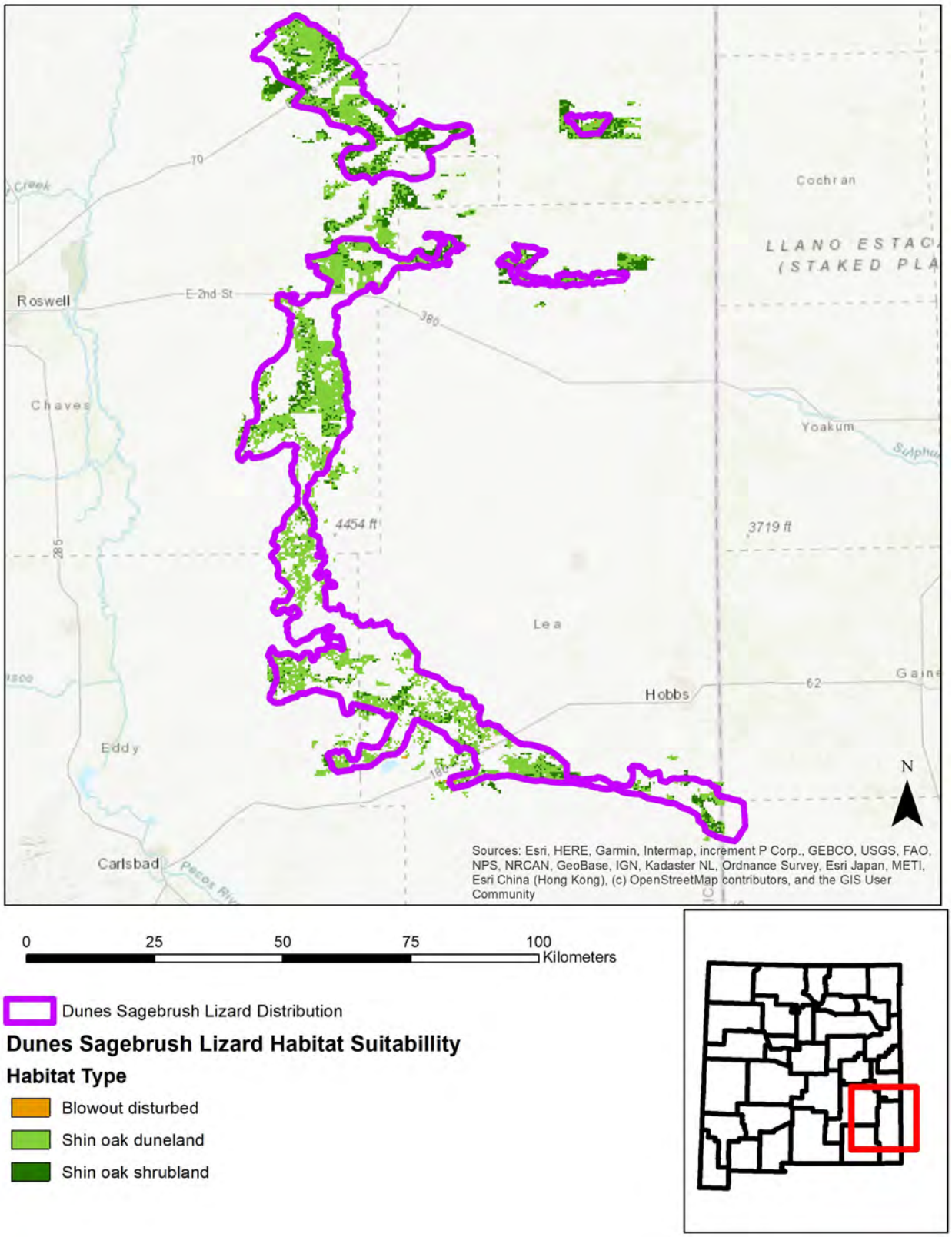
The dunes sagebrush lizard (*Sceloporus arenicolus*; DSL; see photo below) is a state endangered and narrowly-endemic species that only occurs in a narrow arc of sand dune-shinnery oak habitat in southeastern New Mexico and west Texas (see Map 1 below). The surface activity period for the DSL is late April to late September (Degenhardt et al. 2006). To preclude the need for federal listing, the Department strongly recommends that trenching projects planned to occur within known or potentially occupied habitat be mitigated by avoidance (i.e., re-routing trenching activities away from the sand dune-shinnery oak habitat). If complete avoidance of this habitat is not possible, trenching should only occur along existing road or pipeline rights-of-way and outside of the DSL activity period of late April to late September.

If trenching in known or potentially occupied habitat must occur during the DSL activity period, then the Department strongly recommends that qualified biological monitors, trained in reptile and amphibian identification and handling, be employed to search the entire length of open trench daily, between 10:00 A.M. and noon, for as long as the trench remains open. For effective searches and removal of trapped animals, approximately one biological monitor per mile of open trench will be needed. Trapped animals should be relocated a minimum of 50 meters away from the trench.

For trenching activities on Bureau of Land Management (BLM) lands within the distribution of the DSL (see Map 1), the use of a biological monitor to remove trapped wildlife is a BLM condition of approval for trenching projects. Also, the Lesser Prairie-Chicken-Dunes Sagebrush Lizard Candidate Conservation Agreement (CCA) and Candidate Conservation Agreement with Assurances (CCAA) requires CCA/A enrolled participants to use biological monitors to remove trapped animals from trenching projects within the distribution of the DSL. The CCA/CCAA is administered by the Center for Excellence (**CEHMM**).

To reduce costs and maximize effectiveness of employing a biological monitor, concurrent trenching and back-filling should occur, minimizing the amount of open trench at any time. During daily and longer shut-down periods, open trench between trenching and back-filling operations should be protected using one or more of the methods described above.

State endangered dunes sagebrush lizard (*Sceloporus arenicolus*). Photo C.W. Painter.



Map 1. Known distribution of the dunes sagebrush lizard (*Sceloporus arenicolus*; purple polygon) based on Laurencio and Fitzgerald (2010) and habitat suitability for the lizard based on Johnson et al. (2016).

Literature Cited

Anderson, P.K., E. Liner, and R. Etheridge. 1952. Notes on amphibian and reptile populations in a Louisiana pineland area. Ecology 33(2):274-278.

Ayers, D., and G. Wallace. 1997. Pipeline trenches: an underutilized resource for finding fauna. Pp. 349-357 *in* Conservation Outside Nature Reserves. P. Hale and D. Lamb, eds. Centre for Conservation Biology, University of Queensland, Brisbane, Australia.

Degenhardt, W.G., C. W. Painter, and A.H. Price. 1996. Amphibians and Reptiles of New Mexico. University of New Mexico Press, Albuquerque, NM. 357 pp. + appends.

Doody, S.J., P. West, J. Stapley, M. Welsh, A. Tucker, E. Guarino, P. Matthew, N. Bishop, M. Head, S. Dennis, G. West, A. Pepper, and A. Jones. 2003. Fauna by-catch in pipeline trenches: conservation, animal ethics, and current practices in Australia. Australian Zoologist 32(3):410-419.

Enge, K.M., D.T. Cobb, G. Sprandel, and D. Francis. 1996. Wildlife captures in a pipeline trench in Gadsden County, Florida. Florida Scientist 59(1):1-11. Florida Academy of Sciences.

Hawken, J. L. 1951. Water system acts as reptile and amphibian trap. Herpetologica 7(2):81-83.

Johnson, K., M. Horner, E. Muldavin, P. Neville, T. Neville, and J. Smith. 2016. Dunes sagebrush lizard habitat map and models, New Mexico. Natural Heritage New Mexico, University of New Mexico, Albuquerque, New Mexico, USA. Publ. No. 15-GTR-387.

Laurencio, L.R., and L.A. Fitzgerald. 2010. Atlas of distribution and habitat of the dunes sagebrush lizard (*Sceloporus arenicolus*) in New Mexico. Texas Cooperative Wildlife Collection, Department of Wildlife and Fisheries Sciences, Texas A & M University, College Station, Texas, USA.

[NMDGF] New Mexico Department of Game and Fish. 2016. State Wildlife Action Plan for New Mexico. New Mexico Department of Game and Fish, Santa Fe, New Mexico, USA.

Romano, A.J., D. Leavitt, L. Fitzgerald, and C. Schalk. 2014. Vertebrate by-catch of pipeline trenches in the Mescalero-Monahans shinnery sands of southeastern New Mexico. The Prairie Naturalist 46(2):95-96.

Woinarski, J.C., M. Armstrong, K. Brennan, G. Connors, D. Milne, G. McKenzie, and K. Edwards. 2000. A different fauna? Captures of vertebrates in a pipeline trench compared with conventional survey techniques, and a consideration of mortality patterns in a pipeline trench. Australian Zoologist 31(3):421-431.

Table 1 Federally- and state-listed species and Species of Greatest Conservation Need in New Mexico vulnerable to trenching

Common Name	Scientific Name	Status
Western river cooter	*Pseudemys gorzugi*	State NM: Species of Greatest Conservation Need (SGCN) State NM: Threatened
Big Bend slider	*Trachemys gaigeae*	State NM: Species of Greatest Conservation Need (SGCN)
Reticulate Gila monster	*Heloderma suspectum suspectum*	State NM: Endangered State NM: Species of Greatest Conservation Need (SGCN)
Slevin's bunchgrass lizard	*Sceloporus slevini*	State NM: Species of Greatest Conservation Need (SGCN) State NM: Threatened
Dunes sagebrush lizard	*Sceloporus arenicolus*	State NM: Endangered State NM: Species of Greatest Conservation Need (SGCN)
Mountain skink	*Plestiodon callicephalus*	State NM: Species of Greatest Conservation Need (SGCN) State NM: Threatened
Western massasauga	*Sistrurus tergeminus*	State NM: Species of Greatest Conservation Need (SGCN)
New Mexico ridge-nosed rattlesnake	*Crotalus willardi obscurus*	Federal: Threatened State NM: Endangered State NM: Species of Greatest Conservation Need (SGCN)
Banded rock rattlesnake	*Crotalus lepidus klauberi*	State NM: Species of Greatest Conservation Need (SGCN)
Mottled rock rattlesnake	*Crotalus lepidus lepidus*	State NM: Species of Greatest Conservation Need (SGCN) State NM: Threatened
Boreal toad	*Anaxyrus boreas boreas*	State NM: Endangered State NM: Species of Greatest Conservation Need (SGCN)
Sonoran Desert toad	*Incilius alvarius*	State NM: Species of Greatest Conservation Need (SGCN) State NM: Threatened
Arizona toad	*Anaxyrus microscaphus microscaphus*	State NM: Species of Greatest Conservation Need (SGCN)
Boreal chorus frog	*Pseudacris maculata*	State NM: Species of Greatest Conservation Need (SGCN)
Eastern barking frog	*Craugastor augusti latrans*	State NM: Species of Greatest Conservation Need (SGCN)

Table 1 Federally- and state-listed species and Species of Greatest Conservation Need in New Mexico vulnerable to trenching, continued

Common Name	Scientific Name	Status
Western narrow-mouthed toad	*Gastrophryne olivacea*	State NM: Endangered State NM: Species of Greatest Conservation Need (SGCN)
Chiricahua leopard frog	*Lithobates chiricahuensis*	Federal: Threatened State NM: Species of Greatest Conservation Need (SGCN)
Lowland leopard frog	*Lithobates yavapaiensis*	State NM: Endangered State NM: Species of Greatest Conservation Need (SGCN)
Northern leopard frog	*Lithobates pipiens*	State NM: Species of Greatest Conservation Need (SGCN)
Plains leopard frog	*Lithobates blairi*	State NM: Species of Greatest Conservation Need (SGCN)
Rio Grande leopard frog	*Lithobates berlandieri*	State NM: Species of Greatest Conservation Need (SGCN)
Jemez Mountains salamander	*Plethodon neomexicanus*	Federal: Endangered State NM: Endangered State NM: Species of Greatest Conservation Need (SGCN)
Sacramento Mountain salamander	*Aneides hardii*	State NM: Species of Greatest Conservation Need (SGCN) State NM: Threatened

Attachment 2

Threatened and Endangered Species

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United States Department of the Interior

FISH AND WILDLIFE SERVICE
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In Reply Refer To: August 08, 2023
Project Code: 2023-0114010
Project Name: Jemez Springs WWTP Improvements

Subject: List of threatened and endangered species that may occur in your proposed project location or may be affected by your proposed project

To Whom It May Concern:

Thank you for your recent request for information on federally listed species and important wildlife habitats that may occur in your project area. The U.S. Fish and Wildlife Service (Service) has responsibility for certain species of New Mexico wildlife under the Endangered Species Act (ESA) of 1973 as amended (16 USC 1531 et seq.), the Migratory Bird Treaty Act as amended (16 USC 701-715), and the Bald and Golden Eagle Protection Act as amended (16 USC 668-668(c)). We are providing the following guidance to assist you in determining which federally imperiled species may or may not occur within your project area, and to recommend some conservation measures that can be included in your project design.

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the ESA of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the ESA, the accuracy of this species list should be verified after 90 days. The Service recommends that verification be completed by visiting the ECOS-IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the ECOS-IPaC system by completing the same process used to receive the enclosed list.

The purpose of the ESA is to provide a means whereby threatened and endangered species and

the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the ESA and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (NEPA; 42 USC 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at http://www.fws.gov/endangered/esa-library/pdf/TOC-GLOS.PDF.

Candidate Species and Other Sensitive Species

A list of candidate and other sensitive species in your area is also attached. Candidate species and other sensitive species are species that have no legal protection under the ESA, although we recommend that candidate and other sensitive species be included in your surveys and considered for planning purposes. The Service monitors the status of these species. If significant declines occur, these species could potentially be listed. Therefore, actions that may contribute to their decline should be avoided.

Lists of sensitive species including State-listed endangered and threatened species are compiled by New Mexico State agencies. These lists, along with species information, can be found at the following websites.

Biota Information System of New Mexico (BISON-M): www.bison-m.org

New Mexico State Forestry. The New Mexico Endangered Plant Program: https://www.emnrd.nm.gov/sfd/rare-plants/

New Mexico Rare Plant Technical Council, New Mexico Rare Plants: nmrareplants.unm.edu

Natural Heritage New Mexico, online species database: nhnm.unm.edu

WETLANDS AND FLOODPLAINS

Under Executive Orders 11988 and 11990, Federal agencies are required to minimize the destruction, loss, or degradation of wetlands and floodplains, and preserve and enhance their natural and beneficial values. These habitats should be conserved through avoidance, or mitigated to ensure that there would be no net loss of wetlands function and value.

We encourage you to use the National Wetland Inventory (NWI) maps in conjunction with ground-truthing to identify wetlands occurring in your project area. The Service's NWI program website, www.fws.gov/wetlands/Data/Mapper.html, integrates digital map data with other resource information. We also recommend you contact the U.S. Army Corps of Engineers for permitting requirements under section 404 of the Clean Water Act if your proposed action could impact floodplains or wetlands.

MIGRATORY BIRDS

In addition to responsibilities to protect threatened and endangered species under the ESA, there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the Service (50 CFR 10.12 and 16 USC 668(a)). For more information regarding these Acts see https://www.fenws.gov/birds/policies-and-regulations.php.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a Federal nexus) or a Bird/Eagle Conservation Plan (when there is no Federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see https://www.fws.gov/birds/bird-enthusiasts/threats-to-birds.php. We also recommend review of the Birds of Conservation Concern list (https://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php) to fully evaluate the effects to the birds at your site. This list identifies migratory and non-migratory bird species (beyond those already designated as federally threatened or endangered) that represent top conservation priorities for the Service, and are potentially threatened by disturbance, habitat impacts, or other project development activities.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 thereby provides additional protection for both migratory birds and migratory bird habitat. Please visit https://www.fws.gov/migratorybirds/pdf/management/executiveordertoprotectmigratorybirds.pdf for information

regarding the implementation of Executive Order 13186.

We suggest you contact the New Mexico Department of Game and Fish, and the New Mexico Energy, Minerals, and Natural Resources Department, Forestry Division for information regarding State protected and at-risk species fish, wildlife, and plants.

For further consultation with the Service we recommend submitting inquiries or assessments electronically to our incoming email box at nmesfo@fws.gov, where it will be more promptly routed to the appropriate biologist for review.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List

OFFICIAL SPECIES LIST

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

New Mexico Ecological Services Field Office
2105 Osuna Road Ne
Albuquerque, NM 87113-1001
(505) 346-2525

PROJECT SUMMARY

Project Code: 2023-0114010
Project Name: Jemez Springs WWTP Improvements
Project Type: Wastewater Facility - Maintenance / Modification
Project Description: In April 2023 flooding occurred in the Jemez River due to rapid snow melt following an above average snowpack. This flooding overwhelmed the Village of Jemez Springs wastewater treatment plant causing damage to the treatment plant and effluent lines and causing untreated wastewater to flow into the Jemez River. As a result, alternatives are being developed to repair and upgrade the wastewater treatment plant and sewer lines. The area includes the treatment plant and upstream sewer lines from approximately the village center to approximately 3 miles downstream to the plant. Timing for the system upgrades is unknown at this time.

Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@35.75319375,-106.70760352667011,14z

Counties: Sandoval County, New Mexico

ENDANGERED SPECIES ACT SPECIES

There is a total of 9 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries[1], as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

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1. NOAA Fisheries, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

MAMMALS

NAME	STATUS
Mexican Wolf *Canis lupus baileyi* Population: Wherever found, except where listed as an experimental population No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/3916	Endangered
New Mexico Meadow Jumping Mouse *Zapus hudsonius luteus* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/7965	Endangered

BIRDS

NAME	STATUS
Mexican Spotted Owl *Strix occidentalis lucida* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/8196	Threatened
Southwestern Willow Flycatcher *Empidonax traillii extimus* There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/6749	Endangered
Yellow-billed Cuckoo *Coccyzus americanus* Population: Western U.S. DPS There is **final** critical habitat for this species. Your location does not overlap the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/3911	Threatened

AMPHIBIANS

NAME	STATUS
Jemez Mountains Salamander *Plethodon neomexicanus*	Endangered

There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/4095

FISHES

NAME	STATUS
Rio Grande Cutthroat Trout *Oncorhynchus clarkii virginalis*	Candidate

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/920

NAME	STATUS
Rio Grande Silvery Minnow *Hybognathus amarus*	Endangered

Population: Wherever found, except where listed as an experimental population
There is **final** critical habitat for this species. Your location does not overlap the critical habitat.
Species profile: https://ecos.fws.gov/ecp/species/1391

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus*	Candidate

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/9743

CRITICAL HABITATS

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

YOU ARE STILL REQUIRED TO DETERMINE IF YOUR PROJECT(S) MAY HAVE EFFECTS ON ALL ABOVE LISTED SPECIES.

IPAC USER CONTACT INFORMATION

Agency: Jemez Springs village
Name: Julie Kutz
Address: 6020 Academy NE
City: Albquerque
State: NM
Zip: 87109
Email jkutz@geo-logic.com
Phone: 5053539103

LEAD AGENCY CONTACT INFORMATION

Lead Agency: New Mexico Environment Department

Federal or State Threatened/Endangered Species
Sandoval

Taxonomic Group	# Species	Taxonomic Group	# Species
Amphibians	1	Birds	16
Fish	1	Lepidoptera; moths and butterflies	1
Mammals	4	Molluscs	2

TOTAL SPECIES: 25

Common Name	Scientific Name	NMGF	US FWS	Critical Habitat	SGCN	Photo
Spotted Bat	Euderma maculatum	T			Y	View
Pacific Marten	Martes caurina	T			Y	View
White-nosed Coati	Nasua narica	E				View
Meadow Jumping Mouse	Zapus luteus luteus	E	E	Y	Y	View
Yellow-billed Cuckoo (western pop)	Coccyzus americanus occidentalis		T	Y	Y	View
Costa's Hummingbird	Calypte costae	T			Y	View
Broad-billed Hummingbird	Cynanthus latirostris	T			Y	View
Whooping Crane	Grus americana	E	E			No Photo
Neotropic Cormorant	Phalacrocorax brasilianus	T			Y	View
Brown Pelican	Pelecanus occidentalis	E				View
Bald Eagle	Haliaeetus leucocephalus	T			Y	View
Common Black Hawk	Buteogallus anthracinus	T			Y	View
Mexican Spotted Owl	Strix occidentalis lucida		T	Y	Y	View
Peregrine Falcon	Falco peregrinus	T			Y	View
Northern Beardless-Tyrannulet	Camptostoma imberbe	E			Y	View
Willow Flycatcher	Empidonax traillii brewsteri; adastus		E			View
Southwestern Willow Flycatcher	Empidonax traillii extimus	E	E	Y	Y	View
Bell's Vireo	Vireo bellii	T			Y	View
Gray Vireo	Vireo vicinior	T			Y	View
Baird's Sparrow	Centronyx bairdii	T			Y	View
Jemez Mountains Salamander	Plethodon neomexicanus	E	E	Y	Y	View
Rio Grande Silvery Minnow	Hybognathus amarus	E	E	Y	Y	View
Wrinkled Marshsnail	Stagnicola caperata	E			Y	View
Monarch Butterfly	Danaus plexippus		C			View

Federal or State Threatened/Endangered Species
Sandoval

Common Name	Scientific Name	NMGF	US FWS	Critical Habitat	SGCN	Photo
Paper Pondshell	Utterbackia imbecillis	E			Y	View

Attachment 3

Cultural Resource Report

DBS&A
a Geo-Logic Company

VILLAGE OF JEMEZ SPRINGS WASTEWATER IMPROVEMENT PROJECT CULTURAL RESOURCE LITERATURE REVIEW SUMMARY, SANDOVAL COUNTY, NEW MEXICO

PREPARED FOR
Daniel B. Stephens and Associates

PREPARED BY
Okun Consulting Solutions

NOVEMBER 2023

Okun Consulting Solutions

VILLAGE OF JEMEZ SPRINGS WASTEWATER IMPROVEMENT PROJECT, CULTURAL RESOURCE LITERATURE REVIEW SUMMARY, SANDOVAL COUNTY, NEW MEXICO

This report summarizes cultural resource existing conditions and previous research for proposed Village of Jemez Springs (Village) upgrades to their wastewater system. Jemez Springs is a popular tourist town along New Mexico Highway 4 (NM 4) in Sandoval County, New Mexico known for its hot springs and recreational opportunities. The Village has evaluated several alternatives, and the Recommended Project includes rehabilitation of critical components in their wastewater collection system and wastewater treatment plant (WWTP) to ensure reliable service to their customers. The Village plans to pursue both state and federal funding for the project, but specific funding sources have not yet been identified. The current cultural resource literature review was conducted to support an Environmental Information Document (EID) and Preliminary Engineering Report (PER) being completed for the Village by Daniel B. Stephens and Associates per New Mexico Environment Department (NMED) and US Environmental Protection Agency (EPA) guidelines.

Project Description

The Jemez Springs wastewater system requires improvements because it is currently subject to infiltration and inflow, and both wastewater pipes and manholes are aged and in need of renewal. The Village (the main sewer interceptor) and WWTP are located along the Jemez River where sanitary sewer overflows or plant upsets can result in contamination of the river with impacts to wildlife and human health. For example, runoff flooding from higher than usual winter precipitation in 2023 overwhelmed the capacity of the system, causing untreated wastewater to flow into the river. Due to the proximity of the Village, WWTP, and collector system to the Jemez River, this is an ongoing threat with the potential for flooding to occur in any given year, and there is therefore a need to upgrade the infrastructure and increase the capacity of the wastewater system to prevent a recurrence of the 2023 system breakdown. Improvements to the WWTP are also needed to comply with National Pollutant Discharge Elimination System (NPDES) requirements from the EPA.

To accomplish these goals, the project would replace malfunctioning, deteriorated, undersized, and outdated features of the plant and collector system; clean out debris and repair damage from flood events; and update and increase the capacity across the system to handle future flood events. These tasks would require specific repairs and upgrades to the WWTP, manholes, wastewater lines, and other infrastructure. The WWTP is located within a 1.47-acre area between the Jemez River and NM 4, south of Jemez Springs at the southern end of the system. The collection system is comprised of approximately 6.33 miles of primary wastewater collection lines and at least 139 manholes. Specific improvements proposed by the Recommended Project include:

- Cleaning and inspection of the sanitary sewer collection system
- Rehabilitation of high-risk areas and critical components of the sanitary sewer collection system using trenchless methods
- Rehabilitation of existing manholes that are in critical condition or risk exposure to the environment and Jemez River.
- Waterproofing of all manholes located in the floodplain
- Replacement of undersized sewer mains with 8-inch polyvinyl chloride (PVC)
- Installation of influent screening and trash removal equipment at the WWTP
- Installation of various new equipment, buildings, fencing, and other infrastructure at the WWTP
- Electrical improvements to reduce power outages, improve equipment operation, and reduce electricity consumption at the WWTP

Cultural Resource Regulatory Background

As noted above, the cultural resource literature review was conducted to support an EID and PER, and funding could include a variety of state or federal sources that have not yet been identified. As a result, cultural resource investigations may ultimately need to comply with various state and federal laws outlining the identification and treatment of cultural resources. If it receives federal funding, the project would be subject to compliance with Section 106 of the National Historic Preservation Act of 1966 (NHPA; 54 U.S.C. §306108) and its implementing regulations (36 CFR Part 800). This legislation requires the lead federal agency (likely the EPA) to consider the effects a proposed undertaking may have on historic properties as defined under the NHPA and consult with the State Historic Preservation Officer (SHPO) about these potential effects. The project would likely also need to comply with the New Mexico Cultural Properties Protection Act (18-6A-1 through 18-6A-6 New Mexico Statues Annotated [NMSA] 1978), the New Mexico Cultural Properties Act (18-6-1 through 18-6-17 NMSA, as amended through 2005), and other state statutes pertaining to the treatment and preservation of cultural resources, as outlined in the implementing regulations of the New Mexico Administrative Code (NMAC), as it will likely receive state funding and be implemented within municipal lands.

Based on the above guidelines, the current literature review is presented to the Village to assist with cultural resource planning and compliance with cultural resource laws and to identify potential cultural resource issues or concerns that could arise during the project. The "literature review study area" defined by Okun Consulting Solutions (OCS) for the desktop study is a polygon that extends 500 meters (m) (1,640 ft [ft]) in all directions from the existing WWTP and all existing wastewater lines and manholes in the system.

Historical Background

Native Americans have utilized the Jemez Mountains for at least 10,000 years and established the first habitation sites in the area by 2500 BC. For much of its history, the Jemez Mountains were far less densely populated than much of northern New Mexico and were likely only used seasonally or to procure specific

resources such as obsidian. Later, Ancestral Pueblo groups formed villages and were transitional between the Gallina culture to the north and the more settled Ancestral Pueblo areas of the San Juan Basin and Rio Grande Valley. In Late Prehistory, large pueblos were established on mesa tops surrounding the present-day location of Jemez Springs after AD 1200, and the southern part of the Jemez Mountains became a major center of Native American population. At Spanish Contact, the Jemez Mountains were densely populated with large pueblos and extensive systems of fieldhouses and agricultural fields covering the nearby mesa tops. The descendants of these sites today live at Jemez Pueblo and other pueblos in the Rio Grande Valley.

Spanish missionaries arrived in the early 1600s and established mission churches at Giusewa and Walatowa in the AD 1620s (Elliot 1986). The mission church of Giusewa, which was rebuilt in the 1700s, is today preserved as the Jemez State Historical Monument. The Jemez people participated in the Pueblo Revolt and assisted in driving the Spanish from the colony in 1680, but the Spanish reconquered the area and began establishing small communities based on irrigation agriculture in the 1700s. The farming community of Cañon at the confluence of the Jemez and Guadalupe rivers was the first settlement on the Cañon de San Diego Grant, and the Jemez Valley had more than 800 Hispanic residents by the time of Mexican independence in 1821 (Scurlock 1981).

Various historic events would eventually pave the way for more significant settlement of northwestern New Mexico and upland areas such as the Jemez Mountains. Central to these were the expansion of the land grant system under Mexican rule, the eventual subjugation of the Navajo in the 1860s, and the opening of new markets for wool, mineral resources, and timber after New Mexico became part of the United States. Small ranches and homesteads were settled in the upper Jemez Valley in the late 1800s, and the Otero family built a hotel and new bathhouses at Jemez Springs in 1882. Gold was discovered not far from the current project area in 1889; small mining camps boomed in the 1890s, and sawmills were built to meet the lumber demand. The early twentieth century witnessed a period of significant logging and railroad construction in the Jemez Mountains (Elliot 1992).

Jemez Springs became a tourist destination in the 1800s because of its natural mineral hot springs. The water was enclosed with a rock wall and the gazebo built around it still stands today on the Plaza. Remnants of the original bathhouse, which closed permanently following a flood in 1941, are located on the property of Jemez Hot Springs, and many of the surrounding buildings in Jemez Springs are more than 100 years old. The surrounding mountains were designated as the Jemez Forest Preserve in 1905 and became the Jemez National Forest in 1907. The Forest merged with the Pecos National Forest in 1915, creating the Santa Fe National Forest. Recreation and tourism have since become a major part of the economy and local identity.

Record Search Results

A records search of the New Mexico Cultural Resource Information System (NMCRIS) database was completed on October 6, 2023, to obtain information about all previously documented cultural resources and previous cultural resource inventories within the literature review area. Shape files were obtained for all previous investigations and documented resources in the vicinity so they could be evaluated. Current listings of the National Register of Historic Places (NRHP) and New Mexico State Register of Cultural

Properties (NMSRCP) were also consulted to determine the presence of any registered properties or districts.

Based on this record search, 25 cultural resource inventories have been conducted within the literature review area (see Figures 2 and 3). These inventories were conducted between 1984 and 2002 by a variety of different organizations, including the Santa Fe National Forest, New Mexico Department of Transportation (NMDOT), and private contractors (Table 1). The projects included improvements along NM 4 and other transportation routes (n=7); Santa Fe National Forest projects (n=6), including recreational improvements, wildlife and watershed studies, and construction of an administrative building; telecommunications towers (n=3), telephone lines and other utilities (n=2); previous waterlines and waters system improvements (n=2); and other research projects or small-scale infrastructure improvements within Jemez Springs (n=5).

Thirteen different previous cultural resource inventories intersect with one of the wastewater lines or manhole locations within the Jemez Springs wastewater system. The most important large-scale studies for the purposes of the current project are a TRC, Inc. project for a buried telecommunications line (Jones-Bartholomew and Higgins 2002) and surveys by Marron and Associates (Brown and Brown 2006) and Parsons Brinkerhoff (Del Frate et al. 2017) for improvements along NM 4. These linear surveys run parallel or cross some of the Jemez Springs wastewater collection lines, resulting in survey of some of these corridors.

Overall, 27 out of the 139 manholes (19 percent) and 0.99 out of 6.33 miles (16 percent) of existing collection lines have been previously inventoried for cultural resources. The WWTP has not been previously surveyed. Most of the previously surveyed lines and manholes are within the Village or at the northern end of the wastewater collection system, where there have been other infrastructure projects in the past. It should be noted that some of these surveys are too old to meet current standards or be accepted by the SHPO.

Table 1. Summary of Previous Cultural Resource Investigations within the Study Area

NMCRIS	Date	Performing Organization	Report Title	Lead Agency
14296*	1985	NM State Highway & Transportation Dept (NMSHTD)	Cultural Resource Survey of State Road 4 Near Jemez Springs, NMSHD District 6 Project	NMSHTD
20039*	1987	NMSHTD	A Cultural Resource Survey of New Mexico 4, Near Jemez Springs SP-OF-038-1(204)	NMSHTD
21549*	1988	Complete Archaeological Service Assoc.	Cultural Resource Inventory Baca Gravel Pit and Two Yard Sites New Mexico State Highway Department Project SP-OF-038-1(204) Sandoval County, New Mexico	NMSHTD
27298	1989	Southwest Archaeological Consultants	Lower Jemez Campsite for Santa Fe NF	US Forest Service Southwest Region
29197	1984	US Forest Service Southwest Region	Jemez Ranger Station Administrative Site for Santa Fe NM-Jemez RD	US Forest Service Southwest Region
29443	1984	Santa Fe NF-Jemez Ranger District	The Soda Dam Complex Cultural Resource Inventory	Santa Fe National Forest
48885	1993	Trask, Lance	Ancient Billboards, The Rock Art of the Lower Jemez Mountains Santa Fe National Forest, Jemez Ranger	Santa Fe National Forest

			District: Virgin Mesa, Holiday Mesa, Stable Mesa, Mesa de Guadalupe, and Mesa Venado: A Cost-Share Project of the Santa Fe National Forest and the Maxwell Museum of Anthropology	
54395	1996	Complete Archaeological Service Assoc.	Cultural Resources Inventory United States Postal Service Jemez Springs Post Office Sandoval County, New Mexico	US Postal Service Denver Facilities Service Office
59801*	1998	Archaeological Svcs by Laura Michalik	An Archaeological Clearance Survey of a Proposed Telephone Cable Right-of-Way Along NM 4 Between Canon and Jemez Springs, Jemez Ranger District, Santa Fe National Forest, Sandoval County, New Mexico	NMSHTD
60341*	1998	US Natural Resource Conservation Services	Cultural Resource Inventory of the South Upper Ditch (Lower Jemez Ditch)	US Natural Resource Conservation Svc. New Mexico State Office
64443	1998	Santa Fe NF-Jemez Ranger District	Village of Jemez Land Exchange	US Forest Service Santa Fe National Forest
66419*	1999	Los Alamos National Laboratories	Cultural Resource Survey of Father Fitzgerald Park, Village of Jemez Springs, Sandoval County, New Mexico	US Department of Transportation Federal Highway Administration
78284*	2002	TRC, Inc.	Cultural Resource Survey for Valor Telecom's Aerial and Buried Telecommunication Line on Santa Fe National Forest, Highway Right-of-Way, and Private Land, Sandoval County, New Mexico	NMSHTD
79843*	2003	Santa Fe NF-Jemez Ranger District	Jemez Ranger District Administration Site improvements	US Forest Service Santa Fe National Forest
92016*	2005	Santa Fe NF-Jemez Ranger District	Jemez Ranger District Administration Site Waterline	US Forest Service Santa Fe National Forest
102495*	2006	Marron and Associates	Cultural Resource Report a Class I and Class III Survey Along NM 4 between Mile Posts 15.3 and 18.7 in the Village of Jemez Springs, Sandoval County, New Mexico	NM Department of Transportation
115751*	2009	SWCA Environmental Consultants	Additional Survey Around Bridges 441 and 442 on NM 4 in Jemez Springs	NM Department of Transportation
118640	2010	Ecosystem Management Inc.	Results of a Heritage Resource Inventory of 1852 Acres for the East Fork Fuels Treatment Project, Jemez Ranger District, Santa Fe National Forest, Sandoval County, New Mexico	Santa Fe NF-Jemez Ranger District
121000	2011	SWCA Environmental Consultants	Additional Construction Maintenance Easement Survey of NM 4 Bridges in Jemez Springs	NM Department of Transportation
128672*	2013	Jemez Mountains Research Center	Jemez Springs Village Plaza Cultural Resources Inventory Survey	NM Department of Transportation
129883	2014	David Reynolds	Cultural Resources Survey of a Proposed Cell Tower in the Village of Jemez Springs, Sandoval County, NM	US Federal Communications Commission
136069	2016	Santa Fe NF-Jemez Ranger District	Jemez River Fish Structure Restoration Phase II and Invasive Plant Treatment	US Forest Service Santa Fe National Forest
137258*	2017	Parsons, Brinckerhoff	A Cultural Resource Survey for the Proposed Structure No. 6245 Replacement Project along NM 4, Mileposts 18.53-19.00, Village of Jemez Springs, Sandoval County, New Mexico	US Department of Transportation Federal Highway Administration

146769	2020	Quality Services	Historic Properties Inventory and Documentation for the Commnet Jemez Springs Communications Tower Replacement, Sandoval County, New Mexico	US Federal Communications Commission
150004	2022	US Federal Communications Commission	Historic Properties Inventory and Documentation for the Commnet Jemez Springs Communications Tower Replacement	US Federal Communications Commission

Two register-listed properties are located within the literature review area, and 27 historic buildings, 11 archaeological sites, four linear resources, and four historic structures have been previously documented in the area (see Figures 2 and 3). The register-listed properties are the Jemez State Monument (Guisewa) National Historic Landmark (SR 48; NR 73001147) and the Jemez Hot Springs Mineral Bath House (SR 761). SR 48 is the stone and adobe, seventeenth century San Jose de Gusewe Spanish mission church and surrounding ruins, located at the northern edge of Jemez Springs (Stewart 1972). A wastewater collection line begins just south of the monument, but no other infrastructure is within the property. SR 761 includes the Jemez Hot Springs Mineral Bath House, hot springs, and a gazebo constructed in the 1930s under a New Deal Program. The bath house was originally constructed in the 1870s (with an addition in 1940) and is historically significant as one of the first buildings in Jemez Springs and for its central role in the early development of the town as a tourist destination (Threinen 1980). The primary wastewater collection line in the system runs just west of the bathhouse, within the boundaries of the registered property.

The 11 archaeological sites include the Giusewa/Jemez State Monument/San Jose de los Jemez Mission (also SR 48; see above), the historic archaeological elements of the Village of Jemez Springs (LA 8861), the South Upper Ditch (also documented as HCPI 41980; see below), and several historic and prehistoric artifact scatters and residential sites (see Table 2 for a complete list of known resources). These archaeological resources demonstrate the long-term use of Cañon de San Diego and adjacent rock cliffs and mesas. The Village and state monument are crossed by wastewater collection lines, but none of the other previously documented archaeological sites within the literature review area contain wastewater infrastructure.

The four structures are three historic bridges along NM 4 and one set of mid-twentieth century walls. None are crossed by existing wastewater system infrastructure, although collection lines run close to the historic walls (HCPI 38955). The four linear resources are acequias/water conveyances and include the Jemez Springs Ditch, South Upper Ditch, East Lateral, and West Side Ditch. These resources are associated with historic irrigation agriculture within the Cañon de San Diego. The Jemez Springs Ditch, South Upper Ditch, and East Lateral are crossed by several different wastewater collection lines, and in several cases, manholes are located very close to the historic acequias.

The 27 previously recorded historic buildings are located primary in the Village, but several are scattered up and down the canyon from the main town. Most are close to NM 4 where historic building surveys have been commissioned by the NMDOT in the past. The majority of these buildings are located a significant distance from wastewater system infrastructure. However, two buildings are shown in NMCRIS Geographic Information System (GIS) data as being crossed by a wastewater collection line (this could be a GIS error), and approximately 10 have wastewater collection lines that run near the building. Many other historic buildings are likely present in the area but have not been previously documented.

Table 2. Summary of Previously Documented Cultural Resources within the Literature Review Area

Resource No.	Resource Type	Name (if applicable)	Eligibility	Relationship to Project

LA 679	Archaeological Site	Giusewa/Jemez State Monument/San Jose de los Jemez Mission (also SR 48)	Eligible	Crossed by collection line
LA 8861	Archaeological Site	Jemez Springs Village	Unknown	Crossed by collection line
LA 75737	Archaeological Site	None	Unknown	No wastewater infrastructure
LA 54817	Archaeological Site	None	Eligible	No wastewater infrastructure
LA 54818	Archaeological Site	None	Unknown	No wastewater infrastructure
LA 65898	Archaeological Site	None	Eligible	No wastewater infrastructure
LA 65899	Archaeological Site	None	Eligible	No wastewater infrastructure
LA 90613	Archaeological Site	New Bird/Old Bird	Unknown	No wastewater infrastructure
LA 118239	Archaeological Site	None	Unknown	No wastewater infrastructure
LA 121565	Archaeological Site	South Upper Ditch (also HCPI 41980)	Eligible	No wastewater infrastructure
LA 137320	Archaeological Site	None	Not Eligible	No wastewater infrastructure
HCPI 32113	Building	None	Yes	Collection line adjacent
HCPI 32114	Building	None	No	Collection line adjacent
HCPI 32115	Building	None	No	No wastewater infrastructure
HCPI 38934	Building	Old Jemez Springs Ranger Station	Yes	No wastewater infrastructure
HCPI 38955	Structure	Historic Walls	Unknown	No wastewater infrastructure
HCPI 41937	Building	None	Unknown	No wastewater infrastructure
HCPI 41942	Building	None	Unknown	No wastewater infrastructure
HCPI 41943	Building	None	Unknown	Crossed by collection line
HCPI 41944	Building	None	Unknown	Crossed by collection line
HCPI 41945	Building	None	Unknown	No wastewater infrastructure
HCPI 41949	Building	None	Unknown	No wastewater infrastructure
HCPI 41950	Building	None	Unknown	No wastewater infrastructure
HCPI 41951	Building	None	Unknown	No wastewater infrastructure
HCPI 41981	Linear Resource/Acequia	Jemez Springs Ditch	Unknown	Crossed by collection line
HCPI 41980	Linear Resource/Acequia	South Upper Ditch (also LA 121565)	Unknown	Crossed by collection line
HCPI 41982	Linear Resource/Acequia	East Lateral	Eligible	Crossed by collection line
HCPI 41983	Linear Resource/Acequia	West Side Ditch	Eligible	No wastewater infrastructure
HCPI 42198	Building	Jemez Ranger Station	Unknown	No wastewater infrastructure
HCPI 42199	Building	Jemez Ranger Station	Unknown	No wastewater infrastructure
HCPI 42566	Building	None	Not Eligible	No wastewater infrastructure
HCPI 41938	Building	San Diego Bar & Lounge	Unknown	No wastewater infrastructure
HCPI 41939	Building	None	Unknown	No wastewater infrastructure
HCPI 41940	Building	None	Unknown	Collection line adjacent
HCPI 41941	Building	None	Unknown	No wastewater infrastructure
HCPI 41946	Building	None	Unknown	Collection line adjacent

HCPI 41947	Building	None	Unknown	Collection line adjacent
HCPI 41948	Building	None	Unknown	No wastewater infrastructure
HCPI 41952	Building	Jemez Canyon Inn	Unknown	No wastewater infrastructure
HCPI 41953	Building	None	Unknown	No wastewater infrastructure
HCPI 41978	Structure	NMDOT Bridge 441	Unknown	No wastewater infrastructure
HCPI 41979	Structure	NMDOT Bridge 442	Unknown	No wastewater infrastructure
HCPI 42301	Structure	NMDOT Bridge 6245	Not Eligible	No wastewater infrastructure
HCPI 42567	Building	None	Not Eligible	No wastewater infrastructure
HCPI 42568	Building	None	Not Eligible	No wastewater infrastructure
HCPI 45214	Building	Jemez Ranger Station Warehouse	Unknown	No wastewater infrastructure

Summary and Recommendations

The purpose of this desktop review was to identify the location of known cultural resources within the literature review area, determine whether wastewater infrastructure locations had been previously inventoried for the presence of cultural resources, and derive expectations regarding the nature and frequency of resources that could be impacted by wastewater improvements. The primary findings of the desktop review are summarized below:

1. Less than 20 percent of wastewater lines and manhole locations have been previously inventoried for cultural resources; the WWTP has not been previously surveyed for cultural resources.
2. Two register-listed properties—the Jemez State Monument (Guisewa) and Jemez Hot Springs Mineral Bath House—are located within the literature review area, but neither is likely to be impacted by wastewater improvements.
3. Various historic built environment resources in and around the Village are located in the project vicinity, including historic buildings, structures, and acequias; while these resources are unlikely to be impacted by improvements to existing wastewater infrastructure, other historic buildings and structures could be located along these lines.
4. A relatively small number of known archaeological sites are within the literature review area, but this finding is mostly due to a lack of previous inventory; the area has been used historically and prehistorically for thousands of years, and many more archaeological sites may be present.
5. Few large, block cultural resource inventories have been conducted in the area, making it difficult to evaluate the potential for prehistoric archaeological sites.

Background information indicates that the Jemez Springs wastewater collection lines, manholes, WWTP, and other infrastructure located within the Cañon de San Diego are within an area that has been utilized by humans for thousands of years. The remnants of these long-term activities include prehistoric pueblo sites, Spanish mission churches, historic acequias and irrigation features, and buildings associated with the early historic settlement of Jemez Springs in the late 1800s and its subsequent development as a premier recreational destination. Despite this long and significant history, little of the area has been inventoried for cultural resources, and past studies have focuses primarily on the NM 4 transportation corridor and specific infrastructure projects in the Village and immediate surroundings.

This document was prepared to assist the Village with cultural resource planning and compliance as it implements improvements to its wastewater system, and to support an EID and PER being completed by Daniel B. Stephens and Associates for the project. As funding sources are identified in the future, consultation with relevant state and federal agencies should be undertaken to identify the level of effort and areas of potential effects (APEs) required for cultural resources. When specific stages of the wastewater project are implemented, Class III pedestrian survey may be required to identify cultural resources and ensure their avoidance and protection, particularly along project segments that have not been previously surveyed. Some general guidance can also be offered at this preliminary stage. First, if feasible, all above-ground buildings should be avoided during project construction, and registered properties should be evaluated for potential effects. Acequias and irrigation features should either be avoided or returned to their current condition using similar materials, and work should be coordinated with irrigation associations. Finally, the WWTP should be inventoried in full for the presence of cultural resources. All activities should be coordinated with the New Mexico SHPO, and pedestrian cultural resource surveys should meet the state regulations set forth in §*4.10.15 NMAC: Standards for Survey and Inventory*.

References

Brown, Kenneth L. and Marie E. Brown
2006 *Cultural Resource Report a Class I and Class III Survey Along NM 4 between Mile Posts 15.3 and 18.7 in the Village of Jemez Springs, Sandoval County, New Mexico*. Marron and Associates. NMCRIS Activity No. 102495.

Del Frate, Darryl, Jeff Fredine, & Hollis Lawrence
2017 *A Cultural Resource Survey for the Proposed Structure No. 6245 Replacement Project along NM 4, Mileposts 18.53-19.00, Village of Jemez Springs, Sandoval County, New Mexico*. Parsons Brinkerhoff. NMCRIS Activity No. 137258.

Elliott, Michael L.
1986 *Overview and Synthesis of the Archaeology of the Jemez Province, New Mexico*. Jemez Mountains Research Center. Museum of New Mexico, Office of Archaeological Studies. Santa Fe.
1992 *Railroad Logging of the Cañon de San Diego Land Grant in North-Central New Mexico*. National Register of Historic Places Multiple Property Documentation Form. National Park Service.

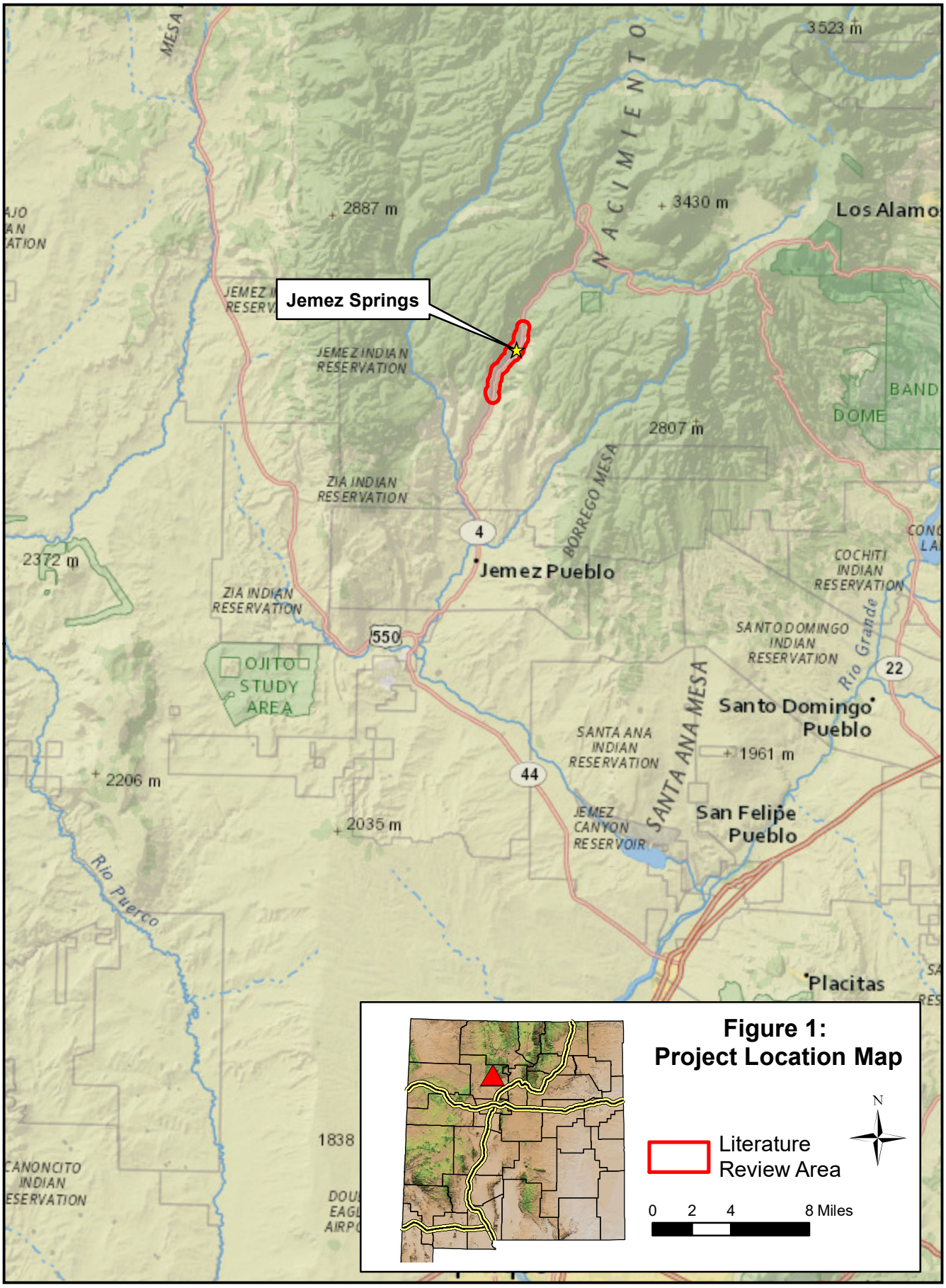
Jones-Bartholomew, Dee A., and Howard C. Higgins
2002 *Cultural Resource Survey for Valor Telecom's Aerial and Buried Telecommunication Line on Santa Fe National Forest, Highway Right-of-Way, and Private Land, Sandoval County, New Mexico*. TRC, Inc. NMCRIS Activity No. 78284.

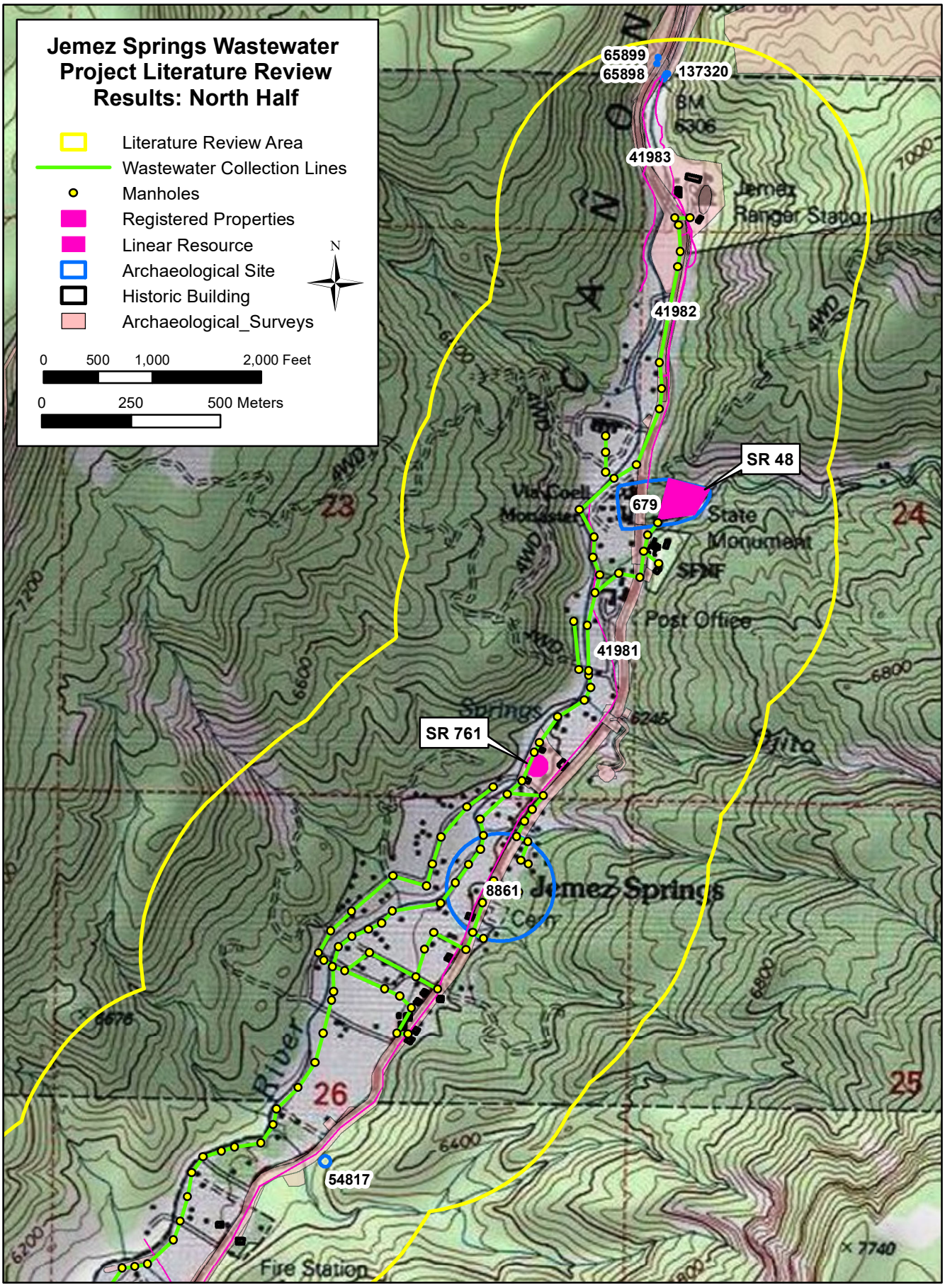
Scurlock, Dan
1981 Euro-American History of the Study Area. In *High Altitude Adaptations along Redondo Creek: The Baca Geothermal Anthropological Project*. Edited by Craig Baker and Joseph C. Winter, pp. 131–160. Office of Contract Archeology, University of New Mexico. Albuquerque.

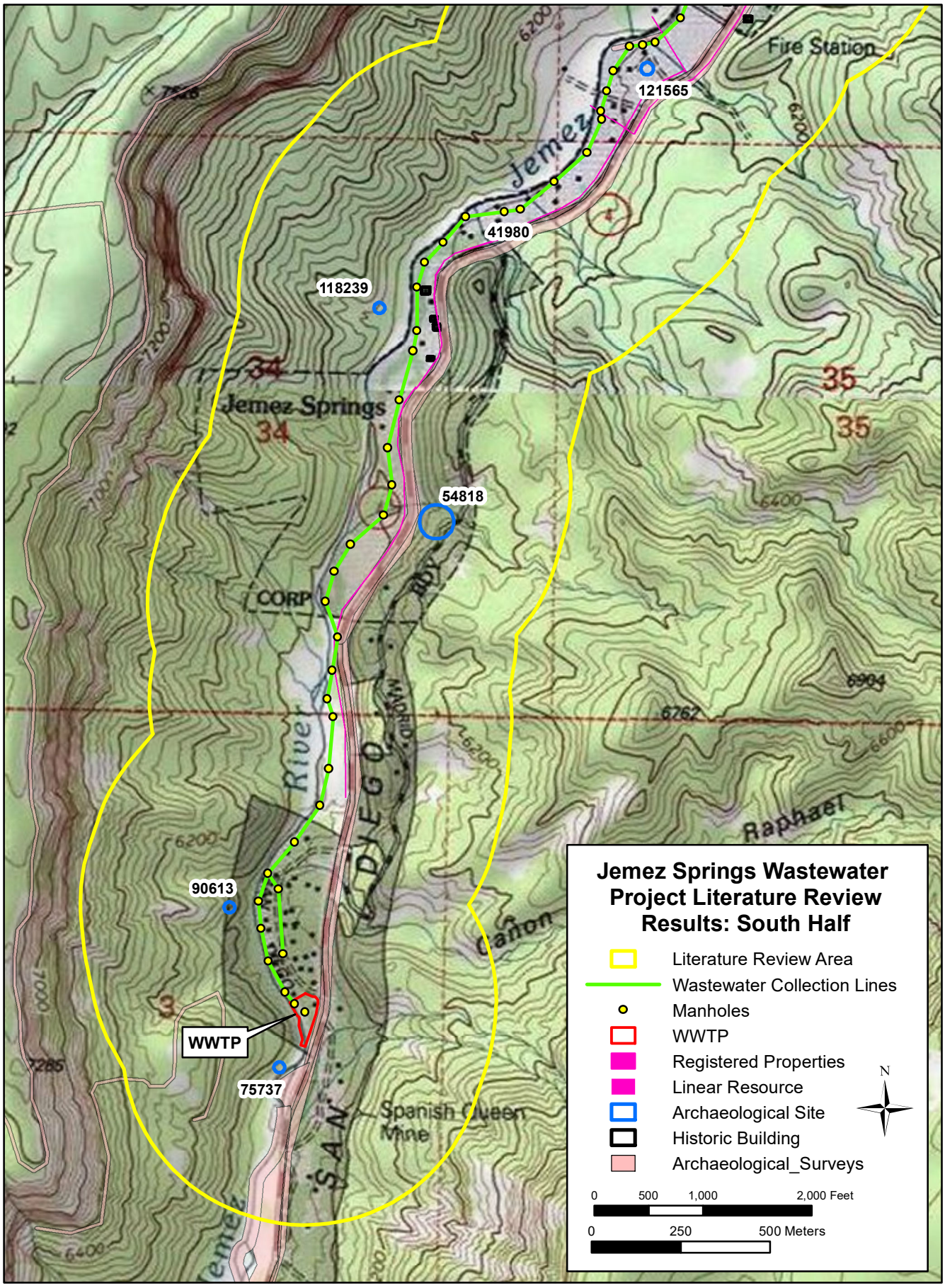
Stewart, Ronald

1972 *Jemez State Monument/San Jose de los Jemez Mission and Guisaja Pueblo*. National Register of Historic Places Inventory Nomination Form. On File at the Laboratory of Anthropology and NMCRIS. Santa Fe.

Threinen, Ellen
1980 *The Jemez Hot Springs Mineral Bath House*. National Register of Historic Places Inventory Nomination Form. On File at the Laboratory of Anthropology and NMCRIS. Santa Fe.


Jemez Springs
JEMEZ INDIAN RESERVATION
ZIA INDIAN RESERVATION
ZIA INDIAN RESERVATION
OJITO STUDY AREA
Jemez Pueblo
COCHITI INDIAN RESERVATION
SANTO DOMINGO INDIAN RESERVATION
Santo Domingo Pueblo
SANTA ANA INDIAN RESERVATION
SANTA ANA MESA
San Felipe Pueblo
JEMEZ CANYON RESERVOIR
Placitas
BORREGO MESA
NACIMIENTO
Rio Grande
Rio Puerco
CANONCITO INDIAN RESERVATION
Los Alamo
BAND
DOME
3523 m
3430 m
2887 m
2807 m
2372 m
2206 m
2035 m
1961 m
1838
4
550
44
22
Figure 1:
Project Location Map
Literature Review Area
N
0 2 4 8 Miles


Jemez Springs Wastewater Project Literature Review Results: North Half
Literature Review Area
Wastewater Collection Lines
Manholes
Registered Properties
Linear Resource
Archaeological Site
Historic Building
Archaeological_Surveys
N
0 500 1,000 2,000 Feet
0 250 500 Meters
65899
65898
137320
41983
41982
41981
SR 48
679
SR 761
8861
54817
Jemez Springs
Post Office
Fire Station


Jemez Springs Wastewater Project Literature Review Results: South Half
Literature Review Area
Wastewater Collection Lines
Manholes
WWTP
Registered Properties
Linear Resource
Archaeological Site
Historic Building
Archaeological_Surveys
N
0 500 1,000 2,000 Feet
0 250 500 Meters
121565
41980
118239
54818
90613
75737
WWTP
Fire Station
Jemez
Jemez Springs
CORP
River
Canon
Raphael
Spanish Queen Mine
SAN DIEGO
34
35
3

Okun Consulting Solutions

Attachment 4

Environmental Justice Report

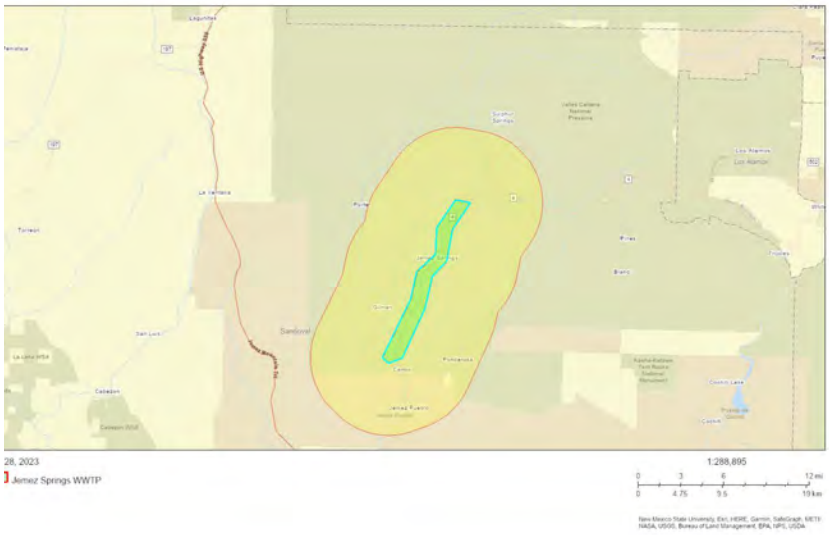
DBS&A
a Geo-Logic Company

EJScreen Community Report

This report provides environmental and socioeconomic information for user-defined areas, and combines that data into environmental justice and supplemental indexes.

Sandoval County, NM

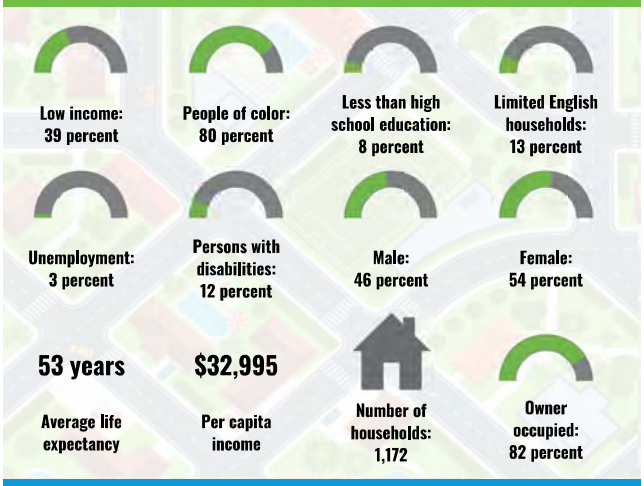
5 miles Ring around the Area
Population: 3,870
Area in square miles: 226.29



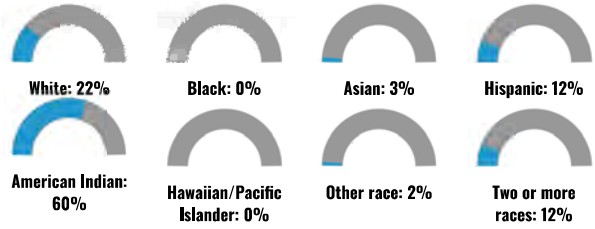
LANGUAGES SPOKEN AT HOME

LANGUAGE	PERCENT
English	31%
Spanish	5%
Other Asian and Pacific Island	2%
Other and Unspecified	61%
Total Non-English	69%

COMMUNITY INFORMATION



BREAKDOWN BY RACE



BREAKDOWN BY AGE

LIMITED ENGLISH SPEAKING BREAKDOWN

Notes: Numbers may not sum to totals due to rounding. Hispanic population can be of any race.
Source: U.S. Census Bureau, American Community Survey (ACS) 2017 -2021. Life expectancy data comes from the Centers for Disease Control.

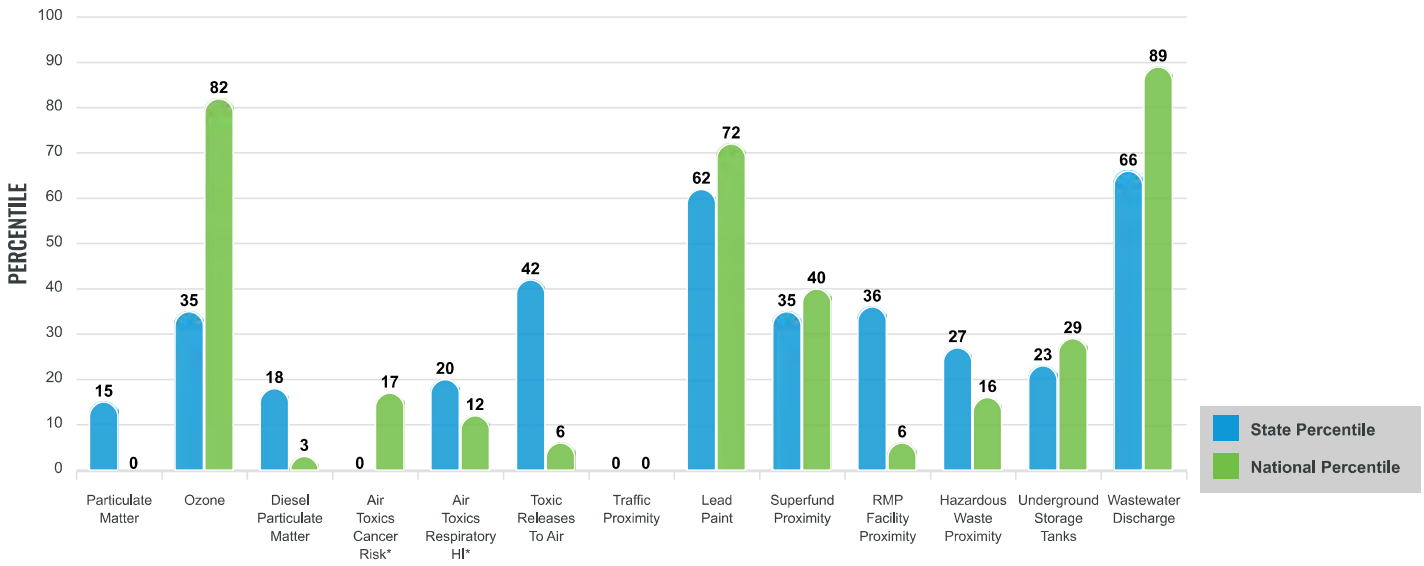
Environmental Justice & Supplemental Indexes

The environmental justice and supplemental indexes are a combination of environmental and socioeconomic information. There are thirteen EJ indexes and supplemental indexes in EJScreen reflecting the 13 environmental indicators. The indexes for a selected area are compared to those for all other locations in the state or nation. For more information and calculation details on the EJ and supplemental indexes, please visit the EJScreen website.

EJ INDEXES

The EJ indexes help users screen for potential EJ concerns. To do this, the EJ index combines data on low income and people of color populations with a single environmental indicator.

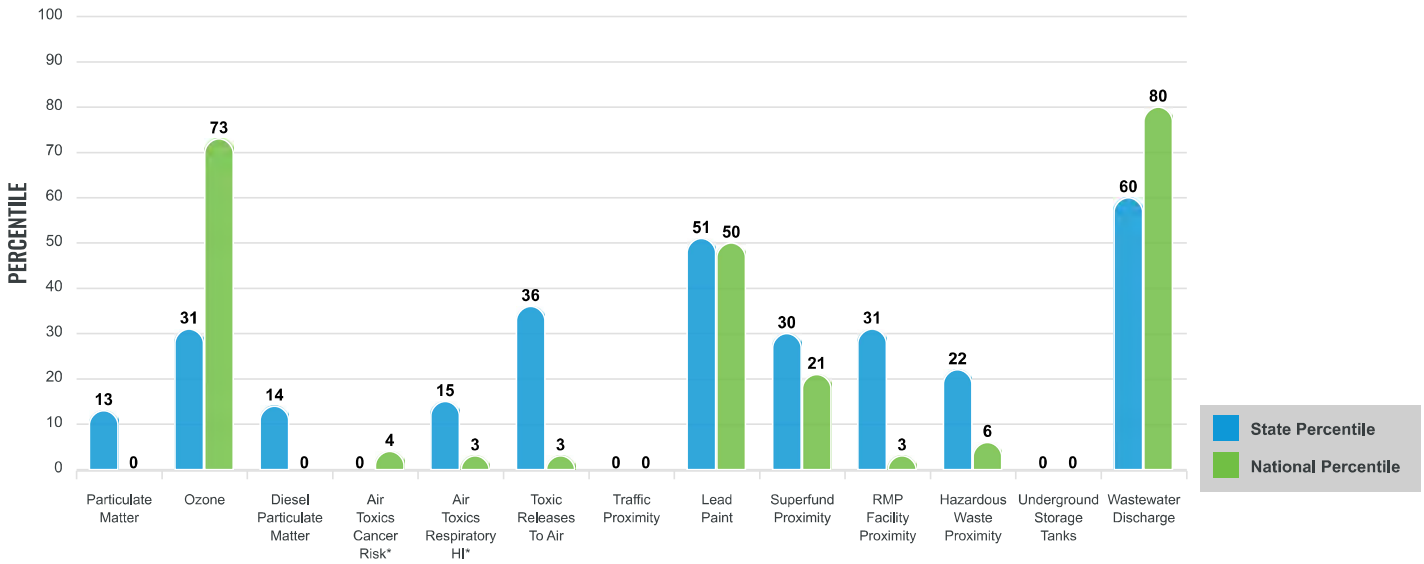
EJ INDEXES FOR THE SELECTED LOCATION



SUPPLEMENTAL INDEXES

The supplemental indexes offer a different perspective on community-level vulnerability. They combine data on percent low-income, percent linguistically isolated, percent less than high school education, percent unemployed, and low life expectancy with a single environmental indicator.

SUPPLEMENTAL INDEXES FOR THE SELECTED LOCATION



These percentiles provide perspective on how the selected block group or buffer area compares to the entire state or nation.

Report for 5 miles Ring around the Area

EJScreen Environmental and Socioeconomic Indicators Data

SELECTED VARIABLES	VALUE	STATE AVERAGE	PERCENTILE IN STATE	USA AVERAGE	PERCENTILE IN USA
POLLUTION AND SOURCES					
Particulate Matter (µg/m^3)	3.62	5.16	5	8.08	0
Ozone (ppb)	62.1	64.7	23	61.6	57
Diesel Particulate Matter (µg/m^3)	0.0243	0.194	11	0.261	1
Air Toxics Cancer Risk* (lifetime risk per million)	10	20	0	28	1
Air Toxics Respiratory HI*	0.1	0.21	4	0.31	1
Toxic Releases to Air	0.12	29	32	4,600	3
Traffic Proximity (daily traffic count/distance to road)	0.011	84	0	210	0
Lead Paint (% Pre-1960 Housing)	0.16	0.19	59	0.3	43
Superfund Proximity (site count/km distance)	0.017	0.14	25	0.13	14
RMP Facility Proximity (facility count/km distance)	0.021	0.15	26	0.43	1
Hazardous Waste Proximity (facility count/km distance)	0.03	0.73	19	1.9	4
Underground Storage Tanks (count/km^2)	0.004	3.3	23	3.9	0
Wastewater Discharge (toxicity-weighted concentration/m distance)	0.023	0.47	52	22	74
SOCIOECONOMIC INDICATORS					
Demographic Index	60%	51%	64	35%	82
Supplemental Demographic Index	16%	17%	50	14%	65
People of Color	80%	62%	72	39%	83
Low Income	39%	40%	50	31%	68
Unemployment Rate	3%	7%	37	6%	38
Limited English Speaking Households	13%	6%	85	5%	88
Less Than High School Education	8%	14%	41	12%	50
Under Age 5	6%	5%	62	6%	57
Over Age 64	17%	19%	51	17%	56
Low Life Expectancy	11%	19%	0	20%	1

*Diesel particulate matter, air toxics cancer risk, and air toxics respiratory hazard index are from the EPA's Air Toxics Data Update, which is the Agency's ongoing, comprehensive evaluation of air toxics in the United States. This effort aims to prioritize air toxics, emission sources, and locations of interest for further study. It is important to remember that the air toxics data presented here provide broad estimates of health risks over geographic areas of the country, not definitive risks to specific individuals or locations. Cancer risks and hazard indices from the Air Toxics Data Update are reported to one significant figure and any additional significant figures here are due to rounding. More information on the Air Toxics Data Update can be found at: https://www.epa.gov/haps/air-toxics-data-update.

Sites reporting to EPA within defined area:

Superfund 0
Hazardous Waste, Treatment, Storage, and Disposal Facilities 0
Water Dischargers 13
Air Pollution 3
Brownfields 0
Toxic Release Inventory 0

Other community features within defined area:

Schools 6
Hospitals 1
Places of Worship 5

Other environmental data:

Air Non-attainment ..... No
Impaired Waters ..... Yes

Selected location contains American Indian Reservation Lands* ..... Yes
Selected location contains a "Justice40 (CEJST)" disadvantaged community ..... Yes
Selected location contains an EPA IRA disadvantaged community ..... Yes

Report for 5 miles Ring around the Area

EJScreen Environmental and Socioeconomic Indicators Data

HEALTH INDICATORS

INDICATOR	HEALTH VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Low Life Expectancy	11%	19%	0	20%	1
Heart Disease	7.9	6.2	88	6.1	83
Asthma	13	10.3	94	10	95
Cancer	6.1	5.7	59	6.1	45
Persons with Disabilities	10.8%	16.6%	18	13.4%	38

CLIMATE INDICATORS

INDICATOR	HEALTH VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Flood Risk	16%	9%	84	12%	80
Wildfire Risk	97%	58%	69	14%	93

CRITICAL SERVICE GAPS

INDICATOR	HEALTH VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Broadband Internet	39%	22%	84	14%	94
Lack of Health Insurance	14%	9%	80	9%	82
Housing Burden	No	N/A	N/A	N/A	N/A
Transportation Access	Yes	N/A	N/A	N/A	N/A
Food Desert	Yes	N/A	N/A	N/A	N/A

Footnotes

Report for 5 miles Ring around the Area

Attachment 5

Agency Correspondence

DBS&A
a Geo-Logic Company

Jemez Springs WWTP EID Consultation Letter Tracking

As of 11/14/2023

Organization	Contact Name	Sent date	Follow up Sent*	Response Received
EMNRD Forestry Division	Erika Rowe; State Botanist	10/11/2023	11/14/2023	
US EPA Region 6	Matthew Reynolds	10/11/2023	11/14/2023	
US EPA Region 6 Office of Communities, Tribes and Environmental Assessment	Jeff Riley	10/11/2023	11/14/2023	10/12/2023
FEMA Region 6	Charles Cook	10/11/2023	11/14/2023	10/13/2023
USDA Natural Resources Conservation Service, New Mexico Field Office, Cuba Office	Nickolas Goodman, District Conservationist	10/11/2023	11/14/2023	
Office of State Engineer (OSE)	Wayne Canon, District 1, OSE Water Rights Division	10/11/2023	11/14/2023	
NMDOT, Statewide Planning	Steven Gisler	10/11/2023	11/14/2023	10/18/2023
	Gary Funkhouser	10/11/2023	11/14/2023	
NMDOT Right of Way Bureau	Angela Sandoval, Operations Section Manager	10/11/2023	11/14/2023	
New Mexico Historic Preservation Division	Michelle Ensey	TBD	11/14/2023	
U.S. Army Corps of Engineers, Albuquerque District	Sarrah Kubinec	10/11/2023	11/14/2023	10/17/2023
NMED	Claudia Trueblood, Ph.D. Science Coordinator, Office of Strategic Initiatives		11/14/2023	

Jemez Springs WWTP EID Consultation Letter Tracking

As of 11/14/2023

NMED, Air Quality	Donna Intermont, Administrative	10/11/2023	11/14/2023	
	Mike Baca, General Compliance	10/11/2023	11/14/2023	10/16/2023
NMED GWQB	Justin Ball, Bureau Chief	10/11/2023	11/14/2023	
NMED SWQB	Shelly Lemon, Bureau Chief	10/11/2023	11/14/2023	
NMED Drinking Water Bureau	Joe Martinez, Bureau Chief	10/11/2023	11/14/2023	
NMED Petroleum Storage Tank Bureau	Lorena Goerger, Bureau Chief	10/11/2023	11/14/2023	
NMED CPB	Brandon Kalinowski	10/11/2023	11/14/2023	
U.S. Fish and Wildlife		8/8/2023 (IPaC)	NA	
Sandoval County	Joshua Jones, County Commissioner, D5	10/11/2023	11/14/2023	
Floodplain Manager	B. Gomez, Sandoval County Floodplain Administrator	10/11/2023	11/14/2023	
U.S. Forest Service,	Jeremy Golston, Jemez Ranger District	10/11/2023	11/14/2023	
Village of Jemez Springs	Roger Sweet, Mayor	10/11/2023	11/14/2023	
NM Department of Game and Fish, Ecological and Environmental Planning Division	Jack Marchetti, Aquatic/Riparian Habitat Specialist	10/11/2023	NA	10/16/2023
NM Department of Cultural Affairs	Marlon Magdalena	10/11/2023	11/14/2023	

Jemez Springs WWTP EID Consultation Letter Tracking

As of 11/14/2023

Valles Caldera Visitor Center	Ranger Sierra	10/11/2023	11/14/2023	
Jemez Springs Library, 30 Village Plaza, Jemez Springs Mile Marker 17-18 www.jsplibrary.org	Janet Phillips	NA	NA	

*Followup with attachments and a public meeting flyer sent to all (even if there was a response)

DBS&A
a Geo-Logic Company

October 11, 2023

Re: Jemez Springs Wastewater Treatment Plant Upgrades

Dear Agency Representative:

The Village of Jemez Springs is proposing improvements to the village-owned wastewater treatment system that include measures to rehabilitate critical areas of the sanitary sewer collection system and the existing wastewater treatment plant (WWTP). The proposed project is located within the Village of Jemez Springs, New Mexico, in the former land grant of Canon de San Diego (see attached Figure 1, Vicinity map). Daniel B. Stephens & Associates, Inc. is currently preparing the Environmental Information Document (EID) for the proposed project on behalf of the Village of Jemez Springs. As part of the preparation of the EID, we are requesting input from interested parties regarding potential environmental impacts resulting from implementation of the project.

Background

In April 2023, the Jemez River overbanked and flooded due to a higher than usual spring runoff, causing a major line break on the sewer interceptor just upstream of the plant and resulting in flows over 300,000 gallons per day (gpd). That incident and subsequent CCTV inspection of sewers revealed deficiencies in the sewer system such as root intrusion, sags in the sewer lines, rocks in sewer lines and eroded manholes.

As a result, the Village of Jemez Springs is in the process of evaluating alternative upgrades to the wastewater treatment plant (WWTP), including each component of the plant: lift station, preliminary treatment, sequencing batch reactors, chemical dosing, disinfection, and sludge handling.

Proposed Project

Five alternatives are currently being evaluated. Figure 2 shows the proposed project area.

- Alternative 1, the No Action Alternative, is not considered feasible, as the Village's existing wastewater treatment system is need of dire repairs to avoid a reoccurrence of another catastrophic event such as the April 2023 failure.
- Collection Alternative 2 – Rehabilitate Critical Areas of the Sanitary Sewer Collection System
- Collection Alternative 3 – Replace the Existing Sanitary Sewer Collection System
- WWTP Alternative 2 – Renovate Critical Components of the Existing WWTP

6020 Academy Road NE, Suite 100
Albuquerque, New Mexico 87109
(505) 822-9400
www.dbstephens.com

- WWTP Alternative 3 – Replace the Existing WWTP with a New Treatment System

The recommended alternative (Proposed Project) is a combination of the Collection Alternative 2 – Rehabilitate Critical Areas of the Sanitary Sewer Collection System and the WWTP Alternative 2 – Renovate Critical Components of the Existing WWTP. Details of the Proposed Project are included in the attached Project Summary.

Purpose and Need

The purpose of the proposed project is to improve the existing WWTP by installing upgrades that will replace malfunctioning, deteriorated, undersized, and outdated features of the plant and collector system. The purpose is also to clear out debris and repair the damage caused to the system from the floods of 2023. Upgrades would provide more permanent solutions to waste management by updating and increasing capacity that would be capable of handling sudden, increased flows caused by flooding in the future.

There is a general need for the project as the collection system and WWTP are aged and in need of renewal. In addition, the snowpack runoff flooding of 2023 overwhelmed the capacity of the system, causing untreated wastewater to flow into the Jemez River. The untreated wastewater overflows and disruption of the WWTP resulted in contamination of the river that impacted wildlife and human health. The flooding was caused by higher than usual winter precipitation that rapidly melted during the spring runoff season. Because of the proximity of the Village and the WWTP and collector system to the Jemez River this is an ongoing threat with the potential for flooding to occur in any given year. The fluctuation of flows due to seasonal flooding or storm events will continue to impact the plant's efficiency and ability to treat wastewater within the limits of their NPDES permit. There is a need therefore to upgrade the infrastructure and increase the capacity of the wastewater system in order to prevent a recurrence of the April 2023 system breakdown.

Providing Input

Per New Mexico Environment Department guidelines for the preparation of EIDs, we are seeking the input of local, state and federal agencies regarding any potential impacts from the project, as well as permitting requirements. Please simply reply to this email (jkutz@geo-logic.com) with your comments. We appreciate your input. If you have questions email jkutz@geo-logic.com or call 505-822-9400 to discuss.

Sincerely,

DANIEL B. STEPHENS & ASSOCIATES, INC.

Julie Kutz
Biologist

Attachments
- Project Summary
- Area Map
- Existing Wastewater Treatment and Collector System
- Proposed Project
- USGS Topo Map

ROGER SWEET
Mayor

DAVID RYAN
Mayor Pro-Tem

VILLAGE OF JEMEZ SPRINGS
Municipal Office

080 Jemez Springs Plaza
PO Box 269, Jemez Springs, NM 87025
Phone (575) 829-3540 • Fax (575) 829-3339
Heather Gutierrez, Deputy Clerk
voffice@jemezsprings-nm.gov
Website: www.jemezsprings-nm.gov

MANOLITO SANCHEZ
Trustee
BOB WILSON
Trustee
MONIQUE ALTON
Trustee

November 13, 2023

Jeff Pappas, PhD
State Historic Preservation Officer and Director
Historic Preservation Division, New Mexico Department of Cultural Affairs
407 Galisteo Street, Suite 236
Bataan Memorial Building
Santa Fe, NM 87501

Re: Village of Jemez Springs Wastewater Improvements
Dear Dr. Pappas:

We are enclosing for your review and comment the preliminary efforts that the Village of Jemez Springs (Village) has taken to date to identify and preserve historic properties that could be affected by plans to improve its wastewater system in Sandoval County, New Mexico. The Village has contracted Daniel B. Stephens and Associates to complete an Environmental Information Document (EID) and Preliminary Engineering Report (PER) for the project, and Okun Consulting Solutions (OCS) has completed background cultural resource investigations to support these efforts. The Village has evaluated several alternatives, and the Recommended Project includes rehabilitation of critical components in their wastewater collection system and wastewater treatment plant (WWTP) to ensure reliable service to their customers. The Village plans to pursue both state and federal funding for the project, but specific funding sources have not yet been identified.

The Jemez Springs wastewater system requires improvements because it is currently subject to infiltration and inflow, and both wastewater pipes and manholes are aged and in need of renewal. The Village (the main sewer interceptor) and wastewater treatment plant (WWTP) are located along the Jemez River where sanitary sewer overflows or plant upsets can result in contamination of the river with impacts to wildlife and human health. To accomplish these goals, the project would replace malfunctioning, deteriorated, undersized, and outdated features of the plant and collector system; clean out debris and repair damage from flood events; and update and increase the capacity across the system to handle future flood events. These tasks would require specific

repairs and upgrades to the WWTP, manholes, wastewater lines, and other infrastructure. The collection system is comprised of approximately 6.33 miles of primary wastewater collection lines and at least 139 manholes.

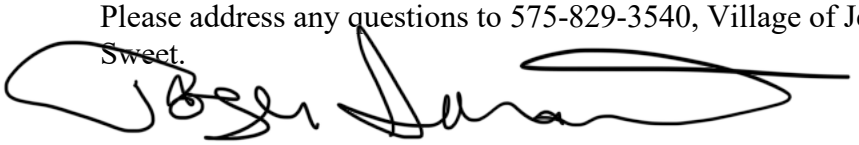
Okun Consulting Solutions (OCS) conducted a cultural resource desktop review and record search to assist the Village with cultural resource planning and compliance as it implements improvements to its wastewater system, and a report summarizing this review is attached. The purpose of this desktop review was to identify the location of known cultural resources within the literature review area, determine whether wastewater infrastructure locations had been previously inventoried for the presence of cultural resources, and derive expectations regarding the nature and frequency of resources that could be impacted by wastewater improvements. The primary findings of the desktop review are summarized below, but please refer to the report for more complete information.

1. Less than 20 percent of wastewater lines and manhole locations have been previously inventoried for cultural resources; the WWTP has not been previously surveyed for cultural resources.
2. Two register-listed properties—the Jemez State Monument (Guisewa) and Jemez Hot Springs Mineral Bath House—are located within the literature review area, but neither is likely to be impacted by wastewater improvements.
3. Various historic built environment resources in and around the Village are located in the project vicinity, including historic buildings, structures, and acequias; while these resources are unlikely to be impacted by improvements to existing wastewater infrastructure, other historic buildings and structures could be located along these lines.
4. A relatively small number of known archaeological sites are within the literature review area, but this finding is mostly due to a lack of previous inventory; the area has been used historically and prehistorically for thousands of years, and many more archaeological sites may be present.
5. Few large, block cultural resource inventories have been conducted in the area, making it difficult to evaluate the potential for prehistoric archaeological sites.

As funding sources are identified in the future, consultation with relevant state and federal agencies should be undertaken to identify the level of effort and areas of potential effects (APEs) required for cultural resources. When specific stages of the wastewater project are implemented, Class III pedestrian survey may be required to identify cultural resources and ensure their avoidance and protection.

The Village will consult with the New Mexico SHPO about their plans to identify and protect historic properties as the project moves forward. At this stage, we are writing to inform you about the project and keep your office appraised of its progress. Your review and comment on the proposed project may also be required for approval of the PER or for future grant applications that the Village will prepare. We look forward to your guidance on these topics.

Please address any questions to 575-829-3540, Village of Jemez Springs Mayor, Roger Sweet.



Sincerely,
Roger Sweet, Mayor
Village of Jemez Springs

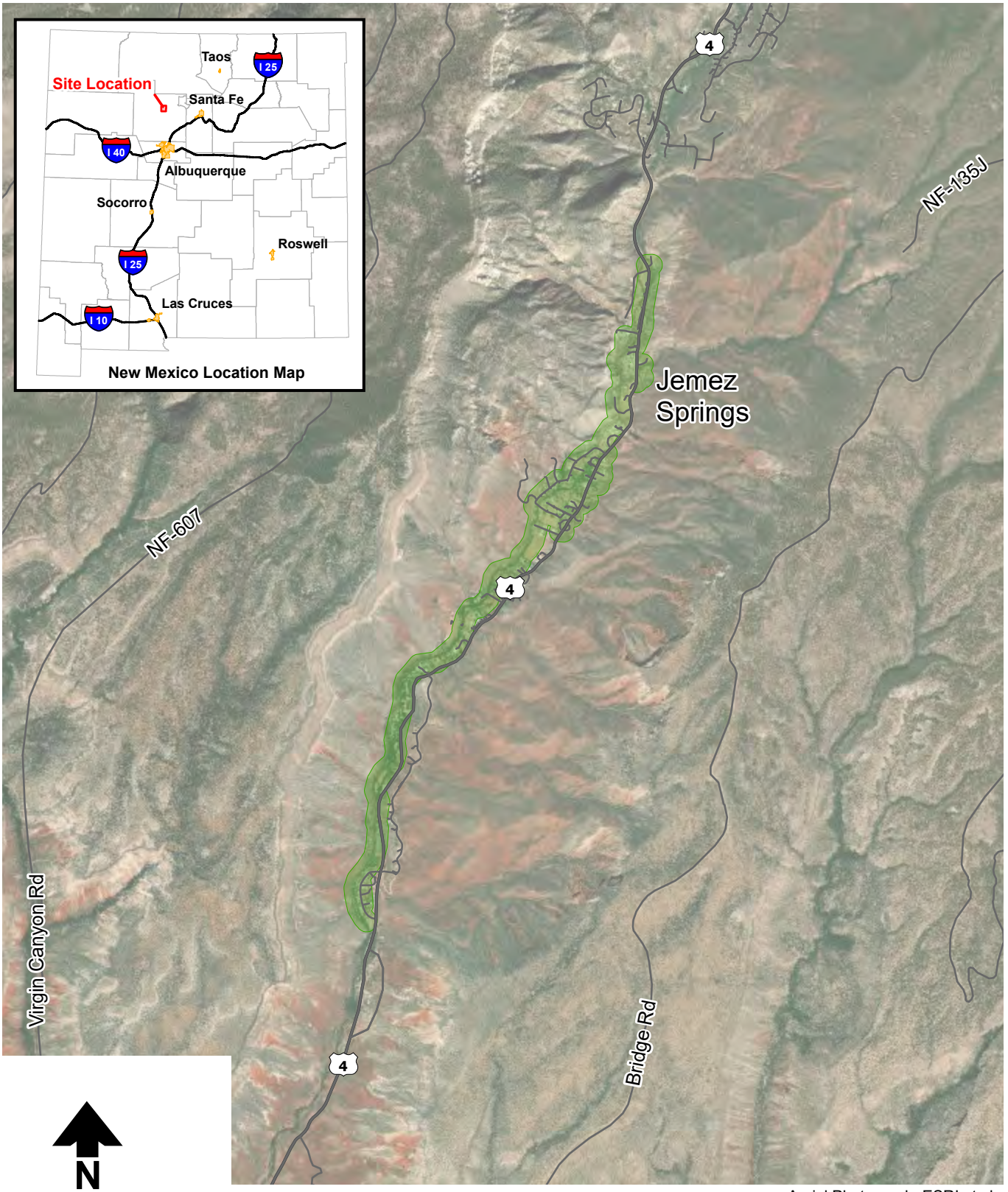
CONCURRENCE:

_____ _____
Dr. Jeff Pappas Ph.D., State Preservation Officer and Director Date

COMMENTS:

_____
_____
_____
_____
_____

Enclosures: Literature Review Summary Report



Aerial Photograph: ESRI et al.

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DBS&A
a Geo-Logic Company

9/22/2023

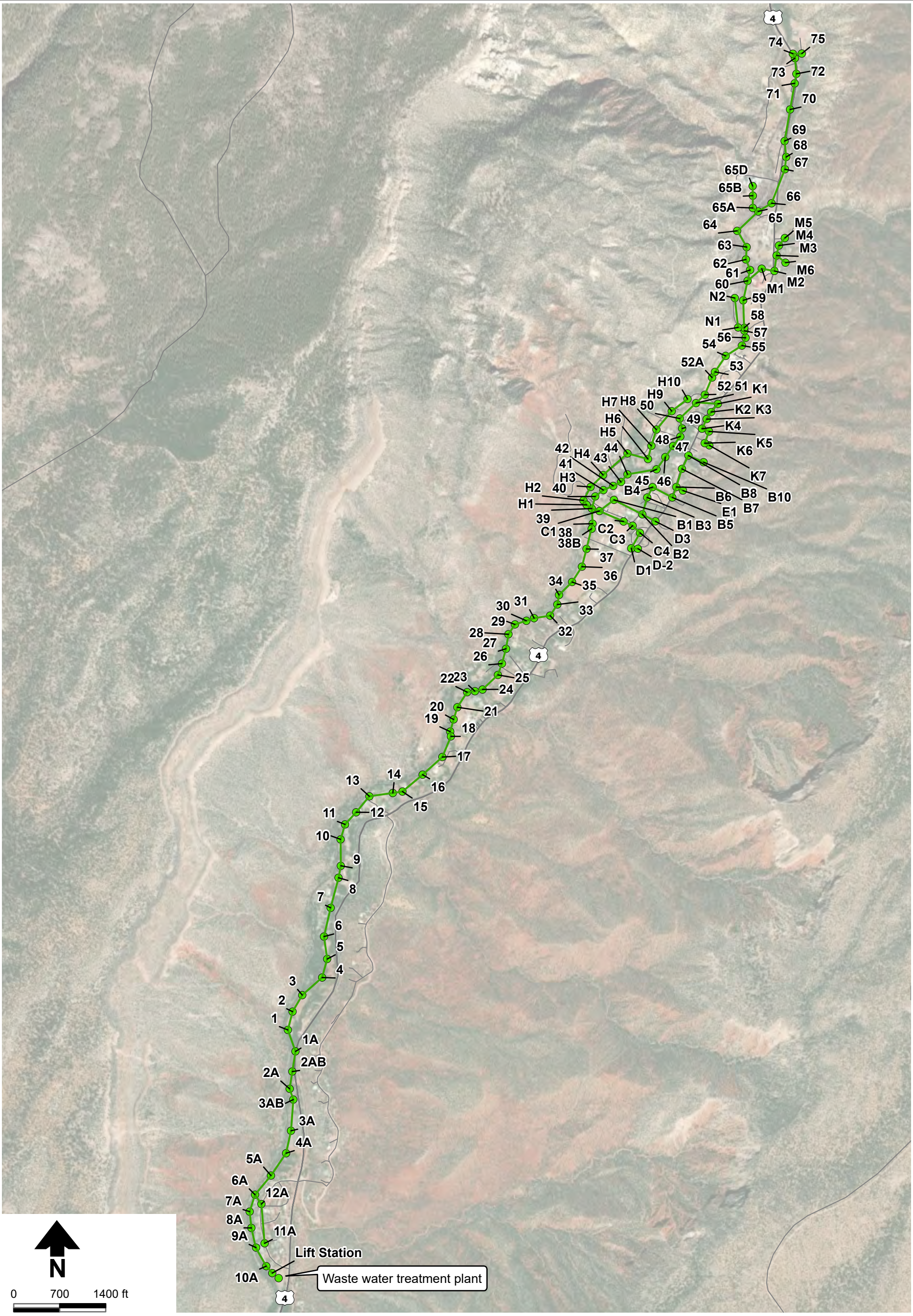
DB23.1197

VILLAGE OF JEMEZ SPRINGS
WASTEWATER SYSTEM PER

Project Area

Figure 1

\\SS6ABQ\DATAS\PROJECTS\DB23.1197_JEMEZ_SPRINGS_WWTP_PER\GIS\ARCGIS_PRO\JEMEZ_SPRINGS_PER\JEMEZ_SPRINGS_PER\JEMEZ_SPRINGS_PER.APRX



Aerial Photograph: ESRI et al.

Explanation

- Sanitary Sewer Line
- Sanitary Sewer Manhole

Figure 2

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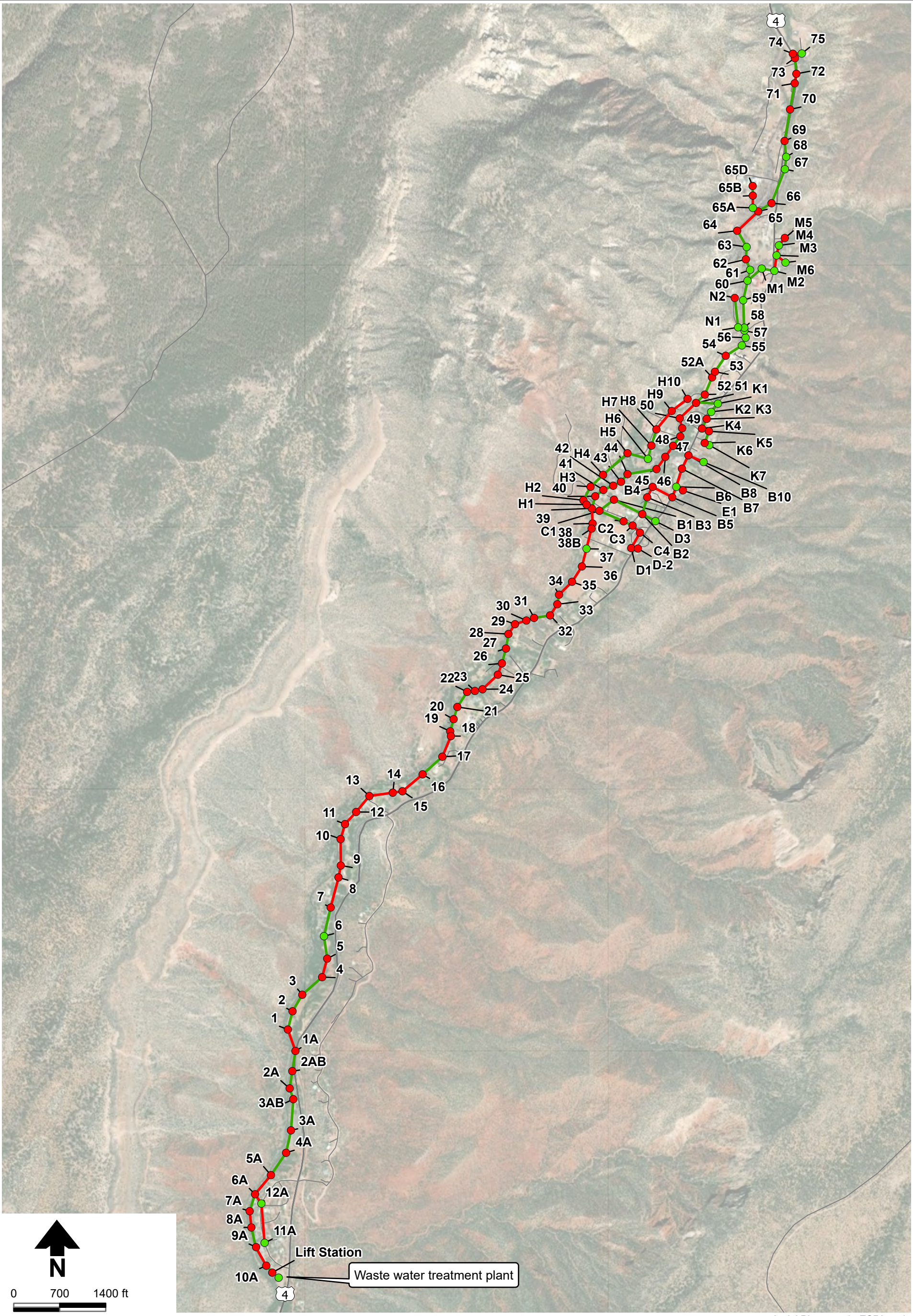
9/22/2023 DB23_1197

VILLAGE OF JEMEZ SPRINGS
WASTEWATER SYSTEM PER

Jemez Springs Existing Wastewater System

\\SS6ABQ\DATAS\PROJECTS\DB23.1197_JEMEZ_SPRINGS_WWTP_PER\GIS\ARCGIS_PRO\JEMEZ_SPRINGS_PER\JEMEZ_SPRINGS_PER\JEMEZ_SPRINGS_PER.APRX



Aerial Photograph: ESRI et al.

Explanation

- Existing Sewer Manhole
- Rehabilitate Sewer Manhole
- Existing Sewer Line
- Rehabilitate Sewer Line

Figure 4

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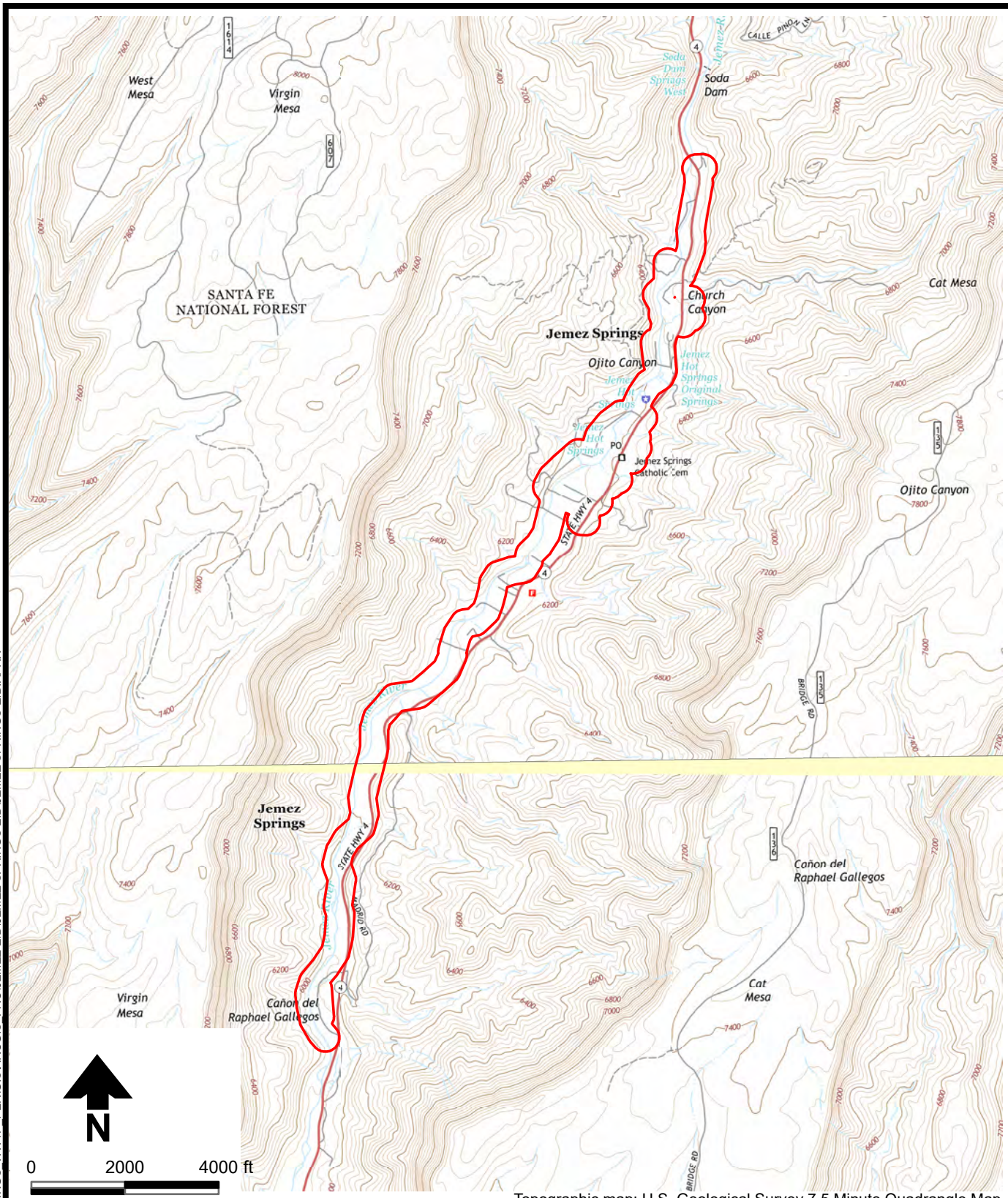
9/28/2023 DB23.1197

VILLAGE OF JEMEZ SPRINGS
WASTEWATER SYSTEM PER

Collection Alternative 2: Rehabilitate Critical Areas



Explanation

Project area

Topographic map: U.S. Geological Survey 7.5 Minute Quadrangle Map
NM Jemez Springs, NM Ponderosa
http://rgis.unm.edu/
Accessed October 10, 2023

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9/25/2023
DB22.2023

VILLAGE OF JEMEZ SPRINGS
ENVIRONMENTAL INFORMATION DOCUMENT (EID)

Topographic Map

Figure 7

Project Summary

Background

In April 2023, the Jemez River overbanked and flooded due to a higher than usual spring runoff of snowpack melting from the headwaters of the river, causing a major line break on the sewer interceptor just upstream of the plant and resulting in flows over 300,000 gallons per day (gpd). That incident and subsequent CCTV inspection of sewers revealed deficiencies in the sewer system such as root intrusion, sags in the sewer lines, rocks in sewer lines and eroded manholes.

As a result, the Village of Jemez Springs is in the process of evaluating alternative upgrades to the wastewater treatment plant (WWTP), including each component of the plant: lift station, preliminary treatment, sequencing batch reactors, chemical dosing, disinfection, and sludge handling. A Preliminary Engineering Report (PER) is being developed for the evaluation and an Environmental Information Document will accompany the PER that is evaluating project impacts on natural and cultural resources, water resources, air quality, socioeconomic and environmental justice, and other resource impacts that may occur as a result of implementation of the project. A desktop review of cultural resources in the project area is also being prepared and results will be submitted to the State Historical Preservation Office (SHPO) for review. Further cultural resource evaluations will be conducted once the design has been determined in coordination with the SHPO. As well, consultation with affiliated tribes will be conducted to determine if there are any concerns with the project.

The proponent of the project is the Village of Jemez Springs. Funding for the proposed project has not been determined at this time.

Project Area Description

The Jemez Springs WWTP and collector system is located in the Village of Jemez Springs, Sandoval County, New Mexico (Figure 1). It is an existing system that services the Village and is Village-owned and maintained. The Jemez Springs WWTP is located adjacent to NM Highway 4, milepost (MP) 14.5, approximately 3 miles south of the Village of Jemez Springs center. The wastewater collection system covers an area approximately 3.5 miles in length, starting north of the village center south to the treatment plant (Figure 2).

The Village is located in the Jemez Mountains, along State Highway 4. The Jemez River runs northeast to southwest on the west side of the Highway through the extents of the Village. The elevations ranges from approximately 6,200 to 6,250 feet above mean sea level from south to north through the village. The Project Area is within Sedimentary Mid-Elevation Forests, an ecoregion consisting of low mountain ridges, slopes, and outwash fans. Coursing through are moderate to high gradient perennial streams with boulder, cobble, and bedrock substrates (Griffith et al., 2006).

Vegetation of this region includes mostly ponderosa pine forest; some areas with pinyon pine or junipers. Understory may include Gambel oak, mountain mahogany, antelope bitterbrush, and wood rose. Grasses include mountain muhly, Junegrass, Arizona fescue, pine dropseed, and various sedges. Vegetation along the banks of the Jemez River consist mostly of willow (Salix spp,) grasses, common horsetail (Equisetum arvense), and cottonwood (Populus deltoides ssp. Wislizeni), with sporadic occurrences of Russian olive (Elaeagnus angustifolia) and salt cedar (Tamarix sp.), imported to the area for ornamentation and erosion control respectively.

The Jemez Springs WWTP and collector system is located near or adjacent to the Jemez River, a tributary of the Rio Grande. The river is perennial, approximately 50 miles long and is formed by the confluence of the San Antonio Creek and East Fork Jemez River. The two tributary streams join near Battleship Rock in Cañon de San Diego, north of the Village. From there the river flows south through the Village of Jemez Springs, Jemez Pueblo and eventually to the Rio Grande.

Land use of the area consists of recreational, private and public land, livestock grazing, some timber harvesting and wildlife habitat. The village is located in the Jemez River valley and is a tourist destination with natural hot springs, restaurants, shops, lodging and part- and full-time residences.

Land outside of the village is a mix of private and public land managed by the U.S. Forest Service. Tribal land belonging to Jemez Pueblo is located approximately six miles south of the WWTP. The village is within the Canon de San Diego land grant, therefore is not part of the U.S. Township and Range system. The wastewater system is shown on USGS topographic quadrangle maps Jemez Springs, NM and Ponderosa, NM.

Proposed Project (Recommended Alternative)

Rehabilitate Critical Areas of the Sanitary Sewer Collection System and Renovate Critical Components of the Existing WWTP

The Proposed Project consists of renovating the existing WWTP and rehabilitating the collection system to improve the level of treatment, improve the solids handling, provide laboratory and office space for operations personnel. This alternative also includes improvements to the UV system and aeration equipment.

Design Details

The Proposed Project includes the following:

- CCTV and flushing of the sanitary sewer collection system
- Rehabilitate high risk areas and critical components of the sanitary sewer collection system via trenchless methods, including Cured in Place Pipe and Pipe Bursting
- Rehabilitate existing manholes that are in critical condition or risk exposure to the environment and Jemez Springs River, utilizing the following repair method types:
    - Repair Method A - Replace cover, frame and seal, including internal/external waterproof seal
    - Repair Method B - Make frame height adjustment and replace cover, frame, and seal, including internal/external waterproof seal
    - Repair Method C - Clean and remove roots, grout and seal leaks and cracks, including waterproof sealant
    - Repair Method D - Reestablish flow channels, bench, pipe connections, and reseal, including waterproof sealant
    - Repair Method E - Apply waterproof coating, including all interior surfaces of the manhole
- Waterproof all manholes located in the floodplain

- Replace undersized sewer mains with 8-inch PVC
- Influent screening and trash removal, including new concrete wet well, trash grinder, auger monster for trash removal, and small enclosure to protect the lift station and components
- New equipment in the existing sequencing batch reactor tanks
- Sludge dewatering equipment consisting of a new belt filter press
- New buildings to include office space, laboratory, ferric chloride dosing equipment, and belt filter press
- New security fencing around the property
- Electrical improvements to reduce power outages, improve equipment operation, and reduce electricity consumption

From: Watson, Mark L., DGF
To: Kutz, Julie
Subject: RE: [EXTERNAL] Rio Grande cutthroat trout in Jemez
Date: Friday, August 11, 2023 8:51:26 AM

Hi Julie, talked with Bryan Bakevich of our FMD and no potential for RGCTs down that low. Potentially RG chub and suckers.

Mark L. Watson
Terrestrial Habitat Specialist
Division of Ecological and Environmental Planning
NM Department of Game and Fish
P.O. Box 25112
Santa Fe, NM 87504
1 Wildlife Way
Santa Fe, NM 87507
(505) 321-5485
New email address as of 1 Oct. 2022: mark.watson@dgf.nm.gov

For NM wildlife info, visit Biota Information System of New Mexico (BISON-M):
Species Accounts, Searches and County Lists (use the "Database Query" option): http://www.bison-m.org/
Habitat Handbook Project Guidelines:
https://www.wildlife.state.nm.us/conservation/habitat-handbook/

Conserving New Mexico's Wildlife for Future Generations

From: Kutz, Julie <jkutz@geo-logic.com>
Sent: Thursday, August 10, 2023 10:03 AM
To: Watson, Mark L., DGF <mark.watson@dgf.nm.gov>
Subject: [EXTERNAL] Rio Grande cutthroat trout in Jemez

Hi Mark,
Do you know if they have been reintroduced in the San Antonio or East Fork tributaries – or downstream in the Jemez River? I'm doing an Environmental Information Document for the Jemez Springs village for a PER (preliminary engineer report) to repair/upgrade the village sanitary sewer system and am going through the federal T&E list which they have the RGCT listed as a candidate. There wouldn't be any impact during construction and would actually be beneficial in the long term

since the sewer system overflowed from the flooding this spring and untreated wastewater flowed in the river.
Thanks,
J.

Julie Kutz
Biologist

Daniel B. Stephens & Associates, Inc.
a Geo-Logic Company

6020 Academy NE, Suite 100
Albuquerque, New Mexico 87109-3315
Office: (505) 822-9400 ¦ Direct: (505) 353-9103 ¦ Mobile: (505) 715-9140
jkutz@dbstephens.com and jkutz@geo-logic.com

www.dbstephens.com ¦ www.geo-logic.com

From:	Marchetti, Jack, DGF
To:	Kutz, Julie
Cc:	Seamster, Virginia, DGF; DGF-EEP-TG; Frey, Eric, DGF
Subject:	RE: [EXTERNAL] Jemez Springs
Date:	Monday, October 16, 2023 3:41:01 PM
Attachments:	project_report_jemez_springs_wastewater_tr_34054_34053.pdf

Dear Ms. Kutz,

The New Mexico Department of Game and Fish (Department) has reviewed the above referenced Jemez Springs WWTP Upgrades project submitted on behalf of the Village of Jemez Springs by Daniel B. Stephens & Associates, Inc.

Department staff entered the project into the New Mexico Environmental Review Tool (NMERT), and the auto-generated project report is attached for your review. Please note that the Department highly recommends consultation with relevant species leads at the United States Fish & Wildlife Service's (USFWS) New Mexico Ecological Services Office (NMESO) before work begins for this project. The Department also recommend use of the USFWS's Information for Planning and Consultation (IPAC) system (https://ipac.ecosphere.fws.gov/) to confirm whether the project area overlaps critical habitat designated for species listed under the federal Endangered Species Act.

Due to construction activities and handling of wastewater and sludge occurring near the Jemez River, the Department recommends implementing a Stormwater Pollution Prevention Plan (SWPPP) to contain potential pollutants. Construction areas and other impervious surfaces can have significant impacts on surface waters by increasing the amount of sediment and other pollutants that are washed into surface waters, increasing the velocity and volume of water, and reducing infiltration into groundwater. Reducing the amount of impervious surfaces and phasing construction will reduce these impacts. The Department provides the following additional recommendations to minimize or eliminate impacts to wildlife and wildlife habitat:

- Divert water around construction site whenever possible.
- Preserve natural areas within the project site. Strive to maintain the natural drainage system of the site, including natural stream channels, wetlands, and floodplains. Design, construct, and maintain the site to protect (or restore) the natural hydrology.
- Following construction, disturbed areas should be re-vegetated using native species that approximate pre-disturbance plant community composition or native plant communities appropriate for the site, including from a region that represents potential future climatic conditions at the site, whichever is more beneficial to wildlife. Short-term erosion control seed mixes are available for temporary control of surface erosion during project implementation; native mixes should be used for temporary as well as permanent erosion control. Native plants and materials should also be used for landscaping. All seed mixtures should be certified as weed-free. New Mexico grass ecotypes for commercial seeding are available through the Los Lunas Plant Materials Center and New Mexico State University. Seeding guidelines are available from the Natural Resources Conservation Service and the Colorado Natural Areas Program.
- Maintain a vegetated buffer zone along all watercourses, including ephemeral arroyos, sufficient to minimize erosion and sediment delivery.

- Use properly engineered drainage swales and other vegetated channel systems instead of storm sewers, lined channels, curbs, and gutters. Vegetated swales should be gently sloped (4:1) so that small wildlife is able to maneuver them.
- Efforts should be made during construction to minimize impacts on vegetative communities. Existing roads and rights-of-way should be used for all transportation. Off-road driving should be avoided. Staging areas should be located in previously disturbed sites, where possible, and kept as small as possible.

Open trenches excavated for underground water or sewer pipelines, powerlines, or fiber optic communication lines can unintentionally entrap and cause the unnecessary mortality of amphibians, reptiles, and small mammals, and can cause injury to large mammals. Trapped animals can die from exposure, starvation, crushing from pipe-laying, entombment from trenching backfilling, drowning, and predation. This unnecessary wildlife mortality can be avoided by implementing conservation measures including: concurrent trenching, pipe-laying, and backfilling operations to minimize the amount of trench left open overnight or longer; construction escape ramps; and employing biological monitors to remove trapped animals. Periods of highest activity for amphibians and reptiles vulnerable to entrapment include summer months and wet weather, and they can be active both day and night. Small mammals subject to entrapment are active year-round and generally most active at night.

Implementing the general trenching conservation measures outlined in the Department's Trenching Project Guidelines will help minimize unnecessary mortality of wildlife. Best management practices should include, at minimum, the following mitigation measures.

- Whenever possible, locate trenching activities within previously disturbed areas, such as existing road or pipeline right-of-ways. To the extent possible, avoid trenching in undisturbed habitat.
- Trench during the cooler months (October – March).
- Utilize concurrent trenching, pipe- or cable-laying, and backfilling. Keep trenching, pipe- or cable-laying, and backfilling crews as close together as possible to minimize the amount of open trench at any given time. When trenching activities are temporarily halted (e.g., overnight, weekends, holidays, weather shutdowns), protect wildlife from accessing any open trench between digging and backfilling operations by using one or more of the methods described below.
- Avoid leaving trenches open overnight. When trenches cannot be backfilled immediately, escape ramps should be constructed at least every 90 meters and preferably 30 meters. Escape ramps can be constructed parallel or perpendicular to the existing trench. The escape ramp slope should be less than 45 degrees (1:1). If pipe or cable has been installed but backfilling has not occurred, escape ramps may need to be constructed on both sides of the trench, since, unless the pipe is elevated enough to allow animals to move underneath it, the pipe or cable may block access of amphibians, reptiles, and small mammals to the ramps if only constructed on one side.
- Trenches that have been left open overnight should be inspected the following day by a qualified biological monitor and trapped animals removed as soon as possible, especially where state- or federally-listed threatened or endangered amphibians, reptiles, or small mammals occur. Untrained personnel should not attempt to remove trapped wildlife because

of the potential to injure animals and the possibility of injury from venomous snakes. Required tools for removal will include snake tongs for removing snakes and a dip net for capturing and removing amphibians and small mammals. Many animals trapped in a trench will burrow under loose soil. To the extent possible, the biological monitor should disturb loose soil in the trench to uncover and remove trapped animals. Animals should be relocated at least 50 meters away from the open trench in undisturbed habitat.

- When pipe has been laid in the trench, end caps should be placed on the open end(s) of the pipe to preclude animals from entering. Pipe staged outside the trench should be capped until placed in the trench or checked for wildlife before being placed into the trench.
- Most wildlife can be protected by constructing silt fence completely around the open trench. Silt fence should be supported from sagging by t-posts, rebar, or stakes and buried at the base to preclude animals from moving below the fence. If construction of a silt fence is a required best management practice for erosion control, then, to preclude the need for a biological monitor, escape ramps, and concurrent backfilling, the guidelines for silt fence installation and maintenance in the Trenching Project Guidelines should be followed.

Thank you for the opportunity to review and comment on the Jemez Springs WWTP project. Please contact me with any questions.

Sincerely,

Jack Marchetti (he/him)
Aquatic/Riparian Habitat Specialist
Ecological and Environmental Planning Division
New Mexico Department of Game and Fish
Cell: 505-479-1269
jack.marchetti@dgf.nm.gov

From: Kutz, Julie <jkutz@geo-logic.com>
Sent: Wednesday, October 11, 2023 1:18 PM
Cc: Arnold, Nate <narnold@geo-logic.com>; Kalinowski, Brandon, ENV <brandon.kalinowski@env.nm.gov>
Subject: [EXTERNAL] Jemez Springs

Good afternoon,

DBS&A is currently preparing an Environmental Information Document (EID) on behalf of the Village of Jemez Springs (the Village) for proposed upgrades of the Village wastewater treatment plant and collector system infrastructure. Those upgrades include measures to rehabilitate critical areas of the sanitary sewer collection system and the existing wastewater treatment plant. To assist with your review, please find attached a cover letter, four maps, and a project summary to provide more information on the environmental setting and the project.

As part of the preparation of the EID, we are requesting input from you regarding potential environmental impacts resulting from implementation of the project.

Please let me know if you have any questions or need further information. Thank you in advance for your input on the project.

Thank you,
Julie

Julie Kutz
Biologist

Daniel B. Stephens & Associates, Inc.
a Geo-Logic Company

6020 Academy NE, Suite 100
Albuquerque, New Mexico 87109-3315
Office: (505) 822-9400 ¦ Direct: (505) 353-9103 ¦ Mobile: (505) 715-9140
jkutz@dbstephens.com and jkutz@geo-logic.com

www.dbstephens.com ¦ www.geo-logic.com

PROJECT INFORMATION

Project Title:	Jemez Springs Wastewater Treatment Plant Upgrades
Project Type:	WASTEWATER, WASTEWATER-TREATMENT, DEVELOPMENT OF NEW TREATMENT PLANTS
Latitude/Longitude (DMS):	35.765090 / -106.697237
County(s):	SANDOVAL
Project Description:	The Village of Jemez Springs is proposing improvements to the village-owned wastewater treatment system that include measures to rehabilitate critical areas of the sanitary sewer collection system and the existing wastewater treatment plant (WWTP). The proposed project is located within the Village of Jemez Springs, New Mexico, in the former land grant of Canon de San Diego (see attached Figure 1, Vicinity map). Daniel B. Stephens & Associates, Inc. is currently preparing the Environmental Information Document (EID) for the proposed project on behalf of the Village of Jemez Springs. As part of the preparation of the EID, we are requesting input from interested parties regarding potential environmental impacts resulting from implementation of the project. The Village of Jemez Springs is in the process of evaluating alternative upgrades to the wastewater treatment plant (WWTP), including each component of the plant: lift station, preliminary treatment, sequencing batch reactors, chemical dosing, disinfection, and sludge handling.

REQUESTOR INFORMATION

Project Organization:	
Contact Name:	Jack Marchetti
Email Address:	jack.marchetti@dgf.nm.gov
Organization:	New Mexico Department of Game and Fish
Address:	1 Wildlife Way, Santa Fe NM 87507
Phone:	5054791269

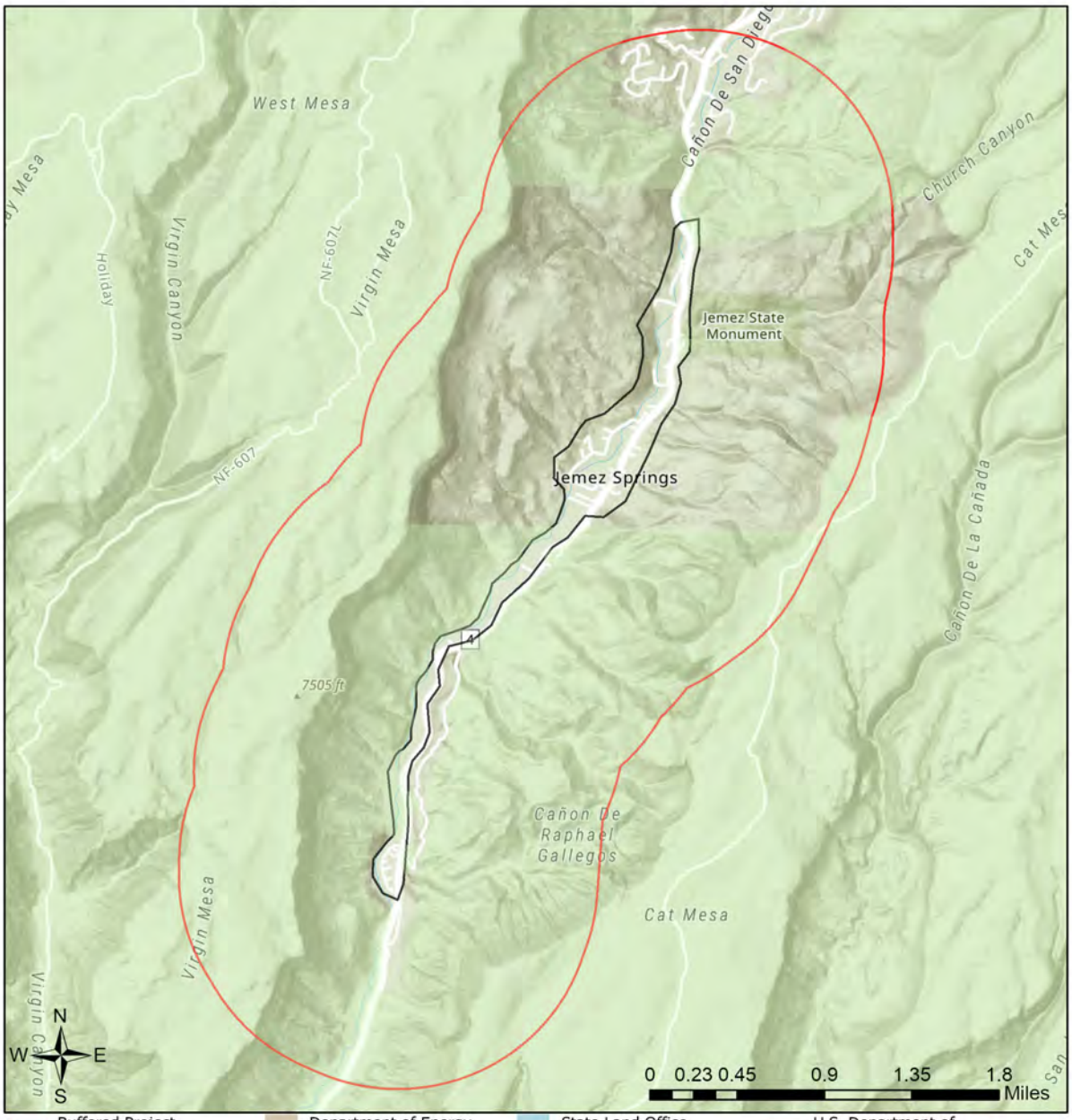
OVERALL STATUS

This report contains an initial list of recommendations regarding potential impacts to wildlife or wildlife habitats from the proposed project; see the Project Recommendations section below for further details. Your project proposal is being forwarded to a New Mexico Department of Game and Fish (Department) biologist for review to determine whether there are any additional recommendations regarding the proposed actions. A Department biologist will be in touch within 30 days if there are further recommendations regarding this project proposal.

About this report:

- This environmental review is based on the project description and location that was entered. The report must be updated if the project type, area, or operational components are modified.
- This is a preliminary environmental screening assessment and report. It is not a substitute for the potential wildlife knowledge gained by having a biologist conduct a field survey of the project area. Federal status and plant data are provided as a courtesy to users. The review is also not intended to replace consultation required under the federal Endangered Species Act (ESA), including impact analyses for federal resources from the U.S. Fish and Wildlife Service (USFWS) using their Information for Planning and Consultation tool.
- The New Mexico Environmental Review Tool (ERT) utilizes species observation locations and species habitat suitability models, both of which are subject to ongoing change and refinement. Inclusion or omission of a species within a report cannot guarantee species presence or absence within your project area. To determine occurrence of any species listed in this report, or other wildlife that may be present within your project area, onsite surveys conducted by a qualified biologist during appropriate, species-specific survey timelines may be necessary.
- The Department encourages use of the ERT to modify proposed projects for avoidance, minimization, or mitigation of wildlife impacts. However, the ERT is not intended to be used in a repeatedly iterative fashion to adjust project attributes until a previously determined recommendation is generated. The ERT serves to assess impacts once project details are developed. The New Mexico Crucial Habitat Assessment Tool is the appropriate system for advising early-stage project planning and design to avoid areas of anticipated wildlife concerns and associated regulatory requirements.

Jemez Springs Wastewater Treatment Plant Upgrades



- Buffered Project Boundary
- Project Boundary
- Bureau of Land Management
- City Land
- County Land
- Department of Defense
- Department of Energy
- NM Department of Game & Fish
- NM State Forestry Division
- NM State Parks
- National Park Service
- Private
- State Land Office
- State of New Mexico
- Tribal Land
- U.S. Army Corps of Engineers
- U.S. Bureau of Reclamation
- U.S. Department of Agriculture
- U.S. Fish and Wildlife Service
- U.S. Forest Service
- U.S. Natural Resources Conservation Service

USGS, New Mexico Department of Game and Fish (NMDGF), Natural Heritage New Mexico (NHNM), and USDA Forest Service,

Compiled by Richard Norwood of NHNM over the period 2020 to 2021.
Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community

Special Status Animal Species Potentially within 1 Miles of Project Area

Common Name	Scientific Name	USFWS (ESA)	NMDGF (WCA)	NMDGF SGCN/SERI
Jemez Mountains Salamander	Plethodon neomexicanus	LE	E	SGCN
Boreal Chorus Frog	Pseudacris maculata			SGCN
Peregrine Falcon	Falco peregrinus		T	SGCN
Mountain Plover	Charadrius montanus			SGCN
Flammulated Owl	Otus flammeolus			SGCN
Western Burrowing Owl	Athene cunicularia hypugaea			SGCN
Mexican Spotted Owl	Strix occidentalis lucida	LT		SGCN
Common Nighthawk	Chordeiles minor			SGCN
Black Swift	Cypseloides niger			SGCN
Lewis's Woodpecker	Melanerpes lewis			SGCN
Red-Headed Woodpecker	Melanerpes erythrocephalus			SGCN
Williamson's Sapsucker	Sphyrapicus thyroideus			SGCN
Olive-Sided Flycatcher	Contopus cooperi			SGCN
Bank Swallow	Riparia riparia			SGCN
Pinyon Jay	Gymnorhinus cyanocephalus			SGCN
Clark's Nutcracker	Nucifraga columbiana			SGCN
Juniper Titmouse	Baeolophus ridgwayi			SGCN
Pygmy Nuthatch	Sitta pygmaea			SGCN
Western Bluebird	Sialia mexicana			SGCN
Mountain Bluebird	Sialia currucoides			SGCN
Bendire's Thrasher	Toxostoma bendirei			SGCN
Loggerhead Shrike	Lanius ludovicianus			SGCN
Gray Vireo	Vireo vicinior		T	SGCN
Virginia's Warbler	Leiothlypis virginiae			SGCN
Black-Throated Gray Warbler	Setophaga nigrescens			SGCN
Grace's Warbler	Setophaga graciae			SGCN
Chestnut-Collared Longspur	Calcarius ornatus			SGCN
Cassin's Finch	Haemorhous cassinii			SGCN
Evening Grosbeak	Coccothraustes vespertinus			SGCN
Rainbow Trout	Oncorhynchus mykiss			SERI
Rio Grande Chub	Gila pandora			SGCN
Rio Grande Sucker	Catostomus plebeius			SGCN
Spotted Bat	Euderma maculatum		T	SGCN
Pale Townsend's Big-Eared Bat	Corynorhinus townsendii pallescens			SGCN
American Pika	Ochotona princeps			SGCN
Gunnison's Prairie Dog	Cynomys gunnisoni			SGCN
New Mexican Meadow Jumping Mouse	Zapus hudsonius luteus	LE	E	SGCN
Black Bear	Ursus americanus			SERI

Special Status Animal Species Potentially within 1 Miles of Project Area

Common Name	Scientific Name	USFWS (ESA)	NMDGF (WCA)	NMDGF SGCN/SERI
Pacific Marten	Martes caurina		T	SGCN
Mountain Lion	Puma concolor			SERI
Elk	Cervus canadensis			SERI
Mule Deer	Odocoileus hemionus			SERI
Gray-Checkered Whiptail	Aspidoscelis tesselata		E	SGCN

ESA = Endangered Species Act, WCA = Wildlife Conservation Act, SGCN = Species of Greatest Conservation Need, SERI = Species of Economic and Recreational Importance, C = Candidate, E = Endangered, LE = Listed Endangered, LT = Listed Threatened, T = Threatened, XN = Non-essential Experimental Population, for other ESA codes see this website: https://nhnm.unm.edu/node/1378928.

Special Status Plant Species Potentially within 1 Miles of Project Area

Common Name	Scientific Name	USFWS (ESA)	NMAC	NMRPCS
Galisteo Sand Verbena	Abronia bigelovii			SS

NMAC = New Mexico Administrative Code, NMRPCS = New Mexico Rare Plant Conservation Strategy, SS = NM Rare Plant Conservation Strategy Species, E = Endangered

Project Recommendations

Your proposed project activities may require a custom review for assessment of potential effects to wildlife. See the "OVERALL STATUS" section above to determine the likelihood that your project will be reviewed further based on its location. A Department biologist will confirm whether any additional conservation measures are needed. You should expect to receive any additional project recommendations within 30 days of your project submission. If the "OVERALL STATUS" section indicates that no further consultation with the Department is required based on its location, then you will only receive additional project feedback from the Department if a biologist deems it necessary.

The Department has reviewed your request for information regarding the above referenced project and provides the following information for the proposed work related to a new or existing Wastewater Treatment Plant (WWTP). Surface water pollution can occur when WWTP effluent is not properly treated and is discharged into surface waters. Untreated water might contain high levels of bacteria (e.g., *E. coli*); total suspended solids (TSS), including human waste; and nutrients, such as nitrogen and phosphorous. Nutrient pollution, which involves excess nitrogen and phosphorous added to the environment, can cause algae to grow rapidly, creating algal blooms. These blooms decrease the dissolved oxygen in the water, creating conditions that are unsuitable for fish and other aquatic life to survive. Additionally, algal blooms can increase toxins and harmful bacteria in the water, threatening terrestrial wildlife that come in contact with the contaminated water or aquatic species. To ensure WWTP operation and construction do not negatively impact any wildlife and aquatic ecosystems in the surrounding environment, the Department offers the following recommendations and resources:

- Ensure that the wastewater discharged from your WWTP meets New Mexico Water Quality Standards.
- Use the New Mexico Surface Water Quality Bureau's websites on Point Source Discharges and Stormwater Discharge, the latter of which provides links to informative documents and references to facilitate the planning and design of WWTP facilities.
- Design WWTP treatment systems with peak wet weather flows in mind to avoid overwhelming your treatment system during wet weather events, which can lead to untreated water being released into surface waters. More information can be found at the Environmental Protection Agency's (EPA's) website on Peak Flows at Sewage Treatment Plants.
- Refer to EPA reports that offer technical guidance and reviews of available treatment processes and equipment, such as the *Life Cyle and Cost Assessments of Nutrient Removal Technologies in Wastewater Treatment Plants* report, *Nutrient Control Design Manual: State of Technology Review Report*, and the *Biological Nutrient Removal Processes and Costs* report. The EPA's *Paseo Real Wastewater Treatment Plant* life cycle assessment offers a New Mexico-specific example of evaluating upgrade options to improve nutrient removal.
- Participation in the EPA's Integrated Planning Framework offers municipalities the chance to achieve clean water while also considering infrastructure improvements, including green infrastructure, and changes in rainfall and population patterns.
- The Department recommends implementing its *Trenching Project Guidelines* whenever repairing existing or installing new pipelines.

Burrowing owl (*Athene cunicularia*) may occur within your project area. Burrowing owls are protected from take by the Migratory Bird Treaty Act and under New Mexico state statute. Before any ground disturbing activities occur, the Department recommends that a preliminary burrowing owl survey be conducted by a qualified biologist using the Department's burrowing owl survey protocol. Should burrowing owls be documented in the project area, please contact the Department or USFWS for further recommendations regarding relocation or avoidance of impacts.

Your project area intersects a Conservation Opportunity Area (COA) as identified in the State Wildlife Action Plan (SWAP) for New Mexico. These areas contain high numbers of Species of Greatest Conservation Need (SGCN) as identified in the SWAP and therefore represent areas where implementing conservation actions, including restoration projects intended to benefit wildlife, has higher potential to benefit a diversity of species. Within COAs, the Department encourages project proponents to consider (during project planning and design) and mitigate (during project implementation) potential adverse effects to non-federally listed SGCN and their habitats. State-listed and federally-listed species are protected from take by the New Mexico Wildlife Conservation Act and Endangered Species Act, respectively, and migratory birds are protected from take by the Migratory Bird Treaty Act.

Your project area intersects designated critical habitat for one or more species that are listed under the federal Endangered Species Act. The Department recommends that you confirm this using the U.S. Fish and Wildlife Service's Information for Planning and Consultation (IPAC) system (https://ipac.ecosphere.fws.gov/) and then reach out to the appropriate species lead(s) with the New Mexico Ecological Services Office of U.S. Fish and Wildlife Service. The U.S. Fish and Wildlife Service has authority to designate critical habitat for species listed under the Endangered Species Act. The Department has no authority to designate critical habitat for species listed under the Wildlife Conservation Act or Endangered Species Act.

The proposed project occurs near an important bat area. This area may contain important bat roosting resources, such as caves or mines, that potentially could be affected by certain project activities. Follow the guidelines below to minimize disturbance to roosting bats.

- Avoid use of pesticides, firearms, open-flame torches, or heavy smoke-producing equipment, especially from April through September.
- If artificial lighting is needed, use only light sources powered by batteries, or cyalume glow/light sticks. Keep the site clean by picking up refuse or materials from project lighting or operations whenever they are shut down.
- For any surface disturbing activities, the project footprint (including a 350 foot buffer) should avoid potential roost sites such as caves or mines, especially from April through July. Tree clearing activities and prescribed burns should include a minimum 0.5 mile buffer from any such features.
- If caves, mines, bridges, or other man-made structure suitable as potential bat roosts are encountered within the project area, they should not be entered during any time of year, and no roosting or hibernating bats should be contacted or disturbed. Report any dead or injured bats to the New Mexico Department of Game and Fish, who can facilitate contacts with other appropriate personnel.

Your project area intersects an Important Plant Area (IPA) that contains one or more species of plants listed as threatened or endangered by the New Mexico Energy, Minerals and Natural Resources Department (EMNRD) under New Mexico Statutes Annotated (NMSA) 75-6-1 or by the U.S. Fish and Wildlife Service (USFWS) under the federal Endangered Species Act. Although IPAs have no legal designation, they have been identified as areas that support either a high diversity of sensitive plant species or contain the last remaining locations of New Mexico's most endangered plants. The Department recommends that you consult with EMNRD's Endangered Plant Program Coordinator regarding any state-listed plants and the U.S. Fish and Wildlife Service's Information for Planning and Consultation (IPAC) system for any federally-listed plants and reaching out to the appropriate federal species lead(s) with the New Mexico Ecological Services Office of U.S. Fish and Wildlife Service. The Department does not have any authority to designate or advise on state- or federally-listed plants.

Prairie dog colonies may occur within the vicinity of your project area. Both black-tailed prairie dogs (*Cynomys ludovicianus*) and Gunnison's prairie dogs (*Cynomys gunnisoni*) are designated as New Mexico Species of Greatest Conservation Need, and their colonies provide important habitat for other grassland wildlife. Wherever possible, occupied prairie dog colonies should be left undisturbed, and all project activities should be directed off the colony. Any burrows that are located on the project site should be surveyed by a qualified biologist to determine whether burrows are active or inactive and whether burrowing owls may be utilizing the site. Colonies within the range of the black-tailed prairie dog can be surveyed by a qualified biologist diurnally, year-round using binoculars. Colonies within the range of the Gunnison's prairie dog can be surveyed by a qualified biologist diurnally, using binoculars during the warmer months from April through October and by searching for fairly fresh scat and lack of cobwebs or debris at the mouths of burrows during the cold months (November through March). If ground-disturbing activities cannot be relocated off the prairie dog colony, or if project activities involve control of prairie dogs, the Department recommends live-trapping and relocation of prairie dogs. The Department can provide recommendations regarding suitability of potential translocation areas and procedures.

The proposed project occurs within or near a riparian area. Because riparian areas are important wildlife habitats, the project footprint should avoid removing any riparian vegetation or creating ground disturbance either directly within or affecting the riparian area, unless the project is intended to restore riparian habitat through non-native plant removal and replanting with native species. If your project involves removal of non-native riparian trees or planting of native riparian vegetation, please refer to the Department's habitat handbook guideline for Restoration and Management of Native and Non-native Trees in Southwestern Riparian Ecosystems. The New Mexico Riparian Habitat Map (NMRipMap) may also provide useful information on local riparian habitat composition and structure.

Your proposed project occurs within an area where springs or other important natural water features occur. This may result in the presence of a high use area for wildlife relative to the surrounding landscape. To ensure continued function of these important wildlife habitats, your project should consider measures to avoid the following.

- Altering surface or groundwater flow or hydrology,
- Disturbance to soil that modifies geomorphic properties or facilitates invasion of non-native vegetation.
- Affecting local surface or groundwater quality.
- Creating disturbance to wildlife utilizing these water features. Disturbance to wildlife can be reduced through practices including clustering infrastructure and activity wherever possible, avoiding large visual obstructions around water features, and limiting nighttime project operations or activities.

Department biologists are available for site-specific consultation regarding measures to assist with management and conservation of these habitat resources.

Your project could affect important components of wildlife habitat, including fawning/calving or wintering areas for species such as deer and elk, or general high wildlife movement and activity areas for large mammals. Mitigation measures should focus on high use sites and movement areas based on collar data and expert knowledge of Department of Game and Fish and land management agency personnel. Management recommendations within these areas may include the following.

- Restrictions on noise-generating activities during wintering and calving/fawning seasons, specific timing of which may vary throughout the state. These activities would include oil and gas well pad development and operations that expose wildlife to loud noises from drilling, compressors, and pumping stations within 400 feet of the source.
- Modifying fences along high use areas to make them wildlife friendly and facilitate large animal movement.

Disclaimers regarding recommendations:

- The Department provides technical guidance to support the persistence of all protected species of native fish and wildlife, including game and nongame wildlife species. Species listed within this report include those that have been documented to occur within the project area, and others that may not have been documented but are projected to occur within the project vicinity.
- Recommendations are provided by the Department under the authority of § 17-1-5.1 New Mexico Statutes Annotated 1978, to provide "communication and consultation with federal and other state agencies, local governments and communities, private organizations and affected interests responsible for habitat, wilderness, recreation, water quality and environmental protection to ensure comprehensive conservation services for hunters, anglers and nonconsumptive wildlife users".
- The Department has no authority for management of plants or Important Plant Areas. The New Mexico Endangered Plant Program, under the Energy, Minerals, and Natural Resources Department's Forestry Division, identifies and develops conservation measures necessary to ensure the survival of plant species within New Mexico. Plant status information is provided within this report as a courtesy to users. Recommendations provided within the ERT may not be sufficient to preclude impacts to rare or sensitive plants, unless conservation measures are identified in coordination with the Endangered Plant Program.
- Additional coordination and/or consultation may also be necessary under the federal ESA or National Environmental Policy Act (NEPA). Further site-specific mitigation recommendations may be proposed during ESA consultation and/or NEPA analyses or through coordination with affected federal agencies.

From: Riley, Jeffrey
To: Kutz, Julie
Cc: Arnold, Nate; brandon.kalinowski@env.nm.gov
Subject: RE: Jemez Springs
Date: Thursday, October 12, 2023 6:26:09 AM

Good Morning Ms. Kutz,

Thank you for the information on this proposed project. As detailed in the information provided, this project is intended to implement upgrades to the Village of Jemez Springs wastewater treatment plant and collector system infrastructure located in Sandoval County, New Mexico. The Infrastructure & Ozone Section of EPA's Region 6 office has reviewed the submitted documents. Our review is limited to actions that might impact the air quality of an area. Therefore, the following comments are based on our review of your project compared to the Clean Air Act requirements for general conformity.

Sandoval County, New Mexico is currently in attainment of all National Ambient Air Quality Standards. As a result, general conformity regulations do not apply and an applicability analysis is not necessary. However, any demolition, construction, rehabilitation, repair, dredging or filling activities have the potential to emit air pollutants and we recommend best management practices be implemented to minimize the impact of any air pollutants to surrounding areas/communities. Furthermore, construction and waste disposal activities should be conducted in accordance with applicable local, state and federal statutes and regulations.

If you have questions, please don't hesitate to contact me at (214)665-8542.

Jeff Riley
US EPA - Region 6
Infrastructure and Ozone Section (6ARSI)
Air & Radiation Division
(214)665-8542
riley.jeffrey@epa.gov

From: Kutz, Julie <jkutz@geo-logic.com>
Sent: Wednesday, October 11, 2023 2:18 PM
Cc: Arnold, Nate <narnold@geo-logic.com>; brandon.kalinowski@env.nm.gov
Subject: Jemez Springs

Good afternoon,

DBS&A is currently preparing an Environmental Information Document (EID) on behalf of the Village of Jemez Springs (the Village) for proposed upgrades of the Village wastewater treatment plant and

collector system infrastructure. Those upgrades include measures to rehabilitate critical areas of the sanitary sewer collection system and the existing wastewater treatment plant. To assist with your review, please find attached a cover letter, four maps, and a project summary to provide more information on the environmental setting and the project.

As part of the preparation of the EID, we are requesting input from you regarding potential environmental impacts resulting from implementation of the project.

Please let me know if you have any questions or need further information. Thank you in advance for your input on the project.

Thank you,
Julie

Julie Kutz
Biologist

Daniel B. Stephens & Associates, Inc.
a Geo-Logic Company

6020 Academy NE, Suite 100
Albuquerque, New Mexico 87109-3315
Office: (505) 822-9400 ¦ Direct: (505) 353-9103 ¦ Mobile: (505) 715-9140
jkutz@dbstephens.com and jkutz@geo-logic.com

www.dbstephens.com ¦ www.geo-logic.com

From:	Williams, Loukisha
To:	Kutz, Julie
Cc:	dxgomez@sandovalcountynm.gov
Subject:	Jemez Springs Wastewater Treatment Plant Upgrades
Date:	Friday, October 13, 2023 2:37:06 PM
Attachments:	Jemez Wasterwater Upgrades Albuquerque_New Mexico .docx Jemez Springs_New Mexico.pdf

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Julie Kutz
Biologist
DBS&A a Geo-Logic Company
6020 Academy Road NE, Suite 100
Albuquerque, New Mexico 87109

Thank you for contacting FEMA for information in reference to your questions pertaining to Jemez Springs Wastewater Treatment Plant Upgrades in New Mexico request for information. Please review our attached response.

Loukisha Williams
Program Support Assistant
Floodplain Management & Insurance
Mitigation-Region 6
O: 940-383-7228 Mobile: (202) 258-3794
Loukisha.Williams@fema.dhs.gov

U.S. Department of Homeland Security
FEMA Region 6
800 N. Loop 288
Denton, TX 76209

FEMA

Julie Kutz
Biologist
DBS&A a Geo-Logic Company
6020 Academy Road NE, Suite 100
Albuquerque, New Mexico 87109

RE: Jemez Springs Wastewater Treatment Plant Upgrades

Dear Ms. Kutz,

We acknowledge receipt of your request for review/environmental consultation in reference to Jemez Springs Wastewater Treatment Plant Upgrades in Albuquerque, New Mexico.

☐ We have no comments to offer.

☒ We offer the following comments:

We would request that the community Floodplain Administrator be contacted for the review and possible permit requirements for this project. If federally funded, we would request the project maintain compliance with EO11988 & EO 11990.

The Community Floodplain Administrator for your project contact information is listed below:

Village of Jemez Springs, NM
Diego Gomez
Floodplain Administrator
P.O. Box 269
Jemez Springs, NM 8702g
dxgomez@sandovalcountynm.gov
(505) 867– 7616

REVIEWER:
Loukisha Williams
Floodplain Management and Insurance Branch
Mitigation Division
(940) 383-7228 DATE: 10/12/2023

From: Funkhouser, Gary, DOT
To: Kutz, Julie
Cc: Arnold, Nate; Kalinowski, Brandon, ENV
Subject: RE: [EXTERNAL] Jemez Springs
Date: Wednesday, October 18, 2023 12:57:28 PM

Hi Julie,

Thank you for the information. As the proposed project will require a NMDOT work permit for construction within the NM 4 right-of-way, the Environmental Bureau is interested in reviewing the resource information resulting from your efforts. Please keep us informed as the project progresses.

Let me know if you have questions or need additional information.

Thanks,

Gary

Gary Funkhouser
Permitted Projects Environmental Coordinator
NMDOT Environmental Bureau
1120 Cerrillos Rd, Santa Fe, NM 87505
505-570-7291
gary.funkhouser@dot.nm.gov

From: Kutz, Julie <jkutz@geo-logic.com>
Sent: Wednesday, October 11, 2023 1:18 PM
Cc: Arnold, Nate <narnold@geo-logic.com>; Kalinowski, Brandon, ENV <brandon.kalinowski@env.nm.gov>
Subject: [EXTERNAL] Jemez Springs

Good afternoon,

DBS&A is currently preparing an Environmental Information Document (EID) on behalf of the Village of Jemez Springs (the Village) for proposed upgrades of the Village wastewater treatment plant and collector system infrastructure. Those upgrades include measures to rehabilitate critical areas of the sanitary sewer collection system and the existing wastewater treatment plant. To assist with your review, please find attached a cover letter, four maps, and a project summary to provide more information on the environmental setting and the project.

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Julie Kutz
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jkutz@dbstephens.com and jkutz@geo-logic.com

www.dbstephens.com ¦ www.geo-logic.com

From: Funkhouser, Gary, DOT
To: Kutz, Julie
Subject: RE: [EXTERNAL] Jemez Springs
Date: Wednesday, October 18, 2023 1:01:48 PM
Attachments: NMDOT Envir Clearance Form.doc

Hi Julie,

For your records, I have attached a copy of the NMDOT environmental certification request form that will be required as part of the NMDOT work permit.

Again, please contact me if you have any questions.

Thanks,

Gary

Gary Funkhouser
Permitted Projects Environmental Coordinator
NMDOT Environmental Bureau
1120 Cerrillos Rd, Santa Fe, NM 87505
505-570-7291
gary.funkhouser@dot.nm.gov

From: Kutz, Julie <jkutz@geo-logic.com>
Sent: Wednesday, October 11, 2023 1:18 PM
Cc: Arnold, Nate <narnold@geo-logic.com>; Kalinowski, Brandon, ENV <brandon.kalinowski@env.nm.gov>
Subject: [EXTERNAL] Jemez Springs

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Thank you,
Julie

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jkutz@dbstephens.com and jkutz@geo-logic.com

www.dbstephens.com ¦ www.geo-logic.com

New Mexico DEPARTMENT OF TRANSPORTATION
MOBILITY FOR EVERYONE

Environmental Certification for Undertakings within NMDOT Rights-of-Way

Please fill out the form completely. Submittals are reviewed in the order received. Allow 10-15 business days for the processing. Emergency requests are handled on a case-by-case basis.

Any tree removals needed for the commission of the utility work shall be reviewed and approved by the NMDOT Environmental Bureau as part of the permit. Provide latitude, longitude, tree type, and tree condition. Any trees on the NM Noxious Weed List are excluded from this requirement.

1. **Purpose** and **Nature** of undertaking. Describe the undertaking along with width, length and depth of ground disturbance. Include the methods and machinery to be used.

2. Is your project resulting from a NMDOT project? If so, provide the control and/or project number.

3. Funding source. Is the funding private, state, or federal? If state and/or federal, list agency(s).

4. Land status. Is the project on right of way owned by BLM, Forest Service, Tribal land, or State Trust land? (NMDOT does not own all highway rights of way)

5. Permitting agencies. List other permitting agencies involved besides NMDOT.

6. County. List the county or counties in which the project is located.

7. Highway number. Indicate the highway the project will cross or parallel.

8. BOP and EOP. Provide the milepost (MP) locations for the beginning of the project area (BOP) and the end of the project area (EOP). Indicate BOP and EOP on project area maps, as well. If highway crossing only, list the milepost location.

9. Side(s) of the road. Indicate on which side of the road the project will be located using cardinal directions (north, south, east, west). List all project crossings of the highway by milepost.

10. Length of the project. Indicate the length of the project within NMDOT right of way in terms of feet and/or miles.

11. Provide the legal description of the project area: Township, Range, and Section(s).

12. Maps / Locational Information. Include a map or other location information such as Esri Shapefiles and/or a Google Earth image or kml/kmz file at an appropriate scale so that the project area within the NMDOT right-of-way can be accurate and precisely identified in the NMDOT GIS database. If milepost information is unavailable, please use latitude and longitude coordinates of the BOP and EOP.

14. Include your:

Name/Company:

Phone:

Email:

15. Submit your request to:

Email: gary.funkhouser@dot.nm.gov
C: 505-570-7291

or:

Gary Funkhouser
NMDOT - Environmental Bureau
P.O. Box 1149
Santa Fe, NM 87504-1149

Physical Address (for FedEx and UPS):
1120 Cerrillos Road, Room 206
Santa Fe, NM 87505-1842

From: Trueblood, Claudia, ENV on behalf of Review, ENV, ENV
To: Kutz, Julie
Subject: Re: [EXTERNAL] Jemez Springs
Date: Monday, October 16, 2023 1:41:48 PM
Attachments: image001.png

Good afternoon, Biologist Kurtz,

This email serves as confirmation that on October 11, 2023, the New Mexico Environment Department received the letter from DBS&A on behalf of the Village of Jemez Springs regarding the proposed upgrades of the Village wastewater treatment plant and collector system infrastructure. You will be informed if more information is needed, or clarification is required.

In the future, please send all comment requests and related materials to env.review@env.nm.gov, it helps with the timely review of your request.

Respectfully,

Claudia Trueblood, Ph.D.
Science Coordinator, Office of Strategic Initiatives
New Mexico Environment Department
claudia.trueblood@env.nm.gov
505 629 3551

Innovation – Science – Collaboration – Compliance
https://www.env.nm.gov/

From: Trueblood, Claudia, ENV <claudia.trueblood@env.nm.gov>
Sent: Wednesday, October 11, 2023 3:10 PM
To: Ball, Justin, ENV <Justin.Ball@env.nm.gov>
Cc: Review, ENV, ENV <ENV.Review@env.nm.gov>
Subject: RE: [EXTERNAL] Jemez Springs

Claudia Trueblood, Ph.D.
Science Coordinator, Office of Strategic Initiatives
New Mexico Environment Department
claudia.trueblood@env.nm.gov
505 629 3551

Innovation – Science – Collaboration – Compliance
https://www.env.nm.gov/

From: Kutz, Julie <jkutz@geo-logic.com>
Sent: Wednesday, October 11, 2023 1:18 PM
Cc: Arnold, Nate <narnold@geo-logic.com>; Kalinowski, Brandon, ENV <brandon.kalinowski@env.nm.gov>
Subject: [EXTERNAL] Jemez Springs

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As part of the preparation of the EID, we are requesting input from you regarding potential environmental impacts resulting from implementation of the project.

Please let me know if you have any questions or need further information. Thank you in advance for your input on the project.

Thank you,
Julie

Julie Kutz
Biologist

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Office: (505) 822-9400 ¦ Direct: (505) 353-9103 ¦ Mobile: (505) 715-9140

jkutz@dbstephens.com and jkutz@geo-logic.com

www.dbstephens.com ¦ www.geo-logic.com

From:	Uitvlugt, Shawn F CIV SPA
To:	Kutz, Julie
Cc:	Truesdell, Zachary M CIV USARMY CESPA (USA)
Subject:	Acknowledgement SPA-2023-00504, Jemez Springs Wastewater Treatment Plant Upgrades
Date:	Friday, October 13, 2023 10:12:35 AM
Attachments:	image001.png

Good morning,

Your submittal has been received. The Albuquerque District Regulatory Division is committed to providing quality and timely service to our customers. This request has been assigned project number SPA-2023-00504. Please use this number in any future project-related correspondence. Zac Truesdell has been assigned and will reach out to you should they have any questions.

If you have any questions or need further information concerning the Regulatory process, please feel free to contact us at spa-rd-nm@usace.army.mil or visit our web site at: http://www.spa.usace.army.mil/Missions/Regulatory-Program-and-Permits/.

U.S. Army Corps of Engineers
Albuquerque District - Regulatory Division
4101 Jefferson Plaza, NE
Albuquerque, New Mexico 87109-3435

https://www.spa.usace.army.mil/Missions/Regulatory-Program-and-Permits/

From: Truesdell, Zachary M CIV USARMY CESPA (USA)
To: Kutz, Julie
Subject: Jemez Springs Wastewater Treatment Plant Upgrades
Date: Tuesday, October 17, 2023 12:26:03 PM

Good afternoon,

Under Section 404 of the Clean Water Act, the Army Corps of Engineers regulates the discharge of dredged or fill material into Waters of the US. Waters of the US include intermittent and perennial streams, and certain wetlands.

Waste treatment systems, including treatment ponds or lagoons, are excluded from the definition of Waters of the US and therefore do not need an Army Corps permit.

Excavation or trenching needed to repair or replace sewer lines or other structures may need a Section 404 permit from the Army Corps if waterways or wetlands are impacted.

Sincerely,
Zac Truesdell
Regulatory Specialist
USACE, Albuquerque District
zachary.m.truesdell@usace.army.mil