Environmental Assessment for the Interceptor Sewer Line in the Village of Ruidoso and the City of Ruidoso Downs (Sewer Line Restoration/ Rehabilitation)
FEMA-1783-DR- NM
Lincoln County, New Mexico
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United States Department of Homeland Security
Federal Emergency Management Agency, Region 6
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ACRONYMS AND ABBREVIATIONS

CAA	Clean Air Act
CEQ	Council on Environmental Quality
CERCLA	Comprehensive Environmental Response Compensation and Liability Act
CFR	Code of Federal Regulations
CO	Carbon Monoxide
CWA	Clean Water Act
dB	Decibels
dB(A)	A-weighted Decibels
EA	Environmental Assessment
EIS	Environmental Impact Statement
EO	Executive Order
EPA	United States Environmental Protection Agency
ESA	Endangered Species Act
FEMA	Federal Emergency Management Agency
FIRM	Flood Insurance Rate Map
FONSI	Finding of No Significant Impact
HEC-RAS	A computer program that models water flow and hydraulics for rivers and channels
HQCF	High Quality Coldwater Fishery
LLC	Limited Liability Company
LUST	Leaking Underground Storage Tank
NAAQS	National Ambient Air Quality Standard
NEPA	National Environmental Policy Act
NHPA	National Historic Preservation Act
NM	New Mexico

ACRONYMS AND ABBREVIATIONS

NMAC	New Mexico Administrative Code
NMDGF	New Mexico Department of Game and Fish
NMED	New Mexico Environment Department
NMHPD	New Mexico Historic Preservation Division
NMRPTC	New Mexico Rare Plant Technical Council
NO2	Nitrogen Dioxide
NPDES	National Pollutant Discharge Elimination System
NRCS	Natural Resources Conservation Service
O3	Ozone
OSHA	Occupational Health and Safety Administration
Pb	Lead
PM	Particulate Matter
PSI	Pounds per square inch
REC	Recognized Environmental Condition
SHPO	State Historic Preservation Officer
SO2	Sulfur Dioxide
SWPPP	Stormwater Pollution Prevention Plan
T&E	Threatened and Endangered
USACE	United States Army Corps of Engineers
USDA	United States Department of Agriculture
USFWS	United States Fish and Wildlife Service
UST	Underground Storage Tank
WOTUS	Waters of the United States

1 INTRODUCTION

Under a major disaster declaration (FEMA 1783-DR-NM) signed by the President on August 14, 2008, federal assistance was provided to all communities located in Lincoln and Otero Counties in the State of New Mexico. This assistance is pursuant to the Robert T. Stafford Disaster Relief and Emergency Assistance Act (Stafford Act), Public Law 93-288, as amended. Section 406 of the Stafford Act authorizes Federal Emergency Management Agency's (FEMA) Public Assistance Program to assist with funding the repair, restoration, reconstruction, or replacement of public facilities damaged as a result of the declared disaster.

An earlier Environmental Assessment (EA) for this project titled "*Sewer Line in the Village of Ruidoso and Ruidoso Downs*" dated June 18, 2010 (the "2010 EA"), was published nine years ago. As explained in this draft EA, after the 2010 EA was completed, engineering studies were conducted, and cost estimates were developed. It was determined the preferred action of moving the interceptor sewer line out of the riverbed of Rio Ruidoso was cost prohibitive. As a result, the preferred action for the project was rescoped to primarily reconcile with updated construction plans and to improve resiliency with hazard mitigation. This is the preferred action being analyzed in this draft EA. The preferred action in the 2010 EA is now the considered alternative in this draft EA. If you would like to review the 2010 EA in its entirety, it is available at: https://www.fema.gov/media-library/assets/documents/19521.

This draft EA has been prepared pursuant to Section 102 of the National Environmental Policy Act (NEPA) of 1969, as implemented by the regulations promulgated by the President's Council on Environmental Quality (CEQ; 40 CFR Parts 1500-1508) and in accordance with FEMA Instruction 108-1-1.The project area lies within the Village of Ruidoso and the City of Ruidoso Downs, Lincoln County, New Mexico. Appendix A (Figure 1) displays the location of the Rio Ruidoso and the proposed sewer line relocation and repair. The project boundary is approximately a 12-mile segment of sewer line following the gradient flow of the Rio Ruidoso, from the Mescalero Apache Reservation on the western boundary of the Village of Ruidoso and extends to the east to the Ruidoso Wastewater Treatment Plant.

2 PURPOSE AND NEED

The Rio Ruidoso is a mountain river and an important cold-water fishery with its source located high in the Sacramento Mountains of South-Central New Mexico. On July 27, 2008, remnants of Hurricane Dolly passed through the Sacramento Mountains. The Village of Ruidoso received 2.46 inches of rain with reports of up to 9 inches of rain in the surrounding mountains. This resulted in historic flooding along the Rio Ruidoso river (Appendix B) and the mountain streams that feed it. The swift movement of flood waters down the mountainsides into the Rio Ruidoso caused a great deal of scouring of stream beds and banks, and the movement of large rocks, boulders, trees, and other natural and man-made debris downstream for miles. This exposed and significantly damaged a sewerage inceptor line located within the banks of the Rio Ruidoso that

serviced most of the Village of Ruidoso and the City of Ruidoso Downs (Appendix B). Damage to the line broke it open causing large amounts of raw sewage to leak into the river.

Temporary repairs were made using Federal disaster funds provided by FEMA. However, the current interceptor line is old and remains exposed at many locations in the river making it highly vulnerable to future damage and additional raw sewage leaks. Additional raw sewage leaks into the river would have negative impacts on public health and safety within the Village of Ruidoso, and the City of Ruidoso Downs, and greatly reduce the capacity of the Rio Ruidoso as a viable cold-water fishery. Because of risks posed to both public health and safety, and to the fishery, there is an urgent need to repair, replace and improve major portions of the interceptor line both within and outside the stream bed, as well as harden it at certain locations in or near the stream bed where it is exposed and remains vulnerable to future damage. The purpose of this action is to undertake the necessary repairs, replacements, rehabilitation to the interceptor line that will reduce the likelihood of raw sewage leaking in the river.

3 ALTERNATIVES

This section describes three alternatives proposed by the Village of Ruidoso to implement restoration/rehabilitation and mitigation of the sewer line that was damaged during the July 2008 flooding of the Rio Ruidoso. The three alternatives evaluated were: 1) The No Action Alternative; 2) The Preferred Action Alternative that will abandon and re-align exposed and vulnerable sections of the sewer line; restore and rehabilitate sections of the sewer line damaged by the 2008 flooding, and mitigate future damage by armoring key locations of the sewer line within its existing footprint; and 3) The Considered Alternative that would remove large portions of the sewer line from the Rio Ruidoso and relocate it along nearby existing roadways and repair those lines that are already out of the river. Technical information for the 2010 EA came from the project's preliminary engineering report. However, this EA is based on construction plans and documentation completed by Molzen Corbin and Associates: “Restoration of Existing Sewer Lines and Manholes,” revised and dated January 2019; “Hazard Mitigation and Stabilization for Sewer Lines”, dated May 2019; and “Lift Stations and Forcemains” dated May 2019. The most appropriate sewer line protection method selected for each site was chosen based on the following factors (Molzen Corbin, May 2019):

- How effective the improvement will be at mitigating future damage to the sewer line from future flooding events,
- Impacts within the Ordinary High-Water Mark (which is within the regulatory jurisdiction of the US Army Corps of Engineers and the Environmental Protection Agency),
- Impacts within Delineated Wetlands, and
- Construction cost and constructability.

3.1 Alternative 1-No Action

It is required under NEPA to provide a No Action Alternative which proposes to maintain the status quo. The No Action Alternative provides a benchmark for evaluation of the other alternatives considered. The No Action Alternative states that FEMA would provide no funding for the further repair of the sewer line. Under the No Action Alternative, the current temporary repairs completed on the damaged sewer line within the Rio Ruidoso would remain and no further repairs using Federal funds would occur. With the No Action Alternative, the potential for sewer contamination to the Rio Ruidoso and the surrounding environment may continue. Furthermore, repair of the sewer line will remain difficult due to a lack of manhole access resulting from nearby homes blocking access or covering manholes, damage to manholes during the 2008 flooding, and difficulty accessing the pipeline within the river.

3.2 Alternative 2-Proposed Action

For the selected Proposed Action, repairs within Upper Canyon and the Village of Ruidoso would include the following activities:

- Restore and rehabilitate most of the existing line adjacent to and within the Rio Ruidoso channel throughout both the Village of Ruidoso and the City of Ruidoso Downs.
- Restore or rehabilitate sections that were damaged by the 2008 flood.
- Some sewer lines installed or rehabilitated would use lift stations or gravity for flow.
- Sanitary Lift Stations would be installed in the Village of Ruidoso that nearby homes could utilize.
- Construction of new manholes or refurbishing existing manholes would be initiated.
- Rehabilitated lines would utilize a trenchless technology method such as "pipe-bursting." Pipe-bursting involves the use of a bursting machine that destroys and pushes fragments of pipe into the surrounding soil. A new pipe is pushed into place as the old pipe is destroyed.

For the exposed or vulnerable existing sewer line sections under Alternative 2, the proposal is to abandon those existing sewer line sections and re-align the sections by moving the line away from the river. The re-aligned sections of the sewer line will be placed near and parallel to the current line and will be buried four (4) feet lower than the current line in order to abide by USACE regulations. Abandoned lines will be cleaned in an environmentally safe manner and sealed in place. New lines will be placed near and parallel to the current line and they will be buried four (4) feet lower than the current line in order to abide by USACE regulations.

Most of the rehabilitated line and re-aligned line will continue to allow for gravity flow to carry the contents down to the Regional Wastewater Treatment facility in the City of Ruidoso Downs. However, two lift stations will be installed, to address two of the most vulnerable sections of the sewer line. This will allow for movement of sewage through the system where grade does not allow for gravity sewer. Manholes will be rehabilitated or replaced, depending on the need or extent of damage at each location.

In order to mitigate future damage to the restored and rehabilitated sewer line under Alternative 2, the proposal is to armor the sewer line and install flood mitigation measures immediately adjacent to key sewer line crossings and sewer line sections running immediately parallel to the river. In many of these locations, it is infeasible to re-align the sewer line away from the Rio Ruidoso or re-alignment will result in greater impact to the Rio Ruidoso and private property along the river.

Alternative 2 is divided into three project phases, which will bring the sewer line back to pre-disaster form, function, and capacity and provide hazard mitigation for susceptible sections of sewer line. The first phase of Alternative 2 is to restore and rehabilitate the sewer line and associated manholes, (see Appendix A for current project area maps) which illustrate the refined alignment and design. The third phase will incorporate two new lift stations with associated force mains. While there are three phases to Alternative 2, the scope of work for each phase will coincide with one another to be completed by 2021. Every location that is disturbed will be reseeded and planted, which will provide soil stabilization and meet environmental regulations.

3.2.1 Alternative 2-First Phase (Restoration and Rehabilitation)

Work for the first phase (restoration and rehabilitation) will begin in the Village of Ruidoso at the Mescalero Apache reservation boundary line and continue to the Regional Wastewater Treatment Plant in the City of Ruidoso Downs in sewer line sections that were damaged by the 2008 flood. The scope of work for this phase will include the following activities:

Sewer Cleaning:
Video recording of the main existing interceptor sewer line will be required to assess the damaged sewer line and their extent. Associated work will include sewer cleaning, hauling and disposal, pre–and post video recordings, bypass pumping, and dewatering.

Trenchless Lining Technology:
Using a trenchless lining technology to reline approximately 57, 357 total linear feet of various damaged sewer line diameters. All incorporating work for the relining of the existing sewer line includes sewer cleaning, hauling and disposal, pre- and post video recordings, bypass pumping, dewatering, liner and liner installation reinstatement of lateral connections.

Damaged Manholes:

- Approximately three (3) damaged manholes will need to be removed and replaced. All associated work for each replaced manhole includes demolition, hauling and disposal, bypass pumping, dewatering, earthwork, new manholes and installation, connections, and the removal and replacement of surface features.
- Approximately 227 of existing manholes are damaged and will need to be rehabilitated. Associated work will include cleaning, hauling, disposal, removal of steps, wall repair, and coating systems for each rehabilitated manhole.
- Approximately 33 manhole top collars have been damaged and will need to be removed and replaced. Associated work for each manhole top collar replacement includes earthwork, removal and replacement of surface features, concrete slab, ring, cover, hauling, disposal, raise manhole top to grade, installation of new ring, cover and concrete collar.
- Approximately three (3) existing manholes will need to be abandoned. Associated work for abandoning each manhole includes cleaning, flushing, hauling, disposal, backfill manhole, remove manhole top ring, cover, concrete collar, backfill to grade, and replace surface features.

Manhole Benches:
Approximately 176 manhole benches have been damaged and will need to be repaired. Associated work for each manhole bench to be repaired includes cleaning, hauling, disposal, bench repair work, and coating systems.

Sewer Line Disposal:
Approximately 805 linear feet of existing 8-inch and 12-inch sewer lines will need to be removed from service. Associated work includes cleaning, flushing, hauling, disposal, and plug pipe both ends.

Rock Excavation:
Approximately 400 linear feet of rock excavation will be needed for the new 8-inch and 12-inch sewer line. Associated work to be completed in place includes removal and disposal of unsuitable backfill material, supply and hauling of imported backfill material, placement and compaction.

New Sewer Line:
Construction of new 8-inch sewer will take place at approximately three (3) locations and construction of a new 12-inch sewer will be at one location. Associated work for each construction of new line includes dewatering, trench excavation and backfill, shoring, piping, installation, bypass pumping, removal of one 4-foot diameter manhole, construction of two 4-foot diameter manholes, connecting to existing sewers, and replacement of sewer features.

Point Repairs:
There are 21 damaged locations that require point repairs for various diameters of sewer line for a total of 180-linear feet of sewer pipe. Associated work for each point repair will include bypass bumping, dewatering, trench excavation, backfilling, removal and replacement of piping and replacement of existing features.

Connection Seals:
Approximately 530 connection seals will be installed in the interior of existing sewer lines. Associated work includes service lateral insert sleeve seals (up to 8-inch laterals) and installation.

3.2.2 Alternative 2-Second Phase (Hazard Mitigation and Stabilization)

For the second phase (hazard mitigation and stabilization) there will be approximately 40 sites within the project boundary along the Rio Ruidoso. The purpose of the hazard mitigation and stabilization phase is to mitigate future hazards from major storm events by protecting the sanitary sewer line from river erosion, degradation, and meander. Project work will include excavation of river channel and adjacent areas along the banks of the Rio Ruidoso, in key locations, to install armoring and flood mitigation structures.

Specifically, the scope of work will include installing new structural encasement to protect the sewer line from future flood hazards and lowering and encasing the sewer line. New sewer line sections, manholes, and encasement will also be installed in areas where the existing line has been damaged beyond rehabilitation. The riverbank and manholes will be protected with stabilization and armoring through grouted boulder grade control structures and grouted boulder bank protection, scour walls, and placement of river rock boulder channels. Work for this phase will begin in the Village of Ruidoso at the Mescalero Apache reservation boundary line and continue to the Regional Wastewater Treatment Plant in the City of Ruidoso Downs.

Hazard mitigation work will include 40 locations that will utilize field verification and surveying, temporary construction fencing, implementation of stream diversions or cofferdams to allow for work within the Rio Ruidoso without impeding flow, dewatering of pumping

equipment and associated piping, clearing and grubbing of approximately 58,376 square yards. Furthermore, there will be approximately 16,527 cubic yards (which includes shoring for safety) of excavation that will include the removal, and disposal of unsuitable backfill material, supply and hauling of imported backfill material, and compaction.

The following materials with approximate volume will be installed:

- 7517 cubic yards of soil filled riprap,
- 68 cubic yards of large boulders,
- 3063 linear feet of grouted boulder edge,
- 2548 cubic yards of grouted boulders,
- 30 weep pipes which include geotextile fabric, piping materials, and clean filter gravel,
- 34 cubic yards of flowable fill,
- 100 PSI controlled low strength material backfill,
- 5,751 square yards of 15-inch concrete or grout cut off walls,
- 24,772 cubic yards of gravity wall including delivery to contractor staging area, and foundation,
- 215 cubic yards of gabion baskets,
- 5,525 cubic yards of subgrade preparation,
- 3,021 linear feet of sanitary sewer gravity pipe including trenching, backfill, and compaction,
- 1,636 linear feet of sewer encasement to include reinforced concrete and placement, and
- 24, 4-ft diameter manholes.

The following materials with approximate volume will be removed or modified for this phase of work:

- Remove, haul and dispose of approximately 153 linear feet of existing wall,
- Remove and modify approximately 105 linear feet of existing gabion wall and riprap fill,
- Remove stockpile and replace approximately 1,711 cubic yards of excavated material including loading and hauling to temporary storage area, hauling of stockpiled topsoil, and compaction,
- Remove and replace approximately 44 service laterals and connect them to the main sewer line,
- Removal and disposal of approximately five (5) manholes,
- Remove approximately 1,260 linear feet of existing sewers from service, including cleaning, flushing, hauling, disposal, and plugging pipe ends,
- For areas where the sewer project impacts road infrastructure, work will include installation of approximately 80 square feet of 4-inch concrete sidewalk, installation of approximately 30 linear feet of metal guardrail barrier, and installation of approximately 117 linear feet of NMDOT pedestrian rail, gates, and delineators per NMDOT Standards. Work will also include bypass sewage pumping, including all pumping equipment, generators, and associated piping.

- Abandon approximately 1,639 linear feet of sewer lines and 7 existing manholes, including cleaning, flushing, hauling, disposal, grouting, and replacing surface features.

3.2.3 Alternative 2-Third Phase (Lift Station and Forcemain)

For the lift station and forcemain phase, the scope of work includes both the civil site work and the electrical work for installing two new lift stations and their associated forcemains. The purpose of the lift stations is to allow for the abandonment of the two most-vulnerable sections of the sewer line located in the river channel. These vulnerable sections will be replaced with lift stations and forcemains to convey the wastewater up steep slopes and continue flow to the Regional Wastewater Treatment Plant.

Work for the lift station phase will take place only in the Village of Ruidoso. One lift station and associated equipment will be placed near the Sleepy Hollow Bridge. The second lift station will be placed near the circle roundabout going into the Upper Canyon on Main Road. Part of the scope of work to complete the lift station phase also includes asphalt removal and replacement to install the sewer line and connection to the existing line; restoring/rehabilitating manholes; installation of new manholes; installation of a new combination sewer air valve station; and relocation of an existing fire hydrant to physically fit all the infrastructure within the property easements for the project.

The work in this phase will include the following:

- Installation of 8-inch and 10-inch sewer with manhole. Includes dewatering, trench excavation and backfill, compaction, shoring, pipe, installation, bypass pumping, constructing a 4-foot diameter manhole, connections to existing sewers, and replacement of surface features.
- Dewatering, trench excavation and backfill, shoring, pipe, installation, bypass pumping, connections to existing sewers for 314 linear feet of 12-inch sewer line.
- Dewatering, trench excavation, backfill, compaction, asphalt removal and replacement including subgrade preparation, shoring, pipe, fittings, hardware, installation, and connection to existing manhole for 307 linear feet of 8-inch forcemain.
- one (1) combination air valve station for sewage service. Include earthwork, enclosure and concrete foundation, piping, fittings, valves, and electrical work.
- New placement of 1,906 linear feet of asphalt pavement which will include saw cutting, milling of top 2 inches of existing asphalt, tack coat application and overlaying with 2 inches of new asphalt.
- Construct one (1) new 4-foot precast manhole. This will include excavation, backfill and compaction, bypass pumping, invert penetrations, invert and bench, cast- in-place concrete collar, and coating systems.
- *Circle Sewage Lift Station* - Work will include rock removal, dewatering, shoring, structures, utilization of pumps rated for 450 gallons per minute, piping, fittings, valves, and coating systems. Electrical work will include all electrical, electrical site work, generator connection box at Main Road, instrumentation and controls. Civil site work will include clearing, grubbing, grading, fencing, entrance road resurfacing, storm drain

extension, creation of a Storm Water Pollution Prevention Plan (SWPPP), revegetation, installation of rip rap and bollards, and all other site work.

- *Sleepy Hollow Road Sewage Lift Station* - Civil site work will include clearing and grubbing, grading, fencing replacement, bollards, and all other site work. An existing fire hydrant and 6-inch waterline adjacent to Sleepy Hollow Road Lift Station will be relocated, which will include earthwork, pipe fittings, disinfection, and installation. Work will also include rock removal, dewatering, shoring, package lift station structure, the use of pumps rated for 60 gallons per minute, piping, fittings, valves, and fencing replacement.

Rehabilitation of the following:

- One (1), 4-foot diameter precast manhole section with ring and cover. This will include excavation, backfill and compaction, bypass pumping, invert penetrations, invert and bench, cast- in-place concrete collar, and coating systems.
  One (1), 6-foot diameter precast manhole section with ring and cover. This will include excavation, backfill and compaction, bypass pumping, invert penetrations, invert and bench, cast-in-place concrete collar, and coating systems.
- 34 linear feet of asphalt removal and replacement. This will include saw-cutting and removal of existing asphalt up to 2 inches thick, subgrade preparation, aggregate base course placement and compaction for new asphalt, and installation of an asphalt section up to 2 inches thick.
- 621 linear feet of rock excavation for 8-inch forcemain and 12-inch sewer line work. This will include removal and disposal of unsuitable backfill material, supply and hauling of imported backfill material, placement and compaction.
- 26 linear feet of rock excavation for 2-inch forcemain. This will include the removal and disposal of unsuitable backfill material, supply and hauling of imported backfill material, placement and compaction.
- Rehabilitate an associated existing manhole that will include earthwork, trench excavation and backfill, piping, fittings, hardware, pipe casing, insulation, and heat tracing for bridge crossing, pipe supports, and installation for the 2-inch forcemain.

Other construction requirements include: Preparing and implementing a SWPPP under the National Pollutant Discharge Elimination System (NPDES) Permit that will need to be obtained prior to construction and compliance oversight for the duration of the construction period.

3.3 Alternative 3 - Remove and Replace Sewer Line

Alternative 3 would remove the current sewer line entirely out of the Rio Ruidoso channel and permanently replace it with a new line located along nearby roadways and other utility easements. Lines that are outside the river channel and are tied to the current line within the river would be rehabilitated and connected to the new line. In order to get the sewage from the homes to the relocated line, over 200 individual sanitary lift stations (also referred to as single-home low-pressure pumping units or grinder pumps) would be necessary for continuous flow within the line to the treatment facility in the City of Ruidoso Downs. Initially, this alternative was

considered the most environmentally conservative because it removed the sewer line from the river channel entirely. After full consideration of all the physical constraints and requirements, it was determined to be infeasible due to the cost constraints of both the construction and operational aspects. In reviewing the feasibility of construction, it was found that multiple existing utilities (i.e. water, electricity, communication lines, etc.) were already located in the initially proposed roadways and utility corridors. The presence of existing utilities in the proposed right-of-way would require a deeper and more extensive excavation in order to install the new sewer line. In addition, this extensive relocation of the sewer line would require significantly more ground disturbance in environmentally sensitive riparian areas, as well as extensive excavation required to complete connection of existing homes to the new sewer line.

4 AFFECTED ENVIRONMENT AND POTENTIAL IMPACTS

This section describes the potential impacts of the No Action and Proposed Action Alternatives. Where potential impacts exist, conditions or mitigation measures to offset these impacts are provided. In addition, this section of the EA has been updated with regulatory laws and guidance that had been issued after the original EA was published.

4.1 Physical Resources

4.1.1 Geology and Soils

Analysis of soils in the area helps determine if further protections may be required by Federal agencies for prime and unique farmlands. Under the Farmland Protection Policy Act, Federal agencies are required to protect lands with prime or unique farmland distinctions and prevent conversion of these lands for local or nonagricultural use. According to the United States Department of Agriculture (USDA) Natural Resources Conservation Service (NRCS), soils must be comprised of over 50 percent prime, unique or statewide importance soils to be protected under the Farmland Protection Policy Act (USDA, 2018).

Geology/ Seismicity: The Ruidoso and Ruidoso Downs area was created during the Permian Period (290 to 248 million years ago) within Yeso and San Andres Formations consisting of marine limestone, sandstone, and mudstones. (Wilks, 2005)

Soils: The NRCS Web Soil Survey Soil was used to identify the soils in the project area (USDA 2017).

Alternative 1: No Action – Under the No Action Alternative, FEMA would provide no funding for the further repair of the sewer line. The current temporary repairs completed on the damaged sewer line within the Rio Ruidoso would remain and no further repairs using Federal funds would occur. With the No Action Alternative, the potential for sewer contamination to the Rio Ruidoso and the surrounding environment may continue. The soils would be directly and indirectly impacted if temporary repairs failed or the sewer line became damaged again.

Alternative 2: Proposed Action – Relining and realignment of the sewer line that are located on the banks and within the Rio Ruidoso will help stop contamination of soils. Hazard mitigation measures will be initiated to protect the sewer line from breaking and contaminating the soil for possible future flooding events. Soils within the proposed project areas described by the NRCS are not identified as prime farmland, farmland of local importance, farmland of statewide importance, or unique farmland (USDA, 2017). Farmland would not be impacted directly or indirectly by the proposed action. Long-term impacts to soils are not anticipated during construction.

Alternative 3: Remove and Replace Sewer Line –This alternative would remove the current sewer line entirely out of the Rio Ruidoso, reducing the impact of line breakage that could contaminate soils.

4.1.2 Air Quality

The United States Environmental Protection Agency (EPA) under the Clean Air Act (CAA) has established standards for maintaining ambient air quality. Air pollution occurs when pollutant materials exceed the standards set for a region. Air pollution has the capacity to cause physical harm to a human being. Pollutant materials can be broken up into six groups: ozone (O3), particulate matter (PM), carbon monoxide (CO), nitrogen dioxide (NO2), sulfur dioxide (SO2), and lead (Pb). Under the CAA, EPA is required to establish a National Ambient Air Quality Standard (NAAQS) for each of the six pollutant groups.

Ruidoso, New Mexico lies within EPA Region 6. The NMED has created statewide ambient air quality standards under New Mexico Administrative Code (NMAC) 20.2.3 (NMAC 2018). The Village of Ruidoso and The City of Ruidoso Downs are in air quality attainment with New Mexico and NAAQS standards. An area is in attainment when the air quality does not exceed the air pollution thresholds established by the NAAQS and the state.

Alternative 1: No Action – Under the no action alternative, air quality would not change.

Alternatives 2 and 3 – Air quality would be temporarily impacted during the construction of the new sewer line due to increased dust and engine emissions from construction-related vehicles. Upon completion of the proposed action, air quality would return to its pre-construction status.

4.2 Water Resources

4.2.1 Surface Water

Under the New Mexico Water Quality Act and the federal CWA, the state of New Mexico is required to adopt water quality standards to "protect the public health or welfare, enhance the quality of water, and are consistent with and serve the purposes of the New Mexico Water Quality Act and the federal CWA." NMAC 20.6.4.6, NMAC 20.6.4.209 (NMAC 2018), designates the Rio Ruidoso as a perennial waterway in the Pecos River Basin. Its designated use is for "domestic

water supply, high quality cold-water aquatic life, irrigation, livestock watering, wildlife habitat, public water supply and primary contact."

New Mexico's Environment Department (NMED), Surface Water Quality Bureau has designated the Rio Ruidoso as a high quality cold-water fishery (HQCF). A cold-water fishery is defined within NMAC 20.6.4 as "a surface water of the state where the water temperature and other characteristics are suitable for the support or propagation or both of cold-water aquatic life." A HQCF is defined as "a perennial surface water of the State in a minimally disturbed condition which has considerable aesthetic value and is a superior cold-water fishery habitat. To be characterized as a surface water of the State, a body of water must have water quality, stream bed characteristics, and other attributes of habitat sufficient to protect and maintain a propagating cold-water fishery."

The Village of Ruidoso and The City of Ruidoso Downs main surface water is the Rio Ruidoso river. The Rio Ruidoso river is a 30-mile river whose watershed is primarily within the Lincoln National Forest. The river starts within the Mescalero Apache Reservation and flows through the Sacramento Mountains to the Pecos River. Its headwaters are found near the top of Sierra Blanca Peak at an elevation of 12,300 feet (3,749 meters). Tributaries to the Rio Ruidoso river within the Village of Ruidoso limits are Carrizo Creek and Cedar Creek. Various other streams feed into the Rio Ruidoso river or fork from the Rio Ruidoso river. The Rio Ruidoso river is a tributary to the Pecos River which is defined as a jurisdictional waters of the United States (WOTUS) by the USACE. The Rio Ruidoso river is also classified as a cold-water fishery that supports substantial recreational use in the Village of Ruidoso and The City of Ruidoso Downs.

The Village of Ruidoso is required by the Surface Water Quality Bureau to obtain an NPDES permit. The NPDES permit will require a SWPPP to be developed. The SWPPP details the proper maintenance of construction to eliminate impacts to water and soil resources.

Alternative 1: No Action – Additional repairs to the sewer line would not take place and the potential for contamination of the river would remain. Water resources and water quality would be directly and indirectly impacted if temporary repairs failed or the sewer line became damaged again.

Alternative 2: Proposed Action – Water quality would be temporarily impaired during construction due to increased turbidity or minor discharges from construction-related equipment, and mitigation measures would need to be implemented to reduce these impacts. Realignments, sewer line lowering, or encasements of the current sewer line will comply with USACE regulations of a 4-foot depth or being contained within bridge structures at river channel crossings, and sections to remain in place will be cleaned in an environmentally safe manner and permanently sealed.

Hazard mitigation measures will be initiated to protect the sewer line from breaking and contaminating the Rio Ruidoso in any future flooding event. However, replacement of the current sewer line would comply with USACE permit conditions (see Section 8: 404 Permit

Special Conditions) at river channel crossings. Diversions during construction of the structures in the river channel are required to comply with NMED 401 Water Quality Certification to avoid soil erosion and the discharge of sedimentation to the Rio Ruidoso (Molzen Corbin, May 2019).

A Construction General Permit (NPDES Permit) requires development and use of a SWPPP for stabilizing disturbed surfaces, outlining materials and design for vegetative bank stabilization and minimizing erosion, has been utilized in the proposed action alternative design to minimize sediment discharge to the Rio Ruidoso (Molzen Corbin, May 2019). These design features of the proposed action are expected to result in no adverse, direct, or indirect impacts to water resources and water quality.

Alternative 3: Remove and Replace Sewer Line – Alternative 3 would remove the current sewer line entirely out of the Rio Ruidoso channel and permanently replace it with a new line located along nearby roadways and other utility easements. This would stop contamination of the Rio Ruidoso. This alternative is expected to result in no adverse, direct, or indirect impacts to water quality. However, the presence of existing utilities in the proposed roadway right-of-way would require a deeper and more extensive excavation in order to install the new sewer line. In addition, this extensive relocation of the sewer line would require significantly more ground disturbance in environmentally sensitive riparian areas, as well as extensive excavation required to complete connection of existing homes to the new sewer line.

4.2.2 Waters of the United States including Wetlands

Sections 404 and 401 of the CWA provide for protection of wetlands and jurisdictional WOTUS as defined by the USACE and the EPA. Executive Order (EO) 11990 was created to "minimize the destruction, loss or degradation of wetlands and to preserve and enhance the natural and beneficial values of wetlands." As a result, federal agencies are to consider alternatives that prevent impact to wetlands or minimize damage, if possible. Implementation of EO 11990 (1977b) under FEMA regulations can be found in 44 CFR Part 9: Floodplain Management and Protection of Wetlands (FEMA, 2018). The Village of Ruidoso is required by the Surface Water Quality Bureau to obtain an NPDES permit. The NPDES permit will require a SWPPP to be developed. The SWPPP details the proper maintenance of construction to eliminate impacts to water and soil resources.

According to the United States Fish and Wildlife Service (USFWS) National Wetlands Inventory map, Ruidoso, New Mexico, the Rio Ruidoso river is a perennial river classified by USFWS as riverine, upper perennial, rock bottom, and permanently flooded (USFWS, 2018). Further downstream, the Rio Ruidoso river merges with the Rio Bonito near the unincorporated town of Hondo, New Mexico and becomes the Rio Hondo which flows another 79 miles eastward to near the City of Roswell, New Mexico where it flows into the Pecos River. The USACE has determined that the Rio Ruidoso river is a jurisdictional WOTUS. In addition to the river itself, adjacent wetlands (Attachment B) were noted during the pedestrian biological survey of the project area. The draft EA conditions from the USACE 404 Permit and NMED 401 Water Quality Certification will include best management practices, minimizing work within the wetlands,

restricting access when working within a wetland, and commencing wetland work to winter months only (Molzen Corbin, May 2019). All USACE conditions are subject to change contingent on final project design. Any significant changes will require a reissuance of the EA and FONSI.

Alternative 1: No Action – Additional repairs to the sewer line would not take place and the potential for contamination of the river would remain. Wetlands and WOTUS would be directly and indirectly impacted if temporary repairs failed or the sewer line became damaged again.

Alternative 2: Proposed Action – For the exposed or vulnerable existing sewer line sections under Alternative 2, the proposal is to abandon those existing sewer line sections and re-align the sections by moving the line away from the river. The re-aligned sections of the sewer line will be placed near and parallel to the current line and will be buried four (4) feet lower than the current line in order to abide by USACE regulations. Abandoned lines will be cleaned in an environmentally safe manner and sealed in place. New lines will be placed near and parallel to the current line and they will be buried four (4) feet lower than the current line in order to abide by USACE regulations.

In many locations it is infeasible to re-align the sewer line away from the Rio Ruidoso or re-alignment will result in greater impact to the Rio Ruidoso and private property along the river. In order to mitigate future damage to the restored and rehabilitated sewer line under Alternative 2, the proposal is to armor the sewer line and install flood mitigation measures immediately adjacent to approximately 40 key sewer line crossings and sewer line sections running immediately parallel to the river. The purpose is to mitigate future hazards from major storm events by protecting the sanitary sewer line from river erosion, degradation, and meander. There will be also associated work for point repair that includes bypass bumping, dewatering, trench excavation and backfill, removal and replacement of sewer pipe. The construction plans for the proposed action would allow for the least amount of direct and indirect impacts to the Rio Ruidoso and would reduce cumulative impacts, are pending approval by the USACE.

All proposed sewer line work directly adjacent to or within the river channel crossings would comply with USACE permit conditions (see Section 8: 404 Permit Special Conditions). The 404 permit is currently being applied for through the USACE Albuquerque District Office.

Seven (7) wetlands have been identified within the proposed project areas. These wetlands are primarily riparian scrub/shrub wetlands along the Rio Ruidoso. It is anticipated that the proposed project would permanently impact 0.04 acres along all seven (7) sites. Accounting for secondary disturbance by equipment during the construction activities for implementation, it is estimated that the temporary impacts to wetlands would be approximately 0.20 acres along all seven (7) sites (High Water Mark, LLC 2019b). The realignment, sewer line lowering, encasement, or mitigation measure design features of the proposed action are expected to result in no adverse, direct, or indirect impacts to wetlands and jurisdictional WOTUS.

Alternative 3: Remove and Replace Sewer Line – Would involve removing the current sewer line entirely out of the Rio Ruidoso channel and permanently replace it with a new line located along nearby roadways and other utility easements. Removing the sewer line would require an USACE 404 permit and would have to comply will all USACE regulations and conditions. However, the presence of existing utilities in the proposed right-of-way would require a deeper and more extensive excavation in order to install the new sewer line. In addition, this extensive relocation of the sewer line would require significantly more ground disturbance in environmentally sensitive riparian areas, as well as extensive excavation required to complete connection of existing homes to the new sewer line.

4.2.3 Floodplains

EO 11988 (Floodplain Management) (1977a) requires Federal agencies to avoid direct or indirect impact of identified floodplains if a practical alternative is available. A floodplain is defined as a low plain area near a water source that is prone to periodic flooding. Two floodplains are typically defined, 100-year floodplain and 500-year floodplain. A 100-year floodplain is defined as an area that is prone to flooding with a one percent chance of flood occurrence any given year. A 500-year floodplain is an area that has a 0.2 percent chance of flood occurrence any given year.

Flood zones are defined by FEMA as zones of flood risk. These are identified on flood insurance rate maps (FIRM) which have been created for flood management and flood insurance purposes.

The FIRMs in the project area include FEMA Panel Number 35027C2055D, effective date 11/16/2011; 35027C2058D, effective date 11/16/2011; 35027C2059E, effective date 11/5/2014; 35027C2080E, effective date 11/5/2014; 35027C2085E, effective date 11/5/2014. The flood zones depicted by these FIRMs are defined as being Zone AE Floodway, Zone AE 1% Annual Chance Flood Hazard, and Zone X 0.2% Annual Chance Flood Hazard.

Zone AE Floodway is defined by FEMA as the channel of a river or other watercourse and the adjacent land areas that must be reserved in order to discharge the base flood without cumulatively increasing the water surface elevation more than a designated height. Zone AE is defined as Areas subject to inundation by the 1-percent-annual-chance flood event determined by detailed methods. Base Flood Elevations are shown. Zone X is defined as the areas of minimal flood hazard, which are the areas outside the floodplain. HEC-RAS (a computer hydraulics of water flow program) analyses was performed on representative structures to check that the proposed structures in this project do not increase the flood depth (Molzen Corbin, May 2019).

Alternative 1: No Action: – Additional repairs to the sewer line would not take place and the potential for contamination of the river would remain. Floodplains would be directly and indirectly impacted by wastewater release if temporary repairs failed or the sewer line became damaged again.

Alternative 2: Proposed Action – The flood-prone areas are primarily at river crossings and places where the roadways run closer to the river. Floodplains would be temporarily impacted

during the construction of the new sewer line in the Upper Canyon and in the City of Ruidoso Downs. The sewer line would remain below the ground surface and would not alter the direction or flow of water during a flooding event. The proposed Lift Stations, Circle Lift Station and Sleepy Hollow Road Lift Station, are both located outside the floodplain in a Zone X.

Portions of the sewer line may be located within the 100-yr floodplain. The Initial Disaster Public Notice was published on September 10, 2014. However, the proposed project is the armoring, realignment, restoration, and rehabilitation of the sewer line extending throughout the Village of Ruidoso and the City of Ruidoso Downs, which is not likely to result in any potential direct impacts that will adversely affect the natural values and function of floodplains nor is it likely to increase the risk of flood loss. Based on the Executive Order 11988 eight-step process (Table 1), the proposed sewer line will minimize the potential for future damage and is still practicable in light of its exposure to flood hazards. Therefore, it is still practicable to construct the project within the floodplain.

Table 1: Executive Order 11988 Eight-Step Process for Floodplains & Wetlands

Step Number	Description	How the EA meets the process
1	Determine whether the Proposed Action is located in a wetland and/or the 100-year floodplain, or whether it has the potential to affect or be affected by a floodplain or wetland.	Portions of the sewer line and ancillary structures may be located within the 100-yr floodplain.
2	Notify public at earliest possible time of the intent to carry out an action in a floodplain or wetland and involve the affected and interested public in the decision-making process.	Public notices were posted in the local paper and in city offices on September 10, 2014. A second public notice will be published Village of Ruidoso Website as part of the public comment period for the EA.
3	Identify and evaluate practicable alternatives to locating the Proposed Action in a floodplain or wetland.	The Applicant has indicated that it is infeasible to re-align the sewer line away from the Rio Ruidoso because the re-alignment would result in greater impact to the Rio Ruidoso and private property along the river.
4	Identify the full range of potential direct or indirect impacts associated with the occupancy or modification of floodplains and wetlands, and the potential direct and indirect support of floodplain and wetland development that could result from the Proposed Action.	The Applicant has calculated that the proposed project would permanently impact 0.04 acres. Temporary impacts to wetlands would be approximately 0.20 acres. The sewer line would remain below the ground surface and would not alter the direction or flow of water during a flooding event. The proposed Circle and Sleepy Hollow Road Lift Stations are both located outside the floodplain in a Zone X.

Step Number	Description	How the EA meets the process
5	Minimize the potential adverse impacts from work within floodplains and wetlands (identified under Step 4), restore and preserve the natural and beneficial values served by wetlands.	The USACE have endorsed the wetland and stream avoidance and minimization mitigation measures proposed by the Applicant. The sewer line would remain below the ground surface and would not alter the direction or flow of water during a flooding event. The proposed Circle and Sleepy Hollow Road Lift Stations are both located outside the floodplain in a Zone X. The project will not increase threats to life and property as it has been designed to maintain the existing hydrology of the floodplain. The existing flood levels will not be altered.
6	Re-evaluate the Proposed Action to determine: 1) if it is still practicable in light of its exposure to flood hazards; 2) the extent to which it will aggravate the hazards to others; 3) its potential to disrupt floodplain and wetland values.	Mitigation measures stated in Section 5 will reduce impacts to both wetlands and floodplains. The proposed action will not expose any segment of the population or sensitive ecological receptors to increased flood hazard as it has been designed to maintain currently existing conditions within the floodplain and limit impacts to wetlands. Therefore, it is still practicable to construct the project within the floodplain.
7	If the agency decides to take an action in a floodplain or wetland, prepare and provide the public with a finding and explanation of any final decision that the floodplain or wetland is the only practicable alternative. The explanation should include any relevant factors considered in the decision-making process.	Final notice will be given to the public after the draft EA has been accepted by FEMA and following an initial public comment period. The Village of Ruidoso public meetings will constitute as the final public notice.
8	Review the implementation and post-implementation phases of the Proposed Action to ensure that the requirements of the EOs are fully implemented. Oversight responsibility shall be integrated into existing processes.	The project will be implemented once final approval has been received from all agency stakeholders and the public has been given sufficient time to comment upon the proposed action.

Alternative 3: Remove and Replace Sewer Line – This alternative would remove the current sewer line entirely out of the Rio Ruidoso channel and permanently replace it with a new line located along nearby roadways and other utility easements. This would eliminate most of the floodplain impacts to the sewer line. However, the presence of existing utilities in the proposed right-of-way would require a deeper and more extensive excavation in order to install the new sewer line. In addition, this extensive relocation of the sewer line would require significantly

more ground disturbance in environmentally sensitive riparian areas, as well as extensive excavation required to complete connection of existing homes to the new sewer line.

5 BIOLOGICAL RESOURCES

Under the Endangered Species Act (ESA) of 1973, the New Mexico Wildlife Conservation Act of 1978, and other agency regulations threatened and endangered (T&E) species are subject to protection from impacts associated with construction projects. Protection varies depending upon the Federal listing status of each species. An endangered listing provides Federal protection for any species in danger of extinction throughout all or a significant portion of their range. A threatened listing provides protection for species which are likely to become endangered within the foreseeable future through all or a significant portion of their range. Take of Federally-Listed endangered or threatened species may result in fines and imprisonment if the action occurs without appropriate permits. Extirpated species are no longer known to occur in areas that they previously inhabited, but in some cases may actually occur or there is potential to re-establish them. The 1988 amendment to the Fish and Wildlife Conservation Act mandates the USFWS to "identify species, subspecies, and populations of all migratory nongame birds that, without additional conservation actions, are likely to become candidates for listing under the Endangered Species Act (ESA) of 1973." Birds of Conservation Concern 2008 is the most recent effort to carry out this mandate. Bird species considered for the Birds of Conservation Concern include nongame birds, gamebirds without hunting seasons subsistence-hunted nongame birds in Alaska, and ESA candidate, proposed, and recently delisted species. Candidate species are those for which data has been presented to USFWS in support their being Federally–Listed as threatened or endangered, but the process of listing has not yet gone to completion or is on hold for various reasons. An experimental population is a special designation under ESA that the USFWS can apply to a population of a threatened or endangered species prior to reestablishing it in an un-occupied portion of its former range. There are two types of experimental populations: (1) essential and (2) nonessential. Essential experimental populations are de-fined as those populations whose loss would be likely to appreciably reduce the likelihood of the survival of the species in the wild. All other experimental populations are classified as nonessential.

Habitats within the proposed sewer line rehabilitation and repair area were compared with those associated with T&E species Federally–Listed for Lincoln County. Table 2 describes those species for which biological analysis indicated that suitable habitats occur within the project area (High Water Mark 2019a).

Table 2: Federally Listed T&E Species for Lincoln County

Common Name	Scientific Name	Federal Status	Habitat Description	Is suitable habitat present?	Effect Determination
New Mexico Meadow Jumping Mouse	Zapus hudsonius luteus	Endangered	Tall (averaging at least 24 inches), dense riparian herbaceous vegetation (plants with no woody tissue) primarily composed of sedges and forbs.	High Water Mark Characterization of Habitat Letter indicated no suitable habitat in project area	No effect
Penasco Least Chipmunk	Tamias minimus atristriatus	Candidate	Mesic meadows and herbaceous riparian communities adjacent to agricultural fields, ponderosa pine forest, and juniper woodlands. Also, can be found in high elevation talus slopes and glacial cirques surrounded by Engelman spruce quaking aspen, corkbark fir, and Douglas fir.	High Water Mark Characterization of Habitat Letter indicated no suitable habitat in project area	No effect
Mexican Spotted Owl	Strix occidentalis lucida	Threatened	Nesting and roosting occurs in both forested and rocky-canyon habitats. Forests used for roosting and nesting often contain mature or old-growth stands with complex structure. The owls appear to use a wider variety of cover types for foraging than for roosting or nesting.	High Water Mark Characterization of Habitat Letter indicated this species is unlike to exist in the project area due to the high levels of disturbance and lack of dense forest for occupancy	No effect
Northern Aplomado Falcon	Falco femoralis septentrionalis	Experimental population, Non-essential	Open rangeland and savanna, semiarid grasslands with scattered trees and shrubs; in United States, was found in coastal prairies along sand ridges, in woodlands along desert streams, and in desert grasslands with scattered mesquite and yucca.	High Water Mark Characterization of Habitat Letter indicated no suitable habitat in project area	No effect
Southwestern Willow Flycatcher	Empidonax traillii extimus	Endangered	Habitat includes riparian and wetland thickets, generally of willow, tamarisk, or both, sometimes boxelder or Russian olive.	High Water Mark Characterization of Habitat Letter indicated no suitable habitat in project area	No effect

Common Name	Scientific Name	Federal Status	Habitat Description	Is suitable habitat present?	Effect Determination
Virginia's Warbler	Vermivora virginiae	Bird of Conservation Concern	Inhabits shrubby habitats in and near fir and pine forests and in oak and oak-pine woodlands, including riparian shrublands in middle elevations	High Water Mark Characterization of Habitat Letter indicated this species is unlike to exist in the project area due to the high levels of disturbance and habitat required for nesting is sparsely found within the project area	No effect
Kuenzler Hedgehog Cactus	Echinocereus fendleri var. kuenzleri	Threatened	Limestone ledges, rock cracks, and gentle slopes; or on flat steps of sunny, grass-covered hillsides in the lower fringes of pinyon-juniper savannah. Occurs at elevations from 5800 to 6890 feet and requires limestone substrate that is relatively stable.	High Water Mark Characterization of Habitat Letter indicated no suitable habitat in project area	No effect

Source: High Water Mark Characterization of Habitat Along the Ruidoso Sewer Line Project (DR 1783 PW 155), June 7, 2019

Alternative 1: No Action – Under the no action alternative, there would be no direct or indirect impacts that would incur to wildlife or vegetation along the banks and within the river. However, if the sewer line were to become damaged again, these populations would be directly impacted through the contamination of their water source.

Alternatives 2 and 3 – The Proposed Action would temporarily impact wildlife species during construction activities. However, wildlife species would likely avoid the project area during construction activities and return upon completion. Vegetation would be temporarily impacted within the Village of Ruidoso and City of Ruidoso Downs; however, revegetation measures will be implemented to restore the disturbed areas to pre-disturbance conditions. Greater impacts to vegetation would occur within the City of Ruidoso Downs where the existing sewer line crosses through grazing lands associated with neighboring farms.

The Mexican spotted owl is Federally–Listed as threatened by the USFWS and is known to occur in the Sacramento Mountain range. For the EA, High Water Mark Characterization of Habitat Letter indicated that there is final critical habitat for this species (published in the Federal Register on August 31, 2004). The project area overlaps the critical habitat for Hazard Mitigation locations 1 – 5 in the upper canyon and for Rehabilitation work in the upper canyons between Location 1 -

5. However, the habitat is not suitable for nesting. This is due to the high levels of disturbance and lack of dense forest for occupancy.

Suitable habitat for T&E species was not noted within the project area (see Table 2); therefore, it is not anticipated that these species will be affected. Long term impacts to vegetation and wildlife are not anticipated as a result of the Proposed Action.

6 CULTURAL RESOURCES

This Determination of Effect (DOE) for Section 106 of the National Historic Preservation Act (NHPA) is a draft determination of effect; contingent on the results of consultation with the State Historic Preservation Officer (SHPO) and public comments. The Section 106 process will be determined complete upon the concurrence of the SHPO, Tribes (identified below), and the Public with this Draft DOE, or if no comments are received within the statutory NHPA review periods. The review periods are 15 days for SHPO comments and 30 days for public comments; as defined in the *Programmatic Agreement Among the Federal Emergency Management Agency, the New Mexico State Historic Preservation Officer, and the New Mexico Department of Homeland Security and Emergency Management, 2016* ("New Mexico PA"). Any significant differences between the Draft DOE and the results of consultation and public comment will result in re-opening of the Section 106 review process.

Federal regulations (54 USC §306108, "Section 106") further require FEMA, as the funding agency, to determine if historic properties are within the Area of Potential Effect (APE). Historic properties are any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places (NRHP). The APE is the geographic area or areas within which an undertaking may directly or indirectly affect historic properties, if any such properties exist. Federal regulations also require FEMA, as the funding agency, to make eligibility determinations on any such historic properties.

Section 106 of the NHPA states that if a federal agency is involved in a project, an assessment of effects to historic properties must be conducted prior to funding, licensing, and authorization of a project. This is part of the federal agency's decision-making process. Federal regulation 36 CFR 800 ("Protection of Historic Properties") and the New Mexico PA provide implementing regulations and guidelines for completing that process.

In order to assess the effects of the Undertaking, a cultural resource survey report that would conduct historic and prehistoric surveys of the project area was determined necessary. In that report, P3Planning provided field survey data, recommendations and expert opinions. The final DOE is contingent upon consultation, comment, and the receipt of photographic information from the field survey. The final DOE will incorporate changes from the recommended DOE to the final DOE, based upon the results of a review and analysis by FEMA subject matter experts. The final DOE will be incorporated before a FONSI is finalized.

As of the date of the Draft EA, FEMA has not completed Section 106 consultation with the SHPO as defined in the 2016 New Mexico PA. As of 2016, Section 106 consultations conducted by FEMA in the State of New Mexico were completed following the process in the New Mexico PA and not the process outlined in 36CFR800.3. The process differs in the statutory time frame.

Under the New Mexico PA the SHPO is afforded 15 days to provide comment. Consultation with the SHPO must be completed before a FONSI can be generated.

Pursuant to 36CFR800.3, this Programmatic Agreement defines FEMA's NHPA compliance process from 2016 to the present. Stipulation II.A.3 of the Programmatic Agreement states that FEMA may apply *Programmatic Allowances* to certain projects, if the Undertaking as a whole can be reviewed under programmatic allowances, and their section 106 obligations will be satisfied. Programmatic Allowances are types of specific project work that FEMA has determined through consultation with the SHPO to have no effect on historic properties if completed. Portions of the proposed Undertaking do not meet the programmatic allowances and as such, a programmatic allowance cannot be applied. This means that the complete section 106 process, as defined in the programmatic agreement, must be completed before a FONSI can be completed.

On August 2, 2019, FEMA completed Section 106 consultation with five (5) Federally Recognized Tribes that have defined areas of ancestral interest that intersect with the APE (Appendix C). The New Mexico PA does not apply to federally recognized Tribes. The Section 106 process as it applies to Tribes is conducted following procedures defined in 36CFR800.3. At this time, the Section 106 process between FEMA and Tribes is complete.

The Tribes were the Comanche, Mescalero Apache Tribe, Yselta del Sur, Kiowa Tribe, and Pueblo of Isleta was conducted per 36 CFR §800.2(c)(2)(i)(B). Responses were received from Ysleta Del Sur, dated July 1, 2019, and Comanche Nation, dated October 8, 2019, stating that the proposed project will not adversely affect traditional, religious, or culturally significant sites (Appendix D). The tribes Mescalero Apache Tribe, Kiowa Tribe, and Pueblo of Isleta did not provide comments within 30 days or declined to comment. FEMA has determined that the proposed project will not adversely affect traditional, religious, or culturally significant sites. No additional consultation with Tribes will be conducted for this Undertaking, however, if the project work or the APE changes substantially to include new areas of potential effect, a new consultation may be required.

In 2009 as part of the original Environmental Assessment (EA), cultural resource surveys were performed by Zia Engineering & Environmental Consultants, LLC. As a result, no historic or eligible properties were identified in the project area, historic districts were not identified, nor were prehistoric or tribal artifacts. Additionally, the cultural resource surveys revealed no known Traditional Cultural Properties associated with the Mesacalero Apache Tribe occurred in the project area. Tribal letters were submitted to the Tribes, including the Mescalero Apache Tribe, and no responses were received. At the time, consultation was conducted with the New Mexico SHPO on January 25, 2010 (Appendix D). The SHPO’s response on March 1, 2010 concurred with the cultural resource survey report that the Undertaking will not result in an adverse effect. The current EA supersedes this consultation and a new consultation for effects to historic properties is required.

Given the changes in the project scope and footprint since the original EA in 2010, an updated cultural resource survey report was conducted by P3Planning in 2019, to identify historic properties within the APE and assess the effects of the Undertaking to historic properties.

The 2019 inventory of the APE identified one-hundred and eighteen (118) individual properties with one (1) possible historic district. These properties are twenty-two (22) archaeological sites and Isolated Occurrences, eighty-five (85) buildings, five (5) bridges, one (1) racetrack, and five (5) acequias. Nineteen (19) of the buildings are recommended eligible as historic properties.

The potential historic district is the Ruidoso Cabinowners, Inc. (RC) Historic District. Located at the upper end of the Rio Ruidoso near the boundary of the Mescalero Apache Reservation, concentrated around Malone and within the RC property boundaries. These include some of the oldest cabins built in Ruidoso. Six (6) RC buildings were documented in the APE, three (3) are recommended as historic properties and as contributing to the potential historic district.

On December 27, 2019, FEMA requested public comment on the effect of the Undertaking to historic properties in the APE. The public comment period is currently pending. The results of the public comment may modify the final DOE and will be provided as part of the consultation with the SHPO.

Alternative 1: No Action – Historic properties or prehistoric or tribal artifacts would not be impacted under the No Action Alternative.

Alternative 2 and 3 – Historic properties that are currently listed on the National Register of Historic Places were not identified within the project area. Historic properties that are eligible for listing on the National Register of Historic Places were identified within the project area. The Proposed Action would not result in Adverse Effects to Historic Properties or prehistoric or tribal artifacts. The impacts identified in this EA have changed since the original EA was published. The agencies consulted have also significantly changed.

7 SOCIOECONOMIC RESOURCES

According to 2018 Census data (USCB, 2018), the Village of Ruidoso, New Mexico had a population of 8,029 individuals and The City of Ruidoso Downs had 2,815. The median income in 2017 was $27,231 for the Village for the Downs.

The current sewer line lies within an existing utility easement that runs through private property, both commercial and residential. The project area contains farmlands, commercial property, and residential property. Roadways are either maintained by the Village of Ruidoso (Upper Canyon), New Mexico Department of Transportation, or Lincoln County.

Alternative 1: No Action – Existing zoning and land use would not be impacted as a result of the no action alternative.

Alternative 2: Proposed Action – The majority of new and rehabilitated sewer lines would occur within existing utility easements and disturbed roadways. Any new work such as lines, manholes, hazard mitigation structures, lift stations or associated work that occurs on landowner's property will require an easement from landowners. Existing zoning and land use would not be adversely affected as a result of the proposed action.

Alternative 3: Remove and Replace Sewer Line – New and rehabilitated sewer lines would occur within existing utility easements and disturbed roadways. Lines leading to and from private property will require permission from landowners for lines to be constructed or rehabilitated on their land. Existing zoning and land use would not be adversely affected as a result of the proposed action.

7.1 Environmental Justice

In 1994, President Clinton signed EO 12898 "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations" that requires each Federal agency to "make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies, and activities on minority populations and low-income populations." The Federal Highway Administration has identified three fundamental principles of environmental justice:

- To avoid, minimize, or mitigate disproportionately high and adverse human health or environmental effects, including social and economic effects, on minority populations and low-income populations;
- To ensure the full and fair participation by all potentially affected communities in the transportation decision-making process; and
- To prevent the denial of, reduction in, or significant delay in the receipt of benefits by minority populations and low-income populations.

The greatest concentration of minorities and households below poverty are adjacent to The City of Ruidoso Downs Block group ID # 350279604004 (EPA 2018). See Table 3 for details.

Table 3: Project Population Data

Area	Population	Hispanic or Latino (of any race)	White	Other	Individuals below poverty level	Median Household Income
Village of Ruidoso	8,029	1,700	907	250	22.8%	$27,231
The City of Ruidoso Downs	2,815	1,700	907	250	22.8%	$27,231
Lincoln County*	20,497*	6,110	17,878	1,880	15.4%	$42,145
New Mexico	2,059,179	1,004,103	795,728	197,944	20.6%	$ 46,718

Source: American FactFinder Report: Generated: 12/27/18 & 6/27/19 (USCB 2018). *= 2010 Population Estimates

Alternative 1: No Action – This alternative would not disproportionately affect low-income or minority populations.

Alternatives 2 and 3 – This alternative would not disproportionately affect low-income or minority populations. The entire community, regardless of demographics, will benefit from this alternative.

7.2 Hazardous Materials

While completion of a formal Phase I Environmental Site Assessment is intended to constitute one of the requirements of all appropriate inquiry for purposes of Comprehensive Environmental Response Compensation and Liability Act (CERCLA) liability protections, it is not intended that its use be limited to that purpose. Phase I Environmental Site Assessment's takes into account commonly known and reasonably ascertainable information. The Environmental Site Assessment review is intended primarily as an approach to conducting an inquiry designed to identify recognized environmental conditions (REC) in connection with a property and represents a commercially prudent and reasonable inquiry.

An informal Phase 1 Environmental Site Assessment was conducted for the original EA to accumulate data for use by parties who wish to evaluate the level of environmental risk associated with commercial real estate and takes into account commonly known and reasonably ascertainable information. The EPA and State of New Mexico regulatory database information was obtained from Environmental FirstSearch (2009), a contract information services company, for use as a source of indications of environmental concern on and in the vicinity of the proposed project areas.

7.2.1 Listed Facilities

The regulatory review identified one (1) Resource Conservation and Recovery Act Generator, seven (7) leaking underground storage tanks (LUSTs), eleven (11) underground storage tanks (USTs) and one (1) discharge permit regulated facilities within the specified search radii. Based on distance, gradient, direction and current regulatory status, the listed regulated sites do not appear to constitute a REC relative to the proposed sewer line locations.

7.2.2 Unmapped Facilities

Unmapped facilities are those that do not contain sufficient address or location information to evaluate the facility listing locations relative to the proposed sewer line routes. The Environmental FirstSearch report listed 29 facilities in the unmapped section. Of the 29 facilities, two (2) facilities may be near the proposed pipeline project. Determining the location of unmapped facilities is beyond the scope of this assessment.

Of these two (2) facilities the regulatory review identified two (2) UST facilities. Due to lack of adequate information, the unmapped regulated facilities may not be assessed as to whether they constitute RECs to the proposed pipeline route.

Alternative 1: No Action – Under the no action alternative, the sewer line will not impact these mapped and unmapped locations.

Alternatives 2 and 3 – The removal of the sewer line to the roadways is not anticipated to impact any of these mapped and unmapped locations. Mitigation measures are required if soil staining pertaining to the leaking storage tanks are identified.

7.3 Noise

The general definition of noise is unwanted sound. Excessive noise can be determined to be noise pollution which may be judged to be an annoyance and may lead to hearing loss. Noise is generally measured in decibels (dB) with the human threshold of sound being defined as 0 dB. Hearing loss and physical discomfort occur at around 120 dB.

The Occupational Health and Safety Administration (OSHA) has developed regulations for occupational noise limitations and safety (29 CFR 1910.95). Although these regulations must be followed by construction workers, the regulations also cover those in close proximity to the zone of noise generation.

Ambient noise within and near the Rio Ruidoso are those of running water and urban and residential traffic. The river flows through the main portion of the Village where noise levels increase due to traffic from roadways and businesses. In the City of Ruidoso Downs, most of the noise near the Rio Ruidoso is a result of the race track or nearby residential and roadway traffic.

Alternative 1: No Action – Under the no-action alternative, noise levels would not be impacted. There would be no change in current noise levels.

Alternatives 2 and 3 – Noise levels would temporarily increase during construction of both action alternatives and during maintenance activities. Any increases to the existing noise levels would cease once the project and/or maintenance was complete. Long term impacts or increases to noise levels are not anticipated as a result of either of the action alternatives.

7.4 Transportation

The Village of Ruidoso and the City of Ruidoso Downs contains residential streets, county roads, and New Mexico State highways. The Village of Ruidoso and the City of Ruidoso Downs each maintain the residential roadways whereas the county maintains their roads, and New Mexico Department of Transportation maintains the highways.

Alternative 1: No Action – Under the no action alternative, impacts to traffic and circulation would not be impacted.

Alternatives 2 and 3 – Traffic may be halted and/or detoured to accommodate construction activities during installation of the pipes along the roadways and connections to residences. Construction efforts in the City of Ruidoso Downs will be minimal since the line mostly runs through farmlands. Coordination with the Ruidoso Downs Race Track should be conducted to minimize impacts to traffic and circulation by scheduling construction activities during times of low activity. Traffic will return to normal activity once construction has ceased. Cumulative impacts are not expected as a result of the proposed action.

8 CUMULATIVE IMPACTS

The CEQ regulations state that cumulative impacts represent the "impact on the environment which results from the incremental impact of the action when added to other past, present, and reasonably foreseeable future actions, regardless of what agency (Federal or non-Federal) or person undertakes such other actions." Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time (40 C.F.R. § 1508.7).

In its comprehensive guidance on cumulative impacts analysis under NEPA, the CEQ notes that: "The range of actions that must be considered includes not only the project proposal, but all connected and similar actions that could contribute to cumulative effects" (CEQ, 1997b). The term "similar actions" may be defined as "reasonably foreseeable or proposed agency actions [with] similarities that provide a basis for evaluating the environmental consequences together, such as common timing or geography." 40 C.F.R. § 1508.25(a)(3); see also 40 C.F.R. §§ 1508.25(a)(2) and (c).

Not all potential issues identified during cumulative effects scoping need be included in an EA. Because some effects may be irrelevant or inconsequential to decisions about the proposed action and alternatives, the focus of the cumulative effects analysis should be narrowed to important issues of national, regional, or local significance. To assist agencies in this narrowing process, CEQ lists several basic questions, including: (1) is the proposed action one of several similar past, present, or future actions in the same geographic area; (2) do other activities (governmental or private) in the region have environmental effects similar to those of the proposed action; (3) have any recent or ongoing NEPA analyses of similar actions or nearby actions identified important adverse or beneficial cumulative effect issues; and, (4) has the impact been historically significant, such that the importance of the resource is defined by past loss, past gain, or investments to restore resources (CEQ, 1997a).

It is normally insufficient when analyzing the contribution of a proposed action to cumulative effects to merely analyze effects within the immediate area of the proposed action (CEQ, 1997a). Geographic boundaries should be expanded for cumulative effects analysis, and conducted on the

scale of human communities, landscapes, watersheds, or airsheds. Temporal frames should be extended to encompass additional effects on the resources, ecosystems, and human communities of concern. A useful concept in determining appropriate geographic boundaries for a cumulative effects analysis is the project impact zone; i.e., the area (and resources within that area) that could be affected by the proposed action. The area appropriate for analysis of cumulative effects will, in most instances, be a larger geographic area occupied by resources outside of the project impact zone.

FEMA has determined that the incremental effects of the other infrastructure recovery and improvement actions are likely to be similar to the impacts and effects described in this EA for the present proposed action, in that the effects to socioeconomic resources are expected to be beneficial, and effects to other similar resources expected to be either non-existent, or minimal and temporary. The proposed sewer line replacement and repair would not result in increased capacity, nor are there any plans for future land use development in the area.

FEMA has further determined that the incremental impact of the present proposed project, when combined with the effects of other past, present, and reasonably foreseeable future projects, are neither cumulatively considerable nor significant.

9 PUBLIC INVOLVEMENT

To meet the requirements of the NEPA, FEMA Environmental and Historic Preservation staff have prepared a Draft EA to identify and evaluate historic and environmental resources that might be affected by proposed road demolition, construction, mitigation or other actions associated with the sewer line replacement and repair. As part of its goal to ensure that good management decisions are made, FEMA invites the public to review and comment on the Draft EA to provide FEMA with information it may not have considered in its assessment.

The Notice of Availability of this Draft EA will be advertised by public notice in the Ruidoso News. Copies of the EA will be available locally at the Village of Ruidoso, Ruidoso Public Library located 107 Kansas City Road, Ruidoso, NM 88345 between Monday and Friday, 9:00 a.m. to 5:30 p.m. and on Saturday, 9:00 a.m. to 5:00 p.m. Also, the Draft EA will be available for review on Village of Ruidoso websites https://www.ruidoso-nm.gov/ and https://ruidososewerproject.com/. A 30-day public comment period will commence on the initial date of the public notice. FEMA will consider and respond to all public comments in the draft EA. If no substantive comments are received, the draft EA will become final, and a Finding of No Significant Impact (FONSI) will be issued for the project.

Comments on the Draft EA can be submitted to the Federal Emergency Management Agency, Region VI, c/o Kevin Jaynes, 800 North Loop 288, Denton, TX 76209, or by email: FEMA-R6-EHP@fema.dhs.gov, or by fax: 940-297-0152.

10 AGENCY COORDINATION

As part of the development of the EA, federal and state resource protection agencies were contacted. Responses received to date are included in Appendix D and are listed below (responses can also be found in Original EA).

- Federally Recognized Tribes
- New Mexico Surface Water Quality Bureau (Pending)
- State Historic Preservation Office (SHPO), Santa Fe, New Mexico
- United States Army Corps of Engineers (USACE), Albuquerque, New Mexico (Pending)

In both the original EA and this EA, FEMA will incorporate comments and conditions received from all agencies.

In accordance with applicable local, state, and federal regulations, the applicant will be responsible for acquiring any necessary permits prior to commencing construction at the project site.

11 CONDITIONS AND MITIGATION MEASURES

- Proper maintenance of construction equipment will eliminate potential impacts to soil and water resources.
- The Surface Water Quality Bureau requires the Village of Ruidoso to obtain a NPDES permit which will require that a SWPPP be developed. The contractor that is awarded the construction of the sewer line will have the responsibility of obtaining the permit and plan. These efforts will minimize the potential of construction materials or other construction-related waste to enter the Rio Ruidoso.
- Regardless of what the population status for wildlife species, trenching guidelines provided by the New Mexico Department of Game & Fish (NMDGF) will be followed to minimize wildlife impacts. These guidelines are summarized below, but a full description is provided in Appendix D in the Original EA. Periods of highest activity for many of these species include night time, summer months, and wet weather. To minimize the amount of open trenches at any given time, keep trenching and back-filling crews close together. Trench during the cooler months (October – March). However, there may be exceptions (e.g., critical wintering areas) which need to be assessed on a site-specific basis. Avoid leaving trenches open overnight. Where trenches cannot be back-filled immediately, escape ramps should be constructed at least every 90 meters. Escape ramps can be short lateral trenches sloping to the surface or wooden planks extending to the surface. The slope should be less than 45 degrees (100%). Trenches that have been left open overnight, especially where endangered species occur, should be inspected and animals removed prior to back-filling.

- After conducting a database search through the Environmental FirstSearch report (2009), 20 mapped facilities were listed and 29 facilities were found to be unmapped. Should any affected soils or groundwater be encountered during future excavations, proper procedures will be followed with respect to worker health and safety and the soils or groundwater will be properly handled and disposed in accordance with local and state regulations.
- Construction will take place during normal business hours and will not operate between 10:00 PM and 7:00 AM so as not to disturb residents. Machine noise must not exceed 50 A-weighted decibels [dB(A)], or 10 dB(A) above the ambient noise level whichever is higher, when measured at the residential property line. A-weighted decibels are an expression of the relative loudness of sounds in air as perceived by the human ear. Detours and closures will not continue through evening hours.
- Non-vibratory machinery will be used during construction to prevent impact to historic–age structures. In the event that archeological deposits, including any Native American pottery, stone tools, bones, or human remains, are uncovered, the project shall be halted and the applicant shall stop all work immediately in the vicinity of the discovery and take reasonable measures to avoid or minimize harm to the finds. All archeological findings will be secured and access to the sensitive area restricted. The applicant will inform FEMA immediately and FEMA will consult with the SHPO or THPO and Tribes and work in sensitive areas cannot resume until consultation is completed and appropriate measures have been taken to ensure that the project is in compliance with the National Historic Preservation Act.
- It is the responsibility of the Village of Ruidoso, the City of Ruidoso Downs, and the hired contractors to obtain the appropriate local, state, and/or federal permits appropriate for this project prior to project initiation.

11.1 USACE 404 Permit General Conditions:

ALL USACE CONDITIONS ARE SUBJECT TO CHANGE CONTINGENT ON FINAL PROJECT DESIGN. ANY SIGNIFICANT CHANGES WILL REQUIRE AN REISSUANCE OF THE EA AND FONSI

1. The time limit for completing the work authorized ends on December 31, 2024. If you find that you need more time to complete the authorized activity, submit your request for a time extension to this office for consideration at least one month before the above date is reached.

2. You must maintain the activity authorized by this permit in good condition and in conformance with the terms and conditions of this permit. You are not relieved of this requirement if you abandon the permitted activity, although you may make a good faith transfer to a third party in compliance with General Condition 4 below. Should you wish to cease to maintain the authorized activity or should you desire to abandon it without a good faith transfer, you must obtain a modification of this permit from this office, which may require restoration of the area.

3. If you discover any previously unknown historic or archeological remains while accomplishing the activity authorized by this permit, you must immediately notify this office of what you have found. We will initiate the Federal and state coordination required to determine if the remains warrant a recovery effort or if the site is eligible for listing in the National Register of Historic Places.

4. If you sell the property associated with this permit, you must obtain the signature of the new owner in the space provided and forward a copy of the permit to this office to validate the transfer of this authorization.

5. If a conditioned water quality certification has been issued for your project, you must comply with the conditions specified in the certification as special conditions to this permit. For your convenience, a copy of the certification is attached if it contains such conditions.

6. You must allow representatives from this office to inspect the authorized activity at any time deemed necessary to ensure that it is being or has been accomplished in accordance with the terms and conditions of your permit.

11.2 USACE 404 PERMIT SPECIAL CONDITIONS:

After a detailed and careful review of all of the conditions contained in this permit, the permittee acknowledges that, although said conditions were required by the Corps of Engineers, nonetheless the permittee agreed to those conditions voluntarily to facilitate issuance of the permit; the permittee will comply fully with all the terms of all the permit conditions.

1. The permittee must comply with all stipulations of the individual water quality certification issued by the New Mexico Environment Department's Surface Water Quality Bureau on (Pending Date).

2. The Migratory Bird Treaty Act (MBTA) (16 USC 703 through 712) prohibits the taking of migratory birds, nests, and eggs, except as permitted by the U.S. Fish and Wildlife Service (FWS). To minimize the likelihood of adverse impacts to all birds protected under the MBTA, the permittee shall not conduct construction within the project area during the general migratory bird nesting season of March 15 through August 31. Alternatively, areas within the arroyo proposed for construction during the nesting season shall be surveyed by a qualified biologist, employed by the permittee, immediately prior to construction, survey results shall be provided to the Corps Albuquerque District Office prior to construction, and, if determined necessary by the Corps, construction areas shall be avoided until nesting season is complete.

3. In order to prevent unauthorized impacts to waters of the U.S., prior to the commencement of construction, the permittee shall install a barrier (i.e., flagging, temporary fencing, jersey barriers, etc.) around areas to be avoided and protected, such as wetlands and riparian areas, in accordance with the proposed project plans submitted with the permit application dated (Pending Date). The permittee shall

submit photo documentation of all barrier installation to the Corps Albuquerque District Office within 30 days of such installation.

4. The permittee shall implement erosion control measures for all temporarily disturbed areas, including access and staging areas, to prevent upland erosion into waters of the U.S. prior to commencement of ground-disturbing activities and these measures will be properly maintained by the permittee until temporarily disturbed areas are stabilized.

5. The permittee shall limit the area of disturbance in the river and adjacent wetlands to the maximum extent practicable and should not exceed the limits shown on the permit application drawings. Any requests for modifications of work area limits shall be submitted and approved by the Corps prior to their implementation. Additionally, the permittee shall clearly flag and/or fence the limits of the work area to avoid inadvertent impacts to riparian vegetation from construction equipment.

6. All temporarily impacted areas located adjacent to waters of the U.S. shall be restored by the permittee to pre-construction conditions, including original contours, vegetation composition and density (excluding invasive species), and drainage patterns. The permittee shall submit photos to the Corps Albuquerque District Office that document the success of restoration efforts within 90 days after restoration is complete.

7. The permittee shall also adhere to the following project specific special conditions designed to minimize impacts to wetlands during construction.

    a. Equipment durable mats must be utilized on top of wetlands that will be driven over by heavy equipment for temporary access and/or construction.

    b. Wetland/hydric soils with associated hydrophytic plants roots removed during construction activities (e.g. trenching) shall be taken to a depth of twelve inches below surface or deeper and stockpiled separately from other soils for later reuse. This salvaged topsoil must be placed on top of any other authorized backfill materials in a manner restoring original grade and compaction.

    c. Excavated materials are not to be stockpiled in wetland areas unless a vegetation/surface protection barrier is utilized.

    d. All unsuitable/excess dredged and excavated material not used as backfill over the pipeline shall be removed from the waterway and disposed of at an upland disposal site in a manner to ensure no return or erosion to any waterway or wetland.

    e. All temporary structures and/or fills shall be removed in their entirety upon completion of the project.

8. Work will be performed during low flow conditions to minimize adverse effects of

increased turbidity due to construction activities on local water quality.

9. The permittee is required to submit an annual report documenting the efficacy of the implemented project components and monitoring procedures discussed below for a period of not less than five years. The monitoring report shall be provided to the Corps by November 15 each year during the monitoring period. If observed conditions indicate improved function or, at a minimum, lack of impairment due to the project, the permittee/project proponent may request to be released from monitoring after the third year. The annual monitoring report shall include:

    a. Photographic documentation of the baseline conditions (first year only).

    b. A discussion of peak flows during spring and monsoon peak events and the treatment locations response to high flows. This discussion should be cumulative from year to year to enable the reviewer to obtain an overall understanding of the structures' efficacy since installation.

    c. Photographs of not less than 3 treatment locations to determine both the efficacy of the restoration procedures as well as the subsequent increase in habitat diversity. The same locations shall be photographed annually and displayed in the monitoring report. Differences shall be prominently noted, both in the report text and annotated in the photo captions. Submitted photos should be formatted to print on a standard 8 ½ by 11 inch piece of paper, dated, and clearly labeled with direction from which the photo was taken. The photo location points should also be identified on the appropriate maps.

    d. Discussion of any unusual events that might have impacted or may impact the efficacy of the restoration procedures in the future, such as a large-scale erosion event.

Conditions that would be included if compensatory mitigation is required.

10. The permittee will implement the compensatory mitigation plan titled (Pending Date) and dated (Pending Date). The construction of the mitigation area must be completed within one year of the date of issuance of this permit.

11. Per 36 CFR 332.7, the overall compensatory mitigation project must be provided long-term protection through integrated natural resource plans, real estate instruments, or other available mechanisms, as appropriate. Accordingly, after the mitigation site has met the approved performance standards, the permittee will monitor and maintain the site.

12. The permittee is required to monitor the mitigation site annually for the years 1 through 5 after construction to ensure success and submit annual monitoring reports to this office by December 15, beginning in 2021. This report must meet the format and content for monitoring reports provided at with

https://www.spa.usace.army.mil/Portals/16/docs/civilworks/regulatory/Mitigation/SPA%20Final%20Mitigation%20Guidelines_OLD.pdf**.** It should be noted that the determination of success of the mitigation rests solely with the Corps, and will be made in writing by December 15, 2026, unless the monitoring period is extended as detailed below.

a. Photographs with a 360 degree panorama taken from a fixed point in the mitigation and control areas must be submitted with each report. The report must include 8.5 x 11" scale drawings of the mitigation site and the control site showing the boundaries of created wetlands, the sample points and photograph locations, and the land/water boundaries at the time of each monitoring visit.

b. Each monitoring effort and report will be based on the sampling technique summarized in the plan.

c. This office reserves the right to determine success based on the established performance measures, the information in the reports, and/or site visit(s). Should we determine that a deficiency exists during or at the conclusion of the monitoring period, we reserve the right to compel you to take whatever measures are necessary, including starting over, to achieve success within an additional monitoring period to be established at that time.

d. Specific remedial measures to be taken will be designed and executed by the permitee and the permittee will be responsible for unsuccessful remedial measures. Should the Corps determine that the mitigation effort is successful the permittee will be released from this condition.

e. The permittee agrees to allow access to the mitigation site by Corps employees in the future for study and long term evaluation. After achieving a determination of success by this office, the permittee shall notify and receive prior approval from this office for any proposed modification within the mitigation area.

12 CONCLUSION

Findings within this EA has determined if the proposed action (Alternative 2) is approved, there would be no significant negative impacts on the physical environment, the biological environment, hazardous materials, socioeconomics, or cultural resources. Temporary impacts may occur during construction of the sewer line; however, upon construction completion, the areas surrounding the construction would return to its original state prior to construction initiation. The approval of the proposed action would have positive impacts on the physical environment in particular with the Rio Ruidoso and the health and safety of the residents of the Village of Ruidoso and the City of Ruidoso Downs.

Preliminary findings within this EA conclude that the mitigation measures required by the agencies and in particular with the final approval and mitigation measures provided by the USACE would negate the significance of the potential impacts to the project area. It is anticipated that the proposed action would meet the requirements of a FONSI under NEPA. As a result, the preparation of an EIS would not be required.

13 LIST OF PREPARERS

The EA was prepared by FEMA. Following are the individuals and their role in the document production:

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14 REFERENCES

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