

ENVIRONMENTAL ASSESSMENT:  
Wastewater Treatment Project,  
Pueblo de San Ildefonso, Santa Fe County,  
New Mexico

Prepared for:  
Pueblo de San Ildefonso

June, 2019

Prepared by  
**Parametrix**





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**Date**





# CITATION

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**APPENDICES**

A: MAPS AND PHOTOGRAPHS

B: PROJECT PLANS

C: FEMA FLOOD INSURANCE RATE MAP

## LIST OF ACRONYMS

AMSL	Above Mean Sea Level
BMPs	Best Management Practices
CGP	Construction General Permit
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
FEMA	Federal Emergency Management Agency
FIRM	FEMA Flood Insurance Rate Map
FONSI	Finding of No Significant Impact
ITA	Indian Trust Asset
IPaC	Information for Planning and Consultation
MBR	Membrane Bioreactor
NAAQS	National Ambient Air Quality Standards
NHD	National Hydrography Dataset
NMED	New Mexico Environment Department
NPDES	National Pollution Elimination Discharge System
NRHP	National Register of Historic Places
NWI	National Wetlands Inventory
NWP	Nationwide Permit
PBRWS	Pojoaque Basin Regional Water System
PVC	Polyvinyl Chloride
SWPPP	Stormwater Pollution Prevention Plan
TESCP	Temporary Erosion and Sediment Control Plan
THPO	Tribal Historic Preservation Officer
USACE	United States Army Corps of Engineers
USFWS	United States Fish and Wildlife Service
VCP	Vitrified Clay Pipe



# 1. INTRODUCTION

Improvements are needed to the Pueblo de San Ildefonso (Pueblo) wastewater treatment system. The improvements would be implemented throughout the central portion of the Pueblo and the eastern portion, referred to as the Central Pueblo and El Rancho service areas (Figures 1 and 2 in Appendix A: Maps and Photographs). The project is funded through a variety of sources including Capital Outlay funding, Tribal Infrastructure Funds, Clean Water State Revolving Loan funds, and Pueblo funding.

The project was identified in the Pojoaque Basin Regional Water System (PBRWS) environmental impact statement (EIS) as a connected action and, while the current project was not directly part of the regional water system, it was analyzed in the EIS as a connected action. The EIS can be found at <https://sites.google.com/site/pbwatereis/documents/project-reports>. The wastewater treatment project has now developed to a level of detail sufficient for additional environmental analysis. As such, this environmental assessment (EA) has been conducted, consistent with the National Environmental Policy Act (NEPA).

The Pueblo is guiding the development and approval of this EA and making the final decision on whether to proceed with the project. Specifically, the proposed project is to address the aging and insufficient wastewater treatment system on the Pueblo and will be implemented in three independent phases:

- Phase I involves rehabilitation of existing wastewater lines on the Pueblo
- Phase II involves expanding the system with new wastewater lines that will serve additional residences on the Pueblo, which currently operate on septic systems
- Phase III involves the development of a wastewater reclamation facility

Phase I of the project required no federal funds or permits and is not considered further in this EA. Phase II and III require federal permits under the Clean Water Act and are scheduled for construction in 2019 and 2020.

This EA concludes that the proposed action meets the purpose and need of the project and the environmental analysis contained herein has identified no impacts at a level that would warrant the need for an EIS. Therefore, unless significant impacts are identified during the public review of this EA, a finding of no significant impact (FONSI) will be requested for the proposed action described in detail below in Section 2.2 of this EA.

## 2. PURPOSE AND NEED FOR THE PROPOSAL

Presented below is detailed information on the purpose and need for the project and a description of the existing facility.

### 2.1 Need for the Proposed Action

Improvements to the existing system are needed to address concerns with groundwater contamination from poorly treated wastewater. The clay liner of the existing sewage lagoon is believed to be compromised and potentially allowing up to 80% of the wastewater that flows into the lagoon to seep into the ground. Additionally, there are approximately 705 existing homes utilizing septic systems within the boundaries of the Pueblo. The compromised lagoon and large number of private septic systems that serve many of the homes on the Pueblo present a high risk of poorly treated wastewater contaminating the Pueblo's groundwater. Finally, over the next several years, the population of the Pueblo is expected to continue to increase, placing additional strain on the existing wastewater treatment system.

## 2.2 Existing Facility

The existing facility is a combination of a conventional gravity wastewater collection system and individual septic tank systems. The central portion of the Pueblo has an existing sewer system with collection lines that are 40-to-50 years old and made from vitrified clay pipe (VCP). The mainline is comprised of 8-inch and 6-inch pipe, while service lines connecting individual residences to the mainline are 4 inches in diameter. Recent closed-circuit television inspections of the sewer lines found extensive amounts of root intrusion, blockages, cracks, missing pipe segments, and plugged manholes throughout the sewer system. A clay-lined, two-cell lagoon serves the central portion of the Pueblo. As mentioned earlier, the clay lining is believed to be breached, providing little in terms of wastewater treatment and allowing wastewater to percolate through the base of the lagoon and potentially contaminate groundwater.

Additional homes within the central Pueblo area, as well as the homes in El Rancho, were not connected to the gravity sewer system when the original system was constructed. These homes utilize 40-to-50-year-old septic tank systems, including leach fields. The condition of these tanks is unknown; however, tanks of this age can degrade and leak wastewater into the ground, contaminating the groundwater with nitrates, nitrites, ammonia, and several micro-organisms.

## 2.3 Scoping and Identified Issues

The Pueblo assembled a team of representatives to participate in the planning process for the improvements. The planning team met several times to provide direction for the project development and discuss concerns with the current conditions and improvement plans. In addition, all work has been reviewed and approved by the Pueblo Council and has been presented at multiple public community meetings.

Scoping and consultation letters are typically sent to agencies with permitting or approval responsibility for the project. Section 106 consultation under the National Historic Preservation Act was conducted internally by the San Ildefonso Tribal Historic Preservation Officer (THPO). Additionally, based on the project description and information from the biological report, the project would have no effect to any species protected under the Endangered Species Act. As such, scoping and consultation was not undertaken with the US Fish and Wildlife Service (USFWS).

As described in Section 3.2 below, the wastewater improvements would involve discharging treated effluent into the Rio Pojoaque. The outlet for the discharge would be below the ordinary highwater mark of the Rio Pojoaque and consultation with the US Army Corps of Engineers (USACE) is in process. Additionally, consultation is underway with the Environmental Protection Agency (EPA) for a National Pollution Discharge Elimination System (NPDES) permit.

## 3. ALTERNATIVES

This section describes the alternatives evaluated in this EA. In July 2018, Souder Miller and Associates completed a preliminary engineering report that evaluated five alternatives based on engineering and treatment effectiveness, environmental impacts, land requirements, constructability, sustainability, and preliminary cost estimates. This analysis recommended the proposed action described below. Additionally, the No Action Alternative is also described below as it is considered throughout the environmental evaluation and provides a baseline from which to consider potential environmental consequences of the build alternative. The report is titled *Final Preliminary Engineering Report*

Wastewater System Improvements Project for Pueblo de San Ildefonso, Santa Fe County, New Mexico and is available at the Pueblo's Tribal Administration office.

### 3.1 No Action Alternative

The No Action alternative would result in no changes to the existing conditions in the project area. The potential for groundwater contamination and associated negative health effects would continue and maintenance needs for the system would continue to increase.

### 3.2 Proposed Action

The build alternative would involve expanding the current wastewater system to include additional homes throughout the central Pueblo area and El Rancho. For the central portion of the Pueblo, collection lines would generally flow to the south, to two separate lift stations that would convey the sewage to a new treatment plant. A smaller lift station at the southern end of the system would pump wastewater to the upper lift stations, which would then pump all the new sewage to the treatment site. For the El Rancho area, a conventional gravity system would be installed that flows from east to west into a single lift station that which would pump wastewater to a new treatment facility.

The recommended treatment system would be located in El Rancho. The treatment plant would use Membrane Bioreactor (MBR) technology to produce a high-quality effluent capable of meeting surface-water discharge standards as well as recommendations from New Mexico Environment Department (NMED) Ground Water Quality Bureau guidance. The MBR facility would be designed with capacity to treat peak-day flows of 560,400 gallons per day (gpd). Treated effluent would then be discharged into the Rio Pojoaque. Plans for the proposed action are provided in Appendix B.

## 4. AFFECTED ENVIRONMENT AND ENVIRONMENTAL IMPACTS

The subsections below summarize existing environmental conditions, followed by impact analyses for those resources identified as potentially affected by the proposed project.

### 4.1 Land Resources

The Pueblo is located in Santa Fe County along the Rio Grande approximately nine miles east of Los Alamos, New Mexico and 18 miles north of Santa Fe. Presented below is a description of the existing topography, soils, geology, minerals, and paleontological resources for the project area. These sections are followed by a description of potential impacts from the project.

#### 4.1.1 Topography

The project area ranges in elevation from 5,531 feet above mean sea level (amsl) to 5,572 feet amsl and is located at the confluence of the Rio Pojoaque and Rio Grande. It is entirely within the San Ildefonso Pueblo, largely within the plaza and immediate surroundings. Topographically, it is situated in the Pojoaque Basin, in the Rio Grande subsection of the Basin and Range physiographic province. Prominent landforms and natural features visible from the project area include Santa Fe Baldy, the Santa Fe Ski Basin, the Truchas Peaks, the Jemez Mountains, the Pajarito Plateau, Black Mesa, Buckman Mesa, Battleship Mesa, and Los Barrancos.

## 4.1.2 Soils

According to the Natural Resources Conservation Service (NRCS) Web Soil Survey, seven soil units are present in the Phase II and Phase III project areas. Summary data of these soil units are presented below in Table 4-1 (US Department of the Interior 2018).

Table 4-1. NRCS Soil Units Project Area

Soil Map Unit	Slopes	Typical Landform	Parent Material	Depth to Restrictive Feature	Total Area (Acres)	Percent of Project Area
Koshare very fine sandy loam	2 to 8 percent	Fan remnants	Alluvium derived from micaceous sandstone and siltstone	>80 inches	15.1	31.5
El Rancho silt loam	1 to 3 percent	Fan remnants	Alluvium derived from micaceous siltstone, sandstone and mudstone	>80 inches	14.5	30.3
Chupe fine sandy loam	1 to 3 percent	Stream terraces on valley floors	Alluvium derived from granite and quartzite	>80 inches	6.8	14.2
Koshare-Urban land complex	2 to 8 percent	Fan remnants	Alluvium derived from micaceous sandstone and siltstone	>80 inches	4.6	9.5
Chupe-Riverwash complex	1 to 3 percent slopes	Flood plains on valley floors	Alluvium derived from granite, gneiss, schist, granitic sandstone, and mudstone	>80 inches	3.6	7.5
Camelrock silty clay loam	0 to 2 percent	Stream terraces	Alluvium derived from granite gneiss, schist, micaceous sandstone, siltstone, and mudstone	>80 inches	2.8	5.8
Ojito-Koshare-Quarteles complex	5 to 50 percent slopes	Hills	Aeolian material and slope alluvium derived from micaceous sandstone and siltstone	20 to 39 inches	0.37	1.1

## 4.1.3 Geology, Minerals, and Paleontological Resources

Geology and mineral makeup of the project area primarily includes unconsolidated alluvium, although the Lower Santa Fe Group (composed of unconsolidated coarse sedimentary sandstone) is present along the southern and eastern boundaries of the project area (<https://mrdata.usgs.gov/geology/state/map-us.html#home>).

While paleontological resources are a possibility within the project area, the 2018 PBRWS EIS indicated that there is a low potential for these resources near rivers, roads, and arroyos. As such, paleontological resources are not anticipated to be a concern within the current project area.

#### 4.1.4 Impact Analysis – Land Resources

The wastewater treatment system is located within the established and developed portions of the Pueblo, primarily within the plaza and along established roads. As such, the project would be consistent with the existing land use conditions and, overall, land resources would not be impacted.

The proposed project would disturb more than 1 acre of soil; therefore, a Stormwater Pollution Prevention Plan (SWPPP) shall be prepared and implemented for the project, in compliance with Section 402 of the Clean Water Act and in accordance with the EPA's 2017 Construction General Permit (CGP).

### 4.2 Water Resources

The proposed project area is located from 0.18 to 2.43 miles west of the Rio Grande, and the Rio Pojoaque borders the north side of the project area. Additionally, various acequias on the Pueblo currently convey water for agricultural purposes. The National Hydrography Dataset (NHD) (U.S. Geological Survey 2019) indicates that non-wetland waters occur along the western project boundary in the southwestern corner and continue east of the project. The National Wetland Inventory (NWI) indicates that potential wetlands also occur in the southwestern section of the project area (U.S. Fish and Wildlife Service 2018a). However, the biological survey conducted for the current project identified no wetlands in the proposed project area, although a concentration of riparian habitat is located west of the project area and continues to the Rio Grande.

Waters of the United States (U.S.) are defined under 33 CFR Part 328.3 (b) and are protected by Section 404 of the Clean Water Act (33 USC 1344), which is administered and enforced by the USACE. Eight non-wetland Waters of the US were previously mapped in the proposed project area during the PBRWS EIS. One additional waterway was delineated during the field survey for the current project.

The project area is located on FEMA Flood Insurance Rate Map (FIRM) Panel Number 35049C0150E. This panel indicates the project is located in an area of minimal flood hazard (Zone X), although flood Zone AE is noted north of the project along the Rio Pojoaque and Zone A is west of the project along the Rio Grande. Both designations (Zone A and Zone AE) indicate potential for flooding during the 100-year flood event but are located outside of the project area (see FEMA's National Flood Hazard Layer Map in Appendix C).

#### 4.2.1 Impacts Analysis – Water Resources

No impacts to floodplains are anticipated from the proposed project. Best Management Practices (BMPs) associated with the SWPPP will be required as the project involves disturbance of more than one acre.

The project would bore under the Waters of the US. However, the outfall of the treated effluent would be constructed below the ordinary highwater mark of the Rio Pojoaque. As such, the project would need to be permitted by the USACE under Nationwide Permit (NWP) 7, *Outfall Structures and Associated Intake Structures*. This NWP applies to outfall structures where effluent is in accordance with the NPDES program. A pre-construction notification to the USACE is in process and will be completed prior to project construction.

As described above, the proposed treatment facility would discharge treated effluent into the Rio Pojoaque. The facility would use MBR technology to produce a high-quality effluent that would meet both surface-water discharge standards and recommendations from NMED Ground Water Quality Bureau guidance. Consultation will be completed with the EPA to obtain an NPDES permit for the facility.

Since no other water resources such as wetlands, springs, or surface waters occur within the project area, no impacts to additional water resources would occur as a result of the proposed project.

## 4.3 Air Quality

Air quality in Santa Fe County is currently in attainment for all New Mexico and National Ambient Air Quality Standards (NAAQS).

### 4.3.1 Impacts Analysis – Air Quality

Since the proposed project would not increase air pollutant emissions, there would be no long-term impacts to air quality. Project construction activities may result in a temporary increase in dust and carbon monoxide emissions. However, these impacts would be temporary and emissions would return to normal levels after construction is complete.

## 4.4 Living Resources

This section summarizes existing natural resource conditions and results of a biological survey of the project area conducted by Parametrix in July 2018. Below is a discussion of the wildlife, vegetation, ecosystems, and agriculture of the project area.

### 4.4.1 Wildlife

The current investigation evaluated USFWS threatened and endangered species, and species designated as candidates for listing, and whether they could potentially use the project area or adjacent land. In addition, the presence of New Mexico state-listed threatened and endangered species or their habitats was also evaluated. The habitat requirements of listed species were compared to the habitat present in the project area, to identify the potential for these species to occur. Species considered unlikely to occur, or for which habitat did not exist, within the project area were eliminated from further consideration. Below is a definition of the project action area and the special-status species evaluated in the biological assessment conducted for this project.

#### **Action Area**

As stated in 50 CFR Part 402, a project's action area is not limited to the immediate project area, but encompasses all areas that may be directly or indirectly affected by a federal action. The action area definition for a particular project is dependent on its location relative to biological resources, the type of potential impacts, and the results of biological investigations. Due to the lack of potential habitat within or adjacent to the proposed project area, the action area and project area are the same area for this proposed project (Parametrix 2018a).

#### **Special-Status Species and Migratory Birds**

Currently, the US Fish and Wildlife Service's Information, Planning, and Conservation (IPaC) System database lists four federally listed threatened and endangered species for Santa Fe County (U.S. Fish and Wildlife Service 2018b):

- Southwestern willow flycatcher – federally endangered
- Yellow-billed cuckoo – federally threatened
- Mexican spotted owl – federally threatened
- New Mexico meadow jumping mouse – federally endangered

An excerpt from the biological assessment (Parametrix 2018a) that provides a description of these species' potential to occur within the project action area and the project's potential effect on the species is presented below:

The **Southwestern willow flycatcher** (*Empidonax traillii extimus*), is listed as endangered but has no critical habitat is present within the proposed project area. The nearest designated critical habitat for the Southwestern willow flycatcher occurs along the Rio Grande in Rio Arriba County, approximately 5 miles north of the proposed project area (U.S. Fish and Wildlife Service 2018b). There would be "no effect" to this species from the proposed actions, due to the lack of habitat in the project area.

The **yellow-billed cuckoo** (*Coccyzus americanus*), is listed as threatened, with proposed critical habitat in Rio Arriba and Santa Fe counties, along the Rio Grande and the western edge of the proposed project area (U.S. Fish and Wildlife Service 2018b). However, there is currently no designated critical habitat for this species in the proposed project area. There would be "no effect" to this species from the proposed actions, due to the lack of habitat in the project area.

The **Mexican spotted owl** (*Strix occidentalis lucida*) is listed as threatened, but has no critical habitat present within the proposed project area. The nearest designated critical habitat for this species is in Los Alamos County, within Bandelier National Monument, approximately 11 miles to the southwest of the proposed project area (U.S. Fish and Wildlife Service 2018b). There would be "no effect" to this species from the proposed actions, due to the lack of habitat in the project area.

The **New Mexico meadow jumping mouse** (*Zapus hudsonius luteus*), is listed as endangered. No critical habitat occurs for this species in Santa Fe County. The closest critical habitat for this species is along the Rio Grande, approximately 12 miles to the west of the project area, in Los Alamos County (U.S. Fish and Wildlife Service 2018b). There would be "no effect" to this species from the proposed actions, due to the lack of habitat in the project area.

#### 4.4.2 Vegetation

Three different plant communities are present within the project area, including Rio Grande Floodplain, North Central New Mexico Valleys and Mesas, and the Foothill Woodlands and Shrublands. Areas adjacent to the major waterways are dominated by the Rio Grande Floodplains vegetative community. This plant community contains mosaics of riparian woodlands and shrublands, as well as wetlands, meadows, ponds, and marshes.

The North Central New Mexico Valleys and Mesas vegetative community consists primarily of piñon and juniper woodlands and savannas. The savanna areas contain understory grasses including galleta, Indian ricegrass, blue grama, black grama, threeawn, and sand dropseed.

The New Mexico Foothill Woodlands and Shrublands vegetative community contains piñon and juniper woodlands and mountain mahogany shrublands. Gambel oak woodlands are also present. Common understory shrubs include serviceberry and skunk bush sumac. These shrublands are often interspersed with mountain grasslands containing blue grama, prairie June grass, and western wheatgrass (Dick Peddie 1993).

The project area does not contain habitat for any federally protected plant species.

#### 4.4.3 Ecosystems and Biological Communities

The project area is located in the Pojoaque Basin north of Santa Fe, New Mexico between the Jemez Mountains and the western foothills of the Sangre de Cristo Mountains, and straddles the Arizona/New Mexico Plateau and the Southern Rockies ecoregions. The Arizona/New Mexico Plateau ecoregion

represents a large transitional region between the drier shrublands and wooded higher relief tablelands of the Colorado Plateau to the north; the lower, hotter, less-vegetated Mojave Basin and Range to the west; and forested mountain regions to the northeast and south (Griffith et al. 2006). The Southern Rockies ecoregion is composed of high-elevation, steep, rugged mountains. Although coniferous forests cover much of the Southern Rockies, vegetation and soil follows a pattern of elevational banding (Griffith et al. 2006). The project area is more consistent with lower elevations and vegetated areas are generally grass- or shrub-covered.

#### 4.4.4 Agriculture

Areas within and around the project have been utilized for agriculture and ranching for several centuries. Typically, the valley floodplains and terraces have been the site of agricultural production and long-lots are interspersed between dwellings in these settings. Numerous earthen and concrete-lined irrigation ditches are present throughout the project area. These features divert water from primary drainages and carry water to long lots and other fields. Uplands beyond the valleys have historically been used for livestock grazing.

#### 4.4.5 Impacts Analysis – Living Resources

The proposed project would have no effect to federally protected species and, similarly, would not affect the additional living resources as described above. The contractor would be required to prepare and implement a SWPPP in order to minimize/mitigate potential impacts to living resources.

### 4.5 Cultural Resources

A records search and Class III (100-percent) pedestrian cultural resources survey of the proposed project area was conducted by Parametrix. The survey of the first phase was completed in May 2018 and Phases II and III were surveyed in June 2018. Consultation with the Pueblo THPO was completed in June 2019.

The Phase I survey documented three archaeological sites (all eligible to the National Register of Historic Places [NRHP]), four acequias (all eligible to the NRHP), the Pueblo de San Ildefonso Historic District (listed in the NRHP), and 32 historic buildings (2 recommended eligible for listing in the NRHP and 30 recommended not eligible). The Phase II/III survey documented 11 archaeological sites (7 eligible to the NRHP and four not eligible), six acequias (all eligible to the NRHP), 14 historic buildings (9 not eligible to the NRHP and 5 undetermined), and a cemetery (not eligible to the NRHP).

To the extent practical, the project will avoid the eligible archaeological sites. For the eligible sites that cannot be avoided, a permitted archaeologist and tribal representative will be present to monitor construction efforts within the site boundaries.

The project will bore under all of the crossings of eligible acequia. If boring is not feasible, the acequias will be reconstructed with in-kind materials after project construction.

Non-vibratory equipment will be used for trenching activities in the vicinity of eligible historic buildings and within the Pueblo de San Ildefonso Historic District.

#### 4.5.1 Impacts Analysis – Cultural Resources

Implementation of the recommendations described above would result in a no adverse effect determination to all cultural resources eligible for listing to the NRHP. Consultation with the Pueblo's THPO resulted in THPO concurrence with a determination of no adverse effect to cultural resources.

Supporting documentation for this consultation and the associated investigations are on file with the THPO.

## 4.6 Socioeconomic Conditions

The proposed project would not require any relocations or displacements, nor result in any permanent changes in access or neighborhood continuity/community cohesion. Below is a discussion of demographic and community conditions and trends. This information was derived from the US Census Bureau's American Fact Finder web service for the San Ildefonso Pueblo designated census place (<https://factfinder.census.gov/faces/tableservices/jsf/pages/productview.xhtml?src=CF>).

### 4.6.1 Employment and Income

The most recent employment and income data is from 2017. At that time, the population of the area that was 16 or older was 591. A total of 58.2% of this population was in the labor force and the unemployment rate was 4.4%. The median household income was \$41,250 and 10.6% of families had been below the poverty level within the previous year.

### 4.6.2 Demographic Trends

A total of 77.9% of the population identified as American Indian or Alaska Native, 17.9% identified as White, and 3.6% identified as some other race. A total of 20% of the population indicated a Hispanic or Latino ethnicity while 80% noted some other ethnicity.

### 4.6.3 Environmental Justice

Based on the US Census data presented above, Low Income and American Indian populations are located within and adjacent to the project area. See Section 4.6.1 and 4.6.2 above for additional details.

### 4.6.4 Lifestyle, Cultural Values, and Community Infrastructure

The project area is located within and around the Pueblo plaza. According to the Pueblo's website, occupation of this area dates to 1300 A.D. when the people from Bandelier moved to this location next to the Rio Grande (<http://www.sanipueblo.org/default.aspx>). The Pueblo's culture and values are deeply rooted in this location and in maintaining a traditional lifestyle.

Care for the natural environment is also an important aspect of Pueblo values. Appropriately treating wastewater and protecting the quality of groundwater and surface water would be consistent with these values.

### 4.6.5 Community Infrastructure

Community infrastructure such as sewage lines, water supply lines, roads, telecommunication, etc. that service the community are present throughout the project area. The project will update and expand access to wastewater treatment facilities. Construction could temporarily impact infrastructure such as access to roads or utilities. Any potential interruption in these services would be temporary and would be coordinated with utility owners and users.

## 4.6.6 Impacts Analysis – Socioeconomic Conditions

The proposed project is not expected to result in an adverse impact to social or economic resources. Although minority and low-income populations are located in the vicinity of the project area, the proposed project would not cause disproportionately high adverse effects on these populations. Community infrastructure and tribal values would be supported by improving and expanding the wastewater treatment system. Any potential conflicts with utilities serving Pueblo residences in the area would be coordinated with the utility owners and users.

## 4.7 Resource Use Patterns

Potential effects to resource use patterns are evaluated in this section. Below is a discussion of potential effects to hunting, fishing, gathering, and recreation; agriculture, timber harvesting, and mineral extraction; transportation networks; and land use planning.

### 4.7.1 Hunting, Fishing, Gathering, and Recreation

Hunting, fishing, and gathering are practiced by tribal members in the rural portions of the reservation. While these activities may not occur within the actual project area, the Pueblo is used by local residents as a base for these activities throughout the surrounding area.

### 4.7.2 Agriculture, Timber Harvesting, and Mineral Extraction

As mentioned earlier, areas within and around the Pueblo have been utilized for agriculture and ranching for several centuries as seen by the many acequias and agricultural fields located in and around the Pueblo and the project area. The Pueblo maintained a largely agricultural economy well into the twentieth century and agriculture continues to play a relevant role in tribal cultural values today.

While various mine claims have been filed in the general area of the Pueblo, no mines are located within the project area and mining is not an active business pursuit for the Pueblo. Similarly, timber harvesting is not an active economic pursuit for the Pueblo.

### 4.7.3 Transportation Networks

A system of local roads provide access throughout the Pueblo and connects the project area to County Road 84 and New Mexico State Highway 502. In turn, these roads connect to US Highway 285 and provide access throughout the rest of the state.

### 4.7.4 Land Use Plans

No specific land use plans exist for the project area, although land use in the immediate area includes residential, cultural, and agricultural uses. Implementing the proposed project would support this continued land use pattern.

### 4.7.5 Impacts Analysis – Resource Use Patterns

The proposed project is consistent with current resource and land use patterns and would not modify the existing transportation infrastructure. Rehabilitating and expanding the wastewater treatment system would support continued land and resource use patterns.

## 4.8 Other Values

Topics discussed in this section include wilderness, noise and light, visual, public health and safety, climate change, Indian Trust Assets (ITA), and hazardous materials. A discussion of each of these topics is provided below.

### 4.8.1 Wilderness

The project area is located in the main residential area of the Pueblo, which includes a fairly dense occupation around the central plaza and a less dense occupation in somewhat more rural areas outside of the plaza. Outside of the immediate plaza and rural developed locations, the landscape is undeveloped and provides a wilderness setting with steep mountainous slopes, the Rio Grande to the west and Rio Pojoaque to the north, and abundant wildlife.

### 4.8.2 Noise, Light, and Visual Resources

The Pueblo is located outside of major urban areas and experiences only a minimal amount of noise associated with traffic and urban life. No change in noise levels is anticipated since the project would not affect traffic, increase urbanization of the area, or otherwise increase ambient noise.

Very little artificial lighting exists in or near the project area and the current project does not involve additional lighting.

The project area is not part of a scenic byway although US 285, approximately 5 miles east of the Pueblo, is part of the Camino Real Trail.

### 4.8.3 Public Health and Safety

Public health and safety resources include access to local ambulance, police, fire, and other emergency response services. The project would not affect these services but would help preserve the quality of surface and groundwater in the area, providing a public health benefit.

### 4.8.4 Climate Change (Greenhouse Gases)

Greenhouse gases are those emissions that trap heat in the atmosphere and create climate change. A primary source of greenhouse gases is the burning of fossil fuels. The current project will not increase fossil fuel consumption or greenhouse gas emissions and no further analysis is warranted.

### 4.8.5 Indian Trust Assets

Indian Trust Assets are legal interests in property held in trust by the United States for Indian Tribes or individuals. The Bureau of Indian Affairs typically administers ITAs. All land associated with the proposed project is owned by the Pueblo and ITAs are therefore not a consideration for the current project.

### 4.8.6 Hazardous Materials

The EPA's EnviroMapper database was consulted regarding any locations reporting hazardous materials to the EPA (<https://geopub.epa.gov/myem/efmap/index.html>). No hazardous materials concerns were identified within the project area and no additional investigations are warranted.

#### 4.8.7 Impacts Analysis – Other Values

No increase in noise, nuisance lighting, or greenhouse gases is anticipated and the wilderness attributes near the project area would not be affected. There are no hazardous material concerns within the project area and no ITAs would be impacted.

#### 4.9 Direct, Indirect, and Cumulative Effects

The proposed action is not expected to result in any significant direct or indirect impacts; therefore, an analysis of potential cumulative effects is not warranted.

#### 4.10 Conclusions

Based on the above analysis, this EA concludes that the proposed action meets the purpose and need of the project and the environmental analysis contained herein has identified no impacts at a level that would warrant the need for an EIS. A FONSI is therefore recommended for the proposed project.

### 5. ENVIRONMENTAL COMMITMENTS AND MITIGATION

The following environmental commitments are to be followed by the construction contractor in order to avoid, minimize, and/or mitigate all identified environmental impacts.

1. **Clean Water Act:** Prior to construction, the Pueblo shall complete a pre-construction notification for Nationwide Permit 7, *Outfall Structures and Associated Intake Structures*, administered by the USACE, under Section 404 of the Clean Water Act.
2. **National Pollution Discharge Elimination System (NPDES):** Prior to construction, the Pueblo shall obtain an NPDES permit for the treatment facility from the EPA.
3. **Stormwater Pollution Prevention:** The Contractor shall prepare and implement a Stormwater Pollution Prevention Plan (SWPPP) and a Temporary Erosion and Sediment Control Plan (TESCP) in compliance with Section 402 of the Clean Water Act. The BMPs shall be installed and maintained both during and after construction to prevent, to the extent practicable, pollutants in stormwater runoff from entering the Rio Pojoaque or Rio Grande.
4. **Historic Buildings:** The Contractor shall use non-vibratory equipment within 50 feet of historic buildings to avoid vibratory impacts to the buildings.
5. **Acequia Crossings:** The Contractor shall bore beneath acequias to avoid impacting the materials and alignment of these resources. If this is not feasible, and project activities include trenching across the acequias, the Contractor will restore the acequia alignment and materials in-kind after construction work at the acequia crossing is complete.

6. **Archaeological Monitoring:** An archaeologist and tribal representative shall be present to monitor construction efforts in the vicinity of certain archaeological sites. Monitoring shall follow the Pueblo de San Ildefonso's *NAGPRA Plan of Action for the Treatment of Intentionally Excavated or Inadvertently Discovered Native American Cultural Items on Pueblo de San Ildefonso Tribal Lands*. To coordinate the monitoring effort, the Contractor shall contact Joseph Aguilar, head of the Tribal Historic Preservation Board for the Pueblo de San Ildefonso.
7. **Historic Properties Discoveries:** If previously undocumented historic properties are discovered during construction, all surface-disturbing activities within 100 feet of the discovery shall immediately cease and measures shall be taken to protect the cultural resources. The Contractor shall immediately contact Joseph Aguilar, head of the Tribal Historic Preservation Board for the Pueblo de San Ildefonso, and ensure that all construction in the area has ceased. If human remains are discovered, all work will stop as described above and the Bureau of Indian Affairs Police will be contacted.

## 6. CONSULTATION AND COORDINATION

As indicated above in Section 2.3 of this EA, The Pueblo assembled a team of representatives to participate in the planning process for the proposed improvements to the wastewater treatment system. The planning team met several times to provide direction for the project development and discuss concerns with the current conditions and improvement plans. In addition, all work has been reviewed and approved by the Pueblo Council and has been presented at multiple public community meetings.

Scoping and consultation letters are typically sent to agencies with permitting or approval responsibility for the project. Section 106 consultation under the National Historic Preservation Act was conducted internally by the San Ildefonso Tribal Historic Preservation Officer (THPO). Additionally, based on the project description and information from the biological report, the project would have no effect to any species protected under the Endangered Species Act. As such, scoping and consultation was not undertaken with the US Fish and Wildlife Service (USFWS).

The wastewater improvements would involve discharging treated effluent into the Rio Pojoaque. The outlet for the discharge would be below the ordinary highwater mark of the Rio Pojoaque and consultation with the USACE is in process. Additionally, consultation is underway with the EPA for an NPDES permit.

Due to the previous amount of stakeholder participation in the planning process and the routine and non-controversial nature of the proposed project, public involvement is limited to notification of the availability of the EA and FONSI. A FONSI is not a decision to proceed, but rather it is a finding on environmental effects of a proposed project. The EA and FONSI will be made available for public review for 20 days after a Notice of Availability is posted. A final decision on whether or not to proceed with the project will be made by the Pueblo after conclusion of the EA/FONSI review period and in consideration of public comments.

## 7. LIST OF CONTRIBUTORS

The following is a list of persons who contributed to developing this EA.

### Pueblo de San Ildefonso

Perry Martinez – San Ildefonso Pueblo Governor

Joseph Aguilar – San Ildefonso Tribal Historic Preservation Office Board

Terry Aguilar – Project Manager

### Souder Miller

Royce Beaudry – Engineer

### Parametrix

Jeff Fredine – NEPA Specialist

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