Preliminary Engineering Report
Wastewater System Improvements
Village of Jemez Springs, New Mexico

This Preliminary Engineering Report was developed in accordance with guidelines established in U.S. Department of Agriculture (USDA) Rural Utilities Services (RUS) Bulletin 1780-2.

Prepared for

Village of Jemez Springs, New Mexico

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1. Project Planning

Daniel B. Stephens & Associates, Inc. (DBS&A) has prepared this preliminary engineering report (PER) to evaluate the Village of Jemez Springs (the Village) wastewater system, including the sanitary sewer collection system and the wastewater treatment plant (WWTP).

1a Location

The Village is located in north-central New Mexico, approximately 60 miles north of Albuquerque. Jemez Springs is in Sandoval County, and is located directly north of Jemez Pueblo (Figure 1).

1b Environmental Resources Present

An environmental information document (EID) was prepared by DBS&A in conjunction with this PER and is included as Appendix A. The EID was prepared in compliance with the National Environmental Policy Act of 1969 (NEPA), the New Mexico Environment Department (NMED) Construction Programs Bureau State Environmental Review Process (NMED CPB, 2020), and other applicable guidelines and regulations.

Maps and figures describing the natural environment are included in the EID. A brief synopsis of the information contained in that document is provided in the following subsections.

1b.i Environmental Setting

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

Vegetation of this region includes mostly ponderosa pine forest, some areas with pinyon pine or junipers. Understory may include Gambel oak, mountain mahogany, antelope bitterbrush, and wood rose. Grasses include mountain muhly, junegrass, Arizona fescue, pine dropseed, and various sedges. Vegetation along the banks of the Jemez River consist mostly of willow (*Salix*

spp.) grasses, common horsetail (*Equisetum arvense*), and cottonwood (*Populus deltoides* ssp. *Wislizeni*), with sporadic occurrences of Russian olive (*Elaeagnus angustifolia*) and salt cedar (*Tamarix* sp.), which were imported to the area for ornamentation and erosion control, respectively (USFS, 2007).

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

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

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

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

1b.ii Land Use

Land within the Village includes private property used primarily for residential and business use that is based on a tourism and recreational economy. The Village owns and operates the WWTP and collector system.

1b.iii Floodplains

The Jemez Springs WWTP and collector system are located within the Jemez River Valley, parallel to and near the Jemez River. The Federal Emergency Management Agency (FEMA)

National Flood Hazard Layer (NFHL), a database that contains current effective flood hazard mapping data, shows the southern portion of the WWTP in a Special Flood Hazard Area subject to inundation by the 1 percent annual chance flood (FEMA, 2023). The floodplain in relation to the project area is shown on Figure D within the EID (Appendix A).

1b.iv Wetlands

Two types of wetlands and one type of riparian habitat are within the area of the Proposed Action:

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

The wetlands map in relation to the project area is shown on Figure E of the EID (Appendix A).

1b.v Water Resources

Surface Water

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

Groundwater

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

1b.vi Coastal Resources

No coastal zones occur in New Mexico.

1b.vii Air Quality

Sandoval County is currently designated by the U.S. Environmental Protection Agency (EPA) as an attainment area for all air pollutants identified in the National Ambient Air Quality standards (NAAQS) (U.S. EPA, 2020). The ambient air quality in the area is good, as there are no significant contributing factors other than traffic on NM 4. Occasional high wind conditions may cause increased particulate transport, resulting in moderate to high particulate pollution. Overall, air quality in the area is very good.

1b.viii Biological Resources

Land cover of the Jemez Springs WWTP and collector system is primarily low-intensity development with scattered areas of Western Great Plains Riparian Woodland and Shrubland and Pasture/Hay through the valley area. Outside of the valley, the most common ecoregion vegetation community is Southern Rocky Mountain Pinyon-Juniper Woodland.

Mammals occurring in the Jemez River Valley would include species that occur in the riparian woodlands and surrounding pinyon-juniper woodlands.

There are 9 federal threatened and endangered species (2 of the 9 are candidate species for federal listing) that were analyzed for the potential to occur in the Project Area. There is designated or proposed critical habitat in the area, but there is none in the proposed Project Area. There are 21 state-listed endangered or threatened animal species and 4 state endangered plants that have the potential to occur in Sandoval County.

1b.ix Archaeological, Cultural and Historic Resources

To be provided by Okun.

1b.x Socioeconomic/Environmental Justice

The estimated population of the Village totals 198, and the median household income (MHI) is $88,125 (USCB, 2023).

Per the EPA environmental justice (EJ) report generated for the project, the WWTP and collector system, as well as a 5-mile ring around the system, has a higher percentage of people of color and lower low-income populations relative to the state of New Mexico, the EPA region, and the U.S. Most EJ demographic indexes for the Village are high compared to the state of New Mexico, the EPA region, and the U.S. as a whole. No other vulnerability indicators were shown to be above the state or the U.S. in general.

1b.xi Other Resources

Public Health and Safety

Inadvertent generation of regulated asbestos waste is possible during the necessary trenching, excavation, and pipe connection activity. These activities have the potential to impact asbestos-containing materials, such as asbestos-cement pipes (sewer, water or conduit). Suspect pipes, fragments, or soils contaminated with related fragments or fines will be sampled and analyzed

using polarized light microscopy (PLM) to determine if the materials contain greater than 1 percent asbestos.

In 2023, higher than normal seasonal runoff caused a major sewer main break, and dramatically higher flows were received at the WWTP. As a result untreated sewage entered the Jemez River, impacting public health and safety.

Transportation

Project construction would have a temporary direct effect due to lane or road closures that may be required for the effluent pipe installation within existing roadways. The traffic may be affected along NM 4, but only temporarily.

Noise

Noise ordinances have been issued for Sandoval County, and would be in effect during construction.

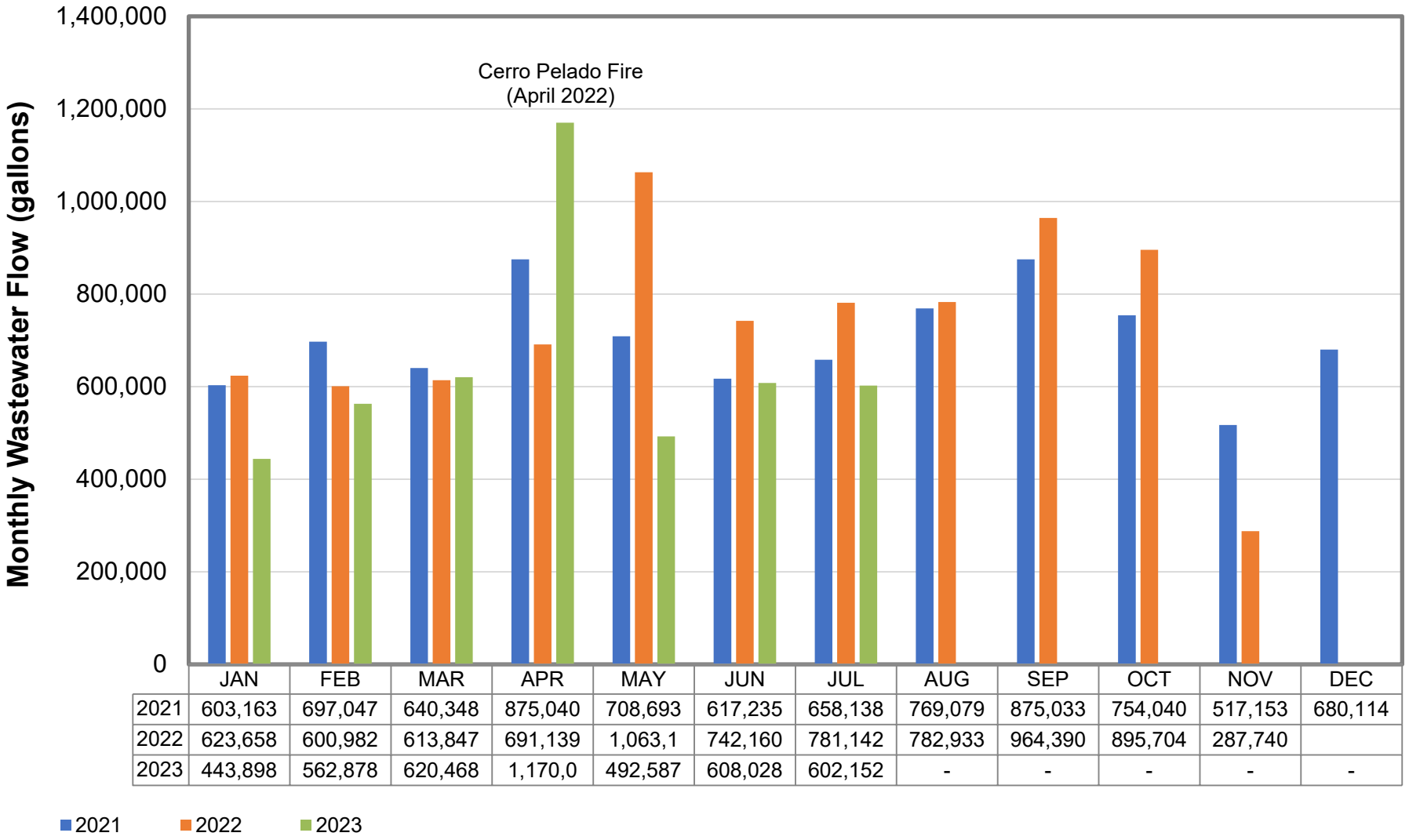
1c Population Trends

From New Mexico Drinking Water Watch (NMED, 2023), the average daily water production is 83,405 gallons per day (gpd), the population served is 1,157, and there are 412 connections to the water system. The water utility provider is the Jemez Springs Drinking Water Utility Authority (DWUA). The source of water is three springs.

The wastewater system serves fewer customers than the water system. Based on account data provided by the Village, there are 179 customer connections to the wastewater system.

In April 2023, a storm event caused a major sewer main break, and dramatically higher flows were received at the WWTP (Chart 1). In May 2022, water was received at the WWTP from firefighting activities associated with the Cerro Pelado fire.

Based on the data shown in Chart 1, the average daily flow based on monthly totals was 23,719 gpd for 2021, 24,872 gpd for 2022, and 19,737 gpd for the first 7 months of 2023. The average for all three years is 22,775 gpd, which represents 127 gpd per customer connection. For an average household size of 2 persons per connection, the per capita wastewater usage is 64 gallons per capita per day (gpcd). Daily flow, including maximum daily flow, is discussed later in this PER.



	JAN	FEB	MAR	APR	MAY	JUN	JUL	AUG	SEP	OCT	NOV	DEC
2021	603,163	697,047	640,348	875,040	708,693	617,235	658,138	769,079	875,033	754,040	517,153	680,114
2022	623,658	600,982	613,847	691,139	1,063,1	742,160	781,142	782,933	964,390	895,704	287,740	
2023	443,898	562,878	620,468	1,170,0	492,587	608,028	602,152	-	-	-	-	-

Chart 1

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JEMEZ SPRINGS PER

Monthly Wastewater Flows

Based on the latest 2022 data from the US census, the current population of Jemez Springs is 197. The peak population of Jemez Springs was in 2000, when its population was 372. The year-round population is small and declining; however, the seasonal population is growing, as short-term rentals are increasingly popular in the area. The wastewater flows for the past three years are consistent with the population trends, showing a gradual decline in total flows. Chart 1 shows monthly flows at the wastewater treatment plant with a trendline for 2022.

1d Community Engagement

The draft PER and EID were made available for public comment. The PER was presented at a Village Council meeting held on November 15, 2023. The EID public meeting and presentation was held on December 20, 2023.

Community engagement was positive regarding the recommended project, and there was overall support for rehabilitation of the wastewater system. The community agreed that maintenance of the wastewater system has been neglected and that improvements are necessary. The concerns were the cost of the project and current lack of funding. The Village will seek funding for improvements, but will not be able to afford them without assistance. Additional concerns expressed by the Village Council include the limited access to the wastewater collection system and access for construction. Access will need to be established for construction and for ongoing operation and maintenance (O&M). Portions of the collection system may be able to be relocated depending on the topography and location of existing buildings and residences.

Comments received from contacted agencies on the EID and public comments received during the presentation and 30-day comment period are provided in the EID (Appendix A).

As wastewater projects are developed under the recommended alternative described in this PER, the Village will provide opportunity for public comment on a project-by-project basis.

2. Existing Facilities

2a Location Map

Figure 2 shows the existing wastewater system, including sanitary sewer manholes, and the location of the WWTP.

2b History

The Village is served by a gravity sewer collection system that conveys wastewater to the south end of the system to the WWTP. The collection system is thought to date back to the 1960s. The sewer mains consist of 6-inch and 8-inch polyvinyl chloride (PVC) pipe.

The Jemez Springs WWTP consists of a sequencing batch reactor (SBR) that was put into service in 2004. Treated wastewater is discharged to the Jemez River. Raw wastewater flows by gravity through the collection system to the wet well at the head of the treatment plant.

The SBR consists of five chambers. The first and the fifth chambers are used as equalization basins or pre-activation basins to control the inflow to the aeration basins. Wastewater flows from the pre-activation basins to the aeration basins. Once the raw sewage enters the aeration basins, treatment is achieved by cycling though an aerobic phase, a settling phase, and a decant phase. Ferric chloride dosing is provided for additional phosphorus removal and odor control.

Typical wastewater flow through the plant is 0.027 million gallons per day (mgd). According to the original design data from Sanitairre (Appendix B), the plant was designed for an average dry weather flow of 75,000 gpd, a peak dry weather flow of 150,000 gpd, and a peak wet weather flow of 225,000 gpd.

The wastewater discharge to the Jemez River is regulated under National Pollutant Discharge Permit Elimination System (NPDES) permit number NM0028011. The discharge permit is included in Appendix B.

2c Condition of Existing Facilities

The majority of the existing sewer lines and manholes are old and aging, known to have been installed in the 1960s with expansions and repairs made periodically over the past 50 years. The 8-inch sewer interceptor runs approximately parallel to the Jemez River, flowing south like the river, in order to take advantage of the natural topography for gravity sewer service.

Some houses were constructed after the sewer interceptor was installed, so in some areas the sewer line runs underneath buildings. There have been major breaks in the sewer mains over the years. Overall, the system is subject to infiltration and inflow impacted by the Jemez River and its proximity to the sewer system, and by increased flow due to seasonal climate variation such as runoff from spring thaws.

The existing WWTP was installed in 2004 and an improvements project was completed in 2010. In spring 2023, storms caused flooding of the Jemez River, which resulted in a sewer line break of the major interceptor just upstream of the WWTP. This event caused extremely high flows (in the range of 300,000 gpd) to enter the WWTP, and the Village had to haul wastewater in trucks to a neighboring facility for a period of two weeks.

The results of that flooding were debris in all of the sewer lines, which remains to be cleaned out. The WWTP basins were cleaned of accumulated sediment and aggregate, and have been restored to good working order.

Sanitary sewer manhole inspections were conducted by DBS&A in July and August 2023. Approximately 90 of 135 manholes were located and inspected; those not inspected were due site access issues, or due to covers being paved over or buried. Some of the manholes were found to have root intrusion or were broken in some way and in need of repair. The sewer interceptor appeared to have a steady clear flow throughout all times of three separate days, which indicates that there is infiltration and inflow. Infiltration refers to groundwater that enters the sewer system through holes, cracks, joint failures, and faulty connections. Inflow is water that flows directly into the sewer system from a source that could include storm drain cross-connections or, in the case of Jemez Springs, river water that could enter through manhole covers.

Daily precipitation data and daily effluent data from July 2021 were compared to evaluate potential infiltration in the Village's sanitary sewer collection system. The precipitation data were obtained from the National Weather Service. The closest weather station is the Wolf Canyon station, approximately 15 miles northwest of Jemez Springs. There are similar patterns, specifically between July 21 and 26, 2021. The delay may be due to the location of the weather station and the length of the collection system. The collection system spans over approximately 4 miles, which would take time to infiltrate and travel to the WWTP. The data suggest that precipitation is infiltrating the collection system, and support the variation in flows experienced at the WWTP (NWS, 2023).

Chart 2 compares precipitation to wastewater flows for the month of July 2021, which was a particularly high-precipitation month for the area. This chart shows a correlation between rainfall and higher flows at the WWTP.

During the manhole inspections conducted by DBS&A, it was observed that there was a clear steady flow at all times of the day along the main sewer interceptor on three different days. This

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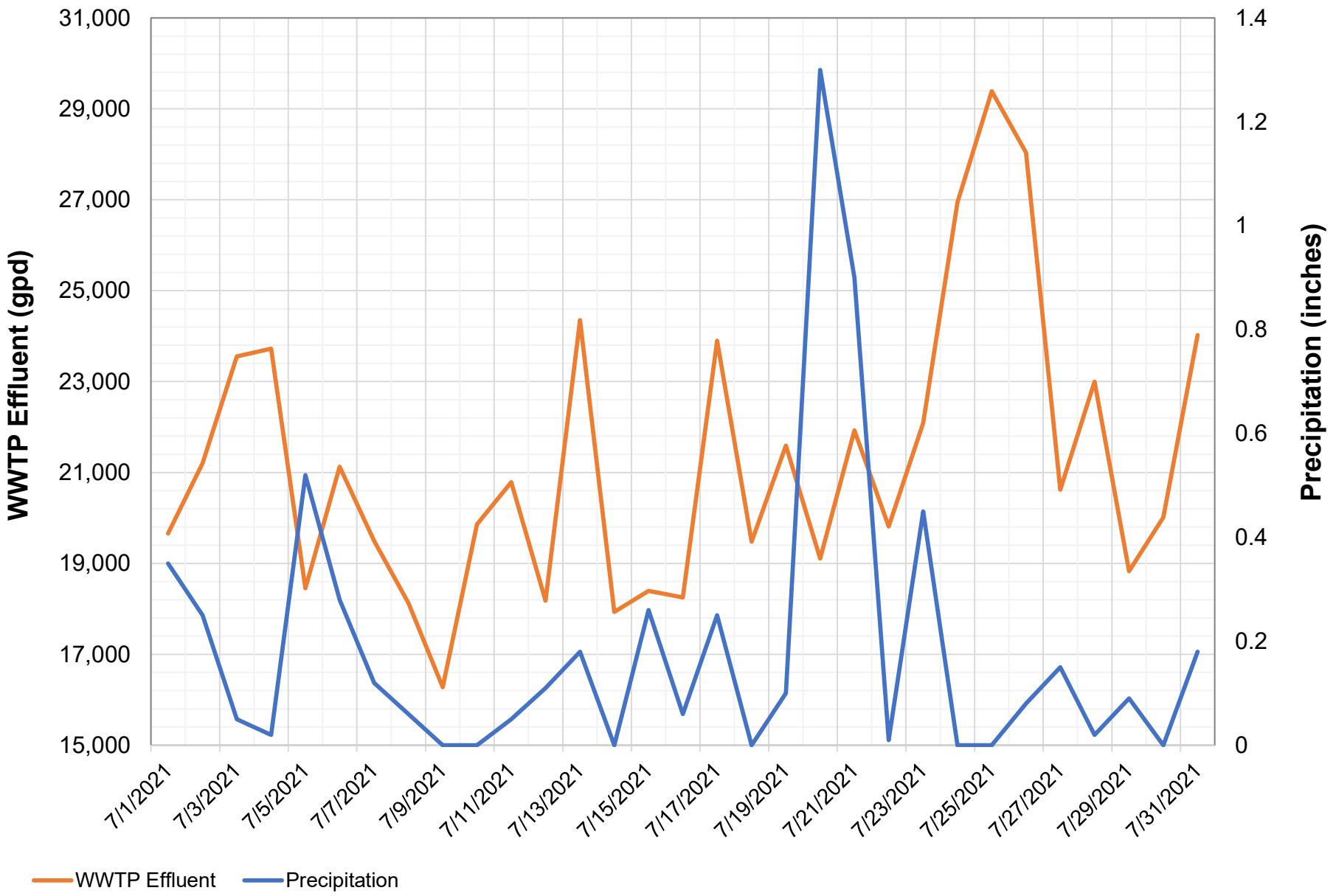

Chart 2

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JEMEZ SPRINGS PER

Precipitation and WWTP Effluent Flows, July 2021

observation suggests that infiltration is occurring in the collection system from the Jemez River, as there had been no precipitation during this time. The flood that occurred in April 2023 caused damage to the WWTP and sanitary sewer collection system. U.S. Geological Survey (USGS) stream gauge data were obtained for the month of April 2023, and were compared to daily WWTP effluent recorded flows. Chart 3 shows this comparison and the correlation between higher stream flows and higher WWTP flows (USGS, 2023).

Results of the manhole inspections show that most of the manholes and sanitary sewer mains need rehabilitation. Manhole inspection reports are provided in Appendix C.

The Village provided a plan set dated 2004 by Wilson and Company entitled "Construction Plans for Sewer Rehabilitation." This plan set included a tabulation of needed repairs to both manholes and sewer lines. It does not appear that this project was ever constructed. The rehabilitation plan set is provided in Appendix C.

For a number of reasons, the WWTP is not able to consistently produce effluent to quality standards outlined in the NPDES permit. This is impacted by changes to the NPDES permit, which have resulted in more stringent limits for certain parameters, and by variability of wastewater flow volumes and wastewater strength due to infiltration and inflow.

Wastewater quality data were provided by the Village for both influent and effluent. DBS&A also sampled the influent, effluent, and the aeration basin at three separate locations to understand the wastewater quality. Water quality results are provided in Appendix D.

In general, both the collection system and WWTP are aged and in need of renewal.

2d Wastewater Flows

The wastewater flow and strength entering the WWTP fluctuate due to the infiltration and inflow that are occurring in the collection system. According to the WWTP, the wastewater flows vary depending on the weather, including rainfall and spring runoff.

Both the influent and the effluent flows are metered, but the influent meter was not working until April 2023. The Village provided daily effluent meter readings for 2021, 2022, and January through July 2023, and provided daily influent meter readings for April through July 2023. Due to the lack of influent meter readings, the effluent data will be used for the wastewater flows. According to the meter readings for the last three years, the average daily flow (ADF) was

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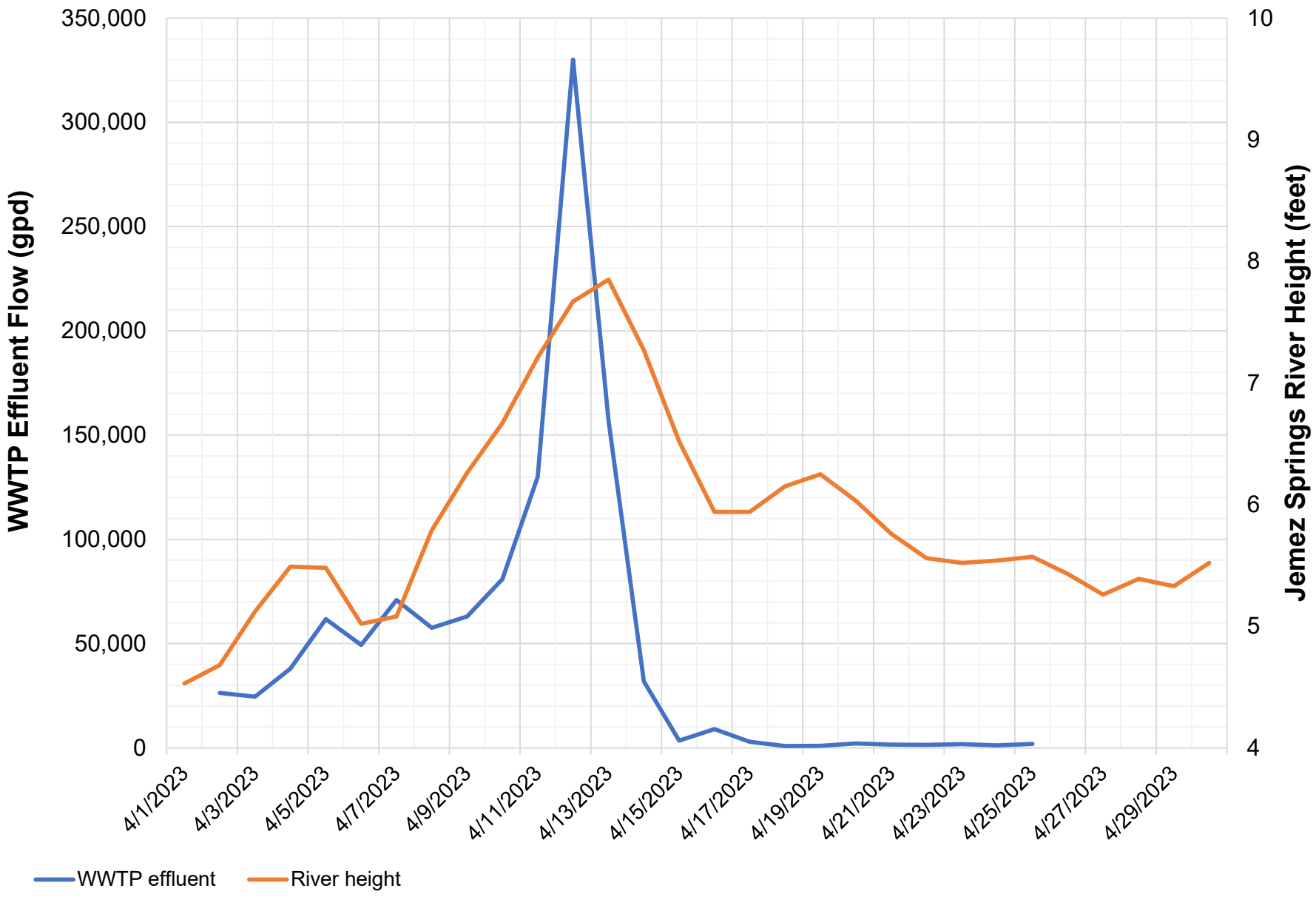

Chart 3

JEMEZ SPRINGS PER

Jemez River Flow and Jemez Springs WWTP Flow, April 2023

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22,775 gpd and the maximum daily flow (MDF) was 60,735 gpd. The wastewater usage is summarized in Table 1.

Table 1. Influent and Effluent Flow Data

Year	Influent Flow (gpd)		Effluent Flow (gpd)	
	ADF	MDF	ADF	MDF
2021	—	—	23,718	60,735
2022	—	—	24,872	54,590
2023	37,561	53,324	19,737	34,397
Total	37,561	53,324	22,775	60,735

gpd = Gallons per day
ADF = Average daily flow
MDF = Maximum daily flow

There are currently 136 residential sewer accounts and 43 commercial sewer accounts (total of 179 accounts). Based on the flow data received for 2021, 2022 and a portion of 2023 (22,775 gpd), the average use per account is 127 gpd.

Influent and effluent flow data provided by the Village are included in Appendix E.

2e Financial Status of any Existing Facilities

The Village's financial statements for the past three years are provided in Appendix F. For fiscal years 2021, 2022, and 2023, the net total income was $110,073.03, $(100,136.60), and $(39,645.09), respectively. The Village's financials are summarized in Table 2.

Table 2. Village of Jemez Springs Wastewater Budget Actuals

	FY 2021	FY 2022	FY 2023
Total Income	$195,296.23	$132,464.83	$168,418.27
Total Expenses	$85,222.93	$232,601.43	$208,063.36
Net Income	$110,073.30	$(100,136.60)	$(39,645.09)

The wastewater rates were increased in August 2023 and are summarized in Table 3. The notice to increase sewer rates is provided in Appendix F.

Table 3. New Sewer Rates as of August 2023

Rate Description	Base Rate	Additional per 1,000 gallons
Base Rate Residential (in Village)	$50.00	$8.25
Base Rate Residential (out of Village)	$52.00	$8.25
Base Rate Commercial (in Village)	$100.00	$9.75
Base Rate Commercial (out of Village)	$105.00	$9.75

DBS&A compared the Jemez Springs sewer rates to similarly sized systems in similar geographic areas that are listed in the NMED 2022 Drinking Water Bureau survey of water and wastewater rates. Based on that survey, the average base rate for residential wastewater service for public systems with between 50 and 200 connections is $25.03, and the maximum of 7 respondents in this category was $38.90. Based on this information, sewer rates for Jemez Springs are 28 percent higher than the average for similar communities.

The Village has increased their rates each of the last two years, and has a plan in place to gradually continue increasing rates to start a reserve fund and have net positive revenue.

A rate study analysis was completed to include the Recommended Project over the 20-year planning period, as discussed in Section 6f.

2f Water/Energy/Waste Audits

The water system is operated by Jemez Springs DWUA, whereas the wastewater system is owned and operated by the Village. Based on the 2022 NMED rate survey, to which Jemez Springs DWUA responded, no water audit was completed in 2022.

For this project, electric utility bills were collected and compared to calculated theoretical electrical consumption at the WWTP, including pumps, site lighting, and ultraviolet (UV) disinfection.

From the bills received, the WWTP uses roughly 7,000 kilowatt-hours (kWh) per month, or 233 kWh per day. From the original design by Sanitairre, the WWTP under the original design conditions was expected to use 166.8 kWh per day. This did not include the UV disinfection. From published sources, electrical usage associated with wastewater disinfection is in the range of 100 to 250 kWh per million gallons of treated water, which would add 2.2 to 5.5 kWh per day.

Based on this information, there appear to be inefficiencies in the electric usage at the WWTP that could be improved by installing new, more efficient equipment.

3. Need for Projects

The Jemez Springs wastewater system needs improvements to ensure reliable wastewater service to customers.

The sanitary sewer system is subject to infiltration and inflow, and both sewer pipes and manholes are aged and in need of renewal. The location of the Village, the main sewer interceptor, and the WWTP along the Jemez River makes the need for a well-functioning system more critical, as sanitary sewer overflows or plant upsets can result in contamination of the river with impacts to wildlife and human health.

The WWTP operates under a federal NPDES permit and has a history of violations. The NPDES permit limits have become increasingly more stringent over the years, and the current plant was not designed for the current limits.

3a Health, Sanitation, and Security

Wastewater collection and treatment are essential to health, sanitation, and security. The Village has had recent failures in the collection system due to flooding brought on by storms. Due to the location of the main sewer interceptor along the Jemez River, pipe failure results in discharge of raw sewage to the river, negatively impacting human and wildlife. In addition, the WWTP has not consistently produced effluent meeting the NPDES permit limits, resulting in violations and administrative orders (AOs) from the U.S. EPA.

The facility is under the jurisdiction of EPA Region 6. The following is a summary of EPA enforcement actions since 2018:

- *WWTP Inspection:* An unannounced inspection was conducted by EPA on October 18, 2017 to evaluate the compliance of the facility's laboratory and sampling with its NPDES operating permit. The inspection report noted the following areas of concern: (1) lack of written standard operating procedures (SOPs) and bench sheets do not properly reference the EPA or standard methods, (2) instruments are not regularly calibrated, (3) improper storage and handling of reagents (i.e., reagent not properly labeled, and expiration dates did not meet the general one year after opening).

- *Administrative Order, Docket Number CWA-06-2018-1804:* This AO was issued for violations cited in the above inspection report, and finds that the facility acted as a "point source" of pollutants to the Jemez River. The AO ordered the respondent to provide written certification to EPA Region 6 that violations cited had been corrected within 30 days of the effective date of the order, or to submit a report within 30 days citing specific actions to be taken to address the violation and description of work needed to achieve compliance.
- *Administrative Order, Docket Number CWA-06-2018-1826:* This AO, with effective date of September 27, 2018, was issued for violations including (1) failure to meet permit effluent limitations, (2) failure to meet monitoring, reporting, and record keeping requirements, (3) failure to maintain an appropriate flow measuring device, and (4) failure to properly operate and maintain all facilities and systems of treatment and control. The AO included a compliance deadline of 30 days within receipt of the AO.
- *Notice of Potential Violation and Opportunity to Confer (06-2002-11703):* This notice, dated May 31, 2022, advised the Village that they "may have committed violations of Section 301 of the Clean Water Act" and that EPA extended an opportunity to advise EPA via conference call of any further information they should consider. This letter was issued in response to e-mail notification that EPA received of a WWTP bypass into the Jemez River that occurred from May 2 to 5, 2022. The Village reportedly received gray water from firefighting camps in the nearby Cerro Pelado forest fires at the abandoned tertiary sand filters that had not been adequately isolated to prevent discharge to the Jemez River.
- *Administrative Order, Docket Number CWA-06-2023-1728:* This AO was issued for violations identified during review of the permit file and discharge monitoring reports submitted to EPA. This docket was filed to replace the previous AO, Docket Number CWA-06-2022-1812, which included the same violations. The violations alleged are for failure to meet permit effluent limits. The effective date of the AO is February 9, 2023, replacing the original AO that had an effective date of August 11, 2022. The Village is directed to provide written certification to EPA within 30 days of the effective date of the order that the violations have been corrected, or to submit a comprehensive written plan for elimination of the cited violations. Violations attached to the AO are for nitrogen, phosphorus, arsenic, and boron.

3b Aging Infrastructure

The Village wastewater operations staff have identified the following needs:

- Office Building

- The laboratory should be separate from the office, with shower for emergency cleaning if required. The laboratory is used for process control of the WWTP.
- The office should be separate with its own restroom facility, heating, an area to spread out maps, and two work stations. There is currently barely room for a single person.
- The existing laboratory/office building is not insulated.
- The toilet was flowing into the ground under the office for two decades. The issue was a pipe offset and any flushed water collected under the building, which created a void.
- It is unclear if the structural integrity of the building is sound. Cracks in the floor may be caused by simple settling or other issues.

- Influent Lift Station
  - The cleaning basket is problematic and an Occupational Safety and Health Administration (OSHA) violation to have a single person clean.
  - Need better design for cleaning influent debris.
  - Having a completely removable basket would be more effective.
  - A removable insert is being fabricated by Scott's Sheetmetal as a temporary fix.
- Ferric Building
  - Outlets and influent flow meter are exposed to chemicals.
  - The structural integrity of the building is thought to be compromised due to leaks during winter 2022 (water line froze and emergency eye wash station was damaged and never replaced) and lack of regular building maintenance.
  - The "frost-free" faucet froze again on February 11, 2023.
  - The garage door and chain rusted.
  - Eye protection is required when opening/closing door due to rust debris from the chain.
  - Power glitches cause the system to fault.
  - Manual reset is the only way to get pumps back online.
  - Unsure if ferric plumbing is intact.
  - Basin 1 has been offline for over five years. They currently cannot test flow due to missing parts at ferric distribution point at basin.

- Current O&M manuals are missing vital pages.
- Multiple spills may have corroded drain lines that drain under the building.
- The emergency eye wash station needs to be replaced due to freezing in February 2022.
- Ventilation within ferric building needs to be improved.
- The building has a single turbine that is not very effective. When doors are initially opened, fumes within the building are strong.
- Relocate influent flow meter to a less corrosive environment and replace with new meter.
- Currently cannot pull any data from the USB port due to corrosion. It is pointless to replace the USB port if the meter does not get relocated.

- UV Disinfection System
  - The entire system needs inspection.
  - Is there a smaller, alternate UV system that is as effective?
  - The system does not keep count of hours for UV lamps. May be simple reset correction with password.
  - Message on computer reads that "lamps have reached life expectancy" after all lamps have been changed.
  - UV panel overheats intermittently and shuts down UV lights.
  - Drain valve has leakage issue; temporary fix is neoprene rubber in place as gasket. The top section of valve was replaced due to broken pieces, and the bottom portion of the original valve could not be removed because it was cemented into the bottom of the UV channel. It is unknown how long it has been this way.
  - Problematic; requires two people to open the valve: one to turn the valve and the other to hold onto the neoprene so it does not get sucked into the pipe.
  - Power phase losses cause UV to shut down.
- Power
  - Power into plant is problematic.
  - Severe rain/snow storms cause power glitches throughout the Jemez Valley.

- Occasionally power to the UV cabinet needs to be manually power cycled to bring the lights back on.
- Internet/security cameras lose power due to circuit breaker tripping.
- Correction is to reset circuit breaker #10 inside the breaker box.
- Intermittent shut downs of Basin 2 mixer and blowers in blower room.
- Correction is reset of breakers in computer room on large breaker panel on north wall of computer room.
- Generator checks are manual and currently the only option. The required part for the generator to allow automated tests is not installed; will be included in the next preventive maintenance (PM).

- Blowers
  - Two SBR blower motors and one digester blower motor underwent PM in 2022. Digester blower motor #2 is brand new and was installed April 2022.
  - Need to replace valves on both digester blowers due to failed valves.
  - Currently need to close air valve to blower not in use so air does not get pushed into inoperative blower and functioning blower does not overheat and shut down.
  - Digester blowers are currently programmed to run the entire decant cycle of 288 minutes, so they run until they are manually turned off.
  - Basin 1 has been down for over 5 years
  - Decant actuator arm was one of the issues. It has been corrected and tested good.
  - Currently have enough aeration membranes to replace all membranes in basin.
  - Ferric system dispersal into basin is a hindering factor for bringing Basin 1 online. Currently missing dispensing component.
  - Reached out to engineering company for schematics. Drawings that list the correct component are missing from both O&M manuals.
- Sludge drying beds
  - Not used.
  - There are three valves for the drying beds on the east side of the beds; all three should be closed.

- Flow from beds runs to weir and into Jemez River. Pipe plug at manhole north of weir/south of drying beds is only way to prevent flow from drying beds to river if needed for emergency use. Currently have no pipe plug to fit pipe.
- Discovered when WWTP tried to help with gray water from Cerro Pelado fire camps. After violation observed, gray water trucks were directed elsewhere for their disposal.
- The gray water drained to the west and flowed from the northernmost bed into the river.
- Pipe plug that was in place failed and has not been replaced.

- Plant Programmable Logic Controller (PLC)
  - Upgrade pending proposal update from Yukon and Associates. Does not need to be included in PER.

3c Reasonable Growth

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

As mentioned in Section 2d, the average daily wastewater flows for 2021, 2022, and 2023 were 23,718 gpd, 24,872 gpd, and 19,737 gpd, respectively, for an average of 22,775 gpd over the last three years. Although the population is declining based on U.S. Census Bureau data, the Village would like to plan for modest growth, which may include increases in seasonal population associated with short-term rentals.

This document examined a 20-year planning period. For planning purposes, an increase in wastewater flows of 10 percent was used, representing an average daily flow of 25,053 gpd and a maximum daily flow of 66,809 gpd. The design capacity of the existing WWTP is 75,000 gpd, which is sufficient to handle to estimated growth in water use over the 20-year planning period.

4. Alternatives Considered

The following alternatives evaluate improvements to the wastewater collection system and the WWTP.

4a Alternative 1: No Action

4a.i Description

Under this alternative, no construction or improvements would take place. The WWTP would continue to see a fluctuation of flows due to storm events, which will continue to impact the plant's efficiency and ability to treat wastewater within the limits of their NPDES permit. The sanitary sewer collection system would continue to have frequent breaks and infiltration, and the WWTP would continue to deteriorate. The Village would continue to incur violations for permit exceedance, especially because the plant was not designed for the current permit limits.

The Village will be negatively impacted financially, and negative impacts to the environment would continue to occur.

4a.ii Design Criteria

This alternative would not include design, and EPA standards for treatment would not be met.

4a.iii Map

The maps of the existing collection system and WWTP are included as Figures 2 and 3, respectively.

4a.iv Environmental Impacts

The collection system has frequent breaks and experiences infiltration, inflow, and root intrusion into sewer lines and manholes, which exposes the environment to wastewater. The WWTP will have negative impacts on the environment if the effluent quality does not meet the discharge permit limits.

4a.v Land Requirements

No land requirements are needed under this alternative.

4a.vi Potential Construction Problems

No construction will take place as part of this alternative.

4a.vii Sustainability Considerations

Water and Energy Efficiency

The WWTP will continue to operate inefficiently without any energy efficient upgrades.

Green Infrastructure

Not applicable.

Other

Not applicable.

4a.viii Cost Estimates

There is no construction cost for this alternative. The annual O&M cost under this alternative is approximately $730,000, which includes the annualized infrastructure replacement cost for the entire wastewater system. A summary of the annual O&M expenses for the wastewater system is included in Appendix G.

4b Collection Alternative 2: Rehabilitate Critical Areas of the Sanitary Sewer Collection System

4b.i Description

Under Collection Alternative 2, rehabilitation is recommended for the critical areas of the sewer collection system, including sanitary sewer lines and manholes. These critical areas were identified by Wilson & Company in 2004 from closed caption television (CCTV) footage, as well as recent manhole inspections completed by DBS&A in August 2023.

Due to the location of the sanitary sewer collection system, which provides limited access for construction vehicles and equipment, we recommend trenchless rehabilitation methods (Appendix H). Trenchless methods can provide a full structural rehabilitation and, if needed, can install a larger-size pipe than the existing pipe.

The 8-inch sewer interceptor running north-south along the Jemez River has limited access due overgrowth and vegetation, and its location in private properties and under buildings. According to the Village, other portions of the sewer system have been paved over by the New Mexico Department of Transportation (NMDOT) and the locations of those manholes were not found during the recent inspections. Undersized sewer mains (6-inch) were also observed. According to the Ten States Standards (GLUMRB, 2014), all sanitary sewer mains delivering

wastewater should be 8 inches in diameter. Upsizing any sewer mains smaller than 8 inches in diameter is recommended. This is particularly necessary for proper cleaning.

There are many different methods of trenchless pipeline rehabilitation, but the methods recommended under this alternative (which form the basis for estimating costs) are (1) spiral wound lining and (2) pipe bursting.

Spiral wound lining provides a fully structural rehabilitation using mechanically wound PVC. The Spiral wound process is 100 percent mechanical and can be installed in live flow.

Pipe bursting is a trenchless replacement method in which an existing pipe is broken and impacted into the surrounding soil and a new high-density polyethylene (HDPE) pipeline is pulled into the existing alignment. The pipe is burst using either a pneumatic hammer or static pull using rods and a hydraulic tool. The pipe bursting method can replace the pipe with the same size or larger size pipe. This method requires excavation, usually in the location of the existing manholes, to create an insertion pit for the pipe bursting equipment.

Another viable option that might be considered during design is cured-in-place pipe (CIPP). The CIPP method expands a resin-impregnated felt liner through the existing pipe. The liner is then cured with heat, creating a permanent bond, improving the structural integrity of the pipe, and sealing any leaks.

Trenchless methods cannot correct problems with the grade of the existing sewer line, such as sags in the line. In some instances, a spot repair might be needed prior to trenchless rehabilitation and, if several spot repairs are needed on the same pipe segment, conventional open-cut excavation might be more economical. However, we do not believe this to be the case for any of the Jemez Springs sewer based on the 2004 rehabilitation plans.

Manhole rehabilitation is specified as one of five repair methods, depending on the condition of each manhole. The types of repair that have been identified are as follows:

- Repair method A: Replace cover, frame, and seal, including internal/external waterproof seal.
- Repair method B: Make frame height adjustment and replace cover, frame, and seal, including internal/external waterproof seal.
- Repair method C: Clean and remove roots, and grout and seal leaks and cracks, including waterproof sealant.

- Repair method D: Reestablish flow channels, bench, pipe connections, and reseal, including waterproof sealant.
- Repair method E: Apply waterproof coating, including all interior surfaces of the manhole.

Depending on the condition of each manhole, any combination of these repair methods can be used.

The majority of sewer lines are located inside the floodplain, as identified by FEMA (Section 1b). The sewer interceptor and manholes need to be protected from leaks to prevent potential contamination of the Jemez River. Repair methods A and E, when combined, will waterproof existing manholes. These repair methods are recommended for all manholes located within the floodplain to prevent infiltration and inflow.

Sewer cleaning by flushing and vacuuming, as well as CCTV inspection, will be required prior to rehabilitation. The estimated costs presented in this report are based on contractor quotations, but prices may change when the project is bid. Combining the cleaning and inspection with the rehabilitation project may result in saving due to economies of scale; for this reason, DBS&A recommends this approach.

4b.ii Design Criteria

Design of this alternative will conform to the Ten States Standards and EPA guidelines, as follows:

- Manholes shall be installed at distances not to exceed 400 feet.
- Gravity sewer conveying raw wastewater shall not be less than 8 inches in diameter.
- Gravity sewer connections shall be watertight.
- No pipe shall exceed a deflection of 5 percent of the inside diameter.
- Drop pipes will be required for a sewer line entering a manhole at an elevation of 24 inches or more above the manhole invert.
- Manholes shall require leak protection when located inside the floodplain.

4b.iii Map

The sewer lines and manholes to be rehabilitated under this alternative are shown on Figure 4.

4b.iv Environmental Impacts

Rehabilitation of the sewer collection system is crucial for reducing leaks, reducing the probability of major breaks/failure, and eliminating infiltration and inflow to the sewer system. Sewer system failures result in negative impacts to the environment, including potential contamination of the Jemez River.

4b.v Land Requirements

The sanitary sewer system is located within existing easements, and rehabilitation will not require new easements. Permits will be required for work conducted within NMDOT right-of-way (ROW) along NM 4.

4b.vi Potential Construction Problems

Access is a concern with the placement of the existing sanitary sewer system. The majority of the system is located within private properties where access is limited. Local residents will need to be given 30-day notice prior to commencement of work on their property. Another potential concern is the close proximity to the Jemez River, where a high groundwater table may be encountered. Dewatering will be required if any excavation takes place where water is encountered. Geotechnical investigation will be required to understand the subsurface conditions and the height of the water table.

4b.vii Sustainability Considerations

Water and Energy Efficiency

Rehabilitating the sewer system will reduce or eliminate infiltration and inflow, reducing related high flows. All flow that drains by gravity to the WWTP is pumped at the influent lift station to the plant. Therefore, this alternative will reduce electrical pumping costs.

Green Infrastructure

Not applicable.

Other

Not applicable.

4b.viii Cost Estimates

The estimated capital cost for Collection Alternative 2 is approximately $7.1 million, including construction cost, non-construction cost, 25 percent contingency, and New Mexico gross receipts tax (NMGRT). The annual O&M cost is approximately $359,000, which includes the annualized infrastructure replacement cost of this alternative. The detailed engineer's opinion of probable cost (EOPC) and annual O&M expenses are provided in Appendix G.

4c Collection Alternative 3: Renewal of Entire Sanitary Sewer Collection System

4c.i Description

Under Collection Alternative 3, the entire sewer collection system would be renewed, including all pipe and manholes. Due to the location of the sanitary sewer system, which provides limited access for construction vehicles and equipment, rehabilitation methods described under Section 4b are the most viable methods for improving the sewer system.

Pipeline rehabilitation is recommended using trenchless pipeline replacement methods, which might include spiral wound lining and/or pipe bursting. Depending on access, location, and cost, a combination of the two methods could be used.

Manhole repair methods A through E, as described in Section 4b, will be combined to improve all existing manholes.

Additionally, all sanitary sewer mains that are smaller than 6 inches are considered undersized according to the Ten States Standards. During recent manhole inspections, 6-inch sewer mains were identified; upsizing to 8-inch pipe is recommended.

Sewer cleaning and CCTV inspection will be required prior to rehabilitation.

4c.ii Design Criteria

Design of this alternative will conform to the Ten States Standards and EPA guidelines, as follows:

- Manholes shall be installed at distances not to exceed 400 feet.
- Gravity sewer conveying raw wastewater shall not be less than 8 inches in diameter.
- Gravity sewer connections shall be watertight.

- No pipe shall exceed a deflection of 5 percent of the inside diameter.
- Drop pipes will be required for a sewer line entering a manhole at an elevation of 24 inches or more above the manhole invert.
- Manholes shall require leak protection when located inside the floodplain.

4c.iii Map

Improvements under this alternative are shown on Figure 5.

4c.iv Environmental Impacts

Rehabilitation of the sewer collection system is crucial for reducing negative impacts to the environment. Improvement to the entire sewer collection system will eliminate concerns of potential contamination to the Jemez River.

4c.v Land Requirements

The sanitary sewer system is located within existing easements, and rehabilitation will not require new easements. Permits will be required for work conducted within NMDOT ROW along NM 4.

4c.vi Potential Construction Problems

Access is a concern with the placement of the existing sanitary sewer system. Majority of the system is located within private properties where access is limited. Local residents will need to be given 30-day notice prior to any work that is completed on their property. Another potential concern is the close proximity to the Jemez River, where a low water table may be encountered. Dewatering will be required if any excavation takes place where water is encountered. Geotechnical investigation will be required to understand the subsurface conditions and the height of the water table.

4c.vii Sustainability Considerations

Water and Energy Efficiency

Rehabilitating the sewer system will reduce or eliminate infiltration and inflow, reducing related high flows. All flow that drains by gravity to the WWTP is pumped at the influent lift station to the plant. Therefore, this alternative will reduce electrical pumping costs.

Green Infrastructure

Not applicable.

Other

Not applicable.

4c.viii Cost Estimates

The estimated capital cost for Collection Alternative 3 is approximately $13.3 million, including construction cost, non-construction cost, 25 percent contingency, and NMGRT. The annual O&M cost is approximately $528,000, which includes the annualized infrastructure replacement cost of this alternative. The detailed EOPC and annual O&M expenses are provided in Appendix G.

4d WWTP Alternative 2: Renovate Critical Components of the Existing WWTP

4d.i Description

Under WWTP Alternative 2, the existing WWTP would be rehabilitated to increase the level of treatment to meet the current permit limits, including stringent limits for nitrogen and phosphorus. Also included in this alternative are solids handling and providing laboratory and office space for operations personnel.

The Village currently hauls liquid sludge off-site for disposal, which is the most expensive method of solids disposal. Providing solids handling on-site will allow disposal at a landfill rather than at a wastewater facility, and will allow potentially less frequent hauling of solids.

The components of this alternative are as follows:

- Influent screening and trash removal, including new concrete wet well, trash grinder, auger monster for trash removal, small enclosure to protect the lift station and components, and new force main piping between the lifts station and SBR
- New equipment in the existing SBR tanks
- Sludge handling improvements, including converting the sand filter pits into sludge drying beds, installing new sludge pump in the digester basin, site piping, and all appurtenances

- New buildings to include office space, laboratory, ferric chloride dosing equipment, and belt filter press
- New PLC and electrical improvements to reduce power outages, improve equipment operation, and reduce electricity consumption
- New UV system for disinfection

This alternative evaluated new sludge dewatering equipment consisting of a new belt filter press; however, the cost, operation, and maintenance were found to be excessive for the size of this treatment system, and would not be feasible with only one operator. The Village concurred that the belt filter press should be removed from this alternative.

4d.ii Design Criteria

The permit limits and monitoring requirements are summarized in Table 4. The NPDES Permit No. NM0028011 fact sheet and recent discharge monitoring report (DMR) results are provided in Appendix B.

Excerpts of the original design criteria provided by JCH and developed by Sanitaire (included in Appendix B) are provided below. From that information, the WWTP was designed to treat to a total nitrogen level of 10 milligrams per liter (mg/L) in the treated effluent, and no phosphorus treatment standard was considered. The WWTP was designed for a higher hydraulic load than it currently receives (75,000 gpd versus the actual average day demand of approximately 23,000 gpd).

- Influent Wastewater Characteristics
  - Average dry weather flow: 75,000 gpd
  - Peak dry weather flow: 150,000 gpd
  - Peak wet weather flow: 225,000 gpd
  - 5-day biochemical oxygen demand (BOD_5) (20°C): 250 mg/L
  - BOD_5 (20°C): 156 pounds per day (lb/d)
  - Total suspended solids (TSS): 250 mg/L
  - NH_3-N: 40 mg/L
  - Alkalinity: 154 mg/L

Table 4. Permit Limits

Effluent Characteristic Parameter	Discharge Limitation					
	pounds per day [a]			mg/L [a]		
	30-Day Average	7-Day Average	Daily Maximum	30-Day Average	7-Day Average	Daily Maximum
Flow	Report (mgd)	Report (mgd)	Report (mgd)	—	—	—
BOD_5	11.3	16.9	—	30	45	—
TSS	11.3	16.9	—	30	45	—
Percent removal [b], BOD_5	≥85%	—	—	—	—	—
Percent removal [b], TSS	≥85%	—	—	—	—	—
E. coli [c]	—	—	—	126	410	—
Nitrogen, total [d]	2.97	—	—	Report	—	4.75
Phosphorus, total	0.626	—	—	Report	—	1.0
Arsenic, dissolved	0.094	—	—	—	—	150 µg/L
Boron, dissolved	1.34	—	—	—	—	2.150 µg/L
Total residual chlorine	—	—	—	—	—	19 µg/L
Aluminum, total recoverable [e]	1.03	NA	NA	—	NA	1,650 µg/L

Note: Final effluent limit is 0.075 million gallons per day (mgd).

[a] Unless otherwise noted.

[b] Percent removal is calculated as follows:
[(average monthly influent concentration – average monthly effluent concentration)/average monthly influent concentration] x 100

[c] Bacteria reporting units must be either colony-forming units per 100 milliliters (cfu/100 mL) or most probable number (MPN).

[d] Total nitrogen is defined as the sum of nitrate + nitrite + total Kjeldahl nitrogen (TKN).

[e] Total recoverable aluminum shall be tested using EPA approved method as found in CFR136 Table IB for determination of total recoverable metals.

mg/L = Milligrams per liter
BOD_5 = Five-day biochemical oxygen demand
TSS = Total suspended solids
µg/L = Micrograms per liter

- Effluent Quality (Monthly Average)
  - BOD_5 (20°C): 10.0 mg/L
  - TSS: 10.0 mg/L
  - Total nitrogen: 10.0 mg/L

From influent testing conducted in June 2023, BOD was 255 mg/L and TSS was 900 mg/L. However, from influent testing conducted in July 2023, BOD was 109 mg/L and TSS was 140 mg/L. These data show that the wastewater strength is highly variable. The low BOD at times means that the bacteria that are responsible for the biological process to treat the wastewater are starved at times for a food source, and this will disrupt the treatment process.

A summary of reported values from DMRs submitted by the Village to EPA as required under the NPDES permit is included in Appendix B. These data show frequent exceedances for phosphorus, nitrogen, boron, and arsenic in the treated effluent. The boron and arsenic exceedances should be handled on the receiving end of the system, as their source is the natural groundwater; however, the nutrients, phosphorus and nitrogen, can be removed at the WWTP through biological treatment supplemented with chemical treatment.

4d.iii Map

A site plan of the proposed improvements is provided as Figure 6. A site plan of the proposed office and laboratory building is included as Figure 7.

4d.iv Environmental Impacts

Environmental impacts to this alternative would include ground disturbance limited to the footprint of the existing wastewater treatment plan. This will include excavation for a new headworks structure, including screening equipment, and earthwork associated with foundation preparation for new buildings.

4d.v Land Requirements

No land acquisition is required for WWTP Alternative 2. The WWTP property is owned by the Village and includes sufficient space for the proposed improvements.

4d.vi Potential Construction Problems

No construction problems are anticipated with this alternative. A geotechnical investigation should be conducted prior to design. The geotechnical investigation would include soil borings to identify excavation conditions and provide parameters necessary for structural design of project components, such as building foundations.

4d.vii Sustainability Considerations

Water and Energy Efficiency

The existing WWTP includes old mechanical components that are undoubtedly inefficient due to age. Replacement of pumps, mechanical equipment, and improvements to the electrical equipment will reduce energy consumption. New buildings and plumbing will also improve water and energy consumption.

Green Infrastructure

Not applicable.

Other

Improvements to sludge handling, including a belt filter press, will reduce O&M costs for pumping and hauling sludge off-site.

4d.viii Cost Estimates

The estimated capital cost for WWTP Alternative 2 is approximately $1.9 million, including construction cost, non-construction cost, 25 percent contingency, and NMGRT. The annual O&M cost is approximately $260,000, which includes the annualized infrastructure replacement cost of this alternative. The detailed EOPC and annual O&M expenses are provided in Appendix G.

4e WWTP Alternative 3: Replace the Existing WWTP with a New Plant

4e.i Description

Under WWTP Alternative 3, the entire WWTP would be replaced. This includes replacement of tanks, piping, electrical, mechanical equipment, ferric chloride building, and the office building. These improvements would improve the level of treatment and efficiency, add solids handling, provide laboratory and office space for operations personnel, and extend the life of the WWTP.

O&M would be significantly reduced, and would mitigate the Village's concerns regarding treated effluent quality, power outages, and equipment breakdown. The components of this alternative are as follows:

- Influent screening and trash removal, including new concrete wet well, trash grinder, auger monster for trash removal, and small enclosure to protect the lift station and components
- New lift station pumps, appurtenances, electrical, and controls
- New blowers, UV disinfection, and all appurtenances
- Replace SBRs in their entirety, including tanks, pumps, diffusers, etc.
- Sludge dewatering equipment consisting of a new belt filter press
- New buildings to include office space, laboratory, ferric chloride dosing equipment, and belt filter press
- New security fencing around the property
- New electrical in all buildings and replace electrical components and panels for all equipment

4e.ii Design Criteria

Improvements under this alternative will ensure that the Jemez Springs WWTP can produce effluent quality within the limits of NPDES Permit No. NM0028011. Permit limits are included in Appendix B.

4e.iii Map

A site plan of the proposed improvements is provided as Figure 8. A site plan of the proposed office and laboratory building is included as Figure 7.

4e.iv Environmental Impacts

Environmental impacts to this alternative would include ground disturbance limited to the footprint of the existing WWTP. This will include excavation for a new headworks structure including screening equipment and earthwork associated with foundation preparation for new buildings.

4e.v Land Requirements

No land acquisition is required for Alternative 3. The WWTP property is owned by the Village and includes sufficient space for the proposed improvements.

4e.vi Potential Construction Problems

No construction problems are anticipated with this alternative. A geotechnical investigation should be conducted prior to design. The geotechnical investigation would include soil borings to identify excavation conditions and provide parameters necessary for structural design of project components, such as building foundations.

4e.vii Sustainability Considerations

Water and Energy Efficiency

The existing WWTP includes old mechanical components that are undoubtedly inefficient due to age. Full replacement of the entire SBR system would improve the level of treatment, improve the ease of O&M, and reduce energy consumption. New buildings and plumbing will also improve water and energy consumption.

Green Infrastructure

Not applicable.

Other

The addition of sludge handling, including a belt filter press, will reduce O&M costs for pumping and disposing of sludge off-site.

4e.viii Cost Estimates

The estimated capital cost for WWTP Alternative 3 is approximately $4.2 million, including construction cost, non-construction cost, 25 percent contingency, and NMGRT. The annual O&M cost is approximately $318,000, which includes the annualized infrastructure replacement cost of this alternative. The detailed EOPC and annual O&M expenses are provided in Appendix G.

5. Selection of an Alternative

5a Life Cycle Cost Analysis

Detailed capital costs and O&M costs are included in Appendix G. The life cycle costs for each of the alternatives are summarized in Table 5.

Table 5. Life Cycle Cost Analysis of Alternatives

Alternative	Capital Cost	O&M Cost	Salvage Value	Net Present Value
Alternative 1: No Action	$0	$12,110,088	$0	$12,110,088
Collection Alternative 2: Rehabilitate Critical Areas of Sanitary Sewer System	$7,092,000	$5,955,509	$1,515,000	$11,532,509
Collection Alternative 3: Replace the Sanitary Sewer System	$13,295,000	$8,759,078	$2,940,000	$19,114,078
WWTP Alternative 2: Renovate Critical Components of the Existing WWTP	$1,889,000	$4,313,182	$309,000	$5,893,182
WWTP Alternative 3: Replace the Existing WWTP with a New Plant	$4,219,000	$5,275,354	$1,122,000	$8,372,354
Recommended Project: Rehabilitate Sewer Collection System and Renovate WWTP	$8,989,000	$7,050,394	$689,000	$15,350,394

Note: Assumed planning period is 20 years.
[a] See Appendix F for anticipated life of assets.
[b] Salvage value calculated based on anticipated life expectancy using straight-line depreciation to end of the planning period and converted to present-day dollars.
O&M = Operation and maintenance

This life cycle cost analysis was prepared in a modified equation from U.S. Department of Agriculture (USDA) Rural Utilities Service (RUS) Bulletin 1780-2, as follows:

$$NPV = C + USPW\ (O\&M) - SPPW\ (S)$$

where NPV = Net present value
C = Capital cost of alternative
USPW (O&M) = Present worth of the uniform series of annual O&M
SPPW (S) = Single payment present worth of the salvage value

The discount rate used is the "real" discount rate taken from Appendix C of Office of Management and Budget Circular A-94 (OMB, 2023), which indicates that the real interest rate for a 20-year bond maturity period is 2.5 percent.

5b Non-Monetary Factors

The options to this point in the analysis have been presented on an engineering, environmental, and financial basis. The approach to selecting the appropriate alternatives will also have to consider non-monetary factors tailored specifically to the needs of the Village. In addition to capital cost and O&M cost, the following factors will also be considered:

- *Owner Preference:* Input from the Village regarding their needs and preference on improvements
- *Sustainability:* Increase the system's resiliency and longevity while reducing environmental impact
- *Health and Security:* Health, safety, and welfare of the community and system's infrastructure
- *Constructability:* Complexity of the project, access to the site, permit or land requirements
- *O&M:* Reduce annual expenses, improve the ease of O&M, and meet long-term goals
- *Community Preference:* General input from the community and approval of proceeding with the work

5c Scoring of Alternatives

To determine the viability of each alternative, the criteria described above were developed based on engineering principles and input from the Village representatives. The criteria for evaluating the alternatives consist of performance measures to assess different aspects of the alternatives.

Each criterion was defined and weighted from 1 to 5 according to its importance relative to the project, with 5 being the most important criterion to the project. Criteria weights were determined using engineering judgement and Village input.

Each alternative evaluated was then ranked in priority according to the defined criteria, from 1 to 3, with 3 representing the highest priority. Because the collection system alternatives were evaluated independently from the WWTP alternatives, two decision matrices were prepared. Table 6 outlines the matrix for the collection system. Table 7 outlines the decision matrix for the WWTP.

Table 6. Collection System Alternative Decision Matrix

Criterion	Weight	No Action		Collection Alternative 2		Collection Alternative 3	
		Score	Wt Score	Score	Wt Score	Score	Wt Score
Capital cost	5	3	15	2	10	1	5
O&M cost	5	3	15	2	10	1	5
Owner preference	5	1	5	3	15	2	10
Sustainability	5	1	5	2	10	3	15
Health and security	5	1	5	2	10	3	15
Constructability	4	3	12	2	8	1	4
O&M	3	1	3	2	6	3	9
Total score			60		69		63

Wt Score = Weighted score

Table 7. WWTP Alternative Decision Matrix

Criterion	Weight	No Action		WWTP Alternative 2		WWTP Alternative 3	
		Score	Wt Score	Score	Wt Score	Score	Wt Score
Capital cost	5	3	15	2	10	1	5
O&M cost	5	3	15	2	10	1	5
Owner preference	5	1	5	3	15	2	10
Sustainability	5	1	5	2	10	3	15
Health and security	5	1	5	2	10	3	15
Constructability	4	3	12	2	8	1	4
O&M	3	1	3	2	6	3	9
Total Score			60		69		63

Wt Score = Weighted score

Based on matrices, the top-ranking projects are Collection Alternative 2 and WWTP Alternative 2. Together, these projects will (1) provide needed improvements to the wastewater collection system and (2) provide necessary improvements to the WWTP to reduce O&M costs and improve the level of treatment. Combining both alternatives will provide a more sustainable wastewater system for the Village, and will reduce the risk of critical failure.

6. Recommended Project

The recommended project will combine the two following alternatives:

- Collection Alternative 2: Rehabilitate critical areas of the sanitary sewer collection system
- WWTP Alternative 2: Renovate critical components of the existing WWTP

Additional concerns with the WWTP, as noted in Section 3b, should be addressed as part of the recommended project, which include the following:

- UV system improvements, including smaller banks or alternate method for replacement, new electrical panel, and a new drain valve with improved operation
- Inspection of blowers and replacement of valves
- Sludge drying beds, including full inspection and new drain isolation valves

6a Preliminary Project Design

The recommended project consists of improvements to critical components of the sanitary sewer collection system and the WWTP. Critical components with a high probability of failure have been identified by recent site visits, previous projects, and information provided by the Village. The quantities and improvements estimated for the Recommended Project will need to be verified by CCTV of the collection system. The recommended project (Figure 9) is separated into three phases and the work of each phase is described in the following subsections. Figures 10 and 11 provide process flow diagrams of the existing WWTP and the WWTP with recommended improvements, respectively.

All improvements to the collection system include non-destructive methods to mitigate excavation, where possible. To rehabilitate the sanitary sewer collection system, the Village must establish access to the collection system prior to construction.

6a.i Phase 1 (0 to 5 Years)

Phase 1 assumes that half of infrastructure recommended for rehabilitation will be completed. CCTV will first be completed to determine the infrastructure that is considered high risk and will be rehabilitated under this phase. The rest of the system improvements will be completed in Phase 3. Quantities provided in this report should not be used for construction, and shall be reevaluated during CCTV inspection.

- Cleaning and CCTV inspection of the sanitary sewer collection system
- Design of Phase 1 and Phase 2
- Rehabilitation of high-risk areas and critical components of the sanitary sewer collection system using trenchless methods, including spiral wound pipe lining and pipe bursting
- Rehabilitation of existing manholes that are in critical condition or risk exposure to the environment and Jemez River using the following repair methods:
  - Repair method A: Replace cover, frame, and seal, including internal/external waterproof seal.
  - Repair method B: Make frame height adjustment and replace cover, frame, and seal, including internal/external waterproof seal.
  - Repair method C: Clean and remove roots, and grout and seal leaks and cracks, including waterproof sealant.
  - Repair method D: Reestablish flow channels, bench, pipe connections, and reseal, including waterproof sealant.
- Waterproofing of all manholes located in the floodplain that are at risk to exposure
  - Repair method E: Apply waterproof coating, including all interior surfaces of the manhole.

6a.ii Phase 2 (5 to 10 Years)

- Design of Phase 3
- Influent screening and trash removal, including new concrete wet well, trash grinder, auger monster for trash removal, and small enclosure to protect the lift station and components
- New equipment in the existing SBR tanks
- Sludge handling improvements, including converting the sand filter pits into sludge drying beds, install new sludge pump in the digester basin, site piping, and all appurtenances
- New buildings to include office space, laboratory, ferric chloride dosing equipment, and belt filter press
- Electrical improvements to reduce power outages, improve equipment operation, and reduce electricity consumption

6a.iii Phase 3 (10 to 20 years)

- Rehabilitation of the collection system that have been determined to need rehabilitation by the CCTV inspection, including sanitary sewer lines and manholes
- Waterproofing of all remaining manholes located in the floodplain
  - Repair method E: Apply waterproof coating, including all interior surfaces of the manhole
- Replacement of undersized sewer mains with 8-inch PVC

6b Project Schedule

The project schedule for Phase 1 of the Recommended Project is outlined in Table 8. The schedule is dependent on funding, and the start and end dates are subject to change.

Table 8. Phase 1 Project Schedule

Task	Date
Final PER	January 2024
Apply for funding of the Recommended Project, Phase 1	March 2024
Receive funding	September 2024
Start design	October 2024
Complete design	July 2025
Bid project and award project	September 2025
Start construction	October 2025
Finish construction	May 2026

The schedule for Phases 2 and 3 will be dependent on funding.

6c Permit Requirements

The Village needs to address the access issues to the sanitary sewer collection system. A large portion of manholes and sewer mains are currently located on private properties within fenced yards. The utility should be able to access all portions of the sewer system for maintenance and replacement. It is recommended that the Village establish clear points of entry to all portions of the collection system.

The WWTP is located on property owned by the Village, and no additional permits or land are needed for improvements.

6d Sustainability Considerations

6d.i Water and Energy Efficiency

The existing WWTP includes old mechanical components that are undoubtedly inefficient due to age. Replacement of pumps, mechanical equipment, and improvements to the electrical equipment will reduce energy consumption. New buildings and plumbing will also improve water and energy consumption.

Rehabilitation of the sanitary sewer system will reduce or eliminate infiltration and inflow, leading to lower flows at the WWTP, and therefore conservation of clean water and reduction of costs associated with treating wastewater.

6d.ii Green Infrastructure

Not applicable.

6d.iii Other

Improvements to sludge handling, including a belt filter press, will reduce O&M costs for pumping and hauling sludge off-site.

6e Total Project Cost Estimate (Engineer's Opinion of Probable Cost)

The estimated capital cost for the Recommended Project is approximately $9.0 million, including construction cost, non-construction cost, 25 percent contingency, and NMGRT. The annual O&M cost is approximately $425,000, which includes the annualized infrastructure replacement cost for the Recommended Project. The Village plans to apply for funding of the recommended project; therefore, the cost has been broken out into three phases as shown in Table 9. The detailed EOPC and annual O&M expenses are provided in Appendix G.

Table 9. Recommended Project Costs by Phase

Phase	Construction	Contingency (25%)	NMGRT (7.1875%)	Non-Construction	NMGRT (7.6250%)	Total Capital Cost
1	$2,215,365	$553,841	$199,037	$656,201	$50,035	$3,675,000
2	$1,209,395	$302,349	$108,657	$287,726	$21,939	$1,931,000
3	$2,305,765	$576,441	$207,159	$273,810	$20,878	$3,385,000
Total	$5,730,525	$1,432,631	$514,852	$1,217,737	$92,852	$8,991,000

6f Annual Operating Budget

The operating budget for the Jemez Springs WWTP is included in Appendix F for fiscal years 2021 through 2023.

6f.i Income

The Jemez Springs wastewater income has fluctuated over the past three fiscal years due to miscellaneous income. It is unknown where this profit is coming from, and it should not be considered a reliable source of income.

Prior to 2022, the Village had not increased their sewer rates since 2011. The Village increased sewer rates in August 2022, which should have increased wastewater revenues; however, billing income went from $122,766 in FY 2022 to $115,245. The Village again increased rates in August 2023, and has a plan to continue gradually increasing rates. This suggests that there is inconsistency in the residential and commercial meters that are used for billing.

A water audit of the drinking water system, with meter accuracy testing of both production and a sample of customer meters, is recommended to verify the accuracy of customer meters, which are used for both water and wastewater billing. The Village just increased their sewer rates again in August 2023 (FY 2024); they expect to see an increase in wastewater billing income pending inspection of the meters.

6f.ii Annual O&M Costs

The O&M cost for the WWTP has fluctuated over the past three fiscal years, mainly due to equipment purchase, pumping costs, and professional service fees. Based on the estimated annual O&M expenses for the recommended project, these additional expenditures will be reduced. Included in the estimated O&M cost is the annualized infrastructure replacement cost,

which should be accounted for as savings in the Village's wastewater system budget for future repairs.

6f.iii Debt Repayments

The Village has one loan with a balance of approximately $90,000. Payments of $7,500 are made once a year, which will pay off the loan in 12 years.

6f.iv Reserves

The Village does not currently have any reserve accounts, but will start to save annually as funds allow.

6f.v Rate Analysis

We understand that the Village will seek funding for the recommended project and will implement the project in phases. Using the NMED Drinking Water Bureau (DWB) Financial Calculator, DBS&A evaluated the current budget with the added expense of funding the Recommended Project in three phases over a 20-year planning period.

Financing the Recommended Project may consist of grants, loans, or a combination of both. For example, the Water Trust Board (WTB) structures their financing with either a 100 percent grant or combinations of a grant and loan. We assumed two conservative scenarios for potential financing: (1) 40-year loan with a 2.5 percent interest rate and (2) 20-year loan with a 0.25 percent interest rate (WTB 40 percent loan, 60 percent grant). The results of these two scenarios are summarized in Tables 10 and 11. NMED DWB Financial Calculator results are provided in Appendix F.

Table 10. Loan Scenario 1

Project	Interest Rate	Loan Amount	Term (years)	Annual Cost	Monthly Cost	Monthly Cost per Connection
Total Recommended Project	2.500%	$8,991,000	40	$355,804.32	$29,650.36	$165.64
Phase 1 Project	2.500%	$3,675,000	40	$145,432.20	$12,119.35	$67.71
Phase 2 Project	2.500%	$1,931,000	40	$76,416.21	$6,368.02	$35.58
Phase 3 Project	2.500%	$3,385,000	40	$133,955.92	$11,162.99	$62.36

Note: Loan Scenario 1 is 100% loan; 40-year loan with a 2.5 percent interest rate.

Table 11. Loan Scenario 2

Project	Interest Rate	Loan Amount	Term (years)	Annual Cost	Monthly Cost	Monthly Cost per Connection
Total Recommended Project	0.250%	$3,596,400	20	$184,371.69	$15,364.31	$85.83
Phase 1 Project	0.250%	$1,470,000	20	$75,360.47	$6,280.04	$35.08
Phase 2 Project	0.250%	$772,400	20	$39,597.57	$3,299.80	$18.43
Phase 3 Project	0.250%	$1,354,000	20	$69,413.65	$5,784.47	$32.32

Note: Loan Scenario 2 consists of 40% loan and 60% grant; 20-year loan with a 0.25 percent interest rate.

Based on the wastewater system budget actuals, the expenses have exceeded income over the last three years. Thus, the rate analysis shows a higher up-front increase in water system rates needed to see a net positive income. The analysis also includes the system's current expenditures, revenue, existing rates, and inflation to evaluate the ability of the Village to finance each phase of the Recommended Project through a loan.

The results indicate that a total rate increase of up to 422 percent over the 20-year planning period would be required to finance the proposed improvements under Scenario 1. Under Scenario 2, rate increases of up to 270 percent would be required over the 20-year planning period. This level of rate increase is not considered viable for a community such as Jemez Springs, with an MHI in 2020 of $88,125 (Data USA, 2024). Table 12 shows the new rates in 2044 under each funding scenario.

Table 12. Theoretical Monthly Wastewater Rates for 2044

	Loan Scenario 1	Loan Scenario 2
Residential	$813.57	$532.23
Commercial	$1,326.24	$867.62

Notes: 1. Loan Scenario 1 includes a 40-year loan with a 0.25% interest rate.
2. Loan Scenario 2 includes a 20-year loan with a 60% grant, 40% loan.

Our analysis assumed two of the more common funding sources; however, there are more funding opportunities, as follows:

- WTB
  - Public Project Revolving Fund (New Mexico Finance Authority [NMFA])

- Rural Infrastructure Program
- Water Project Fund (NMFA)
- Local Government Planning Fund (LGPF)

- Drinking Water State Revolving Fund (DWSRF)
- USDA
- American Rescue Plan Act (ARPA)
- Federal Flood Mitigation Assistance (Federal Emergency Management Agency [FEMA]) grant program
  - https://www.fema.gov/grants/mitigation/flood-mitigation-assistance
  - https://www.fema.gov/grants/mitigation/storm-rlf
  - https://www.fema.gov/grants/mitigation/pre-disaster
  - https://www.fema.gov/grants/mitigation/building-resilient-infrastructure-communities

7. Conclusions and Recommendations

This PER examines alternatives for improvements to the Village of Jemez Springs sanitary sewer collection system and WWTP over a 20-year planning period. The Village has an old and aging wastewater system and has experienced recent sewer line breaks and equipment failures, which has resulted in net negative annual income over the past two fiscal years. The WWTP has also struggled with treating wastewater to the quality required by the NPDES permit, resulting in permit limit exceedances and administrative orders from EPA.

This PER recommends rehabilitation of the critical areas of the sanitary sewer collection system that will need to be identified by contracting sewer cleaning and CCTV inspection. Cleaning and inspection of the collection system will identify the areas that are failing or have a high probability to fail. The Village also needs to address access issues to the sewer system to allow for maintenance. The current access limits maintenance because the majority of the system's location crosses private properties. Rehabilitation of the sewer lines and manholes will reduce infiltration and inflow and reduce the probability of major failures that negatively impact the environment. Establishing access for a rehabilitation project will provide an opportunity for the Village to make that access permanent so that regular maintenance can be implemented.

Recommended improvements to the WWTP include a redesign of the treatment system to meet the current NPDES permit limits, particularly for nutrient removal. The existing WWTP has adequate capacity and can be retrofitted to provide a higher level of treatment through biological and chemical means to meet the required limits.

In addition, renovation and replacement of aging components will lead to better reliability. The WWTP is currently being operated by only one person, so providing newer, more-automated infrastructure will reduce the labor effort for O&M.

These recommended improvements address the Village's concerns and needs, and provide only the necessary upgrades for a cost-effective solution.

The Village's budgets for the last three fiscal years suggest they do not have the budget to self-finance the recommended improvements; however, this PER and EID will enable the Village to apply for federal and state funding to address the wastewater system deficiencies. It is recommended that the proposed project be implemented as soon as funding is available.

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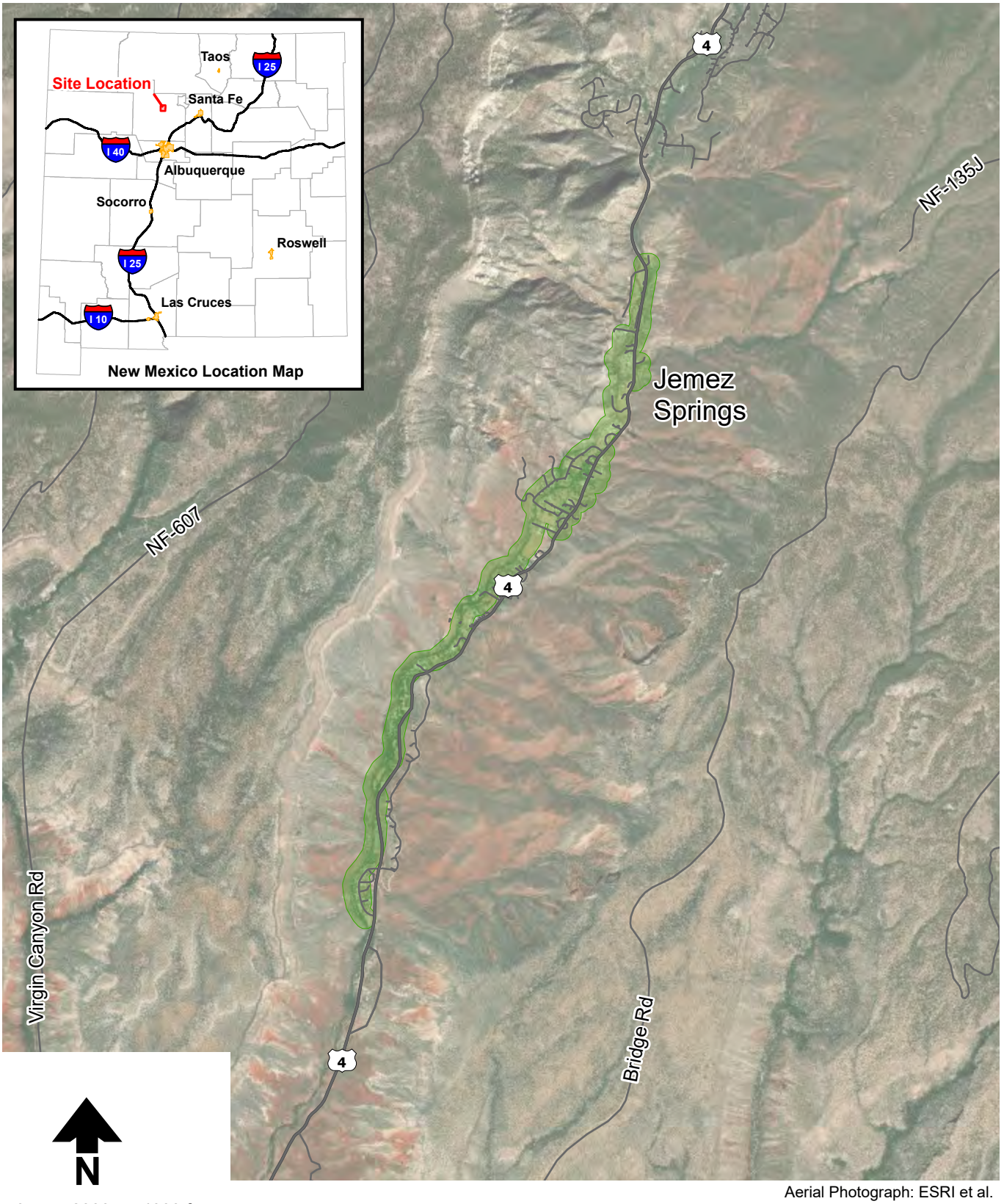
Figures



Aerial Photograph: ESRI et al.

Explanation

Project area

VILLAGE OF JEMEZ SPRINGS
WASTEWATER SYSTEM PER

Project Area

DBS&A
a Geo-Logic Company

10/13/2023 DB23.1197

Figure 1

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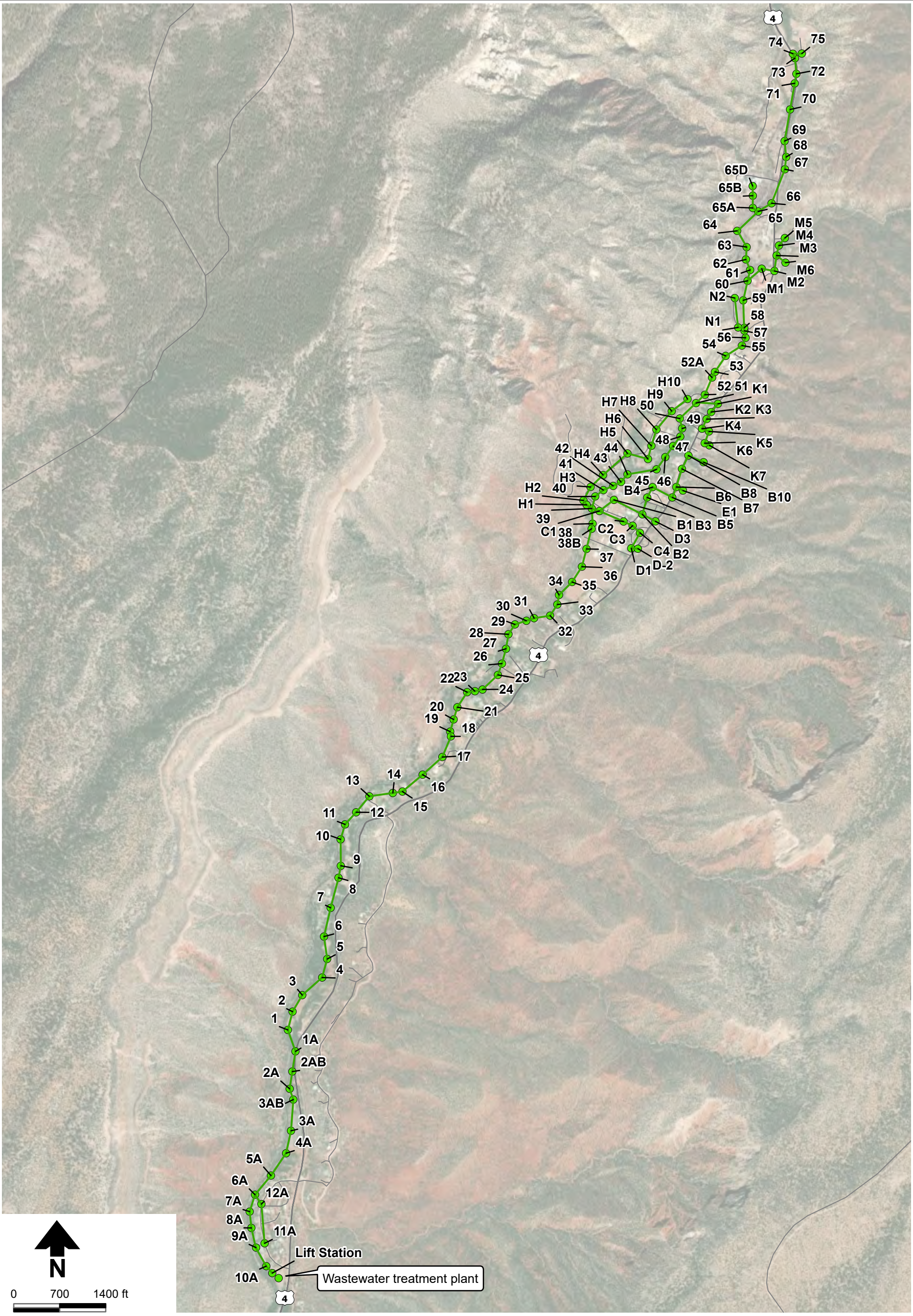

Aerial Photograph: ESRI et al.

Explanation

- Sanitary sewer line
- Sanitary sewer manhole

Figure 2

DBS&A
a Geo-Logic Company

10/13/2023 DB23_1197

VILLAGE OF JEMEZ SPRINGS
WASTEWATER SYSTEM PER

Existing Wastewater System

S:\PROJECTS\DB23.1197_JEMEZ_SPRINGS_WWTP_PER\CAD\PRODUCTION\FIGURES\SITE FIGURE.DWG

VILLAGE OF JEMEZ SPRINGS WASTEWATER SYSTEM PER

Existing Wastewater Treatment Plant

DBS&A a Geo-Logic Company

1/9/2024

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Figure 3

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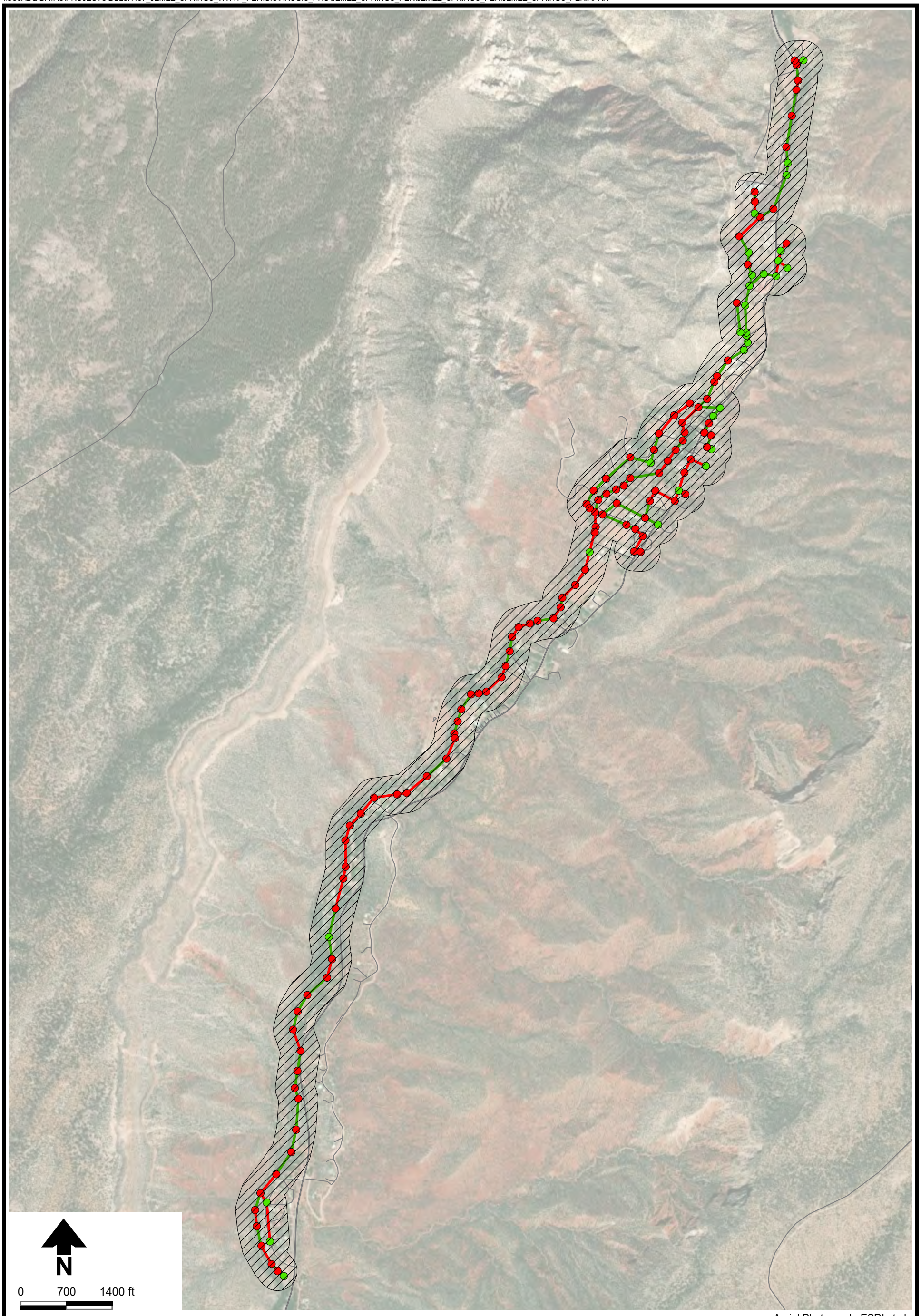

Aerial Photograph: ESRI et al.

Explanation

- Existing sewer manhole
- Rehabilitate sewer manhole
- Existing sewer line
- Rehabilitates sewer line

Figure 4

DBS&A
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10/13/2023 DB23.1197

VILLAGE OF JEMEZ SPRINGS
WASTEWATER SYSTEM PER

Collection Alternative 2: Rehabilitate Critical Areas

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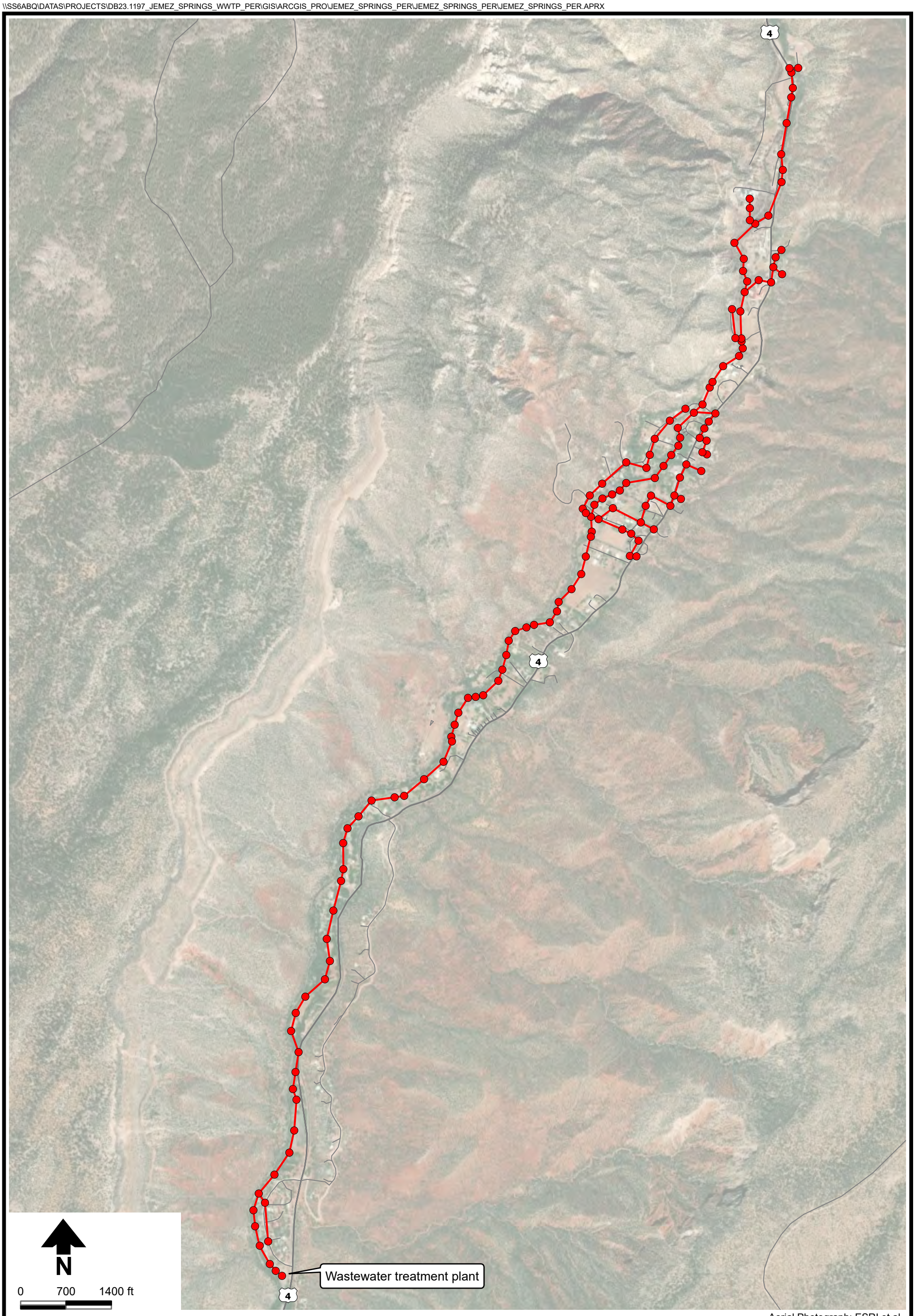

Figure 5

DBS&A
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VILLAGE OF JEMEZ SPRINGS
WASTEWATER SYSTEM PER

Collection Alternative 3: Rehabilitate Entire Sewer System

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DBS&A a Geo-Logic Company

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VILLAGE OF JEMEZ SPRINGS WASTEWATER SYSTEM PER

WWTP Alternative 2: Renovate Critical Components of the WWTP

Figure 6

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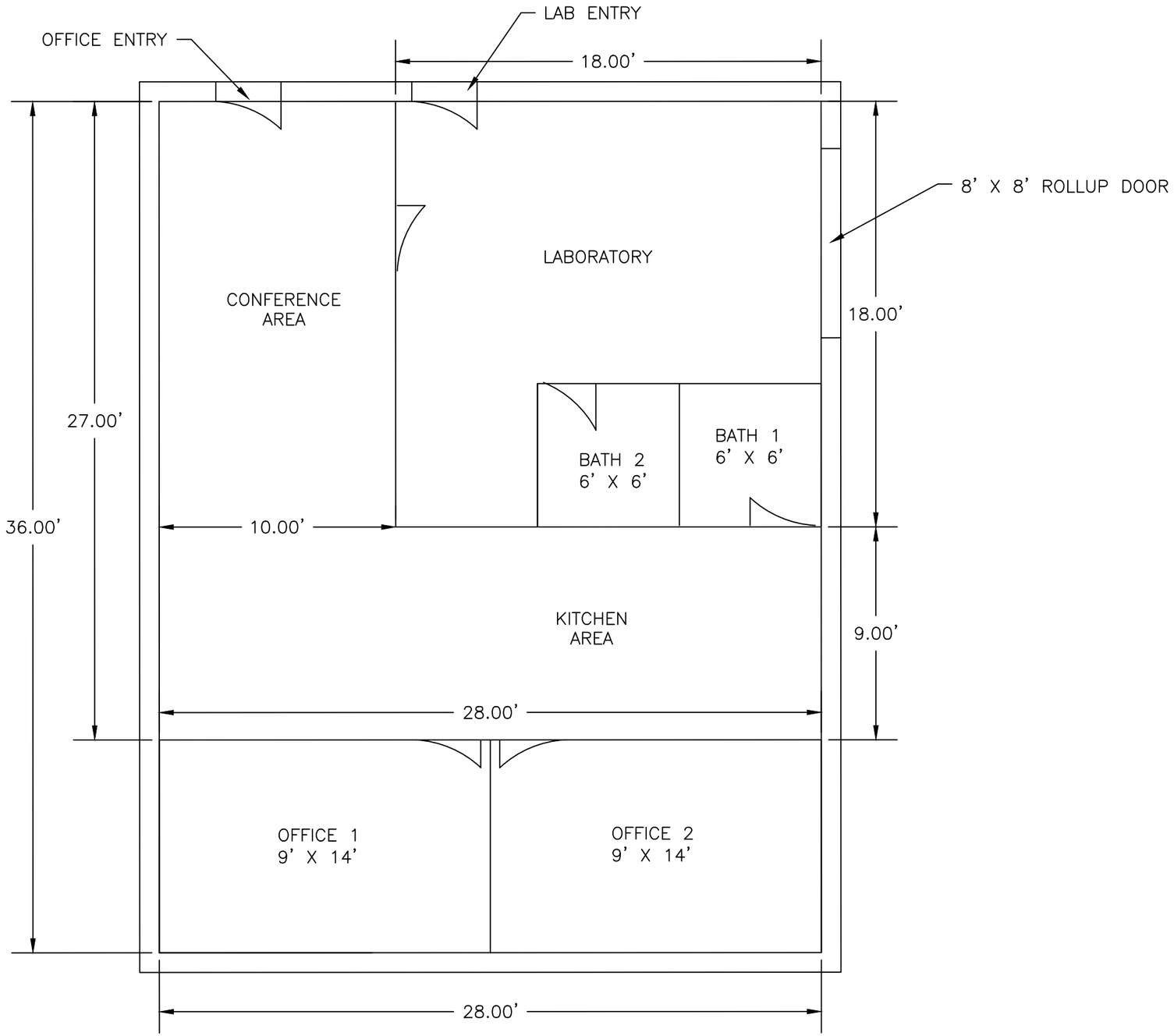

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DBS&A a Geo-Logic Company

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VILLAGE OF JEMEZ SPRINGS WASTEWATER SYSTEM PER

WWTP Alternatives 2 and 3: Office and Laboratory Floor Plan

Figure 7

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a Geo-Logic Company

1/9/2024

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VILLAGE OF JEMEZ SPRINGS WASTEWATER SYSTEM PER

WWTP Alternative 3: Replace Existing WWTP

Figure 8

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

Recommended Improvements

Collection System:
- CCTV and flush entire collection system
- Rehabilitate existing manholes
- Rehabilitate existing sewer mains
- Replace undersized sewer mains with 8-inch PVC

WWTP:
- Influent screening and trash removal
- Replace equipment in the SBR tanks
- Sludge handling and dewatering improvements
- New buildings to include office space, laboratory, and ferric dosing equip.

N

0 700 1400 ft

Aerial Photograph: ESRI et al.

Explanation

- Existing sewer line
- Rehabilitate sewer line
- Existing sewer manhole
- Rehabilitate sewer manhole

Figure 9

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9/28/2023 DB23_1197

VILLAGE OF JEMEZ SPRINGS
WASTEWATER SYSTEM PER
Recommended Project

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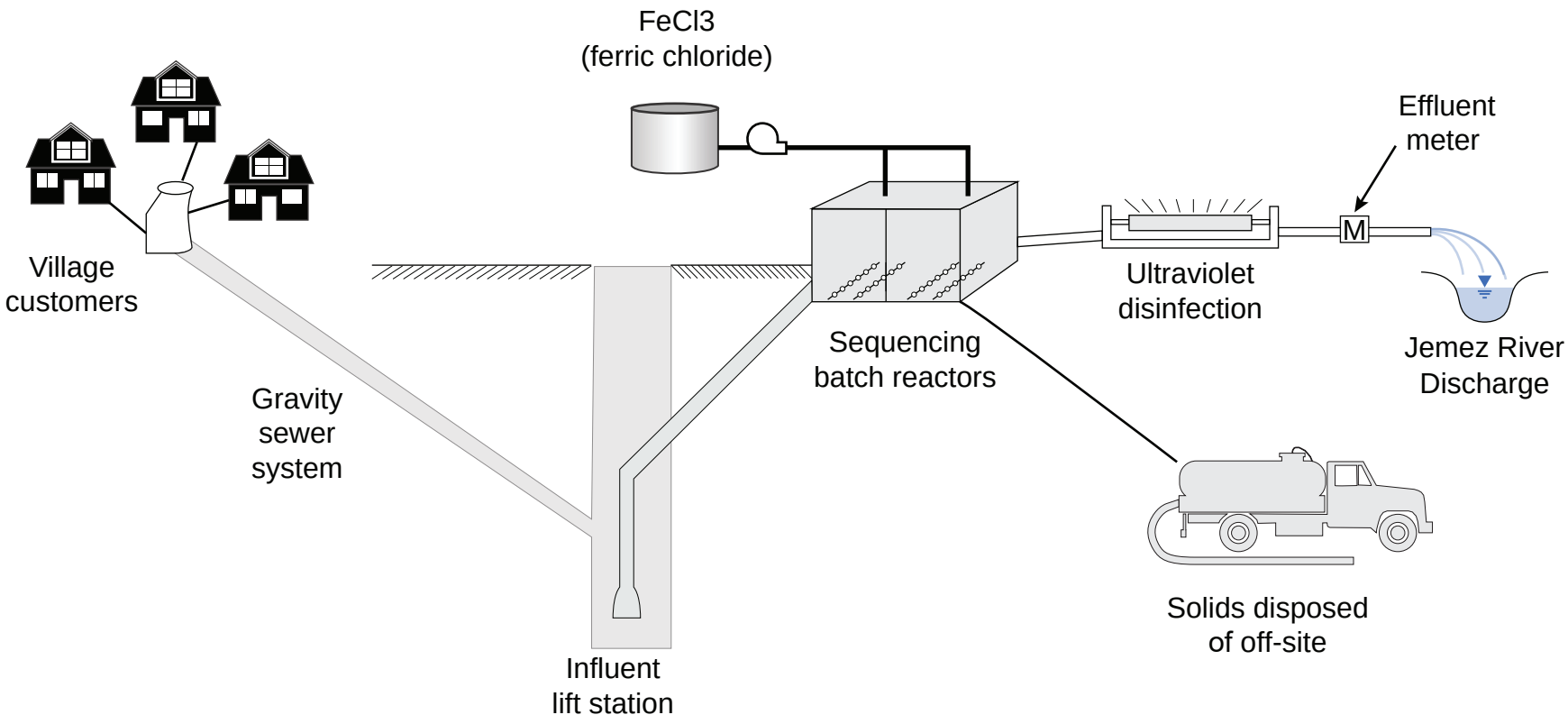

Figure 10

JEMEZ SPRINGS WASTEWATER SYSTEM PER

Existing WWTP Process Flow Diagram

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1/15/2024 DB23.1197

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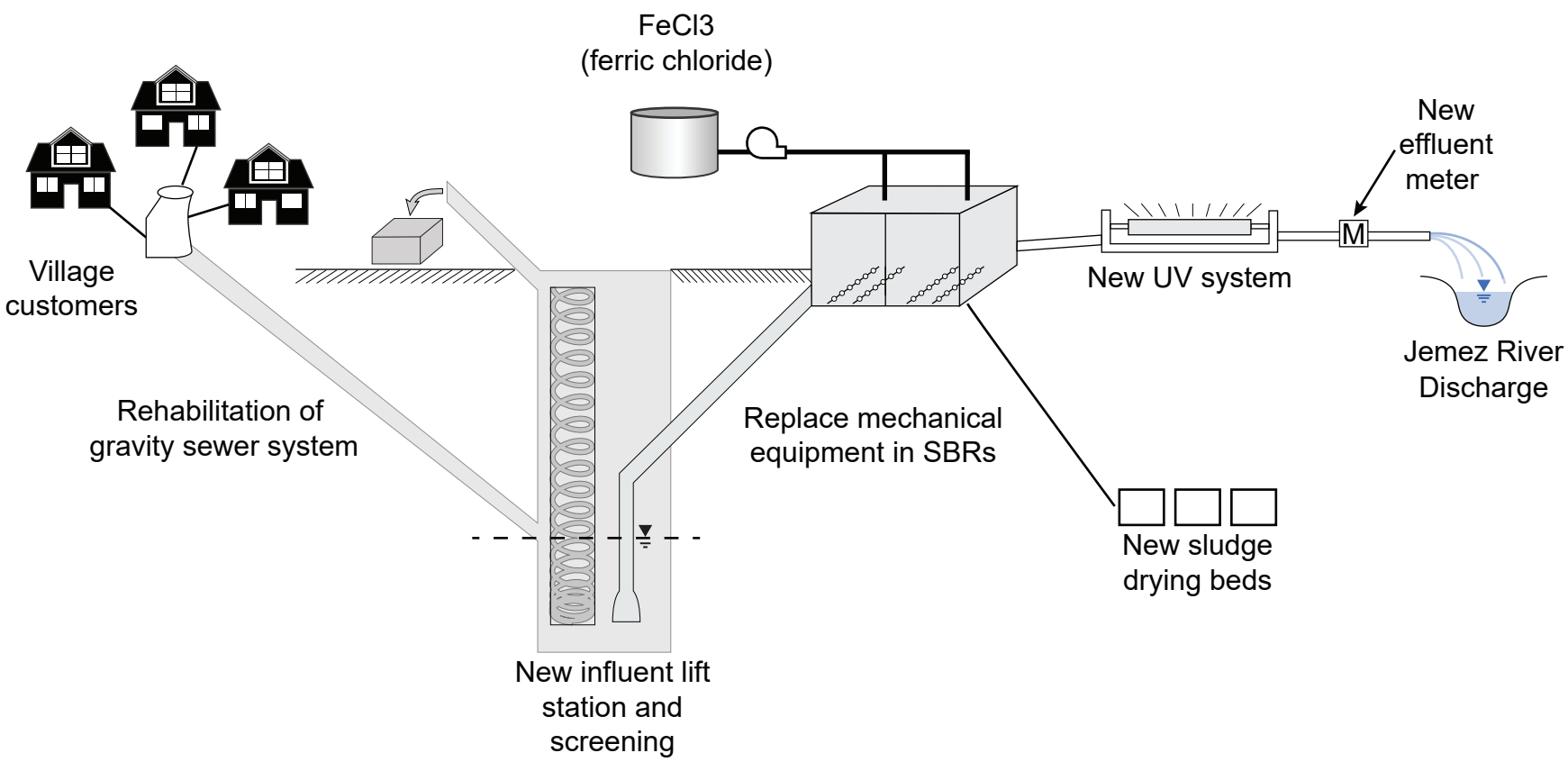

Figure 11

JEMEZ SPRINGS WASTEWATER SYSTEM PER

WWTP Improvements Process Flow Diagram

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Appendix A

Environmental Information Document

DBS&A
a Geo-Logic Company

Environmental Information Document

Wastewater System Improvements
Village of Jemez Springs, New Mexico

Prepared for

Village of Jemez Springs, New Mexico

Prepared by

DBS&A
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DB23.1197

February 2, 2024

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4 Environmental Justice Report
5 Agency Outreach
6 Public Involvement

1. Purpose of and Need for Project

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

1.1 Background

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

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

The proponent of the project is the Village.

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

1.2 Project Description

1.2.1 Location

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

1.2.2 Project Overview

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

The proposed project is currently being evaluated as part of the PER; if funding is approved by NMED CPB, design of the Recommended Project is expected to begin in October 2024.

1.3 Purpose and Need for Project

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

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

2. Alternatives

The PER describes five alternatives:

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

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

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

Collection Alternative 3 and WWTP Alternative 3 were not recommended as part of the PER due to higher associated cost and access issues that limit the feasibility of replacing the collection system. These alternatives are not further evaluated in this EID unless specifically noted in a topic section.

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

2.1 Alternative 1: No Action Alternative

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

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

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

The Proposed Action includes the following:

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

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

3. Affected Environment/Environmental Consequences

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

Sections 3.1 through 3.12 detail the affected environment of the Project Area for the Proposed Action and the potential environmental consequences of implementing the Proposed Action. Significance is the tool used in evaluations of environmental consequences to determine whether a more intensive study might be required. As in NEPA documentation, the significance of any consequences—adverse or beneficial—is based here on context and intensity. The following subsections discuss the effects of the recommended project on a resource and whether mitigation measures will be implemented to lessen the significance of an effect. The relationship between short-term benefits and the long-term impact on preserving and

enhancing the environmental resources, including commitment of any irreversible and irretrievable resources, are discussed in the following subsections.

3.1 Environmental Setting

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

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

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

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

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

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

3.2 Land Use

3.2.1 General Land Use

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

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

3.2.2 Growth and Population Trends

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

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

3.2.3 Important Farmland

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

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

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

3.2.4 Soils

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

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

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

from 10 to 16 inches, loamy very fine sand from 16 to 22 inches, very fine sandy loam from 22 to 35 inches, gravelly sand and gravelly coarse sand from 35 to 42 inches, very gravelly coarse sand from 42 to 53 inches, and very gravelly coarse sand from 53 to 84 inches.

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

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

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

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

3.2.5 Formally Classified Lands

The Jemez Historic Site (formerly Jemez State Monument) is located at the north end of the Village on the east side of NM 4. It is a state-operated historic site that preserves the archaeological remains of the 16th century Native American Gíusewa Pueblo and the 17th century Spanish colonial mission called San José de los Jémez. In addition, the Valles Caldera National Preserve (Preserve) administrative offices are located within the area of the Jemez Springs collector system. While there are other historic sites within the Village, such as

the Jemez Hot Springs, no other formally classified lands, including national parks, landmarks, historic sites, wilderness areas, wildlife refuges, wild and scenic rivers, grasslands, state parks, and Native American owned lands, occur in the footprint of the Proposed Action.

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

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

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

3.3 Floodplains

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

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

Because the Proposed Action would mainly take place on existing developed spaces (i.e., roadway ROW and utility easements) and the Project Area floodplain would be returned to existing elevations and conditions following completion, the Proposed Action is expected to have minimal short-term impacts due to ground disturbance, but no long-term impact on floodplains.

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

3.4 Wetlands

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

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

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

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

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

3.5 Water Resources

3.5.1 Surface Water

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

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

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

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

3.5.2 Groundwater

The Jemez Mountains have both thermal and nonthermal groundwater. The principal reservoir of geothermal fluids is under the central and western parts of the Valles Caldera. Nonthermal groundwater in Valles Caldera occurs in both perched aquifers and deeper valley-fill aquifers. Subsurface escape of reservoir fluid from near and beneath Valles Caldera forms a discharge plume of reservoir water mixed with dilute groundwater, which extends down Canon de San Diego. The Jemez Fault Zone transports a relatively large portion of this flow. Near Jemez Pueblo, subsurface mineral water merges with the regional aquifer deposits of the Albuquerque Basin. The most extensive and productive aquifer in the region is the thick sequence of valley-fill deposits and interbedded volcanic rocks underlying the Pajarito Plateau on the east side of

the mountain mass. The caldera contains both thermal and nonthermal groundwater, and both types discharge from the caldera to the southwest, which follows the trace of the Jemez Fault Zone. The principal geothermal aquifer in the region is located under the central and western parts of the caldera. Water from the more extensive principal aquifers in the valley fill also discharges as spring flow and seepage to the principal stream sources (US DOI, 2000).

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

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

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

3.6 Coastal Resources

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

3.7 Air Quality

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

designated as "nonattainment," the corresponding state must develop a State Implementation Plan (SIP) that details the path to attain and maintain the NAAQS.

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

BMPs will be implemented to mitigate any demolition, construction, rehabilitation, repair, dredging or filling activities that would have the potential to emit air pollutants. Furthermore, construction and waste disposal activities will be conducted in accordance with applicable local, state, and federal statutes and regulations. If asbestos-cement pipe exists in any disturbed areas and any portions of the existing systems are demolished or removed for replacement or capacity expansion, an asbestos survey will be conducted by a qualified professional. All asphalt, concrete, quarrying, crushing, and screening facilities contracted in conjunction with the Proposed Action will have current and proper air quality permits. If any equipment that is powered by diesel, gasoline, or natural gas engines that exceeds 10 pounds per hour (10 tons per year) is used during the project, the NMED Air Quality Bureau (AQB) Permitting Section will be contacted to determine if a permit is required. In addition, all disturbed areas will be reclaimed following construction completion to avoid long-term problems with erosion and fugitive dust. With the BMPs implemented in accordance with NMED requirements to mitigate air quality issues, the Proposed Action would have no short-term or long-term impacts on air quality.

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

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

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

3.8 Biological Resources

3.8.1 Vegetation

The GAP/LANDFIRE National Terrestrial Ecosystems, a highly thematically detailed land cover map, was used for vegetation cover of the Project Area. The land cover map is produced by the

U.S. Geological Survey (USGS) in collaboration with the LANDFIRE Program (USGS, 2022). Land cover of the Jemez Springs WWTP and collector system is primarily low-intensity development with scattered areas of Western Great Plains Riparian Woodland and Shrubland and Pasture/Hay through the valley area. Outside of the valley, the most common ecoregion vegetation community is Southern Rocky Mountain Pinyon-Juniper Woodland (Figure F) (USGS, 2004). These land cover classifications (or ecoregions) are described in the following subsections.

3.8.1.1 Developed, Low Intensity

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

3.8.1.2 Western Great Plains Riparian Woodland and Shrubland

This system is found in the riparian areas of medium and small rivers and streams throughout the Western Great Plains. It is likely most common in the Shortgrass Prairie and Northern Great Plains Steppe, but extends west and as far as the Rio Grande in New Mexico and into the Wyoming Basins in the north. It is found on alluvial soils in highly variable landscape settings, from deep cut ravines to wide, braided streambeds. Hydrologically, these sites tended to be more prone to flash floods with less developed floodplains than on larger rivers, and may dry down completely for some portion of the year. Dominant vegetation shares much with generally drier portions of larger floodplain systems downstream, but overall abundance of vegetation is generally lower. Communities within this system range from riparian forests and shrublands to gravel/sand flats. Dominant species include valley cottonwoods (*Populus deltoides*), willows (*Salix* spp.), silver sagebrush (*Artemisia cana* ssp. *Cana*), western wheat grass (*Pascopyrum smithii*), switchgrass (*Panicum virgatum*), vine mesquite, (*Panicum obutsum*), sand dropseed (*Sporobolus cryptandrus*), and little bluestem (*Schizachyrium scoparium*). These areas are often subjected to heavy grazing and/or agriculture and can be heavily degraded. Salt cedar (*Tamarix* spp.), Russian olive (*Elaeagnus angustifolia*), and less desirable grasses and forbs can invade degraded examples up through central Colorado. Groundwater depletion and lack of fire have resulted in additional species changes.

3.8.1.3 Pasture/Hay

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

3.8.1.4 Southern Rocky Mountain Pinyon - Juniper Woodland

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

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

3.8.2 Wildlife

Mammals occurring in the Jemez River Valley would include species that occur in the riparian woodlands and surrounding pinyon-juniper woodlands. Species would typically include small

mammals such as bats, squirrels, chipmunks, shrews, mice, gophers, rats, voles, rabbits, raccoon, and skunks, as well as larger mammals such as elk (*Cervus canadensis*), mule deer (*Odocoileus hemionus*), gray fox (*Urocyon cinereoargenteus*), red fox (*Vulpes vulpes*), mountain lion (*Puma concolor*), black bear (*Ursus americanus*), coyote (*Canis latrans*), and bobcat (*Lynx rufus*) (Brown and Lowe, 1977; Brown, 1982).

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

Reptiles, amphibians, and fish occurring in the area include smooth greensnake (*Opheodrys vernalis*), wandering terrestrial garter snake (*Thamnophis elegans vagrans*), plateau lizard (*Sceloporus tristichus*), greater short-horned lizard (*Phrynosoma hernandesi*), many-lined skink (*Eumeces multivirgatus*), tiger salamanders (*Ambystoma tigrinum*), Rio Grande sucker (*Catostomus plebeius*), Rio Grande chub (*Gila pandora*), rainbow trout (*Oncorhynchus mykiss*), and brown trout (*Salmo trutta*) (U.S. DOI, 2023)

Construction would be contained within the existing wastewater treatment plant and existing collector system, with a potential for small areas of undisturbed ground to be disturbed by construction vehicle parking or temporarily stored construction material. The direct effects (permanent and temporary) of the Proposed Action to non-listed species would include short-term noise increase and ground disturbance during construction. Noise disturbance during construction could affect wildlife in the Project Area. While much of the Project Area is within previously disturbed ground, excavation and earthwork for new structures could disturb vegetation that may provide habitat for wildlife including bird species, most of which are protected under the Migratory Bird Treaty Act. The project has the potential to impact migratory birds, particularly if construction occurs during the nesting season. If construction activities take place during the migratory bird nesting season (March 15 through September 15), a pre-construction nesting bird survey of the Project Area should be completed; if occupied nests are found, they must be avoided until the young have fledged. Following these guidelines,

the project would comply with the requirements of the Migratory Bird Treaty Act and should not cause harm or harassment to migratory birds.

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

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

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

If caves, mines, bridges, or other man-made structure suitable as potential bat roosts are encountered within the Proposed Action area, they should not be entered during any time of year, and no roosting or hibernating bats should be contacted or disturbed. Any dead or injured bats will be reported to the NMDGF, who can facilitate contacts with other appropriate personnel.

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

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

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

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

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

- Whenever possible, locate trenching activities within previously disturbed areas, such as existing road or pipeline ROW. To the extent possible, avoid trenching in undisturbed habitat.
- Trench during the cooler months (October through March).
- Use concurrent trenching, pipe- or cable-laying, and backfilling. Keep trenching, pipe- or cable-laying, and backfilling crews as close together as possible to minimize the amount of open trench at any given time. When trenching activities are temporarily halted (e.g., overnight, weekends, holidays, weather shutdowns), protect wildlife from accessing any open trench between digging and backfilling operations by using one or more of the methods described below.
- Avoid leaving trenches open overnight. When trenches cannot be backfilled immediately, escape ramps should be constructed at least every 90 meters and preferably 30 meters. Escape ramps can be constructed parallel or perpendicular to the existing trench. The escape ramp slope should be less than 45 degrees (1:1). If pipe or cable has been installed but backfilling has not occurred, escape ramps may need to be constructed on both sides of the trench, as, unless the pipe is elevated enough to allow animals to move underneath it, the pipe or cable may block access of amphibians, reptiles, and small mammals to the ramps if only constructed on one side.

- Trenches that have been left open overnight should be inspected the following day by a qualified biological monitor and trapped animals removed as soon as possible, especially where state-listed or federally listed threatened or endangered amphibians, reptiles, or small mammals occur. Untrained personnel should not attempt to remove trapped wildlife because of the potential to injure animals and the possibility of injury from venomous snakes. Required tools for removal will include snake tongs for removing snakes and a dip net for capturing and removing amphibians and small mammals. Many animals trapped in a trench will burrow under loose soil. To the extent possible, the biological monitor should disturb loose soil in the trench to uncover and remove trapped animals. Animals should be relocated at least 50 meters away from the open trench in undisturbed habitat.
- When pipe has been laid in the trench, end caps should be placed on the open end(s) of the pipe to preclude animals from entering. Pipe staged outside the trench should be capped until placed in the trench or checked for wildlife before being placed into the trench.
- Most wildlife can be protected by constructing silt fence completely around the open trench. Silt fence should be supported from sagging by t-posts, rebar, or stakes and buried at the base to preclude animals from moving below the fence. If construction of a silt fence is a required best management practice for erosion control, then, to preclude the need for a biological monitor, escape ramps, and concurrent backfilling, the guidelines for silt fence installation and maintenance in the trenching project guidelines (Attachment 1) should be followed.

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

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

3.8.3 Threatened and Endangered Species

Online reports were generated for the polygon corresponding to the Jemez Springs WWTP and collector system using the USFWS Information, Planning and Conservation (IPaC) tool and the NMDGF Biota Information System of New Mexico (BISON-M). The IPaC report (USFWS, 2023c) identified no critical habitat located in the Project Area, but lists a total of 9 federal threatened and endangered species (2 of the 9 are candidate species for federal listing) that should be

analyzed for potential impacts (Attachment 2). The nearest designated or proposed critical habitat is for the Mexican spotted owl beyond the project area to the west, in the forested watershed above the canyon walls of the Jemez River. There is also critical habitat to the east, within the forested watersheds beyond the Jemez River Valley (USFWS, 2023a). It was therefore determined that while there is not suitable habitat for the Mexican spotted owl in the Project Area, a potential for the species to occur in the Project Area, but only as an occasional occurrence. Table 1 summarizes the potential for federally listed species to be present in the Project Area.

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

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

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

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

3.9 Archaeological, Cultural, and Historic Resources

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

The Proposed Action may receive federal funding and would therefore be defined as an undertaking under Section 106 of the National Historic Preservation Act of 1966 (NHPA) (54 U.S.C. §306108) and its implementing regulations (36 CFR Part 800). The project may also receive state funding and as such it must comply with state statutes pertaining to cultural resources, including the New Mexico Cultural Properties Protection Act (18-6A-1 through

18-6A-6 New Mexico Statues Annotated [NMSA] 1978), the New Mexico Cultural Properties Act (18-6-1 through 18-6-17 NMSA, as amended through 2005), and the Prehistoric and Historic Sites Preservation Act (18-8-1 through 18-8-8 NMSA 1978). The methods used for implementing these statutes are outlined in the New Mexico Administrative Code (NMAC). The project will also require a utility ROW permit from the NMDOT; therefore, a survey will need to be completed to meet the standards outlined in the NMDOT Guidelines for Cultural Resource Investigations.

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

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

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

studies have focuses primarily on the NM 4 transportation corridor and specific infrastructure projects in the Village and immediate surroundings (Okun, 2023) (Attachment 3).

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

3.10 Socioeconomics/Environmental Justice

3.10.1 Socioeconomic Issues

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

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

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

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

3.10.2 Environmental Justice

The potential environmental justice (EJ) consequences of the Proposed Action were evaluated using the EJ View tool to generate data to determine the potential for disproportionate effects on minority and low-income populations (U.S. EPA, 2023a). The EJ report (Attachment 4) shows that the WWTP and collector system and a five-mile ring around the area has higher people of color and lower low-income populations relative to the state of New Mexico, the EPA region, and the U.S. (Table 4). This contradicts somewhat with the demographic data from the U.S. Census Bureau, but is likely due to the inclusion of the surrounding area and the location of the Jemez Pueblo downstream of the WWTP.

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

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

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

3.11 Other Resources

3.11.1 Public Health and Safety

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

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

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

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

3.11.2 Transportation

Project construction would have a temporary direct effect due to lane or road closures that may be required for the effluent pipe installation within existing roadways. The traffic may be affected along NM 4, but only temporarily. As needed, traffic control plans would be developed and work permits would be obtained during construction from the NMDOT and Sandoval

County for any temporary roadway lane closures that may be necessary. No long-term effects on traffic would result from the Proposed Action.

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

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

3.11.3 Noise

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

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

3.12 Cumulative Impacts

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

4. Summary of Mitigation Measures

Mitigation measures are required to reduce potential environmental impacts until they are no longer significant. No significant impacts are anticipated from the implementation of the proposed project, but some mitigation measures will be implemented, as outlined in the following subsections. Mitigation measures have been developed in large part based on agency

comments received following requests for input (Attachment 5). All comments received are included in Attachment 5.

4.1 Land Use

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

4.2 Physical Resources Measures

Physical resources measures for soils, floodplains, wetlands, water resources, air quality, and noise include the following:

- In accordance with EPA requirements, BMPs will be implemented to minimize the impact of any air pollutants.
- Construction and waste disposal activities will be conducted in accordance with applicable local, state, and federal statutes and regulations.
- All construction crews will be made aware of notification requirements for accidental discharges as specified at 20.6.2.1203 NMAC and be prepared to properly contain and clean up any accidental discharges.
- Dust control will be implemented with use of construction water.
- Construction activities will be restricted to between 7:00 a.m. and 7:00 p.m. for noise control, in adherence to regulations.
- A stormwater pollution prevention plan (SWPPP) will be implemented per EPA-402 and as required by NMED.
- During excavation, any suspect pipes, fragments, or soils contaminated with related fragments or fines will be sampled and analyzed using PLM to determine if the materials contain greater than 1 percent asbestos in accordance with NMED regulations. If asbestos cement pipe is known or detected, an asbestos survey will be conducted by a qualified

professional, and the materials will be managed as regulated asbestos waste according to New Mexico Solid Waste Rules.

- Any asphalt, concrete, quarrying, crushing, and screening facilities contracted in conjunction with the Proposed Action will have current and proper air quality permits in accordance with NMED regulations.
- In accordance with NMED Solid Waste regulations, if more than 120 cubic yards of solid waste from any one contiguous area requires excavation, the Solid Waste Bureau may require submission of a Waste Excavation Plan pursuant to 20.9.2.10.A(15) NMAC.
- In the event that generators, light towers, and other equipment powered by diesel, gasoline, or natural gas engines are used in support of this project, the NMED AQB Permitting Section will be contacted to determine if a permit is required.

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

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

4.3 Biological Resources Measures

4.3.1 General Wildlife and Vegetation Measures

The following measures will be implemented to mitigate construction activities:

- Sewer line or other construction disturbance will be designed such that temporarily disturbed areas will be returned to pre-construction elevations and native vegetation that is certified weed-free will be reseeded if needed and as requested by NMED. Native vegetation will approximate pre-disturbance plant community composition or native plant communities appropriate for the site, including from a region that represents potential future climatic conditions at the site, whichever is more beneficial to wildlife. Short-term erosion control seed mixes are available for temporary control of surface erosion during project implementation. Native mixes should be used for temporary as well as permanent erosion control. Native plants and materials should also be used for landscaping. New Mexico grass ecotypes for commercial seeding are available through the Los Lunas Plant Materials Center and New Mexico State University. Seeding guidelines are available from the Natural Resources Conservation Service and the Colorado Natural Areas Program.

- Divert water around construction site whenever possible. Preserve natural areas within the project site. Strive to maintain the natural drainage system of the site, including natural stream channels, wetlands, and floodplains. Design, construct, and maintain the site to protect (or restore) the natural hydrology.
- A vegetated buffer zone will be maintained along all watercourses, including ephemeral arroyos, sufficient to minimize erosion and sediment delivery.
- Rodent burrows and other underground dens may be disturbed within the Project Area. Besides rodents and other mammals, snakes, lizards, and birds might be present in the area and use burrows in the area; if so, they could be affected during construction. Heavy equipment usage and access would largely be confined to existing roadway surfaces; therefore, disturbance and impact to wildlife habitat from the movement of heavy equipment would be negligible.
- Burrowing owl (*Athene cunicularia*) may occur within the project area. Before any ground disturbing activities occur, a preliminary burrowing owl survey will be conducted by a qualified biologist using the NMDGF burrowing owl survey protocol. Should burrowing owls be documented in the project area, the NMDGF or USFWS will be contacted for further recommendations regarding relocation or avoidance of impacts.
- If caves, mines, bridges, or other man-made structure suitable as potential bat roosts are encountered within the Proposed Action area, they should not be entered during any time of year, and no roosting or hibernating bats should be contacted or disturbed. Any dead or injured bats will be reported to the NMDGF, who can facilitate contacts with other appropriate personnel.
- Prairie dog colonies may occur within the vicinity of your project area. Both black-tailed prairie dogs (*Cynomys ludovicianus*) and Gunnison's prairie dogs (*Cynomys gunnisoni*) are designated as New Mexico Species of Greatest Conservation Need, and their colonies provide important habitat for other grassland wildlife. Wherever possible, occupied prairie dog colonies should be left undisturbed, and all project activities should be directed off the colony. Any burrows that are located on the project site should be surveyed by a qualified biologist to determine whether burrows are active or inactive and whether burrowing owls may be using the site.
- The proposed project occurs within or near a riparian area. Because riparian areas are important wildlife habitats, the project footprint will avoid removing any riparian vegetation or creating ground disturbance either directly within or affecting the riparian area.

- The Proposed Action occurs within an area where springs or other important natural water features occur. This may result in the presence of a high use area for wildlife relative to the surrounding landscape. To ensure continued function of these important wildlife habitats, the Proposed Action will include measures to avoid the following.
  - Altering surface or groundwater flow or hydrology
  - Disturbance to soil that modifies geomorphic properties or facilitates invasion of non-native vegetation
  - Affecting local surface or groundwater quality
  - Creating disturbance to wildlife using these water features. Disturbance to wildlife can be reduced through practices including clustering infrastructure and activity wherever possible, avoiding large visual obstructions around water features, and limiting nighttime project operations or activities
- Whenever possible, locate trenching activities within previously disturbed areas, such as existing road or pipeline right-of-ways. To the extent possible, avoid trenching in undisturbed habitat.
- Trench during the cooler months (October through March).
- Use concurrent trenching, pipe- or cable-laying, and backfilling. Keep trenching, pipe- or cable-laying, and backfilling crews as close together as possible to minimize the amount of open trench at any given time. When trenching activities are temporarily halted (e.g., overnight, weekends, holidays, weather shutdowns), protect wildlife from accessing any open trench between digging and backfilling operations by using one or more of the methods described below.
- Avoid leaving trenches open overnight. When trenches cannot be backfilled immediately, escape ramps should be constructed at least every 90 meters and preferably 30 meters. Escape ramps can be constructed parallel or perpendicular to the existing trench. The escape ramp slope should be less than 45 degrees (1:1). If pipe or cable has been installed but backfilling has not occurred, escape ramps may need to be constructed on both sides of the trench, since, unless the pipe is elevated enough to allow animals to move underneath it, the pipe or cable may block access of amphibians, reptiles, and small mammals to the ramps if only constructed on one side.
- Trenches that have been left open overnight should be inspected the following day by a qualified biological monitor and trapped animals removed as soon as possible, especially

where state-listed or federally listed threatened or endangered amphibians, reptiles, or small mammals occur. Untrained personnel should not attempt to remove trapped wildlife because of the potential to injure animals and the possibility of injury from venomous snakes. Required tools for removal will include snake tongs for removing snakes and a dip net for capturing and removing amphibians and small mammals. Many animals trapped in a trench will burrow under loose soil. To the extent possible, the biological monitor should disturb loose soil in the trench to uncover and remove trapped animals. Animals should be relocated at least 50 meters away from the open trench in undisturbed habitat.

- When pipe has been laid in the trench, end caps should be placed on the open end(s) of the pipe to preclude animals from entering. Pipe staged outside the trench should be capped until placed in the trench or checked for wildlife before being placed into the trench.
- Most wildlife can be protected by constructing silt fence completely around the open trench. Silt fence should be supported from sagging by t-posts, rebar, or stakes and buried at the base to preclude animals from moving below the fence. If construction of a silt fence is a required best management practice for erosion control, then, to preclude the need for a biological monitor, escape ramps, and concurrent backfilling, the guidelines for silt fence installation and maintenance in the trenching project guidelines should be followed (Attachment 1).

4.3.2 Threatened and Endangered Species Measures

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

4.4 Socioeconomic/Environmental Justice Measures

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

4.5 Archaeological, Cultural, and Historic Resources Measures

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

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

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

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

The Pueblo of Santa Ana will be contacted by the Village prior to commencement of construction to coordinate timing and access with the Pueblo for their traditional activities.

4.6 Environmentally Sensitive Areas

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

4.7 Other Resources

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

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

4.8 Cumulative Impact Measures

There are no planned cumulative impact measures.

5. Consultation, Coordination, and Public Involvement

5.1 Agencies Consulted

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

- Energy, Minerals, and Natural Resources Department, State Forestry Division, Erica Rowe, State Botanist
- FEMA Region 6, Charles Cook
- CFM for Sandoval County, B. Gomez, Sandoval County Floodplain Administrator
- USDA NRCS (Cuba Office, New Mexico Field Office); Nickolas Goodman, District Conservationist
- Office of State Engineer (OSE) (District 1, OSE Water Rights Division), Wayne Canon
- NMDOT Environmental Bureau, Steven Gisler and Gary Funkhouser
- NMDOT Right of Way Bureau, Angela Sandoval, Operations Section Manager
- NMED Air Quality Bureau, Donna Intermont
- NMED Surface Water Quality Bureau, Shelly Lemon, Bureau Chief
- NMED Ground Water Quality Bureau, Justin Ball, Bureau Chief
- NMED Drinking Water Bureau, Joe Martinez, Bureau Chief
- NMED Petroleum Storage Tank Bureau, Lorena Goerger, Bureau Chief
- New Mexico Historic Preservation Office, Deputy State Historic Preservation Officer and State Archaeologist – *Pending, letter to be sent when cultural resources Class I report is complete*
- USACE, Sarrah Kubinec, Albuquerque District Office

- U.S. EPA Region 6, Office of Communities, Tribes and Environmental Assessment, Jeff Riley
- Sandoval County, Joshua Jones, District 5 County Commissioner
- U.S. Forest Service, Jemez Ranger District, Jeremy Golston
- NM Department of Game and Fish, Ecological and Environmental Planning Division, Jack Marchetti, Aquatic/Riparian Habitat Specialist
- NM Department of Cultural Affairs, Elizabeth Stone
- Valles Caldera Visitor Center, Ranger Sierra
- State Representative, District 43, Christine Chandler

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

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

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

5.2 Public Involvement

A public meeting was held at the Village-owned Bath House on December 20, 2023. Outreach was conducted for the meeting, including a meeting notice published on three dates: November 15, 2023, December 1, 2023, and December 15, 2023, in the local newspaper, *After the Thunder* (Attachment 6). The notice was also posted on social media, including the Village FaceBook page, and hard copies were posted around common areas of the Village. The results of the meeting and a 30-day public comment period have been documented and provided in the response summary for the public hearing (Attachment 6). All comments were received at the public meeting. No comments were received during the 30-day comment period following the meeting.

5.3 Responsiveness Summary

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

The public meeting was held on December 20, 2023. The meeting sign-in sheet, PowerPoint presentation, and response summary for the public hearing are provided in Attachment 6.

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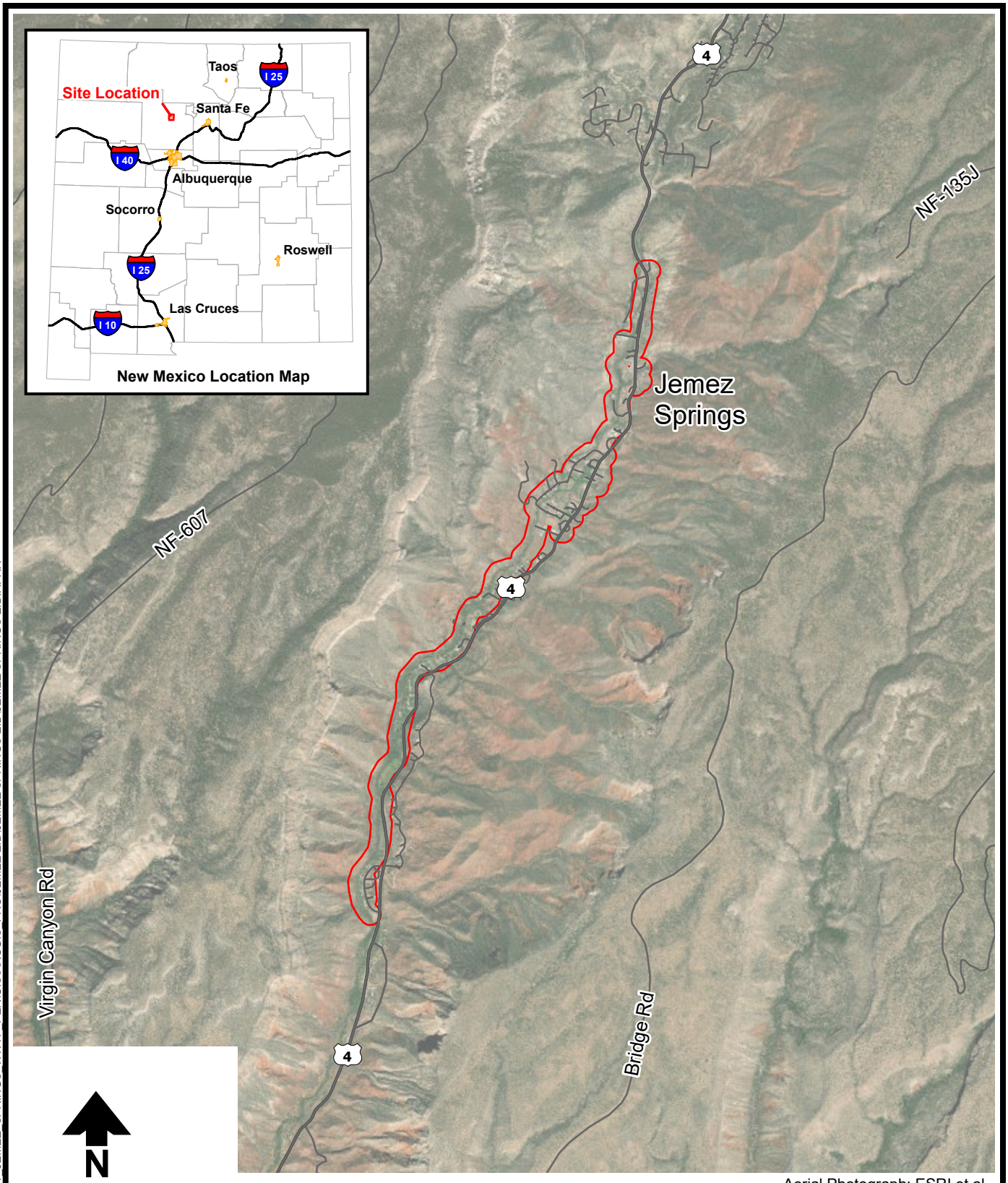
Figures



Aerial Photograph: ESRI et al.

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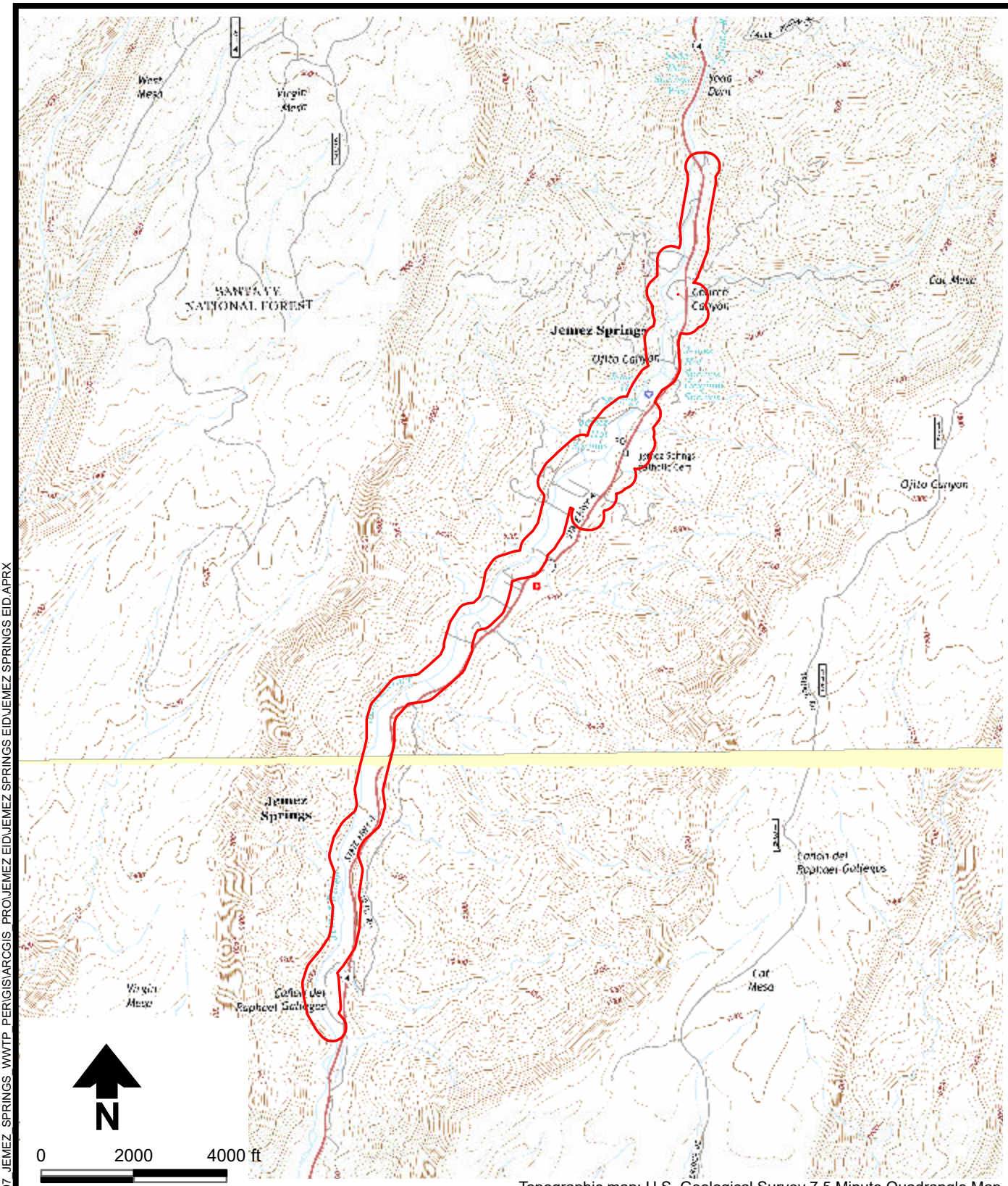
VILLAGE OF JEMEZ SPRINGS
ENVIRONMENTAL INFORMATION DOCUMENT (EID)

Area Map

DBS&A
a Geo-Logic Company

1/4/2024
DB22.2023

Figure A



Explanation

Project area

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

VILLAGE OF JEMEZ SPRINGS
ENVIRONMENTAL INFORMATION DOCUMENT (EID)

Topographic Map

DBS&A
a Geo-Logic Company

1/4/2024
DB22.2023

Figure B

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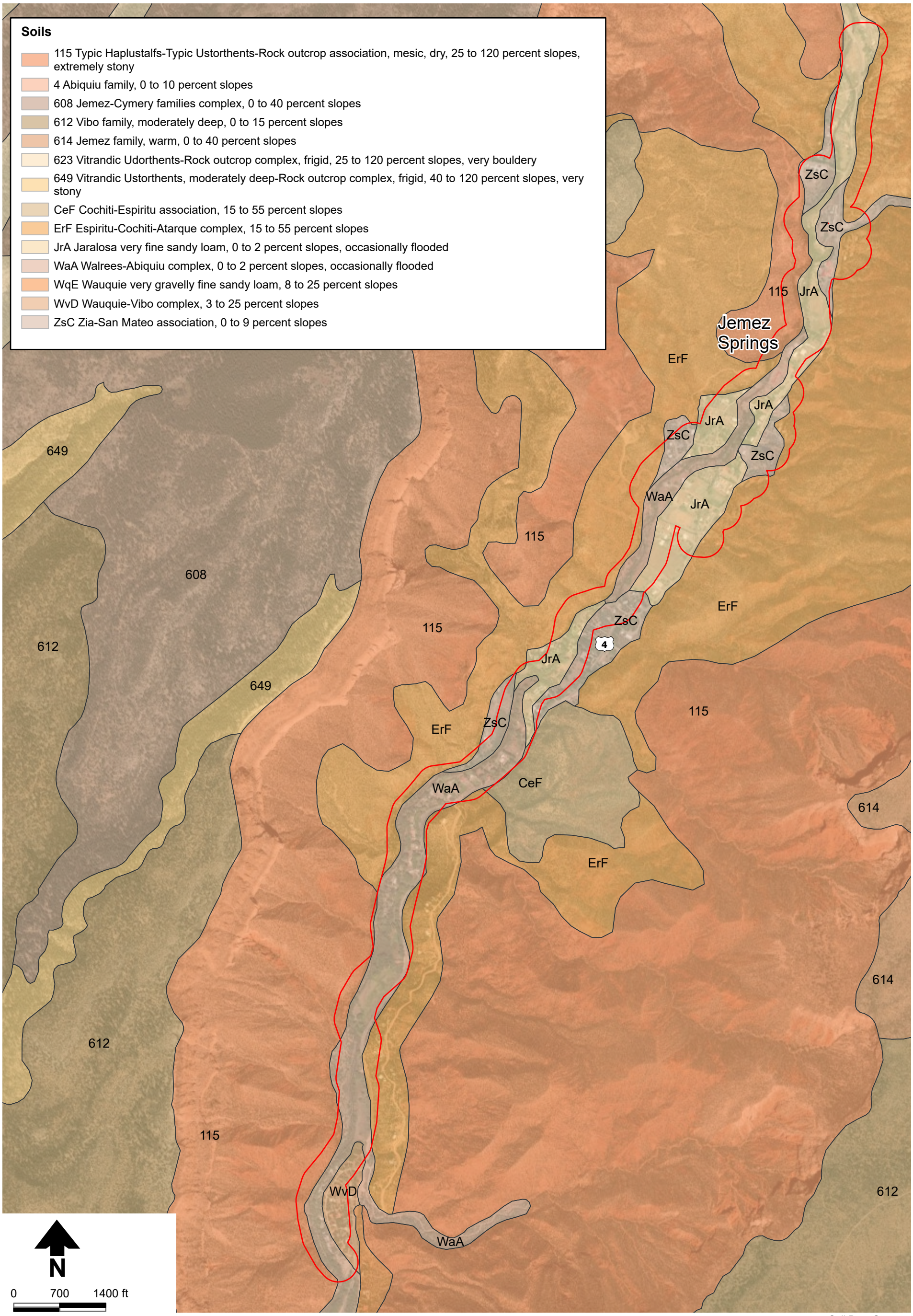

Soil Data Source:
USDA, SSurgo
SSA version est.: 09/08/2022
https://websoilsurvey.sc.egov.usda.gov/
Downloaded December 28, 2022

VILLAGE OF JEMEZ SPRINGS
ENVIRONMENTAL INFORMATION DOCUMENT (EID)
Soils

Figure C

DBS&A
a Geo-Logic Company

1/4/2024 DB22.2023

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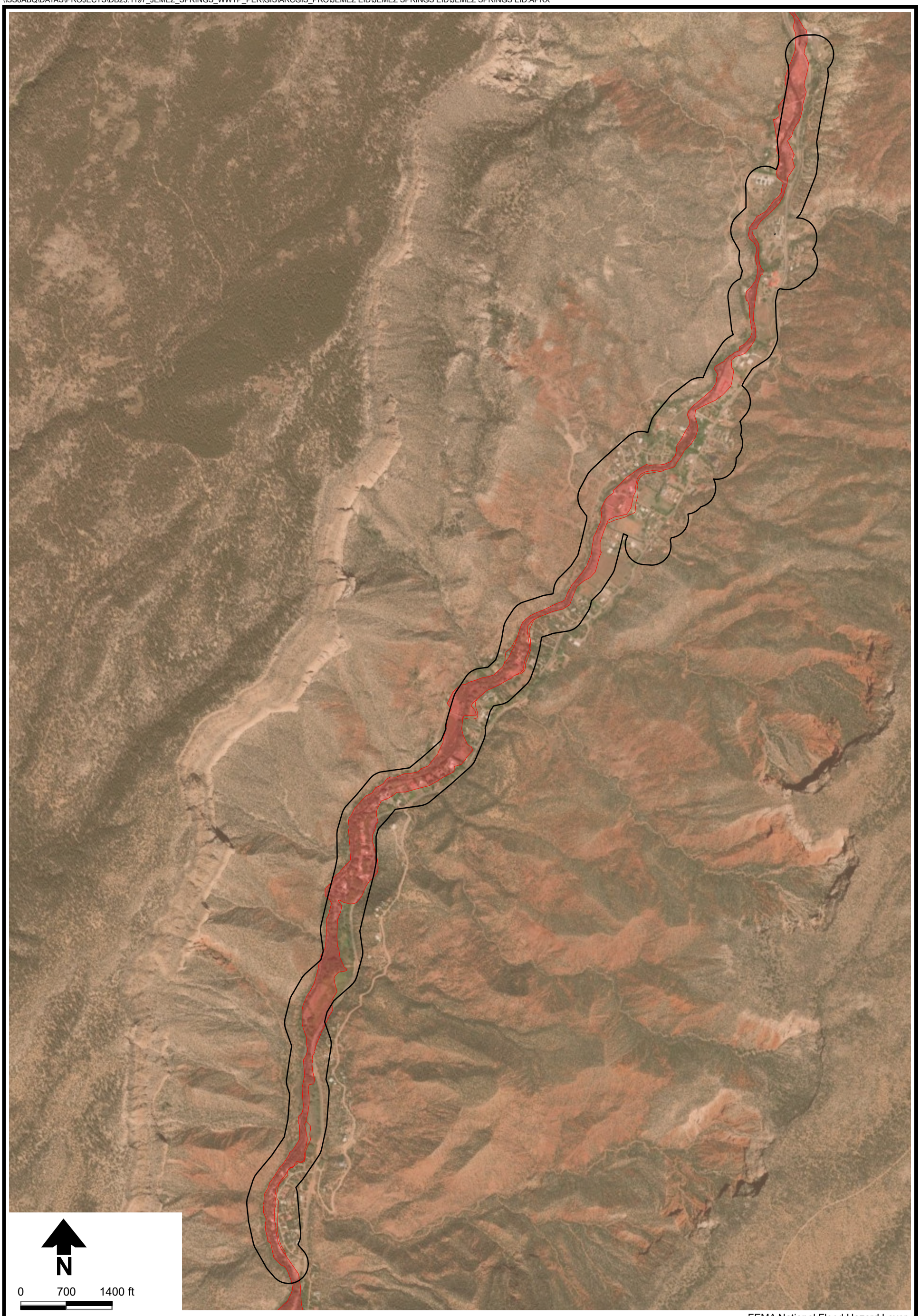


Explanation

Project area

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

X 500 year flood

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

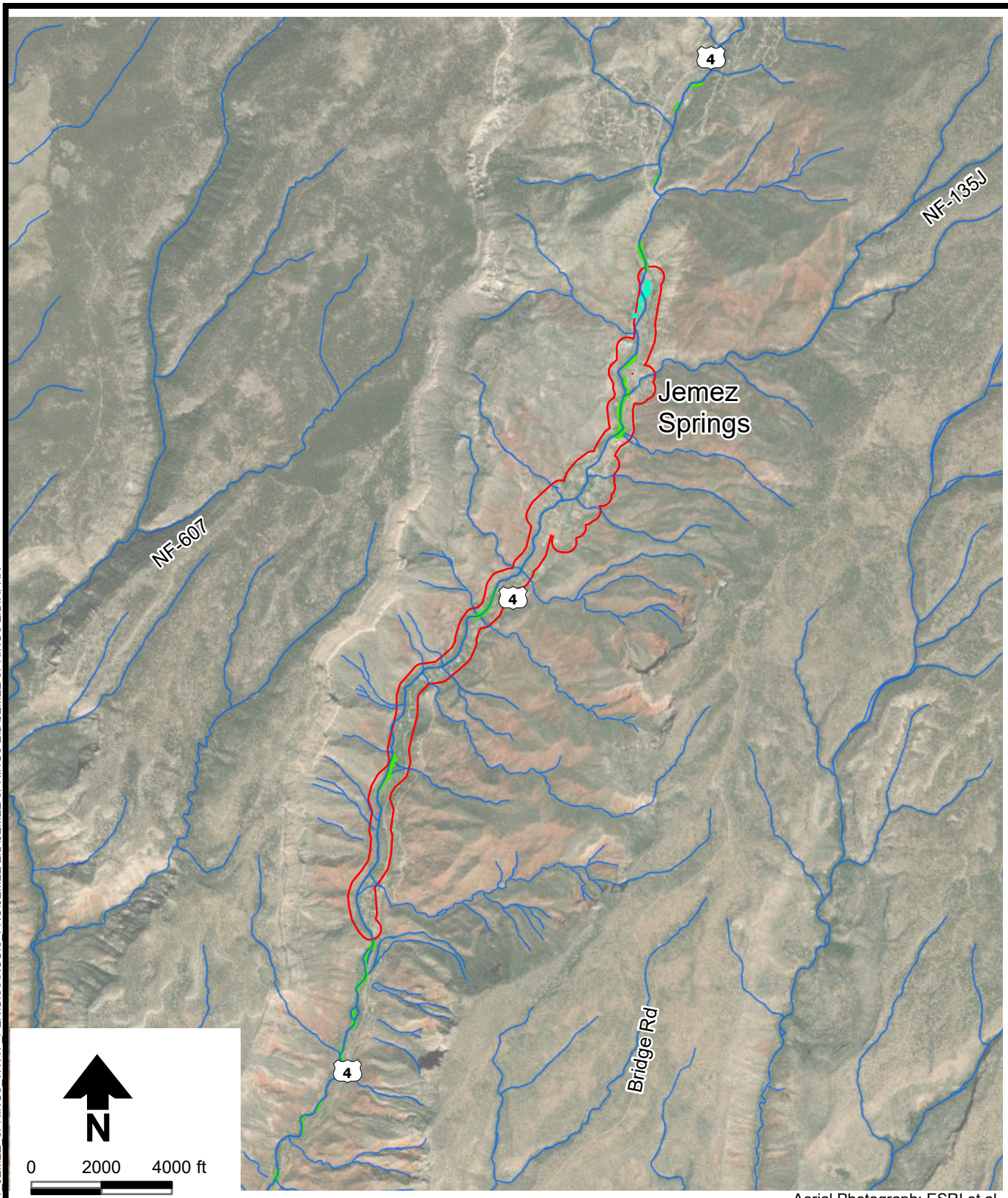
Figure D

DBS&A
a Geo-Logic Company

1/4/2024 DB22.2023

VILLAGE OF JEMEZ SPRINGS
ENVIRONMENTAL INFORMATION DOCUMENT (EID)

Floodplains



Aerial Photograph: ESRI et al.

Explanation

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

VILLAGE OF JEMEZ SPRINGS
ENVIRONMENTAL INFORMATION DOCUMENT (EID)

Wetlands

DBS&A
a Geo-Logic Company

1/4/2024
DB22.2023

Figure E

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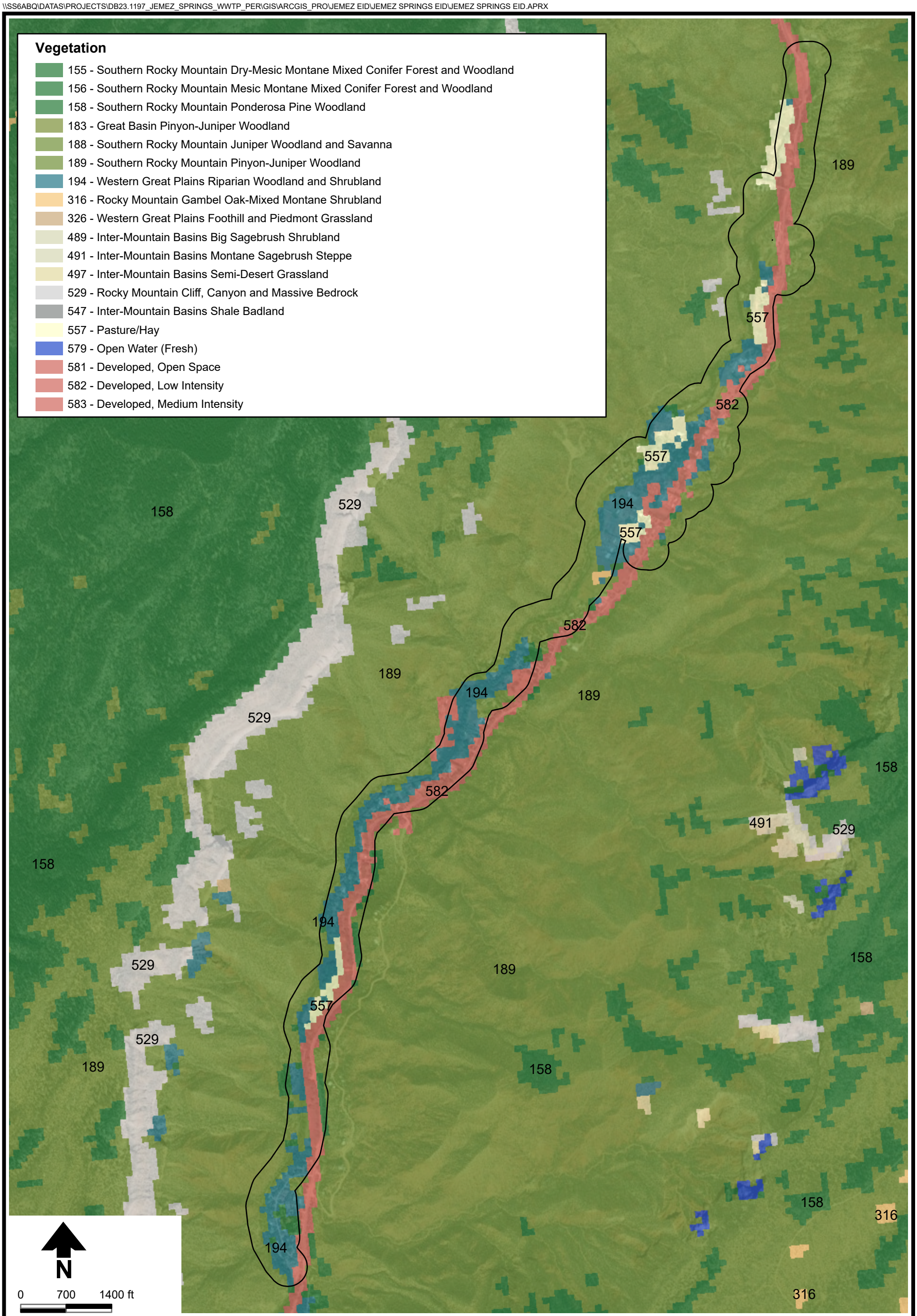

Landcover source: United States Geological Survey(USGS)
Gap Analysis Project
https://www.usgs.gov/programs/gap-analysis-project
Accessed: September 22, 2023

VILLAGE OF JEMEZ SPRINGS
ENVIRONMENTAL INFORMATION DOCUMENT (EID)

Vegetation

Figure F

DBS&A
a Geo-Logic Company

1/4/2024 DB22.2023

Tables

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

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

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

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

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

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

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

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

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

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

Table 2. State-Listed Species Identified for Project Area
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Species Category	Species	Status	Habitat Associations	Potential for Presence in Project Area
Birds (cont.)	Broad-billed hummingbird (*Cynanthus latirostris*)	ST	In New Mexico, the broad-billed hummingbird is local and uncommon. It is a regular summer resident only in the southwest corner of the state within Guadalupe Canyon; otherwise, vagrant occurrences have been documented at a select few locations around the state including Bandelier National Monument (Sandoval Co.) and as an accidental transient in residential/developed areas. It prefers riparian woodlands at low to moderate elevations.	Unlikely to occur. The nearest known location to the Project Area is Bandelier National Monument, far outside of the Project Area.
	Whooping crane (*Grus americana*)	SE	In New Mexico, whooping cranes occupy desert riparian deciduous woodland, marsh woodlands, especially of cottonwoods, that occur where desert streams provide sufficient moisture for a narrow band of trees and shrubs along the margins. They typically roost with sandhill cranes on sand bars in the Rio Grande. Foraging areas are generally agricultural fields and valley pastures, particularly where there is waste grain or sprouting crops.	Unlikely to occur. The Project Area does not contain agricultural fields or pastures and is far west of the Rio Grande.
	Neotropic cormorant (*Phalacrocorax brasilianus*)	ST	In New Mexico, they are generally found on larger bodies of open water such as reservoirs, where they prey on fish. They nest near or over water in vegetation such as dead snags or trees.	Unlikely to occur. The Project Area does not contain large bodies of open water.

Table 2. State-Listed Species Identified for Project Area
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Species Category	Species	Status	Habitat Associations	Potential for Presence in Project Area
Birds (cont.)	Brown pelican (*pelecanus occidentalis*)	ST	The brown pelican is found along seacoasts, lakes, and rivers. This species is a vagrant to New Mexico, having been verified at Bloomfield (San Juan Co.), Snow Lake (Catron Co.), and Bitter Lake National Wildlife Refuge; there are also records of the species near Cliff (Grant Co.), but is mostly found at large lakes or along major rivers, including in the San Juan, Gila, Rio Grande, and Pecos drainages.	Unlikely to occur. The brown pelican is a vagrant in New Mexico and the Jemez River is not a major river.
	Bald eagle (*Haliaeetus leucocephalus*)	ST	The bald eagle is usually found along seacoasts, lakes, and rivers. Nesting sites are usually isolated high in trees, on cliffs, or on pinnacles. The species is also associated with prairie dog colonies in New Mexico. The bald eagle is rare in New Mexico during the spring, summer and fall but somewhat more abundant during the winter season where it is typically found along major rivers such as the Rio Grande, lakes and reservoirs of the state.	While the Jemez River is a perennial waterway, it is not a major river; therefore, *there is a low potential for occurrence of the bald eagle, but only as a vagrant occurrence.*
	Common black hawk (*Buteogallus anthracinus*)	ST	The black hawk is found within wooded habitat along permanent streams. The species summers primarily at lower elevations in the Gila, San Francisco, and Mimbres drainages, which are key habitat areas.	Unlikely to occur. While there is riparian habitat along the permanent Jemez River, the common black hawk is a rare occurrence in Sandoval County.
	Peregrine falcon (*Falco peregrinus*)	ST	Habitat of the peregrine falcon is primarily located in open wetlands near cliffs. In New Mexico, the breeding territories center on cliffs that are in wooded/forested habitats with large "gulfs" of air nearby in which these predators can forage.	The Jemez River has the potential to provide hunting habitat and there are cliffs beyond the Project Area that may provide nesting habitat. The Project Area is near these areas; therefore, *there is a potential for occurrence of the peregrine falcon, although only as a vagrant occurrence.*

Table 2. State-Listed Species Identified for Project Area
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Species Category	Species	Status	Habitat Associations	Potential for Presence in Project Area
Birds (cont.)	Northern beardless-tyrannulet (*Camptostoma imberbe*)	SE	In the Southwest, the species typically occurs at lower elevations in dense stands of mesquite (*Prosopis* spp.) and associated growth, typically along stream courses. The Northern Beardless-Tyrannulet typically summers in New Mexico, in the southern part of the state in Eddy, Grant, and Hidalgo counties. One individual Northern beardless-tyrannulet was reported one time (date unknown) in Bandelier National Park, located 24 miles east of the Project Area (NPS, 2021)	Unlikely to occur. The Project Area, does not contain mesquite, and is outside the tyrannulet's typical range.
	Southwestern willow flycatcher (*Empidonax traillii extimus*)	SE/FE	Habitat for the southwestern willow flycatcher consists of dense riparian habitats along rivers, streams, or other wetlands where its diet consists primarily of insects. Suitable vegetation includes dense growth of willows (*Salix* spp.), arrow weed (*Pluchea sericea*), alder (*Alnus* spp.) saltcedar (*Tamarix ramosissima*), and other riparian vegetation.	Unlikely to occur. The Project Area contains riparian vegetation; however, the few areas of wetlands in the area are confined to the Jemez River corridor and are outside of the Project Area. The nearest critical habitat is within segments of the Rio Grande, approximately 32 miles northeast of the Project Area.
	Bell's vireo (*Vireo bellii*)	ST	Bell's Vireo use broad-leafed plants in the Midwest and narrow-leafed riparian plants in the Southwest. Within New Mexico, Bell's Vireo is locally distributed across the southern third of the state (Hubbard 1978). It breeds in riparian areas, typically nesting in low, shrubby vegetation such as willow, mesquite, and tamarisk (NMDGF, 2020). One individual Bell's vireo was reported one time (date unknown) in Bandelier National Park, located 24 miles east of the Project Area (NPS, 2021)	Unlikely to occur. The Project Area is not within the local distribution of the southern third of the state and does not contain mesquite or seepwillows.

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

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

Table 2. State-Listed Species Identified for Project Area
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Species Category	Species	Status	Habitat Associations	Potential for Presence in Project Area
Mammals (cont.)	New Mexico meadow jumping mouse (*Zapus luteus luteus*)	SE/FE	The New Mexico meadow jumping mouse is a habitat specialist using persistent emergent herbaceous wetlands and scrub-shrub wetlands on wet soil along perennial streams. Also uses patches of herbaceous vegetation dominated by sedges along water edges within willow and alder dominated habitats.	Unlikely to occur. The wetlands in the area are confined to the Jemez River corridor and are outside of the Project Area. The Project Area does not contain emergent herbaceous wetlands, scrub-shrub wetlands, or willow and alder habitat containing sedges. There is critical habitat for the New Mexico meadow jumping mouse located upstream along the San Antonio Creek, a tributary of the Jemez River. The southern end of the habitat is approximately 9.5 miles upstream from Jemez Springs.

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

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

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

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

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

Source: U.S. EPA, 2023

Attachment 1

Trenching Guidelines

DBS&A
a Geo-Logic Company

HABITAT HANDBOOK

ABOUT

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

The author of this Handbook is Mark Watson.

ERT for NM

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

EEP DIVISION

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

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Conservation Measures to Avoid Mortality of Wildlife from Trenching Operations

2022

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

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

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

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

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

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

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

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

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

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

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

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

High Priority Species Consideration

Dunes Sagebrush Lizard (*Sceloporus arenicolus*)

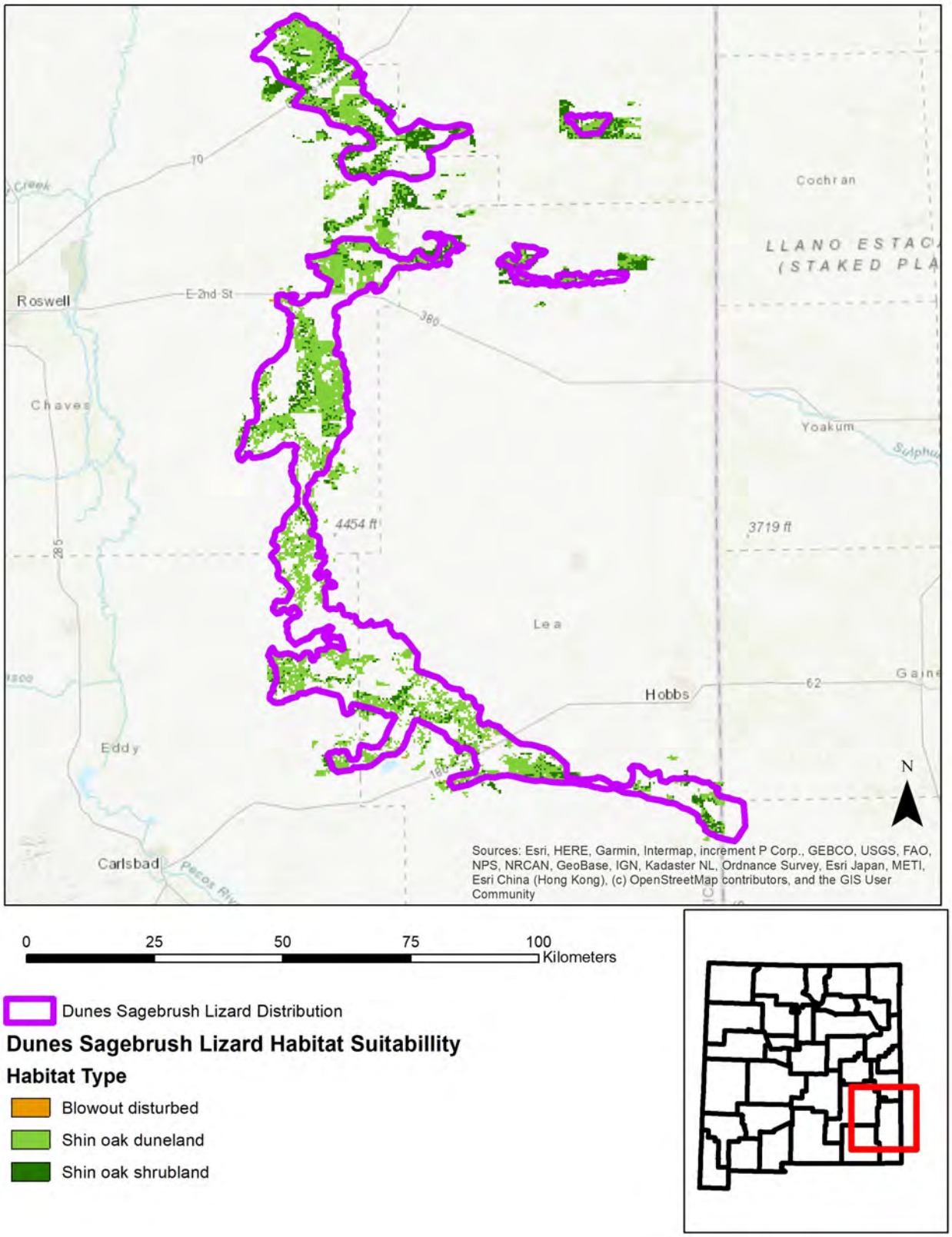
The dunes sagebrush lizard (*Sceloporus arenicolus*; DSL; see photo below) is a state endangered and narrowly-endemic species that only occurs in a narrow arc of sand dune-shinnery oak habitat in southeastern New Mexico and west Texas (see Map 1 below). The surface activity period for the DSL is late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

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

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

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

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



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

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

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

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

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

Attachment 2

Threatened and Endangered Species

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United States Department of the Interior

FISH AND WILDLIFE SERVICE
New Mexico Ecological Services Field Office
2105 Osuna Road Ne
Albuquerque, NM 87113-1001
Phone: (505) 346-2525 Fax: (505) 346-2542

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

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

To Whom It May Concern:

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

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

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

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

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

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

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

Candidate Species and Other Sensitive Species

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

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

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

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

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

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

WETLANDS AND FLOODPLAINS

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

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

MIGRATORY BIRDS

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

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

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

regarding the implementation of Executive Order 13186.

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

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

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

Attachment(s):

- Official Species List

OFFICIAL SPECIES LIST

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

This species list is provided by:

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

PROJECT SUMMARY

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

Project Location:

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

Counties: Sandoval County, New Mexico

ENDANGERED SPECIES ACT SPECIES

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

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

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

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

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

MAMMALS

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

BIRDS

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

AMPHIBIANS

NAME	STATUS
Jemez Mountains Salamander *Plethodon neomexicanus*	Endangered

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

FISHES

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

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

NAME	STATUS
Rio Grande Silvery Minnow *Hybognathus amarus*	Endangered

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

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus*	Candidate

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

CRITICAL HABITATS

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

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

IPAC USER CONTACT INFORMATION

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

LEAD AGENCY CONTACT INFORMATION

Lead Agency: New Mexico Environment Department

Federal or State Threatened/Endangered Species
Sandoval

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

TOTAL SPECIES: 25

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

Federal or State Threatened/Endangered Species
Sandoval

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

Attachment 3

Cultural Resource Report

DBS&A
a Geo-Logic Company

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

PREPARED FOR
Daniel B. Stephens and Associates

PREPARED BY
Okun Consulting Solutions

NOVEMBER 2023

Okun Consulting Solutions

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

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

Project Description

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

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

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

Cultural Resource Regulatory Background

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

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

Historical Background

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

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

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

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

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

Record Search Results

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Summary and Recommendations

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

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

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

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

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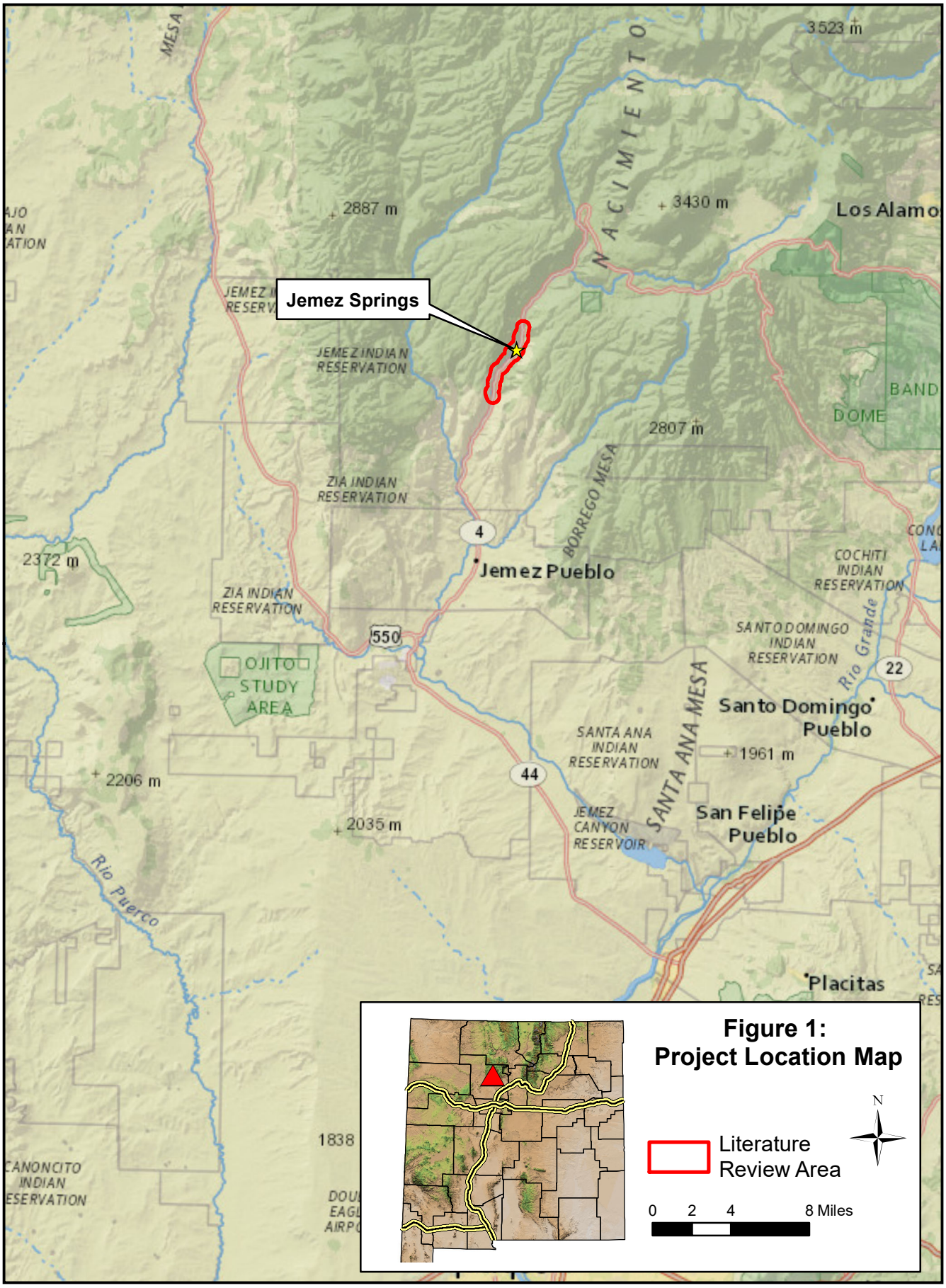
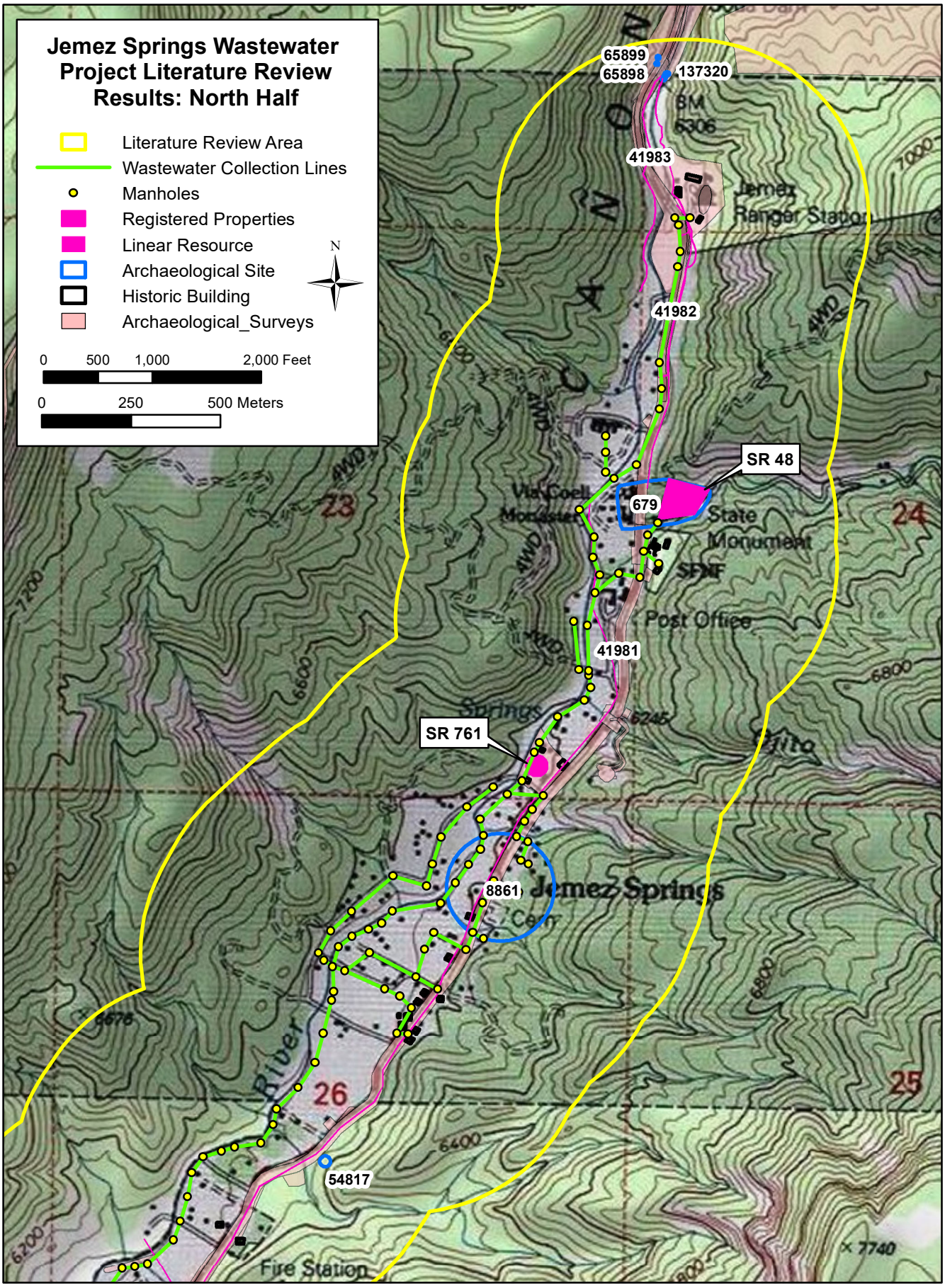
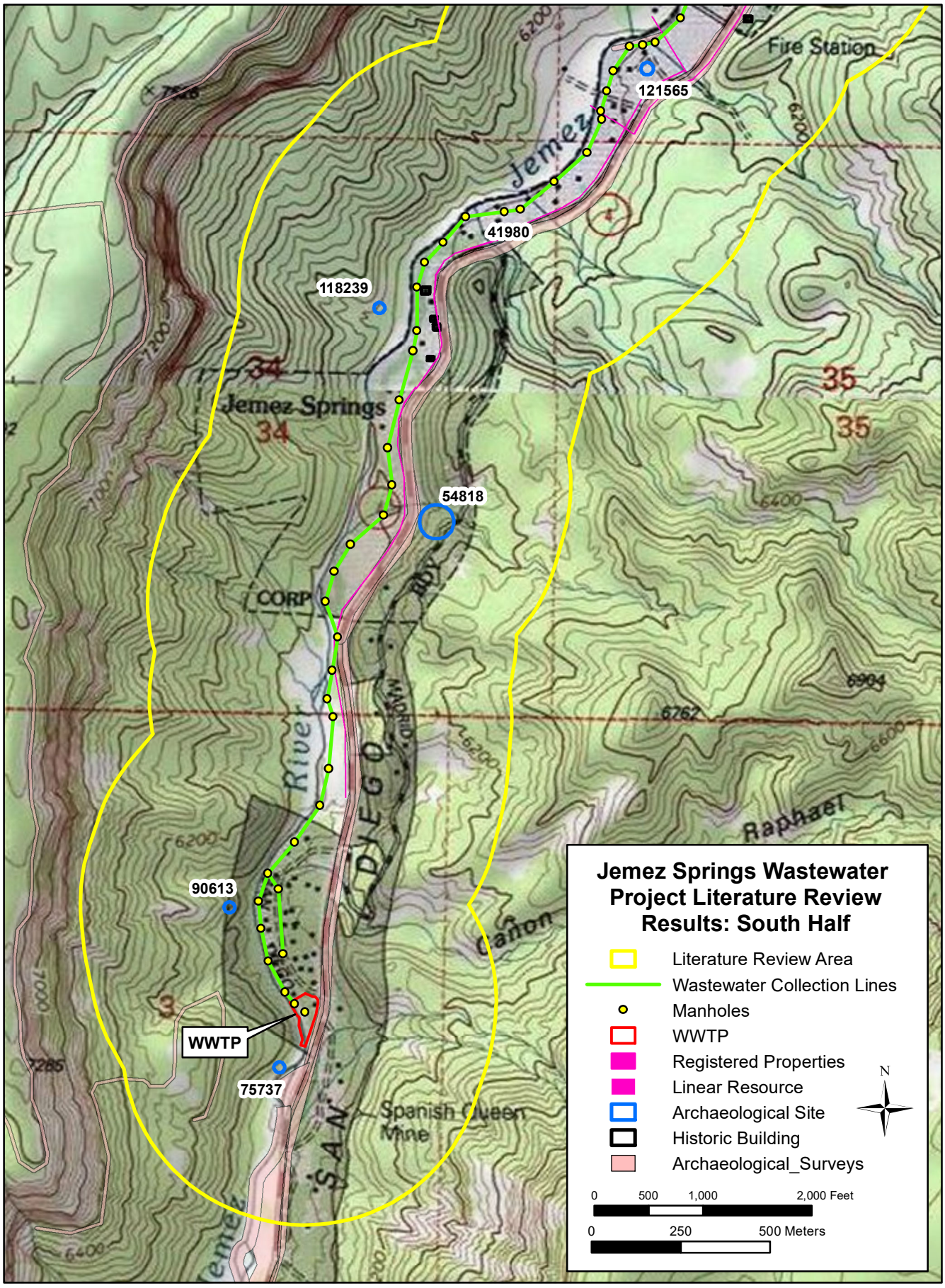
Threinen, Ellen
1980 *The Jemez Hot Springs Mineral Bath House*. National Register of Historic Places Inventory Nomination Form. On File at the Laboratory of Anthropology and NMCRIS. Santa Fe.


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


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


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

Okun Consulting Solutions

Attachment 4

Environmental Justice Report

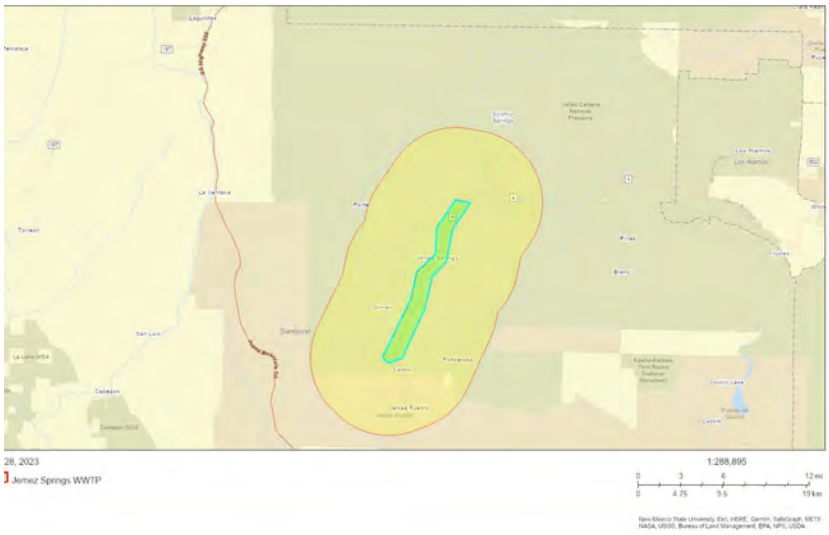
DBS&A
a Geo-Logic Company

EJScreen Community Report

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

Sandoval County, NM

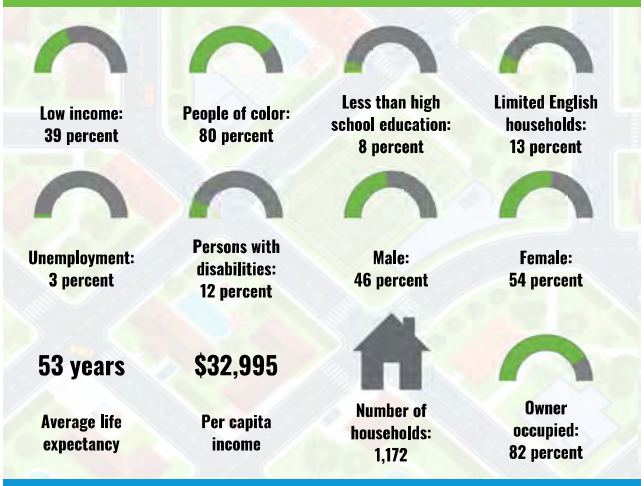
5 miles Ring around the Area
Population: 3,870
Area in square miles: 226.29



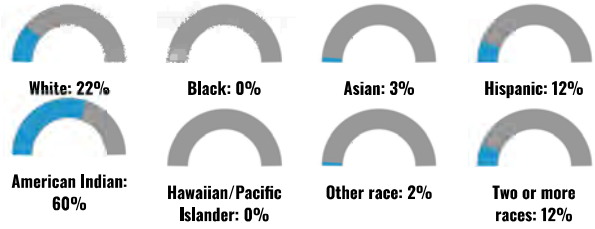
LANGUAGES SPOKEN AT HOME

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

COMMUNITY INFORMATION



BREAKDOWN BY RACE



BREAKDOWN BY AGE

LIMITED ENGLISH SPEAKING BREAKDOWN

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

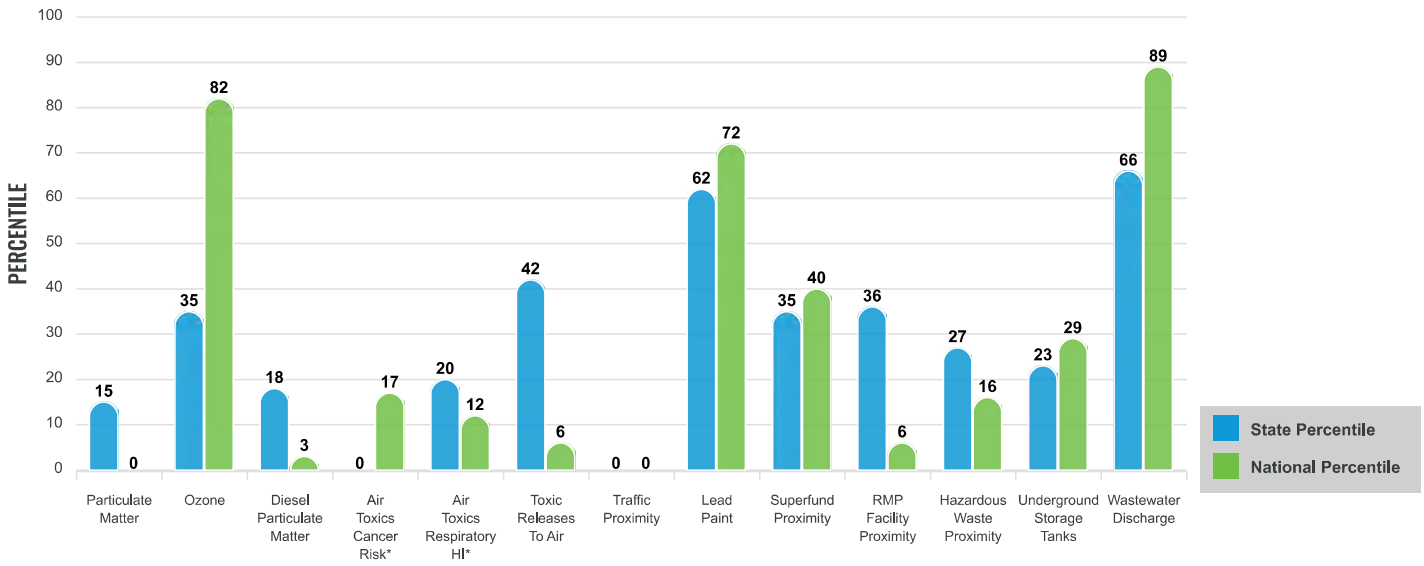
Environmental Justice & Supplemental Indexes

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

EJ INDEXES

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

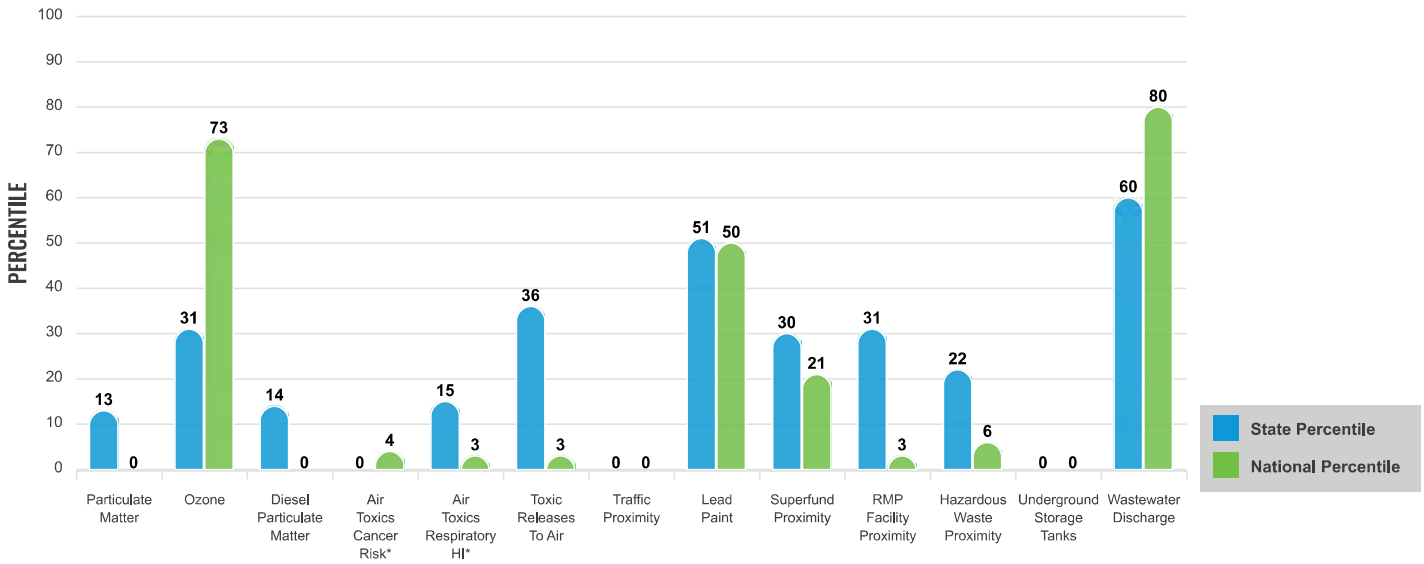
EJ INDEXES FOR THE SELECTED LOCATION



SUPPLEMENTAL INDEXES

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

SUPPLEMENTAL INDEXES FOR THE SELECTED LOCATION



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

Report for 5 miles Ring around the Area

EJScreen Environmental and Socioeconomic Indicators Data

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

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

Sites reporting to EPA within defined area:

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

Other community features within defined area:

Schools 6
Hospitals 1
Places of Worship 5

Other environmental data:

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

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

Report for 5 miles Ring around the Area

EJScreen Environmental and Socioeconomic Indicators Data

HEALTH INDICATORS

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

CLIMATE INDICATORS

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

CRITICAL SERVICE GAPS

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

Footnotes

Report for 5 miles Ring around the Area

Attachment 5

Agency Outreach

DBS&A
a Geo-Logic Company

Jemez Springs WWTP EID Consultation Letter Tracking

As of 12/13/2023

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

Jemez Springs WWTP EID Consultation Letter Tracking

As of 12/13/2023

NMED, Air Quality	Donna Intermont, Administrative	10/11/2023	11/14/2023	
	Mike Baca, General Compliance	10/11/2023	11/14/2023	10/16/2023
NMED GWQB	Justin Ball, Bureau Chief	10/11/2023	11/14/2023	
NMED SWQB	Shelly Lemon, Bureau Chief	10/11/2023	11/14/2023	
NMED Drinking Water Bureau	Joe Martinez, Bureau Chief	10/11/2023	11/14/2023	
NMED Petroleum Storage Tank Bureau	Lorena Goerger, Bureau Chief	10/11/2023	11/14/2023	
NMED CPB	Brandon Kalinowski	10/11/2023	11/14/2023	12/13/2023
U.S. Fish and Wildlife		8/8/2023 (IPaC)	NA	
Sandoval County	Joshua Jones, County Commissioner, D5	10/11/2023	11/14/2023	
Floodplain Manager	Diego Gomez, Sandoval County Floodplain Administrator	10/11/2023	11/14/2023	
U.S. Forest Service,	Jeremy Golston, Jemez Ranger District	10/11/2023	11/14/2023	
Village of Jemez Springs	Roger Sweet, Mayor	10/11/2023	11/14/2023	
NM Department of Game and Fish, Ecological and Environmental Planning Division	Jack Marchetti, Aquatic/Riparian Habitat Specialist	10/11/2023	NA	10/16/2023

Jemez Springs WWTP EID Consultation Letter Tracking

As of 12/13/2023

NM Department of Cultural Affairs	Marlon Magdalena	10/11/2023	11/14/2023	
Valles Caldera Visitor Center	Ranger Sierra	10/11/2023	11/14/2023	
State Representative, District 43	Christine Chandler	12/13/2023		
Tribal Consultations Conducted by NMED				1/8/2024**

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

**Response received by Pueblo of Santa Ana

DBS&A
a Geo-Logic Company

October 11, 2023

Re: Jemez Springs Wastewater Treatment Plant Upgrades

Dear Agency Representative:

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

Background

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

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

Proposed Project

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

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

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

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

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

Purpose and Need

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

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

Providing Input

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

Sincerely,

DANIEL B. STEPHENS & ASSOCIATES, INC.

Julie Kutz
Biologist

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

ROGER SWEET
Mayor

DAVID RYAN
Mayor Pro-Tem

VILLAGE OF JEMEZ SPRINGS
Municipal Office

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

MANOLITO SANCHEZ
Trustee
BOB WILSON
Trustee
MONIQUE ALTON
Trustee

November 13, 2023

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

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

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

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

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

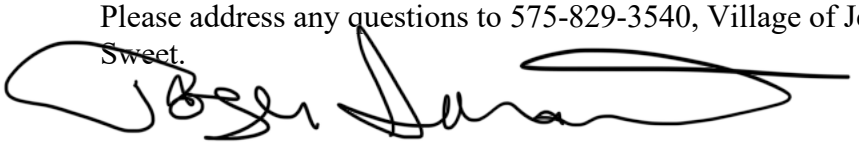
Okun Consulting Solutions (OCS) conducted a cultural resource desktop review and record search to assist the Village with cultural resource planning and compliance as it implements improvements to its wastewater system, and a report summarizing this review is attached. The purpose of this desktop review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

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

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

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

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



Sincerely,
Roger Sweet, Mayor
Village of Jemez Springs

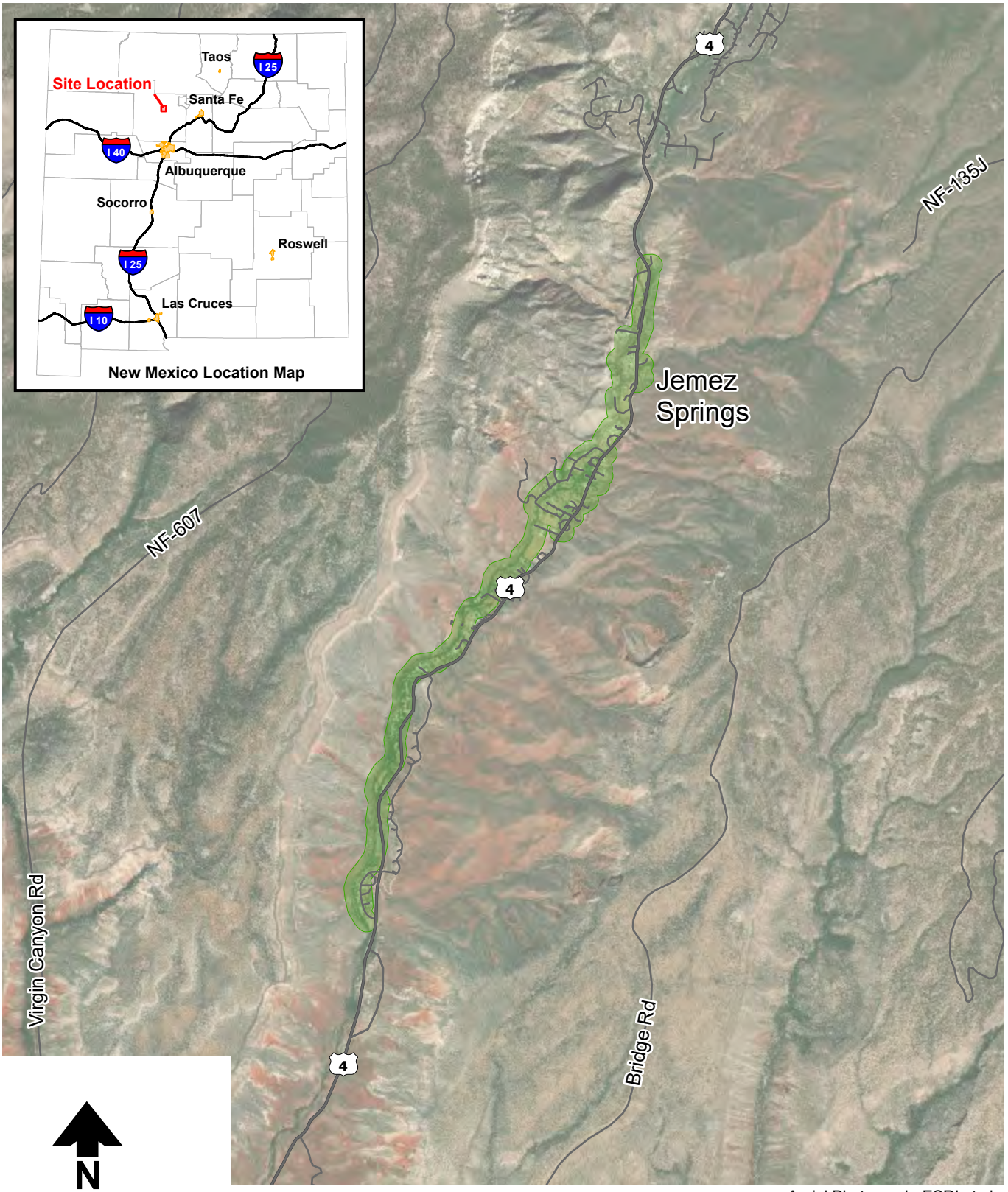
CONCURRENCE:

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

COMMENTS:

_____
_____
_____
_____
_____

Enclosures: Literature Review Summary Report



Aerial Photograph: ESRI et al.

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DBS&A
a Geo-Logic Company

9/22/2023

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VILLAGE OF JEMEZ SPRINGS
WASTEWATER SYSTEM PER

Project Area

Figure 1

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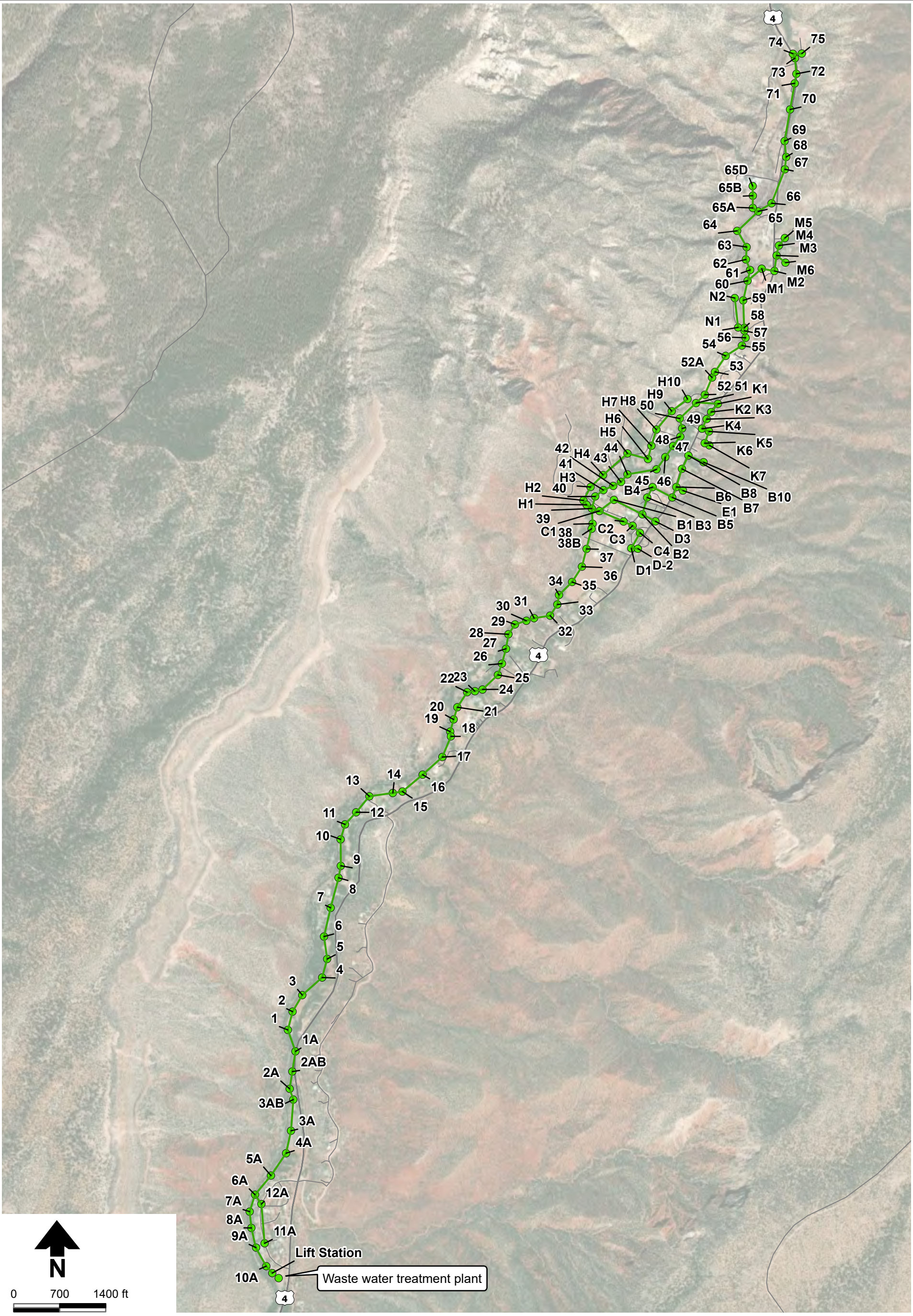

Aerial Photograph: ESRI et al.

Explanation

- Sanitary Sewer Line
- Sanitary Sewer Manhole

Figure 2

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9/22/2023 DB23_1197

VILLAGE OF JEMEZ SPRINGS
WASTEWATER SYSTEM PER

Jemez Springs Existing Wastewater System

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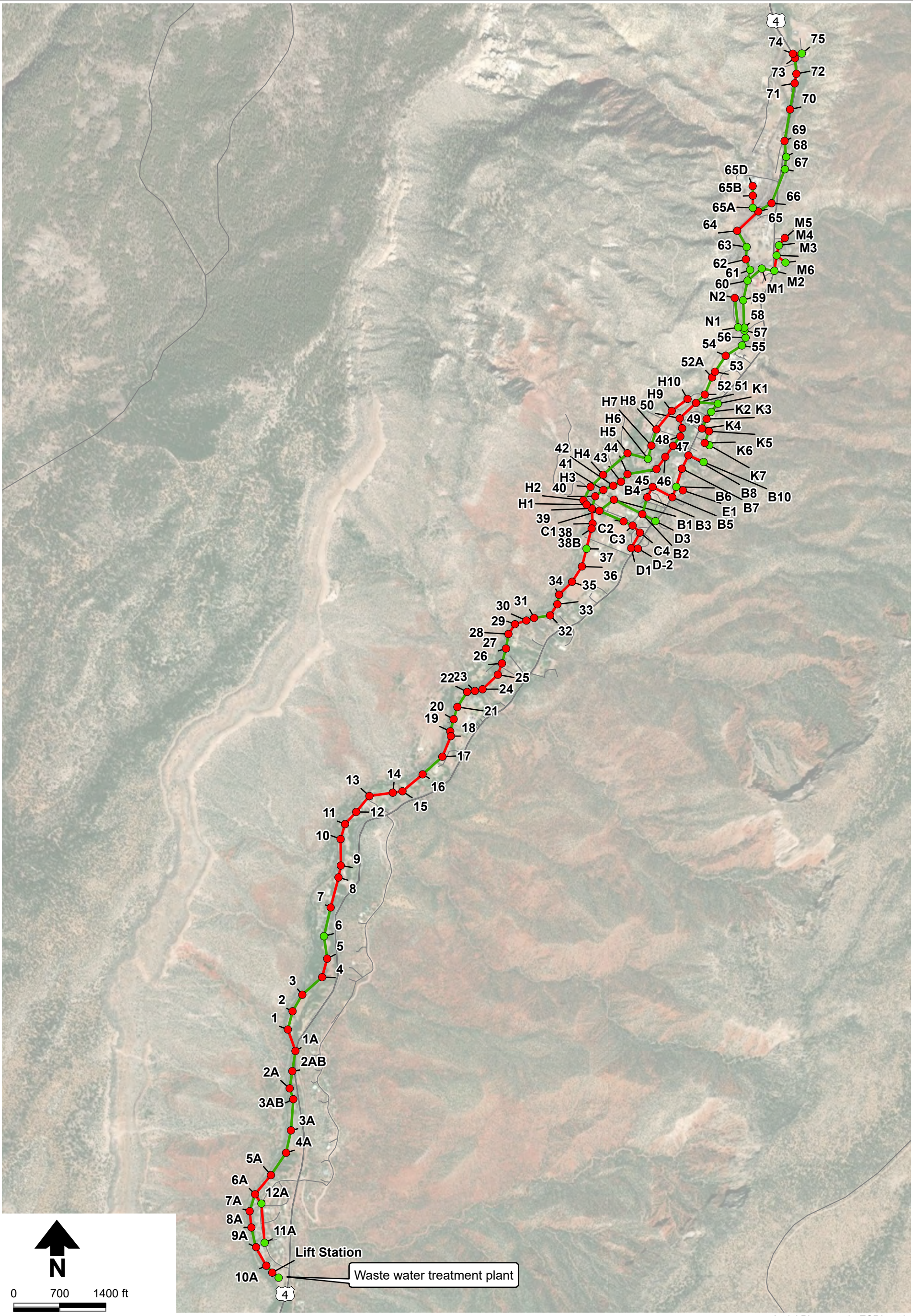

Aerial Photograph: ESRI et al.

Explanation

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

Figure 4

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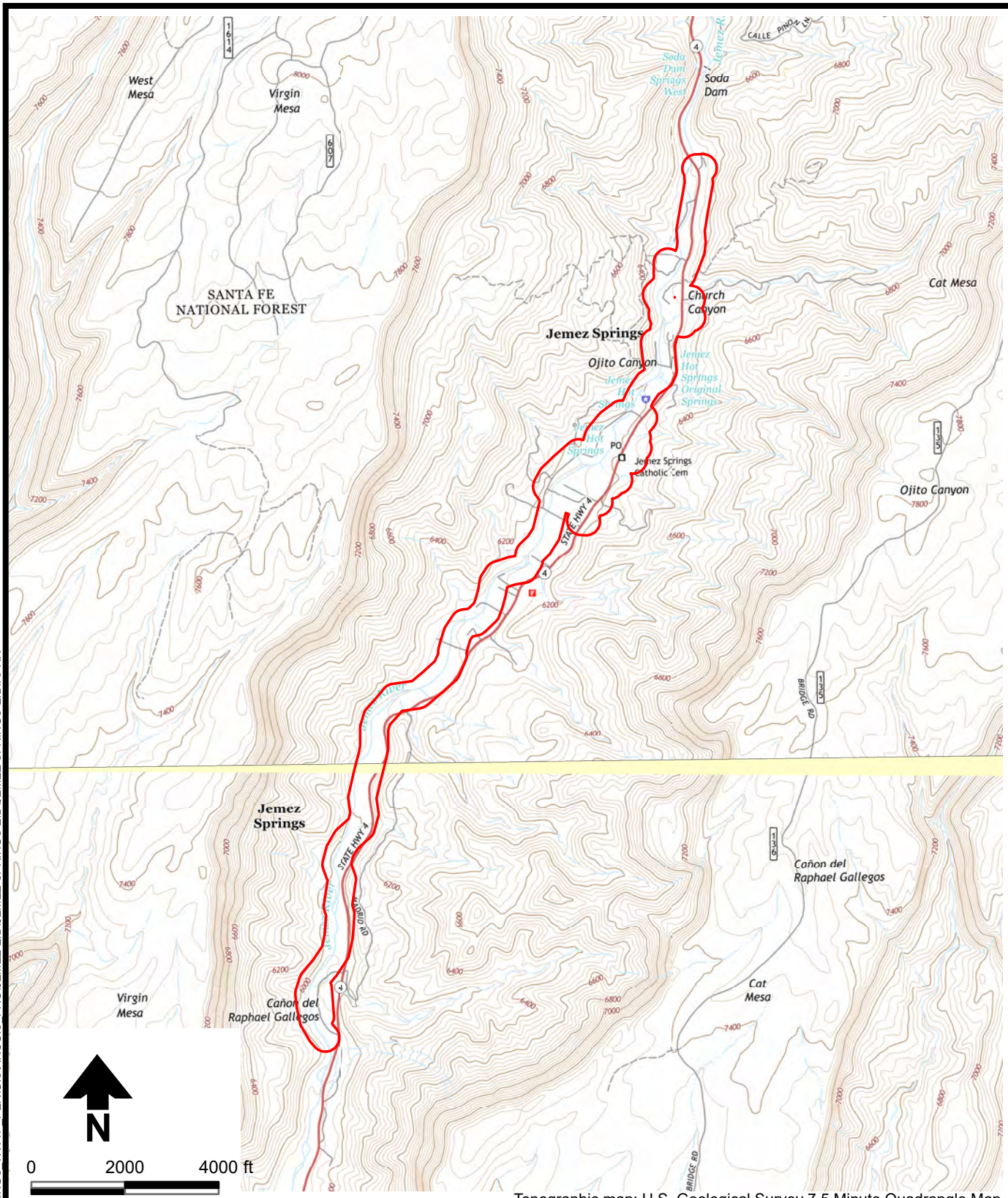
VILLAGE OF JEMEZ SPRINGS
WASTEWATER SYSTEM PER

Collection Alternative 2: Rehabilitate Critical Areas



Explanation

Project area

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

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9/25/2023
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VILLAGE OF JEMEZ SPRINGS
ENVIRONMENTAL INFORMATION DOCUMENT (EID)

Topographic Map

Figure 7

Project Summary

Background

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

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

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

Project Area Description

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

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

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

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

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

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

Proposed Project (Recommended Alternative)

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

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

Design Details

The Proposed Project includes the following:

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

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

Responsiveness Summary
Agency Outreach
Jemez Springs Wastewater System EID

All agency comments received, including attachments, are provided in Attachment 5.

Comments received from agencies are summarized in this document.

New Mexico Department of Game and Fish:

- No potential for Rio Grande cutthroat trout in the Jemez River at the elevation of the Village.
- Due to construction activities and handling of wastewater and sludge occurring near the Jemez River, the Department recommends implementing a Stormwater Pollution Prevention Plan (SWPPP) to contain potential pollutants. Construction areas and other impervious surfaces can have significant impacts on surface waters by increasing the amount of sediment and other pollutants that are washed into surface waters, increasing the velocity and volume of water, and reducing infiltration into groundwater. Reducing the amount of impervious surfaces and phasing construction will reduce these impacts.
- Divert water around construction site whenever possible.
- Preserve natural areas within the project site. Strive to maintain the natural drainage system of the site, including natural stream channels, wetlands, and floodplains. Design, construct, and maintain the site to protect (or restore) the natural hydrology.
- Following construction, disturbed areas should be re-vegetated using native species that approximate pre-disturbance plant community composition or native plant communities appropriate for the site, including from a region that represents potential future climatic conditions at the site, whichever is more beneficial to wildlife. Short-term erosion control seed mixes are available for temporary control of surface erosion during project implementation; native mixes should be used for temporary as well as permanent erosion control. Native plants and materials should also be used for landscaping. All seed mixtures should be certified as weed-free. New Mexico grass ecotypes for commercial seeding are available through the Los Lunas Plant Materials Center and New Mexico State University. Seeding guidelines are available from the Natural Resources Conservation Service and the Colorado Natural Areas Program.

- Maintain a vegetated buffer zone along all watercourses, including ephemeral arroyos, sufficient to minimize erosion and sediment delivery. Use properly engineered drainage swales and other vegetated channel systems instead of storm sewers, lined channels, curbs, and gutters. Vegetated swales should be gently sloped (4:1) so that small wildlife is able to maneuver them.
- Efforts should be made during construction to minimize impacts on vegetative communities. Existing roads and rights-of-way should be used for all transportation. Off-road driving should be avoided. Staging areas should be located in previously disturbed sites, where possible, and kept as small as possible.
- Open trenches excavated for underground water or sewer pipelines, powerlines, or fiber optic communication lines can unintentionally entrap and cause the unnecessary mortality of amphibians, reptiles, and small mammals, and can cause injury to large mammals. Trapped animals can die from exposure, starvation, crushing from pipe-laying, entombment from trenching backfilling, drowning, and predation. This unnecessary wildlife mortality can be avoided by implementing conservation measures, including (1) concurrent trenching, pipe-laying, and backfilling operations to minimize the amount of trench left open overnight or longer, (2) construction escape ramps, and (3) employing biological monitors to remove trapped animals. Periods of highest activity for amphibians and reptiles vulnerable to entrapment include summer months and wet weather, and they can be active both day and night. Small mammals subject to entrapment are active year-round and generally most active at night. Implementing the general trenching conservation measures outlined in the Department's Trenching Project Guidelines will help minimize unnecessary mortality of wildlife.
- Whenever possible, locate trenching activities within previously disturbed areas, such as existing road or pipeline right-of-ways. To the extent possible, avoid trenching in undisturbed habitat. Trench during the cooler months (October–March). Use concurrent trenching, pipe- or cable-laying, and backfilling. Keep trenching, pipe- or cable-laying, and backfilling crews as close together as possible to minimize the amount of open trench at any given time. When trenching activities are temporarily halted (e.g., overnight, weekends, holidays, weather shutdowns), protect wildlife from accessing any open trench between digging and backfilling operations by using one or more of the methods described below. Avoid leaving trenches open overnight. When trenches cannot be backfilled immediately, escape ramps should be constructed at least every 90 meters and preferably 30 meters. Escape ramps can be constructed parallel or perpendicular to the existing trench. The

escape ramp slope should be less than 45 degrees (1:1). If pipe or cable has been installed but backfilling has not occurred, escape ramps may need to be constructed on both sides of the trench, as, unless the pipe is elevated enough to allow animals to move underneath it, the pipe or cable may block access of amphibians, reptiles, and small mammals to the ramps if only constructed on one side. Trenches that have been left open overnight should be inspected the following day by a qualified biological monitor and trapped animals removed as soon as possible, especially where state- or federally listed threatened or endangered amphibians, reptiles, or small mammals occur. Untrained personnel should not attempt to remove trapped wildlife because of the potential to injure animals and the possibility of injury from venomous snakes. Required tools for removal will include snake tongs for removing snakes and a dip net for capturing and removing amphibians and small mammals. Many animals trapped in a trench will burrow under loose soil. To the extent possible, the biological monitor should disturb loose soil in the trench to uncover and remove trapped animals. Animals should be relocated at least 50 meters away from the open trench in undisturbed habitat. When pipe has been laid in the trench, end caps should be placed on the open end(s) of the pipe to preclude animals from entering. Pipe staged outside the trench should be capped until placed in the trench or checked for wildlife before being placed into the trench.

- Most wildlife can be protected by constructing silt fence completely around the open trench. Silt fence should be supported from sagging by T-posts, rebar, or stakes and buried at the base to preclude animals from moving below the fence. If construction of a silt fence is a required best management practice for erosion control, then, to preclude the need for a biological monitor, escape ramps, and concurrent backfilling, the guidelines for silt fence installation and maintenance in the Trenching Project Guidelines should be followed.
- Management recommendations within areas containing important components of wildlife habitat, including fawning/calving or wintering areas for species such as deer and elk, or general high wildlife movement and activity areas for large mammals may include the following measures.
    - Restrictions on noise-generating activities during wintering and calving/fawning seasons, specific timing of which may vary throughout the state. These activities would include oil and gas well pad development and operations that expose wildlife to loud noises from drilling, compressors, and pumping stations within 400 feet of the source.
    - Modifying fences along high use areas to make them wildlife friendly and facilitate large animal movement.

- Additional coordination and/or consultation may also be necessary under the federal ESA or National Environmental Policy Act (NEPA). Further site-specific mitigation recommendations may be proposed during ESA consultation and/or NEPA analyses or through coordination with affected federal agencies.

U.S. Environmental Protection Agency:

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

U.S. Federal Emergency Management Agency

- We would request that the community Floodplain Administrator be contacted for the review and possible permit requirements for this project. If federally funded, we would request the project maintain compliance with EO11988 & EO 11990 (Contact information provided and request for input sent on 11/11/2023 and 11/14/2023).

New Mexico Department of Transportation

- As the proposed project will require an NMDOT work permit for construction within the NM 4 right-of-way, the Environmental Bureau is interested in reviewing the resource information resulting from your efforts. Please keep us informed as the project progresses.
- The NMDOT environmental certification request form will be required as part of the NMDOT work permit.

U.S. Army Corps of Engineers

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

Tribal Input (consultation conducted by NMED)

Pueblo of Santa Ana

- Pueblo requests additional information on the timing of and access to the area during project construction. The Pueblo uses this area for traditional activities and has concerns.

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

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

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

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

Conserving New Mexico's Wildlife for Future Generations

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

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

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

Julie Kutz
Biologist

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

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

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

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

Dear Ms. Kutz,

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

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

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

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

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

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

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

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

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

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

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

Sincerely,

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

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

Good afternoon,

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

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

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

Thank you,
Julie

Julie Kutz
Biologist

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

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

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

PROJECT INFORMATION

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

REQUESTOR INFORMATION

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

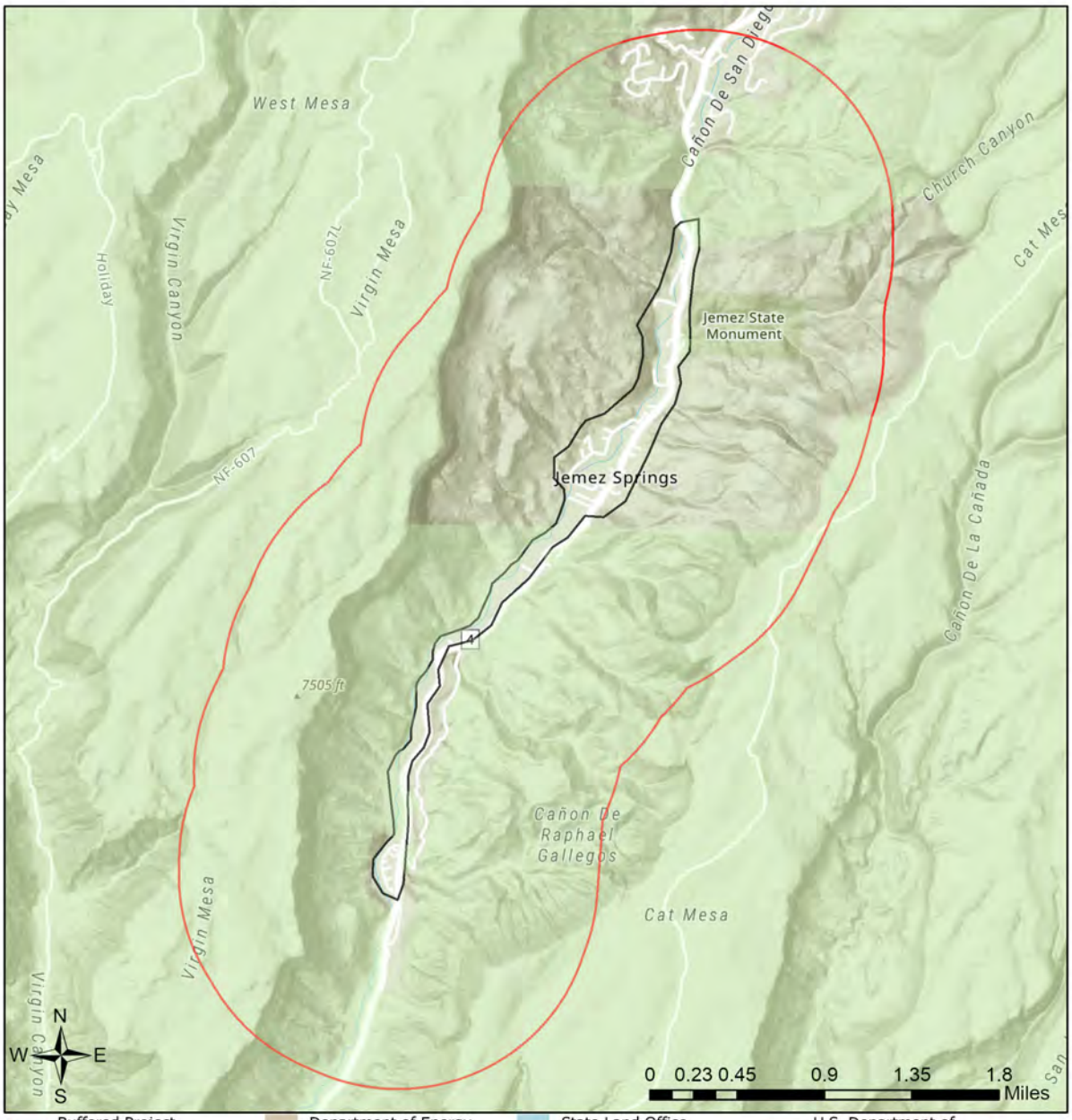
OVERALL STATUS

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

About this report:

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

Jemez Springs Wastewater Treatment Plant Upgrades



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

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

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

Special Status Animal Species Potentially within 1 Miles of Project Area

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

Special Status Animal Species Potentially within 1 Miles of Project Area

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

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

Special Status Plant Species Potentially within 1 Miles of Project Area

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

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

Project Recommendations

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

Disclaimers regarding recommendations:

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

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

Good Morning Ms. Kutz,

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

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

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

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

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

Good afternoon,

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

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

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

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

Thank you,
Julie

Julie Kutz
Biologist

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

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

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

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

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

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

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

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

FEMA

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

RE: Jemez Springs Wastewater Treatment Plant Upgrades

Dear Ms. Kutz,

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

☐ We have no comments to offer.

☒ We offer the following comments:

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

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

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

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

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

Hi Julie,

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

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

Thanks,

Gary

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

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

Good afternoon,

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

Thank you,
Julie

Julie Kutz
Biologist

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

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

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

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

Hi Julie,

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

Again, please contact me if you have any questions.

Thanks,

Gary

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

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

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New Mexico DEPARTMENT OF TRANSPORTATION
MOBILITY FOR EVERYONE

Environmental Certification for Undertakings within NMDOT Rights-of-Way

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

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

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

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

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

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

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

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

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

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

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

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

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

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

14. Include your:

Name/Company:

Phone:

Email:

15. Submit your request to:

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

or:

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

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

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

Good afternoon, Biologist Kurtz,

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

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

Respectfully,

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

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

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

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

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

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

Good morning,

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

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

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

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

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

Good afternoon,

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

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

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

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

NAME: Monica Murrell, THPO
ENTITY: Pueblo of Santa Ana

Jemez Springs Wastewater System Improvement Project

Clean Water State Revolving Loan Fund (CWSRF) Project 116

Acknowledgement

As an official representative for the referenced government, the undersigned acknowledges receipt of this request for comment, and having reviewed the attached project summary and additional information, states:

□ No comment

X Comments (Please describe in the space below or on another sheet of paper and identify whether consultation may be appropriate)

Signature: Monica Murrell Date: 1/10/24

Printed Name: Monica Murrell Title: THPO

Comments: Request additional information on timing of improvements and any potential access restrictions. Pueblo uses this area for traditional activities and has concerns in reference to access and time of year.

Attachment 6

Public Involvement

DBS&A
a Geo-Logic Company

Theodore Greer (theodoregreer.com)

After the Thunder

Arts, Wellness, and the Community of the Jemez Valley

Editor and Publisher: Billy Ehret

Contributors:
Janet Phillips, Theodore Greer, Bill Bergmann,
Momma G, Jerimiah Gorham, Susan Dollenger

PO Box 146 Jemez Springs NM 87025

Editorial/Advertising (917) 450-2334
or billyehret@afterthethunder.com

Subscriptions: $65 for one year (24 issues)
Send name, address, and payment to:
After the Thunder LLC
PO Box 146 Jemez Springs NM 87025

Jemez Valley Residents are Forming a "Watchdog" Group: the Jemez Valley Citizen's Advisory Board

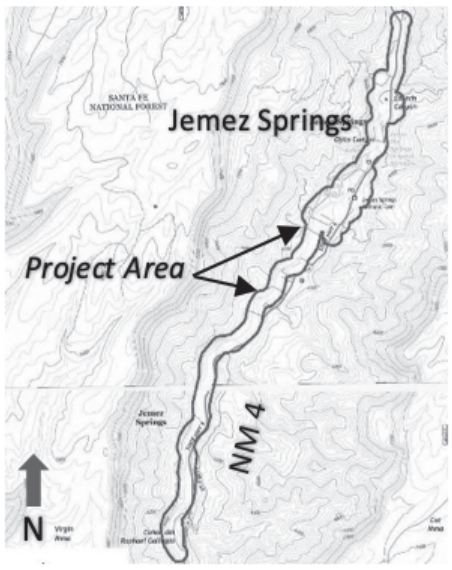
Our Citizen's Advisory Board is a group of people who will meet on a regular basis to provide the Chief of Police and Village Council with advice on a wide range of issues and exchange ideas. With JVCAB, we plan on working with the Chief of Police and Village Council as "Independent Observers", as well as informing the public about events that affect the community, such as the sewer issues in Jemez Springs. The People of the Pueblo of Jemez are extremely affected by these issues; where we may play or fish in the river, they use the river for everyday life.

We're looking for representatives from SLP, La Cueva, Jemez Springs, Cañon, Jemez Pueblo and San Ysidro who would like to participate on the Board.

If you're interested, email erikbeacham@duck.com or gjerimiah@gmail.com (subject: Board) Our motto is: THE POLICE ARE THE PUBLIC, AND THE PUBLIC ARE THE POLICE

PUBLIC MEETING NOTICE

Wastewater System Improvements
Village of Jemez Springs, NM
Wednesday, December 20, 2023
Jemez Springs Bath House
62 Jemez Springs Plaza, Jemez Springs, NM 87025
Presentation & Discussion: 6:00 – 7:30 pm



The Village of Jemez Springs invites you to a public meeting for the proposed Wastewater System Improvements Project, located from north of the Village to the wastewater treatment plant (WWTP).

Public Meeting Purpose: To give the public, area neighbors, and stakeholders the opportunity to learn about the project, ask questions, and provide input.

ADA: To request Americans with Disabilities Act (ADA)-related accommodations for this meeting, contact Rose Fenton, Village of Jemez Springs, at (575) 829-3540 or jswm@jemezsprings-nm.gov at least two days before the public meeting.

Comments: Comments/questions will be accepted and recorded at the meeting, or they can be submitted to jkutz@geologic.com or by phone (505) 353-9103. Please submit comments by January 20, 2024.

Missing Person any Help Appreciated

Ingrid went missing from a trail going north between Jemez Springs and Los Alamos on Sunday, October 15, 2023. She stayed overnight at the Bodhi Manda Zen Center in Jemez Springs, a place that she had been for retreats a number of times, Saturday, October 14, 2023. Sunday morning, she meditated with the group and planned to either go back to ABQ and then onto her position as an intern at Los Alamos National Labs, or go directly to Los Alamos. The next known information was her car was found abandoned on FR 144 11 miles north of HW 126 Wednesday, October 18, 2023. This is a Forest Road which is in between Jemez Springs and Los Alamos. The director at the Bodhi Manda said Ingrid seemed to be in a good frame of mind. Her going for a hike is not out of character. Please call 911.

After the Thunder

Arts, Wellness, and the Community of the Jemez Valley

Editor and Publisher: Billy Ehret

Contributors:
Janet Phillips, Theodore Greer, Bill Bergmann,
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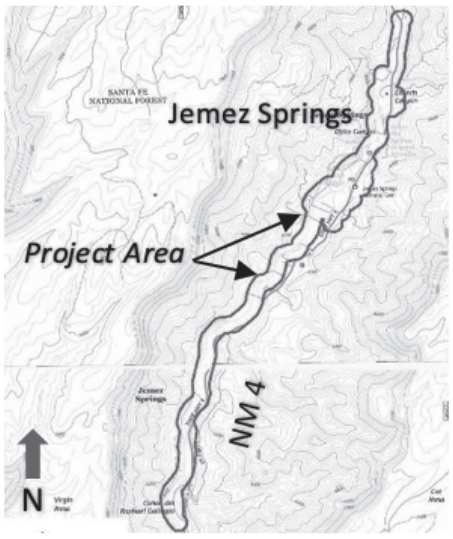

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News from the Friends of Fenton Lake (FOFL)

The November FOFL meeting will be held on 11/19 at the Jemez Mountain Baptist Church in La Cueva at 6:30 PM. All are welcome – come join us.

The lake fished well during the FOFL fishing derby last month, and as water temps drop fish will be actively feeding in preparation for winter. Stocking of the lake typically wanes a bit in late November, but so does the fishing pressure. This is a good time to hike around the lake on the Hal Baxter trail – but be sure to dress up for the weather!

Continued from Front Page

property. Overgrowth and rough terrain make it difficult for heavy equipment to access the manholes to service the collection lines.

The mayor, trustees, and wastewater treatment personnel continue to monitor the situation, actively working to address the root cause of the overflow. Funding is continuing to be sought to remedy ongoing collection line and treatment plant issues identified during this incident and during last spring's flood.

Mayor Sweet credited volunteers for much of the success in resolving the overflow incident. "Through the generous donation of time by various professionals, we were able to diagnose the problem, remediate the blockage and build an access road to the site for future necessary repairs. Their work helped us move forward without further impacting our village finances. Thanks to everyone who helped resolve this problem as quickly as possible, especially over the Thanksgiving holiday. Your assistance was instrumental in helping us protect the environment."

On December 20, Village leadership will hear the preliminary engineering report from wastewater specialists, Daniel B. Stevens & Associates, engaged by the Village earlier this year. Their report will identify weaknesses in the wastewater system and recommend courses of action. The meeting will be held at the Bath House at 6 p.m. and the public is encouraged to attend.

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Village of Jemez Springs, NM
Wednesday, December 20, 2023

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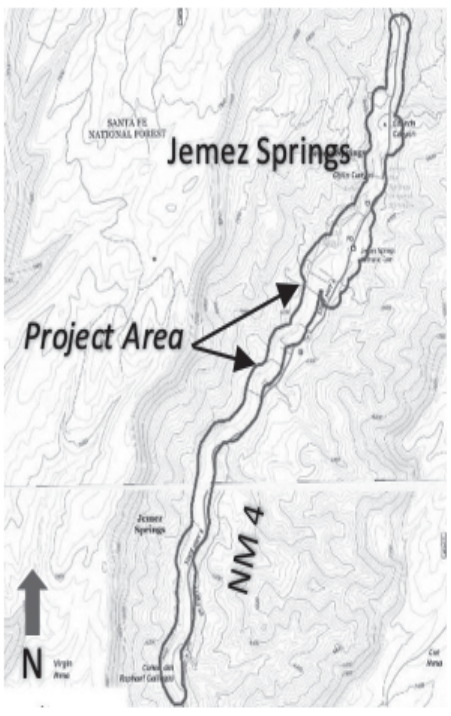

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VILLAGE OF JEMEZ SPRINGS

Sign-in Sheet

Public Meeting

Wastewater System Improvements Project

Jemez Springs Bath House

62 Jemez Springs Plaza, Jemez Springs, NM

Wednesday, December 20, 2023, 6:00 – 7:30pm

Name	Organization (if applicable)	Address	Email Address	Phone No.
JULIE KUTZ	DBS&A	6020 ACADEMY RD, NE, ABQ	jkutz@geo-logic.com	505-353-9103
NANCE ARNOLD	" DBS&A	"	narnold@geo-logic.com	505-321-7403
Michael Nealeigh			michael.nealeigh@gmail.com	575-519-5765
ROSE FENTON	JSWWTP	PO BOX 269, JEMEZ SPRINGS	~~JSWW~~ JSWW@JEMEZSPRINGS-NM.GOV	575-520-8246
Mano Sanchez	Jemez Springs Village		~~Mano~~ trustesanchez@jemezsprings-nm.gov	505-331-4546
Donna Sanchez	Jemez Springs Village		reception@jemezsprings-nm.gov	575-829-3540
SUSANNA COOPER	J.S. P&Z COMMISSION	PO BOX 555, JS	emyco45@gmail.com	575-829-4092
MARK M. FELDMAN		1059 MADRID RD., JS	mmfdesigns@COMCAST.NET	505-220-7262
DAVID RYAN	JS VILLAGE		dave.ryan@jemezpueblo.us	505-401-5477
Bob Wilson	Village of JS, JSDWA	P.O. Box 255, JS	~~Trustee~~ trusteewilson@jemezsprings.org	505-977-2597
Dede Feldman	resident	1059 Madrid Rd	dedefeld@comcast.net	505-2205758
Monique Appel	Village of Jemez Springs	PO Box 92	monique appel@me.com	575-829-3547
Liz Shulman	J+S manager	240 San Diego Loop	lizinjemez@yahoo.com	505 3627557
Lynne Dickey	Community Member	3410 Twisted Juniper		
Seminiano Gutierrez		172 Hwy 485 Jemez Rd	gseminiano@gmail.com	5056979857
*ROGER SWEET	MAYOR VILLAGE JS			

*NAME ADDED BY J. KUTZ

Village of Jemez Springs Public Meeting for:

Environmental Information Document for Wastewater System Improvements

December 20, 2023

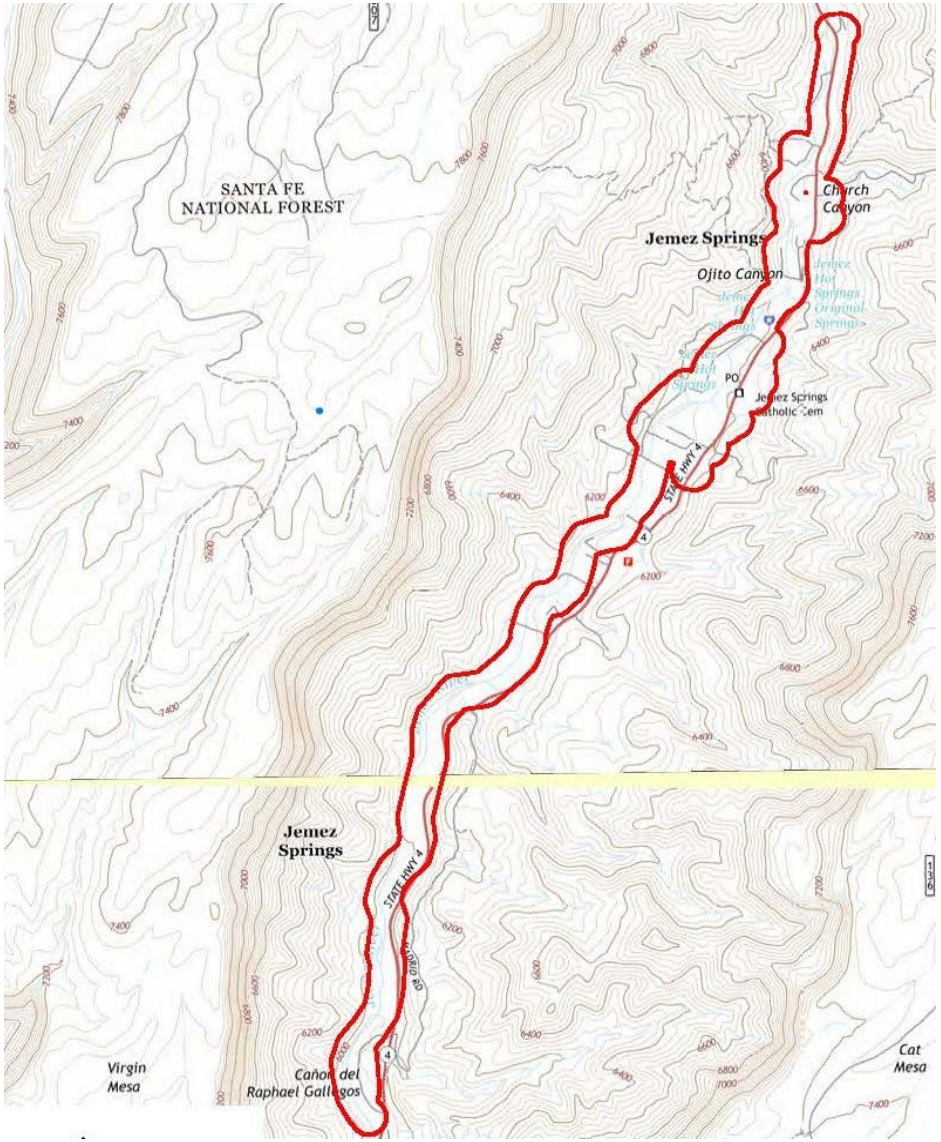
Presenters

Daniel B. Stephens & Associates, engineering consultant preparing the Preliminary Engineering Report and accompanying Environmental Information Document

- Nate Arnold, E.I., Project Engineer
- Julie Kutz, Biologist

Background

- Village owns and operates WWTP and Collection System
- System constructed in 1960s
- WWTP improvements in 2004
- Treated wastewater discharged to the Jemez River
- Regulated under National Pollutant Discharge Permit Elimination System (NPDES) permit



Project Location

Background, cont.

- In April 2023, snowmelt caused the Jemez River to flood
- Sewer main wastewater line broke
- River water, mud, and rocks overflowed the wastewater treatment plant
- Emergency measures were taken by the Village and Sandoval County
- Significant rainfall caused a second incident on November 18, 2023

Photo from Sandoval County website: https://www.sandovalcountynm.gov/fire/emergency-management/jemez-corridor/

Background, cont.

- Closed-circuit television (CCTV) inspection of sewers, completed in 2004 by Wilson & Co., revealed deficiencies in the sewer system
  - Root intrusion,
  - Sags in the sewer lines,
  - Rocks in sewer lines, and
  - Eroded manholes.
- DBS&A inspected 91 of 135 manholes, July 2023
  - Infiltration
  - Root intrusions
  - Erosion/cracks
  - Sediment/blockage

Preliminary Engineering Report for Wastewater System Improvements

- Examines alternatives to system improvements
- Not all alternatives considered are feasible
- Recommended Alternative:
  - Rehabilitate and Renovate Critical Areas of the Sanitary Sewer Collection System and Wastewater Treatment Plant (WWTP)

Recommended Project

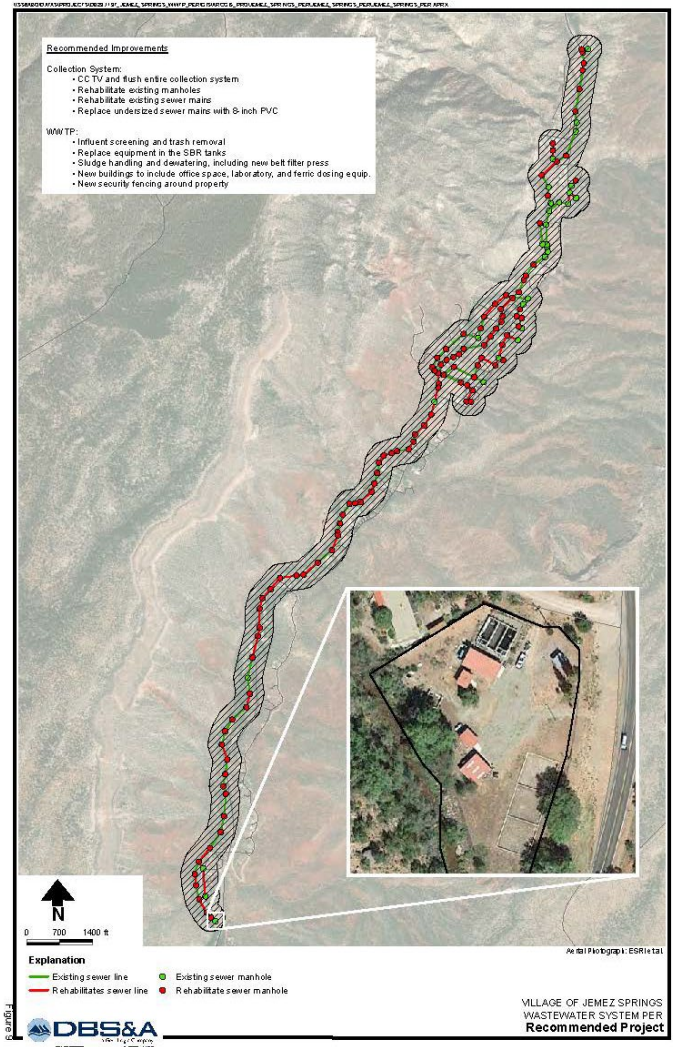
Recommended Improvements

Collection System:

- CCTV and flush entire collection system
- Rehabilitate existing manholes
- Rehabilitate existing sewer mains
- Replace undersized sewer mains with 8-inch PVC

WWTP:

- Influent screening and trash removal
- Replace equipment in the SBR tanks
- Sludge handling and dewatering, including new belt filter press
- New buildings to include office space, laboratory, and ferric dosing equip.
- New security fencing around property



DBS&A a Geo-Logic Company

Environmental Information Document

Based on New Mexico Environment Department (NMED) Construction Programs Bureau State Environmental Review Process (SERP)

- Developed to comply with the National Environmental Policy Act (NEPA) review requirements
- Not a substitute for NEPA, but is first step

Environmental Information Document (cont.)

- Follows the NMED Construction Program Bureau EID template
  - Evaluations typically consist of an initial desktop review and input from appropriate government agencies and other stakeholders
- The EID accompanies the preliminary engineering report (PER)

Project Purpose and Need

- Upgrade WWTP and collection system
- Debris removal and damage repair caused by 2023 flooding
- Provide permanent solutions to system deficiencies

Line attached to bridge crossing Jemez River

Project Purpose and Need

- WWTP and Collection System are aged and in need of renewal
- Existing capacity cannot handle sudden increased flows from flooding or storm events
- Compliance with NPDES permit

Out of service decant arm at WWTP

Alternatives Evaluated in EID

Recommended Alternative

- Rehabilitate and renovate critical areas and components of the system

No Action Alternative

- No improvements would be made to the Village WWTP and collector system

Recommended Alternative

- EID focused on the most impactful measures of the Recommended Alternative Impacts can be beneficial or negative.
- The No Action alternative in general would have no environmental effects because no action would occur. Exceptions come from not implementing preventative measures.

Affected Environment

- The following topics were evaluated for impacts:
  - General land use
  - Growth and population trends
  - Important farmland
  - Soils
  - Formally classified lands
  - Floodplains

Affected Environment (cont.)

- Topics evaluated (cont.):
  - Wetlands
  - Water resources (surface and groundwater)
  - Coastal
  - Air quality
  - Biological resources (vegetation, wildlife, T&E)
  - Archaeological, cultural, and historic resources
  - Socioeconomics/environmental justice

Affected Environment (cont.)

- Topics evaluated (cont.):
  - Other resources
    - Public health and safety
    - Transportation
    - Noise
  - Cumulative impacts

Notable Findings

EID is desktop research with input from agencies, stakeholders and interested public. No on-the-ground surveys have been conducted to date.

Preliminary Findings of Note

- Water resources
- Land use
- Cultural resources
- Wildlife
- Threatened and Endangered Species
- Public health and safety

Water Resources

- Surface water:
  - The Jemez River is in close proximity to the WWTP and Collector System
  - Treated wastewater from the WWTP is released into the Jemez River
  - Recommended Alternative would protect surface water and help reduce the risk of another accidental release of untreated sewage water into Jemez River
  - Therefore the Recommended Alternative would have a positive, long-term impact

Water Resources, cont.

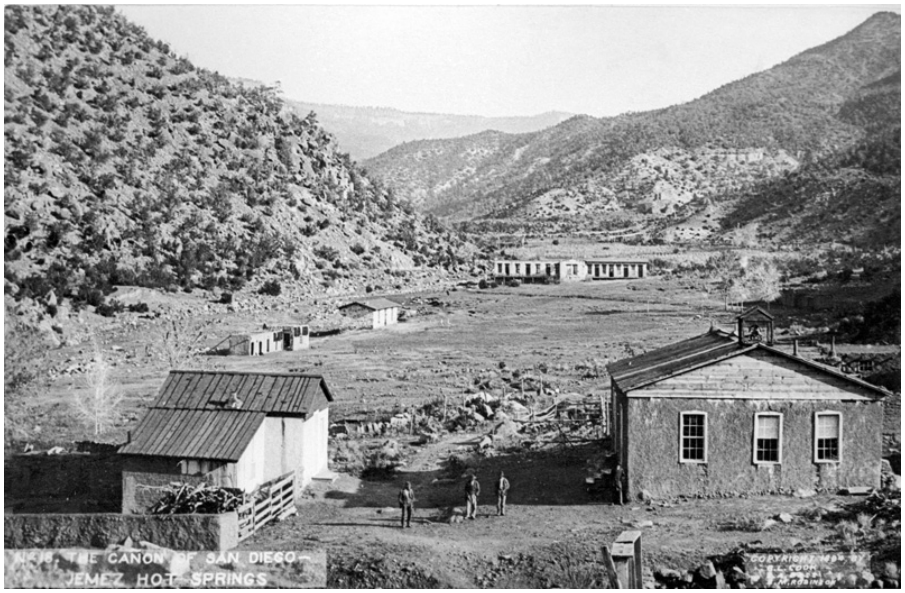
- Surface water:
  - The No Action Alternative would result in continuing deterioration of WWTP and Collection System
  - Lead to increased potential for accidental release of untreated or partially treated sewage water into the Jemez River
  - Therefore the No Action Alternative would have a negative, long-term impact.

Land Use

- System crosses private property but is within easements
- Formally classified lands in the area include
  - Jemez Historic Site (formerly Jemez State Monument)
  - Valles Caldera National Preserve administrative offices
- No change to land use
- Short term impact may occur during construction, but no long-term impact to land use.

Archaeological, Cultural, Historic Resources

Class I (literature) review was prepared to assist the Village with cultural resource planning and future compliance with cultural resource laws. The study area for each alternative was determined and the New Mexico Cultural Resource Information System (NMCRIS) and other databases consulted.



Jemez Springs circa 1890

Archaeological, Cultural, Historic Resources (cont.)

- Very few cultural resources inventories have been conducted
- Jemez State Monument (Guisewa) and Jemez Hot Springs Mineral Bath House are registered, but unlikely to be impacted by Recommended Alternative
- Various historic built environment resources in and around the Village are located in the project vicinity, including historic buildings, structures, and acequias, most are not likely to be impacted
- The area has been used historically and prehistorically for thousands of years, and many more archaeological sites may be present

Archaeological, Cultural, Historic Resources (cont.)

- Much of the project area may require a Class III cultural resource survey when the Recommended Alternative is further designed to determine the significance of impacts on cultural resources.
- Consultation with relevant state and federal agencies will be undertaken to determine the level of effort and area of potential effect.

Wildlife

- Land cover of the Jemez Springs WWTP and collector system is low-intensity development with scattered areas Riparian Woodland, Shrubland and Pasture/Hay. Outside of the valley, the vegetation community is Southern Rocky Mountains Pinyon-Juniper Woodland.

Image from New Mexico True https://www.newmexico.org/

Wildlife, cont.

- Wildlife associated with the Jemez River valley include a rich diversity of species dependent on water, riparian woodlands and pinyon-juniper woodland habitat.
- The direct effects (permanent and temporary) of the Recommended Alternative would include temporary noise increase and ground disturbance during construction.

Wildlife (cont.)

- There are shrubs that could present foraging and nesting habitat for birds including migratory bird species. The Recommended Alternative therefore has a potential to impact nesting birds if construction occurs during the nesting season of March 1 through September 15.
- Potential for burrowing owls in the area, as well as prairie dog colonies
- Caves, bridges or other man-made structures may harbor bats

Image public domain from NPS

Threatened and Endangered Species

- 7 federal threatened and endangered species (2 additional species are candidate species for federal listing)
- No designated critical habitat in the project area
- Nearest critical habitat is beyond to the east and west for the Mexican spotted owl, therefore a potential for occasional occurrence only

Public Health and Safety

- Potential for asbestos in sewer lines or other utilities. Suspect materials will be sampled and properly disposed of.
- Improved system would reduce the risk of a reoccurrence of untreated wastewater overflow into the Jemez River in the event of future flooding.
- Recommended Alternative would have a beneficial long-term impact.

Mitigation Measures

In order to eliminate or minimize the impacts of the Recommended Alternative, the following mitigation measures have been developed:

- *Environmental Setting*. Disturbed areas would be returned to pre-construction conditions. BMPs will be in place for construction impacts such as erosion, traffic control, and waste management.
- *Land Use*. Coordination with private businesses and residences in areas of construction outside of the WWTP will be conducted by the Village. Coordination with the NMDOT will be conducted for work permits and approvals for construction if work occurs in NM 4.

Mitigation Measures (cont.)

- *Physical Resource Measures include but are not limited to (full measures in the EID).*
  - Air pollutants will be minimized per EPA requirements
  - Stormwater Pollution Prevention Plan will be prepared and implemented per EPA-402
  - Any suspect asbestos materials will be sampled and handled per NMED regulations
  - Existing roads and right-of-ways will be utilized to the extent possible

Mitigation Measures (cont.)

- *Biological Resources.*
  - If construction activities begin during the migratory bird breeding season (March 1 through September 15), a pre-construction nesting bird survey will be completed; if occupied nests are found, they must be avoided until the young have fledged.
  - Preliminary survey for burrowing owls will be conducted prior to construction
  - Any disturbed areas will be returned to pre-construction elevations and reseeded with native vegetation that is certified weed-free
  - Natural areas will be preserved. Drainages will be maintained in their natural state.
  - Suitable bat roosting locations (e.g. bridges) will not be disturbed if roosting or hibernating bats are found.

Mitigation Measures (cont.)

- *Biological Resources (cont.).*
  - NMDGF trenching guidelines will be implemented during construction.
  - Riparian vegetation will not be disturbed.

- *Threatened and Endangered Species.*
  - No mitigation measures were identified

Mitigation Measures (cont.)

Archaeological, Cultural, and Historic Resources

- Class III cultural resource surveys will be conducted when the Recommended Alternative is further designed.
- The Historic Preservation Department and SHPO will be consulted as part of the detailed cultural resources evaluation.

A. D. F. Hamlin, A History of Ornament (New York: The Century Company, 1916) 29

Mitigation Measures (cont.)

Transportation.

- Traffic control plans will be developed and work permits will be coordinated with and obtained from the NMDOT and Sandoval County during construction for any temporary roadway lane closures that may be necessary within the right-of-way.

Noise.

- Construction activities will be restricted to between 7:00 a.m. and 7:00 p.m. for noise control, in adherence to regulations.

Consultation, Coordination, and Public Involvement

Agencies Contacted

A project summary and maps were provided to agencies on at least two occasions. The following agencies were contacted for input:

- Energy, Minerals, Natural Resources Department, Forestry Division
- US Environmental Protection Agency, Region 6*
- Federal Emergency Management Agency*
- USDA Natural Resources Conservation Service Cuba Field Office
- Office of State Engineer
- NM Department of Transportation*
- NM Historic Preservation Division (further consultation will be done in future)
- U.S. Army Corps of Engineers, Albuquerque District
- NM Environment Department (Air Quality, Groundwater Quality Bureau, Stormwater Quality Bureau)

Consultation, Coordination, and Public Involvement (cont.)

Agencies Consulted (cont.)

- U.S. National Park Service (Valles Caldera National Preserve)
- NM Department of Game and Fish*
- US Fish and Wildlife Service (on-line report)
- Sandoval County
- U.S. Forest Service (Jemez Ranger District)
- NM Department of Cultural Affairs

* Response received and incorporated in EID

Any Questions?

- For questions or additional information, please contact:
  - Rose Fenton, Village of Jemez Springs, jswm@jemezsprings-nm.gov
  - Nate Arnold, Narnold@geo-logic.com, 505-822-9400
- To submit comments, please e-mail:
  jkutz@geo-logic.com, call 505-822-9400, or mail to:

  DBS&A, c/o Julie Kutz

  6020 Academy NE, Suite 100

  Albuquerque, NM 87109

Please provide comments by January 20, 2024

Thank you!

RESPONSIVENESS SUMMARY

IN THE MATTER OF THE PUBLIC HEARING REGARDING:

Village of Jemez Springs Wastewater Treatment Improvements Project
Public Meeting Held December 20, 2023

SUMMARY OF PUBLIC COMMENTS

Specific Public Comment	Village of Jemez Springs Response	Modifications in response to public comment
What is the timeline for the project?	Approximately 1 ½ years to complete design and construction. For Phase I, the CCTV of the collection system can be done sooner, concurrent with the construction design.	No
Can DBS&A do all phases?	Yes, we provide engineering services throughout construction, including project management and construction oversight. We would also assist with bidding the project to a Contractor.	No
Are there structures built on top of the collection system?	Yes, there are multiple structures built over the sewer main, including a new garage. The collection system as a whole should not have anything built that blocks access and the easement boundary needs to be reestablished.	Yes, as a mitigation measure, a statement to make access issues a priority will be added.
Assuming that funding will be in pieces, which part of the project would be prioritized and be done first?	The collection system would be slated as the first priority. First step is the CCTV and clean the collection system to identify critical areas.	No
Who is providing the funding?	The Village will be applying for both federal and state funding. We have already started the process and cleared the first hurdle for a $2.5 million federal grant that is a 80/20 match. The village will try to use their state grant to make up the 20% match.	No
How much line is there in the collection system?	30,000 linear feet.	No

Specific Public Comment	Village of Jemez Springs Response	Modifications in response to public comment
Will the $2.5 million cover the project cost? How much will the total cost be?	The project total is currently estimated to be $9.5 million, so the $2.5 million will cover approximately 25% of the total needed.	No
How much would it cost to replace the entire system?	The estimate is $19 million. Therefore, the alternatives looking at replacing the WWTP and the collection system were considered to be cost prohibitive.	No
What other grants are available?	The Village and DBS&A's grant writer have been researching various grants. As well, the Village has been working for a long time on the WWTP and collection system improvements, it is an ongoing process.	No

Appendix B

Jemez Springs Wastewater System Information

DBS&A
a Geo-Logic Company

DESIGN SUMMARY

TABLE A
INFLUENT WASTEWATER CHARACTERISTICS AND SITE CONDITIONS

Average Dry Weather Flow	75,000 GPD
Peak Dry Weather Flow	150,000 GPD
Peak Wet Weather Flow	225,000 GPD
BOD_5 (20°C)	250 mg/l
BOD_5 (20°C)	156 lb/day
Suspended Solids	250 mg/l
NH_3-N	40 mg/l
Alkalinity	154 mg/l
Wastewater Temperature	20 °C
Ambient Air Temperature	20 - 90 °F
Site Elevation	5,500 ft

TABLE B
ICEAS™ EFFLUENT QUALITY (MONTHLY AVERAGE)

BOD_5 (20°C)	10.00 mg/l
Suspended Solids	10.00 mg/l
Total Nitrogen	10.00 mg/l

TABLE C
ICEAS PROCESS DESIGN CRITERIA

F / M	0.065 lb BOD_5/ lb MLSS / day
SVI (after 30 minutes settling)	150 ml/g
MLSS at Bottom Water Level	4,752 mg/l
Waste Sludge Produced (Approx.)	113 lb/day
Volume of Sludge Produced (Approx., 0.85% solids)	1,588 GPD
Normal Decant Rate	275 GPM
Peak Decant Rate	375 GPM
Hydraulic Retention Time	0.97 Days
Sludge Age	20.27 Days

CYCLE	AIR-OFF	AIR-ON	SETTLE	DECANT	TOTAL
Normal	72 min	96 min	60 min	60 min	5 hour
Storm	54 min	72 min	45 min	45 min	4 hour

TABLE D
KEY ICEAS DESIGN DETAILS

Number of ICEAS Basins	2
Top Water Level	15.0 ft
Basin Width	12.0 ft
Basin Length	33.0 ft
Bottom Water Level	10.4 ft
Number of SHT Basins	1
Top Water Level	15.0 ft
Basin Width	8.0 ft
Basin Length	30.0 ft

ABJ EQUIPMENT			Motor HP	No. Req.
Decanter Mechanism	3.0 ' Weir length			2
Decanter Drive Unit			0.5	2
ICEAS Blower	190 SCFM	7.0 PSIG	15.0	2
ICEAS Fine Bubble Aeration System				2
Air Control Valve	4 "			2
Waste Sludge Pump	14.0 GPM		1.7	2
Submersible Mixer			2.5	2
ICEAS Controls				1
SHT Fine Bubble Aeration System				1
SHT Blower	70 SCFM	7.5 PSIG	7.5	2

ABJ POWER REQUIREMENTS (At Average Aeration Depth)					Kwh/Day
Decant Drive Unit	0.4 BHP	2 run	@	5 Hrs/day	2.98
SHT Air Blower	4.0 BHP	1 run	@	12 Hrs/day *	35.00
ICEAS Air Blower	7.0 BHP	1 run	@	16 Hrs/day	83.00
Waste Sludge Pump	1.4 BHP	2 run	@	5 Hrs/day	10.15
				KWH/DAY	131.13
			AVERAGE	KWH/HR	5.46

* SHT blower run-time dependent upon sludge processing

REGION 6
1201 ELM STREET, SUITE 500
DALLAS, TEXAS 75270

NPDES Permit No NM0028011

AUTHORIZATION TO DISCHARGE UNDER THE

NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Clean Water Act, as amended, (33 U.S.C. 1251 et. seq; the "Act"),

Village of Jemez Springs
P. O. Box 269
Jemez Springs, NM 87025

14609 Highway 4, approximately 2 miles south of Jemez Springs, Sandoval County, New Mexico, to receiving waters named Jemez River, thence to the Rio Grande in Segment No. 20.6.4.107 of the Rio Grande Basin, from the following coordinates:

Outfall 001: Latitude 35° 43' 36" North, Longitude 106° 42' 48" West

in accordance with this cover page and the effluent limitations, monitoring requirements, and other conditions set forth in Part I, Part II, Part III, and Part IV hereof.

This permit, prepared by Aron K. Korir, Physical Scientist, Permitting Section (6WD-PE), shall become effective on **June 1, 2021**

This permit and the authorization to discharge shall expire at midnight, **May 31, 2026**

Issued on **April 29, 2021**

Charles Maguire

Charles W. Maguire
Director
Water Division (6WD)

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PART I – REQUIREMENTS FOR NPDES PERMITS

A. LIMITATIONS AND MONITORING REQUIREMENTS

1. FINAL Effluent Limits – 0.075 MGD Design Flow

During the period beginning the effective date of the permit and lasting through the expiration date of the permit (unless otherwise noted), the permittee is authorized to discharge treated wastewater to the Jemez River, in Segment Number 20.6.4.107, from Outfall 001. Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	**DISCHARGE LIMITATIONS**						**MONITORING REQUIREMENTS**	
	lbs/day, unless noted			mg/l, unless noted				
PARAMETER	30-DAY AVG	7-DAY AVG	DAILY MAX	30-DAY AVG	7-DAY AVG	DAILY MAX	MEASUREMENT FREQUENCY	SAMPLE TYPE
Flow	Report MGD	Report MGD	Report MGD	***	***	***	Continuous	Totalizing Meter
Biochemical Oxygen Demand, 5-day	11.3	16.9	***	30	45	***	1/Month	Grab (1)
Total Suspended Solids	11.3	16.9	***	30	45	***	1/Month	Grab (1)
Percent Removal BOD_5	≥85%	***	***	***	***	***	1/Month	Calculation (2)
Percent Removal TSS	≥85%	***	***	***	***	***	1/Month	Calculation (2)
E. Coli Bacteria (4)	3.58×10^8 cfu/day	***	***	126	***	410	1/Month	Grab (1)
Nitrogen, Total (7)	2.97	***	***	Report	***	4.75	2/Month	Grab (1)
Phosphorus, Total	0.626	***	***	Report	***	1.0	2/Month	Grab (1)
Arsenic, Dissolved	0.094	***	***	***	***	150 ug/L	1/Month	Grab (1)
Boron, Dissolved	1.34	***	***	***	***	2,150 ug/L	1/Month	Grab (1)
Total Residual Chlorine(9)	***	***	***	***	***	19 ug/l	Daily	Instantaneous Grab (3)
Aluminum Total Recoverable (8)	1.03	N/A	N/A	***	N/A	1,650ug/L	1/Month	Grab (1)

EFFLUENT CHARACTERISTICS		DISCHARGE LIMITATIONS Standard Units		MONITORING REQUIREMENTS	
POLLUTANT	STORET CODE	MINIMUM	MAXIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
pH	00400	6.6	8.8	5/Week	Instantaneous Grab (3)

EFFLUENT CHARACTERISTICS	DISCHARGE MONITORING		MONITORING REQUIREMENTS	
Whole Effluent Toxicity Testing (48 Hr. Static Renewal)	30-DAY AVG MINIMUM	48-HR MINIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
Daphnia pulex	Report	Report	Once/Term (5, 6)	Grab
Pimephales promelas	Report	Report	Once/Term (5, 6)	Grab

Footnotes:

1. Monitoring must be conducted according to test procedures approved under 40CFR Part 136, unless other test procedures have been specified in this permit or approved by the Regional Administrator.
2. Percent removal is calculated using the following equation: [(average monthly influent concentration – average monthly effluent concentration) ÷ average monthly influent concentration] x 100.
3. Instantaneous grab a field measurement that is the analysis of a sample less than 15 minutes from the time of collection only when using chlorine.
4. Bacteria reporting units MUST be either cfu/100mL or MPN.
5. Once per permit term. This permit does not establish requirements to automatically increase WET testing frequency after a test failure, or to begin a toxicity reduction evaluation (TRE) in the event of multiple test failures. However, upon failure of any WET test, the permittee must report the test results to EPA and NMED, Surface Water Quality Bureau, in writing, within 5-business days of notification the test failure. EPA and NMED will review the test results and determine the appropriate action necessary, if any. (See Part II, Section D).
6. Sampling for the whole effluent toxicity test shall occur between the first period between November 1 and April 30, after the permit effective date.
7. Total Nitrogen is defined as the sum of Nitrate +Nitrite (N + N), and Total Kjeldahl Nitrogen (TKN). Total Nitrogen is defined as TKN + Nitrites and Nitrates, as found in the TMDL for the Jemez River approved by EPA September 15, 2009.
8. Compliance schedule to monitor and report total recoverable aluminum data for the first three years from the effective date of this permit. Please refer to part 1.B. The pollutant shall be tested using EPA approved method as found in CFR 136 table IB, for the determination of total recoverable metals, and as found in 20.6.4.900.2 The criteria is based on analysis of total recoverable aluminum in a sample that is filtered to minimize mineral phases as specified by the New Mexico Environment Department (NMED). The NMED specification for filtration can be found at: https//www.env.nm.gov/swqb/SOP/documents/82ChemicalSamplingSOP4-11-2016.pdf. At this website, find chemical sampling in lotic environments part 6.1.4 address total recoverable filtration.

9. 9. The effluent limitation for TRC is the instantaneous maximum and cannot be averaged for reporting purposes. Required when chlorine is used as either backup bacteria control or when disinfection of plant treatment equipment is required.

FLOATING SOLIDS, VISIBLE FOAM AND/OR OILS

There shall be no discharge of floating solids or visible foam in other than trace amounts. There shall be no discharge of visible films of oil, globules of oil, grease or solids in or on the water, or coatings on stream banks.

Samples taken in compliance with the monitoring requirements specified above shall be taken at the discharge after the final treatment unit and prior to the receiving stream.

B. SCHEDULE OF COMPLIANCE

1. Total Recoverable Aluminum

a. The permittee shall achieve compliance with the total recoverable Aluminum effluent limitations specified for discharges within three (3) years from the effective date of the permit.

b. Monitor for total recoverable Aluminum and submit quarterly progress reports for the first three years from the effective date of this permit.

2. Boron Sanitary Sewer Study

Conduct a sanitary sewer survey to identify sources of dissolved boron being contributed to the collection system. The survey must include sample collection at representative locations throughout the sewer collection system, including specific industrial/commercial users with higher potential for elevated levels of boron and of treated drinking water supplied to customers of the public water supply (as a baseline of contributions from domestic wastewater sources). Samples must be analyzed for boron using 40 CFR 136 sufficiently sensitive test methods with a ML at or below the New Mexico Water Quality Standard.

a. Within three (3) months ot the effective date of the permit, submit a proposed study plan to EPA and NMED containing: monitoring of raw and treated drinking water provided to Village customers (Jemez Springs Domestic Water Association); monitoring of major segments of the collection system; monitoring of effluent from select commercial and industrial users with potential to have higher levels of boron (e.g., those with effluent containing waters from other sources than the treated public water supply system; those with industrial or commercial processes that would add boron to the waste stream; etc.); collecting at least three (3) grab samples from each monitoring location; and procedures for collection of samples to ensure batch or intermittent discharges into the collection system are captured in addition to continuous flows.

b. Within twelve (12) months of the effective date of the permit, complete collection of samples.

c. Withing fifteen (15) months of the effective date of the permit, submit report with results of the study and conclusions to EPA and NMED.

d. Submit quarterly progress reports from the effective date of this permit until completion of the study and submission of the final report.

C. MONITORING AND REPORTING (MINOR DISCHARGERS)

Monitoring information shall be on Discharge Monitoring Report Form(s) EPA 3320-1 as specified in Part III.D.4 of this permit and shall be submitted quarterly. Each quarterly submittal shall include separate forms for each month of the reporting period.

1. Reporting periods shall end on the last day of the months March, June, September, and December.

2. The permittee is required to submit regular quarterly reports as described above postmarked no later than the 28th day of the month following each reporting period.

3. If any 7-day average or daily maximum value exceeds the effluent limitations specified in Part I.A, the permittee shall report the excursion in accordance with the requirements of Part III.D.

4. Any 30-day average, 7-day average, or daily maximum value reported in the required Discharge Monitoring Report which is in excess of the effluent limitation specified in Part I.A shall constitute evidence of violation of such effluent limitation and of this permit.

5. Other measurements of oxygen demand (e.g., TOC and COD) may be substituted for five-day Biochemical Oxygen Demand (BOD_5) or for five-day Carbonaceous Biochemical Oxygen Demand ($CBOD_5$), as applicable, where the permittee can demonstrate long-term correlation of the method with BOD_5 or $CBOD_5$ values, as applicable. Details of the correlation procedures used must be submitted and prior approval granted by the permitting authority for this procedure to be acceptable. Data reported must also include evidence to show that the proper correlation continues to exist after approval.

6. The permittee shall report all overflows with the Discharge Monitoring Report submittal. These reports shall be summarized and reported in tabular format. The summaries shall include: the date, time, duration, location, estimated volume, and cause of the overflow; observed environmental impacts from the overflow; actions taken to address the overflow; and ultimate discharge location if not

contained (e.g., storm sewer system, ditch, tributary). Overflows that endanger health or the environment shall be orally reported to EPA at (214) 665- 6595 and NMED Surface Water Quality Bureau at (505) 827-0187, within 24 hours from the time the permittee becomes aware of the circumstance. A written report of overflows which endanger health, or the environment shall be provided to EPA and NMED within 5 days of the time the permittee becomes aware of the circumstance.

7. CONTRIBUTING INDUSTRIES

The following pollutants may not be introduced into the treatment facility:

a. Pollutants which create a fire or explosion hazard in the publicly owned treatment works (POTW), including, but not limited to, wastestreams with a closed cup flashpoint of less than 140 degrees Fahrenheit or 60 degrees Centigrade using the test methods specified in 40 CFR 261.21;
b. Pollutants which will cause corrosive structural damage to the POTW, but in no case discharges with pH lower than 5.0, unless the works are specifically designed to accommodate such discharges.
c. Solid or viscous pollutants in amounts which will cause obstruction to the flow in the POTW, resulting in Interference.
d. Any pollutant, including oxygen demanding pollutants (e.g., BOD), released in a discharge at a flow rate and/or pollutant concentration which will cause Interference with the POTW.
e. Heat in amounts which will inhibit biological activity in the POTW resulting in Interference but in no case heat in such quantities that the temperature at the POTW treatment plant exceeds 40 degrees Centigrade (104 degrees Fahrenheit) unless the Approval Authority, upon request of the POTW, approves alternate temperature limits;
f. Petroleum oil, non-biodegradable cutting oil, or products of mineral oil origin in amounts that will cause interference or pass through.
g. Pollutants which result in the presence of toxic gases, vapors, or fumes within the POTW in a quantity that may cause acute worker health and safety problems; and
h. Any trucked or hauled pollutants, except at discharge points designated by the POTW.

D. POLLUTION PREVENTION REQUIREMENTS

The permittee shall institute a program within 12 months of the effective date of the permit (or continue an existing one) directed towards optimizing the efficiency and extending the useful life of the facility. The permittee shall consider the following items in the program:

a. The influent loadings, flow and design capacity.
b. The effluent quality and plant performance.
c. The age and expected life of the wastewater treatment facility's equipment.
d. Bypasses and overflows of the tributary sewerage system and treatment works.
e. New developments at the facility.
f. Operator certification and training plans and status.
g. The financial status of the facility.
h. Preventative maintenance programs and equipment conditions and,
i. An overall evaluation of conditions at the facility.

PART II - OTHER CONDITIONS

A. MINIMUM QUANTIFICATION LEVEL (MQL)

EPA-approved test procedures (methods) for the analysis and quantification of pollutants or pollutant parameters, including for the purposes of compliance monitoring/DMR reporting, permit renewal applications, or any other reporting that may be required as a condition of this permit, shall be sufficiently sensitive. A method is "sufficiently sensitive" when (1) the method minimum level (ML) of quantification is at or below the level of the applicable effluent limit for the measured pollutant or pollutant parameter; or (2) if there is no EPA-approved analytical method with a published ML at or below the effluent limit (see table below), then the method has the lowest published ML (is the most sensitive) of the analytical methods approved under 40 CFR Part 136 or required under 40 CFR Chapter I, Subchapters N or 0, for the measured pollutant or pollutant parameter; or (3) the method is specified in this permit or has been otherwise approved in writing by the permitting authority (EPA Region 6) for the measured pollutant or pollutant parameter. The Permittee has the option of developing and submitting a report to justify the use of matrix or sample specific MLs rather than the published levels. Upon written approval by EPA Region 6 the matrix or sample specific MLs may be utilized by the Permittee for all future Discharge Monitoring Report (DMR) reporting requirements.

Current EPA Region 6 minimum quantification levels (MQLs) for reporting and compliance are provided in Appendix A of Part II of this permit. The following pollutants may not have EPA approved methods with a published ML at or below the effluent limit, if specified:

POLLUTANT	CAS Number	STORET Code
Total Residual Chlorine	7782-50-5	50060
Cadmium	7440-43-9	01027
Silver	7440-22-4	01077
Thallium	7440-28-0	01059
Cyanide	57-12-5	78248
Dioxin (2,3,7,8-TCDD)	1764-01-6	34675
4, 6-Dinitro-0-Cresol	534-52-1	34657
Pentachlorophenol	87-86-5	39032
Benzidine	92-87-5	39120
Chrysene	218-01-9	34320
Hexachlorobenzene	118-74-1	39700
N-Nitrosodimethylamine	62-75-9	34438
Aldrin	309-00-2	39330
Chlordane	57-74-9	39350
Dieldrin	60-57-1	39380
Heptachlor	76-44-8	39410
Heptachlor epoxide	1024-57-3	39420
Toxaphene	8001-35-2	39400

Unless otherwise indicated in this permit, if the EPA Region 6 MQL for a pollutant or pollutant parameter is sufficiently sensitive (as defined above) and the analytical test result is less than the MQL, then a value of zero (0) may be used for reporting purposes on DMRs. Furthermore, if the EPA Region 6 MQL for a pollutant or parameter is not sufficiently sensitive, but the analytical test result is less than the published ML from a sufficiently sensitive method, then a value of zero (0) may be used for reporting purposes on DMRs.

3. 24-HOUR ORAL REPORTING: DAILY MAXIMUM LIMITATION VIOLATIONS

Under the provisions of Part III.D.7.b.(3) of this permit, violations of daily maximum limitations for the following pollutants shall be reported orally to EPA Region 6, Compliance and Assurance Division, Water Enforcement Branch (6EN-W), Dallas, Texas, and NMED within 24 hours from the time the permittee becomes aware of the violation followed by a written report in five days.

4. PERMIT MODIFICATION AND REOPENER

In accordance with 40 CFR Part 122.44(d), the permit may be reopened and modified during the life of the permit if relevant portions of New Mexico's Water Quality Standards for Interstate and Intrastate Streams are revised, or new water quality standards are established and/or remanded.

In accordance with 40 CFR Part 122.62(a)(2), the permit may be reopened and modified if new information is received that was not available at the time of permit issuance that would have justified the application of different permit conditions at the time of permit issuance. Permit modifications shall reflect the results of any of these actions and shall follow regulations listed at 40 CFR Part 124.5.

5. WHOLE EFFLUENT TOXICITY TESTING (48 HOUR ACUTE NOEC FRESHWATER)

It is unlawful and a violation of this permit for a permittee or his designated agent, to manipulate test samples in any manner, to delay sample shipment, or to terminate or to cause to terminate a toxicity test. Once initiated, all toxicity tests must be completed unless specific authority has been granted by EPA Region 6 or the State NPDES permitting authority.

1. SCOPE AND METHODOLOGY

a. The permittee shall test the effluent for toxicity in accordance with the provisions in this section.

APPLICABLE TO FINAL OUTFALL(S): 001

REPORTED ON DMR AS FINAL OUTFALL: 001

CRITICAL DILUTION (%): 35%

EFFLUENT DILUTION SERIES (%): 15%, 20%, 26%, 35%, and 47%

COMPOSITE SAMPLE TYPE: Defined at PART I

TEST SPECIES/METHODS: 40 CFR Part 136

Daphnia pulex acute static renewal 48-hour definitive toxicity test using EPA/821/R/02/012, or the latest update thereof. A minimum of five (5) replicates with eight (8) organisms per replicate must be used in the control and in each effluent dilution of this test.

Pimephales promelas (Fathead minnow) acute static renewal 48-hour definitive toxicity test using EPA/821/R/02/012, or the latest update thereof. A minimum of five (5) replicates with eight (8) organisms per replicate must be used in the control and in each effluent dilution of this test.

b. The NOEC (No Observed Lethal Effect Concentration) is defined as the greatest effluent dilution at and below which lethality that is statistically different from the control (0% effluent) at the 95% confidence level does not occur. Acute test failure is defined as a demonstration of a statistically significant lethal effect at test completion to a test species at or below the critical dilution.

c. This permit may be reopened to require whole effluent toxicity limits, chemical specific effluent limits, additional testing, and/or other appropriate actions to address toxicity.

d. Test failure is defined as a demonstration of statistically significant lethal effects to a test species at or below the effluent critical dilution.

e. This permit does not establish requirements to automatically increase the WET testing frequency after a test failure, or to begin a toxicity reduction evaluation (TRE) in the event of multiple test failures. However, upon failure of any WET test, the permittee must report the test results to EPA and NMED, Surface Water Quality Bureau, in writing, within 5 business days of notification the test failure. EPA and NMED will review the test results and determine the appropriate action necessary, if any.

2. REQUIRED TOXICITY TESTING CONDITIONS

a. Test Acceptance

The permittee shall repeat a test, including the control and all effluent dilutions, if the procedures and quality assurance requirements defined in the test methods or in this permit are not satisfied, including the following additional criteria:

i. Each toxicity test control (0% effluent) must have a survival equal to or greater than 90%.

ii. The percent coefficient of variation between replicates shall be 40% or less in the control (0% effluent) for: Daphnia pulex survival test; and Fathead minnow survival test.

iii. The percent coefficient of variation between replicates shall be 40% or less in the critical dilution, unless significant lethal effects are exhibited for: Daphnia pulex survival test; and Fathead minnow survival test.

Test failure may not be construed or reported as invalid due to a coefficient of variation value of greater than 40%. A repeat test shall be conducted within the required reporting period of any test determined to be invalid.

b. Statistical Interpretation

For the Daphnia pulex survival test and the Fathead minnow survival test, the statistical analyses used to determine if there is a statistically significant difference between the control and the critical dilution shall be in accordance with the methods for determining the No Observed Effect Concentration (NOEC) as described in EPA 821 R 02 012 or the most recent update thereof.

If the conditions of Test Acceptability are met in Item 2.a above and the percent survival of the test organism is equal to or greater than 90% in the critical dilution concentration and all lower dilution concentrations, the test shall be considered to be a passing test, and the permittee shall report an NOEC of not less than the critical dilution for the reporting requirements found in Item 3 below.

c. Dilution Water

i. Dilution water used in the toxicity tests will be receiving water collected as close to the point of discharge as possible but unaffected by the discharge. The permittee shall substitute synthetic dilution water of similar pH, hardness, and alkalinity to the closest downstream perennial water for.

(A) Toxicity tests conducted on effluent discharges to receiving water classified as intermittent streams; and

(B) Toxicity tests conducted on effluent discharges where no receiving water is available due to zero flow conditions.

ii. If the receiving water is unsatisfactory as a result of instream toxicity (fails to fulfill the test acceptance criteria of Item 3.a), the permittee may substitute synthetic dilution water for the receiving water in all subsequent tests provided the unacceptable receiving water test met the following stipulations:

(A) A synthetic dilution water control which fulfills the test acceptance requirements of Item 3.a was run concurrently with the receiving water control.

(B) The test indicating receiving water toxicity has been carried out to completion (i.e., 48 hours);

(C) The permittee includes all test results indicating receiving water toxicity with the full report and information required by Item 4 below; and

(D) The synthetic dilution water shall have a pH, hardness, and alkalinity similar to that of the receiving water or closest downstream perennial water not adversely affected by the discharge, provided the magnitude of these parameters will not cause toxicity in the synthetic dilution water.

d. Samples and Composites

i. The permittee shall collect two flow weighted composite samples from the outfall(s) listed at Item 1.a above.

ii. The permittee shall collect a second composite sample for use during the 24 hour renewal of each dilution concentration for both tests. The permittee must collect the composite samples so that the maximum holding time for any effluent sample shall not exceed 36 hours. The permittee must have initiated the toxicity test within 36 hours after the collection of the last portion of the first composite sample. Samples shall be chilled to 6 degrees Centigrade during collection, shipping, and/or storage.

iii. The permittee must collect the composite samples such that the effluent samples are representative of any periodic episode of chlorination, biocide usage or other potentially toxic substance discharged on an intermittent basis.

iv. If the flow from the outfall(s) being tested ceases during the collection of effluent samples, the requirements for the minimum number of effluent samples, the minimum number of effluent portions and the sample holding time are waived

during that sampling period. However, the permittee must collect an effluent composite sample volume during the period of discharge that is sufficient to complete the required toxicity tests with daily renewal of effluent. When possible, the effluent samples used for the toxicity tests shall be collected on separate days. The effluent composite sample collection duration and the static renewal protocol associated with the abbreviated sample collection must be documented in the full report required in Item 3 of this section.

3. REPORTING

a. The permittee shall prepare a full report of the results of all tests conducted pursuant to this Part in accordance with the Report Preparation Section of EPA 821 R 02 012, for every valid or invalid toxicity test initiated, whether carried to completion or not. The permittee shall retain each full report pursuant to the provisions of PART III.C.3 of this permit. The permittee shall submit full reports upon the specific request of the Agency. For any test which fails, is considered invalid or which is terminated early for any reason, the full report must be submitted for agency review.

b. A valid test for each species must be reported during each reporting period specified in PART I of this permit unless the permittee is performing a TRE which may increase the frequency of testing and reporting. Only ONE set of biomonitoring data for each species is to be recorded for each reporting period. The data submitted should reflect the LOWEST Survival results for each species during the reporting period. All invalid tests repeat tests (for invalid tests), and retests (for tests previously failed) performed during the reporting period must be attached for EPA review.

c. The permittee shall report the following results of each valid toxicity test. Submit retest information, if required, clearly marked as such. Only results of valid tests are to be reported.

i. Pimephales promelas (Fathead minnow)

(A) If the No Observed Effect Concentration (NOEC) for survival is less than the critical dilution, enter a "1"; otherwise, enter a "0" for Parameter No. TEM6C.

(B) Report the NOEC value for survival, Parameter No. TOM6C.

(C) Report the highest (critical dilution or control) Coefficient of Variation, Parameter No. TQM6C.

ii. Daphnia pulex

(A) If the NOEC for survival is less than the critical dilution, enter a "1"; otherwise, enter a "0" for Parameter No. TEM3D.

(B) Report the NOEC value for survival, Parameter No. TOM3D.

(C) Report the highest (critical dilution or control) Coefficient of Variation, Parameter No. TQM3D.

d. If retests are required by NMED, enter the following codes:

i. For retest number 1, Parameter 22415, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."

ii. For retest number 2, Parameter 22416, enter a "1" if the NOEC for survival is less than the critical dilution; otherwise, enter a "0."

Jemez Springs Discharge Monitoring Report Historical Data
NPDES Permit No NM0028011

DMR Report Period	Boron	Arsenic	Phosphorus		Nitrogen	
	Max = 2150 ug/L	Max = 150 ug/L	Max = 1.0 mg/L	Max = 0.626 mg/L	Max = 4.75 mg/L	Max = 2.97 mg/L
	Daily Max	Daily Max	Daily Max	30 Day Avg	Daily Max	30 Day Avg
1/31/2016	-	-	1.3	0.21	6.7	1.1
2/29/2016	2100	81	1.5	0.22	5.4	0.8
3/31/2016	1900	190	3	3	5	5
4/30/2016	2100	160	0.44	0.33	7.6	6.05
5/31/2016	2200	15	0.56	0.38	4.5	3.75
6/30/2016	2000	77	1	0.16	2.5	0.4
7/31/2016	2100	81	2.6	2.6	3.4	3.4
8/31/2016	2300	10	2.3	2.3	2.3	2.3
9/30/2016	2100	28	1	1	5.3	5.3
10/31/2016	2300	24	1	1	4.1	4.1
11/30/2016	2300	51	0.73	0.73	4.2	4.2
12/31/2016	2200	200	1.8	1.8	3.5	3.5
1/31/2017	2200	57	0.66	0.49	4.3	4.3
2/28/2017	2600	21	1.6	1.6	2.6	2.6
3/31/2017	2500	250	-	-	-	-
4/30/2017	1600	16	0.21	0.2	1.4	1.2
5/31/2017	1900	14	0.14	0.14	4	0.018
6/30/2017	2100	110	0.42	0.4	1.3	1.3
7/31/2017	2200	70	1.6	1.2	3.6	2.6
8/31/2017	2200	85	2.6	2	7.9	5.1
9/30/2017	1500	32	0.41	0.41	3.1	3.1
10/31/2017	2100	51	0.74	0.73	6	4.55
11/30/2017	2100	85	0.79	0.78	1.3	0.65
12/31/2017	2400	110	1.3	0.75	1.4	1.4
1/31/2018	2300	46	0.5	0.49	1.8	0.9
2/28/2018	2100	36	0.96	0.75	3	2.75
3/31/2018	2500	36	0.5	0.6	1.5	0.75
4/30/2018	2300	33	0.45	0.42	1.1	1.1
5/31/2018	2900	32	0.65	0.59	4.2	4.01
6/30/2018	2100	81	0.8	0.65	1.7	0.7
7/31/2018	1800	77	1.1	0.98	5.4	3.35
8/31/2018	2100	73	1.9	1.7	1.4	1.2
9/30/2018	2100	48	2.2	1.4	3.9	2.5
10/31/2018	2800	67	0.55	0.54	4	0.9
11/30/2018	3100	480	3.2	1.8	18	15
12/31/2018	2500	32	0.35	0.33	3	3
31-Jan-19	2300	98	1.5	1.1	2.6	1.95
2/28/2019	2600	50	0.65	0.63	1.6	1.5
3/31/2019	3100	140	0.93	0.66	11	5.6
4/30/2019	2900	230	1.40	1.10	18	12
5/31/2019	2200	100	0.83	0.82	22	19
6/30/2019	2500	130	1.30	1.10	22	22
7/31/2019	2200	69	21.00	21.00	0.33	0.33
8/31/2019	2200	86	0.48	0.42	25	22
9/30/2019	1900	41	1.50	1.20	2.6	1.95
10/31/2019	2700	51	0.43	0.33	13	6.5
11/30/2019	3000	120	1.00	1.00	2.7	2.7
12/31/2019	2500	120	1.00	0.75	6.9	6.3
31-Jan-20	1400	36	1.6	1.4	2.8	1.4
2/29/2020	2200	180	2.1	1.6	8.3	4.8
3/31/2020	2500	80	0.7	0.3	4.75	4.75
4/30/2020	2000	34	0.01	0.01	1	1

DMR Report Period	Boron	Arsenic	Phosphorus		Nitrogen	
	Max = 2150 ug/L	Max = 150 ug/L	Max = 1.0 mg/L	Max = 0.626 mg/L	Max = 4.75 mg/L	Max = 2.97 mg/L
	Daily Max	Daily Max	Daily Max	30 Day Avg	Daily Max	30 Day Avg
5/31/2020	1800	13	0.2	0.1	3.3	2.15
6/30/2020	2100	64	0.32	0.3	12	7.35
7/31/2020	2000	0.23	0.36	0.25	13	8.25
8/31/2020	1900	49	0.71	0.33	20	17.5
9/30/2020	1700	55	0.4	0.37	4.6	4.3
10/31/2020	2100	74	0.42	0.42	1.4	1.4
11/30/2020	2600	22	1	0.61	4.3	2.7
12/31/2020	2400	63	0.81	0.51	4.2	3.3
1/31/2021	1900	31	0.27	0.22	13	9.3
2/28/2021	2700	64	0.36	0.33	24	22
3/31/2021	2500	57	0.45	0.34	11	10.5
4/30/2021	1700	43	0.24	0.23	21	20
5/31/2021	2100	76	0.98	0.72	30	23.5
6/30/2021	2200	68	1.2	0.71	19	17
7/31/2021	2100	64	0.7	0.5	10	8.7
8/31/2021	2800	44	0.7	0.7	15	12.4
9/30/2021	2000	27	1.7	1.1	5.2	4.85
10/31/2021	-	-	-	-	-	-
11/30/2021	2000	130	0.92	0.85	19	15
12/31/2021	2400	160	2.7	2.45	18	14
1/31/2022	2100	110	1	0.75	8.3	6.4
2/28/2022	2000	27	0.54	0.74	21	22
3/31/2022	2200	22	0.29	0.25	17	21
4/30/2022	2300	42	1.7	1.07	21	20
5/31/2022	1700	140	1.5	0.9	20	19
6/30/2022	1500	110	5.1	3.75	21	18.5
7/31/2022	1800	97	0.34	0.34	4.83	4.83
8/31/2022	2000	23	0.9	0.7	11	10.5
9/30/2022	1200	160	1.4	1.4	10	9.7
10/31/2022	1700	13	1.5	0.89	3.6	3.4
11/30/2022	1500	58				
12/31/2022	1800	35				

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1201 ELM STREET, SUITE 500
DALLAS, TEXAS 75270-2102

February 9, 2023

TRANSMITTED VIA EMAIL

The Honorable Roger Sweet, Mayor
Village of Jemez Springs
P.O. Box 269
Jemez Springs, NM 87025
mayor@jemezsprings-nm.gov

Re: Administrative Order; Docket Number: CWA-06-2023-1728
NPDES Permit Number: NM0028011

Dear Mayor Sweet:

Enclosed is an Administrative Order (AO) issued to the Village of Jemez Springs for violation of the Clean Water Act (CWA), (33 U.S.C. § 1251 et seq.). Violations were identified during a review of the permit file and discharge monitoring reports submitted for the Village of Jemez Springs Wastewater Treatment Plant to the Environmental Protection Agency, Region 6 (EPA). The violations alleged are for failure to meet permit effluent limits.

This AO does not assess a monetary penalty; however, it does require compliance with applicable federal regulations. The first compliance deadline is thirty days from the effective date of this letter. The EPA is committed to ensuring compliance with the requirements of the National Pollutant Discharge Elimination System (NPDES) program and my staff will assist you in any way possible. Please reference AO Docket Number CWA-06-2023-1728 and NPDES Permit Number NM0028011on your response.

If you have any questions, please contact Ms. Rachel Matthews, of my staff, at (214) 665-8589 or at matthews.rachel@epa.gov.

Sincerely,

Cheryl J. Seager Digitally signed by Seager, Cheryl
Date: 2023.02.09 19:08:03 -06'00'

Cheryl T. Seager, Director
Enforcement and
Compliance Assurance Division

Enclosure

e.c. Ms. Shelly Lemon
NMED Water Bureau Chief
shelly.lemon@state.nm.us

Ms. Susan LucasKamat
NMED Surface Water Quality Bureau
susan.lucaskamat@state.nm.us

STATUTORY AUTHORITY

The following findings are made, and Order issued, under the authority vested in the Administrator of the United States Environmental Protection Agency (EPA), by Section 309(a) of the Clean Water Act (herein "the Act"), 33 U.S.C. § 1319(a). The Administrator of EPA has delegated the authority to issue this Order to the Regional Administrator of EPA Region 6, who has further delegated this authority to the Director of the Enforcement and Compliance Assurance Division.

FINDINGS

1. Village of Jemez Springs (Respondent) is a "person," as that term is defined at Section 502(5) of the Act, 33 U.S.C. § 1362(5), and 40 C.F.R. § 122.2.

2. At all times relevant to this Order (all relevant times), the Respondent's wastewater treatment plant (WWTP), located at 14609 Highway 4, Sandoval County, NM 87025, New Mexico (facility), and was, therefore, an "owner or operator" within the meaning of 40 C.F.R. § 122.2.

3. At all relevant times, the facility acted as a "point source" of a "discharge" of "pollutants" with its wastewater to the receiving water of Jemez River, which is considered "waters of the United States" within the meaning of Section 502 of the Act, 33 U.S.C. § 1362, and 40 C.F.R. § 122.2.

4. Because Respondent owned or operated a facility that is a point source of discharges of pollutants to waters of the U.S., Respondent and the facility were subject to the Act and the National Pollutant Discharge Elimination System (NPDES) program.

5. Under Section 301 of the Act, 33 U.S.C. § 1311, it is unlawful for any person to discharge any pollutant from a point source to waters of the United States, except with the authorization of, and in compliance with, an NPDES permit issued pursuant to Section 402 of the Act, 33 U.S.C. § 1342.

6. Section 402(a) of the Act, 33 U.S.C. § 1342(a), provides that the Administrator of EPA may issue permits under the NPDES program for the discharge of pollutants from point sources to waters of the United States. Any such discharge is subject to the specific terms and conditions prescribed in the applicable permit.

7. Respondent applied for and was issued NPDES Permit No. NM0028011 (permit) under Section 402 of the Act, 33 U.S.C. § 1342, which became effective on June 1, 2021. At all relevant times, Respondent was authorized to discharge pollutants from the facility to waters of the United States only in compliance with the specific terms and conditions of the permit.

8. Part I.A. of the permit places certain limitations on the quality and quantity of effluent discharged by Respondent. The relevant discharge limitations are specified in Attachment A, which is incorporated herein by reference.

9. The permit also includes "Monitoring and Reporting Requirements" that require Respondent to sample and test its effluent and monitor compliance with permit conditions according to specific procedures, in order to determine the facility's compliance or noncompliance with the permit and applicable regulations.

10. The permit requires Respondent to file certified Discharge Monitoring Reports (DMRs) of the results of monitoring. DMRs filed by Respondent showed discharges of multiple pollutants that exceed the effluent limitations for dates 1/1/2021 through 6/30/2022.

11. On August 11, 2022, EPA issued Administrative Order (Original AO)(herein incorporated by reference) Docket Number CWA-06-2022-1812, which cited the effluent limit violations occurring from 1/1/2021 through 6/30/2022. The Original AO required Respondent to eliminate cited violations or submit a plan to eliminate violations. A copy of the Original AO is enclosed as Attachment B.

12. Respondent submitted a basic plan to bring the facility into compliance on December 5, 2022.

13. On January 30, 2023, Respondent agreed to a detailed long-term comprehensive plan of action, which has been incorporated into this AO and replaces the Original AO.

14. Each violation of the conditions of this permit or regulations described above is a violation of Section 301 of the Act, 33 U.S.C. § 1311.

SECTION 309(a)(3) COMPLIANCE ORDER

Based on the foregoing Findings and pursuant to the authority of Section 309(a)(3) of the Act, EPA hereby orders the Respondent to take the following actions:

A. Immediately take all measures as necessary to comply with permit conditions.

B. Respondent shall accomplish the following tasks and comply with the following schedule of activities:

	TASK	DUE DATE
1.	Apply for technical assistance through the Environmental Finance Center Network (EFCN) for further assistance with a rate analysis, asset management, and capital improvement planning.	March 1, 2023
2.	Repair the leaking roofs on the five structures at the facility.	April 30, 2023
3.	Hire consultant (to evaluate WWTP and prepare Preliminary Engineering Report)	July 1, 2023
4.	Repair/upgrade critical components of control panel.	August 1, 2023
5.	Replace perimeter security fence.	September 1, 2023
6.	Purchase necessary tools and equipment for proper operation and maintenance of facility.	September 1, 2023
7.	Inventory the current and new equipment and tools (based on #6 above) as part of asset management.	October 1, 2023
8.	Inspect and repair ferric system and building.	February 1, 2024
9.	Inspect and repair SBR Basin 1 and 2 to fully operational status.	May 1, 2024
10.	Submit a draft 5-year Capital Improvement Plan (CIP) for all operations and maintenance (O&M) of the WWTP and collection system.	July 1, 2024
11.	Finalize Preliminary Engineering Report (PER) and submit to EPA.	August 1, 2024
12.	Submit the finalized 5-year CIP for all expected expenses for the O&M of the WWTP and collection system.	December 1, 2024

C. Within thirty (30) days of completing the tasks in "B" above, Respondent shall submit a Project Completion Report and include a description of the task(s) implemented and any problems encountered.

D. If Respondent would like to arrange a meeting with EPA to discuss the allegations in Section 309 (a)(3) Compliance Order, Respondent should contact EPA within thirty (30) days of the effective date of this Order. The meeting will be held at the Region 6 offices, 1201 Elm St., Dallas, Texas, or through a virtual platform, as appropriate, and the Respondent can provide any information it believes is relevant to this Order. Respondent shall submit to EPA all information or materials it considers relevant to EPA at least ten (10) days prior to the meeting.

E. To arrange a meeting, or to ask questions or comment on this matter, contact Rachel Matthews at (214) 665-8589.

F. All information, and/or correspondence, shall be electronically submitted to:

Ms. Nancy Williams
Williams.Nancy@epa.gov
and
Ms. Rachel Matthews
Matthew.Rachel@epa.gov

GENERAL PROVISIONS

Respondent may seek federal judicial review of this Order pursuant to Chapter 7 of the Administrative Procedure Act, 5 U.S.C. §§ 701-706.

Issuance of this Section 309(a)(3) Compliance Order shall not be deemed an election by EPA to waive any administrative, judicial, civil or criminal action to seek penalties, fines or other relief under the Act for the violations cited herein, or other violations that become known to EPA. EPA reserves the right to seek any remedy available under the law that it deems appropriate.

Failure to comply with this Section 309(a)(3) Compliance Order or the Act may result in further administrative action, or a civil judicial action initiated by the United States Department of Justice.

This Order does not constitute a waiver or modification of the terms or conditions of Respondent's NPDES permit, which remain in full force and effect. Compliance with the terms and conditions of this Order does not relieve Respondent of its obligation to comply with any applicable federal, state, or local law or regulation.

The effective date of this Order is the date it is received by the Respondent.

February 9, 2023

Date

Digitally signed by Seager, Cheryl
Date: 2023.02.09 19:10:57 -06'00'

Cheryl T. Seager, Director
Enforcement and
Compliance Assurance Division

Attachment A

Docket # CWA-06-2023-1728

Attachment A

PART I – REQUIREMENTS FOR NPDES PERMITS

A. LIMITATIONS AND MONITORING REQUIREMENTS

1. FINAL Effluent Limits – 0.075 MGD Design Flow

During the period beginning the effective date of the permit and lasting through the expiration date of the permit (unless otherwise noted), the permittee is authorized to discharge treated wastewater to the Jemez River, in Segment Number 20.6.4.107, from Outfall 001. Such discharges shall be limited and monitored by the permittee as specified below:

EFFLUENT CHARACTERISTICS	DISCHARGE LIMITATIONS						MONITORING REQUIREMENTS	
	lbs/day, unless noted			mg/l, unless noted				
PARAMETER	30-DAY AVG	7-DAY AVG	DAILY MAX	30-DAY AVG	7-DAY AVG	DAILY MAX	MEASUREMENT FREQUENCY	SAMPLE TYPE
Flow	Report MGD	Report MGD	Report MGD	***	***	***	Continuous	Totalizing Meter
Biochemical Oxygen Demand, 5-day	11.3	16.9	***	30	45	***	1/Month	Grab (1)
Total Suspended Solids	11.3	16.9	***	30	45	***	1/Month	Grab (1)
Percent Removal BOD_5	≥85%	***	***	***	***	***	1/Month	Calculation (2)
Percent Removal TSS	≥85%	***	***	***	***	***	1/Month	Calculation (2)
E. Coli Bacteria (4)	3.58×10^8 cfu/day	***	***	126	***	410	1/Month	Grab (1)
Nitrogen, Total (7)	2.97	***	***	Report	***	4.75	2/Month	Grab (1)
Phosphorus, Total	0.626	***	***	Report	***	1.0	2/Month	Grab (1)
Arsenic, Dissolved	0.094	***	***	***	***	150 ug/L	1/Month	Grab (1)
Boron, Dissolved	1.34	***	***	***	***	2,150 ug/L	1/Month	Grab (1)
Total Residual Chlorine(9)	***	***	***	***	***	19 ug/l	Daily	Instantaneous Grab (3)
Aluminum Total Recoverable (8)	1.03	N/A	N/A	***	N/A	1,650ug/L	1/Month	Grab (1)

EFFLUENT CHARACTERISTICS		DISCHARGE LIMITATIONS Standard Units		MONITORING REQUIREMENTS	
POLLUTANT	STORET CODE	MINIMUM	MAXIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
pH	00400	6.6	8.8	5/Week	Instantaneous Grab (3)

EFFLUENT CHARACTERISTICS	DISCHARGE MONITORING		MONITORING REQUIREMENTS	
Whole Effluent Toxicity Testing (48 Hr. Static Renewal)	30-DAY AVG MINIMUM	48-HR MINIMUM	MEASUREMENT FREQUENCY	SAMPLE TYPE
Daphnia pulex	Report	Report	Once/Term (5, 6)	Grab
Pimephales promelas	Report	Report	Once/Term (5, 6)	Grab

Footnotes:

1. Monitoring must be conducted according to test procedures approved under 40CFR Part 136, unless other test procedures have been specified in this permit or approved by the Regional Administrator.
2. Percent removal is calculated using the following equation: [(average monthly influent concentration – average monthly effluent concentration) ÷ average monthly influent concentration] x 100.
3. Instantaneous grab a field measurement that is the analysis of a sample less than 15 minutes from the time of collection only when using chlorine.
4. Bacteria reporting units MUST be either cfu/100mL or MPN.
5. Once per permit term. This permit does not establish requirements to automatically increase WET testing frequency after a test failure, or to begin a toxicity reduction evaluation (TRE) in the event of multiple test failures. However, upon failure of any WET test, the permittee must report the test results to EPA and NMED, Surface Water Quality Bureau, in writing, within 5-business days of notification the test failure. EPA and NMED will review the test results and determine the appropriate action necessary, if any. (See Part II, Section D).
6. Sampling for the whole effluent toxicity test shall occur between the first period between November 1 and April 30, after the permit effective date.
7. Total Nitrogen is defined as the sum of Nitrate +Nitrite (N + N), and Total Kjeldahl Nitrogen (TKN). Total Nitrogen is defined as TKN + Nitrites and Nitrates, as found in the TMDL for the Jemez River approved by EPA September 15, 2009.
8. Compliance schedule to monitor and report total recoverable aluminum data for the first three years from the effective date of this permit. Please refer to part 1.B. The pollutant shall be tested using EPA approved method as found in CFR 136 table IB, for the determination of total recoverable metals, and as found in 20.6.4.900.2 The criteria is based on analysis of total recoverable aluminum in a sample that is filtered to minimize mineral phases as specified by the New Mexico Environment Department (NMED). The NMED specification for filtration can be found at: https//www.env.nm.gov/swqb/SOP/documents/82ChemicalSamplingSOP4-11-2016.pdf. At this website, find chemical sampling in lotic environments part 6.1.4 address total recoverable filtration.

9. 9. The effluent limitation for TRC is the instantaneous maximum and cannot be averaged for reporting purposes. Required when chlorine is used as either backup bacteria control or when disinfection of plant treatment equipment is required.

Attachment B

Docket # CWA-06-2023-1728

UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
REGION 6
1201 ELM STREET, SUITE 500
DALLAS, TEXAS 75270-2102

August 11, 2022

TRANSMITTED VIA EMAIL

The Honorable Roger Sweet
Mayor, Village of Jemez Springs
P.O. Box 269
Jemez Springs, NM 87025
mayor@jemezsprings-nm.gov

Re: Administrative Order; Docket Number: CWA-06-2022-1812
NPDES Permit Number: NM0028011

Dear Mayor Sweet:

Enclosed is an Administrative Order (AO) issued to the Village of Jemez Springs for violation of the Clean Water Act (CWA), 33 U.S.C. §§ 1251–1387. Violations were identified during a review of the permit file and discharge monitoring reports submitted for the Village of Jemez Springs Wastewater Treatment Plant to the Environmental Protection Agency, Region 6 (EPA). The violations alleged are for failure to meet permit effluent limitations.

This AO does not assess a monetary penalty; however, it does require compliance with applicable federal regulations. The first compliance deadline is within thirty (30) days of receipt of the AO. EPA is committed to ensuring compliance with the requirements of the National Pollutant Discharge Elimination System program and my staff will assist you in any way possible. Please reference AO Docket Number CWA-06-2022-1812 and NPDES Permit Number NM0028011 on your response.

If you have any questions, please contact Mr. Mike Tillman, of my staff, at tillman.michael@epa.gov or (214) 665-7531.

Sincerely,

Digitally signed by
CHERYL SEAGER
Date: 2022.08.11
07:53:05 -05'00'

Cheryl T. Seager, Director
Enforcement and
Compliance Assurance Division

Enclosure(s)

ec: Ms. Shelly Lemon, Chief
NMED Surface Water Quality Bureau
shelly.lemon@state.nm.us

Ms. Susan Lucas-Kamat, Manager
NMED Point Source Regulation Section
susan.lucaskamat@state.nm.us

STATUTORY AUTHORITY

The following findings are made, and Order issued, under the authority vested in the Administrator of the United States Environmental Protection Agency (EPA) by Section 309(a) of the Clean Water Act (the Act), 33 U.S.C. § 1319(a). The Administrator of EPA delegated the authority to issue this Order to the Regional Administrator of EPA Region 6, who delegated this authority to the Director of the Enforcement and Compliance Assurance Division.

FINDINGS

1. The Village of Jemez Springs (Respondent) is a "person," as that term is defined at Section 502(5) of the Act, 33 U.S.C. § 1362(5), and 40 C.F.R. § 122.2.

2. At all times relevant to this Order (all relevant times), Respondent owned or operated the Village of Jemez Springs' wastewater treatment plant (WWTP), located at 14609 Highway 4, Sandoval County, NM 87025 (facility), and was, therefore, an owner or operator within the meaning of 40 C.F.R. § 122.2.

3. At all relevant times, the facility acted as a "point source" of a "discharge" of "pollutants" with its wastewater discharge to the Jemez River, which is considered a "Water of the United States," within the meaning of Section 502 of the Act, 33 U.S.C. § 1362, and 40 C.F.R. § 122.2.

4. Because Respondent owned or operated a facility that acted as a point source of discharges of pollutants to waters of the United States, Respondent and the facility were subject to the Act and the National Pollutant Discharge Elimination System (NPDES) program.

5. Under Section 301 of the Act, 33 U.S.C. § 1311, it is unlawful for any person to discharge any pollutant from a point source to waters of the United States, except with the authorization of, and in compliance with, an NPDES permit issued pursuant to Section 402 of the Act, 33 U.S.C. § 1342.

6. Section 402(a) of the Act, 33 U.S.C. § 1342(a), provides that the Administrator of EPA may issue permits under the NPDES program for the discharge of pollutants from point sources to waters of the United States. Any such discharge is subject to the specific terms and conditions prescribed in the applicable permit.

7. Respondent applied for and was issued NPDES Permit No. NM0028011 (permit) under Section 402 of the Act, 33 U.S.C. § 1342, which became effective on June 1, 2021. At all relevant times, Respondent was authorized to discharge pollutants from the facility to waters of the United States only in compliance with the specific terms and conditions of the permit.

8. Part I.A of the permit requires Respondent to sample and test its effluent and monitor its compliance with permit conditions according to specific procedures, in order to determine the facility's compliance or noncompliance with the permit and applicable regulations. It also requires Respondent to file with EPA and the New Mexico Environment Department certified Discharge Monitoring Reports (DMRs) of the results of monitoring, and Noncompliance Reports when appropriate.

9. The permit contains "Effluent Limitations and Monitoring Requirements" that place certain limitations on the quality and quantity of effluent discharged by Respondent. The relevant discharge limitations are specified in Attachment A, which is incorporated herein by reference.

10. Certified DMRs filed by Respondent with EPA in compliance with the permit show discharges of pollutants from the facility that exceed the permitted effluent limitations established in Part I of the permit, as specified in Attachment B, which is incorporated herein by reference.

11. Each instance in which Respondent discharged pollutants to waters of the United States in amounts exceeding the effluent limitations contained in the permit was a violation of the permit and Section 301 of the Act, 33 U.S.C. § 1311.

SECTION 309(a)(3) COMPLIANCE ORDER

Based on the foregoing Findings and pursuant to the authority of Section 309(a)(3) of the Act, 33 U.S.C. § 1319(a)(3), EPA hereby orders Respondent to take the following actions:

A. Take such measures as are necessary to comply with all permit conditions, including effluent limitations and monitoring and reporting requirements, no later than (30) days from the effective date of this Order.

B. Within thirty (30) days of the effective date of this Order, Respondent shall submit a written report detailing the specific actions taken to correct the violations cited herein and an explanation as to why such actions are anticipated to be sufficient to prevent recurrence of these or similar violations.

C. Within thirty (30) days of the effective date of this Order, Respondent shall provide written certification to EPA Region 6 signed by an authorized official [as defined in 40 C.F.R. § 122.22(a)(3)] that the violations cited herein have been corrected and the facility is in compliance with the requirements of the permit.

D. In the event the Respondent believes complete correction of the violations cited herein is not possible within thirty (30) days of the effective date of this Order, Respondent shall, within thirty (30) days of the effective date of this Order, submit a comprehensive written plan for the elimination of the cited violations within the shortest possible time. Such plan shall describe in detail the specific corrective actions to be taken and why such actions are sufficient to correct the violations. The plan shall include a detailed schedule for the elimination of the violations within the shortest possible time, as well as measures to prevent these or similar violations from recurring.

E. Any approved compliance schedule will be incorporated and re-issued in a future administrative order.

F. Any information or correspondence submitted by Respondent to EPA under this Order shall be addressed to the following:

Mike Tillman
tillman.michael@epa.gov
Water Enforcement Branch (ECDWM)
U.S. EPA, Region 6
1201 Elm Street, Suite 500
Dallas, TX 75270

and

Ms. Nancy Williams
williams.nancy@epa.gov
Water Enforcement Branch (ECDWA)
U.S. EPA, Region 6
1201 Elm Street, Suite 500
Dallas, TX 75270-2102

GENERAL PROVISIONS

Respondent may seek federal judicial review of the Order pursuant to Chapter 7 of the Administrative Procedure Act, 5 U.S.C. §§ 701-706.

Issuance of this Section 309(a)(3) Compliance Order shall not be deemed an election by EPA to waive any administrative, judicial, civil or criminal action to seek penalties, fines, or other relief under the Act for the violations cited herein, or other violations that become known to EPA. EPA reserves the right to seek any remedy available under the law that it deems appropriate.

Failure to comply with this Section 309(a)(3) Compliance Order or the Act may result in further administrative action, or a civil judicial action initiated by the United States Department of Justice.

This Order does not constitute a waiver or modification of the terms or conditions of the Respondent's NPDES permit, which remain in full force and effect. Compliance with the terms and conditions of this Order does not relieve Respondent of its obligation to comply with any applicable federal, state, or local laws or regulations.

The effective date of this Order is the date it is received by Respondent.

August 11, 2022
Date

Cheryl T. Seager, Director
Enforcement and
Compliance Assurance Division

Attachment B.

Effluent Violations 01/01/2021 - 06/30/2022

Permit NM0028011

Permit Name	Version Nmbr	Curr. Major Minor Status	Issue Date	Effective Date	Expiration Date	Engineer	Specialist
JEMEZ SPRINGS, VILLAGE OF	0	Minor	4/29/2021	6/1/2021	5/31/2026	MIKE T	NANCY
JEMEZ SPRINGS, VILLAGE OF	4	Minor	1/14/2016	3/1/2016	2/28/2021	MIKE T	NANCY

Outfall 001A

00600 Nitrogen, total [as N] / Location 1 / Season 0 / Base

Limit Start Date	Limit End Date	Sample Type	Frequency of Analysis
6/1/2021	5/31/2026	Grab	Twice per Month

Limit		
Limit Unit Desc	Pounds per Day	Milligrams per Liter
Statistical Base	30DA AVG	DAILY MX
Limit Value	2.97	4.75
DMR Values		
6/30/21		<19
7/31/21		10
8/31/21		15
9/30/21		5.2
11/30/21		19
12/31/21		18
1/31/22		8.3
2/28/22	3.5	22
3/31/22	3.5	17
4/30/22	3.7	21
5/31/22	5.1	20
6/30/22	3.82	21

00665 Phosphorus, total [as P] / Location 1 / Season 0 / Base

Limit Start Date	Limit End Date	Sample Type	Frequency of Analysis
6/1/2021	5/31/2026	Grab	Twice per Month

Limit		
Limit Unit Desc	Pounds per Day	Milligrams per Liter
Statistical Base	30DA AVG	DAILY MX
Limit Value	.626	1.
DMR Values		
6/30/21		1.2
9/30/21		1.7
12/31/21		2.7
4/30/22		1.7
5/31/22		1.5
6/30/22	.71	5.1

01000 Arsenic, dissolved [as As] / Location 1 / Season 0 / Base

Limit Start Date	Limit End Date	Sample Type	Frequency of Analysis
6/1/2021	5/31/2026	Grab	Monthly

Limit	
Limit Unit Desc	Pounds per Day
Statistical Base	30DA AVG
Limit Value	.094
DMR Values	
11/30/21	.17

01020 Boron, dissolved [as B] / Location 1 / Season 0 / Base

Limit Start Date	Limit End Date	Sample Type	Frequency of Analysis
6/1/2021	5/31/2026	Grab	Monthly

Limit	
Limit Unit Desc	Micrograms per Lit
Statistical Base	DAILY MX
Limit Value	2150.
DMR Values	
6/30/21	2200
4/30/22	2300

Outfall 001A

00600 Nitrogen, total [as N] / Location 1 / Season 0 / Base

Limit Start Date	Limit End Date	Sample Type	Frequency of Analysis
3/1/2016	2/28/2021	Grab	Twice per Month

Limit		
Limit Unit Desc	Pounds per Day	Milligrams per Liter
Statistical Base	30DA AVG	DAILY MX
Limit Value	2.97	4.75
DMR Values		
1/31/21		13
2/28/21	4.5	24
3/31/21		11
4/30/21	4	21
5/31/21	4.4	30

01020 Boron, dissolved [as B] / Location 1 / Season 0 / Base

Limit Start Date	Limit End Date	Sample Type	Frequency of Analysis
3/1/2016	2/28/2021	Grab	Monthly

Limit	
Limit Unit Desc	Micrograms per Lit
Statistical Base	DAILY MX
Limit Value	2150.
DMR Values	
2/28/21	2700
3/31/21	2500

VILLAGE OF JEMEZ SPRINGS

Municipal Office

080 Jemez Springs Plaza

PO Box 269, Jemez Springs, NM 87025

Phone (575) 829-3540 • Fax (575) 829-3339

Christina Holder, Clerk/Treasurer

MANOLITO SANCHEZ
Trustee
BOB WILSON
Trustee
MONIQUE ALTON
Trustee

NPDES Permit NM0028011 Catastrophic Failure Village of Jemez Springs Wastewater Treatment Plant 12 April 2023 Follow-up 26 April 2023

NM0028011
Roger Sweet, Mayor, Village of Jemez Springs, New Mexico, 575-829-3504
080 Jemez Plaza, Jemez Springs, NM 87025; Catastrophic Failure Village of Jemez Springs Wastewater Treatment Plant
12 April 2023

Name and address of the party responsible for the incident; or name of the carrier or vessel, the railcar/truck number, or other identifying information
Village of Jemez Springs Wastewater Treatment Plant, 14609 NM-4, Jemez Springs, NM 87025; Catastrophic Failure due runoff raising Jemez River water level.

Date and time of the incident
12 April 2023 22 9:54AM

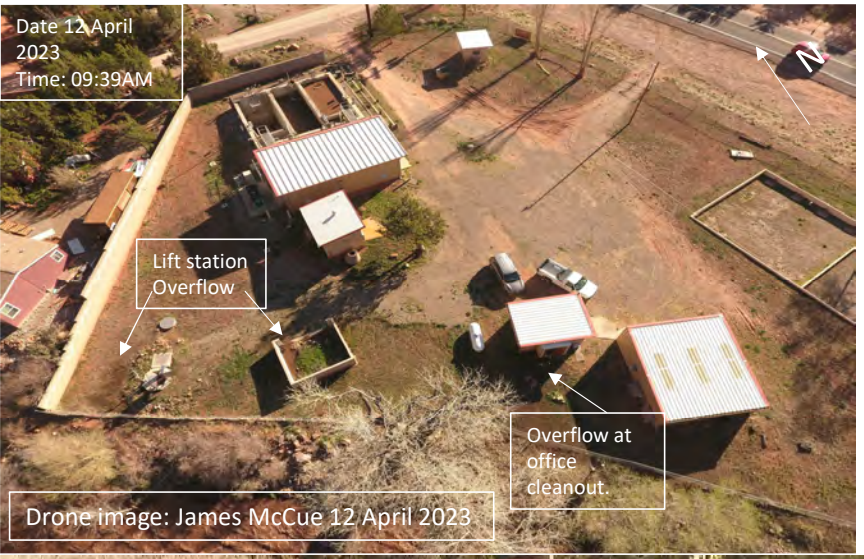
Location of the incident
14609 NM-4, Jemez Springs, NM 87025

Source and cause of the release or spill
High runoff/flooding of the Jemez River

Types of material(s) released or spilled
Untreated sewage

Updated information 26 April 2023

- **12 April**
- Upon notification from JSWWTP on 12 April, Mayor Sweet contacted Jemez Pueblo and Santa Fe National Forest Service to inform them of situation.
- Aerial footage requested; local photographer, Mr. James McCue provided emergency drone footage to identify potential infiltration locations along the Jemez River. Mr. McCue collected footage (still and video imagery) on three different days: 12, 15, and 18 April.
- 0954 12 April 2023, lift station at JSWWTP began to overflow. The drain in the unused sludge holding area and the cleanout behind the office building overflowed prior to that; exact time unknown. (Image page 4)
- SFNFS posted warning signs south of JSWWTP and posted a notification on their website. (Images pages 5)
- Two manholes northwest of JSWWTP overflowed. Exact times unknown. Unable to address those due to emergency at JSWWTP. Both manholes stopped overflowing when the river level decreased, the break in sewer line located and plugged further up the line. (Image page 4)
- NPDES Permit NM0028011 samples collected for the following: BOD5 influent/effluent, TSS influent/effluent, E. Coli, Phosphorus, Total Nitrogen, Dissolved Arsenic, Dissolved Boron, Total Recoverable Aluminum; submitted to Hall Environmental Analysis Laboratory. Preliminary E. Coli results (pending validation). (Image page 4)
- American Pumping initial company contacted due to after hours support and began rotational hauling of waste from JSWWTP
- Both pumps at lift station failed. Reset pumps, pump #2 failed within 30 seconds and later (time unknown) pump #1 failed; pump #1 unable to reset due to ground saturation and water pooling directly in front of electrical panel. Later that night, approximately 11:30PM, pump #1 was reset and it has continued to function. Pump #2 would not reset.



HALL ENVIRONMENTAL ANALYSIS LABORATORY

4901 Hawkins NE, Albuquerque, NM 87109
Tel: (505) 345-3975

Work Orders | Account | Email Alerts | Documents | Customer Service

Analytes View analyte list and results. Data reported may vary from final report. Use at your discretion.

Test Details:	
Work Order:	2304552
Sample Lab ID:	2304552-001B
Test Name:	SM 9223B Fecal Indicator: E. coli MPN
Priority:	Routine
Date Due:	Tuesday Apr 18, 2023
Status:	Pending Validation
Date Completed:	Thursday Apr 13, 2023
Analyst:	TES
Date Validated:	

Analyte:	Type:	Result:	Units:	Analytical Date:
E. Coli	A	Pending Validation	MPN/100mL	4/13/2023 4:58:00 PM

HALL ENVIRONMENTAL ANALYSIS LABORATORY

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Analytes View analyte list and results. Data reported may vary from final report. Use at your discretion.

Test Details:	
Work Order:	2304552
Sample Lab ID:	2304552-001B
Test Name:	SM 9223B Fecal Indicator: E. coli MPN
Priority:	Routine
Date Due:	Tuesday Apr 18, 2023
Status:	Validated
Date Completed:	Thursday Apr 13, 2023
Analyst:	TES
Date Validated:	Tuesday Apr 25, 2023

Analyte:	Type:	Result:	Units:	Analytical Date:
E. Coli	A	>24196	MPN/100mL	4/13/2023 4:58:00 PM

USDA Forest Service
U.S. DEPARTMENT OF AGRICULTURE

Santa Fe National Forest

Forest Service News Release

Santa Fe National Forest
11 Forest Lane, Santa Fe, NM 87508
Website | Facebook | Twitter

Media Contacts:
Pamela Baltimore 307-399-4699 (cell)
Acting Public Affairs Officer
pamela.baltimore@usda.gov

Claudia Brookshire
Public Affairs Staff
brookshire.claudia@gmail.com

Warm weather causes flooding in the Village of Jemez Springs

Increasing Snow Melt results in Jemez Wastewater Plant overflowing into the Jemez River

Santa Fe, NM, April 12, 2023 — Due to flooding caused by spring snow melt, the Jemez District is experiencing hazardous road conditions and closures.

Today, the Village of Jemez notified the Jemez Ranger District that flooding reached the Wastewater Treatment Plant, causing overflow into the Jemez River.

The Forest Service is in the process of installing signage discouraging fishing and drinking at all points south of the wastewater treatment plant. Southern Recreation Areas, including the Vista Linda campground and all roads and gates south of the treatment plant will be closed until further notice.

Quick Overview:

- Forest Service Roads south of the Village of Jemez Springs are closed until further notice.
- Access to fishing and recreation sites closed (to include Vista Linda campground).
- Check with the New Mexico Department of Transportation for road conditions by dialing 511.

The public is advised to contact the Jemez Ranger District at (575) 829-3535 for more information.

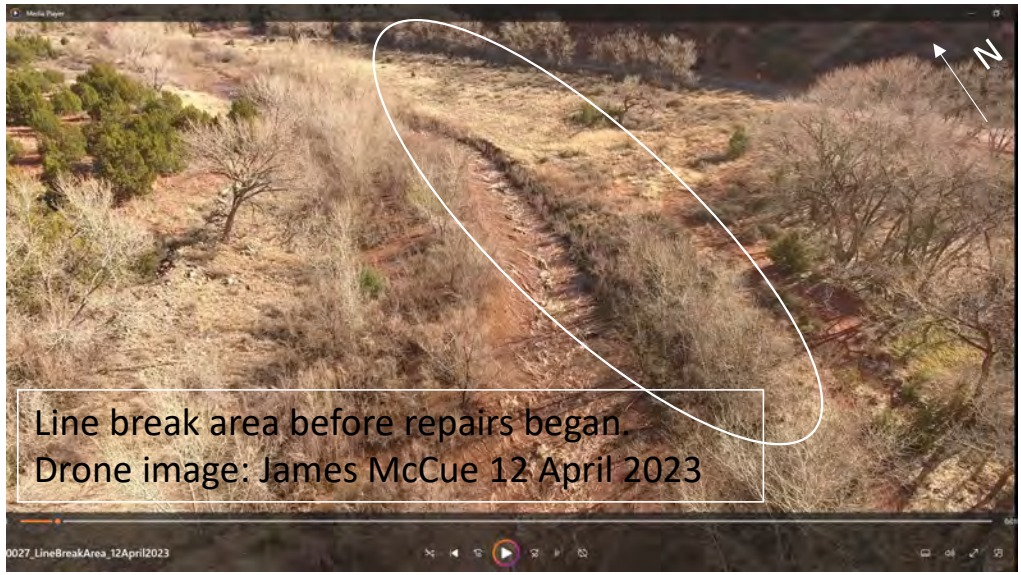
Stay up to date on activities via the SFNF website and following the forest on Facebook and Twitter.

###

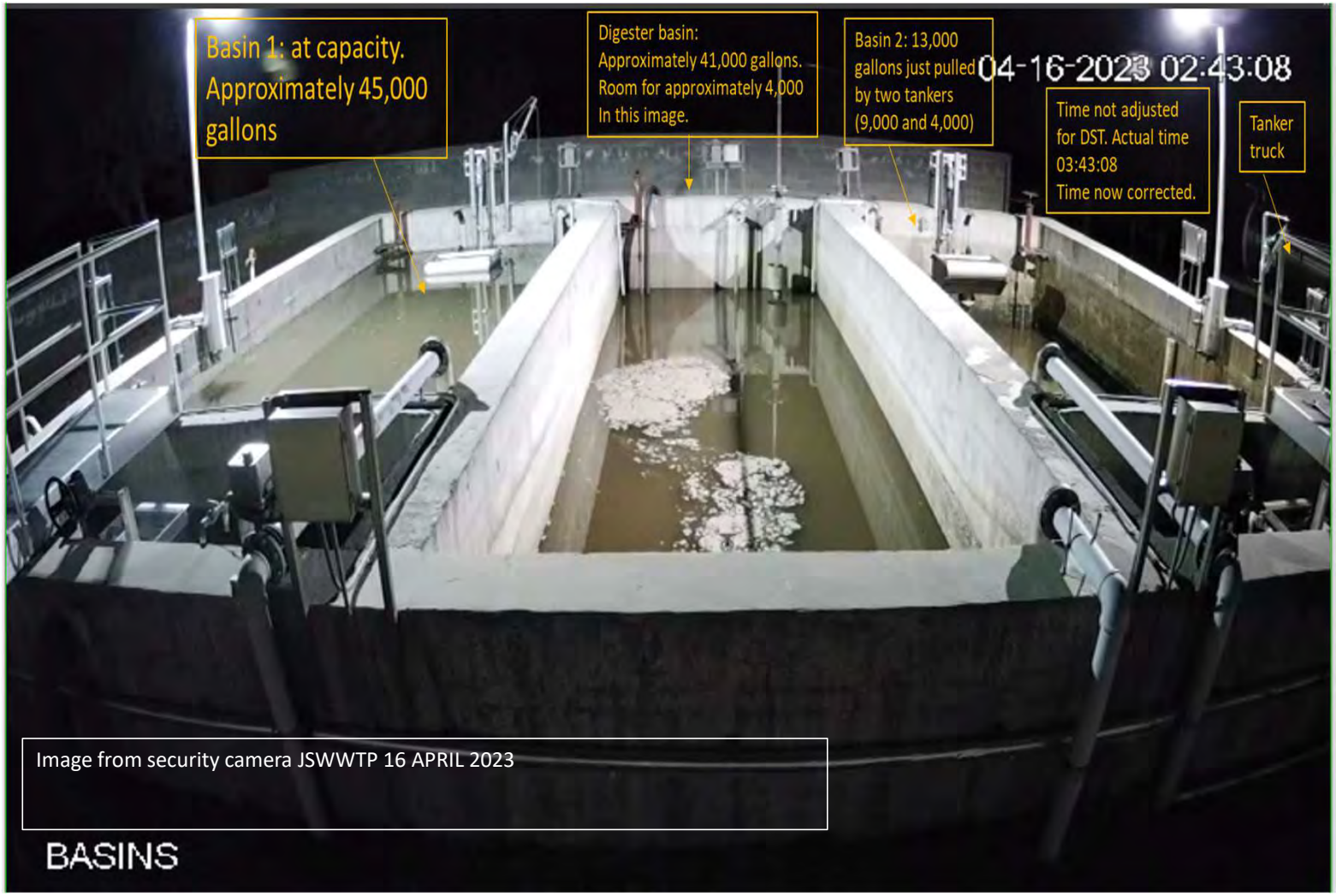
13 April

- 24-hour monitoring of JSWWTP began
- 24-hour pumping from Basin #2 AAA Pumping, American Pumping, Atlas Pumping, and West 44 Pumping.
- JCH technician on site, inspected lift station and blowers; pump #2 kept overheating and shutting off. Drained lift station.
  - The following observed at bottom of lift station: small tree branches, roots, leaves, rocks, and sand. Needs lift station emptied to inspect both pumps.
  - Assessed aeration blower #2 failed and needed to be pulled for inspection by ECM.
- Mountain Pacific and JSWWTP operator reviewed sewer main line maps along with drone imagery. Identified several manholes within 100 feet of Jemez River; walked to manholes, however, unable to locate issue.

- **14 April**
- Mountain Pacific located line break.
- Upon MP reporting, Mark Hatzenbuhler from Sandoval County coordinated with B&D (contract company with SC) to run camera at line break location.
  - At 150’ obstruction observed within line.
  - B&D plugged the manholes to the north and south of the line. Prepared to trench for new line on 15 April.
- Aeration blower #1 failed. Later discovered diffusers in basin covered with sand/sludge
- **15 April**
- Manholes plugged north/south of line break. Waste pumping from manhole north of break began while pumping contined from JSWWTP.
- B&D began excavation of trench for relocation of replaced line.



- **16 April**
- Influent increased significantly approximately 0145AM. Increase due to pressure loss on pipe plug.
- When B&D on site, issue corrected immediately.
- Jemez Pueblo granted permission to use lagoons as dump site to speed tanker hauling.



- **17-26 April**
- Line repair continued, line shifted 5’ to 10’ east of break.
- Expectation to reconnect by Friday, 28 April.
- All 3 basins drained
  - Manhole just north of weir plugged
  - North drying bed used as dump site (Page 12) for remaining, heavy waste tanker trucks unable to haul.
  - Pipe plugs in MH maintained pressure; checked daily
- Repairs/replacement of parts/equipment ongoing.
- ABQ Water Authority on site 25 April; provided camera footage (Page 11). Will return to run more footage. Date undetermined.

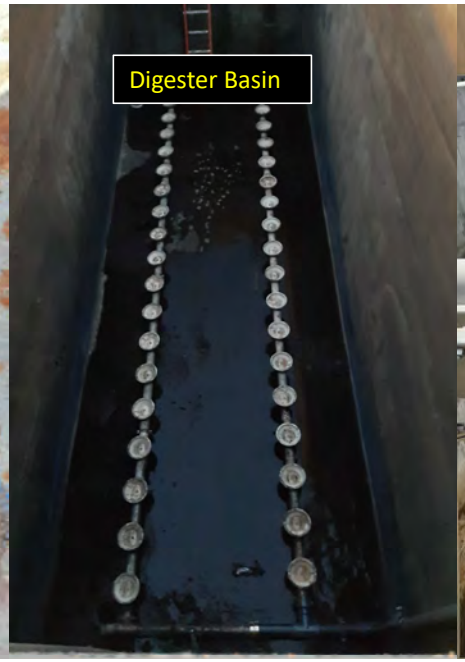
Grit chamber Basin #2
Image taken by Mark Hatzenbuhler (Sandoval County) 18 APRIL 2023

Aeration section of Basin #2
Image taken by Steve Soto (Mountain Pacific) 18 APRIL 2023

- **17-26 April (Continued)**
- Electric Motor Co. and JCH technicians on site
  - EMC pulled blower #2 blower and motor for further inspection
  - JCH technician pulled pumps in lift station.
    - Pump #2 had high amp levels and bad starter: replaced starter
    - Preventive maintenance performed on both pumps. Both pumps operational
- New Mexico Municipal League, Executive Director on site to initiate claim.
- Two emergency hires brought on board 19 April for 24-hour coverage at JSWWTP for monitoring.
- B&D, Atlas, and Badger cleaned all three basins and continue preparation for basin operations.
- Atlas scheduled to reseed JSWWTP with 6,000 of bugs from Rio Rancho Wastewater Site #2.
- Hall Laboratory E.Coli results available on 25 April. >24196 MPN/100m/L
  - Letter generated to Generated to Governor Gachupin of Jemez Pueblo to inform him of validated E.Coli results.
  - Jemez Pueblo crops should not be affected by emergency.
    - Effluent flows from JSWWTP stopped on 16 April.
    - Ditches for irrigation from river water just opened within the last couple of days.

25 April imagery by Albuquerque Water Authority. Root growth, waste, random debris, and river debris visible.

Manhole # Unknown. Unable to open manhole; rusted shut.



Above camera images from JSWWTP security cameras

- Flow information 09 – 25 April to the right.
  - Highest flow day: 12 April 330,084 gallons
  - Last day of effluent: 16 April 8,974 gallons
- Flow Meters due for annual calibration this month. Last calibrated in April 2022 by Yukon.
- Calibration scheduled between 27-29 April by Yukon
  - Effluent meter possible malfunction due to registering effluent flow when there is none. Will have Yukon troubleshoot issue when technician on site.
  - Requested Yukon pull influent data from influent meter during calibration visit.
    - Cannot pull data from meter due to severely corroded USB port.
    - Meter located in ferric building.
    - Requesting Yukon relocate meter into blower building (less corrosive environment). Meter may need to be replaced; not due to current emergency.

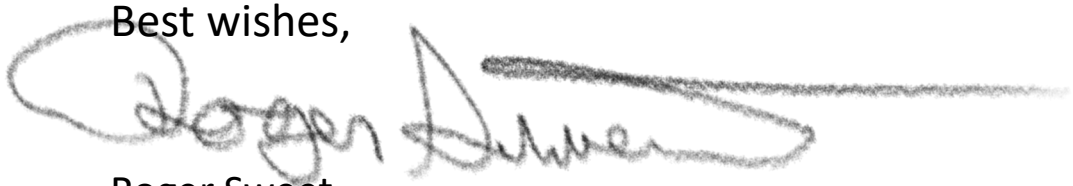
SUNDAY	9-Apr	63041
MONDAY	10-Apr	80873
TUESDAY	11-Apr	129953
WEDNESDAY	12-Apr	330084
THURSDAY	13-Apr	156892
FRIDAY	14-Apr	31920
SATURDAY	15-Apr	3435
WEEKLY AVERAGE		113743
CONVERSION CALC		0.113742571
SUNDAY	16-Apr	8974
MONDAY	17-Apr	2971
TUESDAY	18-Apr	908
WEDNESDAY	19-Apr	1034
THURSDAY	20-Apr	2099
FRIDAY	21-Apr	1525
SATURDAY	22-Apr	1493
WEEKLY AVERAGE		2715
CONVERSION CALC		0.002714857
SUNDAY	23-Apr	1754
MONDAY	24-Apr	1193
TUESDAY	25-Apr	1895

- UV
  - UV Channel drained, modules removed, inspected, cleaned.
  - UV Channel walls scrubbed with hard bristle brush and power washed.
  - UV modules hosed down.
  - UV Quartz covers cleaned.
  - Ran high pressure water through pipe from UV Channel to basins to clean line.
  - Refilled UV channel with water and replaced UV modules.
    - Appear to be functioning normal.
  - No damage from current emergency observed.
    - Normal wear and tear. May need to replace UV lights and possibly entire UV modules (Bank A/Bank B) at some point.

Images by Steve Soto 17 April 2023

With the assistance of multiple organizations, the Village of Jemez Springs Wastewater is putting its best effort in cleaning up this emergency flood event. If you have any questions, please contact me at: 575-829-3540.

Best wishes,



Roger Sweet
Mayor, Village of Jemez Springs

"I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Sewer

VILLAGE OF JEMEZ SPRINGS
80 JEMEZ SPRINGS PLAZA
PO BOX 269
JEMEZ SPRINGS, NM 87025
(575) 829-3540

JEMEZ VALLEY CREDIT UNION
JEMEZ SPRINGS, NM 87025-0026

95-8417/3022

2011

4/10/2023

PAY TO THE ORDER OF JEMEZ MOUNTAIN ELECTRIC COOP $ **1,817.88

One Thousand Eight Hundred Seventeen and 88/100********** DOLLARS

JEMEZ MOUNTAIN ELECTRIC COOP
PO BOX 128
ESPANOLA, NM 87532

MEMO

AUTHORIZED SIGNATURE

⑈00 20 1 1⑈ ⑆30 2 28 4 1 7 1⑆ 0000 368 20 1⑈

VILLAGE OF JEMEZ SPRINGS

2011

JEMEZ MOUNTAIN ELECTRIC COOP 4/10/2023 1,817.88

JVCU WW 1,817.88

VILLAGE OF JEMEZ SPRINGS

2011

JEMEZ MOUNTAIN ELECTRIC COOP 4/10/2023 1,817.88

PAYMENT RECORD

JVCU WW 1,817.88

Jemez Mountains
Electric Cooperative, Inc.
P.O. Box 128, Espanola, New Mexico, 87532

Contact
Espanola (505) 753-2105
Cuba (575) 289-3241
Jemez Springs (575) 829-3550
Toll Free 1-888-755-2105
Automated Payments 1-855-479-3686
To pay online visit our website
www.jemezcoop.org

Account Number	Bill Date	Account Name	Rate	Service Address	Meter Number
67041-001	03/15/23	VILLAGE OF JEMEZ SPRINGS	3	16560	13498128

Service From	Service To	No. Days	Rdg Code	Meter Reading Previous	Meter Reading Present	Multiplier	KWH Usage	Rate	Charges
02/08/23	03/08/23	28	8	91683	98182	1	6499	0.12689	824.66
FACILITY CHARGE									42.50
RATE RIDER NO. 2	0.00280						6499		18.20
FUEL ADJ FACTOR	0.008053						6499		52.34
DCA FACTOR			-0.000940				6499		-6.11
TOTAL CURRENT BILL DUE 04/03/23									931.59
PAST DUE BALANCE									886.29
TOTAL AMOUNT DUE									1,817.88

CURRENT BILL DUE DATE DOES NOT APPLY TO THE PAST DUE BALANCE

To Avoid Disconnect Pay Entire Past Due of $886.29 by 03/29/23
Note: Past Due Notices Delivered will Incur a $15.00 service charge

TOTAL DUE 1,817.88

Comparison	Days Service	Total KWH	Avg. KWH/Day	Cost Per Day
Current	28	6499	232.11	33.27
Last Month	30	6288	209.60	29.54
Last Year	27	7859	291.07	37.94

NEW JMEC RATES ARE IN EFFECT PER NM PRC CASE NO. 21-00318UT

Rate Codes

1 Residential
8 & 9 Street Light
3 Small Commercial
30 & 32 Time of Use
20 21 & 22 Large Power
50 60 & 70 Net Metering
If your rate code is three digits you are being charged a local Rate Rider

Meter Reading Codes

00 Estimated Meter Read
01 Self Read
02 Regular Meter Reading
03 Special
08 Automated
91 Disconnect/Non Pay
92 Final Reading

Please Bring Entire Bill When Paying in Person

failed. The communications between the individual meters and the system command center failed which, in turn, failed to deliver the monthly usage to the JMEC billing department. The communications system has since

Sewer

2024

VILLAGE OF JEMEZ SPRINGS
80 JEMEZ SPRINGS PLAZA
PO BOX 269
JEMEZ SPRINGS, NM 87025
(575) 829-3540

JEMEZ VALLEY CREDIT UNION
JEMEZ SPRINGS, NM 87025-0026

95-8417/3022

4/24/2023

PAY TO THE ORDER OF JEMEZ MOUNTAIN ELECTRIC COOP $**107.67

One Hundred Seven and 67/100********** DOLLARS

JEMEZ MOUNTAIN ELECTRIC COOP
PO BOX 128
ESPANOLA, NM 87532

MEMO

AUTHORIZED SIGNATURE

⑈00 20 24⑈ ⑆30 2 28 4 1 7 1⑆ 0000 368 20 1⑈

VILLAGE OF JEMEZ SPRINGS

2024

JEMEZ MOUNTAIN ELECTRIC COOP 4/24/2023 107.67

JVCU WW 107.67

VILLAGE OF JEMEZ SPRINGS

2024

JEMEZ MOUNTAIN ELECTRIC COOP 4/24/2023 107.67

JVCU WW 107.67

Jemez Mountains Electric Cooperative, Inc.

Your Touchstone Energy® Cooperative

Contact
Espanola (505) 753-2105
Cuba (575) 289-3241
Jemez Springs (575) 829-3550
Toll Free 1-888-755-2105
Automated Payments 1-855-479-3686
To pay online visit our website
www.jemezcoop.org

Account Number	Bill Date	Account Name	Rate	Service Address	Meter Number
67041-001	04/15/23	VILLAGE OF JEMEZ SPRINGS	3	16560	13498128

Service From	Service To	No. Days	Rdg Code	Meter Reading Previous	Meter Reading Present	Multiplier	KWH Usage	Rate	Charges
03/08/23	04/08/23	31	8	98182	5137	1	6955	0.12689	882.52
FACILITY CHARGE									42.50
RATE RIDER NO. 2	0.00280						6955		19.47
FUEL ADJ FACTOR	0.008053						6955		56.01
DCA FACTOR	-0.000940						6955		-6.54
TOTAL CURRENT BILL DUE 05/04/23									993.96
PREVIOUS AMOUNT DUE									1,817.88
THANK YOU FOR YOUR PAYMENT 04/13/23									-2,704.17
PREVIOUS CREDIT BALANCE									-886.29
TOTAL AMOUNT DUE									107.67

TOTAL DUE **107.67**

Comparison	Days Service	Total KWH	Avg. KWH/Day	Cost Per Day
Current	31	6955	224.35	32.06
Last Month	28	6499	232.11	33.27
Last Year	32	8808	275.25	35.12

National Lineman Appreciation Day is April 18 2023. JMEC would like to recognize & thank ALL lineman for their dedication and hard work! We truly appreciate you!

Rate Codes

1 Residential
8 & 9 Street Light
3 Small Commercial
30 & 32 Time of Use
20 21 & 22 Large Power
50 60 & 70 Net Metering
If your rate code is three digits you are being charged a local Rate Rider

Meter Reading Codes

00 Estimated Meter Read
01 Self Read
02 Regular Meter Reading
03 Special
08 Automated
91 Disconnect/Non Pa
92 Final Reading

Please Bring Entire Bill When Paying in Person

JEMEZ SPRINGS APPROVAL: I, or We, certify that the above articles were received in good condition after due inspection thereof, or the services were rendered as stated; that they were necessary and proper and that the amounts claimed are just and reasonable and that no part thereof has been paid.

Name: _____ Originator

Name: _____ Department Head

Authorized Signature for Payment: _____ Finance

2043

Sewer

VILLAGE OF JEMEZ SPRINGS
80 JEMEZ SPRINGS PLAZA
PO BOX 269
JEMEZ SPRINGS, NM 87025
(575) 829-3540

JEMEZ VALLEY CREDIT UNION
JEMEZ SPRINGS, NM 87025-0026

95-8417/3022

5/22/2023

PAY TO THE ORDER OF JEMEZ MOUNTAIN ELECTRIC CO-OP $**695.32

Six Hundred Ninety-Five and 32/100********** DOLLARS

JEMEZ MOUNTAIN ELECTRIC CO-OP

AUTHORIZED SIGNATURE

MEMO

⑈002043⑈ ⑆302284171⑆ 00003682016⑈

VILLAGE OF JEMEZ SPRINGS 2043

JEMEZ MOUNTAIN ELECTRIC CO-OP 5/22/2023 695.32

JVCU WW 695.32

VILLAGE OF JEMEZ SPRINGS 2043

JEMEZ MOUNTAIN ELECTRIC CO-OP 5/22/2023 695.32

JVCU WW 695.32

Jemez Mountains Electric Cooperative, Inc.

Your Touchstone Energy® Cooperative

Contact
Espanola (505) 753-2105
Cuba (575) 289-3241
Jemez Springs (575) 829-3550
Toll Free 1-888-755-2105
Automated Payments 1-855-479-3686
To pay online visit our website
www.jemezcoop.org

Account Number	Bill Date	Account Name	Rate	Service Address	Meter Number
67041-001	05/15/23	VILLAGE OF JEMEZ SPRINGS	3	14609 HWY4 (JEMEZ SPRINGS)	13498128

Service From	Service To	No. Days	Rdg Code	Meter Reading Previous	Meter Reading Present	Multiplier	KWH Usage	Rate	Charges
04/08/23	05/08/23	30	8	5137	9909	1	4772	0.12689	605.52
FACILITY CHARGE									42.50
RATE RIDER NO. 2	0.00280						4772		13.36
FUEL ADJ FACTOR	0.008053						4772		38.43
DCA FACTOR	-0.000940						4772		-4.49
TOTAL CURRENT BILL DUE 06/05/23									695.32
PREVIOUS AMOUNT DUE									107.67
THANK YOU FOR YOUR PAYMENT 05/03/23									-107.67
TOTAL AMOUNT DUE									695.32

TOTAL DUE 695.32

Comparison	Days Service	Total KWH	Avg. KWH/Day	Cost Per Day
Current	30	4772	159.07	23.18
Last Month	31	6955	224.35	32.06
Last Year	31	7808	251.87	32.56

To report a power outage, call our Power Outage Hotline- 1-877-753-0095. We have Dispatchers available 24 hours a day, 7 days a week!

Rate Codes

1 Residential
8 & 9 Street Light
3 Small Commercial
30 & 32 Time of Use
20 21 & 22 Large Power
50 60 & 70 Net Metering

If your rate code is three digits you are being charged a local Rate Rider

Meter Reading Codes

00 Estimated Meter Read
01 Self Read
02 Regular Meter Reading
03 Special
08 Automated
91 Disconnect/Non Pay
92 Final Reading

Please Bring Entire Bill When Paying in Person

JEMEZ SPRINGS APPROVAL: I, or We, certify that the above articles were received in good condition after due inspection thereof, or the services were rendered as stated; that they were necessary and proper and that the amounts claimed are just and reasonable and that no part thereof has been paid.

2055

Sewer

VILLAGE OF JEMEZ SPRINGS
80 JEMEZ SPRINGS PLAZA
PO BOX 269
JEMEZ SPRINGS, NM 87025
(575) 829-3540

JEMEZ VALLEY CREDIT UNION
JEMEZ SPRINGS, NM 87025-0026

95-8417/3022

06/29/2023

PAY TO THE ORDER OF JEMEZ MOUNTAIN ELECTRIC COOP $ **850.03

Eight hundred fifty and 03/100********** DOLLARS

JEMEZ MOUNTAIN ELECTRIC COOP
PO BOX 128
ESPANOLA, NM 87532

MEMO

AUTHORIZED SIGNATURE

⑈002055⑈ ⑆302284171⑆ 00003682 01⑈

VILLAGE OF JEMEZ SPRINGS 2055

06/29/2023 **JEMEZ MOUNTAIN ELECTRIC COOP** 850.03

JVCU WW 850.03

VILLAGE OF JEMEZ SPRINGS 2055

06/29/2023 **JEMEZ MOUNTAIN ELECTRIC COOP** 850.03

JVCU WW 850.03

Jemez Mountains Electric Cooperative, Inc.

Your Touchstone Energy® Cooperative

Contact
Espanola (505) 753-2105
Cuba (575) 289-3241
Jemez Springs (575) 829-3550
Toll Free 1-888-755-2105
Automated Payments 1-855-479-3686
To pay online visit our website
www.jemezcoop.org

Account Number	Bill Date	Account Name	Rate	Service Address	Meter Number
67041-001	06/15/23	VILLAGE OF JEMEZ SPRINGS	3	14609 HWY4 (JEMEZ SPRINGS)	13498128

Service From	Service To	No. Days	Rdg Code	Meter Reading Previous	Meter Reading Present	Multiplier	KWH Usage	Rate	Charges
05/08/23	06/09/23	32	8	9909	15817	1	5908	0.12689	749.67
FACILITY CHARGE									42.50
RATE RIDER NO. 2	0.00280						5908		16.54
FUEL ADJ FACTOR	0.008053						5908		47.58
DCA FACTOR			-0.001060				5908		-6.26
TOTAL CURRENT BILL DUE 07/05/23									850.03
PREVIOUS AMOUNT DUE									695.32
THANK YOU FOR YOUR PAYMENT 05/24/23									-695.32
TOTAL AMOUNT DUE									850.03

TOTAL DUE **850.03**

Comparison	Days Service	Total KWH	Avg. KWH/Day	Cost Per Day
Current	32	5908	184.63	26.56
Last Month	30	4772	159.07	23.18
Last Year	31	6828	220.26	28.62

Enchantment Magazine Survey - Please go to: http://surveys.greatblueresearch.com/s3/NMRECA-Readership-Survey-2023 - to access the survey.

Rate Codes

1 Residential
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8 & 9 Street Light
30 & 32 Time of Use
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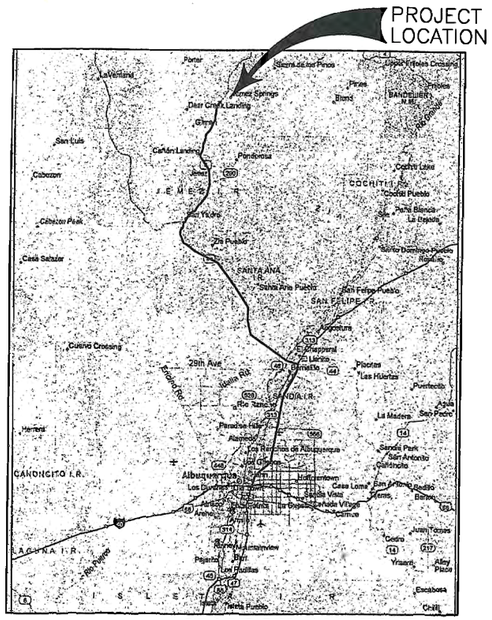
08 Automated
91 Disconnect/Non Pay
92 Final Reading

Please Bring Entire Bill When Paying in Person



LOCATION MAP

N.T.S.

52 - 52A

52A - 53

FILE0024.tif

VILLAGE OF JEMEZ SPRINGS
NEW MEXICO

CONSTRUCTION PLANS FOR

SEWER REHABILITATION

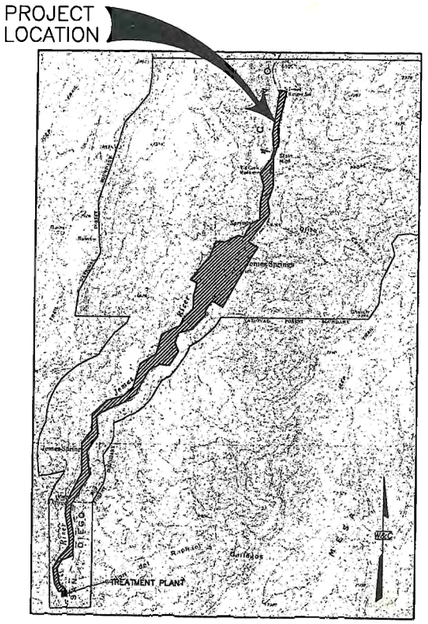
TONY C670 261

1-19-05

DRAWING INDEX

SHT NO.	DESCRIPTION
1.	COVER/ VICINITY MAP/INDEX
2.	SITE LOCATION AND GENERAL NOTES
3.	SEWER MAPS AND INFORMATION 1 OF 7
4.	SEWER MAPS AND INFORMATION 2 OF 7
5.	SEWER MAPS AND INFORMATION 3 OF 7
6.	SEWER MAPS AND INFORMATION 4 OF 7
7.	SEWER MAPS AND INFORMATION 5 OF 7
8.	SEWER MAPS AND INFORMATION 6 OF 7
9.	SEWER MAPS AND INFORMATION 7 OF 7
10.	REHABILITATION REQUIREMENTS 1 OF 7
11.	REHABILITATION REQUIREMENTS 2 OF 7
12.	REHABILITATION REQUIREMENTS 3 OF 7
13.	REHABILITATION REQUIREMENTS 4 OF 7
14.	REHABILITATION REQUIREMENTS 5 OF 7
15.	REHABILITATION REQUIREMENTS 6 OF 7
16.	REHABILITATION REQUIREMENTS 7 OF 7
17.	DETAILS SHEET
18.	INSPECTION REPORT SUMMARY 1 OF 5
19.	INSPECTION REPORT SUMMARY 2 OF 5
20.	INSPECTION REPORT SUMMARY 3 OF 5
21.	INSPECTION REPORT SUMMARY 4 OF 5
22.	INSPECTION REPORT SUMMARY 5 OF 5
23.	MANHOLE INSPECTION REPORT SUMMARY 1 OF 3
24.	MANHOLE INSPECTION REPORT SUMMARY 2 OF 3
25.	MANHOLE INSPECTION REPORT SUMMARY 3 OF 3

1-19-05 5-17



VICINITY MAP

N.T.S.

REVISIONS

NO.	DESCRIPTION	DATE	BY

WILSON & COMPANY
4900 LANG AVE. N.E.
ALBUQUERQUE, NM 87109

DAVID L. PRICE (9780) REGISTERED PROFESSIONAL ENGINEER

VILLAGE OF JEMEZ SPRINGS
WASTEWATER TREATMENT FACILITY

COVER/VICINITY MAP/INDEX

PROJECT NO.	X0-210-029
DATE	7/19/04
DRAWING NO.	XX
SHEET NO.	1

x:\Public\PROJECTS\X0029\Sewer Rehab\cov_r_jemez_springs.dwg 07/21/2004 10:51:47 AM MDT

SITE LOCATION MAP
SCALE: 1" = 800'

X:\Public\PROJECTS\X0029\Sewer Rehab\gnotes.dwg 07/23/2004 10:13:37 AM MDT

GENERAL NOTES

1. ALL MANHOLES, PIPE SIZES, OBSERVATION, DEFECTS, UTILITIES (ABOVE AND BELOW GROUND) AND THEIR LOCATION ARE SHOWN ACCORDING TO BEST INFORMATION AVAILABLE TO THE ENGINEER. THE CONTRACTOR SHALL FIELD VERIFY ALL INFORMATION BEFORE ANY CONSTRUCTION WORK COMMENCES. UTILITIES DAMAGED BY THE CONTRACTOR BECAUSE LOCATION OF THE SAME WAS NOT FIELD VERIFIED SHALL BE REPAIRED OR REPLACED BY THE CONTRACTOR AT HIS EXPENSE.
2. SERVICE CONNECTION LOCATIONS ARE SHOWN ACCORDING TO TELEVISION AUDIO AND VIDEO INFORMATION. THE CONTRACTOR SHALL VERIFY PRIOR TO CONSTRUCTION ALL "LIVE" SERVICE CONNECTIONS AND RESTORE ONLY THOSE "LIVE" CONNECTIONS. CONTRACTORS SHALL SUBMIT DISTANCE (IN STATION) FROM DOWNSTREAM MANHOLE AND HOUSE/BUILDING ADDRESS FOR AS-BUILT DRAWINGS.
3. PRIOR TO CONSTRUCTION OF ALL LINES DESIGNATED FOR REHABILITATION, THE CONTRACTOR SHALL REMOVE ALL DEBRIS AND BLOCKAGES, CLEAN AND RE-TELEVISE LINES AS SPECIFIED. SUCH TELEVISING IS INCIDENTAL TO THE UNIT PRICE COST. WHERE PARTIAL REHABILITATION OR REPLACEMENT IS REQUIRED, CONTRACTOR MAY IF RE-TELEVISE ONLY THAT PORTION REHABILITATED, BUT FOOTAGE LOCATION SHALL BE TIED TO THE DOWNSTREAM MANHOLE FOR DOCUMENTATION PURPOSES.
4. PRIOR TO THE BEGINNING OF ANY REHABILITATION WORK, CONTRACTOR SHALL CLEAN AND TELEVISE ALL SEWERS SCHEDULED FOR REHABILITATION, AS SPECIFIED. UPON REVIEW OF TELEVISION TAPES, OWNER RESERVES THE RIGHT TO DETERMINE METHOD THAT IS USED FOR REHABILITATION. OWNER ALSO RESERVES THE RIGHT TO DELETE REHABILITATION WORK FOR ALL PORTIONS OF THE SEWERS SO DESIGNATED.
5. ALL LABOR AND MATERIALS, INCLUDING LIVE SERVICE CONNECTIONS, NEEDED TO PERFORM POINT REPAIRS NECESSARY FOR LINE REHABILITATION SHALL BE CONSIDERED INCIDENTAL TO THAT LINE REHABILITATION.
6. EXISTING SEWER SYSTEM AND MANHOLES HAVE BEEN INSPECTED AND ARE THE BASIS OF IMPROVEMENTS SET FORTH IN THESE DOCUMENTS. CCTV TAPES AND LOGS OF SEWER INSPECTION AND PHOTOS AND LOGS OF MANHOLE INSPECTION ARE AVAILABLE FOR THE CONTRACTOR REVIEW AND USE.
7. FOR SEWER PIPE INSTALLATION. SEE SPECIFICATIONS, EXCEPT WHERE NOTED OTHERWISE ON PLANS.
8. THE CONTRACTOR SHALL HAVE A MINIMUM , ONE (1) SIGNED COPY OF THE PLANS AND ONE (1) SIGNED COPY OF THE SPECIFICATIONS AT THE JOB SITE AT ALL TIMES.
9. THE CONTRACTOR SHALL NOT BE ALLOWED TO WORK ON SUNDAYS OR HOLIDAYS. SATURDAY WORK SHALL BE BE AS APPROVED BY OWNER.
10. DRIVEWAYS, SIDEWALKS, FENCES, SHRUBS, ORNAMENTAL AND FRUIT TREES AND OTHERS AREAS DAMAGED BY THE CONTRACTOR SHALL BE RESTORED TO A CONDITION EQUAL TO OR BETTER THAN THAT EXISTING BEFORE DAMAGE OR DISRUPTION OCCURRED AND SHALL BE FINISHED TO MATCH SURROUNDING SURFACES.
11. SAW-CUTS REQUIRED FOR THE REMOVAL AND REPLACEMENT ITEMS SHALL BE AT LEAST ONE-HALF THE DEPTH OF THE EXISTING SURFACE MATERIAL. SAW-CUTS SHALL NOT BE PAID FOR DIRECTLY, BUT SHALL BE CONSIDERED INCIDENTAL TO THE VARIOUS REMOVAL AND REPLACEMENT ITEMS REQUIRED.
12. THE CONTRACTOR SHALL PROVIDE ALL CONSTRUCTION STAKING FOR THE PROJECT AND SUCH STAKING SHALL BE CONSIDERATION INCIDENTAL TO THE CONTRACT AMOUNT. ENGINEER TO BE PROVIDED WITH COPIES OF ALL SURVEY FIELD NOTES.
13. SUITABLE MATERIALS USED FOR BACKFILL SHALL BE AS SPECIFIED. ALL UNSUITABLE MATERIALS REMOVED DURING TRENCHING AND EXCAVATION SHALL BE DISPOSED OF AT A SITE APPROVED BY THE OWNER. STOCKPILING OF EXCAVATED MATERIAL IN STREET OR RIGHT-OF-WAY MAY BE ALLOWED UPON APPROVAL BY OWNER.
14. PERMITS AND TRAFFIC CONTROL: PRIOR TO CONSTRUCTION, CONTRACTOR SHALL TO SECURE ALL VILLAGE AND NMDOT PERMITS AND SUBMIT WRITTEN TRAFFIC CONTROL PLAN TO NMDOT FOR APPROVAL.
15. ACCESS TO PROPERTIES MUST BE MAINTAINED AT ALL TIMES.
16. WHERE TRAFFIC ON PUBLIC ACCESS WILL BE IMPAIRED, SUBMIT WRITTEN TRAFFIC CONTROL PLAN MINIMUM 7 WORKING DAYS PRIOR TO CONSTRUCTION.
17. WHERE SERVICES WILL BE TAKEN OUT OF SERVICE PROVIDE WRITTEN NOTIFICATION AND COORDINATION PLAN 7 WORKING DAYS IN ADVANCE OF CONSTRUCTION.
18. WHERE REQUIRED, "BAND SEAL", DFW FLEX PIPE COUPLING, OR SIMILAR FLEXIBLE TYPE COUPLINGS SHALL BE USED TO CONNECT SEWER PIPES OF DIFFERENT MATERIALS.
19. SUBSURFACE INFORMATION SHOWN IN THESE DRAWINGS IS FOR INFORMATION ONLY. THE ACCURACY OF THIS INFORMATION IS NOT GUARANTEED AND IT IS NOT TO BE CONSTRUED AS PART OF THE PLANS GOVERNING THE CONSTRUCTION OF THIS PROJECT.
20. IT IS THE RESPONSIBILITY OF ALL BIDDERS TO VERIFY SUBSURFACE CONDITION, INCLUDING DEWATERING REQUIREMENTS. DEWATERING IF NECESSARY, SHALL BE INCIDENTAL TO OTHER CONSTRUCTION ACTIVITIES.
21. MANHOLES CONSTRUCTED TO REPLACE EXISTING MANHOLES SHALL HAVE FLOWLINE AND RIM ELEVATIONS SET TO MATCH THOSE OF THE EXISTING MANHOLES UNLESS OTHERWISE NOTED OR DIRECTED, FRAMES AND COVER SHALL BE REPLACED IN KIND,
22. ALL MANHOLES FRAME AND COVER CASTINGS SHALL HAVE MACHINED SEATING SURFACES TO INSURE A TIGHT FIT.
23. NO BLASTING SHALL BE ALLOWED ON THE PROJECT.
24. WHERE CONSTRUCTION CALLS FOR REMOVAL OF BRUSH AND TREES AREA, AROUND MANHOLE WILL BE CLEARED TO A 5 FT RADIUS FROM MANHOLE RIM.

REVISIONS			
NO.	DESCRIPTION	DATE	BY

WILSON & COMPANY
4900 LANG AVE. N.E.
ALBUQUERQUE, NM 87109

ROBERT J. PAULETTE NEW MEXICO 12763 REGISTERED PROFESSIONAL ENGINEER

VILLAGE OF JEMEZ SPRINGS, NM
WASTEWATER TREATMENT FACILITY IMPROVEMENTS

SITE LOCATION AND GENERAL NOTES

PROJECT NO.	X0-210-029
DATE	7/19/04
DRAWING NO.	XX
SHEET NO.	2

FILE0022.tif

TAPE #3

CANNOT ACCESS

TAPE #7

DROP MANHOLE

VIDEOTAPED BY SOUTHWEST SEWER

N 30°01'21.03" W
317.53'

N 14°14'23.64" W
298.40'

N 05°15'36.78" W
250.58'

N 18°40'03.77" E
270.33'

N 39°26'04.09" E
379.42'

N 34°41'29.42" E
401.99'

N 11°34'41.73" E
349.55'

S 04°03'28" W
469.35'

S 19°37'19" E
168.22'

S 08°46'34" W
264.19'

MH #10A
8" INV. 5953.61
8" INV.(NE)=5954.58
8" INV.(NE)=5957.15

MH UNKNOWN

MH #9A
8" INV.=5956.55

MH #8A
8" INV.=5959.04

MH #7A
8" INV.=5961.17
INV.(E)=5961.62

MH #6A
8" INV.=5965.91

MH #5A
8" INV.=5971.68

MH #4A
8" INV.=5978.10

MH #3A
8" INV.=5981.70

MH #3AB
8" INV.=5989.00

MH #2A
8" INV.=5991.96

MATCHLINE SHEET 2

WHOLE SECTION - MH TO MH TAPED

TAPED, BUT WITH SECTIONS MISSING FOR VARIOUS REASONS

SCALE: 1" = 100'

REVISIONS

NO.	DESCRIPTION	DATE	BY

WILSON & COMPANY
4900 LANG AVE. N.E.
ALBUQUERQUE, NM 87109

ROBERT J. PAULETICH
NEW MEXICO
13106
REGISTERED PROFESSIONAL ENGINEER

VILLAGE OF JEMEZ SPRINGS, NM
SANITARY SEWER COLLECTION SYSTEM REHABILITATION

SEWER MAPS AND INFORMATION
SHEET 1 OF 7

PROJECT NO. XO-210-029
DATE 7/19/04
DRAWING NO. XX
SHEET NO. 3

FILE0021.tif

TAPE #8

TAPE #8

S 12°19'36" W
282.25'

S 18°14'49" E
340.02'

S 30°59'28" W
287.84'

S 08°57'02" W
306.05'

MH #2AB
8" INV.=5996.48

MH #1A
8" INV.=6000.51

MH #2
8" INV.=6010.01

MH #3
8" INV.=6013.90

MH #4
8" INV.=6019.53

TAPE #7

TAPE #7

S 49°07'59" W
399.17'

N 15°11'42.00" E
294.51'

MH #5 (DNF)

TAPE #4

TAPE #4

N 07°45'05.29" W
351.39'

MH #6
8" INV.=6026.06

S 13°40'52" W
446.11'

S 13°45'25" W
462.53'

MH #7
8" INV.=6031.97

MH #8
8" INV.=6035.12
INV.(N)=6039.72

MATCHLINE SHEET 1

MATCHLINE SHEET 3

WHOLE SECTION - MH TO MH TAPED

TAPED, BUT WITH SECTIONS MISSING FOR VARIOUS REASONS

SCALE: 1" = 100'

REVISIONS

NO.	DESCRIPTION	DATE	BY

WILSON & COMPANY
4900 LANG AVE. N.E.
ALBUQUERQUE, NM 87109

ROBERT J. PAULETTE
NEW MEXICO
12761
REGISTERED PROFESSIONAL ENGINEER

VILLAGE OF JEMEZ SPRINGS, NM
SANITARY SEWER COLLECTION SYSTEM REHABILITATION

SEWER MAPS AND INFORMATION
SHEET 2 OF 7

PROJECT NO. X0-210-029
DATE 7/19/04
DRAWING NO. XX
SHEET NO. 4

FILE0020.tif

MATCHLINE SHEET 2

MATCHLINE SHEET 4

TAPE #4

TAPE #4

TAPE #7

TAPE #7

TAPE #7

N 00°04'57.53" E
=406.825'

S19°04'57"W
230.67'

S40°01'39"W
238.84'

S40°19'36"W
310.58'

S59°36'16"W
352.43'

S81°45'14"W
148.95'

S48°58'26"W
400.98'

S48°28'09"W
400.42'

N05°55'23"W
81.77'

S17°00'32"W
181.06'

S17°00'32"W
191.87'

S22°99'26"W
338.41'

MH #8
INV=6035.12
INV.(N)=6039.72

MH #9 (DNF)

MH #10
INV=6045.79

MH #11
INV=6054.56

MH #12
INV=6060.77

MH #13
INV=6065.14

MH #14
INV=6070.50

MH #15
INV=6074.

MH #16
INV=6076.30

MH #17 (DNF)

MH #18
INV=6089.51

MH #19

MH #20
INV=6095.41

@45.8' SERVICE CONNECTION
W/ROOT - WAS RECORDED
AND ERASED

WHOLE SECTION - MH TO MH TAPED

TAPED, BUT WITH SECTIONS MISSING FOR VARIOUS REASONS

SCALE: 1" = 100'

REVISIONS

NO.	DESCRIPTION	DATE	BY

WILSON &COMPANY
4900 LANG AVE. N.E.
ALBUQUERQUE, NM 87109

ROBERT J. PAULETTE
NEW MEXICO
12763
REGISTERED PROFESSIONAL ENGINEER

VILLAGE OF JEMEZ SPRINGS, NM
SANITARY SEWER COLLECTION SYSTEM REHABILITATION

SEWER MAPS AND INFORMATION
SHEET 3 OF 7

PROJECT NO.	X0-210-029
DATE	7/19/04
DRAWING NO.	XX
SHEET NO.	5

FILE0019.tif

MATCHLINE SHEET 3

MATCHLINE SHEET 5

BROKEN PIPE
NOT ACCESSABLE

TAPE #7

TAPE #8

TAPE #9

DROP MANHOLE

ROCKS IN LINE AT 5'
NOT ACCESSABLE

WHOLE SECTION - MH TO MH TAPED

TAPED, BUT WITH SECTIONS MISSING FOR VARIOUS REASONS

SCALE: 1" = 100'

REVISIONS

NO.	DESCRIPTION	DATE	BY

WILSON &COMPANY
4900 LANG AVE. N.E.
ALBUQUERQUE, NM 87109

VILLAGE OF JEMEZ SPRINGS, NM
SANITARY SEWER COLLECTION SYSTEM REHABILITATION

SEWER MAPS AND INFORMATION
SHEET 4 OF 7

PROJECT NO.	X0-210-029
DATE	7/19/04
DRAWING NO.	XX
SHEET NO.	6

SCALE: 1" = 100'

MATCHLINE SHEET 4

MATCHLINE SHEET 6

PAVED OVER

TAPE #10

TAPE #5

TAPE #8

TAPE #1

TAPE #1 & 2

TAPE #9

CANNOT OPEN

THIS SECTION FIXED BY PIPE BURSTING JANUARY 2004

WHOLE SECTION - MH TO MH TAPED

TAPED, BUT WITH SECTIONS MISSING FOR VARIOUS REASONS

* CAMERA IS UNDERWATER FOR MOST OF THE TAPE.

REVISIONS

NO.	DESCRIPTION	DATE	BY

WILSON & COMPANY
4900 LANG AVE. N.E.
ALBUQUERQUE, NM 87109

VILLAGE OF JEMEZ SPRINGS, NM
SANITARY SEWER COLLECTION SYSTEM REHABILITATION

SEWER MAPS AND INFORMATION
SHEET 5 OF 7

PROJECT NO.	X0-210-029
DATE	7/19/04
DRAWING NO.	XX
SHEET NO.	7

FILE0017.tif

74 ft From MH 52 A
Surface Tie
need to replace w/MH
20' deep

CANNOT OPEN (DNP) MH # M-1
CANNOT OPEN
CANNOT OPEN
CANNOT OPEN
TAPE #1
S63°30'55"W 209.80'
MH # 51 INV=6201.37
S48°27'59"W 169.10'
W29°58'03"E 128.38'
TAPE #1
TAPE #1 AND 8
S23°55'30"W 374.10'
TAPE #8
MH # 52 INV=6205.23 8" INV(SE)=6205.23 6" INV(W)=6205.23
MH # 53 INV=6211.03
S33°48'10"W 288.57'
MH # 54 INV=6214.78
S68°24'40"W 285.84'
TAPE #10
TAPE #10
TAPE #10
N43°30'00"E 146.18'
MH # K-3 INV=6219.02
MH # K-4 INV=6216.98
MATCHLINE SHEET 5
TAPE #9
FILLED WITH ROOTS
S85°21'16"E 90.50'
S09°28'14"E 108.33'
S05°50'00"W 128.16'
MH # 55 INV=6221.81
8" INV=6224.81
INACCESSIBLE (PIPE SAG)
VIDEO TAPED BY SOUTHWEST SEWER
MH # 56 INV=6228.28
MH # 57 INV=6230.95
S02°55'26"E 143.13'
MH # 58 INV=6232.53 8" INV (NW)=6236.29
VIDEO TAPED BY SOUTHWEST SEWER
TAPE #6
TAPE #6
TAPE #6
MH # 59 INV=6244.35
S06°04'07"E 454.74'
S13°07'57"W 279.81'
S02°06'37"E 425.76'
MH # 60 INV=6251.12
S27°29'05"E 110.04'
S04°28'00"W 179.14'
MH # 61 INV=6252.18
S49°11'38"W 274.16'
MH # 62 INV=6251.12
8" INV(NW)=6254.79
S29°07'35"E 236.37'
TAPE #9
S48°06'08"W 423.49'
TAPE #6
MH # 63 INV=6257.18
MH # M-1 (DNP)
N85°55'48"W 193.62'
S06°03'25"W 209.86'
S13°13'08"W 155.48'
MH # M-3 8" INV=6281.81
MH # UNKNOWN # 2 INV=
MH # M-4 8" INV=6281.03
MH # M-5 INV=6297.93
MH # 4 INV=6299.68
MATCHLINE SHEET 7

WHOLE SECTION - MH TO MH TAPED

TAPED, BUT WITH SECTIONS MISSING FOR VARIOUS REASONS

SCALE: 1" = 100'

REVISIONS		
NO.	DESCRIPTION	DATE BY

WILSON & COMPANY
4900 LANG AVE. N.E.
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ROBERT J. ANGLETTA 12793 REGISTERED PROFESSIONAL ENGINEER STATE OF NEW MEXICO

VILLAGE OF JEMEZ SPRINGS, NM
SANITARY SEWER COLLECTION SYSTEM REHABILITATION
SEWER MAPS AND INFORMATION
SHEET 6 OF 7

PROJECT NO. X0-210-029
DATE 7/19/04
DRAWING NO. XX
SHEET NO. 8

FILE0016.tif

MATCHLINE SHEET 6

TAPE #9

TAPE #6

TAPE #8

CANNOT OPEN

INACCESSIBLE - ROCK /OBSTRUCTION ON BOTTOM

WHOLE SECTION - MH TO MH TAPED

TAPED, BUT WITH SECTIONS MISSING FOR VARIOUS REASONS

SCALE: 1" = 100'

REVISIONS

NO.	DESCRIPTION	DATE	BY

WILSON &COMPANY
4900 LANG AVE. N.E.
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ROBERT J. PAULETTE
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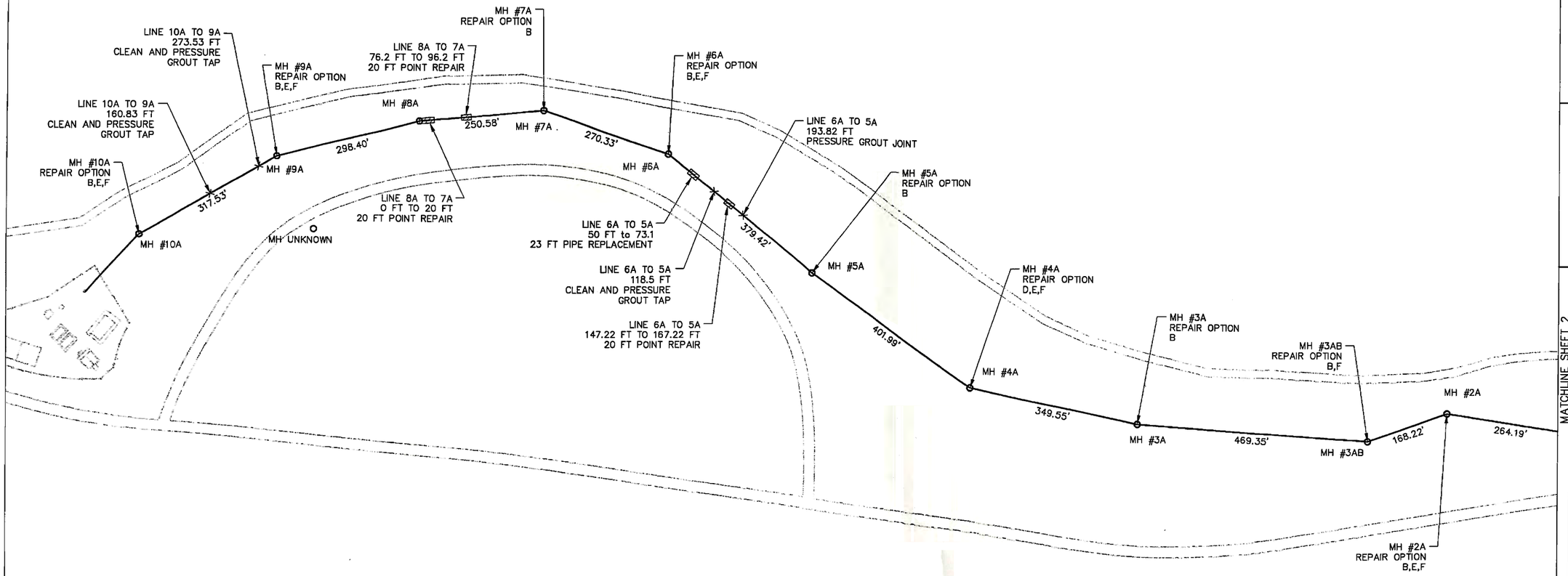
12302
REGISTERED PROFESSIONAL ENGINEER

VILLAGE OF JEMEZ SPRINGS, NM
SANITARY SEWER COLLECTION SYSTEM REHABILITATION

SEWER INSPECTION
SHEET 7 OF 7

PROJECT NO.	X0-210-029
DATE	7/19/04
DRAWING NO.	XX
SHEET NO	9

FILE0015.tif



NOTE:
UNLESS NOTED OTHERWISE, LOCATION OF SEWER REHABILITATION IS IDENTIFIED AS XX' TO YY' FROM DOWNSTREAM MANHOLE. DISTANCE IS APPROXIMATE AS NOTED ON CCTV INSPECTION TAPES. ACTUAL REHABILITATION MAY VARY ACCORDING TO SPECIFIC LOCATION OF JOINTS.

NO.	DESCRIPTION	DATE	BY

REVISIONS

WILSON & COMPANY
4900 LANG AVE. N.E.
ALBUQUERQUE, NM 87109

PAUL ETTE ROBERT MICK 12763 REGISTERED PROFESSIONAL ENGINEER

VILLAGE OF JEMEZ SPRINGS, NM
SANITARY SEWER COLLECTION SYSTEM REHABILITATION

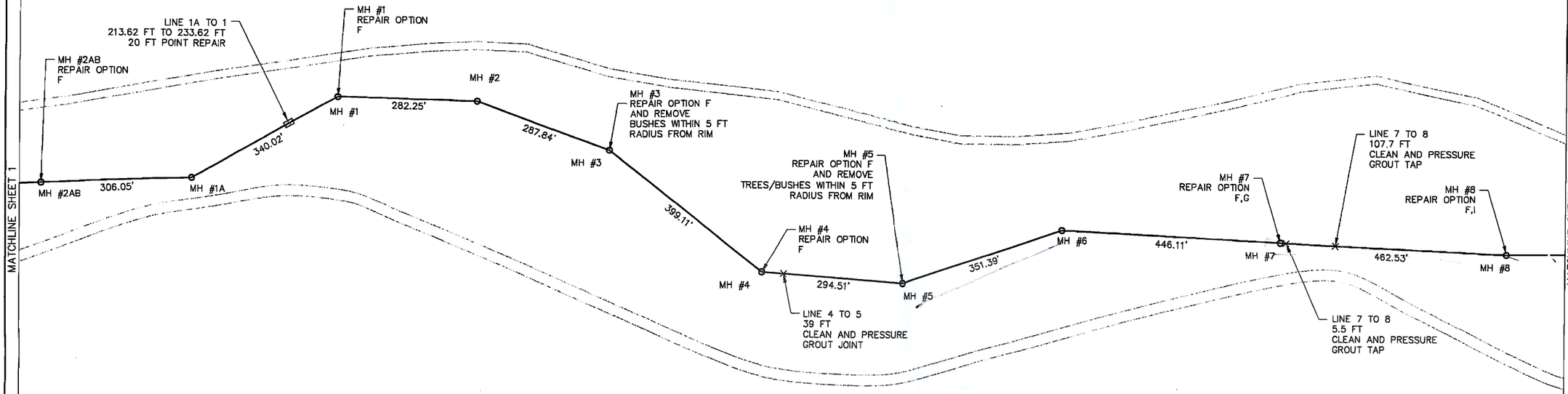
REHABILITATION REQUIREMENTS
SHEET 1 OF 7

PROJECT NO. X0-210-029
DATE 7/19/04
DRAWING NO. XX
SHEET NO. 10

FILE0014.tif

MATCHLINE SHEET 1

MATCHLINE SHEET 3



SCALE: 1" = 100'

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REVISIONS

NO.	DESCRIPTION	DATE	BY

WILSON & COMPANY
4900 LANG AVE. N.E.
ALBUQUERQUE, NM 87109

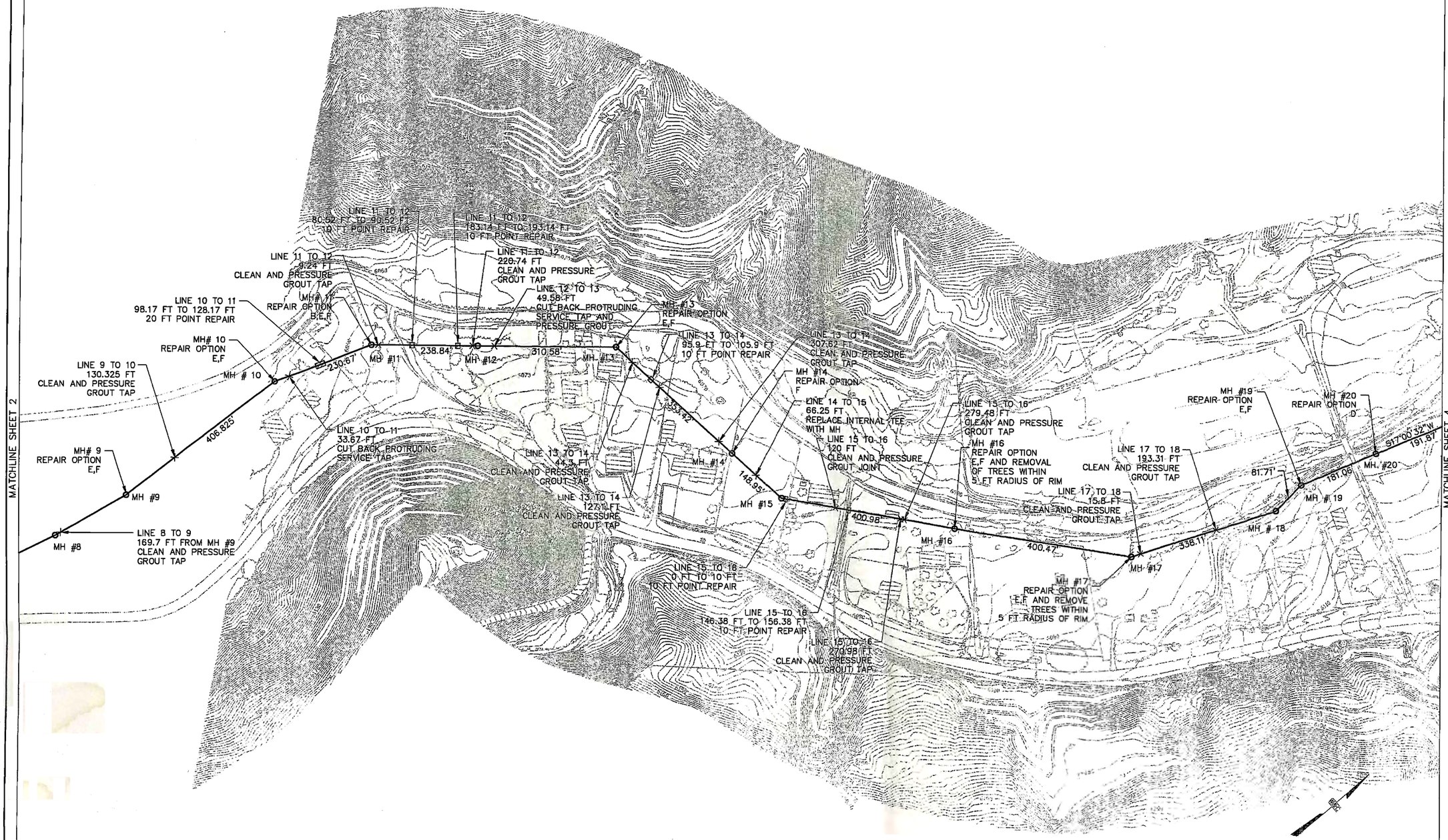
JOSEPH J. PAULETTA — 12793 — REGISTERED PROFESSIONAL ENGINEER — STATE OF NEW MEXICO

VILLAGE OF JEMEZ SPRINGS, NM
SANITARY SEWER COLLECTION SYSTEM REHABILITATION

REHABILITATION REQUIREMENTS
SHEET 2 OF 7

PROJECT NO.	X0-210-029
DATE	7/19/04
DRAWING NO.	XX
SHEET NO.	11

FILE0013.tif



SCALE: 1" = 100'

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REVISIONS

NO.	DESCRIPTION	DATE	BY

WILSON & COMPANY
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ROBERT J. PALLETTE
NEW MEXICO
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REGISTERED PROFESSIONAL ENGINEER

VILLAGE OF JEMEZ SPRINGS, NM
SANITARY SEWER COLLECTION SYSTEM REHABILITATION

REHABILITATION REQUIREMENTS
SHEET 3 OF 7

PROJECT NO.	X0-210-029
DATE	7/19/04
DRAWING NO.	XX
SHEET NO.	12

FILE0012.tif

MATCHLINE SHEET 3

MATCHLINE SHEET 5

MH #21
REPAIR OPTION
B

MH #22
REPAIR OPTION
E,F

MH #23
REPAIR OPTION
E,F

MH #24
REPAIR OPTION
B

MH #25
REPAIR OPTION
E,F

MH #26
REPAIR OPTION
D

MH #27
REPAIR OPTION
D,E,F

MH #28
REPAIR OPTION
E,F

MH #29
REPAIR OPTION
B,E,F

MH #30
REPAIR OPTION
B,E,F

MH #31
REPAIR OPTION
B,E,F

MH #32
REPAIR OPTION B,E,F
LOWER TO GROUND LEVEL
AND CUT SERVICE CONNECTION
OUT OF INVERT

MH #33
REPAIR OPTION
B,E,F AND REMOVE
FENCES AND BUSHES
WITHIN 5 FT RADIUS OF RIM

MH #34
REPAIR OPTION

MH #35

MH #36
REPAIR OPTION
E,F

MH #20

MH # 21

MH #P-1
REPAIR OPTION
D

MH #P-2

MH #P-3
REPAIR OPTION
E,F

191.87'

278.20'

333.70'

174.45'

96.23'

228.15'

219.02'

175.21'

172.14'

129.29'

245.20'

203.09'

134.90'

292.19'

275.36'

276'

326.67'

141.99'

LINE 23 TO 24
95.13 FT
CLEAN AND PRESSURE
GROUT TAP

LINE 24 TO 25
143.14 FT
CLEAN AND PRESSURE
GROUT JOINT

LINE 24 TO 25
201.90 FT
CLEAN AND PRESSURE
GROUT JOINT

LINE 25 TO 26
9.45 FT
CLEAN AND PRESSURE
GROUT JOINT

LINE 25 TO 26
78.8 FT
CLEAN AND PRESSURE
GROUT TAP

LINE P-1 TO P-2
316.67 FT TO MH #P-2
10 FT POINT REPAIR

LINE P-2 TO P-3
35.99 FT TO MH 45.99 FT
10 FT POINT REPAIR

LINE P-2 TO P-3
118.39 FT TO MH 128.39 FT
10 FT POINT REPAIR

LINE P-2 TO P-3
70.59 FT TO MH 90.59 FT
20 FT POINT REPAIR

LINE P-2 TO P-3
135.9 FT TO 45.9 FT
10 FT POINT REPAIR

LINE 28 TO 29
111.21 FT TO MH 121.21 FT
10 FT POINT REPAIR

LINE 29 TO 30
124.1 FT
CLEAN AND PRESSURE
GROUT TAP

LINE 32 TO 33
43.49 FT TO 203.9 FT
159.6 FT PIPE REPLACEMENT

LINE 34 TO 35
262.49 FT
CLEAN AND PRESSURE
GROUT TAP

LINE 34 TO 35
29.7 FT
CLEAN AND PRESSURE
GROUT TAP

LINE 35 TO 36
12.06 FT
CLEAN AND PRESSURE
GROUT TAP

SCALE: 1" = 100'

NOTE:
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REVISIONS

NO.	DESCRIPTION	DATE	BY

WILSON & COMPANY
4900 LANG AVE. N.E.
ALBUQUERQUE, NM 87109

ROBERT J. PAULETTE
NEW MEXICO
12763
REGISTERED PROFESSIONAL ENGINEER

VILLAGE OF JEMEZ SPRINGS, NM
SANITARY SEWER COLLECTION SYSTEM REHABILITATION

REHABILITATION REQUIREMENTS
SHEET 4 OF 7

PROJECT NO. X0-210-029
DATE 7/19/04
DRAWING NO. XX
SHEET NO. 13

FILE0012.tif

MATCHLINE SHEET 3

MATCHLINE SHEET 5

MH #21
REPAIR OPTION
B

MH #22
REPAIR OPTION
F

MH #23
REPAIR OPTION
E,F

MH #24
REPAIR OPTION
B

MH #25
REPAIR OPTION
E,F

MH #26
REPAIR OPTION
D

MH #27
REPAIR OPTION
B,E,F

MH #28
REPAIR OPTION
E,F

MH #29
REPAIR OPTION
B,E,F

MH #30
REPAIR OPTION
B,E,F

MH #31
REPAIR OPTION
B,E,F

MH #32
REPAIR OPTION B,E,F
LOWER TO GROUND LEVEL
AND CUT SERVICE CONNECTION
OUT OF INVERT

MH #33
REPAIR OPTION
B,E,F AND REMOVE
FENCES AND BUSHES
WITHIN 5 FT RADIUS OF RIM

MH #34
REPAIR OPTION
F

MH #36
REPAIR OPTION
F,I

MH #P-1
REPAIR OPTION
D

MH #P-3
REPAIR OPTION
E,F

LINE 28 TO 29
111.21 FT TO MH 121.21 FT
10 FT POINT REPAIR

LINE 29 TO 30
124.1 FT
CLEAN AND PRESSURE
GROUT TAP

LINE 32 TO 33
43.49 FT TO 203.9 FT
159.6 FT PIPE REPLACEMENT

LINE 34 TO 35
262.49 FT
CLEAN AND PRESSURE
GROUT TAP

LINE 23 TO 24
95.13 FT
CLEAN AND PRESSURE
GROUT TAP

LINE 24 TO 25
143.4 FT
CLEAN AND PRESSURE
GROUT JOINT

LINE 24 TO 25
201.90 FT
CLEAN AND PRESSURE
GROUT JOINT

LINE 25 TO 26
9.45 FT
CLEAN AND PRESSURE
GROUT JOINT

LINE 25 TO 26
78.8 FT
CLEAN AND PRESSURE
GROUT TAP

LINE P-1 TO P-2
316.67 FT TO MH #P-2
10 FT POINT REPAIR

LINE P-2 TO P-3
70.59 FT TO MH 90.59 FT
20 FT POINT REPAIR

LINE P-2 TO P-3
35.99 FT TO MH 45.99 FT
10 FT POINT REPAIR

LINE P-2 TO P-3
118.39 FT TO MH 128.39 FT
10 FT POINT REPAIR

LINE P-2 TO P-3
135.9 FT TO 45.9 FT
10 FT POINT REPAIR

LINE 34 TO 35
29.7 FT
CLEAN AND PRESSURE
GROUT TAP

LINE 35 TO 36
12.06 FT
CLEAN AND PRESSURE
GROUT TAP

MH #20
MH #21
MH #22
MH #23
MH #24
MH #25
MH #26
MH #27
MH #28
MH #29
MH #30
MH #31
MH #32
MH #33
MH #34
MH #35
MH #36
MH #P-1
MH #P-2
MH #P-3

191.87
278.20
333.70
174.45
228.15
96.23'
219.02
175.21
172.14'
129.25'
245.70'
134.90
203.09'
292.19'
275.36'
276
141.99'

SCALE: 1" = 100'

NOTE:
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REVISIONS

NO.	DESCRIPTION	DATE	BY

WILSON & COMPANY
4900 LANG AVE. N.E.
ALBUQUERQUE, NM 87109

ROBERT J. PAULETTE
NEW MEXICO
12765
REGISTERED
PROFESSIONAL ENGINEER
7-30-04

VILLAGE OF JEMEZ SPRINGS, NM
SANITARY SEWER COLLECTION SYSTEM REHABILITATION

REHABILITATION REQUIREMENTS
SHEET 4 OF 7

PROJECT NO. X0-210-029
DATE 7/19/04
DRAWING NO. XX
SHEET NO. 13

SCALE: 1" = 100'

MATCHLINE SHEET 4

MATCHLINE SHEET 6

LINE 38 TO 39
172.8 FT TO 205.8 FT
33 FT PIPE REPLACEMENT

LINE 38 TO 39
69.1 FT TO 109.6 FT
38 FT PIPE REPLACEMENT

LINE 37 TO 38
317.75 FT TO 397.75 FT
80 FT PIPE REPLACEMENT

LINE 37 TO 38
0 FT TO 317.75 FT
317.75 PIPE REPLACEMENT

LINE 36 TO 37
11.67 FT
CLEAN AND PRESSURE
GROUT JOINT

LINE 36 TO 37
150 FT TO 170 FT
20 FT POINT REPAIR

LINE 36 TO 37
208.32 FT
CLEAN AND PRESSURE
GROUT TAP

LINE 36 TO 37
253.04 FT
CLEAN AND PRESSURE
GROUT TAP

LINE 37 TO 38
317.75 FT
REPLACE INTERNAL
TEE WITH MANHOLE

LINE 37 TO 38
57.7 FT
CLEAN AND PRESSURE
GROUT JOINT

LINE C-3 TO C-4
0 FT TO 152.75 FT
152.75 PIPE REPLACEMENT

LINE C-4 TO D-1
79 FT TO 229 FT
129 FT PIPE REPLACEMENT

LINE C-4 TO D-1
14.4 FT
CLEAN AND PRESSURE
GROUT TAP

LINE B-3 TO B-4
171.3 FT CLEAN AND
PRESSURE GROUT TAP

LINE B-3 TO B-4
21.1 FT TO 31.1 FT
10 FT POINT REPAIR

LINE B-4 TO B-5
34 FT
CLEAN AND PRESSURE
GROUT TAP

LINE B-5 TO B-6
0 FT TO 25 FT
25 FT PIPE REPLACEMENT

LINE B-5 TO B-6
44.4 FT TO 64.4 FT
20 FT POINT REPAIR

LINE B-6 TO E-1
23.9 FT CLEAN AND
PRESSURE GROUT TAP

LINE B-6 TO E-1
41.85 FT TO 61.85 FT
20 FT POINT REPAIR

LINE B-6 TO B-7
82.7 FT CLEAN AND
PRESSURE GROUT TAP

LINE B-6 TO B-7
90.42 FT CLEAN AND
PRESSURE GROUT TAP

LINE B-7 TO B-8
0 FT TO 103.76 FT
103.76 FT PIPE REPLACEMENT

LINE B-8 TO B-9
15 FT TO 40 FT
25 FT PIPE REPLACEMENT

LINE B-8 TO B-9
95.02 FT TO 130.02 FT
35 FT PIPE REPLACEMENT

LINE 45 TO 46
144.99 FT CLEAN AND
PRESSURE GROUT TAP

LINE 45 TO 46
167.49 FT TO 187.49 FT
20 FT POINT REPAIR

LINE 46 TO 47
30.43 FT
CLEAN AND PRESSURE
GROUT TAP

LINE 49 TO 50
14.5 FT TO 34.5FT
20 FT POINT REPAIR

LINE 49 TO 50
143.1 FT
CLEAN AND PRESSURE
GROUT JOINT

LINE 50 TO 51
174.15 FT TO 184.15 FT
10 FT POINT REPAIR

MH #36
8" INV.=6148.68

MH #37

MH #38

MH #39
REPAIR OPTION
A

MH # 39

MH #C

MH #C-1
REPAIR OPTION
F

MH #C-2

MH #C-2
REPAIR OPTION
D

MH #C-3

MH #C-3
REPAIR OPTION
D,E,F

MH #C-4

MH #C-4
REPAIR OPTION
D,E,F

MH #D-1

MH #D-1
REPAIR OPTION
E,F

MH #D-2

MH #D-2
REPAIR OPTION
D

MH #40
REPAIR OPTION
E,F

MH # 40

MH #41

MH #41
REPAIR OPTION
B,E,F

MH # 42

MH #43
REPAIR OPTION
A

MH #44
REPAIR OPTION
E,F

MH #44

MH #B-1

MH #B-1
REPAIR OPTION
D

MH #B-2

MH #B-2
REPAIR OPTION
D

MH #B-3

MH #B-3
REPAIR OPTION
D,E,F

MH #B-4

MH #B-4
REPAIR OPTION
G

MH #B-5

MH #B-5
REPAIR OPTION
E,F

MH UNKNOWN #3

MH UNK #3
REPAIR OPTION
D,E,F

MH #B-6

MH #B-7

MH #B-7
REPAIR OPTION
E,F

MH #B-8

MH #B-8
REPAIR OPTION
D,E,F

MH #B-9

MH #B-9
REPAIR OPTION
D,E,F

MH #B-10

MH #E-1

MH #E-1
REPAIR OPTION
E,F

MH #45

MH #45
REPAIR OPTION
E,F

MH #46

MH #47

MH #48

MH #49

MH #50

MH #51

MH #H-1

MH #H-1
REPAIR OPTION
D

MH #H-2

MH #H-2
REPAIR OPTION
D

MH #H-3

MH #H-3
REPAIR OPTION
D

MH #H-4

MH #H-4
REPAIR OPTION
D

MH #H-5

MH #H-5
REPAIR OPTION
D

MH #H-6

MH #H-6
REPAIR OPTION
C

MH #H-7

MH #H-7
REPAIR OPTION
D

MH #H-8

MH #H-9

MH #H-9
REPAIR OPTION
D

MH #H-10

MH #H-10
REPAIR OPTION
D

MH #K-1

MH #K-2

MH #K-3

MH #K-3
REPAIR OPTION
D

MH #K-4

MH #K-4
REPAIR OPTION
D

MH #K-5

MH #K-5
REPAIR OPTION
D,E,F

MH #K-6

MH #K-6
REPAIR OPTION
D,E,F

MH #K-7

231.57
259.29
496.15'
185.20
151.93'
158.57'
149.27
277.04'
214.60
234.81'
400.00
300.00
346.75
169.10'
233.69'
205.83
180.13
276.17'
255.84'
174.41
271.73'
215.84'
103.76'
130.12'
160.21
128.38'
113.12'
75.28'

NOTE:
UNLESS NOTED OTHERWISE, LOCATION OF SEWER REHABILITATION IS IDENTIFIED AS XX' TO YY' FROM DOWNSTREAM MANHOLE. DISTANCE IS APPROXIMATE AS NOTED ON CCTV INSPECTION TAPES. ACTUAL REHABILITATION MAY VARY ACCORDING TO SPECIFIC LOCATION OF JOINTS.

REVISIONS

NO.	DESCRIPTION	DATE	BY

WILSON & COMPANY
4900 LANG AVE. N.E.
ALBUQUERQUE, NM 87109

ROBERT PAULETICH 12763 REGISTERED PROFESSIONAL ENGINEER NEW MEXICO

VILLAGE OF JEMEZ SPRINGS, NM
SANITARY SEWER COLLECTION SYSTEM REHABILITATION

REHABILITATION REQUIREMENTS
SHEET 5 OF 7

PROJECT NO.	X0-210-029
DATE	7/19/04
DRAWING NO.	XX
SHEET NO.	14

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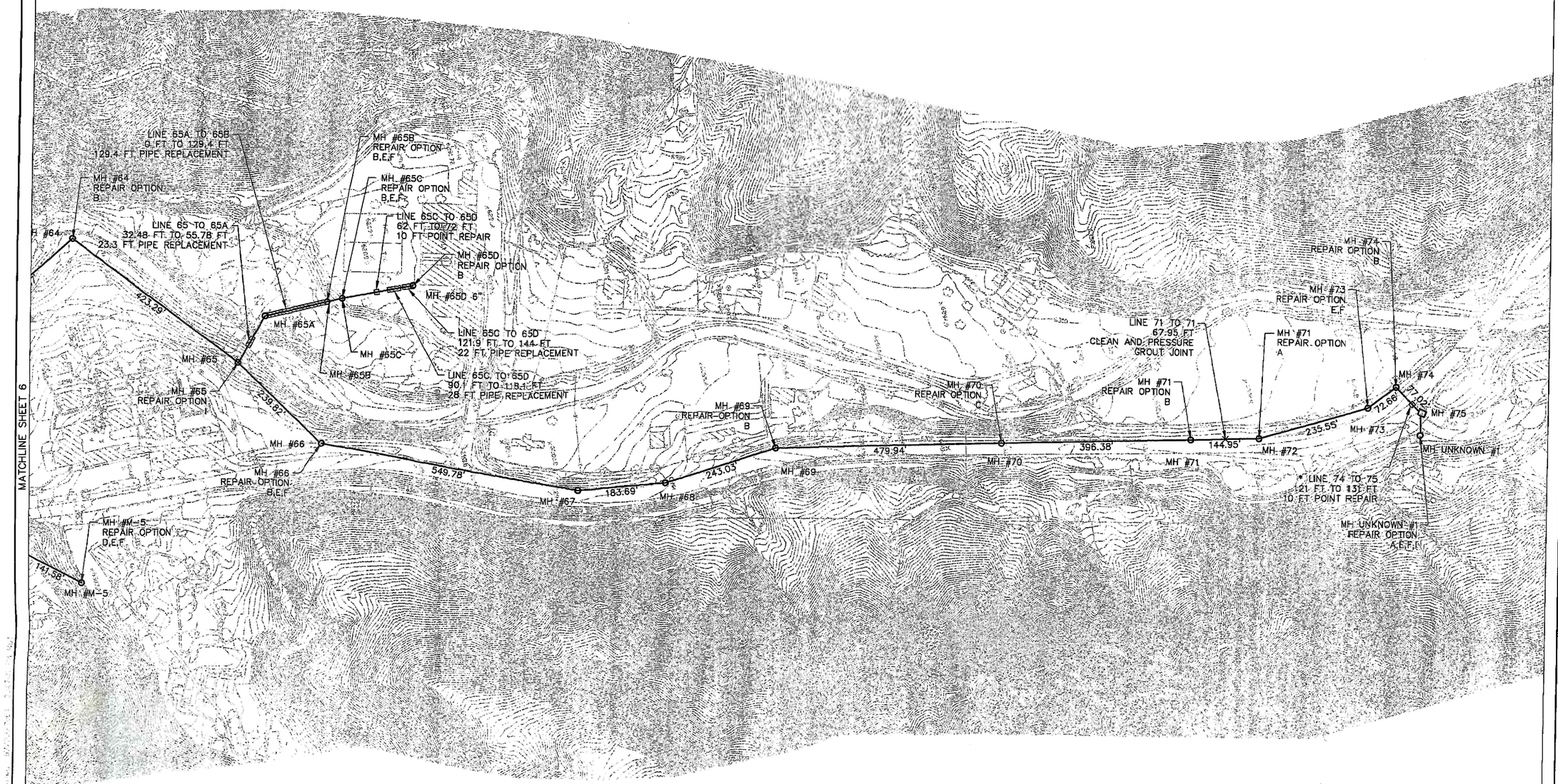
FILE0009.tif



SCALE: 1" = 100'

* TAPE COUNTER STARTED AT 82.2 FT AT MANHOLE #74, POINT REPAIR IS AT 43.8 FT (38.8 FT TO 48.8 FT)

NOTE:

UNLESS NOTED OTHERWISE, LOCATION OF SEWER REHABILITATION IS IDENTIFIED AS XX' TO YY' FROM DOWNSTREAM MANHOLE. DISTANCE IS APPROXIMATE AS NOTED ON CCTV INSPECTION TAPES. ACTUAL REHABILITATION MAY VARY ACCORDING TO SPECIFIC LOCATION OF JOINTS.

REVISIONS		
NO.	DESCRIPTION	DATE BY

WILSON & COMPANY
4900 LANG AVE. N.E.
ALBUQUERQUE, NM 87109

ROBERT L. PAULETTE
NEW MEXICO
12797
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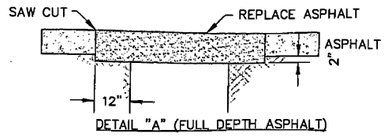
VILLAGE OF JEMEZ SPRINGS, NM
SANITARY SEWER COLLECTION SYSTEM REHABILITATION

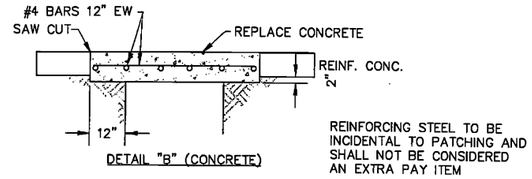
REHABILITATION REQUIREMENTS
SHEET 7 OF 7

PROJECT NO.	X0-210-029
DATE	7/19/04
DRAWING NO.	XX
SHEET NO.	16

FILE0008.tif



DETAIL "A" (FULL DEPTH ASPHALT)

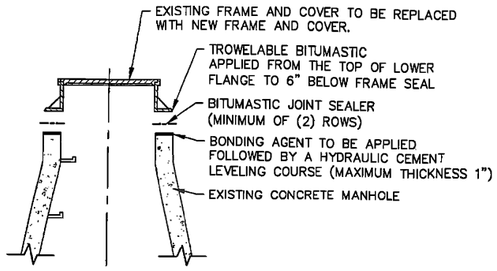


DETAIL "B" (CONCRETE)

REINFORCING STEEL TO BE INCIDENTAL TO PATCHING AND SHALL NOT BE CONSIDERED AN EXTRA PAY ITEM

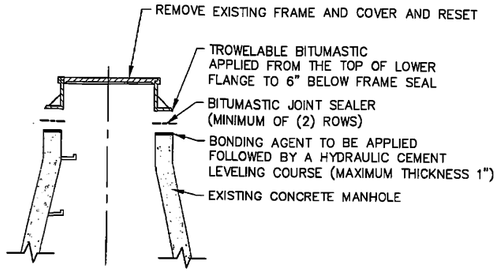
PAVEMENT CUTTING DETAILS

N.T.S.



TYPICAL TYPE A REPAIR METHOD

REPLACE COVER, FRAME, AND FRAME SEAL
N.T.S.

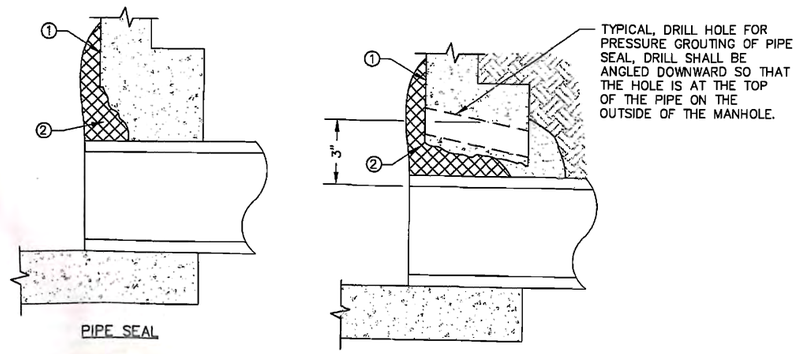


TYPICAL TYPE B REPAIR METHOD

REPLACE FRAME SEAL
N.T.S.

GENERAL UPPER MANHOLE REPAIR NOTES

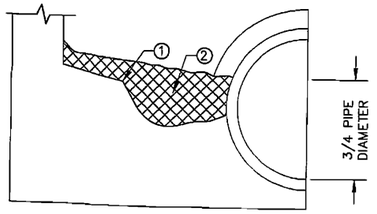
1. SEE SPECIFICATIONS FOR DETAILS OF REPAIR MATERIAL AND METHODS.



PIPE SEAL

PIPE SEAL GROUTING DETAIL

CORBEL AND WALL

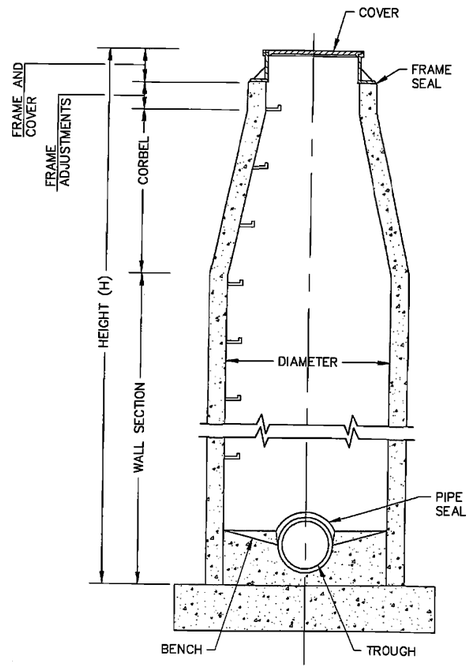


BENCH AND INVERT REPAIR

1. CLEAN EXISTING SURFACE
2. PATCHING COMPOUND
3. LINER (IF APPLICABLE)

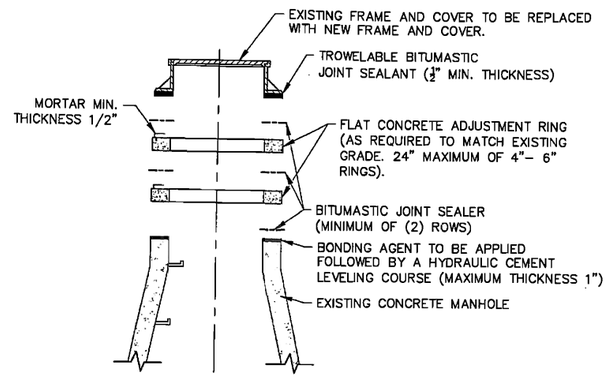
INTERIOR COATING SYSTEM

N.T.S.



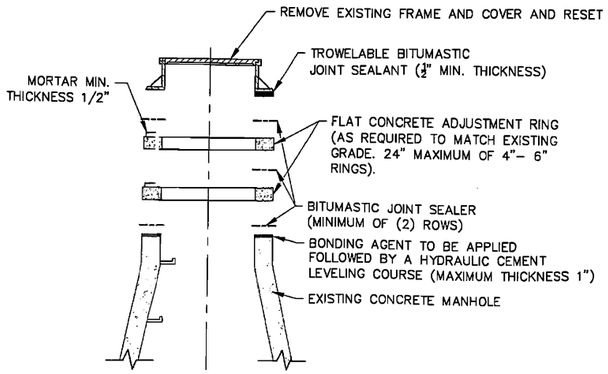
TYPICAL MANHOLE NOMENCLATURE

N.T.S.



TYPICAL TYPE C REPAIR METHOD
MAKE FRAME ADJUSTMENT AND REPLACE COVER, FRAME, AND FRAME SEAL

N.T.S.



TYPICAL TYPE D REPAIR METHOD
MAKE FRAME ADJUSTMENT AND REPLACE FRAME SEAL

N.T.S.

REVISIONS

NO.	DESCRIPTION	DATE	BY

WILSON & COMPANY
4900 LANG AVE. N.E.
ALBUQUERQUE, NM 87109

VILLAGE OF JEMEZ SPRINGS, NM
SANITARY SEWER COLLECTION SYSTEM REHABILITATION

MANHOLE DETAIL

PROJECT NO. X0-210-029
DATE 7/19/04
DRAWING NO. XX
SHEET NO. 17

X:\Public\PROJECTS\X0029\Sewer Rehab\Details\MH Details.dwg 07/23/2004 08:42:21 AM MDT

JEMEZ SPRINGS – CCTV INSPECTION REPORT SUMMARY

FILE0007.jif

Pipe run MH # to MH #	length of pipe run from maps(LF)	length of pipe run from camera (LF)	surface type	pipe material	Direction	location of problem	type of problem	Recommended Repair: clean & pressure grout tap	clean & pressure grout joint	point repair 10 lf of pipe	point repair 20 lf of pipe	6"pipe replacement (lf)	8" pipe replacement (lf)	cut back service & pressure grout	replace internal tee with manhole
10A to 9A	317.53	288.9' – end of cbl	yard/floodplain	PVC	with flow	44.0'	tap at 12 o'clock with roots	x							
					with flow	56.0'	broken piece of PVC pipe in line – not from here								
					with flow	156.7'	tap at 11 o'clock with roots								
9A to 8A	298.40				with flow	288.9'	taping abandoned – end of camera cable	x							
8A to 7A	250.58	86.2' – roots in pipe	yard/floodplain	PVC	against flow	14.4'									
					against flow	86.2'	cracked pipe								
7A to 6A	270.33	258.1' – grease plug	yard/floodplain	PVC	with flow	77.6'	cracked pipe w/protruding roots				x				
					with flow	106'	running service at empty house				x				
					with flow	107'	pipe deformation w/o cracking								
6A to 5A	379.42				with flow	152.5'	pipe deformation w/o cracking								
			yard/floodplain	PVC	with flow	118.5'	service connection w/ protruding roots								
					with flow	185.6'	root penetration	x							
					with flow	222.2'	cracked pipe								
					with flow	259.4'	7.5' of replaced pipe w/slightly offset joint				x				
					against flow	55.0'	~1.5 to 2' severe alligator cracking								
5A to 4A	401.99				against flow	63.1'	cracked pipe			x					
4A to 3A	349.55										x				
3A to 3AB	469.35														
3AB to 2A	168.22														
2A to 2AB	264.19														
2AB to 1A	306.05														
1A to 1	340.02	357.3'	field	PVC	with flow	116.4'	cracked pipe with roots 12 to 3 o'clock								
		289.3' – end of cbl			with flow	193.8'	deformation in pipe 11 o'clock				x				
		68'			with flow	289.3'	taping abandoned – end of camera cable								
1 to 2	282.25	277.9'	yard/woods	PVC	against flow	68'	taping abandoned – met previous footage								
2 to 3	287.84	271.3'	field	PVC	with flow	277.9'	manhole # 1								
		42.4'			with flow	271.3'	taping abandoned – end of camera cable								
3 to 4	399.11	272.3' – end of cbl	field	PVC	against flow	42.4'	taping abandoned – met previous footage								
		124.1' – stopped			with flow	272.3'	taping abandoned – end of camera cable								
4 to 5	294.51	136.1'	field/woods	PVC	against flow	124.1'	taping abandoned – met previous footage								
		107'			with flow	136.1'	taping abandoned – reason unknown								
5 to 6	351.39	264.5' – end of cbl	field	PVC	against flow	39'	root in joint at 2 o'clock								
					against flow	107'	taping abandoned – reason unknown		x						
6 to 7	446.11	403' – stopped	field	PVC											
7 to 8	462.53	270.6' – end of cbl	field	PVC											
		110' – rootmass			with flow										
8 to 9	?	173.2' – stopped			against flow	5.5'	service connection w/ protruding roots								
9 to 10	406.83	409.8	field	PVC	against flow	107.7'	service connection w/ protruding roots	x							
10 to 11	230.67	226	field/yard	PVC	with flow	169.7'	service connection w/ protruding roots	x							
			yard	PVC	with flow	276.5'	service connection w/ protruding roots	x							
					with flow	122.5'	offset joint w/ deformity of end & grease deposit	x							
					with flow	186.6'	broken & repaired pipe ~ 10.4' in length				x				
					with flow	197'	protruding service connection								
11 to 12	238.84	235.3			with flow	212.2'	deflected joint								
			yard	PVC	with flow	18.1'	service connection w/ protruding roots							x	
					with flow	50.7'	cracked pipe at service connection	x							
					with flow	153.3'	cracked pipe ~ 6.2' in length			x					
12 to 13	310.58	262.4'–rootmass			with flow	229.6'	root penetration at joint			x					
13 to 14	353.42	220.3'	yard	PVC	with flow	261.0'	protruding service connection w/ roots		x						
			yard	PVC	against flow	44.3'	tap with roots at 11 o'clock								
					against flow	100.9'	crack in pipe, 3.5 ft length, 8–12 o'clock	x						x	
					against flow	127.1'	tap with roots at 11 o'clock			x					
14 to 15	148.95	152'			against flow	220.3'	taping abandoned – reason unknown	x							
			yard/field	PVC	with flow	82.7'	factory 8"x8" tee w/out manhole								
15 to 16	400.98	412.1'			with flow	152'	manhole # 14								
			field	PVC	with flow	32'	deformation in pipe								x
					with flow	44.7'	factory tap at ___ o'clock								
					with flow	121.5'	break–in tap with holding clips of some kind								
					with flow	130'	tap at 11 o'clock	x							
					with flow	130'	root medium from tap								
					with flow	230'	pipe liner or change in material	x							
		249.6' – obstruction			with flow	249.6'	offset joint								
					with flow	249.6'	taping abandoned at offset joint			x					
					against flow	3.8'	longitudinal crack at 1 o'clock and 1 ft long								
					against flow	50.7'	tap at 12 o'clock								
					against flow	90.8'	break–in tap at ___ o'clock								
		62.5' – met footage			against flow	120'	root medium in joint	x							
16 to 17	400.47	403.6'			against flow	162.5'	taping abandoned – met previous footage		x						
			field	PVC	with flow	47'	deformation in pipe								
					with flow	88'	deformation in pipe								
		283.6' – end of cbl			with flow	226'	tap at 10 o'clock								
		120' – met footage			with flow	283.6'	taping abandoned – end of camera cable								
17 to 18	338.11	347.3'			against flow	120'	taping abandoned – met previous footage								
			field	PVC	with flow	47.5'	tap at 9 o'clock								
					with flow	144.8'	tap at 9 o'clock								
		287.3' – end of cbl			with flow	144.8'	root medium in tap								
					with flow	287.3'	end of camera cable	x							
					against flow	15.8'	tap at 2 o'clock								
					against flow	15.8'	root medium in tap								
					against flow	23.4'	tap at 2 o'clock	x							
		60' – met previous			against flow	32'	pipe deformation at 11 o'clock								
18 to 19	81.71	81'			against flow	60'	met previous footage								
			embankment	PVC	with flow	0'	root entering line from manhole								
19 to 20	181.06	176.2'			with flow	81'	manhole # 18								
			field	PVC	with flow	149.6'	tap at 9 o'clock								

REVISIONS

NO.	DESCRIPTION	DATE	BY

WILSON & COMPANY
4900 LANG AVE. N.E.
ALBUQUERQUE, NM 87109

VILLAGE OF JEMEZ SPRINGS, NM
WASTEWATER TREATMENT FACILITY IMPROVEMENTS

INSPECTION REPORT SUMMARY
SHEET 1 OF 5

PROJECT NO. X0-210-029
DATE 7/19/04
DRAWING NO. XX
SHEET NO. 18

X:\Public\PROJECTS\X0029\Sewer Rehab\Inspect_Summary.dwg 07/21/2004 03:21:37 PM MDT

JEMEZ SPRINGS – CCTV INSPECTION REPORT SUMMARY

FILE0006.tif

Pipe run MH # to MH #	length of pipe run from maps(LF)	length of pipe run from camera (LF)	surface type	pipe material	Direction	location of problem	type of problem	Recommended Repair: clean & pressure grout tap	clean & pressure grout joint	point repair 10 lf of pipe	point repair 20 lf of pipe	6"pipe replacement (lf)	8" pipe replacement (lf)	cut back service & pressure grout	replace internal tee with manhole
20 to 21	191.87	189.5'	field	PVC	with flow	176.2'	manhole # 19								
21 to 22	278.20	219'	field/yard	PVC	with flow	189.5'	manhole # 20								
					against flow	96.0'	tap at 2 o'clock								
22 to 23	105.31	102.7'	yard/rockpile	PVC	against flow	219'	taping abandoned – reason unknown								
					with flow	59'	misshaped pipe								
23 to 24	115.73	118.8'			with flow	102.7'	manhole # 22 with roots								
		95.8'	arroyo/field	PVC	with flow	20.6'	root at 11 o'clock								
		23'			with flow	95.8'	taping abandoned – reason unknown								
24 to 25	322.33				against flow	23'	taping abandoned – met previous footage								
			field	PVC	with flow	89.7'	tap at 9 o'clock								
					with flow	131.8'	offset joint with root medium								
		281'			with flow	190.3'	root medium in joint		x						
25 to 26	174.45	171'			with flow	281'	taping abandoned – reason unknown		x						
			field/dirt road	PVC	with flow	99.3'	tap at 10 o'clock								
					with flow	165'	offset joint								
26 to P-1	96.23	92.7			with flow	171'	manhole # 25		x						
			dirt road	PVC	with flow	4.4'	dimple in pipe at 6 o'clock								
					with flow	78.2'	dimple in pipe at 6 o'clock								
					with flow	82.5'	dimple in pipe at 3 o'clock								
					with flow	86.6'	dimple in pipe at 5 o'clock								
P-1 to P-2	326.77	333.9			with flow	92.7'	manhole # 26								
			dirt road	PVC	with flow	5.1'	longitudinal crack, 3 to 5 o'clock, ~3 ft long								
					with flow	60.1'	cannot see pipe on tape – greens out for 53 ft			x					
					with flow	114.7'	factory tap, 1 o'clock								
					with flow	135.7'	small dimple in pipe at 6 o'clock								
		233.5' – end of cbl			with flow	218.3'	factory tap, 1 o'clock								
					with flow	233.5'	taping abandoned – end of camera cable								
					against flow	61.2'	factory tap, 10 o'clock								
		00.4' – met footage			against flow	78.8'	break–in tap, 11 o'clock, with small roots								
P-2 to P-3	141.99	104.4			against flow	100.4'	taping abandoned – met previous footage	x							
			road shoulder	PVC	with flow	1.9'	longitudinal crack, 1 o'clock, 1 ft long								
					with flow	18.6'	pipe sag 6.4 ft in length			x					
					with flow	21.4'	dimple in bottom of pipe			x					
					with flow	42.7'	something sticking out of joint at 7 o'clock								
					with flow	61.4'	pipe sag 19.6 ft in length								
					with flow	101.0'	root in joint at 8 o'clock				x				
					with flow	101.0'	longitudinal crack, 3 o'clock		x						
26 to 27	228.15	223.2'			with flow	104.4'	manhole # P-2			x					
			yard	PVC	with flow	97.4'	tap at 9 o'clock								
27 to 28	219.02	215'			with flow	223.2'	manhole # 26								
			field	PVC	with flow	175.6'	tap at 12 o'clock								
28 to 29	175.21	169.7'			with flow	215.0'	manhole # 27								
		61.6'	field/floodplain	PVC	with flow	59'	hole with soil visible, from 9 to 5 o'clock, about 3 ft long								
		108.1'			with flow	61.6'	taping abandoned – reason unknown			x					
29 to 30	172.14	166'			against flow	108.1'	taping abandoned – met previous footage								
			field/floodplain	PVC	against flow	124.1'	tap at 2 o'clock with roots								
30 to 31	122.25				against flow	166.0'	manhole # 29 with roots	x							
31 to 32	245.20														
32 to 33	203.09	203													
			yard/field	PVC	with flow	16.4'	crack in pipe								
33 to 34	134.90	134.4			with flow	57.6'	pipe sag ~102' in length								
34 to 35	282.14	29' – rootmass	field	PVC							x				
		29.3' – rootmass	field	PVC	with flow	29.7'	service connection w/ protruding roots						102		
35 to 36	272.10	269.4			against flow	29.7'	service connection w/ protruding roots	x							
			field	PVC	with flow	207.5'	pipe deformation (dent) w/o cracking	x							
					with flow	263.3'	service connection w/ protruding roots								
36 to 37	274.21	268.9	field	PVC	with flow	15.1'	service connection w/protruding roots	x							
					with flow	69.8'	service connection w/ protruding roots	x							
					with flow	108.5'	cracked pipe	x							
					with flow	110'	pipe sag 17' in length								
37 to 38	396.65				with flow	266.5'	roots in pipe joint			x					
			field		with flow	42.8'	pipe sag 19.8 ft in length – deepest = 50%		x		x				
					with flow	78.9'	factory–made 8"x8" junction								
					with flow	104.4'	pipe sag 18.6 ft in length – deepest = 40%				x				
					with flow	162.6'	pipe sag 13.5 ft in length – deepest = 50%								x
		232.1' – end of cbl			with flow	191.9'	pipe sag 26.5 ft in length – deepest = 50%				x				
					with flow	232.1'	taping stopped due to end of camera cable				x				
					against flow	1'	camera underwater for 24.3 ft						26.5		
		96.9'			against flow	60.6'	pipe sag 36.3 ft in length								
38 to 39	225.20				against flow	96.9'	taping abandoned – reason unknown						24.3		
			field/embankment	PVC	against flow	1.5'	pipe sag 11.3 ft in length						36.3		
					against flow	57.7'	fine roots in joint 12 & 4 o'clock								
					against flow	69.1'	pipe sag 37.8 ft in length – deepest = 50%								
		205.8'			against flow	172.8'	pipe sag 33 ft in length		x						
39 to H-1	97.13				against flow	205.8'	taping abandoned – reason unknown						37.8		
H-1 to H-2	96.85												33		
H-2 to H-3	231.57														
H-3 to H-4	259.29														
H-4 to H-5	496.15														
H-5 to H-6	322.88														
H-6 to H-7	214.60														
H-7 to H-8	400.00														
H-8 to H-9	234.81														
H-9 to H-10	300.00														
39 to C-1	112.07														
C-1 to B-1	277.04														

REVISIONS

NO.	DESCRIPTION	DATE	BY

WILSON & COMPANY
4900 LANG AVE. N.E.
ALBUQUERQUE, NM 87109

ROBERT L. PAULETTE
NEW MEXICO
12763
7-30-04
REGISTERED PROFESSIONAL ENGINEER

VILLAGE OF JEMEZ SPRINGS, NM
WASTEWATER TREATMENT FACILITY IMPROVEMENTS
INSPECTION REPORT SUMMARY
SHEET 2 OF 5

PROJECT NO. X0-210-029
DATE 7/19/04
DRAWING NO. XX
SHEET NO. 19

X:\Public\PROJECTS\X0029\Sewer Rehab\Inspect_Summary.dwg 07/21/2004 03:21:37 PM MDT

JEMEZ SPRINGS – CCTV INSPECTION REPORT SUMMARY

FILE0005.tif

Pipe run MH # to MH #	length of pipe run from maps(LF)	length of pipe run from camera (LF)	surface type	pipe material	Direction	location of problem	type of problem	Recommended Repair: clean & pressure grout tap	clean & pressure grout joint	point repair 10 lf of pipe	point repair 20 lf of pipe	6"pipe replacement (lf)	8" pipe replacement (lf)	cut back service & pressure grout	replace internal tee with manhole
B–1 to B–2	489.52														
B–2 to UNK #3	223.41														
B–2 to B–3	271.73														
B–3 to B–4	174.41		road shoulder	PVC	against flow	15.6'	start of taping (missed first 15' of pipe)								
					against flow	26.1'	longitudinal crack at 6 o'clock, ~0.5 ft long								
					against flow	29.0'	separated joint			x					
					against flow	146.5'	object in joint blocking 5%, from 12 to 6 o'clock								
					against flow	153.1'	factory tap at 1 o'clock								
					against flow	171.3'	break–in tap at 10 o'clock								
		180.4' – debris			against flow	171.3'	camera lens blocked by stuff being pushed along	x							
B–4 to B–5	333.43	337	yard/dirt rd/asphalt rd	PVC	against flow	180.4'	taping abandoned – obstruction by debris								
					with flow	89.9'	grease deposits at 5 & 7 o'clock for 103.5 ft								
					with flow	92.0'	flattening of bottom of pipe								
					with flow	165.9'	factory tap at 11 o'clock								
		217.8' – end of cbl			with flow	189.2'	factory tap at 1 o'clock								
					with flow	217.8'	taping abandoned – end of camera cable								
					against flow	15.4'	factory tap at 11 o'clock								
					against flow	34.0'	break–in tap with fine roots intruding								
					against flow	55.4'	dimple in pipe at 5 o'clock	x							
		119.2' – met footage			against flow	67.2'	saddle tap at 1 o'clock								
					against flow	119.2'	taping abandoned – met previous footage								
B–5 to B–6	178.79		road shoulder	PVC	against flow	0'	longitudinal crack at 9 o'clock 23 ft long								
					against flow	54.4'	hole with void visible + assoc fractures at 9 to 12 o'clock					25			
		54.4' – roots			against flow	54.4'	root ball in pipe from hole obstructing 50% pipe				x				
B–6 to E–1	113.35				against flow	54.4'	taping abandoned due to root ball				x				
			dirt driveway	PVC	against flow	23.9'	rootball obstructing 70% of pipe								
		23.9' – roots			against flow	23.9'	probable break–in tap at rootball	x							
					against flow	23.9'	taping abandoned – roots	x							
					with flow	42.7'	factory tap at 11 o'clock								
					with flow	61.5'	pipe deformation 20% (with assoc fractures, etc)								
		69.7' – roots			with flow	69.7'	root medium at joint from 3 to 7 o'clock obstructing 20%				x				
					with flow	69.7'	taping abandoned – roots								
B–6 to B–7	174.42	84.0' – roots	road shoulder	PVC	with flow	11.1'	material change – green PVC to white PVC								
					with flow	16.1'	material change – white PVC to green PVC								
					with flow	23.9'	material change – green PVC to white PVC								
					with flow	37.9'	material change – white PVC to green PVC								
					with flow	84.0'	factory tap at 10 o'clock								
					with flow	84.0'	root medium coming from lateral ~30% of pipe area								
		84.0' – roots			with flow	84.0'	taping abandoned – root medium	x							
							camera is blurry the whole segment								
					against flow	9.0'	root medium w/probable hole obstructing 30% at 9–10 o'clock								
					against flow	77.8'	material change – seems to be smaller in size				x				
					against flow	82.7'	factory tap at ___ o'clock								
		82.7' – roots			against flow	82.7'	root medium coming from lateral obstructing 25%								
					against flow	82.7'	taping abandoned – root medium	x							
B–7 to B–8	103.76	101.7'	road shoulder	PVC	against flow	0'	pipe sag 46.5 ft in length – deepest over 50%								
					against flow	14.8'	camera underwater for 9.9 ft					46.5			
					against flow	59.9'	pipe sag 41.8 ft in length – deepest over 50%								
					against flow	71.3'	camera underwater for 12.4 ft					41.8			
					against flow	90.5'	camera underwater for 11.2 ft								
					against flow	101.7'	manhole # B–8								
B–8 to B–9	215.84	109.7' – debris	road shoulder	PVC	against flow	0'	pipe sag 4.7 ft in length – deepest = 20%								
					against flow	0'	grease deposits 16.7 ft in length at 8 & 1 o'clock								
					against flow	15.0'	pipe sag 24.8 ft in length – deepest = 50%								
					against flow	72.1'	roots & debris obscure the camera lens 11.9 ft					24.8			
					against flow	109.7'	taping abandoned – debris in line								
B–9 to B–10	246.99														
C–1 to C–2	404.54														
C–2 to C–3	148.70	141.7'	woods/asphalt rd	PVC	with flow	25.5'	fine settled deposits, 5 to 7 o'clock, 5% of pipe, 9 ft								
					with flow	75.6'	fine settled deposits, 5 to 7 o'clock, 10% of pipe, 7.4 ft								
					with flow	141.7'	manhole # C–2								
							* there was no flow in this line*								
C–3 to C–4	152.75	160.0'	yard w/trees	PVC	with flow	0'	pipe sag 12.9' in length – deepest at MH at 50%								
					with flow	45.3'	active factory tap at 1 o'clock				x				
					with flow	45.3'	root mass coming out of lateral line, obstructs 10%	x							
					with flow	63.9'	factory tap at 11 o'clock								
					with flow	63.9'	fine roots extending from lateral	x							
					with flow	75.9'	pipe sag 87.1 ft in length, deepest over 50%								
					with flow	81.8'	camera underwater for 24.6 ft					87.1			
					with flow	107.9'	factory tap at 11 o'clock								
					with flow	113.0'	offset joint								
					with flow	133.9'	camera underwater for 46.1 ft		x						
					with flow	160.0'	manhole C–3					46.1			
C–4 to D–1	255.84	233.3' – end of cbl	yard/field	PVC	against flow	14.4'	break–in tap at 12 o'clock								
					against flow	57.6'	grease deposits at 10 & 12 o'clock, 9.1 ft length	x							
					against flow	71.2'	active factory tap at 12 o'clock								
					against flow	71.2'	grease deposits at 9 & 12 o'clock, 7.8 ft length								
					against flow	71.2'	pipe sag, 7.8 ft in length – deepest = 50%								
					against flow	83.0'	pipe sag, 12 ft in length – deepest = 50%			x					
					against flow	97.0'	grease deposits at 9 & 12 o'clock, 4 ft length				x				
					against flow	99.5'	offset joint								
					against flow	100.0'	factory tap at 12 o'clock		x						
					against flow	104.5'	pipe sag for at least 128.8 ft								
					against flow	110'	camera underwater for 123.3 ft					128.8			
					against flow	233.3'	taping abandoned – not sure why (probably cable)								
D–1 to D–2	92.67	86.5'	field/asphalt rd	PVC	against flow	86.5'	manhole # D–2								
							camera was out of focus								

REVISIONS

NO.	DESCRIPTION	DATE	BY

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ALBUQUERQUE, NM 87109

ROBERT J. PAULETTE
NEW MEXICO
13683
REGISTERED PROFESSIONAL ENGINEER

VILLAGE OF JEMEZ SPRINGS, NM
WASTEWATER TREATMENT FACILITY IMPROVEMENTS

INSPECTION REPORT SUMMARY
SHEET 3 OF 5

PROJECT NO. X0-210-029
DATE 7/19/04
DRAWING NO. XX
SHEET NO. 20

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JEMEZ SPRINGS – CCTV INSPECTION REPORT SUMMARY

FILE0004.mif

Pipe run MH # to MH #	length of pipe run from maps(LF)	length of pipe run from camera (LF)	surface type	pipe material	Direction	location of problem	type of problem	Recommended Repair: clean & pressure grout tap	clean & pressure grout joint	point repair 10 lf of pipe	point repair 20 lf of pipe	6"pipe replacement (lf)	8" pipe replacement (lf)	cut back service & pressure grout	replace internal tee with manhole
39 to 40	185.20														
40 to 41	151.93														
41 to 42	158.51														
42 to 43	135.52	132.2'	field	PVC	against flow	132.2'	manhole # 43								
43 to 44	149.27														
44 to 45	452.49	255.1' – end of cbl	field	PVC											
45 to 46	233.69	172.6	field	PVC	with flow	3.9'	blockage								
					with flow	16.2'	pipe deformation (dent) w/o cracking								
					with flow	46.2'	pipe sag – ~18.5' in length								
					with flow	88.7'	service connection w/protruding roots								
46 to 47	205.83	201	field/floodplain	PVC	with flow	113.4'	pipe deformation (dent) w/o cracking	x			x				
47 to 48	180.13		floodplain		with flow	175.4'	root penetration								
48 to 49	126.33		floodplain												
49 to 50	154.90	147.2	floodplain/yard	PVC	against flow	21.1'	offset joint								
					against flow	27.8'	pipe separation								
					against flow	143.1'	offset joint			x					
50 to 51	346.15	285.4' – end of cbl	yard/field	PVC	against flow	146.8'	possible root			x					
					with flow	167.0'	pipe sag		x						
51 to 52	169.10	166.7	field/dirt road	PVC	with flow	170'	sediment in pipe – 7' in length								
52 to K–1	243.44	243.2	dirt road	PVC	with flow	62.3'	pipe sag – 43' in length			x					
					against flow	15.9'	attached grease deposits for 35.2 ft at 5 & 7 o'clock								
					against flow	172.1'	pipe material change – maybe clay or DI						43		
					against flow	172.1'	offset joint at material change								
					against flow	190.7'	pipe material change – back to PVC								
					against flow	192.9'	water depth at 20% and increasing								
		201.7' – debris			against flow	201.7'	water depth at 50%		x						
					against flow	201.7'	taping abandoned – debris in line			x					
					with flow	0'	linear crack at 11 o'clock ~2 ft long			x					
					with flow	31.4'	water depth at 20% and increasing								
		41.5' – met footage			with flow	41.5'	water depth at 50%			x					
K–1 to K–2	146.18	144.6	road shoulder	PVC	with flow	41.5'	taping abandoned – debris in line & met footage				x				
					against flow	5.4'	settled fine debris in line for 8.6 ft				x				
					against flow	13.1'	pipe sag 43.8 ft in length – deepest = 50%								
					against flow	65.3'	pipe sag 8.1 ft in length – deepest = 50%								
					against flow	78.5'	pipe sag 38.6 ft in length – deepest over 50%					43.8			
					against flow	100.8'	camera underwater for 4.5 ft			x					
					against flow	126.1'	active factory–made tap at 11 o'clock					38.6			
					against flow	128.4'	pipe sag 16.2 ft in length – deepest over 50%								
					against flow	133.4'	camera underwater for 11.2 ft.								
K–2 to K–3	128.38				against flow	144.6'	manhole # K–2				x				
K–3 to K–4	160.21														
K–4 to K–5	113.12	109.1' – drop MH	dirt road/grass	PVC	with flow	42.7'	active factory tap at 11 o'clock								
					with flow	64.1'	factory tap at 11 o'clock								
					with flow	109.1'	factory tap at 6 o'clock – drop MH tee								
K–5 to K–6	190.12					109.1'	taping abandoned								
			grass/dirt road	PVC	with flow	62.5'	factory tap at 11 o'clock								
					with flow	95.0'	factory tap at 11 o'clock								
		130.0' – ??			with flow	95.1'	camera underwater for 35 ft								
					with flow	130.0'	taping abandoned – not sure why								
K–6 to K–7	75.28	72.4'	dirt road	PVC			*water level increases steadily whole pipe*					35			
					with flow	9.1'	factory tap at 10 o'clock								
					with flow	41.5'	factory tap at 1 o'clock								
					with flow	71.0'	factory tap at 11 o'clock								
52 to 52A	374.18	276	field	PVC	with flow	72.4'	manhole # K–6								
					with flow	165.6'	seepage at joint								
					with flow	199.7'	pipe sag – ~16' in length		x						
52A to 53	?	88.8	field	PVC	with flow	219.8'	pipe sag – ~13.5' in length								
					with flow	8.4'	pipe leaking				x				
					with flow	43.2'	blockage		x		x				
53 to 54	288.57	276.5	field	PVC	with flow	67.5'	slightly offset joint								
					with flow	30'	pipe sag		x						
					with flow	100'	pipe sag – ~ 16.7' in length			x					
					with flow	186.5'	pipe sag – ~ 29.5' in length								
					with flow	239.6'	separated joint				x				
54 to 55	288.84	212.7'	field	PVC	with flow	268.5'	pipe blockage		x				29.5		
55 to 56	128.16				against flow	212.7'	taping abandoned – reason unknown								
56 to 57	108.35														
57 to 58	43.13														
58 to N–1	90.50	14.8' – blocked	under bridge/dirt rd	PVC	against flow	0'	pipe sag 3.2 ft in length – deepest = 50%								
					against flow	13.4'	line alignment off – down and to left								
					against flow	13.4'	material change – might be concrete or DI			x					
N–1 to N–2	454.77	205.0 – end of cbl	dirt road		against flow	14.8'	taping abandoned – camera cannot make turn			x					
						3.0'	factory tap at 1 o'clock			x					
						4.3'	factory tap at 11 o'clock			x					
						52.0'	camera flipped upside down and view is obstructed for 28.3'								
						160.7'	pipe sag 7.4 ft in length – deepest 10% (no flow in line)								
58 to 59	425.76					205.0'	taping stopped – end of camera cable								
59 to 60	279.81	149.8' – stopped	field/embankment	PVC	with flow	80.9'	service connection w/ protruding roots								
					with flow	86.2'	cracked pipe	x							
60 to UNK#4	?				against flow	63.5'	pipe deformation (dent) w/o cracking				x				
UNK#4 to M–1	274.17														
M–1 to M–2	199.62														
M–2 to M–3	209.86														

REVISIONS

NO.	DESCRIPTION	DATE	BY

WILSON & COMPANY
4900 LANG AVE. N.E.
ALBUQUERQUE, NM 87109

VILLAGE OF JEMEZ SPRINGS, NM
WASTEWATER TREATMENT FACILITY IMPROVEMENTS
INSPECTION REPORT SUMMARY
SHEET 4 OF 5

PROJECT NO. X0-210-029
DATE 7/19/04
DRAWING NO. XX
SHEET NO. 21

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JEMEZ SPRINGS – CCTV INSPECTION REPORT SUMMARY

FILE003.tif

Pipe run MH # to MH #	length of pipe run from maps(LF)	length of pipe run from camera (LF)	surface type	pipe material	Direction	location of problem	type of problem	Recommended Repair: clean & pressure grout tap	clean & pressure grout joint	point repair 10 lf of pipe	point repair 20 lf of pipe	6"pipe replacement (lf)	8" pipe replacement (lf)	cut back service & pressure grout	replace internal tee with manhole
M-3 to M-4	155.48														
M-4 to M-5	141.58														
60 to 61	173.93	204	embankment/floodplain	PVC/con.	against flow	163' to 185'	concrete pipe								
					against flow	199'	root penetration at joint		x						
61 to 62	170.04	169	floodplain	PVC	with flow	125.3'	cracked service connection tee	x							
62 to 63	179.14		floodplain												
63 to 64	286.37	282.4	floodplain/field	PVC	with flow	171.6'	service connection leaking water	x							
64 to 65	423.29	161.7' – stopped	field/gravel path	PVC	against flow										
65 to 65A	98.69	99.5'	under bridge/field	PVC	with flow	0'	pipe sag 7.7 ft in length – deepest = 20%								
					with flow	55.1'	pipe sag 23.3 ft in length – deepest = 50%								
					with flow	99.5'	manhole # 65						23.3		
65A to 65B	132.84	129.4'	field	PVC	against flow	0'	pipe sag 18.2 ft in length – deepest = 20%								
					against flow	21.2'	dimples in pipe at 6 o'clock								
					against flow	29.8'	pipe sag 31.5 ft in length – deepest = 50%								
					against flow	71.7'	pipe sag 18.8 ft in length – deepest = 50%						31.5		
					against flow	113.8'	pipe sag 15.6 ft in length				x				
					against flow	121.3'	camera underwater for 5.5 ft				x				
					against flow	129.4'	root ball extending into line from MH 65B								
					against flow	129.4'	manhole 65B								
65B to 65C	32.33	25.6'	embankment	PVC	against flow	25.6'	rootball extending into line from manhole								
					against flow	25.6'	manhole # 65B								
65C to 65D	150.09	144.0'	yard/garden	PVC	against flow	62.0'	pipe sag 9.2 ft in length – deepest = 45%								
					against flow	73.8'	dimples in pipe, 5 to 7 o'clock			x					
					against flow	90.1'	pipe sag 27.3 ft in length – deepest = 50%								
					against flow	121.9'	pipe sag 22.1 ft in length – deepest over 50%						27.3		
					against flow	135.9'	camera underwater for 6.5 ft						22.1		
					against flow	144.0'	manhole # 65D								
65 to 66	239.82														
66 to 67	549.78														
67 to 68	183.69	183.9'	road shoulder	PVC	with flow	183.9'	manhole # 67								
68 to 69	243.03	181.0' – ??	rd shoulder/embankment	PVC	against flow	181.0'	taping abandoned – ??								
69 to 70	479.94		embankment/rd shoulder	PVC	against flow	3.2'	tap at 9 o'clock								
					against flow	138.6'	badly deformed joint – no breaks								
		138.6' – deformation			against flow	138.6'	taping abandoned – deformation								
70 to 71	396.38	131' – ??	road shoulder	PVC	with flow	131'	taping abandoned – ??								
71 to 72	144.95	143'	road shoulder	PVC	with flow	77'	roots in joint								
					with flow	143'	manhole # 71		x						
72 to 73	235.55	238.55'	road shoulder	PVC	with flow	172'	misshapen joint								
		228.4' – ??			with flow	228.4'	taping abandoned – ??								
		10' – met previous			against flow	10'	taping abandoned – met previous footage								
73 to 74	72.66	69' – blockage	road shoulder	PVC	with flow	69'	taping abandoned – large blockage								
74 to 75	77.02		asphalt rd/ditch	PVC	against flow	82.2'	start – tape counter not reset to zero								
					against flow	126'	deflection at joint								
					against flow	144.6'	offset joint with roots			x					
		64.7' – offset joint			against flow	146.9'	taping abandoned – can't pass offset joint			x					
75 to UNK #1	?														

REVISIONS

NO.	DESCRIPTION	DATE	BY

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WASTEWATER TREATMENT FACILITY IMPROVEMENTS

INSPECTION REPORT SUMMARY
SHEET 5 OF 5

PROJECT NO. X0-210-029
DATE 7/19/04
DRAWING NO. XX
SHEET NO. 22

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Appendix C

Manhole Inspection Reports

DBS&A
a Geo-Logic Company

Identification

Manhole ID	1
Inspection Date & Time	07/17/2023 2:03pm
Rim Elevation	
Invert Depth	
Invert Elevation	56.00

Physical Parameters

Location	Other
Manhole Cover	Serviceable
Ring & Frame	Serviceable
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Serviceable
Cone	Serviceable
Riser	Serviceable
Shelf	Dirty
Channel	Serviceable

Flow and Surcharge

Inflow Indications	Debris on sides/shelf
Surcharge Indications	
Clarity of Flow	Clear appearance
Flow	Steady
Flow Depth Compared to Adjacent Manholes	Same
FlowDepth_in	1.00

Field Notes

Pictures

Identification

Manhole ID	10
Inspection Date & Time	08/03/2023 3:49pm
Rim Elevation	
Invert Depth	
Invert Elevation	105.00

Physical Parameters

Location	Easement
Manhole Cover	Serviceable
Ring & Frame	Serviceable
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Corroded
Cone	Serviceable
Riser	Broken
Shelf	Broken
Channel	Obstructed

Flow and Surcharge

Inflow Indications	Debris on sides/shelf
Surcharge Indications	Grease on shelf
Clarity of Flow	Turbid appearance
Flow	Sluggish
Flow Depth Compared to Adjacent Manholes	Lower
FlowDepth_in	5.00

Pictures

Field Notes

Completely clogged (very small flow going out) filled with roots and foot of dirt. Inlet buried outlet buried and 95% clogged

Identification

Manhole ID	11
Inspection Date & Time	08/03/2023 3:49pm
Rim Elevation	
Invert Depth	
Invert Elevation	99.00

Physical Parameters

Flow and Surcharge

Inflow Indications	Debris on sides/shelf
Surcharge Indications	
Clarity of Flow	Clear appearance
Flow	Steady
Flow Depth Compared to Adjacent Manholes	Lower
FlowDepth_in	0.50

Field Notes

Clear fast flow

Location	Easement
Manhole Cover	Corroded
Ring & Frame	Corroded
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Corroded
Cone	Serviceable
Riser	Serviceable
Shelf	Dirty
Channel	Corroded

Pictures

Identification

Flow and Surcharge

Field Notes

Manhole ID	11A
Inspection Date & Time	07/17/2023 12:19pm
Rim Elevation	
Invert Depth	
Invert Elevation	60.00

Inflow Indications	
Surcharge Indications	Other
Clarity of Flow	Other
Flow	None
Flow Depth Compared to Adjacent Manholes	Other
FlowDepth_in	0.00

Physical Parameters

Location	Roadway
Manhole Cover	Serviceable
Ring & Frame	Serviceable
Manhole Material	Concrete
Manhole Size	4 foot

Pictures

Condition

Vermin	
Steps	Corroded
Cone	Serviceable
Riser	Serviceable
Shelf	Serviceable
Channel	Serviceable

Identification

Manhole ID	12
Inspection Date & Time	08/03/2023 4:01pm
Rim Elevation	
Invert Depth	
Invert Elevation	58.00

Physical Parameters

Location	Easement
Manhole Cover	Corroded
Ring & Frame	Serviceable
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Corroded
Cone	Serviceable
Riser	Serviceable
Shelf	Dirty
Channel	Serviceable

Flow and Surcharge

Inflow Indications	Debris on sides/shelf
Surcharge Indications	
Clarity of Flow	Clear appearance
Flow	Steady
Flow Depth Compared to Adjacent Manholes	Same
FlowDepth_in	0.50

Pictures

Field Notes

Identification

Manhole ID	12A
Inspection Date & Time	07/17/2023 12:49pm
Rim Elevation	
Invert Depth	
Invert Elevation	84.00

Physical Parameters

Location	Roadway
Manhole Cover	Serviceable
Ring & Frame	Serviceable
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Corroded
Cone	Serviceable
Riser	Serviceable
Shelf	Dirty
Channel	Serviceable

Flow and Surcharge

Inflow Indications	
Surcharge Indications	Other
Clarity of Flow	Clear appearance
Flow	None
Flow Depth Compared to Adjacent Manholes	Same
FlowDepth_in	0.00

Field Notes

Pictures

Identification

Manhole ID	13
Inspection Date & Time	08/03/2023 4:13pm
Rim Elevation	
Invert Depth	
Invert Elevation	71.00

Physical Parameters

Flow and Surcharge

Inflow Indications	Debris on sides/shelf
Surcharge Indications	
Clarity of Flow	Clear appearance
Flow	Steady
Flow Depth Compared to Adjacent Manholes	Higher
FlowDepth_in	1.00

Field Notes

Grease in channel

Location	Other
Manhole Cover	Corroded
Ring & Frame	Serviceable
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Corroded
Cone	Corroded
Riser	Serviceable
Shelf	Dirty
Channel	Obstructed

Pictures

Identification

Flow and Surcharge

Field Notes

Manhole ID	14
Inspection Date & Time	08/03/2023 4:28pm
Rim Elevation	
Invert Depth	
Invert Elevation	58.00

Physical Parameters

Location	Easement
Manhole Cover	Corroded
Ring & Frame	Corroded
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Corroded
Cone	Serviceable
Riser	Serviceable
Shelf	Dirty
Channel	Obstructed

Inflow Indications	Debris on sides/shelf
Surcharge Indications	
Clarity of Flow	Clear appearance
Flow	Steady
Flow Depth Compared to Adjacent Manholes	Same
FlowDepth_in	1.00

Grease and obstructions in channel and pipes

Pictures

Identification

Manhole ID	15
Inspection Date & Time	08/03/2023 4:36pm
Rim Elevation	
Invert Depth	
Invert Elevation	86.00

Physical Parameters

Location	Easement
Manhole Cover	Corroded
Ring & Frame	Corroded
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Corroded
Cone	Serviceable
Riser	Serviceable
Shelf	Dirty
Channel	Obstructed

Flow and Surcharge

Inflow Indications	Debris on sides/shelf
Surcharge Indications	
Clarity of Flow	Clear appearance
Flow	Steady
Flow Depth Compared to Adjacent Manholes	Same
FlowDepth_in	1.00

Pictures

Field Notes

Identification

Manhole ID	17
Inspection Date & Time	08/03/2023 4:51pm
Rim Elevation	
Invert Depth	
Invert Elevation	85.00

Physical Parameters

Location	Easement
Manhole Cover	Corroded
Ring & Frame	Serviceable
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Corroded
Cone	Serviceable
Riser	Serviceable
Shelf	Serviceable
Channel	Obstructed

Flow and Surcharge

Inflow Indications	Debris on sides/shelf
Surcharge Indications	
Clarity of Flow	Clear appearance
Flow	Steady
Flow Depth Compared to Adjacent Manholes	Same
FlowDepth_in	0.50

Pictures

Field Notes

Grease in channel

Identification

Manhole ID	19
Inspection Date & Time	08/03/2023 5:02pm
Rim Elevation	
Invert Depth	
Invert Elevation	73.00

Physical Parameters

Flow and Surcharge

Inflow Indications	
Surcharge Indications	
Clarity of Flow	Clear appearance
Flow	Steady
Flow Depth Compared to Adjacent Manholes	Same
FlowDepth_in	0.50

Field Notes

Location	Easement
Manhole Cover	Corroded
Ring & Frame	Serviceable
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Corroded
Cone	Serviceable
Riser	Serviceable
Shelf	Dirty
Channel	Silt

Pictures

Identification

Flow and Surcharge

Field Notes

Manhole ID	1A
Inspection Date & Time	07/17/2023 1:50pm
Rim Elevation	
Invert Depth	
Invert Elevation	101.00

Inflow Indications	
Surcharge Indications	
Clarity of Flow	Clear appearance
Flow	Steady
Flow Depth Compared to Adjacent Manholes	Same
FlowDepth_in	1.00

Possible I&I - all MHs along the river have steady clear flow and minimal to no debris

Physical Parameters

Location	Roadway
Manhole Cover	Serviceable
Ring & Frame	Serviceable
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Serviceable
Cone	Serviceable
Riser	Serviceable
Shelf	Serviceable
Channel	Serviceable

Pictures

Identification

Manhole ID	2
Inspection Date & Time	08/03/2023 2:03pm
Rim Elevation	
Invert Depth	
Invert Elevation	

Physical Parameters

Location	Other
Manhole Cover	Corroded
Ring & Frame	Serviceable
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Corroded
Cone	Serviceable
Riser	Serviceable
Shelf	Dirty
Channel	Obstructed

Flow and Surcharge

Inflow Indications	Debris on sides/shelf
Surcharge Indications	
Clarity of Flow	Clear appearance
Flow	Steady
Flow Depth Compared to Adjacent Manholes	Same
FlowDepth_in	0.50

Pictures

Field Notes

Identification

Manhole ID	20
Inspection Date & Time	08/03/2023 5:08pm
Rim Elevation	
Invert Depth	
Invert Elevation	

Physical Parameters

Location	Easement
Manhole Cover	Corroded
Ring & Frame	Serviceable
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Corroded
Cone	Broken
Riser	Broken
Shelf	Broken
Channel	Obstructed

Flow and Surcharge

Inflow Indications	Debris on sides/shelf
Surcharge Indications	Grease on shelf
Clarity of Flow	Other
Flow	None
Flow Depth Compared to Adjacent Manholes	Lower
FlowDepth_in	0.00

Field Notes

2 feet of dirt and roots. Pipes buried. No flow visible. Invert unknown.

Pictures

Identification

Manhole ID	21
Inspection Date & Time	08/03/2023 5:13pm
Rim Elevation	
Invert Depth	
Invert Elevation	97.00

Physical Parameters

Flow and Surcharge

Inflow Indications	Debris on sides/shelf
Surcharge Indications	
Clarity of Flow	Clear appearance
Flow	Steady
Flow Depth Compared to Adjacent Manholes	Higher
FlowDepth_in	1.00

Field Notes

Grease on shelf

Location	Easement
Manhole Cover	Serviceable
Ring & Frame	Serviceable
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Corroded
Cone	Serviceable
Riser	Serviceable
Shelf	Dirty
Channel	Serviceable

Pictures

Identification

Flow and Surcharge

Field Notes

Manhole ID	22
Inspection Date & Time	08/03/2023 5:19pm
Rim Elevation	
Invert Depth	
Invert Elevation	67.00

Physical Parameters

Location	Easement
Manhole Cover	Corroded
Ring & Frame	Serviceable
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Corroded
Cone	Serviceable
Riser	Serviceable
Shelf	Dirty
Channel	Silt

Inflow Indications	Debris on sides/shelf
Surcharge Indications	
Clarity of Flow	Clear appearance
Flow	Steady
Flow Depth Compared to Adjacent Manholes	Same
FlowDepth_in	0.50

Buildup on shelf

Pictures

Identification

Manhole ID	23
Inspection Date & Time	08/03/2023 5:24pm
Rim Elevation	
Invert Depth	
Invert Elevation	100.00

Physical Parameters

Location	Easement
Manhole Cover	Corroded
Ring & Frame	Serviceable
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Corroded
Cone	Corroded
Riser	Serviceable
Shelf	Dirty
Channel	Corroded

Flow and Surcharge

Inflow Indications	
Surcharge Indications	
Clarity of Flow	Clear appearance
Flow	Steady
Flow Depth Compared to Adjacent Manholes	Same
FlowDepth_in	1.00

Pictures

Field Notes

Identification

Manhole ID	24
Inspection Date & Time	08/03/2023 5:29pm
Rim Elevation	
Invert Depth	
Invert Elevation	120.00

Physical Parameters

Location	Easement
Manhole Cover	Serviceable
Ring & Frame	Missing Grout
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Corroded
Cone	Serviceable
Riser	Serviceable
Shelf	Dirty
Channel	Corroded

Flow and Surcharge

Inflow Indications	Debris on sides/shelf
Surcharge Indications	
Clarity of Flow	Clear appearance
Flow	Steady
Flow Depth Compared to Adjacent Manholes	Same
FlowDepth_in	1.00

Pictures

Field Notes

Rim 2 feet above grade.

Identification

Manhole ID	25
Inspection Date & Time	08/03/2023 5:38pm
Rim Elevation	
Invert Depth	
Invert Elevation	76.00

Physical Parameters

Flow and Surcharge

Inflow Indications	Debris on sides/shelf
Surcharge Indications	
Clarity of Flow	Clear appearance
Flow	Steady
Flow Depth Compared to Adjacent Manholes	Same
FlowDepth_in	1.00

Field Notes

Location	Easement
Manhole Cover	Serviceable
Ring & Frame	Serviceable
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Corroded
Cone	Serviceable
Riser	Serviceable
Shelf	Dirty
Channel	Corroded

Pictures

Identification

Flow and Surcharge

Field Notes

Manhole ID	27
Inspection Date & Time	08/03/2023 5:46pm
Rim Elevation	
Invert Depth	
Invert Elevation	49.00

Physical Parameters

Location	Easement
Manhole Cover	Corroded
Ring & Frame	Corroded
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Corroded
Cone	Serviceable
Riser	Serviceable
Shelf	Dirty
Channel	Corroded

Inflow Indications	Debris on sides/shelf
Surcharge Indications	Grease on shelf
Clarity of Flow	Clear appearance
Flow	Sluggish
Flow Depth Compared to Adjacent Manholes	Same
FlowDepth_in	1.00

Heavy buildup on shelf. Corrosion - signs of H2S

Pictures

Identification

Manhole ID	28
Inspection Date & Time	08/03/2023 5:52pm
Rim Elevation	
Invert Depth	
Invert Elevation	60.00

Physical Parameters

Location	Easement
Manhole Cover	Corroded
Ring & Frame	Serviceable
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Corroded
Cone	Serviceable
Riser	Serviceable
Shelf	Dirty
Channel	Obstructed

Flow and Surcharge

Inflow Indications	Debris on sides/shelf
Surcharge Indications	Grease on shelf
Clarity of Flow	Clear appearance
Flow	Steady
Flow Depth Compared to Adjacent Manholes	Same
FlowDepth_in	1.00

Field Notes

I let 25% full of grease

Pictures

Identification

Manhole ID	29
Inspection Date & Time	08/03/2023 6:00pm
Rim Elevation	
Invert Depth	
Invert Elevation	60.00

Physical Parameters

Location	Easement
Manhole Cover	Damaged
Ring & Frame	Missing Grout
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Corroded
Cone	Broken
Riser	Broken
Shelf	Dirty
Channel	Corroded

Flow and Surcharge

Inflow Indications	Debris on sides/shelf
Surcharge Indications	
Clarity of Flow	Clear appearance
Flow	Steady
Flow Depth Compared to Adjacent Manholes	Same
FlowDepth_in	1.00

Pictures

Field Notes

Identification

Manhole ID	2A
Inspection Date & Time	07/17/2023 1:41pm
Rim Elevation	
Invert Depth	
Invert Elevation	74.00

Physical Parameters

Flow and Surcharge

Inflow Indications	
Surcharge Indications	
Clarity of Flow	Clear appearance
Flow	Steady
Flow Depth Compared to Adjacent Manholes	Same
FlowDepth_in	1.00

Field Notes

Location	Other
Manhole Cover	Serviceable
Ring & Frame	Serviceable
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Serviceable
Cone	Serviceable
Riser	Serviceable
Shelf	Serviceable
Channel	Serviceable

Pictures

Identification

Flow and Surcharge

Field Notes

Manhole ID	3
Inspection Date & Time	08/03/2023 2:13pm
Rim Elevation	
Invert Depth	
Invert Elevation	67.00

Inflow Indications	Debris on sides/shelf
Surcharge Indications	
Clarity of Flow	Clear appearance
Flow	Steady
Flow Depth Compared to Adjacent Manholes	Same
FlowDepth_in	0.50

Physical Parameters

Location	Easement
Manhole Cover	Serviceable
Ring & Frame	Serviceable
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Corroded
Cone	Serviceable
Riser	Serviceable
Shelf	Dirty
Channel	Corroded

Pictures

Identification

Manhole ID	30
Inspection Date & Time	08/03/2023 6:04pm
Rim Elevation	
Invert Depth	
Invert Elevation	117.00

Physical Parameters

Location	Easement
Manhole Cover	
Ring & Frame	Missing Grout
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Corroded
Cone	Serviceable
Riser	Serviceable
Shelf	Serviceable
Channel	Corroded

Flow and Surcharge

Inflow Indications	
Surcharge Indications	
Clarity of Flow	Clear appearance
Flow	Steady
Flow Depth Compared to Adjacent Manholes	Same
FlowDepth_in	1.00

Field Notes

Pictures

Identification

Manhole ID	31
Inspection Date & Time	08/03/2023 6:11pm
Rim Elevation	
Invert Depth	
Invert Elevation	147.00

Physical Parameters

Location	Easement
Manhole Cover	Damaged
Ring & Frame	Missing Grout
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Corroded
Cone	Serviceable
Riser	Serviceable
Shelf	Dirty
Channel	Obstructed

Flow and Surcharge

Inflow Indications	
Surcharge Indications	
Clarity of Flow	Clear appearance
Flow	Steady
Flow Depth Compared to Adjacent Manholes	
FlowDepth_in	2.00

Field Notes

Higher flow upstream, possible I&I in upstream pipe

Pictures

Identification

Manhole ID	32
Inspection Date & Time	08/03/2023 6:18pm
Rim Elevation	
Invert Depth	
Invert Elevation	178.00

Physical Parameters

Flow and Surcharge

Inflow Indications	
Surcharge Indications	
Clarity of Flow	Clear appearance
Flow	Sluggish
Flow Depth Compared to Adjacent Manholes	Same
FlowDepth_in	1.00

Field Notes

Location	Easement
Manhole Cover	Damaged
Ring & Frame	Serviceable
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Corroded
Cone	Serviceable
Riser	Serviceable
Shelf	Dirty
Channel	Obstructed

Pictures

Identification

Flow and Surcharge

Field Notes

Manhole ID	33
Inspection Date & Time	08/03/2023 6:28pm
Rim Elevation	
Invert Depth	
Invert Elevation	99.00

Physical Parameters

Location	Easement
Manhole Cover	Corroded
Ring & Frame	Corroded
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Corroded
Cone	Corroded
Riser	Corroded
Shelf	Dirty
Channel	Obstructed

Inflow Indications	Debris on sides/shelf
Surcharge Indications	Grease on shelf
Clarity of Flow	Clear appearance
Flow	Steady
Flow Depth Compared to Adjacent Manholes	Same
FlowDepth_in	1.00

Buildup and corrosion on shelf

Pictures

Identification

Manhole ID	34
Inspection Date & Time	08/03/2023 6:32pm
Rim Elevation	
Invert Depth	
Invert Elevation	60.00

Physical Parameters

Location	Easement
Manhole Cover	Corroded
Ring & Frame	Corroded
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Corroded
Cone	Broken
Riser	Broken
Shelf	Corroded
Channel	Obstructed

Flow and Surcharge

Inflow Indications	Debris on sides/shelf
Surcharge Indications	Grease on shelf
Clarity of Flow	Turbid appearance
Flow	Sluggish
Flow Depth Compared to Adjacent Manholes	Higher
FlowDepth_in	2.00

Pictures

Field Notes

Large root intrusions, heavy buildup of roots and dirt

Identification

Manhole ID	35
Inspection Date & Time	08/03/2023 6:38pm
Rim Elevation	
Invert Depth	
Invert Elevation	86.00

Physical Parameters

Location	Easement
Manhole Cover	Serviceable
Ring & Frame	Serviceable
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Corroded
Cone	Serviceable
Riser	Serviceable
Shelf	Dirty
Channel	Corroded

Flow and Surcharge

Inflow Indications	
Surcharge Indications	
Clarity of Flow	Clear appearance
Flow	Steady
Flow Depth Compared to Adjacent Manholes	Lower
FlowDepth_in	1.00

Field Notes

Pictures

Identification

Manhole ID	36
Inspection Date & Time	08/03/2023 6:42pm
Rim Elevation	
Invert Depth	
Invert Elevation	60.00

Physical Parameters

Flow and Surcharge

Inflow Indications	
Surcharge Indications	
Clarity of Flow	Turbid appearance
Flow	Steady
Flow Depth Compared to Adjacent Manholes	Same
FlowDepth_in	1.00

Field Notes

Location	Easement
Manhole Cover	Serviceable
Ring & Frame	Serviceable
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Serviceable
Cone	Serviceable
Riser	Serviceable
Shelf	Serviceable
Channel	Obstructed

Pictures

Identification

Flow and Surcharge

Field Notes

Manhole ID	37
Inspection Date & Time	08/03/2023 6:46pm
Rim Elevation	
Invert Depth	
Invert Elevation	64.00

Inflow Indications	Debris on sides/shelf
Surcharge Indications	
Clarity of Flow	Turbid appearance
Flow	Steady
Flow Depth Compared to Adjacent Manholes	Same
FlowDepth_in	1.00

Heavy corrosion and buildup

Physical Parameters

Location	Easement
Manhole Cover	Corroded
Ring & Frame	Corroded
Manhole Material	Concrete
Manhole Size	4 foot

Pictures

Condition

Vermin	
Steps	Corroded
Cone	Corroded
Riser	Corroded
Shelf	Corroded
Channel	Corroded

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Identification

Manhole ID	38
Inspection Date & Time	07/17/2023 2:44pm
Rim Elevation	
Invert Depth	
Invert Elevation	98.00

Physical Parameters

Location	Other
Manhole Cover	Serviceable
Ring & Frame	Serviceable
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Corroded
Cone	Serviceable
Riser	Serviceable
Shelf	Dirty
Channel	Obstructed

Flow and Surcharge

Inflow Indications	Debris on sides/shelf
Surcharge Indications	
Clarity of Flow	Turbid appearance
Flow	Sluggish
Flow Depth Compared to Adjacent Manholes	Higher
FlowDepth_in	2.00

Field Notes

Outlet pipe 50% clogged

Pictures

Identification

Manhole ID	38B
Inspection Date & Time	07/17/2023 2:55pm
Rim Elevation	
Invert Depth	
Invert Elevation	85.00

Physical Parameters

Location	Other
Manhole Cover	Serviceable
Ring & Frame	Corroded
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Corroded
Cone	Serviceable
Riser	Serviceable
Shelf	Corroded
Channel	Obstructed

Flow and Surcharge

Inflow Indications	Debris on sides/shelf
Surcharge Indications	Other
Clarity of Flow	Other
Flow	None
Flow Depth Compared to Adjacent Manholes	Lower
FlowDepth_in	0.00

Field Notes

I&I: Pipes buried - channel blocked with dirt, roots. No flow.

Pictures

Identification

Manhole ID	39
Inspection Date & Time	07/17/2023 2:57pm
Rim Elevation	
Invert Depth	
Invert Elevation	93.00

Physical Parameters

Flow and Surcharge

Inflow Indications	Debris on sides/shelf
Surcharge Indications	
Clarity of Flow	Turbid appearance
Flow	Sluggish
Flow Depth Compared to Adjacent Manholes	Higher
FlowDepth_in	1.50

Field Notes

Missing cover, ring, and frame. Road cone and board on top. Broken collar. 3 drop inlets

Location	Roadway
Manhole Cover	Corroded
Ring & Frame	Corroded
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	Other
Steps	Corroded
Cone	Corroded
Riser	Corroded
Shelf	Broken
Channel	Obstructed

Pictures

Identification

Flow and Surcharge

Field Notes

Manhole ID	3A
Inspection Date & Time	07/17/2023 1:29pm
Rim Elevation	
Invert Depth	
Invert Elevation	97.00

Inflow Indications	
Surcharge Indications	
Clarity of Flow	Clear appearance
Flow	Steady
Flow Depth Compared to Adjacent Manholes	Higher
FlowDepth_in	1.00

Needs bollards

Physical Parameters

Location	Other
Manhole Cover	Serviceable
Ring & Frame	Serviceable
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Serviceable
Cone	Serviceable
Riser	Serviceable
Shelf	Serviceable
Channel	Serviceable

Pictures

Identification

Manhole ID	40
Inspection Date & Time	07/19/2023 3:40pm
Rim Elevation	
Invert Depth	
Invert Elevation	55.00

Physical Parameters

Location	Other
Manhole Cover	Serviceable
Ring & Frame	Serviceable
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Corroded
Cone	Serviceable
Riser	Corroded
Shelf	Dirty
Channel	Obstructed

Flow and Surcharge

Inflow Indications	
Surcharge Indications	
Clarity of Flow	Clear appearance
Flow	Steady
Flow Depth Compared to Adjacent Manholes	Same
FlowDepth_in	2.00

Field Notes

Dirt buildup on shelf, debris in channel, I&I

Pictures

Identification

Manhole ID	41
Inspection Date & Time	07/19/2023 3:00pm
Rim Elevation	
Invert Depth	
Invert Elevation	

Physical Parameters

Location	Other
Manhole Cover	
Ring & Frame	
Manhole Material	
Manhole Size	

Condition

Vermin	
Steps	
Cone	
Riser	
Shelf	
Channel	

Flow and Surcharge

Inflow Indications	
Surcharge Indications	
Clarity of Flow	
Flow	
Flow Depth Compared to Adjacent Manholes	
FlowDepth_in	

Field Notes

Manhole in thick willows on the river overbank, heavily corroded rim - can't open

Pictures

Identification

Manhole ID	42
Inspection Date & Time	07/19/2023 3:06pm
Rim Elevation	
Invert Depth	
Invert Elevation	56.00

Physical Parameters

Flow and Surcharge

Inflow Indications	Debris on sides/shelf
Surcharge Indications	
Clarity of Flow	Clear appearance
Flow	Steady
Flow Depth Compared to Adjacent Manholes	Higher
FlowDepth_in	2.00

Field Notes

Heavy corrosion, I&I (clear water steady stream)

Location	Other
Manhole Cover	Corroded
Ring & Frame	Corroded
Manhole Material	Brick
Manhole Size	4 foot

Condition

Vermin	Roaches
Steps	Corroded
Cone	Corroded
Riser	Corroded
Shelf	Dirty
Channel	Corroded

Pictures

Identification

Flow and Surcharge

Field Notes

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Manhole ID	43
Inspection Date & Time	07/19/2023 3:20pm
Rim Elevation	
Invert Depth	
Invert Elevation	

Inflow Indications	
Surcharge Indications	
Clarity of Flow	
Flow	
Flow Depth Compared to Adjacent Manholes	
FlowDepth_in	

Stuck - can't open

Physical Parameters

Location	
Manhole Cover	
Ring & Frame	
Manhole Material	
Manhole Size	

Condition

Vermin	
Steps	
Cone	
Riser	
Shelf	
Channel	

Pictures

Identification

Manhole ID	4A
Inspection Date & Time	07/17/2023 1:09pm
Rim Elevation	
Invert Depth	
Invert Elevation	103.00

Physical Parameters

Location	Other
Manhole Cover	Serviceable
Ring & Frame	Serviceable
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Serviceable
Cone	Serviceable
Riser	Serviceable
Shelf	Serviceable
Channel	Silt

Flow and Surcharge

Inflow Indications	
Surcharge Indications	
Clarity of Flow	Clear appearance
Flow	Steady
Flow Depth Compared to Adjacent Manholes	Same
FlowDepth_in	0.50

Field Notes

Buildup in channel, needs bollards

Pictures

Identification

Manhole ID	52
Inspection Date & Time	07/17/2023 4:28pm
Rim Elevation	
Invert Depth	
Invert Elevation	86.00

Physical Parameters

Location	Roadway
Manhole Cover	Corroded
Ring & Frame	Corroded
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Corroded
Cone	Corroded
Riser	Corroded
Shelf	Corroded
Channel	Corroded

Flow and Surcharge

Inflow Indications	
Surcharge Indications	
Clarity of Flow	Clear appearance
Flow	Steady
Flow Depth Compared to Adjacent Manholes	Higher
FlowDepth_in	1.00

Field Notes

Fast flow

Pictures

Identification

Manhole ID	52A
Inspection Date & Time	07/17/2023 4:48pm
Rim Elevation	
Invert Depth	
Invert Elevation	58.00

Physical Parameters

Flow and Surcharge

Inflow Indications	
Surcharge Indications	Grease on shelf
Clarity of Flow	Turbid appearance
Flow	Steady
Flow Depth Compared to Adjacent Manholes	Higher
FlowDepth_in	1.00

Field Notes

FOG in channel

Location	Other
Manhole Cover	Corroded
Ring & Frame	Missing Grout
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Corroded
Cone	Corroded
Riser	Corroded
Shelf	Corroded
Channel	Obstructed

Pictures

Identification

Flow and Surcharge

Field Notes

Manhole ID	53
Inspection Date & Time	07/17/2023 4:53pm
Rim Elevation	
Invert Depth	
Invert Elevation	60.00

Inflow Indications	
Surcharge Indications	
Clarity of Flow	Clear appearance
Flow	Sluggish
Flow Depth Compared to Adjacent Manholes	Lower
FlowDepth_in	0.50

Physical Parameters

Location	Other
Manhole Cover	Corroded
Ring & Frame	Corroded
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Corroded
Cone	Corroded
Riser	Corroded
Shelf	Corroded
Channel	Corroded

Pictures

Identification

Manhole ID	54
Inspection Date & Time	07/19/2023 4:22pm
Rim Elevation	
Invert Depth	
Invert Elevation	74.00

Physical Parameters

Location	Other
Manhole Cover	Serviceable
Ring & Frame	Serviceable
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Corroded
Cone	Serviceable
Riser	Serviceable
Shelf	Serviceable
Channel	Corroded

Flow and Surcharge

Inflow Indications	
Surcharge Indications	
Clarity of Flow	Clear appearance
Flow	Sluggish
Flow Depth Compared to Adjacent Manholes	Same
FlowDepth_in	0.50

Field Notes

Debris in channel

Pictures

Identification

Manhole ID	55
Inspection Date & Time	07/19/2023 4:24pm
Rim Elevation	
Invert Depth	
Invert Elevation	99.00

Physical Parameters

Location	Other
Manhole Cover	Serviceable
Ring & Frame	Serviceable
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Corroded
Cone	Serviceable
Riser	Serviceable
Shelf	Dirty
Channel	Silt

Flow and Surcharge

Inflow Indications	
Surcharge Indications	
Clarity of Flow	Clear appearance
Flow	Steady
Flow Depth Compared to Adjacent Manholes	Same
FlowDepth_in	0.50

Field Notes

Pictures

Identification

Manhole ID	5A
Inspection Date & Time	08/03/2023 1:40pm
Rim Elevation	
Invert Depth	
Invert Elevation	101.00

Physical Parameters

Flow and Surcharge

Inflow Indications	Debris on sides/shelf
Surcharge Indications	
Clarity of Flow	Clear appearance
Flow	Steady
Flow Depth Compared to Adjacent Manholes	Same
FlowDepth_in	0.50

Field Notes

Location	Other
Manhole Cover	Serviceable
Ring & Frame	Serviceable
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Corroded
Cone	Serviceable
Riser	Serviceable
Shelf	Dirty
Channel	Obstructed

Pictures

Identification

Flow and Surcharge

Field Notes

Manhole ID	61
Inspection Date & Time	07/19/2023 5:18pm
Rim Elevation	
Invert Depth	
Invert Elevation	96.00

Inflow Indications	
Surcharge Indications	Other
Clarity of Flow	Turbid appearance
Flow	Sluggish
Flow Depth Compared to Adjacent Manholes	Lower
FlowDepth_in	1.00

Not flowing, stoppage in channel

Physical Parameters

Location	Other
Manhole Cover	Serviceable
Ring & Frame	Serviceable
Manhole Material	Concrete
Manhole Size	4 foot

Pictures

Condition

Vermin	
Steps	Corroded
Cone	Serviceable
Riser	Serviceable
Shelf	Serviceable
Channel	Obstructed

Identification

Manhole ID	62
Inspection Date & Time	07/19/2023 5:06pm
Rim Elevation	
Invert Depth	
Invert Elevation	97.00

Physical Parameters

Location	Other
Manhole Cover	Serviceable
Ring & Frame	Serviceable
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Corroded
Cone	Serviceable
Riser	Serviceable
Shelf	Serviceable
Channel	Silt

Flow and Surcharge

Inflow Indications	
Surcharge Indications	
Clarity of Flow	Turbid appearance
Flow	Sluggish
Flow Depth Compared to Adjacent Manholes	Same
FlowDepth_in	0.50

Field Notes

Rim 2 feet above grade, debris in channel

Pictures

Identification

Manhole ID	63
Inspection Date & Time	07/19/2023 4:56pm
Rim Elevation	
Invert Depth	
Invert Elevation	149.00

Physical Parameters

Location	Other
Manhole Cover	Serviceable
Ring & Frame	Serviceable
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Serviceable
Cone	Serviceable
Riser	Serviceable
Shelf	Dirty
Channel	Obstructed

Flow and Surcharge

Inflow Indications	
Surcharge Indications	
Clarity of Flow	Clear appearance
Flow	Sluggish
Flow Depth Compared to Adjacent Manholes	Same
FlowDepth_in	0.50

Field Notes

Rim is 5 feet above grade, debris in channel

Pictures

Identification

Manhole ID	65
Inspection Date & Time	07/19/2023 6:45pm
Rim Elevation	
Invert Depth	
Invert Elevation	

Physical Parameters

Flow and Surcharge

Inflow Indications	
Surcharge Indications	Grease on shelf
Clarity of Flow	
Flow	Surcharging
Flow Depth Compared to Adjacent Manholes	
FlowDepth_in	

Field Notes

Full of water - backed up, 1.5 feet from top of water to rim

Location	
Manhole Cover	
Ring & Frame	
Manhole Material	
Manhole Size	

Condition

Vermin	
Steps	
Cone	
Riser	
Shelf	
Channel	

Pictures

Identification

Flow and Surcharge

Field Notes

Manhole ID	65A
Inspection Date & Time	07/19/2023 6:49pm
Rim Elevation	
Invert Depth	
Invert Elevation	

Inflow Indications	
Surcharge Indications	Grease on shelf
Clarity of Flow	
Flow	Surcharging
Flow Depth Compared to Adjacent Manholes	
FlowDepth_in	

Full of water, outlet underwater, inlet 75% covered, black sludge material

Physical Parameters

Location	Other
Manhole Cover	Serviceable
Ring & Frame	Serviceable
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	
Cone	
Riser	
Shelf	
Channel	

Pictures

Identification

Manhole ID	65B
Inspection Date & Time	07/19/2023 6:53pm
Rim Elevation	
Invert Depth	
Invert Elevation	93.00

Physical Parameters

Location	Other
Manhole Cover	Serviceable
Ring & Frame	Serviceable
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Corroded
Cone	Serviceable
Riser	Serviceable
Shelf	Dirty
Channel	Obstructed

Flow and Surcharge

Inflow Indications	
Surcharge Indications	
Clarity of Flow	Other
Flow	Surcharging
Flow Depth Compared to Adjacent Manholes	Same
FlowDepth_in	2.00

Pictures

Field Notes

Channel clogged, pipes 40% full, black material (sludge)

Identification

Manhole ID	65D
Inspection Date & Time	07/19/2023 7:12pm
Rim Elevation	
Invert Depth	
Invert Elevation	

Physical Parameters

Location	Other
Manhole Cover	Serviceable
Ring & Frame	Serviceable
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Corroded
Cone	Serviceable
Riser	Serviceable
Shelf	Other
Channel	Other

Flow and Surcharge

Inflow Indications	Debris on sides/shelf
Surcharge Indications	Grease on shelf
Clarity of Flow	Other
Flow	Surcharging
Flow Depth Compared to Adjacent Manholes	Same
FlowDepth_in	2.00

Field Notes

Completely backed up with sludge, grease trap next to MH and may be connected

Pictures

Identification

Manhole ID	66
Inspection Date & Time	07/17/2023 6:52pm
Rim Elevation	
Invert Depth	
Invert Elevation	128.00

Physical Parameters

Flow and Surcharge

Inflow Indications	
Surcharge Indications	Other
Clarity of Flow	Turbid appearance
Flow	Surcharging
Flow Depth Compared to Adjacent Manholes	Same
FlowDepth_in	0.50

Field Notes

No flow, standing water. Buildup on shelf and channel obstructed.

Location	Roadway
Manhole Cover	Serviceable
Ring & Frame	Serviceable
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Corroded
Cone	Serviceable
Riser	Serviceable
Shelf	Dirty
Channel	Obstructed

Pictures

Identification

Flow and Surcharge

Field Notes

Manhole ID	68
Inspection Date & Time	07/17/2023 6:28pm
Rim Elevation	
Invert Depth	
Invert Elevation	63.00

Physical Parameters

Location	Roadway
Manhole Cover	Serviceable
Ring & Frame	Serviceable
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Corroded
Cone	Serviceable
Riser	Serviceable
Shelf	Dirty
Channel	Obstructed

Inflow Indications	Debris on sides/shelf
Surcharge Indications	Other
Clarity of Flow	Turbid appearance
Flow	Surcharging
Flow Depth Compared to Adjacent Manholes	Same
FlowDepth_in	0.50

Debris in channel, blockage (no flow) - standing water.

Pictures

Identification

Manhole ID	69
Inspection Date & Time	07/17/2023 6:38pm
Rim Elevation	
Invert Depth	
Invert Elevation	75.00

Physical Parameters

Location	Roadway
Manhole Cover	Serviceable
Ring & Frame	Serviceable
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Corroded
Cone	Serviceable
Riser	Serviceable
Shelf	Dirty
Channel	Obstructed

Flow and Surcharge

Inflow Indications	Debris on sides/shelf
Surcharge Indications	
Clarity of Flow	Other
Flow	None
Flow Depth Compared to Adjacent Manholes	Lower
FlowDepth_in	0.00

Pictures

Field Notes

Dirty and no flow. buildup on shelf and channel.

Identification

Manhole ID	6A
Inspection Date & Time	08/03/2023 1:29pm
Rim Elevation	
Invert Depth	
Invert Elevation	99.00

Physical Parameters

Location	Other
Manhole Cover	Serviceable
Ring & Frame	Serviceable
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Corroded
Cone	Serviceable
Riser	Serviceable
Shelf	Dirty
Channel	Obstructed

Flow and Surcharge

Inflow Indications	Debris on sides/shelf
Surcharge Indications	
Clarity of Flow	Clear appearance
Flow	Steady
Flow Depth Compared to Adjacent Manholes	Same
FlowDepth_in	0.50

Pictures

Field Notes

Identification

Manhole ID	7
Inspection Date & Time	08/03/2023 3:15pm
Rim Elevation	
Invert Depth	
Invert Elevation	84.00

Physical Parameters

Flow and Surcharge

Inflow Indications	Debris on sides/shelf
Surcharge Indications	Grease on shelf
Clarity of Flow	Clear appearance
Flow	Sluggish
Flow Depth Compared to Adjacent Manholes	Lower
FlowDepth_in	1.00

Field Notes

Grease buildup on channel, higher flow upstream

Location	Easement
Manhole Cover	Corroded
Ring & Frame	Serviceable
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Corroded
Cone	Serviceable
Riser	Serviceable
Shelf	Dirty
Channel	Obstructed

Pictures

Identification

Flow and Surcharge

Field Notes

Manhole ID	70
Inspection Date & Time	07/17/2023 6:22pm
Rim Elevation	
Invert Depth	
Invert Elevation	120.00

Physical Parameters

Location	Roadway
Manhole Cover	Serviceable
Ring & Frame	Serviceable
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Corroded
Cone	Serviceable
Riser	Serviceable
Shelf	Dirty
Channel	Obstructed

Inflow Indications	Debris on sides/shelf
Surcharge Indications	Other
Clarity of Flow	Other
Flow	None
Flow Depth Compared to Adjacent Manholes	Lower
FlowDepth_in	0.00

No flow, pipes 90% blocked and full of dirt

Pictures

Identification

Manhole ID	73
Inspection Date & Time	07/17/2023 6:10pm
Rim Elevation	
Invert Depth	
Invert Elevation	123.00

Physical Parameters

Location	Roadway
Manhole Cover	Corroded
Ring & Frame	Corroded
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Corroded
Cone	Corroded
Riser	Corroded
Shelf	Dirty
Channel	Obstructed

Flow and Surcharge

Inflow Indications	Debris on sides/shelf
Surcharge Indications	Other
Clarity of Flow	Clear appearance
Flow	Sluggish
Flow Depth Compared to Adjacent Manholes	Same
FlowDepth_in	0.50

Pictures

Field Notes

Rim heavily corroded. 6" to 1' of dirt on shelf

Identification

Manhole ID	74
Inspection Date & Time	08/03/2023 7:05pm
Rim Elevation	
Invert Depth	
Invert Elevation	120.00

Physical Parameters

Location	Easement
Manhole Cover	Needs Raising
Ring & Frame	Needs Raising
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Corroded
Cone	Corroded
Riser	Corroded
Shelf	Dirty
Channel	Obstructed

Flow and Surcharge

Inflow Indications	Debris on sides/shelf
Surcharge Indications	Grease on shelf
Clarity of Flow	Turbid appearance
Flow	Sluggish
Flow Depth Compared to Adjacent Manholes	Lower
FlowDepth_in	2.00

Pictures

Field Notes

1.5 feet of dirt buildup on bottom, pipes 95% clogged

Identification

Manhole ID	75
Inspection Date & Time	07/17/2023 6:15pm
Rim Elevation	
Invert Depth	
Invert Elevation	102.00

Physical Parameters

Flow and Surcharge

Inflow Indications	
Surcharge Indications	
Clarity of Flow	Clear appearance
Flow	Sluggish
Flow Depth Compared to Adjacent Manholes	Same
FlowDepth_in	1.00

Field Notes

Blockage in channel.

Location	Other
Manhole Cover	Serviceable
Ring & Frame	Serviceable
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Serviceable
Cone	Serviceable
Riser	Serviceable
Shelf	Serviceable
Channel	Obstructed

Pictures

Identification

Flow and Surcharge

Field Notes

Manhole ID	7A
Inspection Date & Time	08/03/2023 1:05pm
Rim Elevation	
Invert Depth	
Invert Elevation	100.00

Inflow Indications	Debris on sides/shelf
Surcharge Indications	
Clarity of Flow	Clear appearance
Flow	Steady
Flow Depth Compared to Adjacent Manholes	Same
FlowDepth_in	1.00

Clear steady flow, I&I

Physical Parameters

Location	Other
Manhole Cover	Serviceable
Ring & Frame	Serviceable
Manhole Material	Concrete
Manhole Size	4 foot

Pictures

Condition

Vermin	
Steps	Corroded
Cone	Serviceable
Riser	Serviceable
Shelf	Dirty
Channel	Corroded

Identification

Manhole ID	8
Inspection Date & Time	08/03/2023 3:00pm
Rim Elevation	
Invert Depth	
Invert Elevation	130.00

Physical Parameters

Location	Easement
Manhole Cover	Serviceable
Ring & Frame	Serviceable
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Corroded
Cone	Serviceable
Riser	Serviceable
Shelf	Dirty
Channel	Obstructed

Flow and Surcharge

Inflow Indications	Debris on sides/shelf
Surcharge Indications	Grease on shelf
Clarity of Flow	Clear appearance
Flow	Pulsing
Flow Depth Compared to Adjacent Manholes	Higher
FlowDepth_in	2.00

Field Notes

Drop inlet. Lots of water - infiltration upstream

Pictures

Identification

Manhole ID	8A
Inspection Date & Time	08/03/2023 1:07pm
Rim Elevation	
Invert Depth	
Invert Elevation	76.00

Physical Parameters

Location	Other
Manhole Cover	Corroded
Ring & Frame	Serviceable
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Corroded
Cone	Serviceable
Riser	Serviceable
Shelf	Dirty
Channel	Corroded

Flow and Surcharge

Inflow Indications	Debris on sides/shelf
Surcharge Indications	
Clarity of Flow	Clear appearance
Flow	Steady
Flow Depth Compared to Adjacent Manholes	Same
FlowDepth_in	0.50

Pictures

Field Notes

Identification

Manhole ID	9
Inspection Date & Time	08/03/2023 3:30pm
Rim Elevation	
Invert Depth	
Invert Elevation	85.00

Physical Parameters

Flow and Surcharge

Inflow Indications	Debris on sides/shelf
Surcharge Indications	
Clarity of Flow	Clear appearance
Flow	Steady
Flow Depth Compared to Adjacent Manholes	Lower
FlowDepth_in	0.50

Field Notes

I filtration between 8 and 9. Steady flow no blockage

Location	Easement
Manhole Cover	Corroded
Ring & Frame	Serviceable
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Corroded
Cone	Serviceable
Riser	Serviceable
Shelf	Dirty
Channel	Corroded

Pictures

Identification

Flow and Surcharge

Field Notes

Manhole ID	B1
Inspection Date & Time	07/19/2023 2:50pm
Rim Elevation	
Invert Depth	
Invert Elevation	74.00

Inflow Indications	Debris on sides/shelf
Surcharge Indications	
Clarity of Flow	Turbid appearance
Flow	Sluggish
Flow Depth Compared to Adjacent Manholes	Same
FlowDepth_in	1.00

Large roots, heavy buildup on channel and shelf, pipes 25% blocked

Physical Parameters

Location	Roadway
Manhole Cover	Serviceable
Ring & Frame	Serviceable
Manhole Material	Concrete
Manhole Size	4 foot

Pictures

Condition

Vermin	
Steps	Corroded
Cone	Corroded
Riser	Leaking/bad joints
Shelf	Dirty
Channel	Obstructed

Identification

Manhole ID	B2
Inspection Date & Time	07/19/2023 2:28pm
Rim Elevation	
Invert Depth	
Invert Elevation	101.00

Physical Parameters

Location	Roadway
Manhole Cover	Serviceable
Ring & Frame	Serviceable
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	Roaches
Steps	Corroded
Cone	Serviceable
Riser	Serviceable
Shelf	Dirty
Channel	Obstructed

Flow and Surcharge

Inflow Indications	
Surcharge Indications	
Clarity of Flow	Turbid appearance
Flow	Sluggish
Flow Depth Compared to Adjacent Manholes	Same
FlowDepth_in	1.00

Field Notes

Debris buildup in channel

Pictures

Identification

Manhole ID	B3
Inspection Date & Time	07/19/2023 4:01pm
Rim Elevation	
Invert Depth	
Invert Elevation	

Physical Parameters

Location	Other
Manhole Cover	Serviceable
Ring & Frame	Serviceable
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Corroded
Cone	Serviceable
Riser	Serviceable
Shelf	Dirty
Channel	Obstructed

Flow and Surcharge

Inflow Indications	
Surcharge Indications	
Clarity of Flow	Turbid appearance
Flow	Sluggish
Flow Depth Compared to Adjacent Manholes	Higher
FlowDepth_in	1.00

Field Notes

Debris, pipes 10% blocked

Pictures

Identification

Manhole ID	B7
Inspection Date & Time	07/19/2023 12:55pm
Rim Elevation	
Invert Depth	
Invert Elevation	80.00

Physical Parameters

Flow and Surcharge

Inflow Indications	Debris on sides/shelf
Surcharge Indications	Grease on shelf
Clarity of Flow	Turbid appearance
Flow	Sluggish
Flow Depth Compared to Adjacent Manholes	Lower
FlowDepth_in	2.00

Field Notes

2” sludge build up on bottom, no flow, can’t see channel, needs new cover

Location	Roadway
Manhole Cover	Damaged
Ring & Frame	Corroded
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Corroded
Cone	Corroded
Riser	Corroded
Shelf	Dirty
Channel	Obstructed

Pictures

Identification

Flow and Surcharge

Field Notes

Manhole ID	B8
Inspection Date & Time	07/19/2023 1:02pm
Rim Elevation	
Invert Depth	
Invert Elevation	49.00

Physical Parameters

Location	Roadway
Manhole Cover	Serviceable
Ring & Frame	Serviceable
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	Roaches
Steps	Corroded
Cone	Serviceable
Riser	Corroded
Shelf	Dirty
Channel	Obstructed

Inflow Indications	Debris on sides/shelf
Surcharge Indications	Other
Clarity of Flow	Turbid appearance
Flow	Sluggish
Flow Depth Compared to Adjacent Manholes	Same
FlowDepth_in	0.50

Foot of buildup, plugged not flowing

Pictures

Identification

Manhole ID	C1
Inspection Date & Time	07/19/2023 2:20pm
Rim Elevation	
Invert Depth	
Invert Elevation	80.00

Physical Parameters

Location	Roadway
Manhole Cover	Serviceable
Ring & Frame	Serviceable
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Corroded
Cone	Serviceable
Riser	Corroded
Shelf	Dirty
Channel	Obstructed

Flow and Surcharge

Inflow Indications	
Surcharge Indications	
Clarity of Flow	Clear appearance
Flow	Sluggish
Flow Depth Compared to Adjacent Manholes	Higher
FlowDepth_in	1.00

Field Notes

2 inlets, dirty channel, corroded rim and riser

Pictures

Identification

Manhole ID	C2
Inspection Date & Time	07/19/2023 1:53pm
Rim Elevation	
Invert Depth	
Invert Elevation	70.00

Physical Parameters

Location	Roadway
Manhole Cover	Serviceable
Ring & Frame	Serviceable
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	Roaches
Steps	Corroded
Cone	Serviceable
Riser	Serviceable
Shelf	Dirty
Channel	Silt

Flow and Surcharge

Inflow Indications	
Surcharge Indications	
Clarity of Flow	Turbid appearance
Flow	Sluggish
Flow Depth Compared to Adjacent Manholes	Higher
FlowDepth_in	1.00

Field Notes

Outlet pipe 25% buildup, slowing flow

Pictures

Identification

Manhole ID	C3
Inspection Date & Time	07/19/2023 1:58pm
Rim Elevation	
Invert Depth	
Invert Elevation	72.00

Physical Parameters

Flow and Surcharge

Inflow Indications	Debris on sides/shelf
Surcharge Indications	
Clarity of Flow	Turbid appearance
Flow	Sluggish
Flow Depth Compared to Adjacent Manholes	Same
FlowDepth_in	1.00

Field Notes

Heavy buildup in the channel/shelf, inlet 50% blocked, root intrusions

Location	Unpaved Alley
Manhole Cover	Serviceable
Ring & Frame	Serviceable
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	Roaches
Steps	Corroded
Cone	Leaking/bad joints
Riser	Leaking/bad joints
Shelf	Dirty
Channel	Obstructed

Pictures

Identification

Flow and Surcharge

Field Notes

Manhole ID	D1
Inspection Date & Time	07/17/2023 2:22pm
Rim Elevation	
Invert Depth	
Invert Elevation	60.00

Physical Parameters

Location	Roadway
Manhole Cover	Serviceable
Ring & Frame	Missing Grout
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Serviceable
Cone	Serviceable
Riser	Serviceable
Shelf	Dirty
Channel	Obstructed

Inflow Indications	Debris on sides/shelf
Surcharge Indications	Other
Clarity of Flow	Other
Flow	None
Flow Depth Compared to Adjacent Manholes	Lower
FlowDepth_in	0.00

No flow, discharge pipe buried and full of dirt

Pictures

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Identification

Manhole ID	D-2
Inspection Date & Time	07/17/2023 2:30pm
Rim Elevation	
Invert Depth	
Invert Elevation	106.00

Physical Parameters

Location	Roadway
Manhole Cover	Serviceable
Ring & Frame	Corroded
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Serviceable
Cone	Serviceable
Riser	Serviceable
Shelf	Dirty
Channel	Obstructed

Flow and Surcharge

Inflow Indications	Debris on sides/shelf
Surcharge Indications	Other
Clarity of Flow	Other
Flow	None
Flow Depth Compared to Adjacent Manholes	Same
FlowDepth_in	0.00

Field Notes

No flow (dry), corroded rim, drop manhole

Pictures

Identification

Manhole ID	H2
Inspection Date & Time	07/17/2023 3:20pm
Rim Elevation	
Invert Depth	
Invert Elevation	58.00

Physical Parameters

Location	Roadway
Manhole Cover	Corroded
Ring & Frame	Serviceable
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Corroded
Cone	Corroded
Riser	Misaligned
Shelf	Dirty
Channel	Silt

Flow and Surcharge

Inflow Indications	Debris on sides/shelf
Surcharge Indications	
Clarity of Flow	Turbid appearance
Flow	Steady
Flow Depth Compared to Adjacent Manholes	Lower
FlowDepth_in	0.50

Field Notes

Foot of dirt on the shelf. Shallow. Lots of buildup.

Pictures

Identification

Manhole ID	H3
Inspection Date & Time	07/17/2023 3:36pm
Rim Elevation	
Invert Depth	
Invert Elevation	201.00

Physical Parameters

Flow and Surcharge

Inflow Indications	Debris on sides/shelf
Surcharge Indications	
Clarity of Flow	Turbid appearance
Flow	Sluggish
Flow Depth Compared to Adjacent Manholes	Same
FlowDepth_in	1.00

Field Notes

Foot of mud on shelf. Signs of H2S corrosion - too deep to measure

Location	Roadway
Manhole Cover	Serviceable
Ring & Frame	Serviceable
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Corroded
Cone	Corroded
Riser	Corroded
Shelf	Dirty
Channel	Obstructed

Pictures

Identification

Flow and Surcharge

Field Notes

Manhole ID	H5
Inspection Date & Time	07/17/2023 3:47pm
Rim Elevation	
Invert Depth	
Invert Elevation	165.00

Inflow Indications	
Surcharge Indications	
Clarity of Flow	Turbid appearance
Flow	Pulsing
Flow Depth Compared to Adjacent Manholes	Higher
FlowDepth_in	1.00

Physical Parameters

Location	Roadway
Manhole Cover	Serviceable
Ring & Frame	Serviceable
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Corroded
Cone	Serviceable
Riser	Serviceable
Shelf	Serviceable
Channel	Silt

Pictures

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Identification

Manhole ID	H7
Inspection Date & Time	07/17/2023 3:56pm
Rim Elevation	
Invert Depth	
Invert Elevation	64.00

Physical Parameters

Location	Roadway
Manhole Cover	
Ring & Frame	Serviceable
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Corroded
Cone	Corroded
Riser	Corroded
Shelf	Dirty
Channel	Obstructed

Flow and Surcharge

Inflow Indications	Debris on sides/shelf
Surcharge Indications	
Clarity of Flow	Turbid appearance
Flow	Sluggish
Flow Depth Compared to Adjacent Manholes	Same
FlowDepth_in	0.50

Field Notes

Foot of buildup on shelf. Corroded cover, ring and frame.

Pictures

Identification

Manhole ID	H8
Inspection Date & Time	07/17/2023 4:11pm
Rim Elevation	
Invert Depth	
Invert Elevation	70.00

Physical Parameters

Location	Roadway
Manhole Cover	Corroded
Ring & Frame	Corroded
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Corroded
Cone	Serviceable
Riser	Serviceable
Shelf	Dirty
Channel	Obstructed

Flow and Surcharge

Inflow Indications	Debris on sides/shelf
Surcharge Indications	
Clarity of Flow	Turbid appearance
Flow	Surcharging
Flow Depth Compared to Adjacent Manholes	Lower
FlowDepth_in	0.50

Field Notes

2" inlet. Corroded cover, ring, and frame.

Pictures

Identification

Manhole ID	H9
Inspection Date & Time	07/17/2023 4:18pm
Rim Elevation	
Invert Depth	
Invert Elevation	65.00

Physical Parameters

Flow and Surcharge

Inflow Indications	
Surcharge Indications	Other
Clarity of Flow	Turbid appearance
Flow	Surcharging
Flow Depth Compared to Adjacent Manholes	Same
FlowDepth_in	8.00

Field Notes

Standing water/no flow. debris in channel - downstream impeadences. Corroded rim and cover.

Location	Roadway
Manhole Cover	Corroded
Ring & Frame	Corroded
Manhole Material	
Manhole Size	4 foot

Condition

Vermin	
Steps	Corroded
Cone	Serviceable
Riser	
Shelf	Dirty
Channel	Obstructed

Pictures

Identification

Flow and Surcharge

Field Notes

Manhole ID	K1
Inspection Date & Time	07/19/2023 1:32pm
Rim Elevation	
Invert Depth	
Invert Elevation	88.00

Inflow Indications	
Surcharge Indications	
Clarity of Flow	Turbid appearance
Flow	Sluggish
Flow Depth Compared to Adjacent Manholes	Higher
FlowDepth_in	1.00

Dirt, buildup, outlet goes under the road

Physical Parameters

Location	Roadway
Manhole Cover	Serviceable
Ring & Frame	Serviceable
Manhole Material	Concrete
Manhole Size	4 foot

Pictures

Condition

Vermin	Roaches
Steps	Corroded
Cone	Corroded
Riser	Serviceable
Shelf	Dirty
Channel	Obstructed

Identification

Manhole ID	K2
Inspection Date & Time	07/19/2023 1:25pm
Rim Elevation	
Invert Depth	
Invert Elevation	63.00

Physical Parameters

Location	Roadway
Manhole Cover	Serviceable
Ring & Frame	Corroded
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Corroded
Cone	Serviceable
Riser	Serviceable
Shelf	Dirty
Channel	Obstructed

Flow and Surcharge

Inflow Indications	
Surcharge Indications	
Clarity of Flow	Clear appearance
Flow	Steady
Flow Depth Compared to Adjacent Manholes	Higher
FlowDepth_in	0.25

Field Notes

Dirty, low flow

Pictures

Identification

Manhole ID	K3
Inspection Date & Time	07/19/2023 1:38pm
Rim Elevation	
Invert Depth	
Invert Elevation	67.00

Physical Parameters

Location	Roadway
Manhole Cover	Corroded
Ring & Frame	Corroded
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	Roaches
Steps	Corroded
Cone	Corroded
Riser	Serviceable
Shelf	Dirty
Channel	Obstructed

Flow and Surcharge

Inflow Indications	
Surcharge Indications	
Clarity of Flow	Turbid appearance
Flow	Surcharging
Flow Depth Compared to Adjacent Manholes	Lower
FlowDepth_in	1.00

Field Notes

Pipe 50% obstructed, slow flow

Pictures

Identification

Manhole ID	M2
Inspection Date & Time	07/17/2023 7:04pm
Rim Elevation	
Invert Depth	
Invert Elevation	76.00

Physical Parameters

Flow and Surcharge

Inflow Indications	Debris on sides/shelf
Surcharge Indications	
Clarity of Flow	Other
Flow	None
Flow Depth Compared to Adjacent Manholes	Same
FlowDepth_in	0.00

Field Notes

No flow, no water

Location	Roadway
Manhole Cover	Serviceable
Ring & Frame	Serviceable
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Corroded
Cone	Serviceable
Riser	Serviceable
Shelf	Dirty
Channel	Obstructed

Pictures

Identification

Flow and Surcharge

Field Notes

Manhole ID	M6
Inspection Date & Time	07/17/2023 7:11pm
Rim Elevation	
Invert Depth	
Invert Elevation	84.00

Inflow Indications	Debris on sides/shelf
Surcharge Indications	
Clarity of Flow	Other
Flow	None
Flow Depth Compared to Adjacent Manholes	Same
FlowDepth_in	0.00

No water - manhole is dry and has dirt buildup.

Physical Parameters

Location	Other
Manhole Cover	Serviceable
Ring & Frame	Serviceable
Manhole Material	Concrete
Manhole Size	4 foot

Condition

Vermin	
Steps	Corroded
Cone	Serviceable
Riser	Serviceable
Shelf	Serviceable
Channel	Silt

Pictures

Appendix D

Wastewater Quality Reports

DBS&A
a Geo-Logic Company

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

September 16, 2021

Karen Nalezny

Village of Jemez Springs
PO Box 269
Jemez Springs, NM 87025
TEL: (575) 829-3988
FAX (575) 829-3339

RE: Compliance OrderNo.: 2108H28

Dear Karen Nalezny:

Hall Environmental Analysis Laboratory received 4 sample(s) on 8/31/2021 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Village of Jemez Springs
Client Sample ID: Influent
Project: Compliance
Collection Date: 8/31/2021 10:25:00 AM
Lab ID: 2108H28-001
Matrix: AQUEOUS
Received Date: 8/31/2021 1:16:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM5210B: BOD						Analyst: **SMS**	
Biochemical Oxygen Demand	59	2.0		mg/L	1	9/6/2021 1:43:00 PM	62318
SM 2540D: TSS						Analyst: **KS**	
Suspended Solids	60	20	D	mg/L	1	9/3/2021 5:28:00 PM	62351

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Village of Jemez Springs
Client Sample ID: Arsenic Boron Aluminum
Project: Compliance
Collection Date: 8/31/2021 10:25:00 AM
Lab ID: 2108H28-002
Matrix: AQUEOUS
Received Date: 8/31/2021 1:16:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 200.7: TOTAL METALS						Analyst: **ELS**	
Aluminum	ND	0.020		mg/L	1	9/7/2021 8:38:53 AM	62388
Boron	2.8	0.20		mg/L	5	9/7/2021 8:40:34 AM	62388
200.8 ICPMS METALS:TOTAL						Analyst: **ELS**	
Arsenic	0.044	0.0010	*	mg/L	1	9/9/2021 2:53:11 PM	62388

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Village of Jemez Springs
Client Sample ID: E coli (Numerical)
Project: Compliance
Collection Date: 8/31/2021 10:25:00 AM
Lab ID: 2108H28-003 **Matrix:** AQUEOUS **Received Date:** 8/31/2021 1:16:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **SMS**	
E. Coli	<1	1.000		MPN/100	1	9/1/2021 4:08:00 PM	62314

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Village of Jemez Springs
Client Sample ID: Effluent
Project: Compliance
Collection Date: 8/31/2021 10:35:00 AM
Lab ID: 2108H28-004
Matrix: AQUEOUS
Received Date: 8/31/2021 1:16:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM5210B: BOD						Analyst: **SMS**	
Biochemical Oxygen Demand	2.8	2.0		mg/L	1	9/6/2021 1:43:00 PM	62318
SM 2540D: TSS						Analyst: **KS**	
Suspended Solids	ND	4.0		mg/L	1	9/3/2021 5:28:00 PM	62351

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2108H28**

16-Sep-21

Client: Village of Jemez Springs

Project: Compliance

Sample ID: **MB-62388**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW**	Batch ID: **62388**	RunNo: **81074**
Prep Date: **9/3/2021**	Analysis Date: **9/7/2021**	SeqNo: **2861709** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Boron	ND	0.040								

Sample ID: **LLLCS-62388**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BatchQC**	Batch ID: **62388**	RunNo: **81074**
Prep Date:	Analysis Date: **9/7/2021**	SeqNo: **2861711** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020	0.01000	0	116	50	150			
Boron	ND	0.040	0.04000	0	96.3	50	150			

Sample ID: **LCS-62388**	SampType: **LCS**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW**	Batch ID: **62388**	RunNo: **81074**
Prep Date: **9/3/2021**	Analysis Date: **9/7/2021**	SeqNo: **2861713** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.53	0.040	0.5000	0	105	85	115			

Sample ID: **LCS-62388**	SampType: **LCS**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW**	Batch ID: **62388**	RunNo: **81074**
Prep Date: **9/3/2021**	Analysis Date: **9/7/2021**	SeqNo: **2861718** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.56	0.020	0.5000	0	113	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2108H28**

16-Sep-21

Client: Village of Jemez Springs

Project: Compliance

Sample ID: **MB-62388**	SampType: **MBLK**	TestCode: **200.8 ICPMS Metals:Total**
Client ID: **PBW**	Batch ID: **62388**	RunNo: **81170**
Prep Date: **9/3/2021**	Analysis Date: **9/9/2021**	SeqNo: **2865079** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								

Sample ID: **MSLLLCS-62388**	SampType: **LCSLL**	TestCode: **200.8 ICPMS Metals:Total**
Client ID: **BatchQC**	Batch ID: **62388**	RunNo: **81170**
Prep Date: **9/3/2021**	Analysis Date: **9/9/2021**	SeqNo: **2865081** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0011	0.0010	0.001000	0	106	50	150			

Sample ID: **MSLCS-62388**	SampType: **LCS**	TestCode: **200.8 ICPMS Metals:Total**
Client ID: **LCSW**	Batch ID: **62388**	RunNo: **81170**
Prep Date: **9/3/2021**	Analysis Date: **9/9/2021**	SeqNo: **2865185** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	101	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2108H28**

16-Sep-21

Client: Village of Jemez Springs

Project: Compliance

Sample ID: **MB-62318**	SampType: **MBLK**	TestCode: **SM5210B: BOD**							
Client ID: **PBW**	Batch ID: **62318**	RunNo: **81071**							
Prep Date: **9/1/2021**	Analysis Date: **9/6/2021**	SeqNo: **2861583**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	ND	2.0								

Sample ID: **LCS-62318**	SampType: **LCS**	TestCode: **SM5210B: BOD**							
Client ID: **LCSW**	Batch ID: **62318**	RunNo: **81071**							
Prep Date: **9/1/2021**	Analysis Date: **9/6/2021**	SeqNo: **2861584**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	193	2.0	198.0	0	97.5	84.6	115.4			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2108H28**

16-Sep-21

Client: Village of Jemez Springs

Project: Compliance

Sample ID: **MB-62314**	SampType: **MBLK**	TestCode: **SM 9223B Fecal Indicator: E. coli MPN**
Client ID: **PBW**	Batch ID: **62314**	RunNo: **80999**
Prep Date: **8/31/2021**	Analysis Date: **9/1/2021**	SeqNo: **2858749** Units: **MPN/100mL**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
E. Coli	<1	1.000								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2108H28**

16-Sep-21

Client: Village of Jemez Springs

Project: Compliance

Sample ID: **MB-62351**	SampType: **MBLK**	TestCode: **SM 2540D: TSS**							
Client ID: **PBW**	Batch ID: **62351**	RunNo: **81084**							
Prep Date: **9/2/2021**	Analysis Date: **9/3/2021**	SeqNo: **2862049**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Suspended Solids	ND	4.0								

Sample ID: **LCS-62351**	SampType: **LCS**	TestCode: **SM 2540D: TSS**							
Client ID: **LCSW**	Batch ID: **62351**	RunNo: **81084**							
Prep Date: **9/2/2021**	Analysis Date: **9/3/2021**	SeqNo: **2862050**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Suspended Solids	92	4.0	92.10	0	99.9	83.71	119.44			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

Sample Log-In Check List

Client Name: Village of Jemez Springs Work Order Number: 2108H28 RcptNo: 1

Received By: Tracy Casarrubias 8/31/2021 1:16:00 PM

Completed By: Sean Livingston 8/31/2021 2:26:50 PM Sean Livingston

Reviewed By: CMC 8/31/21 @ 1455

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Client

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes ☐ No ☐ NA ☑
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐ # of preserved bottles checked for pH: 1 (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐ Adjusted? NO
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐ Checked by: JR 8/31/21

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	2.4	Good				

Chain-of-Custody Record

Client: VILLAGE OF JEMEZ SPRINGS

Mailing Address: P.O. BOX 269
JEMEZ SPRINGS NM 87025

Phone #: 505 948-4311

email or Fax#: 575 829-3339

QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☒ Standard ☐ Rush

Project Name: COMPLIANCE

Project #:

Project Manager: KAREN NALEZNY

Sampler: Karen Nalezny

On Ice: ☒ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 2.6-0.2=2.4 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2108128	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	INFLUENT BOD	INFLUENT TSS	ARSENIC BORON ALUMINUM	ECOLI (NUMERICAL)	EFFLUENT BOD	EFFLUENT TSS
8/31/21	10:25	AQUA	INFLUENT BOD			001											X					
8/31/21	10:25	AQUA	INFLUENT TSS			↓												X				
8/31/21	10:35	AQUA	ARSENIC BORON ALUMINUM			002													X			
8/31/21	10:35	AQUA	ECOLI (NUMERICAL)			003														X		
8/31/21	10:35	AQUA	EFF. BOD			004															X	
8/31/21	10:35	AQUA	EFF. TSS			↓																X

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
8/31/21	13:05	Karen Nalezny		COD	8-31-21	13:16
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

October 19, 2021

Rose Fenton

Village of Jemez Springs
PO Box 269
Jemez Springs, NM 87025
TEL: (575) 829-3988
FAX: (575) 829-3339

RE: Compliance OrderNo.: 2109E38

Dear Rose Fenton:

Hall Environmental Analysis Laboratory received 6 sample(s) on 9/24/2021 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Village of Jemez Springs
Client Sample ID: T.Nitrogen & T. Phosphorous
Project: Compliance
Collection Date: 9/23/2021 4:32:00 PM
Lab ID: 2109E38-001 **Matrix:** AQUEOUS **Received Date:** 9/24/2021 12:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Nitrate+Nitrite as N	ND	1.0		mg/L	5	9/30/2021 1:49:37 AM	A81688
TOTAL NITROGEN						Analyst: **CJS**	
Nitrogen, Total	5.2	1.0		mg/L	1	10/13/2021 9:10:00 AM	R81991
EPA METHOD 365.1: TOTAL PHOSPHOROUS						Analyst: **CJS**	
Phosphorus, Total (As P)	0.50	0.050	D	mg/L	1	10/8/2021 12:22:00 PM	63134
SM 4500 NORG C: TKN						Analyst: **EKM**	
Nitrogen, Kjeldahl, Total	5.2	1.0		mg/L	1	10/12/2021 1:58:00 PM	63197

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Village of Jemez Springs
Client Sample ID: Arsenic Boron Aluminum
Project: Compliance
Collection Date: 9/23/2021 4:32:00 PM
Lab ID: 2109E38-002 **Matrix:** AQUEOUS **Received Date:** 9/24/2021 12:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 200.7: TOTAL METALS						Analyst: **ELS**	
Aluminum	ND	0.020		mg/L	1	9/28/2021 12:42:46 PM	62860
Boron	2.0	0.20		mg/L	5	9/28/2021 12:44:32 PM	62860
200.8 ICPMS METALS:TOTAL						Analyst: **bcv**	
Arsenic	0.027	0.0010	*	mg/L	1	9/30/2021 3:19:14 PM	62860

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Village of Jemez Springs
Client Sample ID: Effluent BOD
Project: Compliance
Collection Date: 9/23/2021 4:32:00 PM
Lab ID: 2109E38-003
Matrix: AQUEOUS
Received Date: 9/24/2021 12:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM5210B: BOD						Analyst: **AG**	
Biochemical Oxygen Demand	4.5	2.0		mg/L	1	9/29/2021 2:24:00 PM	62812

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Village of Jemez Springs
Client Sample ID: Effluent TSS
Project: Compliance
Collection Date: 9/23/2021 4:32:00 PM
Lab ID: 2109E38-004 **Matrix:** AQUEOUS **Received Date:** 9/24/2021 12:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM 2540D: TSS						Analyst: **KS**	
Suspended Solids	ND	4.0		mg/L	1	9/30/2021 12:02:00 PM	62909

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Village of Jemez Springs
Client Sample ID: Influent BOD
Project: Compliance
Collection Date: 9/23/2021 4:40:00 PM
Lab ID: 2109E38-005 **Matrix:** AQUEOUS **Received Date:** 9/24/2021 12:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM5210B: BOD						Analyst: **AG**	
Biochemical Oxygen Demand	250	2.0		mg/L	1	9/29/2021 2:24:00 PM	62812

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Village of Jemez Springs
Client Sample ID: Influent TSS
Project: Compliance
Collection Date: 9/23/2021 4:40:00 PM
Lab ID: 2109E38-006 **Matrix:** AQUEOUS **Received Date:** 9/24/2021 12:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM 2540D: TSS						Analyst: **KS**	
Suspended Solids	1500	40	D	mg/L	1	9/30/2021 12:02:00 PM	62909

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2109E38**

19-Oct-21

Client: Village of Jemez Springs

Project: Compliance

Sample ID: **MB-62860**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW**	Batch ID: **62860**	RunNo: **81624**
Prep Date: **9/27/2021**	Analysis Date: **9/28/2021**	SeqNo: **2884563** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Boron	ND	0.040								

Sample ID: **LLLCS-62860**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BatchQC**	Batch ID: **62860**	RunNo: **81624**
Prep Date: **9/27/2021**	Analysis Date: **9/28/2021**	SeqNo: **2884568** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020	0.01000	0	116	50	150			
Boron	0.041	0.040	0.04000	0	102	50	150			

Sample ID: **LCS-62860**	SampType: **LCS**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW**	Batch ID: **62860**	RunNo: **81624**
Prep Date: **9/27/2021**	Analysis Date: **9/28/2021**	SeqNo: **2884570** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.55	0.020	0.5000	0	110	85	115			
Boron	0.54	0.040	0.5000	0	108	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2109E38**
19-Oct-21

Client: Village of Jemez Springs
Project: Compliance

Sample ID: **MB-62860**	SampType: **MBLK**	TestCode: **200.8 ICPMS Metals:Total**
Client ID: **PBW**	Batch ID: **62860**	RunNo: **81644**
Prep Date: **9/27/2021**	Analysis Date: **9/28/2021**	SeqNo: **2885779** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								

Sample ID: **MSLLLCS-62860**	SampType: **LCSLL**	TestCode: **200.8 ICPMS Metals:Total**
Client ID: **BatchQC**	Batch ID: **62860**	RunNo: **81644**
Prep Date: **9/27/2021**	Analysis Date: **9/28/2021**	SeqNo: **2885800** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010	0.001000	0	97.8	50	150			

Sample ID: **MSLCS-62860**	SampType: **LCS**	TestCode: **200.8 ICPMS Metals:Total**
Client ID: **LCSW**	Batch ID: **62860**	RunNo: **81644**
Prep Date: **9/27/2021**	Analysis Date: **9/28/2021**	SeqNo: **2885801** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.026	0.0010	0.02500	0	103	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2109E38**
19-Oct-21

Client: Village of Jemez Springs
Project: Compliance

Sample ID: **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **A81688**	RunNo: **81688**
Prep Date:	Analysis Date: **9/29/2021**	SeqNo: **2887556** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	ND	0.20								

Sample ID: **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **A81688**	RunNo: **81688**
Prep Date:	Analysis Date: **9/29/2021**	SeqNo: **2887557** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.5	0.20	3.500	0	101	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2109E38**
19-Oct-21

Client: Village of Jemez Springs
Project: Compliance

Sample ID: **MB-62812**	SampType: **MBLK**	TestCode: **SM5210B: BOD**							
Client ID: **PBW**	Batch ID: **62812**	RunNo: **81681**							
Prep Date: **9/24/2021**	Analysis Date: **9/29/2021**	SeqNo: **2887083**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	ND	2.0								

Sample ID: **LCS-62812**	SampType: **LCS**	TestCode: **SM5210B: BOD**							
Client ID: **LCSW**	Batch ID: **62812**	RunNo: **81681**							
Prep Date: **9/24/2021**	Analysis Date: **9/29/2021**	SeqNo: **2887084**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	141	2.0	198.0	0	71.2	84.6	115.4			S

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2109E38**
19-Oct-21

Client: Village of Jemez Springs
Project: Compliance

Sample ID: **MB-63134**	SampType: **MBLK**	TestCode: **EPA Method 365.1: Total Phosphorous**
Client ID: **PBW**	Batch ID: **63134**	RunNo: **81940**
Prep Date: **10/7/2021**	Analysis Date: **10/8/2021**	SeqNo: **2900414** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Total (As P)	ND	0.010								

Sample ID: **LCS-63134**	SampType: **LCS**	TestCode: **EPA Method 365.1: Total Phosphorous**
Client ID: **LCSW**	Batch ID: **63134**	RunNo: **81940**
Prep Date: **10/7/2021**	Analysis Date: **10/8/2021**	SeqNo: **2900415** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Total (As P)	0.25	0.010	0.2500	0	100	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2109E38**
19-Oct-21

Client: Village of Jemez Springs
Project: Compliance

Sample ID: **MB-63197**	SampType: **MBLK**	TestCode: **SM 4500 Norg C: TKN**
Client ID: **PBW**	Batch ID: **63197**	RunNo: **81983**
Prep Date: **10/11/2021**	Analysis Date: **10/12/2021**	SeqNo: **2902631** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Kjeldahl, Total	ND	1.0								

Sample ID: **LCS-63197**	SampType: **LCS**	TestCode: **SM 4500 Norg C: TKN**
Client ID: **LCSW**	Batch ID: **63197**	RunNo: **81983**
Prep Date: **10/11/2021**	Analysis Date: **10/12/2021**	SeqNo: **2902632** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Kjeldahl, Total	9.9	1.0	10.00	0	99.4	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2109E38**
19-Oct-21

Client: Village of Jemez Springs
Project: Compliance

Sample ID: **MB-62909**	SampType: **MBLK**	TestCode: **SM 2540D: TSS**							
Client ID: **PBW**	Batch ID: **62909**	RunNo: **81702**							
Prep Date: **9/29/2021**	Analysis Date: **9/30/2021**	SeqNo: **2887993**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Suspended Solids	ND	4.0								

Sample ID: **LCS-62909**	SampType: **LCS**	TestCode: **SM 2540D: TSS**							
Client ID: **LCSW**	Batch ID: **62909**	RunNo: **81702**							
Prep Date: **9/29/2021**	Analysis Date: **9/30/2021**	SeqNo: **2887994**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Suspended Solids	95	4.0	92.10	0	103	83.71	119.44			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

Sample Log-In Check List

Client Name: **Village of Jemez Springs** Work Order Number: **2109E38** RcptNo: **1**

Received By: **Tracy Casarrubias** **9/24/2021 12:12:00 PM**

Completed By: **Isaiah Ortiz** **9/24/2021 12:45:26 PM** I-Ortiz

Reviewed By: TMC 9/24/21

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Client		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☐	No ☐	NA ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: 2 (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted? NO
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by: JR 9/24/21

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.3	Good	Not Present			

Chain-of-Custody Record

Client: VILLAGE OF JEMEZ SPRINGS

Mailing Address: PO Box 269 JEMEZ SPRINGS NM 87025

Phone #: 505-948-4311

email or Fax#: 575 829 3339

QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☒ Standard ☐ Rush

Project Name: Compliance

Project #:

Project Manager: KAREN NALEZNY

Sampler: Karen Maloney

On Ice: ☒ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 5.4-0.1=5.3 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2109E38	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	TNITROGEN T Phosphorus	ARSENIC Boron Aluminum	EFF. BOD	EFF TSS	INFLUENT BOD	INFLUENT TSS
9-23-21	16:32	Aqua	T.NITROGEN T PHOSPHORUS			001											X					
9-23-21	16:32	Aqua	ARSENIC BORON ALUMINUM			002												X				
9-23-21	16:32	Aqua	EFFLUENT BOD			003													X			
9-23-21	16:32	Aqua	EFFLUENT TSS			004														X		
9-23-21	16:40	Aqua	INFLUENT BOD			005															X	
9-23-21	16:40	Aqua	INFLUENT TSS			006																X

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
9-24-21	12:08	Karen Maloney		CDO	9-24-21	12:12
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

November 16, 2021

Rose Fenton

Village of Jemez Springs
PO Box 269
Jemez Springs, NM 87025
TEL: (575) 829-3988
FAX (575) 829-3339

RE: WWTP NM0028011 OrderNo.: 2110E21

Dear Rose Fenton:

Hall Environmental Analysis Laboratory received 3 sample(s) on 10/29/2021 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman

Laboratory Manager

4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Village of Jemez Springs
Client Sample ID: Final Effluent
Project: WWTP NM0028011
Collection Date: 10/28/2021 11:45:00 AM
Lab ID: 2110E21-001
Matrix: AQUEOUS
Received Date: 10/29/2021 3:20:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **LRN**	
Nitrate+Nitrite as N	1.3	1.0		mg/L	5	11/4/2021 12:49:06 AM	A82583
TOTAL NITROGEN						Analyst: **CJS**	
Nitrogen, Total	7.6	1.0		mg/L	1	11/10/2021 10:30:00 AM	R82725
EPA METHOD 365.1: TOTAL PHOSPHOROUS						Analyst: **CJS**	
Phosphorus, Total (As P)	0.33	0.050	D	mg/L	1	11/3/2021 12:17:00 PM	63707
SM 4500 NORG C: TKN						Analyst: **EKM**	
Nitrogen, Kjeldahl, Total	6.3	1.0		mg/L	1	11/8/2021 10:43:00 AM	63785

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Village of Jemez Springs
Client Sample ID: Final Effluent
Project: WWTP NM0028011
Collection Date: 10/29/2021 11:55:00 AM
Lab ID: 2110E21-002 **Matrix:** AQUEOUS **Received Date:** 10/29/2021 3:20:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **AKS**	
E. Coli	1011.2	1.000		MPN/100	1	10/30/2021 5:12:00 AM	63660
EPA METHOD 300.0: ANIONS						Analyst: **LRN**	
Nitrate+Nitrite as N	1.8	1.0		mg/L	5	11/4/2021 1:01:26 AM	A82583
TOTAL NITROGEN						Analyst: **CJS**	
Nitrogen, Total	7.0	1.0		mg/L	1	11/10/2021 10:30:00 AM	R82725
EPA METHOD 365.1: TOTAL PHOSPHOROUS						Analyst: **CJS**	
Phosphorus, Total (As P)	0.38	0.050	D	mg/L	1	11/3/2021 12:18:00 PM	63707
SM 4500 NORG C: TKN						Analyst: **EKM**	
Nitrogen, Kjeldahl, Total	5.2	1.0		mg/L	1	11/8/2021 10:43:00 AM	63785
EPA METHOD 200.7: TOTAL METALS						Analyst: **ELS**	
Aluminum	ND	0.020		mg/L	1	11/3/2021 10:07:54 AM	63713

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Village of Jemez Springs
Client Sample ID: Raw Influent
Project: WWTP NM0028011
Collection Date: 10/29/2021 1:36:00 PM
Lab ID: 2110E21-003 **Matrix:** AQUEOUS **Received Date:** 10/29/2021 3:20:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM5210B: BOD						Analyst: **dms**	
Biochemical Oxygen Demand	190	2.0	R	mg/L	1	11/3/2021 2:30:00 PM	63646
NOTES: R-RPD between dilutions is >30%.							
SM 2540D: TSS						Analyst: **KS**	
Suspended Solids	ND	4.0		mg/L	1	11/4/2021 9:28:00 AM	63730

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2110E21**

16-Nov-21

Client: Village of Jemez Springs

Project: WWTP NM0028011

Sample ID: **2110E21-002EMS**	SampType: **MS**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **Final Effluent**	Batch ID: **63713**	RunNo: **82573**
Prep Date: **11/2/2021**	Analysis Date: **11/3/2021**	SeqNo: **2930426** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.62	0.020	0.5000	0	124	70	130			

Sample ID: **2110E21-002EMSD**	SampType: **MSD**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **Final Effluent**	Batch ID: **63713**	RunNo: **82573**
Prep Date: **11/2/2021**	Analysis Date: **11/3/2021**	SeqNo: **2930427** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.61	0.020	0.5000	0	123	70	130	1.27	20	

Sample ID: **LLLCS-63713**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BatchQC**	Batch ID: **63713**	RunNo: **82573**
Prep Date: **11/2/2021**	Analysis Date: **11/3/2021**	SeqNo: **2930717** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020	0.01000	0	119	50	150			

Sample ID: **MB-63713**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW**	Batch ID: **63713**	RunNo: **82573**
Prep Date: **11/2/2021**	Analysis Date: **11/3/2021**	SeqNo: **2930721** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								

Sample ID: **LCS-63713**	SampType: **LCS**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW**	Batch ID: **63713**	RunNo: **82573**
Prep Date: **11/2/2021**	Analysis Date: **11/3/2021**	SeqNo: **2930735** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.57	0.020	0.5000	0	114	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2110E21**
16-Nov-21

Client: Village of Jemez Springs
Project: WWTP NM0028011

Sample ID: **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBW**	Batch ID: **A82583**	RunNo: **82583**							
Prep Date:	Analysis Date: **11/3/2021**	SeqNo: **2931207**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	ND	0.20								

Sample ID: **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSW**	Batch ID: **A82583**	RunNo: **82583**							
Prep Date:	Analysis Date: **11/3/2021**	SeqNo: **2931208**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.5	0.20	3.500	0	99.1	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2110E21**

16-Nov-21

Client: Village of Jemez Springs

Project: WWTP NM0028011

Sample ID: **MB-63646**	SampType: **MBLK**	TestCode: **SM5210B: BOD**							
Client ID: **PBW**	Batch ID: **63646**	RunNo: **82574**							
Prep Date: **10/29/2021**	Analysis Date: **11/3/2021**	SeqNo: **2930935**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	ND	2.0								

Sample ID: **LCS-63646**	SampType: **LCS**	TestCode: **SM5210B: BOD**							
Client ID: **LCSW**	Batch ID: **63646**	RunNo: **82574**							
Prep Date: **10/29/2021**	Analysis Date: **11/3/2021**	SeqNo: **2930936**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	164	2.0	198.0	0	82.8	84.6	115.4			S

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2110E21**

16-Nov-21

Client: Village of Jemez Springs

Project: WWTP NM0028011

Sample ID: **MB-63660**	SampType: **MBLK**	TestCode: **SM 9223B Fecal Indicator: E. coli MPN**
Client ID: **PBW**	Batch ID: **63660**	RunNo: **82470**
Prep Date: **10/29/2021**	Analysis Date: **10/30/2021**	SeqNo: **2926151** Units: **MPN/100mL**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
E. Coli	<1	1.000								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2110E21**

16-Nov-21

Client: Village of Jemez Springs

Project: WWTP NM0028011

Sample ID: **MB-63707**	SampType: **MBLK**	TestCode: **EPA Method 365.1: Total Phosphorous**
Client ID: **PBW**	Batch ID: **63707**	RunNo: **82556**
Prep Date: **11/2/2021**	Analysis Date: **11/3/2021**	SeqNo: **2929861** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Total (As P)	ND	0.010								

Sample ID: **LCS-63707**	SampType: **LCS**	TestCode: **EPA Method 365.1: Total Phosphorous**
Client ID: **LCSW**	Batch ID: **63707**	RunNo: **82556**
Prep Date: **11/2/2021**	Analysis Date: **11/3/2021**	SeqNo: **2929862** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Total (As P)	0.25	0.010	0.2500	0	98.3	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2110E21**

16-Nov-21

Client: Village of Jemez Springs

Project: WWTP NM0028011

Sample ID: **MB-63785**	SampType: **MBLK**	TestCode: **SM 4500 Norg C: TKN**
Client ID: **PBW**	Batch ID: **63785**	RunNo: **82664**
Prep Date: **11/5/2021**	Analysis Date: **11/8/2021**	SeqNo: **2934733** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Kjeldahl, Total	ND	1.0								

Sample ID: **LCS-63785**	SampType: **LCS**	TestCode: **SM 4500 Norg C: TKN**
Client ID: **LCSW**	Batch ID: **63785**	RunNo: **82664**
Prep Date: **11/5/2021**	Analysis Date: **11/8/2021**	SeqNo: **2934734** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Kjeldahl, Total	9.8	1.0	10.00	0	98.0	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2110E21**

16-Nov-21

Client: Village of Jemez Springs

Project: WWTP NM0028011

Sample ID: **MB-63730**	SampType: **MBLK**	TestCode: **SM 2540D: TSS**
Client ID: **PBW**	Batch ID: **63730**	RunNo: **82580**
Prep Date: **11/3/2021**	Analysis Date: **11/4/2021**	SeqNo: **2931003** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Suspended Solids	ND	4.0								

Sample ID: **LCS-63730**	SampType: **LCS**	TestCode: **SM 2540D: TSS**
Client ID: **LCSW**	Batch ID: **63730**	RunNo: **82580**
Prep Date: **11/3/2021**	Analysis Date: **11/4/2021**	SeqNo: **2931004** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Suspended Solids	100	4.0	92.10	0	109	83.71	119.44			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

Sample Log-In Check List

Client Name: **Village of Jemez Springs** Work Order Number: **2110E21** RcptNo: 1

Received By: **Cheyenne Cason** **10/29/2021 3:20:00 PM**

Completed By: **Tracy Casarrubias** **10/29/2021 3:55:39 PM**

Reviewed By: SC 10/29/21

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Client		

Log In

3. Was an attempt made to cool the samples?	Yes ☐	No ☑	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☐	No ☑	NA ☐
5. Sample(s) in proper container(s)?	Approved by client. Yes ☐	No ☑	
6. Sufficient sample volume for indicated test(s)?	Yes ☐	No ☑	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☐	No ☐	NA ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: 3 (<2 or >12 unless noted)

Adjusted? yes

Checked by: JR 10/29/21

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☑ No ☐ NA ☐

Person Notified:	Nicole Mangin	Date:	10/29/2021
By Whom:	Isaiah Ortiz	Via:	☐ eMail ☑ Phone ☐ Fax ☐ In Person
Regarding:	Missing volume fo requested analysis.		
Client Instructions:	Analyze what is provided.		

16. Additional remarks:

Did not receive unpreserved sample for sample 002B and 002C. Also didn't receive filtered 125 HNO3 for dissoved metals analysis. Sampler notified. - JR 10/29/21

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	8.2	Good	Not Present			

Chain-of-Custody Record

Client: Village of Jemez Springs

Mailing Address:

Phone #: 505-610-0708

email or Fax#:

QA/QC Package:
☐ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☒ Standard ☐ Rush

Project Name: WWTP-NM0028011

Project #: Final Effluent and Raw Influent

Project Manager: Rose Fenton

Sampler: RF MM

On Ice: ☒ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 8.3 -0.1 = 8.2 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2110E21	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	Total Nitrogen/Total Phosphorus	BOD, TSS, E.Coli	Dissolved Arsenic	Dissolved Boron	Aluminum Total Recoverable	BOD, TSS
10/28/21	11:45am	AQ	Final Effluent	2P	multiple	001											X					
10/29/21	11:55	AQ	Final Effluent	4P	multiple	002											X	X	X	X	X	
10/29/21	13:36	AQ	Raw Influent	1P	unpres	003											X					X

Analysis Request

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
10/29/21	15:15			COC	10/29/21	1520
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

December 09, 2021

Rose Fenton

Village of Jemez Springs
PO Box 269
Jemez Springs, NM 87025
TEL: (575) 829-3988
FAX: (575) 829-3339

RE: Village of Jemez Springs OrderNo.: 2111B40

Dear Rose Fenton:

Hall Environmental Analysis Laboratory received 1 sample(s) on 11/23/2021 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Village of Jemez Springs
Client Sample ID: Final Effluent
Project: Village of Jemez Springs
Collection Date: 11/22/2021 8:15:00 AM
Lab ID: 2111B40-001 **Matrix:** AQUEOUS **Received Date:** 11/23/2021 9:54:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst: **bcv**	
Arsenic	0.13	0.010	*	mg/L	10	12/1/2021 3:06:31 PM	B83225
EPA METHOD 300.0: ANIONS						Analyst: **LRN**	
Nitrogen, Nitrite (As N)	ND	0.50		mg/L	5	11/23/2021 4:06:39 PM	R83121
Nitrogen, Nitrate (As N)	ND	0.50		mg/L	5	11/23/2021 4:06:39 PM	R83121
TOTAL NITROGEN						Analyst: **CJS**	
Nitrogen, Total	19	1.0		mg/L	1	12/6/2021 3:47:00 PM	R84315
EPA METHOD 365.1: TOTAL PHOSPHOROUS						Analyst: **CJS**	
Phosphorus, Total (As P)	0.92	0.050	D	mg/L	1	12/1/2021 12:14:00 PM	64217
SM 4500 NORG C: TKN						Analyst: **EKM**	
Nitrogen, Kjeldahl, Total	19	1.0		mg/L	1	12/2/2021 1:49:00 PM	64240
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **ELS**	
Boron	2.0	0.20		mg/L	5	11/29/2021 12:43:46 PM	B83138

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2111B40**

09-Dec-21

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B83138**	RunNo: **83138**
Prep Date:	Analysis Date: **11/29/2021**	SeqNo: **2953587** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	ND	0.040								

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B83138**	RunNo: **83138**
Prep Date:	Analysis Date: **11/29/2021**	SeqNo: **2953588** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.041	0.040	0.04000	0	103	50	150			

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B83138**	RunNo: **83138**
Prep Date:	Analysis Date: **11/29/2021**	SeqNo: **2953589** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.51	0.040	0.5000	0	102	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2111B40**

09-Dec-21

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B83225**	RunNo: **83225**
Prep Date:	Analysis Date: **12/1/2021**	SeqNo: **2956962** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								

Sample ID: **LCSLL**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B83225**	RunNo: **83225**
Prep Date:	Analysis Date: **12/1/2021**	SeqNo: **2956963** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010	0.001000	0	95.2	50	150			

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B83225**	RunNo: **83225**
Prep Date:	Analysis Date: **12/1/2021**	SeqNo: **2956964** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	102	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2111B40**

09-Dec-21

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R83121**	RunNo: **83121**
Prep Date:	Analysis Date: **11/23/2021**	SeqNo: **2952774** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Nitrite (As N)	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								

Sample ID: **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R83121**	RunNo: **83121**
Prep Date:	Analysis Date: **11/23/2021**	SeqNo: **2952775** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Nitrite (As N)	0.98	0.10	1.000	0	98.2	90	110			
Nitrogen, Nitrate (As N)	2.6	0.10	2.500	0	102	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2111B40**

09-Dec-21

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-64217**	SampType: **MBLK**	TestCode: **EPA Method 365.1: Total Phosphorous**
Client ID: **PBW**	Batch ID: **64217**	RunNo: **83210**
Prep Date: **11/30/2021**	Analysis Date: **12/1/2021**	SeqNo: **2956441** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Total (As P)	ND	0.010								

Sample ID: **LCS-64217**	SampType: **LCS**	TestCode: **EPA Method 365.1: Total Phosphorous**
Client ID: **LCSW**	Batch ID: **64217**	RunNo: **83210**
Prep Date: **11/30/2021**	Analysis Date: **12/1/2021**	SeqNo: **2956442** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Total (As P)	0.24	0.010	0.2500	0	96.3	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2111B40**

09-Dec-21

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-64240**	SampType: **MBLK**	TestCode: **SM 4500 Norg C: TKN**
Client ID: **PBW**	Batch ID: **64240**	RunNo: **83247**
Prep Date: **12/1/2021**	Analysis Date: **12/2/2021**	SeqNo: **2957823** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Kjeldahl, Total	ND	1.0								

Sample ID: **LCS-64240**	SampType: **LCS**	TestCode: **SM 4500 Norg C: TKN**
Client ID: **LCSW**	Batch ID: **64240**	RunNo: **83247**
Prep Date: **12/1/2021**	Analysis Date: **12/2/2021**	SeqNo: **2957824** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Kjeldahl, Total	9.7	1.0	10.00	0	96.6	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

Sample Log-In Check List

Client Name: Village of Jemez Springs Work Order Number: 2111B40 RcptNo: 1

Received By: **Cheyenne Cason** 11/23/2021 9:54:00 AM

Completed By: **Tracy Casarrubias** 11/23/2021 11:10:19 AM

Reviewed By: SCC 11/23/21

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Client

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☐ No ☑ NA ☐
   Samples not frozen.
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes ☐ No ☐ NA ☑
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: 2 (<2 or >12 unless noted)
Adjusted? NO
Checked by: MPG 11/23/21

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	-0.8	Good	Not Present			

Chain-of-Custody Record

Client: Village of Jemez Springs

Mailing Address: P.O. Box 269
Jemez Springs, NM 87025

Phone #: 505-610-0708

email or Fax#: jswm@jemezsprings-nm.gov

QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other_____

☐ EDD (Type) _____

Turn-Around Time:
☒ Standard ☐ Rush_____

Project Name:
Village of Jemez Springs

Project #:
WWTP

Project Manager:
Rose Fenton

Sampler: ROSE FENTON

On Ice: ☒ Yes ☐ No

# of Coolers: 1

Cooler Temp (including CF): -0.8-0 = -0.8

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2111B40
11/22/21	0815	AQ	Final Effluent	1-P	H2SO4	-101
11/22/21	0815	AQ	Final Effluent	1-P	none	
11/22/21	0815	AQ	Final Effluent	1-P	HNO3	
11/22/21	0815	AQ	Final Effluent	1-P	HNO3	

Analysis Request

BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	total Phosphorous	total total Nitrogen	Dissolved Arsenic	Dissolved Boron		
										■					
											■				
												■			
													■		

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
11/23	0954	R Fenton	Cue CDU		11/23/21	0954
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time

Remarks:
Sample not frozen cue 11/23/21

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

January 18, 2022

Rose Fenton

Village of Jemez Springs
PO Box 269
Jemez Springs, NM 87025
TEL: (575) 829-3988
FAX: (575) 829-3339

RE: Village of Jemez Springs OrderNo.: 2112E14

Dear Rose Fenton:

Hall Environmental Analysis Laboratory received 1 sample(s) on 12/28/2021 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **2112E14**
Date Reported: **1/18/2022**

CLIENT: Village of Jemez Springs
Client Sample ID: Final Effluent
Project: Village of Jemez Springs
Collection Date: 12/28/2021 12:02:00 PM
Lab ID: 2112E14-001 **Matrix:** AQUEOUS **Received Date:** 12/28/2021 2:06:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	12/29/2021 10:40:15 AM	R84860
Nitrogen, Nitrate (As N)	0.11	0.10		mg/L	1	12/29/2021 10:40:15 AM	R84860
TOTAL NITROGEN						Analyst: **MRA**	
Nitrogen, Total	11	1.0		mg/L	1	1/14/2022	R85180
EPA METHOD 365.1: TOTAL PHOSPHOROUS						Analyst: **CJS**	
Phosphorus, Total (As P)	2.2	0.050	D	mg/L	1	1/9/2022 6:08:00 PM	64891
SM 4500 NORG C: TKN						Analyst: **CJS**	
Nitrogen, Kjeldahl, Total	11	1.0		mg/L	1	1/10/2022 3:14:00 PM	64927
EPA METHOD 200.7: METALS						Analyst: **ELS**	
Aluminum	ND	0.020		mg/L	1	1/4/2022 10:14:15 AM	64811

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2112E14**

18-Jan-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-64811**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW**	Batch ID: **64811**	RunNo: **84934**
Prep Date: **1/3/2022**	Analysis Date: **1/4/2022**	SeqNo: **2987831** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								

Sample ID: **LLLCS-64811**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **64811**	RunNo: **84934**
Prep Date: **1/3/2022**	Analysis Date: **1/4/2022**	SeqNo: **2987833** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020	0.01000	0	116	50	150			

Sample ID: **LCS-64811**	SampType: **LCS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW**	Batch ID: **64811**	RunNo: **84934**
Prep Date: **1/3/2022**	Analysis Date: **1/4/2022**	SeqNo: **2987835** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.56	0.020	0.5000	0	113	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2112E14**

18-Jan-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R84860**	RunNo: **84860**
Prep Date:	Analysis Date: **12/29/2021**	SeqNo: **2985142** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Nitrite (As N)	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								

Sample ID: **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R84860**	RunNo: **84860**
Prep Date:	Analysis Date: **12/29/2021**	SeqNo: **2985143** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Nitrite (As N)	0.99	0.10	1.000	0	99.3	90	110			
Nitrogen, Nitrate (As N)	2.6	0.10	2.500	0	105	90	110			

Sample ID: **2112E14-001AMS**	SampType: **ms**	TestCode: **EPA Method 300.0: Anions**
Client ID: **Final Effluent**	Batch ID: **R84860**	RunNo: **84860**
Prep Date:	Analysis Date: **12/29/2021**	SeqNo: **2985145** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0.1064	94.1	93.5	110			

Sample ID: **2112E14-001AMSD**	SampType: **msd**	TestCode: **EPA Method 300.0: Anions**
Client ID: **Final Effluent**	Batch ID: **R84860**	RunNo: **84860**
Prep Date:	Analysis Date: **12/29/2021**	SeqNo: **2985146** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0.1064	97.6	93.5	110	4.42	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2112E14**

18-Jan-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-64891**	SampType: **MBLK**	TestCode: **EPA Method 365.1: Total Phosphorous**
Client ID: **PBW**	Batch ID: **64891**	RunNo: **85037**
Prep Date: **1/6/2022**	Analysis Date: **1/9/2022**	SeqNo: **2991892** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Total (As P)	ND	0.010								

Sample ID: **LCS-64891**	SampType: **LCS**	TestCode: **EPA Method 365.1: Total Phosphorous**
Client ID: **LCSW**	Batch ID: **64891**	RunNo: **85037**
Prep Date: **1/6/2022**	Analysis Date: **1/9/2022**	SeqNo: **2991893** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Total (As P)	0.23	0.010	0.2500	0	93.4	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2112E14**

18-Jan-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-64927**	SampType: **MBLK**	TestCode: **SM 4500 Norg C: TKN**
Client ID: **PBW**	Batch ID: **64927**	RunNo: **85055**
Prep Date: **1/9/2022**	Analysis Date: **1/10/2022**	SeqNo: **2992571** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Kjeldahl, Total	ND	1.0								

Sample ID: **LCS-64927**	SampType: **LCS**	TestCode: **SM 4500 Norg C: TKN**
Client ID: **LCSW**	Batch ID: **64927**	RunNo: **85055**
Prep Date: **1/9/2022**	Analysis Date: **1/10/2022**	SeqNo: **2992572** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Kjeldahl, Total	10	1.0	10.00	0	102	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

Sample Log-In Check List

Client Name: **Village of Jemez Springs** Work Order Number: **2112E14** RcptNo: **1**

Received By: **Cheyenne Cason** **12/28/2021 2:06:00 PM** Chel

Completed By: **Cheyenne Cason** **12/28/2021 2:16:23 PM** Chel

Reviewed By: TMC 12/28/21 15:05

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Client

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☐ No ☑ NA ☐
   Samples were collected the same day and chilled.
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes ☐ No ☐ NA ☑
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐ # of preserved bottles checked for pH: 2 (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐ Adjusted? NO
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐ Checked by: 12.28.21

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	7.8	Good	Not Present			

Chain-of-Custody Record

Client: Village of Jemez Springs

Mailing Address: P.O. Box 269
Jemez Springs, NM 87025

Phone #: 505-610-0708

email or Fax#: jswm@jemezsprings-nm.gov

QA/QC Package:
■ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
■ Standard ☐ Rush

Project Name: Village of Jemez Springs

Project #: WWTP

Project Manager: Rose Fenton

Sampler: Rose Fenton

On Ice: ☒ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 7.9 -0.2 -0.1 = 7.8

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2112E14	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	total nitrogen	total phosphorous	aluminum
12-28-21	12:02pm	AQ	Final effluent	1-P	None	001											■		
12-28-31	12:02pm08.05am	AQ	Final effluent	1-P		1												■	
12-28-21	12:02pm08.05am	AQ	Final effluent	1-P		1													■

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
12-28	1406	R Fenton	Cnc	CDO	12/28/21	1406
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time

Remarks:
Please email reports to:
jswm@jemezsprings-nm.gov
nmangin2021@gmail.com

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

March 11, 2022

Rose Fenton
Village of Jemez Springs
PO Box 269
Jemez Springs, NM 87025
TEL: (575) 829-3988
FAX (575) 829-3339

RE: Village of Jemez Springs OrderNo.: 2202B91

Dear Rose Fenton:

Hall Environmental Analysis Laboratory received 3 sample(s) on 2/24/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Village of Jemez Springs
Client Sample ID: Final Effluent
Project: Village of Jemez Springs
Collection Date: 2/23/2022 4:08:00 PM
Lab ID: 2202B91-001 **Matrix:** AQUEOUS **Received Date:** 2/24/2022 3:24:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst: **bcv**	
Arsenic	0.027	0.0050	*	mg/L	5	3/3/2022 2:59:17 PM	B86239
SM5210B: BOD						Analyst: **dms**	
Biochemical Oxygen Demand	7.6	2.0		mg/L	1	3/2/2022 1:59:00 PM	65798
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Nitrate+Nitrite as N	4.2	1.0		mg/L	5	3/8/2022 5:31:25 AM	A86296
TOTAL NITROGEN						Analyst: **CJS**	
Nitrogen, Total	20	1.0		mg/L	1	3/9/2022 9:40:00 AM	R86337
EPA METHOD 365.1: TOTAL PHOSPHOROUS						Analyst: **CJS**	
Phosphorus, Total (As P)	0.54	0.25	D	mg/L	1	3/1/2022 3:35:00 PM	65869
SM 4500 NORG C: TKN						Analyst: **EKM**	
Nitrogen, Kjeldahl, Total	16	1.0		mg/L	1	3/2/2022 10:33:00 AM	65856
SM 2540D: TSS						Analyst: **KS**	
Suspended Solids	7.0	4.0		mg/L	1	3/3/2022 12:04:00 PM	65896
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **ELS**	
Boron	2.0	0.20		mg/L	5	3/3/2022 12:15:01 PM	C86233
EPA METHOD 200.7: TOTAL METALS						Analyst: **ELS**	
Aluminum	ND	0.020		mg/L	1	3/2/2022 5:22:25 PM	65862

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Village of Jemez Springs
Client Sample ID: Raw Influent
Project: Village of Jemez Springs
Collection Date: 2/23/2022 3:40:00 PM
Lab ID: 2202B91-002 **Matrix:** AQUEOUS **Received Date:** 2/24/2022 3:24:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM5210B: BOD						Analyst: **dms**	
Biochemical Oxygen Demand	107	2.0		mg/L	1	3/2/2022 1:59:00 PM	65798
SM 2540D: TSS						Analyst: **KS**	
Suspended Solids	660	20	D	mg/L	1	3/3/2022 12:04:00 PM	65896

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Village of Jemez Springs
Client Sample ID: Final Effluent
Project: Village of Jemez Springs
Collection Date: 2/24/2022 11:21:00 AM
Lab ID: 2202B91-003 **Matrix:** AQUEOUS **Received Date:** 2/24/2022 3:24:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **SMS**	
E. Coli	238.2	1.000		MPN/100	1	2/25/2022 4:24:00 PM	65791

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2202B91**

11-Mar-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C86233**	RunNo: **86233**
Prep Date:	Analysis Date: **3/3/2022**	SeqNo: **3039404** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	ND	0.040								

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C86233**	RunNo: **86233**
Prep Date:	Analysis Date: **3/3/2022**	SeqNo: **3039410** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.041	0.040	0.04000	0	103	50	150			

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C86233**	RunNo: **86233**
Prep Date:	Analysis Date: **3/3/2022**	SeqNo: **3039412** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.53	0.040	0.5000	0	105	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2202B91**

11-Mar-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-65862**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW**	Batch ID: **65862**	RunNo: **86204**
Prep Date: **3/1/2022**	Analysis Date: **3/2/2022**	SeqNo: **3038168** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								

Sample ID: **LLLCS-65862**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BatchQC**	Batch ID: **65862**	RunNo: **86204**
Prep Date: **3/1/2022**	Analysis Date: **3/2/2022**	SeqNo: **3038170** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020	0.01000	0	126	50	150			

Sample ID: **LCS-65862**	SampType: **LCS**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW**	Batch ID: **65862**	RunNo: **86204**
Prep Date: **3/1/2022**	Analysis Date: **3/2/2022**	SeqNo: **3038172** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.56	0.020	0.5000	0	113	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2202B91**

11-Mar-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B86239**	RunNo: **86239**
Prep Date:	Analysis Date: **3/3/2022**	SeqNo: **3039934** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								

Sample ID: **LCSLL**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B86239**	RunNo: **86239**
Prep Date:	Analysis Date: **3/3/2022**	SeqNo: **3039936** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010	0.001000	0	93.7	50	150			

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B86239**	RunNo: **86239**
Prep Date:	Analysis Date: **3/3/2022**	SeqNo: **3039938** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	95.4	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2202B91**

11-Mar-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **A86296**	RunNo: **86296**
Prep Date:	Analysis Date: **3/7/2022**	SeqNo: **3042906** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	ND	0.20								

Sample ID: **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **A86296**	RunNo: **86296**
Prep Date:	Analysis Date: **3/7/2022**	SeqNo: **3042907** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.6	0.20	3.500	0	104	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2202B91**

11-Mar-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-65798**	SampType: **MBLK**	TestCode: **SM5210B: BOD**
Client ID: **PBW**	Batch ID: **65798**	RunNo: **86238**
Prep Date: **2/25/2022**	Analysis Date: **3/2/2022**	SeqNo: **3039712** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	ND	2.0								

Sample ID: **LCS-65798**	SampType: **LCS**	TestCode: **SM5210B: BOD**
Client ID: **LCSW**	Batch ID: **65798**	RunNo: **86238**
Prep Date: **2/25/2022**	Analysis Date: **3/2/2022**	SeqNo: **3039713** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	176	2.0	198.0	0	88.9	84.6	115.4			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2202B91**

11-Mar-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-65791**	SampType: **MBLK**	TestCode: **SM 9223B Fecal Indicator: E. coli MPN**
Client ID: **PBW**	Batch ID: **65791**	RunNo: **86115**
Prep Date: **2/24/2022**	Analysis Date: **2/25/2022**	SeqNo: **3034267** Units: **MPN/100mL**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
E. Coli	<1	1.000								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2202B91**
11-Mar-22

Client: Village of Jemez Springs
Project: Village of Jemez Springs

Sample ID: **MB-65869**	SampType: **MBLK**	TestCode: **EPA Method 365.1: Total Phosphorous**
Client ID: **PBW**	Batch ID: **65869**	RunNo: **86166**
Prep Date: **3/1/2022**	Analysis Date: **3/1/2022**	SeqNo: **3036785** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Total (As P)	ND	0.050								

Sample ID: **LCS-65869**	SampType: **LCS**	TestCode: **EPA Method 365.1: Total Phosphorous**
Client ID: **LCSW**	Batch ID: **65869**	RunNo: **86166**
Prep Date: **3/1/2022**	Analysis Date: **3/1/2022**	SeqNo: **3036786** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Total (As P)	0.26	0.050	0.2500	0	102	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2202B91**

11-Mar-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-65856**	SampType: **MBLK**	TestCode: **SM 4500 Norg C: TKN**
Client ID: **PBW**	Batch ID: **65856**	RunNo: **86189**
Prep Date: **3/1/2022**	Analysis Date: **3/2/2022**	SeqNo: **3037862** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Kjeldahl, Total	ND	1.0								

Sample ID: **LCS-65856**	SampType: **LCS**	TestCode: **SM 4500 Norg C: TKN**
Client ID: **LCSW**	Batch ID: **65856**	RunNo: **86189**
Prep Date: **3/1/2022**	Analysis Date: **3/2/2022**	SeqNo: **3037863** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Kjeldahl, Total	10	1.0	10.00	0	105	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2202B91**

11-Mar-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-65896**	SampType: **MBLK**	TestCode: **SM 2540D: TSS**
Client ID: **PBW**	Batch ID: **65896**	RunNo: **86222**
Prep Date: **3/2/2022**	Analysis Date: **3/3/2022**	SeqNo: **3039144** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Suspended Solids	ND	4.0								

Sample ID: **LCS-65896**	SampType: **LCS**	TestCode: **SM 2540D: TSS**
Client ID: **LCSW**	Batch ID: **65896**	RunNo: **86222**
Prep Date: **3/2/2022**	Analysis Date: **3/3/2022**	SeqNo: **3039145** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Suspended Solids	100	4.0	92.40	0	110	83.44	119.05			

Sample ID: **2202B91-001ADUP**	SampType: **DUP**	TestCode: **SM 2540D: TSS**
Client ID: **Final Effluent**	Batch ID: **65896**	RunNo: **86222**
Prep Date: **3/2/2022**	Analysis Date: **3/3/2022**	SeqNo: **3039147** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Suspended Solids	5.0	4.0						33.3	10	R

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

Sample Log-In Check List

Client Name: Village of Jemez Springs Work Order Number: 2202B91 RcptNo: 1

Received By: Joseph Alderette 2/24/2022 3:24:00 PM

Completed By: Isaiah Ortiz 2/24/2022 3:41:39 PM

Reviewed By: 2-24-22 @ 16:41

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Client		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☐	No ☐	NA ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: 3 (<2 or >12 unless noted)
Adjusted? NO
Checked by: JN 2/24/22

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	3.0	Good	Not Present			

Chain-of-Custody Record

Client: VILLAGE OF JEMEZ SPRINGS

Mailing Address: PO BOX 269
JEMEZ SPRINGS, NM 87025

Phone #: 575-520-8246

email or Fax#: JSWM@JEMEZSPRINGS-NM.GOV

QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☒ Standard ☐ Rush

Project Name: VILLAGE OF JEMEZ SPRINGS

Project #: WWTP

Project Manager: ROSE FENTON

Sampler: ROSE FENTON

On Ice: ☑ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 3.1 - 0.1 = 3.0 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

2022 Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2202B91
2-23	1608	AQ	FINAL EFFLUENT	2-P	NONE	001
2-23	1608	AQ	FINAL EFFLUENT	1-P	H_2SO_4	
2-23	1608	AQ	FINAL EFFLUENT	1-P	FILTERED HNO3	
2-23	1608	AQ	FINAL EFFLUENT	1-P	NO FILTER HNO3	
2-23	1540	AQ	RAW INFLUENT	2-P	NONE	002
2-23	XXXX	AQ	FINAL EFFLUENT	1-P	$Na_2S_2O_3$	
2-24	1121	AQ	FINAL EFFLUENT	1-P	$Na_2S_2O_3$	003

Analysis Request

BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	BOD	TSS	TOTAL PHOSPHORUS	DISSOLVED ARSENIC	DISSOLVED BORON	TOTAL RECOVERABLE ALUMINUM	ECOLI
										X	X					
												X				
													X			
															X	
										X	X					
																X
																X

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
2/24/22	15:23			CDO	2-24-22	15:24
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

September 14, 2022

Rose Fenton

Village of Jemez Springs
PO Box 269
Jemez Springs, NM 87025
TEL: (575) 829-3988
FAX: (575) 829-3339

RE: Village Of Jemez Springs OrderNo.: 2208B85

Dear Rose Fenton:

Hall Environmental Analysis Laboratory received 2 sample(s) on 8/18/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Village of Jemez Springs
Client Sample ID: Final Effluent
Project: Village Of Jemez Springs
Collection Date: 8/18/2022 10:17:00 AM
Lab ID: 2208B85-001 **Matrix:** AQUEOUS **Received Date:** 8/18/2022 3:39:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst: **bcv**	
Arsenic	0.023	0.0050	*	mg/L	5	9/2/2022 12:00:26 PM	B90806
SM5210B: BOD						Analyst: **dms**	
Biochemical Oxygen Demand	2.1	2.0		mg/L	1	8/24/2022 2:33:00 PM	69617
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **SMS**	
E. Coli	<1	1.000		MPN/100	1	8/19/2022 4:59:00 PM	69618
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Nitrate+Nitrite as N	8.9	1.0		mg/L	5	8/31/2022 5:48:56 PM	A90725
TOTAL NITROGEN						Analyst: **CJS**	
Nitrogen, Total	11	1.0		mg/L	1	9/7/2022 10:30:00 AM	R90836
EPA METHOD 365.1: TOTAL PHOSPHOROUS						Analyst: **JMT**	
Phosphorus, Total (As P)	0.54	0.25	D	mg/L	1	8/26/2022 9:25:00 AM	69771
SM 4500 NORG C: TKN						Analyst: **EKM**	
Nitrogen, Kjeldahl, Total	1.7	1.0		mg/L	1	8/30/2022 1:31:00 PM	69850
SM 2540D: TSS						Analyst: **KS**	
Suspended Solids	ND	4.0		mg/L	1	8/22/2022 5:57:00 PM	69663
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **JRR**	
Boron	2.0	0.20		mg/L	5	9/9/2022 2:32:43 PM	C90954
EPA METHOD 200.7: TOTAL METALS						Analyst: **VP**	
Aluminum	ND	0.020		mg/L	1	8/24/2022 2:39:38 PM	69648

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Village of Jemez Springs
Client Sample ID: Raw Influent
Project: Village Of Jemez Springs
Collection Date: 8/18/2022 10:30:00 AM
Lab ID: 2208B85-002 **Matrix:** AQUEOUS **Received Date:** 8/18/2022 3:39:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM5210B: BOD						Analyst: **dms**	
Biochemical Oxygen Demand	242	2.0	R	mg/L	1	8/24/2022 2:33:00 PM	69617
NOTES: R- RPD between bottles >30%							
SM 2540D: TSS						Analyst: **KS**	
Suspended Solids	120	20	D	mg/L	1	8/22/2022 5:57:00 PM	69663

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2208B85**

14-Sep-22

Client: Village of Jemez Springs

Project: Village Of Jemez Springs

Sample ID: **MB-C**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C90954**	RunNo: **90954**
Prep Date:	Analysis Date: **9/9/2022**	SeqNo: **3252210** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	ND	0.040								

Sample ID: **LLLCS-C**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C90954**	RunNo: **90954**
Prep Date:	Analysis Date: **9/9/2022**	SeqNo: **3252211** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.044	0.040	0.04000	0	109	50	150			

Sample ID: **LCS-C**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C90954**	RunNo: **90954**
Prep Date:	Analysis Date: **9/9/2022**	SeqNo: **3252212** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.52	0.040	0.5000	0	104	85	115			

Sample ID: **2208B85-001EMS**	SampType: **MS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **Final Effluent**	Batch ID: **C90954**	RunNo: **90954**
Prep Date:	Analysis Date: **9/9/2022**	SeqNo: **3252315** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	4.5	0.20	2.500	2.046	99.7	70	130			

Sample ID: **2208B85-001EMSD**	SampType: **MSD**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **Final Effluent**	Batch ID: **C90954**	RunNo: **90954**
Prep Date:	Analysis Date: **9/9/2022**	SeqNo: **3252316** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	4.6	0.20	2.500	2.046	101	70	130	0.954	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2208B85**

14-Sep-22

Client: Village of Jemez Springs

Project: Village Of Jemez Springs

Sample ID: **2208B85-001DMS**	SampType: **MS**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **Final Effluent**	Batch ID: **69648**	RunNo: **90541**
Prep Date: **8/20/2022**	Analysis Date: **8/24/2022**	SeqNo: **3234480** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.57	0.020	0.5000	0	114	70	130			

Sample ID: **2208B85-001DMSD**	SampType: **MSD**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **Final Effluent**	Batch ID: **69648**	RunNo: **90541**
Prep Date: **8/20/2022**	Analysis Date: **8/24/2022**	SeqNo: **3234481** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.56	0.020	0.5000	0	111	70	130	2.66	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2208B85**

14-Sep-22

Client: Village of Jemez Springs

Project: Village Of Jemez Springs

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B90806**	RunNo: **90806**
Prep Date:	Analysis Date: **9/2/2022**	SeqNo: **3246263** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								

Sample ID: **LCSLL**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B90806**	RunNo: **90806**
Prep Date:	Analysis Date: **9/2/2022**	SeqNo: **3246264** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0012	0.0010	0.001000	0	120	50	150			

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B90806**	RunNo: **90806**
Prep Date:	Analysis Date: **9/2/2022**	SeqNo: **3246265** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.026	0.0010	0.02500	0	104	85	115			

Sample ID: **2208B85-001EMSDL**	SampType: **MS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **Final Effluent**	Batch ID: **B90806**	RunNo: **90806**
Prep Date:	Analysis Date: **9/2/2022**	SeqNo: **3246277** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.16	0.0050	0.1250	0.02329	107	70	130			

Sample ID: **2208B85-001EMSLL**	SampType: **MSD**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **Final Effluent**	Batch ID: **B90806**	RunNo: **90806**
Prep Date:	Analysis Date: **9/2/2022**	SeqNo: **3246278** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.16	0.0050	0.1250	0.02329	106	70	130	1.18	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2208B85**

14-Sep-22

Client: Village of Jemez Springs

Project: Village Of Jemez Springs

Sample ID: **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **A90725**	RunNo: **90725**
Prep Date:	Analysis Date: **8/31/2022**	SeqNo: **3242926** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	ND	0.20								

Sample ID: **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **A90725**	RunNo: **90725**
Prep Date:	Analysis Date: **8/31/2022**	SeqNo: **3242927** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.2	0.20	3.500	0	92.7	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2208B85**

14-Sep-22

Client: Village of Jemez Springs

Project: Village Of Jemez Springs

Sample ID: **MB-69617**	SampType: **MBLK**	TestCode: **SM5210B: BOD**							
Client ID: **PBW**	Batch ID: **69617**	RunNo: **90542**							
Prep Date: **8/19/2022**	Analysis Date: **8/24/2022**	SeqNo: **3234572**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	ND	2.0								

Sample ID: **LCS-69617**	SampType: **LCS**	TestCode: **SM5210B: BOD**							
Client ID: **LCSW**	Batch ID: **69617**	RunNo: **90542**							
Prep Date: **8/19/2022**	Analysis Date: **8/24/2022**	SeqNo: **3234573**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	180	2.0	198.0	0	90.9	84.6	115.4			

Sample ID: **2208B85-002ADUP**	SampType: **DUP**	TestCode: **SM5210B: BOD**							
Client ID: **Raw Influent**	Batch ID: **69617**	RunNo: **90542**							
Prep Date: **8/19/2022**	Analysis Date: **8/24/2022**	SeqNo: **3234581**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	202	2.0						18.0	22.7	R

NOTES:

R- RPD between bottles >30%

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2208B85**

14-Sep-22

Client: Village of Jemez Springs

Project: Village Of Jemez Springs

Sample ID: **MB-69618**	SampType: **MBLK**	TestCode: **SM 9223B Fecal Indicator: E. coli MPN**
Client ID: **PBW**	Batch ID: **69618**	RunNo: **90438**
Prep Date: **8/18/2022**	Analysis Date: **8/19/2022**	SeqNo: **3227198** Units: **MPN/100mL**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
E. Coli	<1	1.000								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2208B85**

14-Sep-22

Client: Village of Jemez Springs

Project: Village Of Jemez Springs

Sample ID: **MB-69771**	SampType: **mblk**	TestCode: **EPA Method 365.1: Total Phosphorous**
Client ID: **PBW**	Batch ID: **69771**	RunNo: **90597**
Prep Date: **8/25/2022**	Analysis Date: **8/26/2022**	SeqNo: **3236724** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Total (As P)	ND	0.050								

Sample ID: **LCS-69771**	SampType: **LCS**	TestCode: **EPA Method 365.1: Total Phosphorous**
Client ID: **LCSW**	Batch ID: **69771**	RunNo: **90597**
Prep Date: **8/25/2022**	Analysis Date: **8/26/2022**	SeqNo: **3236725** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Total (As P)	0.24	0.050	0.2500	0	96.6	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2208B85**

14-Sep-22

Client: Village of Jemez Springs

Project: Village Of Jemez Springs

Sample ID: **MB-69850**	SampType: **MBLK**	TestCode: **SM 4500 Norg C: TKN**
Client ID: **PBW**	Batch ID: **69850**	RunNo: **90661**
Prep Date: **8/30/2022**	Analysis Date: **8/30/2022**	SeqNo: **3239818** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Kjeldahl, Total	ND	1.0								

Sample ID: **LCS-69850**	SampType: **LCS**	TestCode: **SM 4500 Norg C: TKN**
Client ID: **LCSW**	Batch ID: **69850**	RunNo: **90661**
Prep Date: **8/30/2022**	Analysis Date: **8/30/2022**	SeqNo: **3239819** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Kjeldahl, Total	9.9	1.0	10.00	0	99.4	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2208B85**

14-Sep-22

Client: Village of Jemez Springs

Project: Village Of Jemez Springs

Sample ID: **MB-69663**	SampType: **MBLK**	TestCode: **SM 2540D: TSS**
Client ID: **PBW**	Batch ID: **69663**	RunNo: **90477**
Prep Date: **8/22/2022**	Analysis Date: **8/22/2022**	SeqNo: **3229572** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Suspended Solids	ND	4.0								

Sample ID: **LCS-69663**	SampType: **LCS**	TestCode: **SM 2540D: TSS**
Client ID: **LCSW**	Batch ID: **69663**	RunNo: **90477**
Prep Date: **8/22/2022**	Analysis Date: **8/22/2022**	SeqNo: **3229573** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Suspended Solids	92	4.0	92.40	0	99.6	83.44	119.05			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **Village of Jemez Springs** Work Order Number: **2208B85** RcptNo: 1

Received By: **Kasandra Payan** **8/18/2022 3:39:00 PM**

Completed By: **Cheyenne Cason** **8/18/2022 3:54:02 PM**

Reviewed By: TMc 8/10/22

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Client

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☐ No ☑ NA ☐
   Samples were collected the same day and chilled.
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes ☐ No ☐ NA ☑
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: 3
(<2 or >12 unless noted)
Adjusted? NO

Checked by: IKP 8.18.22

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	11.5	Good	Not Present			

Chain-of-Custody Record

Client: Village of Jemez Springs

Mailing Address: P.O. Box 269

Jemez Springs, NM 87025

Phone #: 505-610-0708

email or Fax#: jswm@jemezsprings-nm.gov

QA/QC Package:

■ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:

■ Standard ☐ Rush

Project Name: Village of Jemez Springs

Project #: WWTP

Project Manager: Rose Fenton

Sampler: Rose Fenton

On Ice: ☑ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 11.5-0=11.5

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www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2208685	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	BOD5 / TSS	E-COLI	T. N. / T. P.	DIS. As / DIS B.	T. RECOVERABLE Al
8/18/22	1017	AQ	FINAL EFFLUENT	1-P	N/A	001											■				
8/18/22	1030	AQ	RAW INFLUENT	1-P	N/A	002											■				
8/18/22	1017	AQ	FINAL EFFLUENT	1-P	NA2S2O3	001												■			
8/18/22	1017	AQ	FINAL EFFLUENT	1-P	H2SO4														■		
8/18/22	1017	AQ	FINAL EFFLUENT	1-P	HNO3															■	
8/18/22	1017	AQ	FINAL EFFLUENT	1-P	HNO3																■

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
8/18/22	15:39			COO	8.18.22	15:39
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time

Remarks:

Please email reports to:
jswm@jemezsprings-nm.gov
nmangin2021@gmail.com

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
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Website: www.hallenvironmental.com

July 07, 2023

Rose Fenton

Village of Jemez Springs
PO Box 269
Jemez Springs, NM 87025
TEL:
FAX:

RE: Village of Jemez Springs Special Sample Study OrderNo.: 2306G89

Dear Rose Fenton:

Hall Environmental Analysis Laboratory received 5 sample(s) on 6/30/2023 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **2306G89**
Date Reported: **7/7/2023**

CLIENT: Village of Jemez Springs
Client Sample ID: JSWWTP Final Effluent
Project: Village of Jemez Springs Special Sample
Collection Date: 6/30/2023 8:58:00 AM
Lab ID: 2306G89-001 **Matrix:** AQUEOUS
Received Date: 6/30/2023 2:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **VP**	
Boron	1.7	0.20		mg/L	5	7/5/2023 4:46:14 PM	A97929

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Village of Jemez Springs
Client Sample ID: MH#1A
Project: Village of Jemez Springs Special Sample
Collection Date: 6/30/2023 11:26:00 AM
Lab ID: 2306G89-002 **Matrix:** AQUEOUS **Received Date:** 6/30/2023 2:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **VP**	
Boron	1.6	0.20		mg/L	5	7/5/2023 4:50:24 PM	A97929

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Village of Jemez Springs
Client Sample ID: MH#39
Project: Village of Jemez Springs Special Sample
Collection Date: 6/30/2023 11:16:00 AM
Lab ID: 2306G89-003
Matrix: AQUEOUS
Received Date: 6/30/2023 2:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **VP**	
Boron	2.1	0.20		mg/L	5	7/5/2023 4:54:29 PM	A97929

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Village of Jemez Springs
Client Sample ID: MH#52
Project: Village of Jemez Springs Special Sample
Collection Date: 6/30/2023 10:53:00 AM
Lab ID: 2306G89-004 **Matrix:** AQUEOUS **Received Date:** 6/30/2023 2:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **VP**	
Boron	2.5	0.20		mg/L	5	7/5/2023 4:58:37 PM	A97929

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Village of Jemez Springs
Client Sample ID: MH#54
Project: Village of Jemez Springs Special Sample
Collection Date: 6/30/2023 10:25:00 AM
Lab ID: 2306G89-005
Matrix: AQUEOUS
Received Date: 6/30/2023 2:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **VP**	
Boron	0.38	0.040		mg/L	1	7/5/2023 5:00:39 PM	A97929

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2306G89**

07-Jul-23

Client: Village of Jemez Springs

Project: Village of Jemez Springs Special Sample Study

Sample ID: **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A97929**	RunNo: **97929**
Prep Date:	Analysis Date: **7/5/2023**	SeqNo: **3562786** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	ND	0.040								

Sample ID: **LCSLL-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A97929**	RunNo: **97929**
Prep Date:	Analysis Date: **7/5/2023**	SeqNo: **3562787** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.042	0.040	0.04000	0	105	50	150			

Sample ID: **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A97929**	RunNo: **97929**
Prep Date:	Analysis Date: **7/5/2023**	SeqNo: **3562788** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.55	0.040	0.5000	0	111	85	115			

Sample ID: **2306G89-005AMS**	SampType: **MS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **MH#54**	Batch ID: **A97929**	RunNo: **97929**
Prep Date:	Analysis Date: **7/5/2023**	SeqNo: **3562821** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.91	0.040	0.5000	0.3764	108	70	130			

Sample ID: **2306G89-005AMSD**	SampType: **MSD**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **MH#54**	Batch ID: **A97929**	RunNo: **97929**
Prep Date:	Analysis Date: **7/5/2023**	SeqNo: **3562825** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.90	0.040	0.5000	0.3764	105	70	130	1.31	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

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Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Village of Jemez Springs Work Order Number: 2306G89 RcptNo: 1

Received By: Kasandra Jimena Garcia 6/30/2023 2:45:00 PM

Completed By: Desiree Dominguez 6/30/2023 3:17:09 PM

Reviewed By: 6/30/23

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Client		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☐	No ☐	NA ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: 5 (6)
(<2 or >12 unless noted)
Adjusted? NO
Checked by: 6/30/23

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: ____ Date: ____
By Whom: ____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: ____
Client Instructions: ____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.2	Good	Not Present	Yogi		

Chain-of-Custody Record

Client: Village of Jemez Springs

Mailing Address: P.O. Box 269

Jemez Springs, NM 87025

Phone #: 575-520-8246

email or Fax#: jswm@jemezsprings-nm.gov

QA/QC Package:

■ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC ■ Other SPECIAL SAMPLE

☐ EDD (Type) _____

Turn-Around Time:

■ Standard ☐ Rush _____

Project Name:

Village of Jemez Springs SPECIAL SAMPLE STUDY / S P E C I A L S A M P L E

Project #:

JSWWTP BORON STUDY

Project Manager:

Rose Fenton

Sampler: Rose Fenton

On Ice: ☑ Yes ☐ No

# of Coolers: 1 VOG1

Cooler Temp(including CF): 4.1+0.1 = 4.2

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2306G89	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	DISSOLVED BORON
6/30/23	0858	AQ	JSWWTP FINAL EFFLUENT	1-P	HNO3	-001											■
6/30/23	1126	AQ	MH#1A	1-P	HNO3	-002											■
6/30/23	1116	AQ	MH#39	1-P	HN03	-003											■
6/30/23	1053	AQ	MH#52	1-P	HNO3	-004											■
6/30/23	1025	AQ	MH#54	1-P	HNO3	-005											■
			SPECIAL SAMPLE														
			SPECIAL SAMPLE														
			SPECIAL SAMPLE														
			SPECIAL SAMPLE														
			SPECIAL SAMPLE														

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
6/30	1443	R Fenton		OPO	6.30.23	14:45
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time

Remarks:

Please email reports to:
jswm@jemezsprings-nm.gov
nmangin2021@gmail.com

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

July 13, 2021

Karen Nalezny

Village of Jemez Springs
PO Box 269
Jemez Springs, NM 87025
TEL: (575) 829-3988
FAX: (575) 829-3339

RE: Compliance OrderNo.: 2106420

Dear Karen Nalezny:

Hall Environmental Analysis Laboratory received 1 sample(s) on 6/8/2021 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Village of Jemez Springs
Client Sample ID: Effluent
Project: Compliance
Collection Date: 6/8/2021 10:57:00 AM
Lab ID: 2106420-001
Matrix: AQUEOUS
Received Date: 6/8/2021 2:50:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM5210B: BOD						Analyst: **AG**	
Biochemical Oxygen Demand	DO Depletion <2.0	2.0		mg/L	1	6/14/2021 9:38:00 AM	60509
SM 9223B FECAL INDICATOR: E. COLI	**MPN**					Analyst: **SMS**	
E. Coli	90.8	1.000		MPN/100	1	6/9/2021 4:11:00 PM	60503
EPA METHOD 300.0: ANIONS						Analyst: **CAS**	
Nitrogen, Nitrite (As N)	ND	0.50		mg/L	5	6/8/2021 8:43:20 PM	R78945
Nitrogen, Nitrate (As N)	ND	0.50		mg/L	5	6/8/2021 8:43:20 PM	R78945
TOTAL NITROGEN						Analyst: **CJS**	
Nitrogen, Total	19	1.0		mg/L	1	6/28/2021 3:52:00 PM	R79412
EPA METHOD 365.1: TOTAL PHOSPHOROUS						Analyst: **JRR**	
Phosphorus, Total (As P)	0.25	0.050	D	mg/L	1	6/17/2021 12:15:00 PM	60682
SM 4500 NORG C: TKN						Analyst: **EKM**	
Nitrogen, Kjeldahl, Total	19	1.0		mg/L	1	6/25/2021 1:45:00 PM	60903
SM 2540D: TSS						Analyst: **KS**	
Suspended Solids	ND	4.0		mg/L	1	6/15/2021 3:11:00 PM	60614
EPA METHOD 200.7: TOTAL METALS						Analyst: **ELS**	
Aluminum	ND	0.020		mg/L	1	6/11/2021 12:30:52 PM	60558
Boron	2.2	0.20		mg/L	5	6/11/2021 12:32:30 PM	60558
200.8 ICPMS METALS:TOTAL						Analyst: **bcv**	
Arsenic	0.058	0.0050	*	mg/L	5	6/14/2021 5:13:34 PM	60558

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2106420**

13-Jul-21

Client: Village of Jemez Springs

Project: Compliance

Sample ID: **MB-60558**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW**	Batch ID: **60558**	RunNo: **79020**
Prep Date: **6/10/2021**	Analysis Date: **6/11/2021**	SeqNo: **2772203** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Boron	ND	0.040								

Sample ID: **LLLCS-60558**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BatchQC**	Batch ID: **60558**	RunNo: **79020**
Prep Date: **6/10/2021**	Analysis Date: **6/11/2021**	SeqNo: **2772205** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.041	0.040	0.04000	0	103	50	150			

Sample ID: **LCS-60558**	SampType: **LCS**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW**	Batch ID: **60558**	RunNo: **79020**
Prep Date: **6/10/2021**	Analysis Date: **6/11/2021**	SeqNo: **2772207** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.55	0.020	0.5000	0	111	85	115			
Boron	0.51	0.040	0.5000	0	101	85	115			

Sample ID: **LLLCS-60558**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BatchQC**	Batch ID: **60558**	RunNo: **79020**
Prep Date: **6/10/2021**	Analysis Date: **6/11/2021**	SeqNo: **2772219** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020	0.01000	0	122	50	150			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2106420**

13-Jul-21

Client: Village of Jemez Springs

Project: Compliance

Sample ID: **MB-60558**	SampType: **MBLK**	TestCode: **200.8 ICPMS Metals:Total**
Client ID: **PBW**	Batch ID: **60558**	RunNo: **79048**
Prep Date: **6/10/2021**	Analysis Date: **6/14/2021**	SeqNo: **2773991** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								

Sample ID: **MSLLLCS-60558**	SampType: **LCSLL**	TestCode: **200.8 ICPMS Metals:Total**
Client ID: **BatchQC**	Batch ID: **60558**	RunNo: **79048**
Prep Date: **6/10/2021**	Analysis Date: **6/14/2021**	SeqNo: **2773992** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010	0.001000	0	80.2	50	150			

Sample ID: **MSLCS-60558**	SampType: **LCS**	TestCode: **200.8 ICPMS Metals:Total**
Client ID: **LCSW**	Batch ID: **60558**	RunNo: **79048**
Prep Date: **6/10/2021**	Analysis Date: **6/14/2021**	SeqNo: **2773993** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	91.5	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2106420**

13-Jul-21

Client: Village of Jemez Springs

Project: Compliance

Sample ID: **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R78945**	RunNo: **78945**
Prep Date:	Analysis Date: **6/8/2021**	SeqNo: **2769463** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Nitrite (As N)	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								

Sample ID: **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R78945**	RunNo: **78945**
Prep Date:	Analysis Date: **6/8/2021**	SeqNo: **2769464** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Nitrite (As N)	1.0	0.10	1.000	0	100	90	110			
Nitrogen, Nitrate (As N)	2.6	0.10	2.500	0	103	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2106420**

13-Jul-21

Client: Village of Jemez Springs

Project: Compliance

Sample ID: **MB-60509**	SampType: **MBLK**	TestCode: **SM5210B: BOD**							
Client ID: **PBW**	Batch ID: **60509**	RunNo: **79073**							
Prep Date: **6/9/2021**	Analysis Date: **6/14/2021**	SeqNo: **2775094**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	ND	2.0								

Sample ID: **LCS-60509**	SampType: **LCS**	TestCode: **SM5210B: BOD**							
Client ID: **LCSW**	Batch ID: **60509**	RunNo: **79073**							
Prep Date: **6/9/2021**	Analysis Date: **6/14/2021**	SeqNo: **2775095**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	190	2.0	198.0	0	96.0	84.6	115.4			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2106420**

13-Jul-21

Client: Village of Jemez Springs

Project: Compliance

Sample ID: **MB-60503**	SampType: **MBLK**	TestCode: **SM 9223B Fecal Indicator: E. coli MPN**
Client ID: **PBW**	Batch ID: **60503**	RunNo: **78960**
Prep Date: **6/8/2021**	Analysis Date: **6/9/2021**	SeqNo: **2770173** Units: **MPN/100mL**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
E. Coli	<1	1.000								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2106420**
13-Jul-21

Client: Village of Jemez Springs
Project: Compliance

Sample ID: **MB-60682**	SampType: **MBLK**	TestCode: **EPA Method 365.1: Total Phosphorous**
Client ID: **PBW**	Batch ID: **60682**	RunNo: **79177**
Prep Date: **6/16/2021**	Analysis Date: **6/17/2021**	SeqNo: **2778995** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Total (As P)	ND	0.010								

Sample ID: **LCS-60682**	SampType: **LCS**	TestCode: **EPA Method 365.1: Total Phosphorous**
Client ID: **LCSW**	Batch ID: **60682**	RunNo: **79177**
Prep Date: **6/16/2021**	Analysis Date: **6/17/2021**	SeqNo: **2778996** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Total (As P)	0.24	0.010	0.2500	0	94.5	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2106420**

13-Jul-21

Client: Village of Jemez Springs

Project: Compliance

Sample ID: **2106420-001CMS**	SampType: **MS**	TestCode: **SM 4500 Norg C: TKN**
Client ID: **Effluent**	Batch ID: **60903**	RunNo: **79367**
Prep Date: **6/24/2021**	Analysis Date: **6/25/2021**	SeqNo: **2788821** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Kjeldahl, Total	29	1.0	10.00	19.32	101	75	125			

Sample ID: **2106420-001CMSD**	SampType: **MSD**	TestCode: **SM 4500 Norg C: TKN**
Client ID: **Effluent**	Batch ID: **60903**	RunNo: **79367**
Prep Date: **6/24/2021**	Analysis Date: **6/25/2021**	SeqNo: **2788822** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Kjeldahl, Total	29	1.0	10.00	19.32	101	75	125	0	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2106420**

13-Jul-21

Client: Village of Jemez Springs

Project: Compliance

Sample ID: **MB-60614**	SampType: **MBLK**	TestCode: **SM 2540D: TSS**
Client ID: **PBW**	Batch ID: **60614**	RunNo: **79089**
Prep Date: **6/14/2021**	Analysis Date: **6/15/2021**	SeqNo: **2775622** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Suspended Solids	ND	4.0								

Sample ID: **LCS-60614**	SampType: **LCS**	TestCode: **SM 2540D: TSS**
Client ID: **LCSW**	Batch ID: **60614**	RunNo: **79089**
Prep Date: **6/14/2021**	Analysis Date: **6/15/2021**	SeqNo: **2775623** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Suspended Solids	87	4.0	92.10	0	94.5	83.71	119.44			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

Sample Log-In Check List

Client Name: **Village of Jemez Springs** Work Order Number: **2106420** RcptNo: 1

Received By: **Sean Livingston** **6/8/2021 2:50:00 PM** Sean Livingston

Completed By: **Sean Livingston** **6/8/2021 2:56:01 PM** Sean Livingston

Reviewed By: JR 6/8/21 @ 15:20

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Client		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☐	No ☐	NA ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: 2 (<2 or >12 unless noted)

Adjusted? 6/8/21 NO

Checked by: CC 6/8/21

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: Date:

By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding:

Client Instructions:

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	0.8	Good				

Chain-of-Custody Record

Client: VILLAGE OF JEMEZ SPRINGS

Mailing Address: P.O. Box 269

Phone #: 505 220-5509

email or Fax#: 575.829.3339

QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☐ Standard ☐ Rush

Project Name: Compliance

Project #:

Project Manager: Karen Nalezny

Sampler: Karen Nalezny

On Ice: ☐ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 0.7+0.1=0.8 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. Z106420
6.8.21	10:57	Aqua	T. NITROGEN & TPHOSPHATES			001
6.8.21	10:57	Aqua	ALUMINUM ARSENIC BORON			
6.8.21	10:57	Aqua	E. COLI (NUMERICS)			
6.8.21	10:57	Aqua	EFFLUENT BOD			
6.8.21	10:57	Aqua	EFFLUENT TSS			

Analysis Request

BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	TN/TKN/TP/PO4/PHOS	ARSENIC BORON ALUMINUM	E. COLI (NUMERICS)	EFF. BOD	EFF. TSS		
										X						
											X					
												X				
													X			
														X		

Date	Time	Relinquished by	Received by	Via	Date	Time
6.8.21	14:25	Karen Nalezny	Sec	CDO	6/8/21	14:50

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

August 11, 2021

Karen Nalezny

Village of Jemez Springs
PO Box 269
Jemez Springs, NM 87025
TEL: (575) 829-3988
FAX: (575) 829-3339

RE: Compliance OrderNo.: 2107768

Dear Karen Nalezny:

Hall Environmental Analysis Laboratory received 2 sample(s) on 7/15/2021 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Village of Jemez Springs
Client Sample ID: Effluent
Project: Compliance
Collection Date: 7/15/2021 9:02:00 AM
Lab ID: 2107768-001 **Matrix:** AQUEOUS **Received Date:** 7/15/2021 11:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM5210B: BOD						Analyst: **AG**	
Biochemical Oxygen Demand	ND	2.0		mg/L	1	7/20/2021 2:59:00 PM	61336
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Nitrate+Nitrite as N	ND	1.0		mg/L	5	7/27/2021 1:59:00 PM	R80123
TOTAL NITROGEN						Analyst: **CJS**	
Nitrogen, Total	10	1.0		mg/L	1	7/30/2021 9:35:00 AM	R80193
EPA METHOD 365.1: TOTAL PHOSPHOROUS						Analyst: **CJS**	
Phosphorus, Total (As P)	0.39	0.050	D	mg/L	1	7/28/2021 12:02:00 PM	61595
SM 4500 NORG C: TKN						Analyst: **EKM**	
Nitrogen, Kjeldahl, Total	10	1.0		mg/L	1	7/28/2021 2:37:00 PM	61596
SM 2540D: TSS						Analyst: **KS**	
Suspended Solids	ND	4.0		mg/L	1	7/21/2021 12:06:00 PM	61428
EPA METHOD 200.7: TOTAL METALS						Analyst: **ELS**	
Aluminum	ND	0.020		mg/L	1	7/16/2021 12:42:17 PM	61359
Boron	2.1	0.20		mg/L	5	7/16/2021 1:35:37 PM	61359
200.8 ICPMS METALS:TOTAL						Analyst: **bcv**	
Arsenic	0.064	0.0050	*	mg/L	5	7/20/2021 2:01:40 PM	61359

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Village of Jemez Springs
Client Sample ID: Influent
Project: Compliance
Collection Date: 7/15/2021 9:19:00 AM
Lab ID: 2107768-002
Matrix: AQUEOUS
Received Date: 7/15/2021 11:25:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM5210B: BOD						Analyst: **AG**	
Biochemical Oxygen Demand	65	2.0		mg/L	1	7/20/2021 2:59:00 PM	61336
SM 2540D: TSS						Analyst: **KS**	
Suspended Solids	670	40	D	mg/L	1	7/21/2021 12:06:00 PM	61428

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Value above quantitation range
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2107768**

11-Aug-21

Client: Village of Jemez Springs

Project: Compliance

Sample ID: **MB-61359**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW**	Batch ID: **61359**	RunNo: **79854**
Prep Date: **7/15/2021**	Analysis Date: **7/16/2021**	SeqNo: **2809278** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								
Boron	ND	0.040								

Sample ID: **LLLCS-61359**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BatchQC**	Batch ID: **61359**	RunNo: **79854**
Prep Date: **7/15/2021**	Analysis Date: **7/16/2021**	SeqNo: **2809280** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020	0.01000	0	105	50	150			
Boron	ND	0.040	0.04000	0	99.6	50	150			

Sample ID: **LCS-61359**	SampType: **LCS**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW**	Batch ID: **61359**	RunNo: **79854**
Prep Date: **7/15/2021**	Analysis Date: **7/16/2021**	SeqNo: **2809282** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.56	0.020	0.5000	0	112	85	115			
Boron	0.52	0.040	0.5000	0	104	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2107768**

11-Aug-21

Client: Village of Jemez Springs

Project: Compliance

Sample ID: **MB-61359**	SampType: **MBLK**	TestCode: **200.8 ICPMS Metals:Total**
Client ID: **PBW**	Batch ID: **61359**	RunNo: **79926**
Prep Date: **7/15/2021**	Analysis Date: **7/20/2021**	SeqNo: **2812398** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								

Sample ID: **MSLLLCS-61359**	SampType: **LCSLL**	TestCode: **200.8 ICPMS Metals:Total**
Client ID: **BatchQC**	Batch ID: **61359**	RunNo: **79926**
Prep Date: **7/15/2021**	Analysis Date: **7/20/2021**	SeqNo: **2812399** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010	0.001000	0	99.8	50	150			

Sample ID: **MSLCS-61359**	SampType: **LCS**	TestCode: **200.8 ICPMS Metals:Total**
Client ID: **LCSW**	Batch ID: **61359**	RunNo: **79926**
Prep Date: **7/15/2021**	Analysis Date: **7/20/2021**	SeqNo: **2812400** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.027	0.0010	0.02500	0	108	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2107768**

11-Aug-21

Client: Village of Jemez Springs

Project: Compliance

Sample ID: **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R80123**	RunNo: **80123**
Prep Date:	Analysis Date: **7/27/2021**	SeqNo: **2820841** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	ND	0.20								

Sample ID: **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R80123**	RunNo: **80123**
Prep Date:	Analysis Date: **7/27/2021**	SeqNo: **2820842** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.5	0.20	3.500	0	99.2	90	110			

Sample ID: **2107768-001CMS**	SampType: **ms**	TestCode: **EPA Method 300.0: Anions**
Client ID: **Effluent**	Batch ID: **R80123**	RunNo: **80123**
Prep Date:	Analysis Date: **7/27/2021**	SeqNo: **2820848** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	16	1.0	17.50	0	92.6	85.4	110			

Sample ID: **2107768-001CMSD**	SampType: **msd**	TestCode: **EPA Method 300.0: Anions**
Client ID: **Effluent**	Batch ID: **R80123**	RunNo: **80123**
Prep Date:	Analysis Date: **7/27/2021**	SeqNo: **2820849** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	16	1.0	17.50	0	90.6	85.4	110	2.21	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2107768**
11-Aug-21

Client: Village of Jemez Springs
Project: Compliance

Sample ID: **MB-61336**	SampType: **MBLK**	TestCode: **SM5210B: BOD**							
Client ID: **PBW**	Batch ID: **61336**	RunNo: **79957**							
Prep Date: **7/15/2021**	Analysis Date: **7/20/2021**	SeqNo: **2813478**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	ND	2.0								

Sample ID: **LCS-61336**	SampType: **LCS**	TestCode: **SM5210B: BOD**							
Client ID: **LCSW**	Batch ID: **61336**	RunNo: **79957**							
Prep Date: **7/15/2021**	Analysis Date: **7/20/2021**	SeqNo: **2813479**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	180	2.0	198.0	0	90.9	84.6	115.4			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2107768**
11-Aug-21

Client: Village of Jemez Springs
Project: Compliance

Sample ID: **MB-61595**	SampType: **MBLK**	TestCode: **EPA Method 365.1: Total Phosphorous**							
Client ID: **PBW**	Batch ID: **61595**	RunNo: **80158**							
Prep Date: **7/27/2021**	Analysis Date: **7/28/2021**	SeqNo: **2822519**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Total (As P)	ND	0.010								

Sample ID: **LCS-61595**	SampType: **LCS**	TestCode: **EPA Method 365.1: Total Phosphorous**							
Client ID: **LCSW**	Batch ID: **61595**	RunNo: **80158**							
Prep Date: **7/27/2021**	Analysis Date: **7/28/2021**	SeqNo: **2822520**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Total (As P)	0.25	0.010	0.2500	0	102	90	110			

Sample ID: **2107768-001CMS**	SampType: **MS**	TestCode: **EPA Method 365.1: Total Phosphorous**							
Client ID: **Effluent**	Batch ID: **61595**	RunNo: **80158**							
Prep Date: **7/27/2021**	Analysis Date: **7/28/2021**	SeqNo: **2822522**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Total (As P)	1.7	0.050	1.250	0.3945	101	90	110			D

Sample ID: **2107768-001CMSD**	SampType: **MSD**	TestCode: **EPA Method 365.1: Total Phosphorous**							
Client ID: **Effluent**	Batch ID: **61595**	RunNo: **80158**							
Prep Date: **7/27/2021**	Analysis Date: **7/28/2021**	SeqNo: **2822523**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Total (As P)	1.7	0.050	1.250	0.3945	102	90	110	0.570	20	D

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2107768**

11-Aug-21

Client: Village of Jemez Springs

Project: Compliance

Sample ID: **MB-61596**	SampType: **MBLK**	TestCode: **SM 4500 Norg C: TKN**
Client ID: **PBW**	Batch ID: **61596**	RunNo: **80146**
Prep Date: **7/27/2021**	Analysis Date: **7/28/2021**	SeqNo: **2821718** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Kjeldahl, Total	ND	1.0								

Sample ID: **LCS-61596**	SampType: **LCS**	TestCode: **SM 4500 Norg C: TKN**
Client ID: **LCSW**	Batch ID: **61596**	RunNo: **80146**
Prep Date: **7/27/2021**	Analysis Date: **7/28/2021**	SeqNo: **2821719** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Kjeldahl, Total	9.8	1.0	10.00	0	98.0	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2107768**

11-Aug-21

Client: Village of Jemez Springs

Project: Compliance

Sample ID: **MB-61428**	SampType: **MBLK**	TestCode: **SM 2540D: TSS**
Client ID: **PBW**	Batch ID: **61428**	RunNo: **79948**
Prep Date: **7/20/2021**	Analysis Date: **7/21/2021**	SeqNo: **2813328** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Suspended Solids	ND	4.0								

Sample ID: **LCS-61428**	SampType: **LCS**	TestCode: **SM 2540D: TSS**
Client ID: **LCSW**	Batch ID: **61428**	RunNo: **79948**
Prep Date: **7/20/2021**	Analysis Date: **7/21/2021**	SeqNo: **2813329** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Suspended Solids	96	4.0	92.10	0	104	83.71	119.44			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix
B	Analyte detected in the associated Method Blank
E	Value above quantitation range
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

Sample Log-In Check List

Client Name: **Village of Jemez Springs** Work Order Number: **2107768** RcptNo: 1

Received By: **Juan Rojas** **7/15/2021 11:25:00 AM**

Completed By: **Sean Livingston** **7/15/2021 11:43:19 AM**

Reviewed By: JR 7/15/21 @13:45

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Client		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☐	No ☐	NA ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: 2 (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted? NO
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by: KPG 7/15/21

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	1.5	Good				

Chain-of-Custody Record

Client: VILLAGE OF JEMEZ SPRINGS

Mailing Address: PO BOX 269
JEMEZ SPRINGS, NM 87025

Phone #: 505-220-5509

email or Fax#: 575-829-3339

QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☒ Standard ☐ Rush

Project Name:
COMPLIANCE

Project #:

Project Manager:
KAREN NALEZNY

Sampler:

On Ice: ☒ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 1.5-0=1.5 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2107768	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	EFF BOD	EFF TSS	TNITROGEN TPHOSPHORUS	ARSENIC BORON ALUMINUM	INFLUENT BOD	INFLUENT TSS
7-15-21	9:02	AQUA	~~EFF~~ BOD			001											X					
7-15-21	9:02	AQUA	EFF TSS															X				
7-15-21	9:02	AQUA	TNITROGEN TPHOSPHORUS																X			
7-15-21	9:02	AQUA	ARSENIC BORON ALUMINUM																	X		
7-15-21	9:19	AQUA	INFLUENT BOD			002															X	
7-15-21	9:19	AQUA	INFLUENT TSS																			X
7																						

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
7-15-21	11:23			COC	7/15/21	11:25
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

January 31, 2022

Rose Fenton

Village of Jemez Springs
PO Box 269
Jemez Springs, NM 87025
TEL: (575) 829-3988
FAX: (575) 829-3339

RE: Village of Jemez Springs OrderNo.: 2201564

Dear Rose Fenton:

Hall Environmental Analysis Laboratory received 2 sample(s) on 1/13/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Village of Jemez Springs
Client Sample ID: Final Effluent
Project: Village of Jemez Springs
Collection Date: 1/13/2022 11:49:00 AM
Lab ID: 2201564-001 **Matrix:** AQUEOUS **Received Date:** 1/13/2022 4:17:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst: **bcv**	
Arsenic	0.11	0.0050	*	mg/L	5	1/14/2022 5:55:56 PM	A85189
SM5210B: BOD						Analyst: **dms**	
Biochemical Oxygen Demand	4.4	2.0		mg/L	1	1/19/2022 1:33:00 PM	65020
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Nitrogen, Nitrite (As N)	ND	0.50		mg/L	5	1/13/2022 7:52:13 PM	R85157
Nitrogen, Nitrate (As N)	ND	0.50		mg/L	5	1/13/2022 7:52:13 PM	R85157
TOTAL NITROGEN						Analyst: **CJS**	
Nitrogen, Total	8.3	1.0		mg/L	1	1/27/2022 10:50:00 AM	R85447
EPA METHOD 365.1: TOTAL PHOSPHOROUS						Analyst: **CJS**	
Phosphorus, Total (As P)	1.1	0.050	D	mg/L	1	1/20/2022 10:59:00 AM	65109
SM 4500 NORG C: TKN						Analyst: **EKM**	
Nitrogen, Kjeldahl, Total	8.3	1.0		mg/L	1	1/25/2022 9:24:00 AM	65167
SM 2540D: TSS						Analyst: **KS**	
Suspended Solids	ND	4.0		mg/L	1	1/20/2022 12:56:00 PM	65102
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **ELS**	
Boron	2.1	0.20		mg/L	5	1/14/2022 11:59:45 AM	A85167
EPA METHOD 200.7: METALS						Analyst: **ELS**	
Aluminum	ND	0.020		mg/L	1	1/20/2022 9:55:30 AM	65093

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Village of Jemez Springs
Client Sample ID: Raw Influent
Project: Village of Jemez Springs
Collection Date: 1/13/2022 11:38:00 AM
Lab ID: 2201564-002 **Matrix:** AQUEOUS **Received Date:** 1/13/2022 4:17:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM5210B: BOD						Analyst: **dms**	
Biochemical Oxygen Demand	780	2.0		mg/L	1	1/19/2022 1:33:00 PM	65020
SM 2540D: TSS						Analyst: **KS**	
Suspended Solids	970	40	D	mg/L	1	1/20/2022 12:56:00 PM	65102

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2201564**

31-Jan-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW**	Batch ID: **A85167**	RunNo: **85167**
Prep Date:	Analysis Date: **1/14/2022**	SeqNo: **2996212** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	ND	0.040								

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **A85167**	RunNo: **85167**
Prep Date:	Analysis Date: **1/14/2022**	SeqNo: **2996214** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.041	0.040	0.04000	0	102	50	150			

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW**	Batch ID: **A85167**	RunNo: **85167**
Prep Date:	Analysis Date: **1/14/2022**	SeqNo: **2996216** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.50	0.040	0.5000	0	99.4	85	115			

Sample ID: **MB-65093**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW**	Batch ID: **65093**	RunNo: **85306**
Prep Date: **1/19/2022**	Analysis Date: **1/20/2022**	SeqNo: **3000836** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								

Sample ID: **LLLCS-65093**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **65093**	RunNo: **85306**
Prep Date: **1/19/2022**	Analysis Date: **1/20/2022**	SeqNo: **3000838** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020	0.01000	0	108	50	150			

Sample ID: **LCS-65093**	SampType: **LCS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW**	Batch ID: **65093**	RunNo: **85306**
Prep Date: **1/19/2022**	Analysis Date: **1/20/2022**	SeqNo: **3000851** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.52	0.020	0.5000	0	103	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2201564**

31-Jan-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A85167**	RunNo: **85167**
Prep Date:	Analysis Date: **1/14/2022**	SeqNo: **2996213** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	ND	0.040								

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A85167**	RunNo: **85167**
Prep Date:	Analysis Date: **1/14/2022**	SeqNo: **2996215** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.041	0.040	0.04000	0	102	50	150			

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A85167**	RunNo: **85167**
Prep Date:	Analysis Date: **1/14/2022**	SeqNo: **2996217** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.50	0.040	0.5000	0	99.4	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2201564**

31-Jan-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A85189**	RunNo: **85189**
Prep Date:	Analysis Date: **1/14/2022**	SeqNo: **2996976** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								

Sample ID: **LCSLL**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A85189**	RunNo: **85189**
Prep Date:	Analysis Date: **1/14/2022**	SeqNo: **2996977** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0010	0.0010	0.001000	0	101	50	150			

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A85189**	RunNo: **85189**
Prep Date:	Analysis Date: **1/14/2022**	SeqNo: **2996978** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	99.9	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2201564**
31-Jan-22

Client: Village of Jemez Springs
Project: Village of Jemez Springs

Sample ID: **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R85157**	RunNo: **85157**
Prep Date:	Analysis Date: **1/13/2022**	SeqNo: **2995945** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Nitrite (As N)	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								

Sample ID: **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R85157**	RunNo: **85157**
Prep Date:	Analysis Date: **1/13/2022**	SeqNo: **2995953** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Nitrite (As N)	0.96	0.10	1.000	0	95.5	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	98.4	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2201564**

31-Jan-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-65020**	SampType: **MBLK**	TestCode: **SM5210B: BOD**							
Client ID: **PBW**	Batch ID: **65020**	RunNo: **85268**							
Prep Date: **1/14/2022**	Analysis Date: **1/19/2022**	SeqNo: **2999872**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	ND	2.0								

Sample ID: **LCS-65020**	SampType: **LCS**	TestCode: **SM5210B: BOD**							
Client ID: **LCSW**	Batch ID: **65020**	RunNo: **85268**							
Prep Date: **1/14/2022**	Analysis Date: **1/19/2022**	SeqNo: **2999873**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	182	2.0	198.0	0	91.9	84.6	115.4			

Sample ID: **2201564-002ADUP**	SampType: **DUP**	TestCode: **SM5210B: BOD**							
Client ID: **Raw Influent**	Batch ID: **65020**	RunNo: **85268**							
Prep Date: **1/14/2022**	Analysis Date: **1/19/2022**	SeqNo: **2999882**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	765	2.0						2.52	22.7	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2201564**

31-Jan-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-65109**	SampType: **MBLK**	TestCode: **EPA Method 365.1: Total Phosphorous**
Client ID: **PBW**	Batch ID: **65109**	RunNo: **85283**
Prep Date: **1/19/2022**	Analysis Date: **1/20/2022**	SeqNo: **3000390** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Total (As P)	ND	0.010								

Sample ID: **LCS-65109**	SampType: **LCS**	TestCode: **EPA Method 365.1: Total Phosphorous**
Client ID: **LCSW**	Batch ID: **65109**	RunNo: **85283**
Prep Date: **1/19/2022**	Analysis Date: **1/20/2022**	SeqNo: **3000397** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Total (As P)	0.23	0.010	0.2500	0	92.2	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2201564**

31-Jan-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-65167**	SampType: **MBLK**	TestCode: **SM 4500 Norg C: TKN**
Client ID: **PBW**	Batch ID: **65167**	RunNo: **85388**
Prep Date: **1/24/2022**	Analysis Date: **1/25/2022**	SeqNo: **3004513** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Kjeldahl, Total	ND	1.0								

Sample ID: **LCS-65167**	SampType: **LCS**	TestCode: **SM 4500 Norg C: TKN**
Client ID: **LCSW**	Batch ID: **65167**	RunNo: **85388**
Prep Date: **1/24/2022**	Analysis Date: **1/25/2022**	SeqNo: **3004514** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Kjeldahl, Total	9.9	1.0	10.00	0	99.4	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2201564**

31-Jan-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-65102**	SampType: **MBLK**	TestCode: **SM 2540D: TSS**
Client ID: **PBW**	Batch ID: **65102**	RunNo: **85293**
Prep Date: **1/19/2022**	Analysis Date: **1/20/2022**	SeqNo: **3000559** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Suspended Solids	ND	4.0								

Sample ID: **LCS-65102**	SampType: **LCS**	TestCode: **SM 2540D: TSS**
Client ID: **LCSW**	Batch ID: **65102**	RunNo: **85293**
Prep Date: **1/19/2022**	Analysis Date: **1/20/2022**	SeqNo: **3000560** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Suspended Solids	98	4.0	92.40	0	106	83.44	119.05			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

Sample Log-In Check List

Client Name: Village of Jemez Springs Work Order Number: 2201564 RcptNo: 1

Received By: Tracy Casarrubias 1/13/2022 4:17:00 PM

Completed By: Sean Livingston 1/13/2022 4:40:25 PM S Livingston

Reviewed By: JN 1/13/22 @16:42

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Client

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☐ No ☑ NA ☐
   Samples were collected the same day and chilled.
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes ☐ No ☐ NA ☑
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: 3 (<2 or >12 unless noted)
Adjusted? NO
Checked by: KPG 1/13/22

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: ____ Date: ____
By Whom: ____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: ____
Client Instructions: ____

16. Additional remarks:

17. Cooler Information

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	7.9	Good				

Chain-of-Custody Record

Client: Village of Jemez Springs

Mailing Address: P.O. Box 269
Jemez Springs, NM 87025

Phone #: 505-610-0708

email or Fax#: jswm@jemezsprings-nm.gov

QA/QC Package:
■ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other
☐ EDD (Type)

Turn-Around Time:
■ Standard ☐ Rush

Project Name: Village of Jemez Springs

Project #: WWTP

Project Manager: Rose Fenton

Sampler: Rose Fenton
On Ice: ☒ Yes ☐ No
# of Coolers: 1
Cooler Temp(including CF): 7.9 -0 = 7.9

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2201564
01/13/22	11:49am	AQ	Final effluent	2-P	None	001
01/13/22	11:49am	AQ	Final effluent/Unfiltered	1-P	HnO3	001
01/13/22	11:49am	AQ	Final effluent.Filtered	1-P	HnO3	001
01/13/22	11:49am	AQ	Final effluent	1-P	H2SO4	001
01/13/22	11:38am	AQ	Raw influent	2-P	None	002

Analysis Request

BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	BOD5	TSS	Total Nitrogen	Total Phosphorous	T. Recoverable Aluminum	Dis. Boron & Dis. Arsenic
										■	■				
														■	
															■
												■	■		
										■	■				

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
1/13/22	16:16				1/13/22	16:17
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time

Remarks:
Please email reports to:
jswm@jemezsprings-nm.gov
nmangin2021@gmail.com

Aluminum : unfiltered

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

April 25, 2022

Rose Fenton
Village of Jemez Springs
PO Box 269
Jemez Springs, NM 87025
TEL: (575) 829-3988
FAX: (575) 829-3339

RE: Village of Jemez Springs OrderNo.: 2203648

Dear Rose Fenton:

Hall Environmental Analysis Laboratory received 2 sample(s) on 3/10/2022 for the analyses presented in the following report.

This report is a revised report and it replaces the original report issued March 29, 2022.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. All samples are reported as received unless otherwise indicated.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Village of Jemez Springs
Client Sample ID: Final Effluent
Project: Village of Jemez Springs
Collection Date: 3/10/2022 11:30:00 AM
Lab ID: 2203648-001 **Matrix:** AQUEOUS **Received Date:** 3/10/2022 4:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst: **bcv**	
Arsenic	0.022	0.0010	*	mg/L	1	3/16/2022 12:44:52 PM	B86537
SM5210B: BOD						Analyst: **dms**	
Biochemical Oxygen Demand	2.7	2.0		mg/L	1	3/17/2022 2:26:00 PM	66106
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **SMS**	
E. Coli	5.2	1.000		MPN/100	1	3/11/2022 5:03:00 PM	66103
EPA METHOD 300.0: ANIONS						Analyst: **LRN**	
Nitrogen, Nitrite (As N)	ND	0.50		mg/L	5	3/10/2022 9:33:58 PM	R86417
Nitrogen, Nitrate (As N)	ND	0.50		mg/L	5	3/10/2022 9:33:58 PM	R86417
TOTAL NITROGEN						Analyst: **CJS**	
Nitrogen, Total	17	1.0		mg/L	1	3/22/2022 3:33:00 PM	R86646
EPA METHOD 365.1: TOTAL PHOSPHOROUS						Analyst: **JMT**	
Phosphorus, Total (As P)	0.15	0.050	H	mg/L	1	4/19/2022 11:49:00 AM	66911
SM 4500 NORG C: TKN						Analyst: **EKM**	
Nitrogen, Kjeldahl, Total	17	1.0		mg/L	1	3/18/2022 10:16:00 AM	66248
SM 2540D: TSS						Analyst: **KS**	
Suspended Solids	ND	4.0		mg/L	1	3/17/2022 7:22:00 AM	66210
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **ELS**	
Boron	2.2	0.20		mg/L	5	3/11/2022 11:34:48 AM	B86413
EPA METHOD 200.7: METALS						Analyst: **ELS**	
Aluminum	0.021	0.020		mg/L	1	3/15/2022 10:56:09 AM	66152

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Village of Jemez Springs
Client Sample ID: Raw Influent
Project: Village of Jemez Springs
Collection Date: 3/10/2022 1:35:00 PM
Lab ID: 2203648-002 **Matrix:** AQUEOUS **Received Date:** 3/10/2022 4:03:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM5210B: BOD						Analyst: **dms**	
Biochemical Oxygen Demand	195	2.0	R	mg/L	1	3/17/2022 2:26:00 PM	66106

NOTES:
R- RPD between bottles >30%

SM 2540D: TSS						Analyst: **KS**	
Suspended Solids	820	20	D	mg/L	1	3/17/2022 7:22:00 AM	66210

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2203648**

25-Apr-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **LCS-66152**	SampType: **LCS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW**	Batch ID: **66152**	RunNo: **86470**
Prep Date: **3/14/2022**	Analysis Date: **3/15/2022**	SeqNo: **3051167** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.53	0.020	0.5000	0	107	85	115			

Sample ID: **MB-66152**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW**	Batch ID: **66152**	RunNo: **86470**
Prep Date: **3/14/2022**	Analysis Date: **3/15/2022**	SeqNo: **3051185** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								

Sample ID: **LLLCS-66152**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **66152**	RunNo: **86470**
Prep Date: **3/14/2022**	Analysis Date: **3/15/2022**	SeqNo: **3051187** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020	0.01000	0	116	50	150			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2203648**

25-Apr-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B86413**	RunNo: **86413**
Prep Date:	Analysis Date: **3/11/2022**	SeqNo: **3048350** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	ND	0.040								

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B86413**	RunNo: **86413**
Prep Date:	Analysis Date: **3/11/2022**	SeqNo: **3048351** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.043	0.040	0.04000	0	108	50	150			

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B86413**	RunNo: **86413**
Prep Date:	Analysis Date: **3/11/2022**	SeqNo: **3048352** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.52	0.040	0.5000	0	105	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2203648**

25-Apr-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B86537**	RunNo: **86537**
Prep Date:	Analysis Date: **3/16/2022**	SeqNo: **3053959** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								

Sample ID: **LCSLL**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B86537**	RunNo: **86537**
Prep Date:	Analysis Date: **3/16/2022**	SeqNo: **3053960** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010	0.001000	0	93.0	50	150			

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B86537**	RunNo: **86537**
Prep Date:	Analysis Date: **3/16/2022**	SeqNo: **3053961** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	97.3	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2203648**

25-Apr-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R86417**	RunNo: **86417**
Prep Date:	Analysis Date: **3/10/2022**	SeqNo: **3048600** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Nitrite (As N)	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								

Sample ID: **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R86417**	RunNo: **86417**
Prep Date:	Analysis Date: **3/10/2022**	SeqNo: **3048601** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Nitrite (As N)	0.98	0.10	1.000	0	97.6	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	100	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2203648**

25-Apr-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-66106**	SampType: **MBLK**	TestCode: **SM5210B: BOD**							
Client ID: **PBW**	Batch ID: **66106**	RunNo: **86527**							
Prep Date: **3/11/2022**	Analysis Date: **3/17/2022**	SeqNo: **3053531**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	ND	2.0								

Sample ID: **LCS-66106**	SampType: **LCS**	TestCode: **SM5210B: BOD**							
Client ID: **LCSW**	Batch ID: **66106**	RunNo: **86527**							
Prep Date: **3/11/2022**	Analysis Date: **3/17/2022**	SeqNo: **3053532**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	152	2.0	198.0	0	76.8	84.6	115.4			S

Sample ID: **2203648-002ADUP**	SampType: **DUP**	TestCode: **SM5210B: BOD**							
Client ID: **Raw Influent**	Batch ID: **66106**	RunNo: **86527**							
Prep Date: **3/11/2022**	Analysis Date: **3/17/2022**	SeqNo: **3053543**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	132	2.0						38.5	22.7	R

NOTES:

S-LCS recovery low

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2203648**

25-Apr-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-66103**	SampType: **MBLK**	TestCode: **SM 9223B Fecal Indicator: E. coli MPN**
Client ID: **PBW**	Batch ID: **66103**	RunNo: **86420**
Prep Date: **3/10/2022**	Analysis Date: **3/11/2022**	SeqNo: **3048790** Units: **MPN/100mL**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
E. Coli	<1	1.000								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2203648**

25-Apr-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-66911**	SampType: **mblk**	TestCode: **EPA Method 365.1: Total Phosphorous**
Client ID: **PBW**	Batch ID: **66911**	RunNo: **87411**
Prep Date: **4/18/2022**	Analysis Date: **4/19/2022**	SeqNo: **3092328** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Total (As P)	ND	0.050								

Sample ID: **LCS-66911**	SampType: **LCS**	TestCode: **EPA Method 365.1: Total Phosphorous**
Client ID: **LCSW**	Batch ID: **66911**	RunNo: **87411**
Prep Date: **4/18/2022**	Analysis Date: **4/19/2022**	SeqNo: **3092330** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Total (As P)	0.24	0.050	0.2500	0	96.7	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2203648**

25-Apr-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-66248**	SampType: **MBLK**	TestCode: **SM 4500 Norg C: TKN**
Client ID: **PBW**	Batch ID: **66248**	RunNo: **86574**
Prep Date: **3/17/2022**	Analysis Date: **3/18/2022**	SeqNo: **3055683** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Kjeldahl, Total	ND	1.0								

Sample ID: **LCS-66248**	SampType: **LCS**	TestCode: **SM 4500 Norg C: TKN**
Client ID: **LCSW**	Batch ID: **66248**	RunNo: **86574**
Prep Date: **3/17/2022**	Analysis Date: **3/18/2022**	SeqNo: **3055684** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Kjeldahl, Total	9.7	1.0	10.00	0	96.6	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2203648**

25-Apr-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-66210**	SampType: **MBLK**	TestCode: **SM 2540D: TSS**							
Client ID: **PBW**	Batch ID: **66210**	RunNo: **86525**							
Prep Date: **3/16/2022**	Analysis Date: **3/17/2022**	SeqNo: **3053365**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Suspended Solids	ND	4.0								

Sample ID: **LCS-66210**	SampType: **LCS**	TestCode: **SM 2540D: TSS**							
Client ID: **LCSW**	Batch ID: **66210**	RunNo: **86525**							
Prep Date: **3/16/2022**	Analysis Date: **3/17/2022**	SeqNo: **3053366**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Suspended Solids	92	4.0	92.40	0	99.6	83.44	119.05			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: clients.hallenvironmental.com

Sample Log-In Check List

Client Name: Village of Jemez Springs Work Order Number: 2203648 RcptNo: 1

Received By: Sean Livingston 3/10/2022 4:03:00 PM Sean Livingston

Completed By: Sean Livingston 3/10/2022 4:05:28 PM Sean Livingston

Reviewed By: SCL 3/10/22 @ 16:21

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Client		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☐	No ☑	NA ☐
	Samples were collected the same day and chilled.		
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☐	No ☐	NA ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: 3 (<2 or >12 unless noted)

Adjusted? NO

Checked by: JR 3/10/22

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order?	Yes ☐	No ☐	NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	11.9	Good				

Chain-of-Custody Record

Client: VILLAGE OF JEMEZ SPRINGS

Mailing Address: PO BOX 269
JEMEZ SPRINGS, NM 87025

Phone #: 575-829-4205

email or Fax#: JSWM@JEMEZSPRINGS-NM.GOV

QA/QC Package:
☒ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
☒ Standard ☐ Rush

Project Name:
VILLAGE OF JEMEZ SPRINGS

Project #:
WWTP

Project Manager:
ROSE FENTON

Sampler: ROSE FENTON

On Ice: ☒ Yes ☐ No

# of Coolers: 1

Cooler Temp (including CF): 11.9 +0=11.9 (°C)

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

2022 Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2203648	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	BOD5	TSS	E-COLI	T. NITROGEN/T. PHOSPHORUS	ARSENIC DISSOLVED	ALUMINUM TOTAL RECOVERABLE
3/10	1130	AQ	FINAL EFFLUENT	2-P	NONE	001											X	X				
3/10	1130	AQ	FINAL EFFLUENT	1-P	NA2S2O3														X			
3/10	1130	AQ	FINAL EFFLUENT	1-P	H2SO4															X		
3/10	1130	AQ	FINAL EFFLUENT	1-P	HNO3																X	
3/10	1130	AQ	FINAL EFFLUENT	1-P	HNO3																	
3/10	13:35	AQ	RAW INFLUENT	2-P		002											X	X				
	per sample bottle SLA 3/10/22																					

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
3/10	1603	R Fenton	SLA	COO	3/10/22	16:03
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time

Remarks:

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

May 04, 2022

Rose Fenton

Village of Jemez Springs
PO Box 269
Jemez Springs, NM 87025
TEL: (575) 829-3988
FAX: (575) 829-3339

RE: Village of Jemez Springs OrderNo.: 2204589

Dear Rose Fenton:

Hall Environmental Analysis Laboratory received 2 sample(s) on 4/13/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Village of Jemez Springs
Client Sample ID: Final Effluent
Project: Village of Jemez Springs
Collection Date: 4/13/2022 8:04:00 AM
Lab ID: 2204589-001 **Matrix:** AQUEOUS **Received Date:** 4/13/2022 10:54:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst: **bcv**	
Arsenic	0.042	0.0010	*	mg/L	1	4/14/2022 2:33:34 PM	A87266
SM5210B: BOD						Analyst: **dms**	
Biochemical Oxygen Demand	2.3	2.0		mg/L	1	4/19/2022 12:14:00 PM	66833
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **SMS**	
E. Coli	1.0	1.000		MPN/100	1	4/14/2022 3:57:00 PM	66826
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Nitrogen, Nitrite (As N)	ND	0.10		mg/L	1	4/14/2022 12:58:06 AM	R87235
Nitrogen, Nitrate (As N)	ND	0.10		mg/L	1	4/14/2022 12:58:06 AM	R87235
TOTAL NITROGEN						Analyst: **CJS**	
Nitrogen, Total	21	1.0		mg/L	1	5/3/2022 12:33:00 PM	R87682
EPA METHOD 365.1: TOTAL PHOSPHOROUS						Analyst: **CJS**	
Phosphorus, Total (As P)	0.36	0.25	D	mg/L	1	4/21/2022 11:00:00 AM	66952
SM 4500 NORG C: TKN						Analyst: **EKM**	
Nitrogen, Kjeldahl, Total	21	1.0		mg/L	1	4/26/2022 10:30:00 AM	67041
SM 2540D: TSS						Analyst: **KS**	
Suspended Solids	ND	4.0		mg/L	1	4/18/2022 11:47:00 AM	66876
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **ELS**	
Boron	2.3	0.20		mg/L	5	4/19/2022 3:16:56 PM	C87332
EPA METHOD 200.7: TOTAL METALS						Analyst: **ELS**	
Aluminum	ND	0.020		mg/L	1	4/19/2022 4:25:58 PM	66915

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Village of Jemez Springs
Client Sample ID: Raw Influent
Project: Village of Jemez Springs
Collection Date: 4/13/2022 9:03:00 AM
Lab ID: 2204589-002 **Matrix:** AQUEOUS **Received Date:** 4/13/2022 10:54:00 AM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM5210B: BOD						Analyst: **dms**	
Biochemical Oxygen Demand	74	2.0		mg/L	1	4/19/2022 12:14:00 PM	66833
SM 2540D: TSS						Analyst: **KS**	
Suspended Solids	90	20	D	mg/L	1	4/18/2022 11:47:00 AM	66876

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2204589**

04-May-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-C**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C87332**	RunNo: **87332**
Prep Date:	Analysis Date: **4/19/2022**	SeqNo: **3090269** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	ND	0.040								

Sample ID: **LLLCS-C**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C87332**	RunNo: **87332**
Prep Date:	Analysis Date: **4/19/2022**	SeqNo: **3090270** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.041	0.040	0.04000	0	104	50	150			

Sample ID: **LCS-C**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C87332**	RunNo: **87332**
Prep Date:	Analysis Date: **4/19/2022**	SeqNo: **3090271** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.54	0.040	0.5000	0	108	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2204589**

04-May-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-66915**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW**	Batch ID: **66915**	RunNo: **87332**
Prep Date: **4/18/2022**	Analysis Date: **4/19/2022**	SeqNo: **3088686** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								

Sample ID: **LLLCS-66915**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BatchQC**	Batch ID: **66915**	RunNo: **87332**
Prep Date: **4/18/2022**	Analysis Date: **4/19/2022**	SeqNo: **3088688** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020	0.01000	0	103	50	150			

Sample ID: **LCS-66915**	SampType: **LCS**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW**	Batch ID: **66915**	RunNo: **87332**
Prep Date: **4/18/2022**	Analysis Date: **4/19/2022**	SeqNo: **3088690** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.52	0.020	0.5000	0	104	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2204589**

04-May-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A87266**	RunNo: **87266**
Prep Date:	Analysis Date: **4/14/2022**	SeqNo: **3085899** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								

Sample ID: **LCSLL**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A87266**	RunNo: **87266**
Prep Date:	Analysis Date: **4/14/2022**	SeqNo: **3085900** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0010	0.0010	0.001000	0	102	50	150			

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A87266**	RunNo: **87266**
Prep Date:	Analysis Date: **4/14/2022**	SeqNo: **3085901** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	102	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2204589**

04-May-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB**	SampType: **ms**	TestCode: **EPA Method 300.0: Anions**
Client ID: **BatchQC**	Batch ID: **R87235**	RunNo: **87235**
Prep Date:	Analysis Date: **4/13/2022**	SeqNo: **3084721** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Nitrite (As N)	ND	0.10	1.000	0	0	83.4	105			S
Nitrogen, Nitrate (As N)	ND	0.10	2.500	0	0	93.5	110			S

Sample ID: **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R87235**	RunNo: **87235**
Prep Date:	Analysis Date: **4/13/2022**	SeqNo: **3084722** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Nitrite (As N)	0.98	0.10	1.000	0	98.2	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	101	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2204589**

04-May-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-66833**	SampType: **MBLK**	TestCode: **SM5210B: BOD**							
Client ID: **PBW**	Batch ID: **66833**	RunNo: **87355**							
Prep Date: **4/14/2022**	Analysis Date: **4/19/2022**	SeqNo: **3089801**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	ND	2.0								

Sample ID: **LCS-66833**	SampType: **LCS**	TestCode: **SM5210B: BOD**							
Client ID: **LCSW**	Batch ID: **66833**	RunNo: **87355**							
Prep Date: **4/14/2022**	Analysis Date: **4/19/2022**	SeqNo: **3089802**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	170	2.0	198.0	0	85.9	84.6	115.4			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2204589**
04-May-22

Client: Village of Jemez Springs
Project: Village of Jemez Springs

Sample ID: **MB-66826**	SampType: **MBLK**	TestCode: **SM 9223B Fecal Indicator: E. coli MPN**
Client ID: **PBW**	Batch ID: **66826**	RunNo: **87251**
Prep Date: ***4/13/2022***	Analysis Date: ***4/14/2022***	SeqNo: **3085292** Units: **MPN/100mL**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
E. Coli	<1	1.000								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2204589**

04-May-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-66952**	SampType: **MBLK**	TestCode: **EPA Method 365.1: Total Phosphorous**
Client ID: **PBW**	Batch ID: **66952**	RunNo: **87410**
Prep Date: **4/20/2022**	Analysis Date: **4/21/2022**	SeqNo: **3092245** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Total (As P)	ND	0.050								

Sample ID: **LCS-66952**	SampType: **LCS**	TestCode: **EPA Method 365.1: Total Phosphorous**
Client ID: **LCSW**	Batch ID: **66952**	RunNo: **87410**
Prep Date: **4/20/2022**	Analysis Date: **4/21/2022**	SeqNo: **3092246** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Total (As P)	0.24	0.050	0.2500	0	94.5	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2204589**

04-May-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-67041**	SampType: **MBLK**	TestCode: **SM 4500 Norg C: TKN**
Client ID: **PBW**	Batch ID: **67041**	RunNo: **87505**
Prep Date: **4/25/2022**	Analysis Date: **4/26/2022**	SeqNo: **3096578** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Kjeldahl, Total	ND	1.0								

Sample ID: **LCS-67041**	SampType: **LCS**	TestCode: **SM 4500 Norg C: TKN**
Client ID: **LCSW**	Batch ID: **67041**	RunNo: **87505**
Prep Date: **4/25/2022**	Analysis Date: **4/26/2022**	SeqNo: **3096579** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Kjeldahl, Total	10	1.0	10.00	0	101	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2204589**

04-May-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-66876**	SampType: **MBLK**	TestCode: **SM 2540D: TSS**
Client ID: **PBW**	Batch ID: **66876**	RunNo: **87306**
Prep Date: **4/15/2022**	Analysis Date: **4/18/2022**	SeqNo: **3087493** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Suspended Solids	ND	4.0								

Sample ID: **LCS-66876**	SampType: **LCS**	TestCode: **SM 2540D: TSS**
Client ID: **LCSW**	Batch ID: **66876**	RunNo: **87306**
Prep Date: **4/15/2022**	Analysis Date: **4/18/2022**	SeqNo: **3087494** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Suspended Solids	91	4.0	92.40	0	98.5	83.44	119.05			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **Village of Jemez Springs** Work Order Number: **2204589** RcptNo: **1**

Received By: **Juan Rojas** **4/13/2022 10:54:00 AM**

Completed By: **Desiree Dominguez** **4/13/2022 11:29:03 AM**

Reviewed By: TO 4/13/22 @ 1207

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Client

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☐ No ☑ NA ☐
   Samples were collected the same day and chilled.
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes ☐ No ☐ NA ☑
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐ # of preserved bottles checked for pH: 3 (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐ Adjusted? No
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐ Checked by: SCC 4/13/22

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	11.7	Good				

Chain-of-Custody Record

Client: Village of Jemez Springs

Mailing Address: P.O. Box 269
Jemez Springs, NM 87025

Phone #: 505-610-0708

email or Fax#: jswm@jemezsprings-nm.gov

QA/QC Package:
■ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other
☐ EDD (Type)

Turn-Around Time:
■ Standard ☐ Rush

Project Name:
Village of Jemez Springs

Project #:
WWTP

Project Manager:
Rose Fenton

Sampler: Rose Fenton
On Ice: ☐ Yes ☒ No
# of Coolers: 1
Cooler Temp(including CF): 11.8-0.1=11.7

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2204589	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	BOD5	TSS	T. Nitrogen/T.Phosporus	Arsenic dis/Boron dis	E-Coli	Aluminum Recoverable
4/13/22	0804	AQ	Final effluent	2-P	None	-001											■	■				
4/13/22	0804	AQ	Final effluent	1-P	Na2S2O3																■	
4/13/22	0804	AQ	Final effluent	1-P	H2SO4														■			
4/13/22	0804	AQ	Final effluent	1-P	HNO3															■		
4/13/22	0804	AQ	Final effluent	1-P	HNO3																	■
4/13/22	0903	AQ	Raw influent	2-P	None	-002											■	■				

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
4/13/22	1054	R Fenton ROSE FENTON		CDO	4/13/22	10:54
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time

Remarks:
Please email reports to:
jswm@jemezsprings-nm.gov
nmangin2021@gmail.com

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

June 13, 2022

Rose Fenton

Village of Jemez Springs
PO Box 269
Jemez Springs, NM 87025
TEL: (575) 829-3988
FAX (575) 829-3339

RE: Village of Jemez Springs OrderNo.: 2205918

Dear Rose Fenton:

Hall Environmental Analysis Laboratory received 3 sample(s) on 5/19/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Case Narrative

WO#: **2205918**
Date: **6/13/2022**

CLIENT: Village of Jemez Springs
Project: Village of Jemez Springs

Analytical Comments Regarding BOD:
The method blank(s) had a DO depletion >0.2mg/L.

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Village of Jemez Springs
Client Sample ID: Final Effluent
Project: Village of Jemez Springs
Collection Date: 5/19/2022 10:25:00 AM
Lab ID: 2205918-001 **Matrix:** AQUEOUS **Received Date:** 5/19/2022 3:30:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM5210B: BOD						Analyst: **dms**	
Biochemical Oxygen Demand	DO Depletion<2.0	2.0		mg/L	1	5/25/2022 12:59:00 PM	67587
SM 9223B FECAL INDICATOR: E. COLI	**MPN**					Analyst: **SMS**	
E. Coli	<1	1.000		MPN/100	1	5/20/2022 5:08:00 PM	67581
SM 2540D: TSS						Analyst: **KS**	
Suspended Solids	ND	4.0		mg/L	1	5/26/2022 2:46:00 PM	67686

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Village of Jemez Springs
Client Sample ID: Final Effluent
Project: Village of Jemez Springs
Collection Date: 5/19/2022 6:10:00 AM
Lab ID: 2205918-002 **Matrix:** AQUEOUS **Received Date:** 5/19/2022 3:30:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst: **bcv**	
Arsenic	0.14	0.010	*	mg/L	10	5/20/2022 4:46:46 PM	A88171
EPA METHOD 300.0: ANIONS						Analyst: **JTT**	
Nitrate+Nitrite as N	1.1	1.0		mg/L	5	6/2/2022 6:52:45 PM	R88447
TOTAL NITROGEN						Analyst: **CJS**	
Nitrogen, Total	18	1.0		mg/L	1	6/6/2022 10:15:00 AM	R88482
EPA METHOD 365.1: TOTAL PHOSPHOROUS						Analyst: **CJS**	
Phosphorus, Total (As P)	0.31	0.25	D	mg/L	1	5/25/2022 12:58:00 PM	67660
SM 4500 NORG C: TKN						Analyst: **EKM**	
Nitrogen, Kjeldahl, Total	17	1.0		mg/L	1	6/2/2022 9:56:00 AM	67820
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **ELS**	
Boron	1.7	0.20		mg/L	5	5/23/2022 5:17:46 PM	B88208
EPA METHOD 200.7: METALS						Analyst: **ELS**	
Aluminum	0.024	0.020		mg/L	1	5/24/2022 1:59:07 PM	67628

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Village of Jemez Springs
Client Sample ID: Raw Influent
Project: Village of Jemez Springs
Collection Date: 5/19/2022 9:07:00 AM
Lab ID: 2205918-003 **Matrix:** AQUEOUS **Received Date:** 5/19/2022 3:30:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM5210B: BOD						Analyst: **dms**	
Biochemical Oxygen Demand	74	2.0		mg/L	1	5/25/2022 12:59:00 PM	67587
SM 2540D: TSS						Analyst: **KS**	
Suspended Solids	44	8.0	D	mg/L	1	5/26/2022 2:46:00 PM	67686

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2205918**

13-Jun-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-67628**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW**	Batch ID: **67628**	RunNo: **88237**
Prep Date: **5/23/2022**	Analysis Date: **5/24/2022**	SeqNo: **3129091** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								

Sample ID: **LCSLL-67628**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **67628**	RunNo: **88237**
Prep Date: **5/23/2022**	Analysis Date: **5/24/2022**	SeqNo: **3129092** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020	0.01000	0	115	50	150			

Sample ID: **LCS-67628**	SampType: **LCS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW**	Batch ID: **67628**	RunNo: **88237**
Prep Date: **5/23/2022**	Analysis Date: **5/24/2022**	SeqNo: **3129093** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.56	0.020	0.5000	0	111	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2205918**

13-Jun-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B88208**	RunNo: **88208**
Prep Date:	Analysis Date: **5/23/2022**	SeqNo: **3127152** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	ND	0.040								

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B88208**	RunNo: **88208**
Prep Date:	Analysis Date: **5/23/2022**	SeqNo: **3127156** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.043	0.040	0.04000	0	107	50	150			

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B88208**	RunNo: **88208**
Prep Date:	Analysis Date: **5/23/2022**	SeqNo: **3127157** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.51	0.040	0.5000	0	102	85	115			

Sample ID: **2205918-002BMS**	SampType: **MS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **Final Effluent**	Batch ID: **B88208**	RunNo: **88208**
Prep Date:	Analysis Date: **5/23/2022**	SeqNo: **3127267** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	4.4	0.20	2.500	1.662	108	70	130			

Sample ID: **2205918-002BMSD**	SampType: **MSD**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **Final Effluent**	Batch ID: **B88208**	RunNo: **88208**
Prep Date:	Analysis Date: **5/23/2022**	SeqNo: **3127268** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	4.3	0.20	2.500	1.662	105	70	130	1.63	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2205918**

13-Jun-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A88171**	RunNo: **88171**
Prep Date:	Analysis Date: **5/20/2022**	SeqNo: **3126735** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								

Sample ID: **LCSLL**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A88171**	RunNo: **88171**
Prep Date:	Analysis Date: **5/20/2022**	SeqNo: **3126736** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0010	0.0010	0.001000	0	101	50	150			

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A88171**	RunNo: **88171**
Prep Date:	Analysis Date: **5/20/2022**	SeqNo: **3126737** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	101	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2205918**

13-Jun-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R88447**	RunNo: **88447**
Prep Date:	Analysis Date: **6/2/2022**	SeqNo: **3137873** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	ND	0.20								

Sample ID: **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R88447**	RunNo: **88447**
Prep Date:	Analysis Date: **6/2/2022**	SeqNo: **3137874** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.6	0.20	3.500	0	103	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2205918**

13-Jun-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-67587**	SampType: **MBLK**	TestCode: **SM5210B: BOD**
Client ID: **PBW**	Batch ID: **67587**	RunNo: **88265**
Prep Date: **5/20/2022**	Analysis Date: **5/25/2022**	SeqNo: **3129991** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	ND	2.0								

Sample ID: **LCS-67587**	SampType: **LCS**	TestCode: **SM5210B: BOD**
Client ID: **LCSW**	Batch ID: **67587**	RunNo: **88265**
Prep Date: **5/20/2022**	Analysis Date: **5/25/2022**	SeqNo: **3129992** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	203	2.0	198.0	0	103	84.6	115.4			

Sample ID: **2205918-003ADUP**	SampType: **DUP**	TestCode: **SM5210B: BOD**
Client ID: **Raw Influent**	Batch ID: **67587**	RunNo: **88265**
Prep Date: **5/20/2022**	Analysis Date: **5/25/2022**	SeqNo: **3129999** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	70	2.0						5.48	22.7	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2205918**
13-Jun-22

Client: Village of Jemez Springs
Project: Village of Jemez Springs

Sample ID: **MB-67581**	SampType: **MBLK**	TestCode: **SM 9223B Fecal Indicator: E. coli MPN**
Client ID: **PBW**	Batch ID: **67581**	RunNo: **88175**
Prep Date: **5/19/2022**	Analysis Date: **5/20/2022**	SeqNo: **3125862** Units: **MPN/100mL**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
E. Coli	<1	1.000								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2205918**

13-Jun-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-67660**	SampType: **MBLK**	TestCode: **EPA Method 365.1: Total Phosphorous**
Client ID: **PBW**	Batch ID: **67660**	RunNo: **88255**
Prep Date: **5/24/2022**	Analysis Date: **5/25/2022**	SeqNo: **3129731** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Total (As P)	ND	0.050								

Sample ID: **LCS-67660**	SampType: **LCS**	TestCode: **EPA Method 365.1: Total Phosphorous**
Client ID: **LCSW**	Batch ID: **67660**	RunNo: **88255**
Prep Date: **5/24/2022**	Analysis Date: **5/25/2022**	SeqNo: **3129732** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Total (As P)	0.24	0.050	0.2500	0	96.2	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2205918**

13-Jun-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-67820**	SampType: **MBLK**	TestCode: **SM 4500 Norg C: TKN**
Client ID: **PBW**	Batch ID: **67820**	RunNo: **88420**
Prep Date: **6/1/2022**	Analysis Date: **6/2/2022**	SeqNo: **3136967** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Kjeldahl, Total	ND	1.0								

Sample ID: **LCS-67820**	SampType: **LCS**	TestCode: **SM 4500 Norg C: TKN**
Client ID: **LCSW**	Batch ID: **67820**	RunNo: **88420**
Prep Date: **6/1/2022**	Analysis Date: **6/2/2022**	SeqNo: **3136968** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Kjeldahl, Total	9.8	1.0	10.00	0	98.0	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2205918**

13-Jun-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-67686**	SampType: **MBLK**	TestCode: **SM 2540D: TSS**
Client ID: **PBW**	Batch ID: **67686**	RunNo: **88299**
Prep Date: **5/25/2022**	Analysis Date: **5/26/2022**	SeqNo: **3131504** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Suspended Solids	ND	4.0								

Sample ID: **LCS-67686**	SampType: **LCS**	TestCode: **SM 2540D: TSS**
Client ID: **LCSW**	Batch ID: **67686**	RunNo: **88299**
Prep Date: **5/25/2022**	Analysis Date: **5/26/2022**	SeqNo: **3131505** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Suspended Solids	96	4.0	92.40	0	104	83.44	119.05			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **Village of Jemez Springs** Work Order Number: **2205918** RcptNo: **1**

Received By: **Cheyenne Cason** **5/19/2022 3:30:00 PM**

Completed By: **Cheyenne Cason** **5/19/2022 3:42:59 PM**

Reviewed By: SCL 5/19/22 @ 16:00

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Client		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☐	No ☐	NA ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	# of preserved bottles checked for pH: 3 (<2 or >12 unless noted)
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	Adjusted? NO
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	Checked by: JN 5/19/22

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	6.0	Good	Not Present			

Chain-of-Custody Record

Client: Village of Jemez Springs

Mailing Address: P.O. Box 269
Jemez Springs, NM 87025

Phone #: 505-610-0708

email or Fax#: jswm@jemezsprings-nm.gov

QA/QC Package:
■ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
■ Standard ☐ Rush

Project Name: Village of Jemez Springs

Project #: WWTP

Project Manager: Rose Fenton

Sampler: Rose Fenton
On Ice: ☒ Yes ☐ No
# of Coolers: 1
Cooler Temp(including CF): 6.1 0.1=6.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2205918	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	BOD5, TSS	T. N / T.P	DIS. AS / DIS. B	DIS. AL TOTAL RECOVERABLE	E.COLI	BOD5/TSS
5/19/22	1025	AQ	FINAL EFFLUENT	1-P	NONE	001											■					
5/19/22	06:10	AQ	FINAL EFFLUENT	1-P	H2SO4	002												■					
5/19/22	06:10	AQ	FINAL EFFLUENT/FILTER	1-P	HNO3														■				
5/19/22	06:10	AQ	FINAL EFFLUENT	1-P	HNO3	1														■			
5/19/22	1025	AQ	FINAL EFFLUENT	1-P	NA2S2O3	001															■		
5/19/22	0907	AQ	RAW INFLUENT	1-P	NONE	003																	■

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
5/19/22	1527	R Fenton	Cmc	COO	5/19/22	1530
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time

Remarks:
Please email reports to:
jswm@jemezsprings-nm.gov
nmangin2021@gmail.com

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

July 12, 2022

Rose Fenton

Village of Jemez Springs
PO Box 269
Jemez Springs, NM 87025
TEL: (575) 829-3988
FAX (575) 829-3339

RE: Village of Jemez Springs OrderNo.: 2206986

Dear Rose Fenton:

Hall Environmental Analysis Laboratory received 2 sample(s) on 6/17/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Village of Jemez Springs
Client Sample ID: Final Effluent
Project: Village of Jemez Springs
Collection Date: 6/17/2022 2:08:00 PM
Lab ID: 2206986-001 **Matrix:** AQUEOUS **Received Date:** 6/17/2022 4:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst: **bcv**	
Arsenic	0.11	0.0050	*	mg/L	5	6/21/2022 12:03:48 PM	B88918
SM5210B: BOD						Analyst: **dms**	
Biochemical Oxygen Demand	8.2	2.0	R	mg/L	1	6/23/2022 1:43:00 PM	68182
NOTES: R-RPD between dilutions >30%							
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Nitrate+Nitrite as N	5.1	1.0		mg/L	5	6/24/2022 3:25:30 PM	R89012
TOTAL NITROGEN						Analyst: **MRA**	
Nitrogen, Total	16	1.0		mg/L	1	7/7/2022 3:48:00 PM	R89305
EPA METHOD 365.1: TOTAL PHOSPHOROUS						Analyst: **JMT**	
Phosphorus, Total (As P)	2.4	0.25	D	mg/L	1	6/23/2022 1:34:00 PM	68292
SM 4500 NORG C: TKN						Analyst: **EKM**	
Nitrogen, Kjeldahl, Total	11	1.0		mg/L	1	7/5/2022 9:59:00 AM	68504
SM 2540D: TSS						Analyst: **KS**	
Suspended Solids	ND	4.0		mg/L	1	6/23/2022 11:55:00 AM	68257
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **JLF**	
Boron	1.5	0.20		mg/L	5	6/21/2022 7:19:16 PM	A88936
EPA METHOD 200.7: TOTAL METALS						Analyst: **JLF**	
Aluminum	ND	0.020		mg/L	1	6/21/2022 6:08:04 PM	68213

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Village of Jemez Springs
Client Sample ID: Raw Influent
Project: Village of Jemez Springs
Collection Date: 6/17/2022 2:28:00 PM
Lab ID: 2206986-002 **Matrix:** AQUEOUS **Received Date:** 6/17/2022 4:23:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM5210B: BOD						Analyst: **dms**	
Biochemical Oxygen Demand	100	2.0		mg/L	1	6/23/2022 1:43:00 PM	68182
SM 2540D: TSS						Analyst: **KS**	
Suspended Solids	70	20	D	mg/L	1	6/23/2022 11:55:00 AM	68257

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2206986**

12-Jul-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A88936**	RunNo: **88936**
Prep Date:	Analysis Date: **6/21/2022**	SeqNo: **3158359** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	ND	0.040								

Sample ID: **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A88936**	RunNo: **88936**
Prep Date:	Analysis Date: **6/21/2022**	SeqNo: **3158360** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.041	0.040	0.04000	0	103	50	150			

Sample ID: **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A88936**	RunNo: **88936**
Prep Date:	Analysis Date: **6/21/2022**	SeqNo: **3158361** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.51	0.040	0.5000	0	102	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2206986**

12-Jul-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-68213**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW**	Batch ID: **68213**	RunNo: **88936**
Prep Date: **6/18/2022**	Analysis Date: **6/21/2022**	SeqNo: **3158412** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								

Sample ID: **LCSLL-68213**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BatchQC**	Batch ID: **68213**	RunNo: **88936**
Prep Date: **6/18/2022**	Analysis Date: **6/21/2022**	SeqNo: **3158413** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020	0.01000	0	123	50	150			

Sample ID: **LCS-68213**	SampType: **LCS**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW**	Batch ID: **68213**	RunNo: **88936**
Prep Date: **6/18/2022**	Analysis Date: **6/21/2022**	SeqNo: **3158414** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.55	0.020	0.5000	0	109	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2206986**

12-Jul-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B88918**	RunNo: **88918**
Prep Date:	Analysis Date: **6/21/2022**	SeqNo: **3157492** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								

Sample ID: **LCSLL**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B88918**	RunNo: **88918**
Prep Date:	Analysis Date: **6/21/2022**	SeqNo: **3157493** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0012	0.0010	0.001000	0	117	50	150			

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B88918**	RunNo: **88918**
Prep Date:	Analysis Date: **6/21/2022**	SeqNo: **3157494** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.026	0.0010	0.02500	0	105	85	115			

Sample ID: **LCSD**	SampType: **LCSD**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSS02**	Batch ID: **B88918**	RunNo: **88918**
Prep Date:	Analysis Date: **6/21/2022**	SeqNo: **3157495** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.026	0.0010	0.02500	0	105	85	115	0.0894	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2206986**

12-Jul-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **PBW**	Batch ID: **R89012**	RunNo: **89012**							
Prep Date:	Analysis Date: **6/24/2022**	SeqNo: **3161898**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	ND	0.20								

Sample ID: **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **LCSW**	Batch ID: **R89012**	RunNo: **89012**							
Prep Date:	Analysis Date: **6/24/2022**	SeqNo: **3161899**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.6	0.20	3.500	0	104	90	110			

Sample ID: **2206986-001BMS**	SampType: **ms**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **Final Effluent**	Batch ID: **R89012**	RunNo: **89012**							
Prep Date:	Analysis Date: **6/24/2022**	SeqNo: **3161918**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	23	1.0	17.50	5.113	101	90.9	108			

Sample ID: **2206986-001BMSD**	SampType: **msd**	TestCode: **EPA Method 300.0: Anions**							
Client ID: **Final Effluent**	Batch ID: **R89012**	RunNo: **89012**							
Prep Date:	Analysis Date: **6/24/2022**	SeqNo: **3161919**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	23	1.0	17.50	5.113	101	90.9	108	0.580	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2206986**

12-Jul-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-68182**	SampType: **MBLK**	TestCode: **SM5210B: BOD**
Client ID: **PBW**	Batch ID: **68182**	RunNo: **88960**
Prep Date: **6/17/2022**	Analysis Date: **6/23/2022**	SeqNo: **3160281** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	ND	2.0								

Sample ID: **LCS-68182**	SampType: **LCS**	TestCode: **SM5210B: BOD**
Client ID: **LCSW**	Batch ID: **68182**	RunNo: **88960**
Prep Date: **6/17/2022**	Analysis Date: **6/23/2022**	SeqNo: **3160282** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	206	2.0	198.0	0	104	84.6	115.4			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2206986**
12-Jul-22

Client: Village of Jemez Springs
Project: Village of Jemez Springs

Sample ID: **MB-68292**	SampType: **MBLK**	TestCode: **EPA Method 365.1: Total Phosphorous**
Client ID: **PBW**	Batch ID: **68292**	RunNo: **88983**
Prep Date: **6/22/2022**	Analysis Date: **6/23/2022**	SeqNo: **3160139** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Total (As P)	ND	0.050								

Sample ID: **LCS-68292**	SampType: **LCS**	TestCode: **EPA Method 365.1: Total Phosphorous**
Client ID: **LCSW**	Batch ID: **68292**	RunNo: **88983**
Prep Date: **6/22/2022**	Analysis Date: **6/23/2022**	SeqNo: **3160140** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Total (As P)	0.24	0.050	0.2500	0	95.0	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2206986**

12-Jul-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-68504**	SampType: **MBLK**	TestCode: **SM 4500 Norg C: TKN**
Client ID: **PBW**	Batch ID: **68504**	RunNo: **89220**
Prep Date: **7/1/2022**	Analysis Date: **7/5/2022**	SeqNo: **3171579** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Kjeldahl, Total	ND	1.0								

Sample ID: **LCS-68504**	SampType: **LCS**	TestCode: **SM 4500 Norg C: TKN**
Client ID: **LCSW**	Batch ID: **68504**	RunNo: **89220**
Prep Date: **7/1/2022**	Analysis Date: **7/5/2022**	SeqNo: **3171580** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Kjeldahl, Total	10	1.0	10.00	0	101	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2206986**

12-Jul-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-68257**	SampType: **MBLK**	TestCode: **SM 2540D: TSS**							
Client ID: **PBW**	Batch ID: **68257**	RunNo: **88970**							
Prep Date: **6/22/2022**	Analysis Date: **6/23/2022**	SeqNo: **3159769**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Suspended Solids	ND	4.0								

Sample ID: **LCS-68257**	SampType: **LCS**	TestCode: **SM 2540D: TSS**							
Client ID: **LCSW**	Batch ID: **68257**	RunNo: **88970**							
Prep Date: **6/22/2022**	Analysis Date: **6/23/2022**	SeqNo: **3159770**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Suspended Solids	94	4.0	92.40	0	102	83.44	119.05			

Sample ID: **2206986-001ADUP**	SampType: **DUP**	TestCode: **SM 2540D: TSS**							
Client ID: **Final Effluent**	Batch ID: **68257**	RunNo: **88970**							
Prep Date: **6/22/2022**	Analysis Date: **6/23/2022**	SeqNo: **3159789**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Suspended Solids	ND	4.0						0	10	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **Village of Jemez Springs** Work Order Number: **2206986** RcptNo: **1**

Received By: **Juan Rojas** **6/17/2022 4:23:00 PM**

Completed By: **Desiree Dominguez** **6/17/2022 4:35:11 PM**

Reviewed By: JR 6/17/22 @16:41

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Client

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☐ No ☑ NA ☐
   Samples were collected the same day and chilled.
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preserved added to bottles? Yes ☐ No ☑ NA ☐ 6-17-22
9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes ☐ No ☐ NA ☑
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: 3 (<2 or >12 unless noted)
Adjusted? Yes
Checked by: 6-17-22

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

16. Additional remarks: Added 0.4 ml of HNO_3 to Sample 001 D for pH less than 2. 6-17-22

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	19.3	Good				

Chain-of-Custody Record

Client: Village of Jemez Springs

Mailing Address: P.O. Box 269

Jemez Springs, NM 87025

Phone #: 505-610-0708

email or Fax#: jswm@jemezsprings-nm.gov

QA/QC Package:

■ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other_____

☐ EDD (Type) _____

Turn-Around Time:

■ Standard ☐ Rush_____

Project Name: Village of Jemez Springs

Project #: WWTP

Project Manager: Rose Fenton

Sampler: Rose Fenton

On Ice: ~~☐~~ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 19.4-0.1=19.3

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2206986	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	BOD5 / TSS	T. N. / T. P.	DIS AS / DIS. B	T. RECOVERABLE AL	BOD5 / TSS	
6/17/22	1408	AQ	FINAL EFFLUENT	1-P	NONE	-001											■					
6/17/22	1408	AQ	FINAL EFFLUENT	1-P	H2SO4													■				
6/17/22	1408	AQ	FINAL EFFLUENT	1-P	HNO3														■			
6/17/22	1408	AQ	FINAL EFFLUENT	1-P	HNO3															■		
6/17/22	1428	AQ	RAW INFLUENT	1-P	NONE	-002															■	

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
6/17/22	1623				6/17/22	16:23
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time

Remarks:

Please email reports to:
jswm@jemezsprings-nm.gov
nmangin2021@gmail.com

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

August 05, 2022

Rose Fenton

Village of Jemez Springs
PO Box 269
Jemez Springs, NM 87025
TEL: (575) 829-3988
FAX: (575) 829-3339

RE: Village of Jemez Springs OrderNo.: 2207893

Dear Rose Fenton:

Hall Environmental Analysis Laboratory received 2 sample(s) on 7/19/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Village of Jemez Springs
Client Sample ID: Final Effluent
Project: Village of Jemez Springs
Collection Date: 7/19/2022 11:58:00 AM
Lab ID: 2207893-001 **Matrix:** AQUEOUS **Received Date:** 7/19/2022 2:25:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst: **ELS**	
Arsenic	0.097	0.0050	*	mg/L	5	7/29/2022 12:59:56 PM	B89910
SM5210B: BOD						Analyst: **AG**	
Biochemical Oxygen Demand	2.1	2.0		mg/L	1	7/25/2022 12:05:00 PM	68904
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **SMS**	
E. Coli	7.5	1.000		MPN/100	1	7/20/2022 5:44:00 PM	68902
EPA METHOD 300.0: ANIONS						Analyst: **NAI**	
Nitrate+Nitrite as N	7.8	1.0		mg/L	5	8/1/2022 1:44:24 PM	R89942
TOTAL NITROGEN						Analyst: **EKM**	
Nitrogen, Total	14	1.0		mg/L	1	8/3/2022 1:24:00 PM	R89985
EPA METHOD 365.1: TOTAL PHOSPHOROUS						Analyst: **JMT**	
Phosphorus, Total (As P)	1.3	0.25		mg/L	5	7/21/2022 2:10:00 PM	68919
SM 4500 NORG C: TKN						Analyst: **EKM**	
Nitrogen, Kjeldahl, Total	5.9	1.0		mg/L	1	8/2/2022 9:59:00 AM	69177
SM 2540D: TSS						Analyst: **KS**	
Suspended Solids	ND	4.0		mg/L	1	7/26/2022 12:38:00 PM	69032
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **JRR**	
Boron	1.8	0.20		mg/L	5	7/26/2022 9:47:34 AM	A89845
EPA METHOD 200.7: TOTAL METALS						Analyst: **JLF**	
Aluminum	ND	0.020		mg/L	1	8/1/2022 6:35:51 PM	68918

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Village of Jemez Springs
Client Sample ID: Raw Influent
Project: Village of Jemez Springs
Collection Date: 7/19/2022 9:55:00 AM
Lab ID: 2207893-002 **Matrix:** AQUEOUS **Received Date:** 7/19/2022 2:25:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM5210B: BOD						Analyst: **AG**	
Biochemical Oxygen Demand	<29.4	2.0	E	mg/L	1	7/25/2022 12:05:00 PM	68904
NOTES: Estimated Value due to all bottles having DO Depletion <2.0							
SM 2540D: TSS						Analyst: **KS**	
Suspended Solids	60	20	D	mg/L	1	7/26/2022 12:38:00 PM	69032

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2207893**

05-Aug-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A89845**	RunNo: **89845**
Prep Date:	Analysis Date: **7/26/2022**	SeqNo: **3199434** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	ND	0.040								

Sample ID: **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A89845**	RunNo: **89845**
Prep Date:	Analysis Date: **7/26/2022**	SeqNo: **3199435** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.040	0.040	0.04000	0	101	50	150			

Sample ID: **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A89845**	RunNo: **89845**
Prep Date:	Analysis Date: **7/26/2022**	SeqNo: **3199436** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.50	0.040	0.5000	0	100	85	115			

Sample ID: **2207893-001CMS**	SampType: **MS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **Final Effluent**	Batch ID: **A89845**	RunNo: **89845**
Prep Date:	Analysis Date: **7/26/2022**	SeqNo: **3199463** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	4.4	0.20	2.500	1.808	102	70	130			

Sample ID: **2207893-001CMSD**	SampType: **MSD**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **Final Effluent**	Batch ID: **A89845**	RunNo: **89845**
Prep Date:	Analysis Date: **7/26/2022**	SeqNo: **3199464** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	4.4	0.20	2.500	1.808	104	70	130	1.01	20	

Sample ID: **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A89845**	RunNo: **89845**
Prep Date:	Analysis Date: **7/26/2022**	SeqNo: **3200793** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	ND	0.040								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2207893**

05-Aug-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A89845**	RunNo: **89845**
Prep Date:	Analysis Date: **7/26/2022**	SeqNo: **3200794** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	ND	0.040	0.04000	0	98.0	50	150			

Sample ID: **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A89845**	RunNo: **89845**
Prep Date:	Analysis Date: **7/26/2022**	SeqNo: **3200795** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.49	0.040	0.5000	0	97.7	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2207893**

05-Aug-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-68918**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW**	Batch ID: **68918**	RunNo: **89701**
Prep Date: **7/20/2022**	Analysis Date: **7/21/2022**	SeqNo: **3193888** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								

Sample ID: **LCSLL-68918**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BatchQC**	Batch ID: **68918**	RunNo: **89701**
Prep Date: **7/20/2022**	Analysis Date: **7/21/2022**	SeqNo: **3193889** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020	0.01000	0	125	50	150			

Sample ID: **LCS-68918**	SampType: **LCS**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW**	Batch ID: **68918**	RunNo: **89701**
Prep Date: **7/20/2022**	Analysis Date: **7/21/2022**	SeqNo: **3193890** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.54	0.020	0.5000	0	108	85	115			

Sample ID: **2207893-001DMS**	SampType: **MS**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **Final Effluent**	Batch ID: **68918**	RunNo: **89952**
Prep Date: **7/20/2022**	Analysis Date: **8/1/2022**	SeqNo: **3204862** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.56	0.020	0.5000	0	112	70	130			

Sample ID: **2207893-001DMSD**	SampType: **MSD**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **Final Effluent**	Batch ID: **68918**	RunNo: **89952**
Prep Date: **7/20/2022**	Analysis Date: **8/1/2022**	SeqNo: **3204863** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.56	0.020	0.5000	0	112	70	130	0.248	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2207893**

05-Aug-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **2207893-001CMS**	SampType: **MS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **Final Effluent**	Batch ID: **B89910**	RunNo: **89910**
Prep Date:	Analysis Date: **7/29/2022**	SeqNo: **3202884** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.22	0.0050	0.1250	0.09711	97.4	70	130			

Sample ID: **2207893-001CMSD**	SampType: **MSD**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **Final Effluent**	Batch ID: **B89910**	RunNo: **89910**
Prep Date:	Analysis Date: **7/29/2022**	SeqNo: **3202885** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.22	0.0050	0.1250	0.09711	94.8	70	130	1.51	20	

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B89910**	RunNo: **89910**
Prep Date:	Analysis Date: **7/29/2022**	SeqNo: **3202886** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								

Sample ID: **LLLCS**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B89910**	RunNo: **89910**
Prep Date:	Analysis Date: **7/29/2022**	SeqNo: **3202887** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0010	0.0010	0.001000	0	102	50	150			

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B89910**	RunNo: **89910**
Prep Date:	Analysis Date: **7/29/2022**	SeqNo: **3202889** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	96.2	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2207893**

05-Aug-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R89942**	RunNo: **89942**
Prep Date:	Analysis Date: **8/1/2022**	SeqNo: **3204474** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	ND	0.20								

Sample ID: **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R89942**	RunNo: **89942**
Prep Date:	Analysis Date: **8/1/2022**	SeqNo: **3204475** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.6	0.20	3.500	0	102	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2207893**

05-Aug-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-68904**	SampType: **MBLK**	TestCode: **SM5210B: BOD**
Client ID: **PBW**	Batch ID: **68904**	RunNo: **89776**
Prep Date: **7/20/2022**	Analysis Date: **7/25/2022**	SeqNo: **3196884** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	ND	2.0								

Sample ID: **LCS-68904**	SampType: **LCS**	TestCode: **SM5210B: BOD**
Client ID: **LCSW**	Batch ID: **68904**	RunNo: **89776**
Prep Date: **7/20/2022**	Analysis Date: **7/25/2022**	SeqNo: **3196885** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	202	2.0	198.0	0	102	84.6	115.4			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2207893**

05-Aug-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-68902**	SampType: **MBLK**	TestCode: **SM 9223B Fecal Indicator: E. coli MPN**
Client ID: **PBW**	Batch ID: **68902**	RunNo: **89647**
Prep Date: **7/19/2022**	Analysis Date: **7/20/2022**	SeqNo: **3191659** Units: **MPN/100mL**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
E. Coli	<1	1.000								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2207893**

05-Aug-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-68919**	SampType: **mblk**	TestCode: **EPA Method 365.1: Total Phosphorous**
Client ID: **PBW**	Batch ID: **68919**	RunNo: **89682**
Prep Date: **7/20/2022**	Analysis Date: **7/21/2022**	SeqNo: **3192784** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Total (As P)	ND	0.050								

Sample ID: **LCS-68919**	SampType: **LCS**	TestCode: **EPA Method 365.1: Total Phosphorous**
Client ID: **LCSW**	Batch ID: **68919**	RunNo: **89682**
Prep Date: **7/20/2022**	Analysis Date: **7/21/2022**	SeqNo: **3192785** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Total (As P)	0.23	0.050	0.2500	0	93.9	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2207893**

05-Aug-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-69177**	SampType: **MBLK**	TestCode: **SM 4500 Norg C: TKN**
Client ID: **PBW**	Batch ID: **69177**	RunNo: **89956**
Prep Date: **8/1/2022**	Analysis Date: **8/2/2022**	SeqNo: **3205199** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Kjeldahl, Total	ND	1.0								

Sample ID: **LCS-69177**	SampType: **LCS**	TestCode: **SM 4500 Norg C: TKN**
Client ID: **LCSW**	Batch ID: **69177**	RunNo: **89956**
Prep Date: **8/1/2022**	Analysis Date: **8/2/2022**	SeqNo: **3205200** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Kjeldahl, Total	9.9	1.0	10.00	0	99.4	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2207893**

05-Aug-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-69032**	SampType: **MBLK**	TestCode: **SM 2540D: TSS**							
Client ID: **PBW**	Batch ID: **69032**	RunNo: **89800**							
Prep Date: **7/25/2022**	Analysis Date: **7/26/2022**	SeqNo: **3197762**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Suspended Solids	ND	4.0								

Sample ID: **LCS-69032**	SampType: **LCS**	TestCode: **SM 2540D: TSS**							
Client ID: **LCSW**	Batch ID: **69032**	RunNo: **89800**							
Prep Date: **7/25/2022**	Analysis Date: **7/26/2022**	SeqNo: **3197763**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Suspended Solids	98	4.0	92.40	0	106	83.44	119.05			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Village of Jemez Springs Work Order Number: 2207893 RcptNo: 1

Received By: **Joseph Alderette** 7/19/2022 2:25:00 PM

Completed By: **Isaiah Ortiz** 7/19/2022 2:37:01 PM

Reviewed By: 7.19.22

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Client		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☐	No ☐	NA ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: 3 (<2 or >12 unless noted)
Adjusted? NO
Checked by: KPC 7.19.22

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: ____ Date: ____
By Whom: ____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: ____
Client Instructions: ____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	5.7	Good	Not Present			

Chain-of-Custody Record

Client: Village of Jemez Springs

Mailing Address: P.O. Box 269

Jemez Springs, NM 87025

Phone #: 505-610-0708

email or Fax#: jswm@jemezsprings-nm.gov

QA/QC Package:

■ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other_____

☐ EDD (Type) _____

Turn-Around Time:

■ Standard ☐ Rush_____

Project Name:

Village of Jemez Springs

Project #:

WWTP

Project Manager:

Rose Fenton

Sampler: Rose Fenton

On Ice: ☑ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 5.7 -0 = 5.7°C

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2207893
7/19/22	1158	AQ	FINAL EFFLUENT	1-P	NONE	001
7/19/22	1158	AQ	FINAL EFFLUENT	1-P	H2SO4	
7/19/22	1158	AQ	FINAL EFFLUENT	1-P	HN03	
7/19/22	1158	AQ	FINAL EFFLUENT	1-P	HNO3	
7/19/22	2955	AQ	RAW INFLUENT	1-P	NONE	002
7/19/22	1158	AQ	FINAL EFFLUENT	1-P	NA2S2O3	001

Analysis Request

Sample	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	BOD5/TSS	TOTAL N. / TOTAL P.	DIS. As / / DIS. B	Total Recoverable Al.	BOD5 / TSS	ECOLI
001											■					
1												■				
1													■			
1														■		
002															■	
001																■

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
7/19/22	14:25			CDD	7.19.22	14:25
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time

Remarks:

Please email reports to:
jswm@jemezsprings-nm.gov
nmangin2021@gmail.com

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

October 04, 2022

Rose Fenton

Village of Jemez Springs
PO Box 269
Jemez Springs, NM 87025
TEL: (575) 829-3988
FAX (575) 829-3339

RE: Village of Jemez Springs OrderNo.: 2209780

Dear Rose Fenton:

Hall Environmental Analysis Laboratory received 2 sample(s) on 9/15/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Village of Jemez Springs
Client Sample ID: Raw Influent
Project: Village of Jemez Springs
Collection Date: 9/15/2022 9:06:00 AM
Lab ID: 2209780-001 **Matrix:** AQUEOUS **Received Date:** 9/15/2022 12:07:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM5210B: BOD						Analyst: **AG**	
Biochemical Oxygen Demand	221	2.0	R	mg/L	1	9/21/2022 12:38:00 PM	70217
NOTES: R-RPD between dilutions >30%							
SM 2540D: TSS						Analyst: **KS**	
Suspended Solids	180	20	D	mg/L	1	9/21/2022 11:27:00 AM	70297

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Village of Jemez Springs
Client Sample ID: Final Effluent
Project: Village of Jemez Springs
Collection Date: 9/15/2022 9:25:00 AM
Lab ID: 2209780-002 **Matrix:** AQUEOUS **Received Date:** 9/15/2022 12:07:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst: **bcv**	
Arsenic	0.16	0.010	*	mg/L	10	9/19/2022 12:33:50 PM	A91132
SM5210B: BOD						Analyst: **AG**	
Biochemical Oxygen Demand	ND	2.0		mg/L	1	9/21/2022 12:38:00 PM	70217
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **SMS**	
E. Coli	<1	1.000		MPN/100	1	9/16/2022 3:42:00 PM	70208
EPA METHOD 300.0: ANIONS						Analyst: **JTT**	
Nitrate+Nitrite as N	8.8	1.0		mg/L	5	9/22/2022 2:02:48 AM	A91222
TOTAL NITROGEN						Analyst: **CJS**	
Nitrogen, Total	10	1.0		mg/L	1	9/30/2022 4:08:00 PM	R91449
EPA METHOD 365.1: TOTAL PHOSPHOROUS						Analyst: **JMT**	
Phosphorus, Total (As P)	1.4	0.25		mg/L	5	9/21/2022 6:09:00 PM	70295
SM 4500 NORG C: TKN						Analyst: **EKM**	
Nitrogen, Kjeldahl, Total	1.4	1.0		mg/L	1	9/30/2022 1:21:00 PM	70509
SM 2540D: TSS						Analyst: **KS**	
Suspended Solids	4.0	4.0		mg/L	1	9/21/2022 11:27:00 AM	70297
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **JRR**	
Boron	1.2	0.20		mg/L	5	9/27/2022 4:26:39 PM	C91347
EPA METHOD 200.7: TOTAL METALS						Analyst: **VP**	
Aluminum	ND	0.020		mg/L	1	9/21/2022 3:41:52 PM	70300

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of range due to dilution or matrix interference		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2209780**

04-Oct-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-C**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C91347**	RunNo: **91347**
Prep Date:	Analysis Date: **9/27/2022**	SeqNo: **3269825** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	ND	0.040								

Sample ID: **LLLCS-C**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C91347**	RunNo: **91347**
Prep Date:	Analysis Date: **9/27/2022**	SeqNo: **3269826** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.041	0.040	0.04000	0	103	50	150			

Sample ID: **LCS-C**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C91347**	RunNo: **91347**
Prep Date:	Analysis Date: **9/27/2022**	SeqNo: **3269827** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.50	0.040	0.5000	0	99.9	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2209780**

04-Oct-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-70300**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW**	Batch ID: **70300**	RunNo: **91216**
Prep Date: **9/20/2022**	Analysis Date: **9/21/2022**	SeqNo: **3263676** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								

Sample ID: **LCSLL-70300**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BatchQC**	Batch ID: **70300**	RunNo: **91216**
Prep Date: **9/20/2022**	Analysis Date: **9/21/2022**	SeqNo: **3263678** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020	0.01000	0	155	50	150			S

Sample ID: **LCS-70300**	SampType: **LCS**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW**	Batch ID: **70300**	RunNo: **91216**
Prep Date: **9/20/2022**	Analysis Date: **9/21/2022**	SeqNo: **3263680** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.56	0.020	0.5000	0	112	85	115			

Sample ID: **MB-70300**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW**	Batch ID: **70300**	RunNo: **91216**
Prep Date: **9/20/2022**	Analysis Date: **9/21/2022**	SeqNo: **3268126** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								

Sample ID: **LCSLL-70300**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BatchQC**	Batch ID: **70300**	RunNo: **91216**
Prep Date: **9/20/2022**	Analysis Date: **9/21/2022**	SeqNo: **3268127** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020	0.01000	0	119	50	150			

Sample ID: **LCS-70300**	SampType: **LCS**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW**	Batch ID: **70300**	RunNo: **91216**
Prep Date: **9/20/2022**	Analysis Date: **9/21/2022**	SeqNo: **3268128** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.55	0.020	0.5000	0	111	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2209780**

04-Oct-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A91132**	RunNo: **91132**
Prep Date:	Analysis Date: **9/19/2022**	SeqNo: **3260247** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								

Sample ID: **LCSLL**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A91132**	RunNo: **91132**
Prep Date:	Analysis Date: **9/19/2022**	SeqNo: **3260248** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0011	0.0010	0.001000	0	105	50	150			

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A91132**	RunNo: **91132**
Prep Date:	Analysis Date: **9/19/2022**	SeqNo: **3260249** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.023	0.0010	0.02500	0	92.1	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2209780**

04-Oct-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **A91222**	RunNo: **91222**
Prep Date:	Analysis Date: **9/21/2022**	SeqNo: **3264367** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	ND	0.20								

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **A91222**	RunNo: **91222**
Prep Date:	Analysis Date: **9/21/2022**	SeqNo: **3264368** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.5	0.20	3.500	0	99.3	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2209780**

04-Oct-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-70217**	SampType: **MBLK**	TestCode: **SM5210B: BOD**
Client ID: **PBW**	Batch ID: **70217**	RunNo: **91249**
Prep Date: **9/16/2022**	Analysis Date: **9/21/2022**	SeqNo: **3265160** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	ND	2.0								

Sample ID: **LCS-70217**	SampType: **LCS**	TestCode: **SM5210B: BOD**
Client ID: **LCSW**	Batch ID: **70217**	RunNo: **91249**
Prep Date: **9/16/2022**	Analysis Date: **9/21/2022**	SeqNo: **3265161** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	193	2.0	198.0	0	97.5	84.6	115.4			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2209780**

04-Oct-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-70208**	SampType: **MBLK**	TestCode: **SM 9223B Fecal Indicator: E. coli MPN**
Client ID: **PBW**	Batch ID: **70208**	RunNo: **91100**
Prep Date: **9/15/2022**	Analysis Date: **9/16/2022**	SeqNo: **3258729** Units: **MPN/100mL**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
E. Coli	<1	1.000								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2209780**

04-Oct-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **LCS-70295**	SampType: **LCS**	TestCode: **EPA Method 365.1: Total Phosphorous**
Client ID: **LCSW**	Batch ID: **70295**	RunNo: **91213**
Prep Date: **9/20/2022**	Analysis Date: **9/21/2022**	SeqNo: **3263321** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Total (As P)	0.23	0.050	0.2500	0	91.8	90	110			

Sample ID: **MB-70295**	SampType: **mblk**	TestCode: **EPA Method 365.1: Total Phosphorous**
Client ID: **PBW**	Batch ID: **70295**	RunNo: **91213**
Prep Date: **9/20/2022**	Analysis Date: **9/21/2022**	SeqNo: **3263332** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Total (As P)	ND	0.050								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2209780**

04-Oct-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-70509**	SampType: **MBLK**	TestCode: **SM 4500 Norg C: TKN**
Client ID: **PBW**	Batch ID: **70509**	RunNo: **91444**
Prep Date: **9/30/2022**	Analysis Date: **9/30/2022**	SeqNo: **3274488** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Kjeldahl, Total	ND	1.0								

Sample ID: **LCS-70509**	SampType: **LCS**	TestCode: **SM 4500 Norg C: TKN**
Client ID: **LCSW**	Batch ID: **70509**	RunNo: **91444**
Prep Date: **9/30/2022**	Analysis Date: **9/30/2022**	SeqNo: **3274489** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Kjeldahl, Total	10	1.0	10.00	0	104	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2209780**

04-Oct-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-70297**	SampType: **MBLK**	TestCode: **SM 2540D: TSS**
Client ID: **PBW**	Batch ID: **70297**	RunNo: **91186**
Prep Date: **9/20/2022**	Analysis Date: **9/21/2022**	SeqNo: **3262667** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Suspended Solids	ND	4.0								

Sample ID: **LCS-70297**	SampType: **LCS**	TestCode: **SM 2540D: TSS**
Client ID: **LCSW**	Batch ID: **70297**	RunNo: **91186**
Prep Date: **9/20/2022**	Analysis Date: **9/21/2022**	SeqNo: **3262668** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Suspended Solids	89	4.0	91.90	0	96.8	83.89	119.7			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of range due to dilution or matrix interference
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Village of Jemez Springs Work Order Number: 2209780 RcptNo: 1

Received By: **Kasandra Payan** 9/15/2022 12:07:00 PM

Completed By: **Tracy Casarrubias** 9/15/2022 12:27:48 PM

Reviewed By: 9.15.22 @ 13:40

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Client

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☐ No ☑ NA ☐
   Samples were collected the same day and chilled.
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes ☐ No ☐ NA ☑
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: 3
(<2 or >12 unless noted)
Adjusted? yes
Checked by: KPA 9.15.22

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

16. Additional remarks: Added 0.4 mL of HNO_3 to sample 0020 for pH <2 - KPA 9.15.22
17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	13.5	Good	Not Present			

Chain-of-Custody Record

Client: Village of Jemez Springs

Mailing Address: P.O. Box 269
Jemez Springs, NM 87025

Phone #: 505-610-0708

email or Fax#: jswm@jemezsprings-nm.gov

QA/QC Package:
■ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other_____
☐ EDD (Type) _____

Turn-Around Time:
■ Standard ☐ Rush_____

Project Name:
Village of Jemez Springs

Project #:
WWTP

Project Manager:
Rose Fenton

Sampler: Rose Fenton
On Ice: ☑ Yes ☐ No
# of Coolers: 1
Cooler Temp(including CF): 13.5-0=13.5

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2209780	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	BOD / TSS	E-COLI	TOTAL N / P	DISSOLVED B / As	TOTAL RECOVER Al
9/15/22	0906	AQ	RAW INFLUENT	1-P	N/A	001											■				
9/15/22	0925	AQ	FINAL EFFLUENT	1-P	N/A	002											■				
9/16/22	0925	AQ	FINAL EFFLUENT	1-P	NA2S203													■			
9/16/22	0925	AQ	FINAL EFFLUENT	1-P	H2S04														■		
9/16/22	0925	AQ	FINAL EFFLUENT	1-P	HN03															■	
9/16/22	0925	AQ	FINAL EFFLUENT	1-P	HNO3																■

Date	Time	Relinquished by	Received by	Via	Date	Time
9/16/22	1207	RJ Mitchell				
				000	9.15.22	12:07

Date	Time	Relinquished by	Received by	Via	Date	Time

Remarks:
Please email reports to:
jswm@jemezsprings-nm.gov
nmangin2021@gmail.com

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

October 26, 2022

Rose Fenton

Village of Jemez Springs
PO Box 269
Jemez Springs, NM 87025
TEL: (575) 829-3988
FAX: (575) 829-3339

RE: Village of Jemez Springs OrderNo.: 2210571

Dear Rose Fenton:

Hall Environmental Analysis Laboratory received 2 sample(s) on 10/12/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Village of Jemez Springs
Client Sample ID: Raw Influent
Project: Village of Jemez Springs
Collection Date: 10/12/2022 10:23:00 AM
Lab ID: 2210571-001 **Matrix:** AQUEOUS **Received Date:** 10/12/2022 12:54:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM5210B: BOD						Analyst: **dms**	
Biochemical Oxygen Demand	44	2.0		mg/L	1	10/18/2022 11:20:00 AM	70786
SM 2540D: TSS						Analyst: **KS**	
Suspended Solids	80	20	D	mg/L	1	10/18/2022 11:09:00 AM	70867

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted associated results may be		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Village of Jemez Springs
Client Sample ID: Final Effluent
Project: Village of Jemez Springs
Collection Date: 10/12/2022 10:05:00 AM
Lab ID: 2210571-002 **Matrix:** AQUEOUS **Received Date:** 10/12/2022 12:54:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst: **bcv**	
Arsenic	0.013	0.0010	*	mg/L	1	10/18/2022 12:53:40 PM	A91883
SM5210B: BOD						Analyst: **dms**	
Biochemical Oxygen Demand	2.5	2.0		mg/L	1	10/18/2022 11:20:00 AM	70786
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **SMS**	
E. Coli	4.1	1.000		MPN/100	1	10/13/2022 3:07:00 PM	70777
EPA METHOD 300.0: ANIONS						Analyst: **NAI**	
Nitrate+Nitrite as N	2.1	1.0		mg/L	5	10/18/2022 11:13:11 PM	R91895
TOTAL NITROGEN						Analyst: **EKM**	
Nitrogen, Total	3.6	1.0		mg/L	1	10/20/2022 3:54:00 PM	R91957
EPA METHOD 365.1: TOTAL PHOSPHOROUS						Analyst: **JMT**	
Phosphorus, Total (As P)	0.27	0.25	D	mg/L	1	10/19/2022 3:41:00 PM	70904
SM 4500 NORG C: TKN						Analyst: **EKM**	
Nitrogen, Kjeldahl, Total	1.5	1.0		mg/L	1	10/19/2022 1:30:00 PM	70925
SM 2540D: TSS						Analyst: **KS**	
Suspended Solids	ND	4.0		mg/L	1	10/18/2022 11:09:00 AM	70867
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **JRR**	
Boron	1.7	0.20		mg/L	5	10/20/2022 12:10:30 PM	B91965
EPA METHOD 200.7: TOTAL METALS						Analyst: **VP**	
Aluminum	ND	0.020		mg/L	1	10/14/2022 6:07:13 PM	70811

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Estimated value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted associated results may be		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2210571**

26-Oct-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-B**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B91965**	RunNo: **91965**
Prep Date:	Analysis Date: **10/20/2022**	SeqNo: **3299205** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	ND	0.040								

Sample ID: **LLLCS-B**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B91965**	RunNo: **91965**
Prep Date:	Analysis Date: **10/20/2022**	SeqNo: **3299206** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.041	0.040	0.04000	0	103	50	150			

Sample ID: **LCS-B**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B91965**	RunNo: **91965**
Prep Date:	Analysis Date: **10/20/2022**	SeqNo: **3299207** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.48	0.040	0.5000	0	97.0	85	115			

Sample ID: **2210571-002DMS**	SampType: **MS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **Final Effluent**	Batch ID: **B91965**	RunNo: **91965**
Prep Date:	Analysis Date: **10/20/2022**	SeqNo: **3299267** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	4.2	0.20	2.500	1.734	97.6	70	130			

Sample ID: **2210571-002DMSD**	SampType: **MSD**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **Final Effluent**	Batch ID: **B91965**	RunNo: **91965**
Prep Date:	Analysis Date: **10/20/2022**	SeqNo: **3299268** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	4.2	0.20	2.500	1.734	99.7	70	130	1.20	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted associated results may be
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2210571**

26-Oct-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **LCSLL-70811**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BatchQC**	Batch ID: **70811**	RunNo: **91819**
Prep Date: **10/13/2022**	Analysis Date: **10/14/2022**	SeqNo: **3292047** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020	0.01000	0	140	50	150			

Sample ID: **2210571-002EMS**	SampType: **MS**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **Final Effluent**	Batch ID: **70811**	RunNo: **91819**
Prep Date: **10/13/2022**	Analysis Date: **10/14/2022**	SeqNo: **3292055** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.59	0.020	0.5000	0	117	70	130			

Sample ID: **2210571-002EMSD**	SampType: **MSD**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **Final Effluent**	Batch ID: **70811**	RunNo: **91819**
Prep Date: **10/13/2022**	Analysis Date: **10/14/2022**	SeqNo: **3292056** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.59	0.020	0.5000	0	119	70	130	1.27	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted associated results may be
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2210571**

26-Oct-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A91883**	RunNo: **91883**
Prep Date:	Analysis Date: **10/18/2022**	SeqNo: **3295065** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								

Sample ID: **LCSLL**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A91883**	RunNo: **91883**
Prep Date:	Analysis Date: **10/18/2022**	SeqNo: **3295066** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0011	0.0010	0.001000	0	109	50	150			

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A91883**	RunNo: **91883**
Prep Date:	Analysis Date: **10/18/2022**	SeqNo: **3295067** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.024	0.0010	0.02500	0	96.8	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted associated results may be
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2210571**

26-Oct-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R91895**	RunNo: **91895**
Prep Date:	Analysis Date: **10/18/2022**	SeqNo: **3295958** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	ND	0.20								

Sample ID: **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R91895**	RunNo: **91895**
Prep Date:	Analysis Date: **10/18/2022**	SeqNo: **3295963** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.4	0.20	3.500	0	97.6	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted associated results may be
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2210571**

26-Oct-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-70786**	SampType: **MBLK**	TestCode: **SM5210B: BOD**
Client ID: **PBW**	Batch ID: **70786**	RunNo: **91925**
Prep Date: **10/13/2022**	Analysis Date: **10/18/2022**	SeqNo: **3297523** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	ND	2.0								

Sample ID: **LCS-70786**	SampType: **LCS**	TestCode: **SM5210B: BOD**
Client ID: **LCSW**	Batch ID: **70786**	RunNo: **91925**
Prep Date: **10/13/2022**	Analysis Date: **10/18/2022**	SeqNo: **3297524** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	192	2.0	198.0	0	97.0	84.6	115.4			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted associated results may be
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2210571**

26-Oct-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-70777**	SampType: **MBLK**	TestCode: **SM 9223B Fecal Indicator: E. coli MPN**
Client ID: **PBW**	Batch ID: **70777**	RunNo: **91814**
Prep Date: **10/12/2022**	Analysis Date: **10/13/2022**	SeqNo: **3291814** Units: **MPN/100mL**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
E. Coli	<1	1.000								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted associated results may be
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2210571**
26-Oct-22

Client: Village of Jemez Springs
Project: Village of Jemez Springs

Sample ID: **MB-70904**	SampType: **MBLK**	TestCode: **EPA Method 365.1: Total Phosphorous**
Client ID: **PBW**	Batch ID: **70904**	RunNo: **91918**
Prep Date: **10/18/2022**	Analysis Date: **10/19/2022**	SeqNo: **3297100** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Total (As P)	ND	0.050								

Sample ID: **LCS-70904**	SampType: **LCS**	TestCode: **EPA Method 365.1: Total Phosphorous**
Client ID: **LCSW**	Batch ID: **70904**	RunNo: **91918**
Prep Date: **10/18/2022**	Analysis Date: **10/19/2022**	SeqNo: **3297101** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Total (As P)	0.23	0.050	0.2500	0	93.4	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted associated results may be
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2210571**

26-Oct-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-70925**	SampType: **MBLK**	TestCode: **SM 4500 Norg C: TKN**
Client ID: **PBW**	Batch ID: **70925**	RunNo: **91910**
Prep Date: **10/19/2022**	Analysis Date: **10/19/2022**	SeqNo: **3296597** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Kjeldahl, Total	ND	1.0								

Sample ID: **LCS-70925**	SampType: **LCS**	TestCode: **SM 4500 Norg C: TKN**
Client ID: **LCSW**	Batch ID: **70925**	RunNo: **91910**
Prep Date: **10/19/2022**	Analysis Date: **10/19/2022**	SeqNo: **3296598** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Kjeldahl, Total	9.9	1.0	10.00	0	99.4	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted associated results may be
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2210571**

26-Oct-22

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-70867**	SampType: **MBLK**	TestCode: **SM 2540D: TSS**
Client ID: **PBW**	Batch ID: **70867**	RunNo: **91860**
Prep Date: **10/17/2022**	Analysis Date: **10/18/2022**	SeqNo: **3294073** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Suspended Solids	ND	4.0								

Sample ID: **LCS-70867**	SampType: **LCS**	TestCode: **SM 2540D: TSS**
Client ID: **LCSW**	Batch ID: **70867**	RunNo: **91860**
Prep Date: **10/17/2022**	Analysis Date: **10/18/2022**	SeqNo: **3294074** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Suspended Solids	84	4.0	91.90	0	91.4	83.89	119.7			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted associated results may be
B	Analyte detected in the associated Method Blank
E	Estimated value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Village of Jemez Springs Work Order Number: 2210571 RcptNo: 1

Received By: Juan Rojas 10/12/2022 12:54:00 PM Juan Rojas

Completed By: Isaiah Ortiz 10/12/2022 1:16:13 PM I-Ok

Reviewed By: KR 9 10.12.22 @ 14:40

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Client		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☐	No ☐	NA ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: 3 (<2 or >12 unless noted)

Adjusted? NO

Checked by: SRR 10/12/22

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	12.6	Good	Not Present			

Chain-of-Custody Record

Client: Village of Jemez Springs

Mailing Address: P.O. Box 269

Jemez Springs, NM 87025

Phone #: 505-610-0708

email or Fax#: jswm@jemezsprings-nm.gov

QA/QC Package:

■ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:

■ Standard ☐ Rush

Project Name: Village of Jemez Springs

Project #: WWTP

Project Manager: Rose Fenton

Sampler: Rose Fenton

On Ice: ☒ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 12.4+0.2=12.6

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2210571
10/12/22	1023	AQ	RAW INFLUENT	1-P	NONE	001
10/12/22	1005	AQ	FINAL EFFLUENT	1-P	NONE	002
10/12/22	1005	AQ	FINAL EFFLUENT	1-P	NA2S203	
10/12/22	1005	AQ	FINAL EFFLUENT	1-P	H2S04	
10/12/22	1005	AQ	FINAL EFFLUENT	1-P	HN03	
10/12/22	1005	AQ	FINAL EFFLUENT	1-P	HN03	

BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	BOD5 / TSS	ECOLI	TOTAL P / TOTAL N	DIS B / DIS As	Al TOT RECOVERABLE	
										■					
										■					
											■				
												■			
													■		
														■	

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
10/12/22	1254					
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
					10/12/22	1254

Remarks:

Please email reports to:
jswm@jemezsprings-nm.gov
nmangin2021@gmail.com

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

January 10, 2023

Rose Fenton

Village of Jemez Springs
PO Box 269
Jemez Springs, NM 87025
TEL: (575) 829-3988
FAX: (575) 829-3339

RE: Village of Jemez Springs OrderNo.: 2212871

Dear Rose Fenton:

Hall Environmental Analysis Laboratory received 2 sample(s) on 12/14/2022 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Village of Jemez Springs
Client Sample ID: Fianl Effluent
Project: Village of Jemez Springs
Collection Date: 12/14/2022 8:46:00 AM
Lab ID: 2212871-001 **Matrix:** AQUEOUS **Received Date:** 12/14/2022 1:32:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst: **bcv**	
Arsenic	0.035	0.0010	*	mg/L	1	1/4/2023 4:18:12 PM	A93722
SM5210B: BOD						Analyst: **dms**	
Biochemical Oxygen Demand	DO Depletion <2.0	2.0		mg/L	1	12/20/2022 7:59:00 AM	72102
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **SMS**	
E. Coli	<1	1.000		MPN/100	1	12/15/2022 5:13:00 PM	72090
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Nitrogen, Nitrite (As N)	ND	0.50		mg/L	5	12/14/2022 8:25:14 PM	R93300
Nitrogen, Nitrate (As N)	ND	0.50		mg/L	5	12/14/2022 8:25:14 PM	R93300
TOTAL NITROGEN						Analyst: **CJS**	
Nitrogen, Total	12	1.0		mg/L	1	1/6/2023 1:17:00 PM	R93771
EPA METHOD 365.1: TOTAL PHOSPHOROUS						Analyst: **CJS**	
Phosphorus, Total (As P)	0.59	0.25	D	mg/L	1	12/21/2022 12:58:00 PM	72219
SM 4500 NORG C: TKN						Analyst: **EKM**	
Nitrogen, Kjeldahl, Total	12	1.0		mg/L	1	1/5/2023 9:06:00 AM	72437
SM 2540D: TSS						Analyst: **KS**	
Suspended Solids	ND	4.0		mg/L	1	12/18/2022 1:46:00 PM	72160
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **ELS**	
Boron	1.8	0.20		mg/L	5	12/23/2022 2:26:54 PM	C93558
EPA METHOD 200.7: TOTAL METALS						Analyst: **VP**	
Aluminum	0.022	0.020		mg/L	1	12/15/2022 5:04:29 PM	72095

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Village of Jemez Springs
Client Sample ID: Raw Influent
Project: Village of Jemez Springs
Collection Date: 12/14/2022 10:40:00 AM
Lab ID: 2212871-002 **Matrix:** AQUEOUS **Received Date:** 12/14/2022 1:32:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM5210B: BOD						Analyst: **dms**	
Biochemical Oxygen Demand	217	2.0	R	mg/L	1	12/20/2022 7:59:00 AM	72102
NOTES: R-RPD between bottles >30%							
SM 2540D: TSS						Analyst: **KS**	
Suspended Solids	220	20	D	mg/L	1	12/18/2022 1:46:00 PM	72160

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2212871**

10-Jan-23

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-C**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **C93558**	RunNo: **93558**
Prep Date:	Analysis Date: **12/23/2022**	SeqNo: **3375409** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	ND	0.040								

Sample ID: **LCSLL-C**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **C93558**	RunNo: **93558**
Prep Date:	Analysis Date: **12/23/2022**	SeqNo: **3375410** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.041	0.040	0.04000	0	102	50	150			

Sample ID: **LCS-C**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **C93558**	RunNo: **93558**
Prep Date:	Analysis Date: **12/23/2022**	SeqNo: **3375411** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.48	0.040	0.5000	0	96.2	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2212871**

10-Jan-23

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-72095**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW**	Batch ID: **72095**	RunNo: **93329**
Prep Date: **12/14/2022**	Analysis Date: **12/15/2022**	SeqNo: **3364344** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								

Sample ID: **LCSLL-72095**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BatchQC**	Batch ID: **72095**	RunNo: **93329**
Prep Date: **12/14/2022**	Analysis Date: **12/15/2022**	SeqNo: **3364345** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020	0.01000	0	79.5	50	150			

Sample ID: **LCS-72095**	SampType: **LCS**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW**	Batch ID: **72095**	RunNo: **93329**
Prep Date: **12/14/2022**	Analysis Date: **12/15/2022**	SeqNo: **3364346** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.52	0.020	0.5000	0	104	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2212871**

10-Jan-23

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A93722**	RunNo: **93722**
Prep Date:	Analysis Date: **1/4/2023**	SeqNo: **3383073** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								

Sample ID: **LCSLL**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A93722**	RunNo: **93722**
Prep Date:	Analysis Date: **1/4/2023**	SeqNo: **3383074** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010	0.001000	0	79.3	50	150			

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A93722**	RunNo: **93722**
Prep Date:	Analysis Date: **1/4/2023**	SeqNo: **3383075** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	98.0	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2212871**

10-Jan-23

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R93300**	RunNo: **93300**
Prep Date:	Analysis Date: **12/14/2022**	SeqNo: **3363069** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Nitrite (As N)	ND	0.10								
Nitrogen, Nitrate (As N)	ND	0.10								

Sample ID: **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R93300**	RunNo: **93300**
Prep Date:	Analysis Date: **12/14/2022**	SeqNo: **3363070** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Nitrite (As N)	0.99	0.10	1.000	0	98.6	90	110			
Nitrogen, Nitrate (As N)	2.5	0.10	2.500	0	101	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2212871**

10-Jan-23

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-72102**	SampType: **MBLK**	TestCode: **SM5210B: BOD**
Client ID: **PBW**	Batch ID: **72102**	RunNo: **93427**
Prep Date: **12/15/2022**	Analysis Date: **12/20/2022**	SeqNo: **3369624** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	ND	2.0								

Sample ID: **LCS-72102**	SampType: **LCS**	TestCode: **SM5210B: BOD**
Client ID: **LCSW**	Batch ID: **72102**	RunNo: **93427**
Prep Date: **12/15/2022**	Analysis Date: **12/20/2022**	SeqNo: **3369625** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	200	2.0	198.0	0	101	84.6	115.4			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2212871**

10-Jan-23

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-72090**	SampType: **MBLK**	TestCode: **SM 9223B Fecal Indicator: E. coli MPN**
Client ID: **PBW**	Batch ID: **72090**	RunNo: **93328**
Prep Date: **12/14/2022**	Analysis Date: **12/15/2022**	SeqNo: **3364240** Units: **MPN/100mL**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
E. Coli	<1	1.000								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2212871**

10-Jan-23

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-72219**	SampType: **MBLK**	TestCode: **EPA Method 365.1: Total Phosphorous**
Client ID: **PBW**	Batch ID: **72219**	RunNo: **93458**
Prep Date: **12/20/2022**	Analysis Date: **12/21/2022**	SeqNo: **3370890** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Total (As P)	ND	0.050								

Sample ID: **LCS-72219**	SampType: **LCS**	TestCode: **EPA Method 365.1: Total Phosphorous**
Client ID: **LCSW**	Batch ID: **72219**	RunNo: **93458**
Prep Date: **12/20/2022**	Analysis Date: **12/21/2022**	SeqNo: **3370898** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Total (As P)	0.24	0.050	0.2500	0	97.1	90	110			

Sample ID: **2212871-001CMS**	SampType: **MS**	TestCode: **EPA Method 365.1: Total Phosphorous**
Client ID: **Fianl Effluent**	Batch ID: **72219**	RunNo: **93458**
Prep Date: **12/20/2022**	Analysis Date: **12/21/2022**	SeqNo: **3370920** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Total (As P)	1.7	0.25	1.250	0.5920	92.6	90	110			D

Sample ID: **2212871-001CMSD**	SampType: **MSD**	TestCode: **EPA Method 365.1: Total Phosphorous**
Client ID: **Fianl Effluent**	Batch ID: **72219**	RunNo: **93458**
Prep Date: **12/20/2022**	Analysis Date: **12/21/2022**	SeqNo: **3370921** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Total (As P)	1.7	0.25	1.250	0.5920	92.2	90	110	0.400	20	D

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2212871**

10-Jan-23

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-72437**	SampType: **MBLK**	TestCode: **SM 4500 Norg C: TKN**
Client ID: **PBW**	Batch ID: **72437**	RunNo: **93732**
Prep Date: **1/4/2023**	Analysis Date: **1/5/2023**	SeqNo: **3383443** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Kjeldahl, Total	ND	1.0								

Sample ID: **LCS-72437**	SampType: **LCS**	TestCode: **SM 4500 Norg C: TKN**
Client ID: **LCSW**	Batch ID: **72437**	RunNo: **93732**
Prep Date: **1/4/2023**	Analysis Date: **1/5/2023**	SeqNo: **3383444** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Kjeldahl, Total	10	1.0	10.00	0	101	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2212871**

10-Jan-23

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-72160**	SampType: **MBLK**	TestCode: **SM 2540D: TSS**							
Client ID: **PBW**	Batch ID: **72160**	RunNo: **93373**							
Prep Date: **12/16/2022**	Analysis Date: **12/18/2022**	SeqNo: **3366917**	Units: **mg/L**						

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Suspended Solids	ND	4.0								

Sample ID: **LCS-72160**	SampType: **LCS**	TestCode: **SM 2540D: TSS**							
Client ID: **LCSW**	Batch ID: **72160**	RunNo: **93373**							
Prep Date: **12/16/2022**	Analysis Date: **12/18/2022**	SeqNo: **3366918**	Units: **mg/L**						

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Suspended Solids	89	4.0	91.90	0	96.8	83.89	119.7			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Village of Jemez Springs Work Order Number: 2212871 RcptNo: 1

Received By: **Kasandra Jimena Garcia** 12/14/2022 1:32:00 PM

Completed By: **Tracy Casarrubias** 12/14/2022 1:46:32 PM

Reviewed By: 12-14-22 @ 14:19

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Client		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☐	No ☑	NA ☐
	Samples were collected the same day and chilled.		
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☐	No ☐	NA ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: 3
(<2 or >12 unless noted)
Adjusted? NO
Checked by: KPG 12.14.22

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: ____ Date: ____
By Whom: ____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: ____
Client Instructions: ____

16. Additional remarks: Poured off from 001A to 001C unpres for TSS ~~for~~ analysis - KPG 12.14.22

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	8.4	Good	Not Present			

Chain-of-Custody Record

Client: Village of Jemez Springs

Mailing Address: P.O. Box 269

Jemez Springs, NM 87025

Phone #: 505-610-0708

email or Fax#: jswm@jemezsprings-nm.gov

QA/QC Package:

■ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance

☐ NELAC ☐ Other_____

☐ EDD (Type) _____

Turn-Around Time:

■ Standard ☐ Rush_____

Project Name:

Village of Jemez Springs

Project #:

WWTP

Project Manager:

Rose Fenton

Sampler: Rose Fenton

On Ice: ☑ Yes ☐ No

# of Coolers: 1

Cooler Temp(including CF): 8.4 - 0 = 8.4

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2212871	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	BOD5 / TSS	E-COLI	TOTAL P / TOTAL N	DISSOLVED As / B	Al Total Recoverable	
12/14/22	0846 AM	AQ	FINAL EFFLUENT	1-P	NONE	001											■					
12/14/22	1040 AM	AQ	RAW INFLUENT	1-P	NONE	002											■					
12/14/22	0846 AM	AQ	FINAL EFFLUENT	1-P	NA2S203													■				
12/14/22	0846 AM	AQ	FINAL EFFLUENT	1-P	H2S04														■			
12/14/22	0846 AM	AQ	FINAL EFFLUENT	1-P	HN03															■		
12/14/22	0846 AM	AQ	FINAL EFFLUENT	1-P	HN03																■	

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
12/14/22	1332					
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
				ODO	12/14/22	13:32

Remarks:

Please email reports to:
jswm@jemezsprings-nm.gov
nmangin2021@gmail.com

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

January 25, 2023

Rose Fenton

Village of Jemez Springs
PO Box 269
Jemez Springs, NM 87025
TEL: (575) 829-3988
FAX: (575) 829-3339

RE: Village of Jemez Springs OrderNo.: 2301301

Dear Rose Fenton:

Hall Environmental Analysis Laboratory received 2 sample(s) on 1/9/2023 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Village of Jemez Springs
Client Sample ID: Final Effluent
Project: Village of Jemez Springs
Collection Date: 1/9/2023 9:00:00 AM
Lab ID: 2301301-001 **Matrix:** AQUEOUS **Received Date:** 1/9/2023 1:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst: **bcv**	
Arsenic	0.044	0.0010	*	mg/L	1	1/23/2023 12:51:02 PM	B94117
SM5210B: BOD						Analyst: **AG**	
Biochemical Oxygen Demand	6.2	2.0		mg/L	1	1/16/2023 12:24:00 PM	72565
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **SMS**	
E. Coli	24.7	1.000		MPN/100	1	1/10/2023 5:57:00 PM	72527
EPA METHOD 300.0: ANIONS						Analyst: **NAI**	
Nitrate+Nitrite as N	ND	1.0		mg/L	5	1/12/2023 12:45:14 PM	R93930
TOTAL NITROGEN						Analyst: **CJS**	
Nitrogen, Total	16	1.0		mg/L	1	1/19/2023 1:20:00 PM	R94061
EPA METHOD 365.1: TOTAL PHOSPHOROUS						Analyst: **CJS**	
Phosphorus, Total (As P)	0.54	0.25	D	mg/L	1	1/11/2023 11:42:00 AM	72550
SM 4500 NORG C: TKN						Analyst: **EKM**	
Nitrogen, Kjeldahl, Total	16	1.0		mg/L	1	1/18/2023 1:28:00 PM	72680
SM 2540D: TSS						Analyst: **KS**	
Suspended Solids	ND	4.0		mg/L	1	1/12/2023 12:15:00 PM	72566
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **JRR**	
Boron	1.9	0.20		mg/L	5	1/11/2023 10:38:46 AM	A93892
EPA METHOD 200.7: TOTAL METALS						Analyst: **VP**	
Aluminum	ND	0.020		mg/L	1	1/12/2023 12:05:44 PM	72539

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Village of Jemez Springs
Client Sample ID: Raw Influent
Project: Village of Jemez Springs
Collection Date: 1/9/2023 10:23:00 AM
Lab ID: 2301301-002 **Matrix:** AQUEOUS **Received Date:** 1/9/2023 1:12:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM5210B: BOD						Analyst: **AG**	
Biochemical Oxygen Demand	124	2.0		mg/L	1	1/16/2023 12:24:00 PM	72565
SM 2540D: TSS						Analyst: **KS**	
Suspended Solids	50	40	D	mg/L	1	1/12/2023 12:15:00 PM	72566

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2301301**

25-Jan-23

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A93892**	RunNo: **93892**
Prep Date:	Analysis Date: **1/11/2023**	SeqNo: **3389233** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	ND	0.040								

Sample ID: **LCSLL-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A93892**	RunNo: **93892**
Prep Date:	Analysis Date: **1/11/2023**	SeqNo: **3389236** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	ND	0.040	0.04000	0	99.8	50	150			

Sample ID: **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A93892**	RunNo: **93892**
Prep Date:	Analysis Date: **1/11/2023**	SeqNo: **3389238** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.50	0.040	0.5000	0	99.7	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2301301**

25-Jan-23

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-72539**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW**	Batch ID: **72539**	RunNo: **93918**
Prep Date: **1/10/2023**	Analysis Date: **1/12/2023**	SeqNo: **3390635** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								

Sample ID: **LCSLL-72539**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BatchQC**	Batch ID: **72539**	RunNo: **93918**
Prep Date: **1/10/2023**	Analysis Date: **1/12/2023**	SeqNo: **3390636** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020	0.01000	0	111	50	150			

Sample ID: **LCS-72539**	SampType: **LCS**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW**	Batch ID: **72539**	RunNo: **93918**
Prep Date: **1/10/2023**	Analysis Date: **1/12/2023**	SeqNo: **3390637** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.56	0.020	0.5000	0	113	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2301301**

25-Jan-23

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B94117**	RunNo: **94117**
Prep Date:	Analysis Date: **1/23/2023**	SeqNo: **3398367** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								

Sample ID: **LCSLL**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B94117**	RunNo: **94117**
Prep Date:	Analysis Date: **1/23/2023**	SeqNo: **3398368** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010	0.001000	0	97.4	50	150			

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B94117**	RunNo: **94117**
Prep Date:	Analysis Date: **1/23/2023**	SeqNo: **3398369** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.026	0.0010	0.02500	0	104	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2301301**

25-Jan-23

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R93930**	RunNo: **93930**
Prep Date:	Analysis Date: **1/12/2023**	SeqNo: **3391327** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	ND	0.20								

Sample ID: **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R93930**	RunNo: **93930**
Prep Date:	Analysis Date: **1/12/2023**	SeqNo: **3391328** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.3	0.20	3.500	0	94.9	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2301301**

25-Jan-23

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-72565**	SampType: **MBLK**	TestCode: **SM5210B: BOD**							
Client ID: **PBW**	Batch ID: **72565**	RunNo: **93992**							
Prep Date: **1/11/2023**	Analysis Date: **1/16/2023**	SeqNo: **3393372**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	ND	2.0								

Sample ID: **LCS-72565**	SampType: **LCS**	TestCode: **SM5210B: BOD**							
Client ID: **LCSW**	Batch ID: **72565**	RunNo: **93992**							
Prep Date: **1/11/2023**	Analysis Date: **1/16/2023**	SeqNo: **3393373**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	168	2.0	198.0	0	84.8	84.6	115.4			R

NOTES:

R-RPD between dilutions is >30%.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2301301**

25-Jan-23

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-72527**	SampType: **MBLK**	TestCode: **SM 9223B Fecal Indicator: E. coli MPN**
Client ID: **PBW**	Batch ID: **72527**	RunNo: **93886**
Prep Date: **1/9/2023**	Analysis Date: **1/10/2023**	SeqNo: **3389172** Units: **MPN/100mL**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
E. Coli	<1	1.000								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2301301**

25-Jan-23

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-72550**	SampType: **MBLK**	TestCode: **EPA Method 365.1: Total Phosphorous**
Client ID: **PBW**	Batch ID: **72550**	RunNo: **93868**
Prep Date: **1/10/2023**	Analysis Date: **1/11/2023**	SeqNo: **3388537** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Total (As P)	ND	0.050								

Sample ID: **LCS-72550**	SampType: **LCS**	TestCode: **EPA Method 365.1: Total Phosphorous**
Client ID: **LCSW**	Batch ID: **72550**	RunNo: **93868**
Prep Date: **1/10/2023**	Analysis Date: **1/11/2023**	SeqNo: **3388538** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Total (As P)	0.24	0.050	0.2500	0	95.4	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2301301**

25-Jan-23

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-72680**	SampType: **MBLK**	TestCode: **SM 4500 Norg C: TKN**
Client ID: **PBW**	Batch ID: **72680**	RunNo: **94028**
Prep Date: **1/18/2023**	Analysis Date: **1/18/2023**	SeqNo: **3394475** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Kjeldahl, Total	ND	1.0								

Sample ID: **LCS-72680**	SampType: **LCS**	TestCode: **SM 4500 Norg C: TKN**
Client ID: **LCSW**	Batch ID: **72680**	RunNo: **94028**
Prep Date: **1/18/2023**	Analysis Date: **1/18/2023**	SeqNo: **3394476** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Kjeldahl, Total	9.9	1.0	10.00	0	99.4	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2301301**

25-Jan-23

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-72566**	SampType: **MBLK**	TestCode: **SM 2540D: TSS**							
Client ID: **PBW**	Batch ID: **72566**	RunNo: **93912**							
Prep Date: **1/11/2023**	Analysis Date: **1/12/2023**	SeqNo: **3390336**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Suspended Solids	ND	4.0								

Sample ID: **LCS-72566**	SampType: **LCS**	TestCode: **SM 2540D: TSS**							
Client ID: **LCSW**	Batch ID: **72566**	RunNo: **93912**							
Prep Date: **1/11/2023**	Analysis Date: **1/12/2023**	SeqNo: **3390337**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Suspended Solids	90	4.0	91.90	0	97.9	83.89	119.7			

Sample ID: **2301301-001ADUP**	SampType: **DUP**	TestCode: **SM 2540D: TSS**							
Client ID: **Final Effluent**	Batch ID: **72566**	RunNo: **93912**							
Prep Date: **1/11/2023**	Analysis Date: **1/12/2023**	SeqNo: **3390368**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Suspended Solids	ND	4.0						0	10	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **Village of Jemez Springs** Work Order Number: **2301301** RcptNo: **1**

Received By: **Juan Rojas** **1/9/2023 1:12:00 PM**

Completed By: **Tracy Casarrubias** **1/9/2023 1:43:27 PM**

Reviewed By: KPG 1.9.23 @ 14:23

Chain of Custody

1. Is Chain of Custody complete? Yes ☐ No ☑ Not Present ☐
2. How was the sample delivered? Client

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☐ No ☑ NA ☐
   Samples were collected the same day and chilled.
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes ☐ No ☐ NA ☑
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: 3 (<2 or >12 unless noted)
Adjusted? NO
Checked by: JR 1/9/23

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☑ No ☐ NA ☐

Person Notified:	Rose Fenton	Date:	1/9/2023
By Whom:	Tracy Casarrubias	Via:	☑ eMail ☑ Phone ☐ Fax ☐ In Person
Regarding:	Missing collection time on COC and bottle for sample 002A		
Client Instructions:	Go with collection time of 10:23		

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	8.9	Good	Not Present			

Chain-of-Custody Record

Client: Village of Jemez Springs

Mailing Address: P.O. Box 269

Jemez Springs, NM 87025

Phone #: 505-610-0708

email or Fax#: jswm@jemezsprings-nm.gov

QA/QC Package:

■ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance ☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:

■ Standard ☐ Rush

Project Name: Village of Jemez Springs

Project #: WWTP

Project Manager: Rose Fenton

Sampler: Rose Fenton

On Ice: ~~☐~~ Yes ☐ No

# of Coolers: 1 Yog-

Cooler Temp(including CF): 9.0-0.1=8.9

HALL ENVIRONMENTAL ANALYSIS LABORATORY

www.hallenvironmental.com

4901 Hawkins NE - Albuquerque, NM 87109

Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2301301	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	BOD5/TSS	E-COLI	TOTAL P / TOTAL N	DIS As / DIS B	AI TOT RECOVERABLE
1/9/23	0900	AQ	FINAL EFFLUENT	1-P	NONE	001											■				
1/9/23	*10:23	AQ	RAW INFLUENT	1-P	NONE	002											■				
1/9/23	0900	AQ	FINAL EFFLUENT	1-P	NA2S2O3													■			
1/9/23	0900	AQ	FINAL EFFLUENT	1-P	H2SO4														■		
1/9/23	0900	AQ	FINAL EFFLUENT	1-P	HNO3															■	
1/9/23	0900	AQ	FINAL EFFLUENT	1-P	HNO3																■

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
1.9.23	1312			COC	1/9/23	13:12
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time

Remarks: *002. Collection time-10:23 per Rose F. DAD 1/12/23

Please email reports to:
jswm@jemezsprings-nm.gov
nmangin2021@gmail.com

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

March 06, 2023

Rose Fenton

Village of Jemez Springs
PO Box 269
Jemez Springs, NM 87025
TEL: (575) 829-3988
FAX (575) 829-3339

RE: Village of Jemez Springs OrderNo.: 2302816

Dear Rose Fenton:

Hall Environmental Analysis Laboratory received 2 sample(s) on 2/17/2023 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Village of Jemez Springs
Client Sample ID: Final Effluent
Project: Village of Jemez Springs
Collection Date: 2/17/2023 11:06:00 AM
Lab ID: 2302816-001 **Matrix:** AQUEOUS **Received Date:** 2/17/2023 2:20:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst: **bcv**	
Arsenic	0.052	0.0050	*	mg/L	5	2/23/2023 3:46:05 PM	D94837
SM5210B: BOD						Analyst: **dms**	
Biochemical Oxygen Demand	DO Depletion<2.0	2.0		mg/L	1	2/23/2023 2:34:00 PM	73231
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **dms**	
E. Coli	1.0	1.000		MPN/100	1	2/18/2023 7:42:00 PM	73246
EPA METHOD 300.0: ANIONS						Analyst: **NAI**	
Nitrate+Nitrite as N	ND	1.0		mg/L	5	2/21/2023 6:18:10 PM	R94783
TOTAL NITROGEN						Analyst: **EKM**	
Nitrogen, Total	16	1.0		mg/L	1	3/2/2023 7:34:00 AM	R94958
EPA METHOD 365.1: TOTAL PHOSPHOROUS						Analyst: **JMT**	
Phosphorus, Total (As P)	0.39	0.050		mg/L	1	3/1/2023 5:13:00 PM	73431
SM 4500 NORG C: TKN						Analyst: **EKM**	
Nitrogen, Kjeldahl, Total	16	1.0		mg/L	1	2/23/2023 8:07:00 AM	73308
SM 2540D: TSS						Analyst: **KS**	
Suspended Solids	ND	4.0		mg/L	1	2/22/2023 11:07:00 AM	73290
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **JRR**	
Boron	1.8	0.20		mg/L	5	2/24/2023 11:49:34 AM	A94891
EPA METHOD 200.7: METALS						Analyst: **VP**	
Aluminum	ND	0.020		mg/L	1	3/1/2023 1:44:20 PM	73418

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Village of Jemez Springs
Client Sample ID: Raw Influent
Project: Village of Jemez Springs
Collection Date: 2/17/2023 12:58:00 PM
Lab ID: 2302816-002 **Matrix:** AQUEOUS **Received Date:** 2/17/2023 2:20:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM5210B: BOD						Analyst: **dms**	
Biochemical Oxygen Demand	130	2.0		mg/L	1	2/23/2023 2:34:00 PM	73231
SM 2540D: TSS						Analyst: **KS**	
Suspended Solids	670	20	D	mg/L	1	2/22/2023 11:07:00 AM	73290

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2302816**

06-Mar-23

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-73418**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW**	Batch ID: **73418**	RunNo: **94949**
Prep Date: **2/28/2023**	Analysis Date: **3/1/2023**	SeqNo: **3432724** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								

Sample ID: **LCSLL-73418**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **73418**	RunNo: **94949**
Prep Date: **2/28/2023**	Analysis Date: **3/1/2023**	SeqNo: **3432725** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020	0.01000	0	121	50	150			

Sample ID: **LCS-73418**	SampType: **LCS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW**	Batch ID: **73418**	RunNo: **94949**
Prep Date: **2/28/2023**	Analysis Date: **3/1/2023**	SeqNo: **3432726** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.53	0.020	0.5000	0	105	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2302816**

06-Mar-23

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A94891**	RunNo: **94891**
Prep Date:	Analysis Date: **2/24/2023**	SeqNo: **3429897** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	ND	0.040								

Sample ID: **LLLCS-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A94891**	RunNo: **94891**
Prep Date:	Analysis Date: **2/24/2023**	SeqNo: **3429898** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.043	0.040	0.04000	0	108	50	150			

Sample ID: **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A94891**	RunNo: **94891**
Prep Date:	Analysis Date: **2/24/2023**	SeqNo: **3429899** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.54	0.040	0.5000	0	107	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2302816**

06-Mar-23

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **D94837**	RunNo: **94837**
Prep Date:	Analysis Date: **2/23/2023**	SeqNo: **3427717** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								

Sample ID: **LCSLL**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **D94837**	RunNo: **94837**
Prep Date:	Analysis Date: **2/23/2023**	SeqNo: **3427718** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.0010	0.0010	0.001000	0	105	50	150			

Sample ID: **2302816-001EMSLL**	SampType: **MS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **Final Effluent**	Batch ID: **D94837**	RunNo: **94837**
Prep Date:	Analysis Date: **2/23/2023**	SeqNo: **3427730** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.18	0.0050	0.1250	0.05233	102	70	130			

Sample ID: **2302816-001EMSDL**	SampType: **MSD**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **Final Effluent**	Batch ID: **D94837**	RunNo: **94837**
Prep Date:	Analysis Date: **2/23/2023**	SeqNo: **3427731** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.18	0.0050	0.1250	0.05233	103	70	130	0.998	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2302816**

06-Mar-23

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R94783**	RunNo: **94783**
Prep Date:	Analysis Date: **2/21/2023**	SeqNo: **3426068** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	ND	0.20								

Sample ID: **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R94783**	RunNo: **94783**
Prep Date:	Analysis Date: **2/21/2023**	SeqNo: **3426069** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.4	0.20	3.500	0	97.2	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2302816**

06-Mar-23

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-73231**	SampType: **MBLK**	TestCode: **SM5210B: BOD**
Client ID: **PBW**	Batch ID: **73231**	RunNo: **94812**
Prep Date: **2/17/2023**	Analysis Date: **2/23/2023**	SeqNo: **3426732** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	ND	2.0								

Sample ID: **LCS-73231**	SampType: **LCS**	TestCode: **SM5210B: BOD**
Client ID: **LCSW**	Batch ID: **73231**	RunNo: **94812**
Prep Date: **2/17/2023**	Analysis Date: **2/23/2023**	SeqNo: **3426733** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	200	2.0	198.0	0	101	84.6	115.4			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2302816**

06-Mar-23

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-73246**	SampType: **MBLK**	TestCode: **SM 9223B Fecal Indicator: E. coli MPN**
Client ID: **PBW**	Batch ID: **73246**	RunNo: **94704**
Prep Date: **2/17/2023**	Analysis Date: **2/18/2023**	SeqNo: **3423653** Units: **MPN/100mL**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
E. Coli	<1	1.000								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT
Hall Environmental Analysis Laboratory, Inc.

WO#: **2302816**
06-Mar-23

Client: Village of Jemez Springs
Project: Village of Jemez Springs

Sample ID: **MB-73431**	SampType: **mblk**	TestCode: **EPA Method 365.1: Total Phosphorous**
Client ID: **PBW**	Batch ID: **73431**	RunNo: **94959**
Prep Date: **2/28/2023**	Analysis Date: **3/1/2023**	SeqNo: **3433192** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Total (As P)	ND	0.050								

Sample ID: **LCS-73431**	SampType: **LCS**	TestCode: **EPA Method 365.1: Total Phosphorous**
Client ID: **LCSW**	Batch ID: **73431**	RunNo: **94959**
Prep Date: **2/28/2023**	Analysis Date: **3/1/2023**	SeqNo: **3433193** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Total (As P)	0.25	0.050	0.2500	0	98.5	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2302816**

06-Mar-23

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-73308**	SampType: **MBLK**	TestCode: **SM 4500 Norg C: TKN**
Client ID: **PBW**	Batch ID: **73308**	RunNo: **94822**
Prep Date: **2/22/2023**	Analysis Date: **2/23/2023**	SeqNo: **3427003** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Kjeldahl, Total	ND	1.0								

Sample ID: **LCS-73308**	SampType: **LCS**	TestCode: **SM 4500 Norg C: TKN**
Client ID: **LCSW**	Batch ID: **73308**	RunNo: **94822**
Prep Date: **2/22/2023**	Analysis Date: **2/23/2023**	SeqNo: **3427004** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Kjeldahl, Total	10	1.0	10.00	0	101	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2302816**

06-Mar-23

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-73290**	SampType: **MBLK**	TestCode: **SM 2540D: TSS**							
Client ID: **PBW**	Batch ID: **73290**	RunNo: **94776**							
Prep Date: **2/21/2023**	Analysis Date: **2/22/2023**	SeqNo: **3426003**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Suspended Solids	ND	4.0								

Sample ID: **LCS-73290**	SampType: **LCS**	TestCode: **SM 2540D: TSS**							
Client ID: **LCSW**	Batch ID: **73290**	RunNo: **94776**							
Prep Date: **2/21/2023**	Analysis Date: **2/22/2023**	SeqNo: **3426004**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Suspended Solids	85	4.0	91.90	0	92.5	83.89	119.7			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Village of Jemez Springs Work Order Number: 2302816 RcptNo: 1

Received By: Sean Livingston 2/17/2023 2:20:00 PM S Livingston

Completed By: Sean Livingston 2/17/2023 2:25:56 PM S Livingston

Reviewed By: CMC 2/17/23 @ 1440

Chain of Custody

1. Is Chain of Custody complete?	Yes ☑	No ☐	Not Present ☐
2. How was the sample delivered?	Client		

Log In

3. Was an attempt made to cool the samples?	Yes ☑	No ☐	NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C	Yes ☑	No ☐	NA ☐
5. Sample(s) in proper container(s)?	Yes ☑	No ☐	
6. Sufficient sample volume for indicated test(s)?	Yes ☑	No ☐	
7. Are samples (except VOA and ONG) properly preserved?	Yes ☑	No ☐	
8. Was preservative added to bottles?	Yes ☐	No ☑	NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA?	Yes ☐	No ☐	NA ☑
10. Were any sample containers received broken?	Yes ☐	No ☑	
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody)	Yes ☑	No ☐	
12. Are matrices correctly identified on Chain of Custody?	Yes ☑	No ☐	
13. Is it clear what analyses were requested?	Yes ☑	No ☐	
14. Were all holding times able to be met? (If no, notify customer for authorization.)	Yes ☑	No ☐	

# of preserved bottles checked for pH: 3 (<2 or >12 unless noted)

Adjusted? NO

Checked by: SA 2/17/23

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.1	Good	Not Present	YOGI		

Chain-of-Custody Record

Client: Village of Jemez Springs

Mailing Address: P.O. Box 269
Jemez Springs, NM 87025

Phone #: 575-520-8246

email or Fax#: jswm@jemezsprings-nm.gov

QA/QC Package:
■ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other_____

☐ EDD (Type) _____

Turn-Around Time:
■ Standard ☐ Rush_____

Project Name:
Village of Jemez Springs

Project #:
WWTP

Project Manager:
Rose Fenton

Sampler: Rose Fenton
On Ice: ☑ Yes ☐ No
# of Coolers: 1 IR: Yo4F
Cooler Temp(including CF): 3.9+0.2=4.1°C

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2302816	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	BOD5 / TSS	E-COLI	Total N / Total P	Dissolved B / As	Total Recoverable Al	
2/17/23	1100	AQ	FINAL EFFLUENT	1-P	N/A	001											■					
2/17/23	1258	AQ	RAW INFLUENT	1-P	N/A	002											■					
2/17/23	1106	AQ	FINAL EFFLUENT	1-P	Na2S203	001												■				
2/17/23	1106	AQ	FINAL EFFLUENT	1-P	H2S04														■			
2/17/23	1106	AQ	FINAL EFFLUENT	1-P	HN03															■		
2/17/23	1106	AQ	FINAL EFFLUENT	1-P	HN03																■	

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
2/17/23	1420	R Fenton	[illegible]	[illegible]	2/17/23	14:20
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time

Remarks:
Please email reports to:
jswm@jemezsprings-nm.gov
nmangin2021@gmail.com

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

March 31, 2023

Rose Fenton

Village of Jemez Springs
PO Box 269
Jemez Springs, NM 87025
TEL: (575) 829-3988
FAX: (575) 829-3339

RE: Village of Jemez Springs OrderNo.: 2303458

Dear Rose Fenton:

Hall Environmental Analysis Laboratory received 2 sample(s) on 3/8/2023 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Village of Jemez Springs
Client Sample ID: Final Effluent
Project: Village of Jemez Springs
Collection Date: 3/8/2023 11:32:00 AM
Lab ID: 2303458-001 **Matrix:** AQUEOUS **Received Date:** 3/8/2023 1:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst: **bcv**	
Arsenic	0.035	0.0050	*	mg/L	5	3/14/2023 12:14:10 PM	B95252
SM5210B: BOD						Analyst: **dms**	
Biochemical Oxygen Demand	16	2.0		mg/L	1	3/14/2023 9:44:00 AM	73597
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **SMS**	
E. Coli	27.2	1.000		MPN/100	1	3/9/2023 4:20:00 PM	73586
EPA METHOD 300.0: ANIONS						Analyst: **NAI**	
Nitrate+Nitrite as N	ND	1.0		mg/L	5	3/25/2023 8:52:15 PM	A95567
TOTAL NITROGEN						Analyst: **CJS**	
Nitrogen, Total	16	1.0		mg/L	1	3/30/2023 4:03:00 PM	R95680
EPA METHOD 365.1: TOTAL PHOSPHOROUS						Analyst: **JMT**	
Phosphorus, Total (As P)	0.26	0.050		mg/L	1	3/16/2023 3:12:00 PM	73723
SM 4500 NORG C: TKN						Analyst: **DML**	
Nitrogen, Kjeldahl, Total	16	1.0		mg/L	1	3/24/2023 2:00:00 PM	73885
SM 2540D: TSS						Analyst: **KS**	
Suspended Solids	10	4.0		mg/L	1	3/10/2023 10:50:00 AM	73613
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **JRR**	
Boron	2.0	0.20		mg/L	5	3/16/2023 2:50:05 PM	A95342
EPA METHOD 200.7: METALS						Analyst: **VP**	
Aluminum	ND	0.020		mg/L	1	3/15/2023 12:43:01 PM	73636

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Village of Jemez Springs
Client Sample ID: Raw Influent
Project: Village of Jemez Springs
Collection Date: 3/8/2023 10:48:00 AM
Lab ID: 2303458-002 **Matrix:** AQUEOUS **Received Date:** 3/8/2023 1:15:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM5210B: BOD						Analyst: **dms**	
Biochemical Oxygen Demand	371	2.0	R	mg/L	1	3/14/2023 9:44:00 AM	73597
NOTES: R-RPD between bottles >30%							
SM 2540D: TSS						Analyst: **KS**	
Suspended Solids	300	20	D	mg/L	1	3/10/2023 10:50:00 AM	73613

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2303458**

31-Mar-23

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-73636**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Metals**
Client ID: **PBW**	Batch ID: **73636**	RunNo: **95286**
Prep Date: **3/10/2023**	Analysis Date: **3/15/2023**	SeqNo: **3446412** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								

Sample ID: **LCSLL-73636**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Metals**
Client ID: **BatchQC**	Batch ID: **73636**	RunNo: **95286**
Prep Date: **3/10/2023**	Analysis Date: **3/15/2023**	SeqNo: **3446413** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020	0.01000	0	128	50	150			

Sample ID: **LCS-73636**	SampType: **LCS**	TestCode: **EPA Method 200.7: Metals**
Client ID: **LCSW**	Batch ID: **73636**	RunNo: **95286**
Prep Date: **3/10/2023**	Analysis Date: **3/15/2023**	SeqNo: **3446414** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.54	0.020	0.5000	0	108	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2303458**

31-Mar-23

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A95342**	RunNo: **95342**
Prep Date:	Analysis Date: **3/16/2023**	SeqNo: **3448403** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	ND	0.040								

Sample ID: **LCSLL-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A95342**	RunNo: **95342**
Prep Date:	Analysis Date: **3/16/2023**	SeqNo: **3448404** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.041	0.040	0.04000	0	101	50	150			

Sample ID: **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A95342**	RunNo: **95342**
Prep Date:	Analysis Date: **3/16/2023**	SeqNo: **3448405** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.52	0.040	0.5000	0	104	85	115			

Sample ID: **2303458-001EMS**	SampType: **MS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **Final Effluent**	Batch ID: **A95342**	RunNo: **95342**
Prep Date:	Analysis Date: **3/16/2023**	SeqNo: **3448468** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	4.8	0.20	2.500	1.964	113	70	130			

Sample ID: **2303458-001EMSD**	SampType: **MSD**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **Final Effluent**	Batch ID: **A95342**	RunNo: **95342**
Prep Date:	Analysis Date: **3/16/2023**	SeqNo: **3448469** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	4.8	0.20	2.500	1.964	112	70	130	0.339	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2303458**

31-Mar-23

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B95252**	RunNo: **95252**
Prep Date:	Analysis Date: **3/14/2023**	SeqNo: **3445006** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010								

Sample ID: **LCSLL**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B95252**	RunNo: **95252**
Prep Date:	Analysis Date: **3/14/2023**	SeqNo: **3445007** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.0010	0.001000	0	99.5	50	150			

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B95252**	RunNo: **95252**
Prep Date:	Analysis Date: **3/14/2023**	SeqNo: **3445008** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.0010	0.02500	0	99.0	85	115			

Sample ID: **2303458-001EMSLL**	SampType: **MS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **Final Effluent**	Batch ID: **B95252**	RunNo: **95252**
Prep Date:	Analysis Date: **3/14/2023**	SeqNo: **3445033** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.16	0.0050	0.1250	0.03491	101	70	130			

Sample ID: **2303458-001EMSLL**	SampType: **MSD**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **Final Effluent**	Batch ID: **B95252**	RunNo: **95252**
Prep Date:	Analysis Date: **3/14/2023**	SeqNo: **3445034** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.16	0.0050	0.1250	0.03491	98.8	70	130	1.64	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2303458**

31-Mar-23

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **A95567**	RunNo: **95567**
Prep Date:	Analysis Date: **3/25/2023**	SeqNo: **3457118** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	ND	0.20								

Sample ID: **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **A95567**	RunNo: **95567**
Prep Date:	Analysis Date: **3/25/2023**	SeqNo: **3457119** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.5	0.20	3.500	0	100	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2303458**

31-Mar-23

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-73597**	SampType: **MBLK**	TestCode: **SM5210B: BOD**							
Client ID: **PBW**	Batch ID: **73597**	RunNo: **95248**							
Prep Date: **3/9/2023**	Analysis Date: **3/14/2023**	SeqNo: **3444703**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	ND	2.0								

Sample ID: **LCS-73597**	SampType: **LCS**	TestCode: **SM5210B: BOD**							
Client ID: **LCSW**	Batch ID: **73597**	RunNo: **95248**							
Prep Date: **3/9/2023**	Analysis Date: **3/14/2023**	SeqNo: **3444704**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	193	2.0	198.0	0	97.5	84.6	115.4			R

Sample ID: **2303458-002ADUP**	SampType: **DUP**	TestCode: **SM5210B: BOD**							
Client ID: **Raw Influent**	Batch ID: **73597**	RunNo: **95248**							
Prep Date: **3/9/2023**	Analysis Date: **3/14/2023**	SeqNo: **3444718**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	443	2.0						17.7	28.2	R

NOTES:

R-RPD between bottles >30%

R-RPD between bottles >30%

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2303458**

31-Mar-23

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-73586**	SampType: **MBLK**	TestCode: **SM 9223B Fecal Indicator: E. coli MPN**
Client ID: **PBW**	Batch ID: **73586**	RunNo: **95154**
Prep Date: **3/8/2023**	Analysis Date: **3/9/2023**	SeqNo: **3440982** Units: **MPN/100mL**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
E. Coli	<1	1.000								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2303458**

31-Mar-23

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-73723**	SampType: **MBLK**	TestCode: **EPA Method 365.1: Total Phosphorous**
Client ID: **PBW**	Batch ID: **73723**	RunNo: **95340**
Prep Date: **3/15/2023**	Analysis Date: **3/16/2023**	SeqNo: **3448266** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Total (As P)	ND	0.050								

Sample ID: **LCS-73723**	SampType: **LCS**	TestCode: **EPA Method 365.1: Total Phosphorous**
Client ID: **LCSW**	Batch ID: **73723**	RunNo: **95340**
Prep Date: **3/15/2023**	Analysis Date: **3/16/2023**	SeqNo: **3448267** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Total (As P)	0.25	0.050	0.2500	0	99.5	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2303458**

31-Mar-23

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-73885**	SampType: **MBLK**	TestCode: **SM 4500 Norg C: TKN**
Client ID: **PBW**	Batch ID: **73885**	RunNo: **95550**
Prep Date: **3/23/2023**	Analysis Date: **3/24/2023**	SeqNo: **3456321** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Kjeldahl, Total	ND	1.0								

Sample ID: **LCS-73885**	SampType: **LCS**	TestCode: **SM 4500 Norg C: TKN**
Client ID: **LCSW**	Batch ID: **73885**	RunNo: **95550**
Prep Date: **3/23/2023**	Analysis Date: **3/24/2023**	SeqNo: **3456322** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Kjeldahl, Total	9.9	1.0	10.00	0	99.4	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2303458**

31-Mar-23

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-73613**	SampType: **MBLK**	TestCode: **SM 2540D: TSS**							
Client ID: **PBW**	Batch ID: **73613**	RunNo: **95171**							
Prep Date: **3/9/2023**	Analysis Date: **3/10/2023**	SeqNo: **3441996**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Suspended Solids	ND	4.0								

Sample ID: **LCS-73613**	SampType: **LCS**	TestCode: **SM 2540D: TSS**							
Client ID: **LCSW**	Batch ID: **73613**	RunNo: **95171**							
Prep Date: **3/9/2023**	Analysis Date: **3/10/2023**	SeqNo: **3441997**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Suspended Solids	90	4.0	91.90	0	97.9	83.89	119.7			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **Village of Jemez Springs** Work Order Number: **2303458** RcptNo: **1**

Received By: **Cheyenne Cason** **3/8/2023 1:15:00 PM** CMC

Completed By: **Desiree Dominguez** **3/8/2023 1:27:19 PM** DD

Reviewed By: CMC 3/8/23 @1354

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Client

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☐ No ☑ NA ☐
   Samples were collected the same day and chilled.
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes ☐ No ☐ NA ☑
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: 3 (<2 or >12 unless noted)
Adjusted? NO
Checked by: TMC 3/8/23

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	10.0	Good	Not Present	Morty		

Chain-of-Custody Record

Client: Village of Jemez Springs

Mailing Address: P.O. Box 269
Jemez Springs, NM 87025

Phone #: 575-520-8246

email or Fax#: jswm@jemezsprings-nm.gov

QA/QC Package:
■ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other_____
☐ EDD (Type) _____

Turn-Around Time:
■ Standard ☐ Rush_____

Project Name:
Village of Jemez Springs

Project #:
WWTP

Project Manager:
Rose Fenton

Sampler: Rose Fenton
On Ice: ☒ Yes ☐ No Morty
# of Coolers: 1
Cooler Temp(including CF): 10.1-0.1=16.0

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2303458	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	BOD5 / TSS	E-COLI	Total N / Total P	Dissolved B / As	Total recoverable Al	
3/8/23	1132	AQ	FINAL EFFLUENT	1-P	N/A	-001											■					
3/8/23	1048	AQ	RAW INFLUENT	1-P	N/A	-002											■					
3/8/23	1132	AQ	FINAL EFFLUENT	1-P	NA2S2O3	-001												■				
3/8/23	1132	AQ	FINAL EFFLUENT	1-P	H2SO4														■			
3/8/23	1132	AQ	FINAL EFFLUENT	1-P	HNO3															■		
3/8/23	1132	AQ	FINAL EFFLUENT	1-P	HNO3																■	

Date	Time	Relinquished by:	Received by:	Via:	Date	Time
3.8.23	1314	Donald D.	CM	CMRO	3/8/23	1315
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time

Remarks:
Please email reports to:
jswm@jemezsprings-nm.gov
nmangin2021@gmail.com

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

May 01, 2023

Rose Fenton

Village of Jemez Springs
PO Box 269
Jemez Springs, NM 87025
TEL: (575) 829-3988
FAX: (575) 829-3339

RE: Village of Jemez Springs OrderNo.: 2304552

Dear Rose Fenton:

Hall Environmental Analysis Laboratory received 2 sample(s) on 4/12/2023 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Case Narrative

WO#: **2304552**
Date: **5/1/2023**

CLIENT: Village of Jemez Springs
Project: Village of Jemez Springs

Analytical Comments Regarding BOD:
The method blank(s) had a DO depletion >0.2mg/L.

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Village of Jemez Springs
Client Sample ID: Final Effluent
Project: Village of Jemez Springs
Collection Date: 4/12/2023 12:31:00 PM
Lab ID: 2304552-001 **Matrix:** AQUEOUS **Received Date:** 4/12/2023 2:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst: **bcv**	
Arsenic	0.0079	0.00050		mg/L	1	4/13/2023 1:10:14 PM	C95993
SM5210B: BOD						Analyst: **SMS**	
Biochemical Oxygen Demand	7.16	2.00		mg/L	1	4/18/2023 4:27:00 PM	74294
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **TES**	
E. Coli	>24196	10.00		MPN/100	1	4/13/2023 4:58:00 PM	74284
EPA METHOD 300.0: ANIONS						Analyst: **JTT**	
Nitrate+Nitrite as N	ND	1.0		mg/L	5	4/14/2023 10:48:04 PM	A96042
TOTAL NITROGEN						Analyst: **CJS**	
Nitrogen, Total	2.4	1.0		mg/L	1	4/27/2023 3:32:00 PM	R96359
EPA METHOD 365.1: TOTAL PHOSPHOROUS						Analyst: **CJS**	
Phosphorus, Total (As P)	0.52	0.25	D	mg/L	1	4/19/2023 11:57:00 AM	74393
SM 4500 NORG C: TKN						Analyst: **DML**	
Nitrogen, Kjeldahl, Total	2.4	1.0		mg/L	1	4/26/2023 2:10:00 PM	74545
SM 2540D: TSS						Analyst: **KS**	
Suspended Solids	230	8.0	D	mg/L	1	4/18/2023 11:44:00 AM	74368
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **JRR**	
Boron	0.083	0.040		mg/L	1	4/17/2023 2:03:18 PM	A96084
EPA METHOD 200.7: TOTAL METALS						Analyst: **VP**	
Aluminum	4.8	0.10	*	mg/L	5	4/14/2023 10:25:30 AM	74295

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Village of Jemez Springs
Client Sample ID: Raw Influent
Project: Village of Jemez Springs
Collection Date: 4/12/2023 12:37:00 PM
Lab ID: 2304552-002 **Matrix:** AQUEOUS **Received Date:** 4/12/2023 2:40:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM5210B: BOD						Analyst: **SMS**	
Biochemical Oxygen Demand	<6.57	2.00	E	mg/L	1	4/18/2023 4:27:00 PM	74294
NOTES:							
E-Estimated value due to all bottles having a DO Depletion <2.0 mg/L.							
SM 2540D: TSS						Analyst: **KS**	
Suspended Solids	360	8.0	D	mg/L	1	4/18/2023 11:44:00 AM	74368

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2304552**

01-May-23

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A96084**	RunNo: **96084**
Prep Date:	Analysis Date: **4/17/2023**	SeqNo: **3479297** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	ND	0.040								

Sample ID: **LCSLL-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A96084**	RunNo: **96084**
Prep Date:	Analysis Date: **4/17/2023**	SeqNo: **3479298** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.043	0.040	0.04000	0	106	50	150			

Sample ID: **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A96084**	RunNo: **96084**
Prep Date:	Analysis Date: **4/17/2023**	SeqNo: **3479299** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.51	0.040	0.5000	0	102	85	115			

Sample ID: **2304552-001EMS**	SampType: **MS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **Final Effluent**	Batch ID: **A96084**	RunNo: **96084**
Prep Date:	Analysis Date: **4/17/2023**	SeqNo: **3479308** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.62	0.040	0.5000	0.08301	108	70	130			

Sample ID: **2304552-001EMSD**	SampType: **MSD**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **Final Effluent**	Batch ID: **A96084**	RunNo: **96084**
Prep Date:	Analysis Date: **4/17/2023**	SeqNo: **3479309** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.62	0.040	0.5000	0.08301	107	70	130	0.889	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2304552**

01-May-23

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-74295**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW**	Batch ID: **74295**	RunNo: **96029**
Prep Date: **4/13/2023**	Analysis Date: **4/14/2023**	SeqNo: **3477331** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								

Sample ID: **LCSLL-74295**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BatchQC**	Batch ID: **74295**	RunNo: **96029**
Prep Date: **4/13/2023**	Analysis Date: **4/14/2023**	SeqNo: **3477332** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020	0.01000	0	120	50	150			

Sample ID: **LCS-74295**	SampType: **LCS**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW**	Batch ID: **74295**	RunNo: **96029**
Prep Date: **4/13/2023**	Analysis Date: **4/14/2023**	SeqNo: **3477333** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.55	0.020	0.5000	0	109	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2304552**

01-May-23

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **2304552-001EMSLL**	SampType: **MS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **Final Effluent**	Batch ID: **C95993**	RunNo: **95993**
Prep Date:	Analysis Date: **4/13/2023**	SeqNo: **3476041** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.033	0.00050	0.02500	0.007883	101	70	130			

Sample ID: **2304552-001EMSDL**	SampType: **MSD**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **Final Effluent**	Batch ID: **C95993**	RunNo: **95993**
Prep Date:	Analysis Date: **4/13/2023**	SeqNo: **3476042** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.032	0.00050	0.02500	0.007883	98.3	70	130	2.12	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2304552**

01-May-23

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **A96042**	RunNo: **96042**
Prep Date:	Analysis Date: **4/14/2023**	SeqNo: **3477656** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	ND	0.20								

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **A96042**	RunNo: **96042**
Prep Date:	Analysis Date: **4/14/2023**	SeqNo: **3477657** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.5	0.20	3.500	0	98.9	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2304552**

01-May-23

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-74294**	SampType: **MBLK**	TestCode: **SM5210B: BOD**							
Client ID: **PBW**	Batch ID: **74294**	RunNo: **96301**							
Prep Date: **4/13/2023**	Analysis Date: **4/18/2023**	SeqNo: **3487190**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	ND	2.00								

Sample ID: **LCS-74294**	SampType: **LCS**	TestCode: **SM5210B: BOD**							
Client ID: **LCSW**	Batch ID: **74294**	RunNo: **96301**							
Prep Date: **4/13/2023**	Analysis Date: **4/18/2023**	SeqNo: **3487191**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	195	2.00	198.0	0	98.5	84.6	115.4			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2304552**

01-May-23

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-74284**	SampType: **MBLK**	TestCode: **SM 9223B Fecal Indicator: E. coli MPN**
Client ID: **PBW**	Batch ID: **74284**	RunNo: **96007**
Prep Date: **4/12/2023**	Analysis Date: **4/13/2023**	SeqNo: **3476311** Units: **MPN/100mL**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
E. Coli	<1	1.000								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2304552**

01-May-23

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-74393**	SampType: **MBLK**	TestCode: **EPA Method 365.1: Total Phosphorous**
Client ID: **PBW**	Batch ID: **74393**	RunNo: **96141**
Prep Date: **4/18/2023**	Analysis Date: **4/19/2023**	SeqNo: **3481534** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Total (As P)	ND	0.050								

Sample ID: **LCS-74393**	SampType: **LCS**	TestCode: **EPA Method 365.1: Total Phosphorous**
Client ID: **LCSW**	Batch ID: **74393**	RunNo: **96141**
Prep Date: **4/18/2023**	Analysis Date: **4/19/2023**	SeqNo: **3481535** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Total (As P)	0.24	0.050	0.2500	0	94.4	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2304552**

01-May-23

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-74545**	SampType: **MBLK**	TestCode: **SM 4500 Norg C: TKN**
Client ID: **PBW**	Batch ID: **74545**	RunNo: **96324**
Prep Date: **4/25/2023**	Analysis Date: **4/26/2023**	SeqNo: **3488498** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Kjeldahl, Total	ND	1.0								

Sample ID: **LCS-74545**	SampType: **LCS**	TestCode: **SM 4500 Norg C: TKN**
Client ID: **LCSW**	Batch ID: **74545**	RunNo: **96324**
Prep Date: **4/25/2023**	Analysis Date: **4/26/2023**	SeqNo: **3488499** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Kjeldahl, Total	9.8	1.0	10.00	0	98.0	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2304552**

01-May-23

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-74368**	SampType: **MBLK**	TestCode: **SM 2540D: TSS**							
Client ID: **PBW**	Batch ID: **74368**	RunNo: **96092**							
Prep Date: **4/17/2023**	Analysis Date: **4/18/2023**	SeqNo: **3479962**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Suspended Solids	ND	4.0								

Sample ID: **LCS-74368**	SampType: **LCS**	TestCode: **SM 2540D: TSS**							
Client ID: **LCSW**	Batch ID: **74368**	RunNo: **96092**							
Prep Date: **4/17/2023**	Analysis Date: **4/18/2023**	SeqNo: **3479963**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Suspended Solids	85	4.0	91.90	0	92.5	83.89	119.7			

Sample ID: **LCSD-74368**	SampType: **LCSD**	TestCode: **SM 2540D: TSS**							
Client ID: **LCSS02**	Batch ID: **74368**	RunNo: **96092**							
Prep Date: **4/17/2023**	Analysis Date: **4/18/2023**	SeqNo: **3479964**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Suspended Solids	89	4.0	91.90	0	96.8	83.89	119.7	4.60	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: **Village of Jemez Springs** Work Order Number: **2304552** RcptNo: **1**

Received By: **Joseph Alderette** **4/12/2023 2:40:00 PM**

Completed By: **Desiree Dominguez** **4/12/2023 3:13:36 PM**

Reviewed By: JM 4/12/23 @15:35

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Client

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☐ No ☑ NA ☐
   Samples were collected the same day and chilled.
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes ☐ No ☐ NA ☑
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: 3 (<2 or >12 unless noted)
Adjusted? NO
Checked by: KRG 4·12·23

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: Date:
By Whom: Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding:
Client Instructions:

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	9.8	Good	Not Present	Yogi		

Chain-of-Custody Record

Client: Village of Jemez Springs

Mailing Address: P.O. Box 269
Jemez Springs, NM 87025

Phone #: 575-520-8246

email or Fax#: jswm@jemezsprings-nm.gov

QA/QC Package:
■ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
■ Standard ☐ Rush

Project Name:
Village of Jemez Springs

Project #:
WWTP

Project Manager:
Rose Fenton

Sampler: Rose Fenton
On Ice: ☑ Yes ☐ No
# of Coolers: 1
Cooler Temp (including CF): 10.1 - 0.3 = 9.8 °C

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2304552	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	BOD5 / TSS	E-COLI	Total N / Total P	Dissolved As / B	Total Recoverable Al	
4/13/23	1231	AQ	FINAL EFFLUENT	1-P	NONE	-001											■					
4/13/23	1237	AQ	RAW INFLUENT	1-P	NONE	-002											■					
4/13/23	1231	AQ	FINAL EFFLUENT	1-P	NA2S203	-001												■				
4/13/23	1231	AQ	FINAL EFFLUENT	1-P	H2S04														■			
4/13/23	1231	AQ	FINAL EFFLUENT	1-P	HN03															■		
4/13/23	1231	AQ	FINAL EFFLUENT	1-P	HN03																■	

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
4/12/23	14:40 PM	MATT SALAZAR		CDO	4-12-23	14:40
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time

Remarks:
Please email reports to:
jswm@jemezsprings-nm.gov
nmangin2021@gmail.com

PLANT OVERWHELMED BY INFILTRATION INFLUENT DUE TO SPRING RUNOFF / RIVER FLOODING

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

July 17, 2023

Rose Fenton

Village of Jemez Springs
PO Box 269
Jemez Springs, NM 87025
TEL: (575) 829-3988
FAX: (575) 829-3339

RE: Village of Jemez Springs OrderNo.: 2306550

Dear Rose Fenton:

Hall Environmental Analysis Laboratory received 2 sample(s) on 6/9/2023 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

Hall Environmental Analysis Laboratory, Inc.

Analytical Report
Lab Order **2306550**
Date Reported: **7/17/2023**

CLIENT: Village of Jemez Springs
Project: Village of Jemez Springs
Lab ID: 2306550-001 **Matrix:** AQUEOUS

Client Sample ID: Raw Influent
Collection Date: 6/9/2023 1:41:00 PM
Received Date: 6/9/2023 3:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM5210B: BOD						Analyst: **ejn**	
Biochemical Oxygen Demand	255	2.00	R	mg/L	1	6/14/2023 4:11:00 PM	75505
NOTES:							
R - RPD between dilutions is >30%							
SM 2540D: TSS						Analyst: **KS**	
Suspended Solids	900	20	D	mg/L	1	6/15/2023 11:09:00 AM	75578

18,666 gallons
received this day

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Village of Jemez Springs
Client Sample ID: Final Effluent
Project: Village of Jemez Springs
Collection Date: 6/9/2023 12:54:00 PM
Lab ID: 2306550-002 **Matrix:** AQUEOUS **Received Date:** 6/9/2023 3:45:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst: **bcv**	
Arsenic	0.054	0.0025	*	mg/L	5	6/12/2023 2:00:25 PM	B97375
SM5210B: BOD						Analyst: **ejn**	
Biochemical Oxygen Demand	ND	2.00		mg/L	1	6/14/2023 4:14:00 PM	75505
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **TES**	
E. Coli	1.0	1.000	EH	MPN/100	1	6/11/2023 1:10:00 AM	75500
NOTES:							
E - Estimated results. Sample read past the 28 hour hold time.							
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Nitrate+Nitrite as N	21	1.0	*	mg/L	5	6/21/2023 7:16:35 PM	A97630
TOTAL NITROGEN						Analyst: **MCA**	
Nitrogen, Total	21	5.0		mg/L	1	7/13/2023 2:02:00 PM	R98176
EPA METHOD 365.1: TOTAL PHOSPHOROUS						Analyst: **JAG**	
Phosphorus, Total (As P)	1.7	0.25	D	mg/L	1	6/15/2023 12:10:00 PM	75610
SM 4500 NORG C: TKN						Analyst: **DML**	
Nitrogen, Kjeldahl, Total	ND	5.0	D	mg/L	1	7/8/2023 10:45:00 AM	76046
SM 2540D: TSS						Analyst: **KS**	
Suspended Solids	ND	4.0		mg/L	1	6/15/2023 11:09:00 AM	75578
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **JRR**	
Boron	1.7	0.40		mg/L	10	6/12/2023 12:57:14 PM	A97384
EPA METHOD 200.7: TOTAL METALS						Analyst: **JRR**	
Aluminum	ND	0.020		mg/L	1	6/19/2023 1:08:00 PM	75553

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2306550**

17-Jul-23

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A97384**	RunNo: **97384**
Prep Date:	Analysis Date: **6/12/2023**	SeqNo: **3537879** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	ND	0.040								

Sample ID: **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A97384**	RunNo: **97384**
Prep Date:	Analysis Date: **6/12/2023**	SeqNo: **3537880** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.50	0.040	0.5000	0	101	85	115			

Sample ID: **LCSLL-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A97384**	RunNo: **97384**
Prep Date:	Analysis Date: **6/12/2023**	SeqNo: **3537881** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	ND	0.040	0.04000	0	99.8	50	150			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2306550**

17-Jul-23

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-75553**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW**	Batch ID: **75553**	RunNo: **97552**
Prep Date: **6/13/2023**	Analysis Date: **6/19/2023**	SeqNo: **3545680** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								

Sample ID: **LCSLL-75553**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BatchQC**	Batch ID: **75553**	RunNo: **97552**
Prep Date: **6/13/2023**	Analysis Date: **6/19/2023**	SeqNo: **3545681** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020	0.01000	0	137	50	150			

Sample ID: **LCS-75553**	SampType: **LCS**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW**	Batch ID: **75553**	RunNo: **97552**
Prep Date: **6/13/2023**	Analysis Date: **6/19/2023**	SeqNo: **3545682** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.56	0.020	0.5000	0	112	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2306550**

17-Jul-23

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B97375**	RunNo: **97375**
Prep Date:	Analysis Date: **6/12/2023**	SeqNo: **3537562** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.00050								

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B97375**	RunNo: **97375**
Prep Date:	Analysis Date: **6/12/2023**	SeqNo: **3537564** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.026	0.00050	0.02500	0	103	85	115			

Sample ID: **LCSLLB**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B97375**	RunNo: **97375**
Prep Date:	Analysis Date: **6/12/2023**	SeqNo: **3537565** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00055	0.00050	0.0005000	0	109	50	150			

Sample ID: **2306550-002EMSLL**	SampType: **MS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **Final Effluent**	Batch ID: **B97375**	RunNo: **97375**
Prep Date:	Analysis Date: **6/12/2023**	SeqNo: **3537588** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.18	0.0025	0.1250	0.05383	101	70	130			

Sample ID: **2306550-002EMSDL**	SampType: **MSD**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **Final Effluent**	Batch ID: **B97375**	RunNo: **97375**
Prep Date:	Analysis Date: **6/12/2023**	SeqNo: **3537589** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.19	0.0025	0.1250	0.05383	106	70	130	3.47	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2306550**

17-Jul-23

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **A97630**	RunNo: **97630**
Prep Date:	Analysis Date: **6/21/2023**	SeqNo: **3550086** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	ND	0.20								

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **A97630**	RunNo: **97630**
Prep Date:	Analysis Date: **6/21/2023**	SeqNo: **3550087** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.6	0.20	3.500	0	102	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2306550**

17-Jul-23

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-75505**	SampType: **MBLK**	TestCode: **SM5210B: BOD**							
Client ID: **PBW**	Batch ID: **75505**	RunNo: **97520**							
Prep Date: **6/9/2023**	Analysis Date: **6/14/2023**	SeqNo: **3543453**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	ND	2.00								

Sample ID: **LCS-75505**	SampType: **LCS**	TestCode: **SM5210B: BOD**							
Client ID: **LCSW**	Batch ID: **75505**	RunNo: **97520**							
Prep Date: **6/9/2023**	Analysis Date: **6/14/2023**	SeqNo: **3543454**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	148	2.00	198.0	0	74.6	84.6	115.4			S

Sample ID: **2306550-001ADUP**	SampType: **DUP**	TestCode: **SM5210B: BOD**							
Client ID: **Raw Influent**	Batch ID: **75505**	RunNo: **97520**							
Prep Date: **6/9/2023**	Analysis Date: **6/14/2023**	SeqNo: **3543456**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	252	2.00						0.872	28.2	R

NOTES:

R - RPD between dilutions is >30%

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2306550**

17-Jul-23

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-75500**	SampType: **MBLK**	TestCode: **SM 9223B Fecal Indicator: E. coli MPN**
Client ID: **PBW**	Batch ID: **75500**	RunNo: **97355**
Prep Date: **6/9/2023**	Analysis Date: **6/11/2023**	SeqNo: **3537089** Units: **MPN/100mL**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
E. Coli	<1	1.000								H

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2306550**

17-Jul-23

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-75610**	SampType: **mblk**	TestCode: **EPA Method 365.1: Total Phosphorous**
Client ID: **PBW**	Batch ID: **75610**	RunNo: **97481**
Prep Date: **6/15/2023**	Analysis Date: **6/15/2023**	SeqNo: **3542009** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Total (As P)	ND	0.050								

Sample ID: **LCS-75610**	SampType: **LCS**	TestCode: **EPA Method 365.1: Total Phosphorous**
Client ID: **LCSW**	Batch ID: **75610**	RunNo: **97481**
Prep Date: **6/15/2023**	Analysis Date: **6/15/2023**	SeqNo: **3542010** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Total (As P)	0.24	0.050	0.2500	0	97.7	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2306550**

17-Jul-23

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-76046**	SampType: **MBLK**	TestCode: **SM 4500 Norg C: TKN**
Client ID: **PBW**	Batch ID: **76046**	RunNo: **98021**
Prep Date: **7/7/2023**	Analysis Date: **7/8/2023**	SeqNo: **3566565** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Kjeldahl, Total	ND	1.0								

Sample ID: **LCS-76046**	SampType: **LCS**	TestCode: **SM 4500 Norg C: TKN**
Client ID: **LCSW**	Batch ID: **76046**	RunNo: **98021**
Prep Date: **7/7/2023**	Analysis Date: **7/8/2023**	SeqNo: **3566566** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Kjeldahl, Total	9.9	1.0	10.00	0	99.4	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2306550**

17-Jul-23

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-75578**	SampType: **MBLK**	TestCode: **SM 2540D: TSS**							
Client ID: **PBW**	Batch ID: **75578**	RunNo: **97468**							
Prep Date: **6/14/2023**	Analysis Date: **6/15/2023**	SeqNo: **3541249**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Suspended Solids	ND	4.0								

Sample ID: **LCS-75578**	SampType: **LCS**	TestCode: **SM 2540D: TSS**							
Client ID: **LCSW**	Batch ID: **75578**	RunNo: **97468**							
Prep Date: **6/14/2023**	Analysis Date: **6/15/2023**	SeqNo: **3541250**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Suspended Solids	97	4.0	91.90	0	106	83.89	119.7			

Sample ID: **2306550-002ADUP**	SampType: **DUP**	TestCode: **SM 2540D: TSS**							
Client ID: **Final Effluent**	Batch ID: **75578**	RunNo: **97468**							
Prep Date: **6/14/2023**	Analysis Date: **6/15/2023**	SeqNo: **3541262**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Suspended Solids	ND	4.0						0	10	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Village of Jemez Springs Work Order Number: 2306550 RcptNo: 1

Received By: Nancy Proctor 6/9/2023 3:45:00 PM

Completed By: Desiree Dominguez 6/9/2023 3:53:02 PM DD

Reviewed By: MJ 6/9/23 @ 16:35

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Client

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☐ No ☑ NA ☐
   Samples were collected the same day and chilled.
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes ☐ No ☐ NA ☑
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

# of preserved bottles checked for pH: 3 (<2 or >12 unless noted)
Adjusted? NO
Checked by: SCM
pH Lot# 538534

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____
By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person
Regarding: _____
Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	13.7	Good	Not Present	Morty		

Chain-of-Custody Record

Client: Village of Jemez Springs

Mailing Address: P.O. Box 269
Jemez Springs, NM 87025

Phone #: 575-520-8246

email or Fax#: jswm@jemezsprings-nm.gov

QA/QC Package:
■ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
■ Standard ☐ Rush

Project Name:
Village of Jemez Springs

Project #:
WWTP

Project Manager:
Rose Fenton

Sampler: Rose Fenton
On Ice: ☑ Yes ☐ No
# of Coolers: 1 manly
Cooler Temp(including CF): 13.9-0.2=13.7

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Analysis Request

	Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2306550	BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	BOD5/TSS	ECOLI	Total N / Total P	Dissolved As / B	Al Total Recoverable
27	6/9/23	~~1354~~ 1354	AQ	FINAL EFFLUENT	1-P	NONE	-002											■				
	6/9/23	1341	AQ	RAW INFLUENT	1-P	NONE	-001											■				
27	6/9/23	~~1354~~ 1354	AQ	FINAL EFFLUENT	1-P	NA2S2O3	-002												■			
27	6/9/23	~~1354~~ 1354	AQ	FINAL EFFLUENT	1-P	H2S04	1													■		
27	6/9/23	~~1354~~ 1354	AQ	FINAL EFFLUENT	1-P	HNO3															■	
27	6/9/23	~~1354~~ 1354	AQ	FINAL EFFLUENT	1-P	HNO3																■

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
6/9/23	1545	R Fenton	[illegible]	CDO	6/9/23	15:45
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time

Remarks:
Please email reports to:
jswm@jemezsprings-nm.gov
nmangin2021@gmail.com

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

August 16, 2023

Rose Fenton

Village of Jemez Springs
PO Box 269
Jemez Springs, NM 87025
TEL: (575) 829-3988
FAX: (575) 829-3339

RE: Village of Jemez Springs OrderNo.: 2307232

Dear Rose Fenton:

Hall Environmental Analysis Laboratory received 2 sample(s) on 7/7/2023 for the analyses presented in the following report.

These were analyzed according to EPA procedures or equivalent. To access our accredited tests please go to www.hallenvironmental.com or the state specific web sites. In order to properly interpret your results, it is imperative that you review this report in its entirety. See the sample checklist and/or the Chain of Custody for information regarding the sample receipt temperature and preservation. Data qualifiers or a narrative will be provided if the sample analysis or analytical quality control parameters require a flag. When necessary, data qualifiers are provided on both the sample analysis report and the QC summary report, both sections should be reviewed. All samples are reported, as received, unless otherwise indicated. Lab measurement of analytes considered field parameters that require analysis within 15 minutes of sampling such as pH and residual chlorine are qualified as being analyzed outside of the recommended holding time.

Please don't hesitate to contact HEAL for any additional information or clarifications.

ADHS Cert #AZ0682 -- NMED-DWB Cert #NM9425 -- NMED-Micro Cert #NM0901

Sincerely,

Andy Freeman
Laboratory Manager
4901 Hawkins NE
Albuquerque, NM 87109

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Case Narrative

WO#: **2307232**
Date: **8/16/2023**

CLIENT: Village of Jemez Springs
Project: Village of Jemez Springs

Analytical Comments Regarding BOD:
The method blank(s) had a DO depletion >0.2mg/L.

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Village of Jemez Springs
Client Sample ID: Raw Influent
Project: Village of Jemez Springs
Collection Date: 7/7/2023 9:06:00 AM
Lab ID: 2307232-001 **Matrix:** AQUEOUS **Received Date:** 7/7/2023 12:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
SM5210B: BOD						Analyst: **ejn**	
Biochemical Oxygen Demand	109	2.00		mg/L	1	7/12/2023 5:12:00 PM	76048
SM 2540D: TSS						Analyst: **KS**	
Suspended Solids	140	20	D	mg/L	1	7/14/2023 10:16:00 AM	76169

19,308 gallons received this day

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

Hall Environmental Analysis Laboratory, Inc.

CLIENT: Village of Jemez Springs
Client Sample ID: Final Effluent
Project: Village of Jemez Springs
Collection Date: 7/7/2023 8:55:00 AM
Lab ID: 2307232-002 **Matrix:** AQUEOUS **Received Date:** 7/7/2023 12:10:00 PM

Analyses	Result	RL	Qual	Units	DF	Date Analyzed	Batch
EPA 200.8: DISSOLVED METALS						Analyst: **bcv**	
Arsenic	0.11	0.0025	*	mg/L	5	7/18/2023 11:45:37 AM	B98305
SM5210B: BOD						Analyst: **ejn**	
Biochemical Oxygen Demand	3.65	2.00		mg/L	1	7/12/2023 5:13:00 PM	76048
SM 9223B FECAL INDICATOR: E. COLI MPN						Analyst: **MRA**	
E. Coli	<1	1.000		MPN/100	1	7/8/2023 11:10:00 AM	76063
EPA METHOD 300.0: ANIONS						Analyst: **JMT**	
Nitrate+Nitrite as N	16	1.0	*	mg/L	5	7/24/2023 9:11:02 PM	R98462
TOTAL NITROGEN						Analyst: **MRA**	
Nitrogen, Total	16	2.0		mg/L	1	8/9/2023 3:23:00 PM	R98842
EPA METHOD 365.1: TOTAL PHOSPHOROUS						Analyst: **JAG**	
Phosphorus, Total (As P)	5.0	0.25	D	mg/L	1	7/14/2023 11:17:00 AM	76184
SM 4500 NORG C: TKN						Analyst: **DML**	
Nitrogen, Kjeldahl, Total	ND	2.0	D	mg/L	1	7/31/2023 10:03:00 AM	76545
SM 2540D: TSS						Analyst: **KS**	
Suspended Solids	ND	4.0	D	mg/L	1	7/14/2023 10:16:00 AM	76169
EPA METHOD 200.7: DISSOLVED METALS						Analyst: **VP**	
Boron	1.5	0.20		mg/L	5	7/10/2023 12:44:12 PM	A98054
EPA METHOD 200.7: TOTAL METALS						Analyst: **JRR**	
Aluminum	ND	0.020		mg/L	1	7/14/2023 2:10:05 PM	76139

Refer to the QC Summary report and sample login checklist for flagged QC data and preservation information.

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2307232**

16-Aug-23

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-A**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **PBW**	Batch ID: **A98054**	RunNo: **98054**
Prep Date:	Analysis Date: **7/10/2023**	SeqNo: **3567952** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	ND	0.040								

Sample ID: **LCSLL-A**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **A98054**	RunNo: **98054**
Prep Date:	Analysis Date: **7/10/2023**	SeqNo: **3567953** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	ND	0.040	0.04000	0	93.9	50	150			

Sample ID: **LCS-A**	SampType: **LCS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **A98054**	RunNo: **98054**
Prep Date:	Analysis Date: **7/10/2023**	SeqNo: **3567954** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	0.54	0.040	0.5000	0	107	85	115			

Sample ID: **2307232-002EMS**	SampType: **MS**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **Final Effluent**	Batch ID: **A98054**	RunNo: **98054**
Prep Date:	Analysis Date: **7/10/2023**	SeqNo: **3567994** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	4.0	0.20	2.500	1.525	100	70	130			

Sample ID: **2307232-002EMSD**	SampType: **MSD**	TestCode: **EPA Method 200.7: Dissolved Metals**
Client ID: **Final Effluent**	Batch ID: **A98054**	RunNo: **98054**
Prep Date:	Analysis Date: **7/10/2023**	SeqNo: **3567995** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Boron	4.1	0.20	2.500	1.525	101	70	130	0.606	20	

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2307232**

16-Aug-23

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-76139**	SampType: **MBLK**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **PBW**	Batch ID: **76139**	RunNo: **98228**
Prep Date: **7/12/2023**	Analysis Date: **7/14/2023**	SeqNo: **3574675** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020								

Sample ID: **LCSLL-76139**	SampType: **LCSLL**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **BatchQC**	Batch ID: **76139**	RunNo: **98228**
Prep Date: **7/12/2023**	Analysis Date: **7/14/2023**	SeqNo: **3574676** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	ND	0.020	0.01000	0	114	50	150			

Sample ID: **LCS-76139**	SampType: **LCS**	TestCode: **EPA Method 200.7: Total Metals**
Client ID: **LCSW**	Batch ID: **76139**	RunNo: **98228**
Prep Date: **7/12/2023**	Analysis Date: **7/14/2023**	SeqNo: **3574677** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Aluminum	0.54	0.020	0.5000	0	107	85	115			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2307232**

16-Aug-23

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB**	SampType: **MBLK**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **PBW**	Batch ID: **B98305**	RunNo: **98305**
Prep Date:	Analysis Date: **7/18/2023**	SeqNo: **3577406** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	ND	0.00050								

Sample ID: **LCS**	SampType: **LCS**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **LCSW**	Batch ID: **B98305**	RunNo: **98305**
Prep Date:	Analysis Date: **7/18/2023**	SeqNo: **3577408** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.025	0.00050	0.02500	0	101	85	115			

Sample ID: **LCSLLB**	SampType: **LCSLL**	TestCode: **EPA 200.8: Dissolved Metals**
Client ID: **BatchQC**	Batch ID: **B98305**	RunNo: **98305**
Prep Date:	Analysis Date: **7/18/2023**	SeqNo: **3577409** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Arsenic	0.00051	0.00050	0.0005000	0	102	50	150			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2307232**

16-Aug-23

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB**	SampType: **mblk**	TestCode: **EPA Method 300.0: Anions**
Client ID: **PBW**	Batch ID: **R98462**	RunNo: **98462**
Prep Date:	Analysis Date: **7/24/2023**	SeqNo: **3584267** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	ND	0.20								

Sample ID: **LCS**	SampType: **lcs**	TestCode: **EPA Method 300.0: Anions**
Client ID: **LCSW**	Batch ID: **R98462**	RunNo: **98462**
Prep Date:	Analysis Date: **7/24/2023**	SeqNo: **3584268** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrate+Nitrite as N	3.5	0.20	3.500	0	99.0	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2307232**

16-Aug-23

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-76048**	SampType: **MBLK**	TestCode: **SM5210B: BOD**
Client ID: **PBW**	Batch ID: **76048**	RunNo: **98252**
Prep Date: **7/7/2023**	Analysis Date: **7/12/2023**	SeqNo: **3575903** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	ND	2.00								

Sample ID: **LCS-76048**	SampType: **LCS**	TestCode: **SM5210B: BOD**
Client ID: **LCSW**	Batch ID: **76048**	RunNo: **98252**
Prep Date: **7/7/2023**	Analysis Date: **7/12/2023**	SeqNo: **3575904** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Biochemical Oxygen Demand	179	2.00	198.0	0	90.6	84.6	115.4			R

NOTES:

R - RPD between dilutions is >30%

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2307232**

16-Aug-23

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-76063**	SampType: **MBLK**	TestCode: **SM 9223B Fecal Indicator: E. coli MPN**
Client ID: **PBW**	Batch ID: **76063**	RunNo: **98049**
Prep Date: **7/7/2023**	Analysis Date: **7/8/2023**	SeqNo: **3567714** Units: **MPN/100mL**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
E. Coli	<1	1.000								

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2307232**

16-Aug-23

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-76184**	SampType: **mblk**	TestCode: **EPA Method 365.1: Total Phosphorous**
Client ID: **PBW**	Batch ID: **76184**	RunNo: **98206**
Prep Date: **7/13/2023**	Analysis Date: **7/14/2023**	SeqNo: **3573702** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Total (As P)	ND	0.050								

Sample ID: **LCS-76184**	SampType: **LCS**	TestCode: **EPA Method 365.1: Total Phosphorous**
Client ID: **LCSW**	Batch ID: **76184**	RunNo: **98206**
Prep Date: **7/13/2023**	Analysis Date: **7/14/2023**	SeqNo: **3573703** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Phosphorus, Total (As P)	0.24	0.050	0.2500	0	95.9	90	110			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2307232**

16-Aug-23

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-76545**	SampType: **MBLK**	TestCode: **SM 4500 Norg C: TKN**
Client ID: **PBW**	Batch ID: **76545**	RunNo: **98613**
Prep Date: **7/28/2023**	Analysis Date: **7/31/2023**	SeqNo: **3591157** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Kjeldahl, Total	ND	1.0								

Sample ID: **LCS-76545**	SampType: **LCS**	TestCode: **SM 4500 Norg C: TKN**
Client ID: **LCSW**	Batch ID: **76545**	RunNo: **98613**
Prep Date: **7/28/2023**	Analysis Date: **7/31/2023**	SeqNo: **3591158** Units: **mg/L**

Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Nitrogen, Kjeldahl, Total	9.9	1.0	10.00	0	99.4	80	120			

Qualifiers:

*	Value exceeds Maximum Contaminant Level.
D	Sample Diluted Due to Matrix
H	Holding times for preparation or analysis exceeded
ND	Not Detected at the Reporting Limit
PQL	Practical Quanitative Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.
B	Analyte detected in the associated Method Blank
E	Above Quantitation Range/Estimated Value
J	Analyte detected below quantitation limits
P	Sample pH Not In Range
RL	Reporting Limit

QC SUMMARY REPORT

Hall Environmental Analysis Laboratory, Inc.

WO#: **2307232**

16-Aug-23

Client: Village of Jemez Springs

Project: Village of Jemez Springs

Sample ID: **MB-76169**	SampType: **MBLK**	TestCode: **SM 2540D: TSS**							
Client ID: **PBW**	Batch ID: **76169**	RunNo: **98197**							
Prep Date: **7/13/2023**	Analysis Date: **7/14/2023**	SeqNo: **3573492**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Suspended Solids	ND	4.0								

Sample ID: **LCS-76169**	SampType: **LCS**	TestCode: **SM 2540D: TSS**							
Client ID: **LCSW**	Batch ID: **76169**	RunNo: **98197**							
Prep Date: **7/13/2023**	Analysis Date: **7/14/2023**	SeqNo: **3573493**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Suspended Solids	97	4.0	91.90	0	106	83.89	119.7			

Sample ID: **2307232-002ADUP**	SampType: **DUP**	TestCode: **SM 2540D: TSS**							
Client ID: **Final Effluent**	Batch ID: **76169**	RunNo: **98197**							
Prep Date: **7/13/2023**	Analysis Date: **7/14/2023**	SeqNo: **3573502**	Units: **mg/L**						
Analyte	Result	PQL	SPK value	SPK Ref Val	%REC	LowLimit	HighLimit	%RPD	RPDLimit	Qual
Suspended Solids	ND	4.0						0	10	D

Qualifiers:

*	Value exceeds Maximum Contaminant Level.	B	Analyte detected in the associated Method Blank
D	Sample Diluted Due to Matrix	E	Above Quantitation Range/Estimated Value
H	Holding times for preparation or analysis exceeded	J	Analyte detected below quantitation limits
ND	Not Detected at the Reporting Limit	P	Sample pH Not In Range
PQL	Practical Quanitative Limit	RL	Reporting Limit
S	% Recovery outside of standard limits. If undiluted results may be estimated.		

HALL ENVIRONMENTAL ANALYSIS LABORATORY

Hall Environmental Analysis Laboratory
4901 Hawkins NE
Albuquerque, NM 87109
TEL: 505-345-3975 FAX: 505-345-4107
Website: www.hallenvironmental.com

Sample Log-In Check List

Client Name: Village of Jemez Springs Work Order Number: 2307232 RcptNo: 1

Received By: **Joseph Alderette** 7/7/2023 12:10:00 PM

Completed By: **Desiree Dominguez** 7/7/2023 12:24:26 PM

Reviewed By: JN 7/7/23 @ 14:00

Chain of Custody

1. Is Chain of Custody complete? Yes ☑ No ☐ Not Present ☐
2. How was the sample delivered? Client

Log In

3. Was an attempt made to cool the samples? Yes ☑ No ☐ NA ☐
4. Were all samples received at a temperature of >0° C to 6.0°C Yes ☑ No ☐ NA ☐
   Samples were collected the same day and chilled.
5. Sample(s) in proper container(s)? Yes ☑ No ☐
6. Sufficient sample volume for indicated test(s)? Yes ☑ No ☐
7. Are samples (except VOA and ONG) properly preserved? Yes ☑ No ☐
8. Was preservative added to bottles? Yes ☐ No ☑ NA ☐
9. Received at least 1 vial with headspace <1/4" for AQ VOA? Yes ☐ No ☐ NA ☑
10. Were any sample containers received broken? Yes ☐ No ☑
11. Does paperwork match bottle labels? (Note discrepancies on chain of custody) Yes ☑ No ☐
12. Are matrices correctly identified on Chain of Custody? Yes ☑ No ☐
13. Is it clear what analyses were requested? Yes ☑ No ☐
14. Were all holding times able to be met? (If no, notify customer for authorization.) Yes ☑ No ☐

SCM 07/07/23

# of preserved bottles checked for pH: 3 (<2 or >12 unless noted)

Adjusted? NO

Checked by: SCM 07/07/23

Special Handling (if applicable)

15. Was client notified of all discrepancies with this order? Yes ☐ No ☐ NA ☑

Person Notified: _____ Date: _____

By Whom: _____ Via: ☐ eMail ☐ Phone ☐ Fax ☐ In Person

Regarding: _____

Client Instructions: _____

16. Additional remarks:

17. **Cooler Information**

Cooler No	Temp °C	Condition	Seal Intact	Seal No	Seal Date	Signed By
1	4.8	Good	Not Present	Yogi		

Chain-of-Custody Record

Client: Village of Jemez Springs

Mailing Address: P.O. Box 269
Jemez Springs, NM 87025

Phone #: 575-520-8246

email or Fax#: jswm@jemezsprings-nm.gov

QA/QC Package:
■ Standard ☐ Level 4 (Full Validation)

Accreditation: ☐ Az Compliance
☐ NELAC ☐ Other

☐ EDD (Type)

Turn-Around Time:
■ Standard ☐ Rush

Project Name:
Village of Jemez Springs

Project #:
WWTP

Project Manager:
Rose Fenton

Sampler: Rose Fenton
On Ice: ☑ Yes ☐ No
# of Coolers: 1
Cooler Temp (Including CF): 4.8-0=4.8°C

HALL ENVIRONMENTAL ANALYSIS LABORATORY
www.hallenvironmental.com
4901 Hawkins NE - Albuquerque, NM 87109
Tel. 505-345-3975 Fax 505-345-4107

Date	Time	Matrix	Sample Name	Container Type and #	Preservative Type	HEAL No. 2307232
7/7/23	0855	AQ	FINAL EFFLUENT	1-P	NONE	-002
7/7/23	0806	AQ	RAW INFLUENT	1-P	NONE	-001
7/7/23	0855	AQ	FINAL EFFLUENT	1-P	NA2S2O3	-002
7/7/23	0855	AQ	FINAL EFFLUENT	1-P	H2S04	
7/7/23	0855	AQ	FINAL EFFLUENT	1-P	HNO3	
7/7/23	0855	AQ	FINAL EFFLUENT	1-P	HNO3	

Analysis Request

BTEX / MTBE / TMB's (8021)	TPH:8015D(GRO / DRO / MRO)	8081 Pesticides/8082 PCB's	EDB (Method 504.1)	PAHs by 8310 or 8270SIMS	RCRA 8 Metals	Cl, F, Br, NO_3, NO_2, PO_4, SO_4	8260 (VOA)	8270 (Semi-VOA)	Total Coliform (Present/Absent)	BOD5/TSS	ECOLI	Total N / Total P	Dissolved As / B	Al Total Recoverable	
										■					
										■					
											■				
												■			
													■		
														■	

Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time
7/7/23	1210			CDO	7.7.23	12:10
Date:	Time:	Relinquished by:	Received by:	Via:	Date	Time

Remarks:
Please email reports to:
jswm@jemezsprings-nm.gov

If necessary, samples submitted to Hall Environmental may be subcontracted to other accredited laboratories. This serves as notice of this possibility. Any sub-contracted data will be clearly notated on the analytical report.

Appendix E

Wastewater Flow Data

DBS&A
a Geo-Logic Company

2021	Jan	DAILY FLOW			Feb	DAILY FLOW			Mar	DAILY FLOW
SUNDAY				**SUNDAY**	**31**	**22062**		**SUNDAY**	**28**	**23386**
MONDAY				MONDAY	1	19354		MONDAY	1	20326
TUESDAY				TUESDAY	2	19760		TUESDAY	2	19704
WEDNESDAY				WEDNESDAY	3	18363		WEDNESDAY	3	19222
THURSDAY				THURSDAY	4	23569		THURSDAY	4	18245
FRIDAY	1	23667		FRIDAY	5	26366		FRIDAY	5	19587
SATURDAY	2	22684		SATURDAY	6	26320		SATURDAY	6	19323
WEEKLY AVERAGE		**23176**		**WEEKLY AVERAGE**		**22256**		**WEEKLY AVERAGE**		**19970**
CONVERSION CALC		**0.0231755**		**CONVERSION CALC**		**0.022256286**		**CONVERSION CALC**		**0.019970429**
SUNDAY	3	22684		SUNDAY	7	27543		SUNDAY	7	21751
MONDAY	4	19998		MONDAY	8	24851		MONDAY	8	18989
TUESDAY	5	18276		TUESDAY	9	23238		TUESDAY	9	17881
WEDNESDAY	6	22182		WEDNESDAY	10	22503		WEDNESDAY	10	18435
THURSDAY	7	18091		THURSDAY	11	21909		THURSDAY	11	18347
FRIDAY	8	19108		FRIDAY	12	25756		FRIDAY	12	18362
SATURDAY	9	18716		SATURDAY	13	27436		SATURDAY	13	21933
WEEKLY AVERAGE		**19865**		**WEEKLY AVERAGE**		**24748**		**WEEKLY AVERAGE**		**19385**
CONVERSION CALC		**0.019865**		**CONVERSION CALC**		**0.024748**		**CONVERSION CALC**		**0.019385429**
SUNDAY	10	20319		SUNDAY	14	38423		SUNDAY	14	23307
MONDAY	11	19397		MONDAY	15	38648		MONDAY	15	22838
TUESDAY	12	16312		TUESDAY	16	30073		TUESDAY	16	19518
WEDNESDAY	13	20403		WEDNESDAY	17	27777		WEDNESDAY	17	20085
THURSDAY	14	15317		THURSDAY	18	28717		THURSDAY	18	19649
FRIDAY	15	16336		FRIDAY	19	27767		FRIDAY	19	20873
SATURDAY	16	20632		SATURDAY	20	20502		SATURDAY	20	23691
WEEKLY AVERAGE		**18388**		**WEEKLY AVERAGE**		**30272**		**WEEKLY AVERAGE**		**21423**
CONVERSION CALC		**0.018388**		**CONVERSION CALC**		**0.030272429**		**CONVERSION CALC**		**0.021423**
SUNDAY	17	20982		SUNDAY	21	25742		SUNDAY	21	22374
MONDAY	18	19853		MONDAY	22	21931		MONDAY	22	22374
TUESDAY	19	18347		TUESDAY	23	20050		TUESDAY	23	19749
WEDNESDAY	20	20032		WEDNESDAY	24	19889		WEDNESDAY	24	24123
THURSDAY	21	18576		THURSDAY	25	21488		THURSDAY	25	25353
FRIDAY	22	17813		FRIDAY	26	22930		FRIDAY	26	21721
SATURDAY	23	17176		SATURDAY	27	22756		SATURDAY	27	22040
WEEKLY AVERAGE		**18968**		**WEEKLY AVERAGE**		**22112**		**WEEKLY AVERAGE**		**22533**
CONVERSION CALC		**0.018968429**		**CONVERSION CALC**		**0.022112286**		**CONVERSION CALC**		**0.022533429**
SUNDAY	24	18454		SUNDAY	28	23386		SUNDAY	28	22085
MONDAY	25	19294		MONDAY				MONDAY	29	19713
TUESDAY	26	18717		TUESDAY				TUESDAY	30	16638
WEDNESDAY	27	20896		WEDNESDAY				WEDNESDAY	31	22112
THURSDAY	28	18741		THURSDAY				THURSDAY		
FRIDAY	29	20122		FRIDAY				FRIDAY		
SATURDAY	30	17976		SATURDAY				SATURDAY		
WEEKLY AVERAGE		**19171**		**WEEKLY AVERAGE**		**23386**		**WEEKLY AVERAGE**		**20137**
CONVERSION CALC		**0.019171429**		**CONVERSION CALC**		**0.023386**		**CONVERSION CALC**		**0.020137**
SUNDAY	31	22062								
MONTHLY AVERAGE		**19456.87097**		**MONTHLY AVERAGE**		**24895**		**MONTHLY AVERAGE**		**20656.3871**
CONVERSION CALC		**0.019456871**		**CONVERSION CALC**		**0.024894536**		**CONVERSION CALC**		**0.020656387**

2021	APR	DAILY FLOW			MAY	DAILY FLOW			JUNE	DAILY FLOW
SUNDAY	**28-Mar**	**22085**		**SUNDAY**	**25-Apr**	**55538**		**SUNDAY**	**30-May**	**26835**
MONDAY	**29-Mar**	**19713**		**MONDAY**	**26-Apr**	**33427**		**MONDAY**	**31-May**	**23527**
TUESDAY	**30-Mar**	**16638**		**TUESDAY**	**27-Apr**	**27727**		TUESDAY	1	22606
WEDNESDAY	**31-Mar**	**22112**		**WEDNESDAY**	**28-Apr**	**30241**		WEDNESDAY	2	20044
THURSDAY	1	18940		**THURSDAY**	**29-Apr**	**28019**		THURSDAY	3	19005
FRIDAY	2	20636		**FRIDAY**	**30-Apr**	**21634**		FRIDAY	4	23296
SATURDAY	3	19921		SATURDAY	1	22071		SATURDAY	5	22396
WEEKLY AVERAGE		**20006**		**WEEKLY AVERAGE**		**31237**		**WEEKLY AVERAGE**		**22530**
CONVERSION CALC		**0.020006429**		**CONVERSION CALC**		**0.031236714**		**CONVERSION CALC**		**0.022529857**
SUNDAY	4	21088		SUNDAY	2	22309		SUNDAY	6	22706
MONDAY	5	16824		MONDAY	3	21434		MONDAY	7	20396
TUESDAY	6	25592		TUESDAY	4	20641		TUESDAY	8	19516
WEDNESDAY	7	30149		WEDNESDAY	5	17948		WEDNESDAY	9	19462
THURSDAY	8	33640		THURSDAY	6	19398		THURSDAY	10	20525
FRIDAY	9	31516		FRIDAY	7	16458		FRIDAY	11	17377
SATURDAY	10	32418		SATURDAY	8	21712		SATURDAY	12	21699
WEEKLY AVERAGE		**27318**		**WEEKLY AVERAGE**		**19986**		**WEEKLY AVERAGE**		**20240**
CONVERSION CALC		**0.027318143**		**CONVERSION CALC**		**0.019985714**		**CONVERSION CALC**		**0.020240143**
SUNDAY	11	32695		SUNDAY	9	21309		SUNDAY	13	28388
MONDAY	12	28689		MONDAY	10	20276		MONDAY	14	23155
TUESDAY	13	28215		TUESDAY	11	21405		TUESDAY	15	20958
WEDNESDAY	14	30743		WEDNESDAY	12	24371		WEDNESDAY	16	18671
THURSDAY	15	17761		THURSDAY	13	30057		THURSDAY	17	19050
FRIDAY	16	14908		FRIDAY	14	26274		FRIDAY	18	16809
SATURDAY	17	35041		SATURDAY	15	24848		SATURDAY	19	20402
WEEKLY AVERAGE		**26865**		**WEEKLY AVERAGE**		**24077**		**WEEKLY AVERAGE**		**21062**
CONVERSION CALC		**0.026864571**		**CONVERSION CALC**		**0.024077143**		**CONVERSION CALC**		**0.021061857**
SUNDAY	18	33499		SUNDAY	16	25170		SUNDAY	20	21171
MONDAY	19	28612		MONDAY	17	23021		MONDAY	21	8524
TUESDAY	20	27688		TUESDAY	18	24798		TUESDAY	22	28225
WEDNESDAY	21	27338		WEDNESDAY	19	23967		WEDNESDAY	23	18039
THURSDAY	22	25866		THURSDAY	20	24640		THURSDAY	24	15856
FRIDAY	23	35940		FRIDAY	21	22647		FRIDAY	25	22212
SATURDAY	24	60735		SATURDAY	22	23863		SATURDAY	26	21220
WEEKLY AVERAGE		**34240**		**WEEKLY AVERAGE**		**24015**		**WEEKLY AVERAGE**		**19321**
CONVERSION CALC		**0.034239714**		**CONVERSION CALC**		**0.024015143**		**CONVERSION CALC**		**0.019321**
SUNDAY	25	55538		SUNDAY	23	27795		SUNDAY	27	20336
MONDAY	26	33427		MONDAY	24	24492		MONDAY	28	24683
TUESDAY	27	27727		TUESDAY	25	20933		TUESDAY	29	21136
WEDNESDAY	28	30241		WEDNESDAY	26	19310		WEDNESDAY	30	19372
THURSDAY	29	28019		THURSDAY	27	21292		THURSDAY		
FRIDAY	30	21634		FRIDAY	28	21857		FRIDAY		
SATURDAY				SATURDAY	29	24035		SATURDAY		
WEEKLY AVERAGE		**32764**		**WEEKLY AVERAGE**		**22816**		**WEEKLY AVERAGE**		**21382**
CONVERSION CALC		**0.032764333**		**CONVERSION CALC**		**0.022816286**		**CONVERSION CALC**		**0.02138175**
				SUNDAY	30	26835				
				MONDAY	31	23527				
MONTHLY AVERAGE		**29168**		**MONTHLY AVERAGE**		**22861**		**MONTHLY AVERAGE**		**20574.5**
CONVERSION CALC		**0.029168**		**CONVERSION CALC**		**0.022861065**		**CONVERSION CALC**		**0.0205745**

2021	JULY	DAILY FLOW			AUG	DAILY FLOW			SEP	DAILY FLOW
SUNDAY	**27-Jun**	**20336**		SUNDAY	1	25413		**SUNDAY**	**29**	**25134**
MONDAY	**28-Jun**	**24683**		MONDAY	2	22844		**MONDAY**	**30**	**26570**
TUESDAY	**29-Jun**	**21136**		TUESDAY	3	20308		**TUESDAY**	**31**	**28581**
WEDNESDAY	**30-Jun**	**19372**		WEDNESDAY	4	18758		WEDNESDAY	1	18652
THURSDAY	1	19657		THURSDAY	5	21650		THURSDAY	2	21903
FRIDAY	2	21205		FRIDAY	6	21050		FRIDAY	3	21903
SATURDAY	3	23554		SATURDAY	7	23090		SATURDAY	4	24703
WEEKLY AVERAGE		**21420**		**WEEKLY AVERAGE**		**21873**		**WEEKLY AVERAGE**		**23921**
CONVERSION CALC		**0.021420429**		**CONVERSION CALC**		**0.021873286**		**CONVERSION CALC**		**0.023920857**
SUNDAY	4	23723		SUNDAY	8	24917		SUNDAY	5	25986
MONDAY	5	18453		MONDAY	9	29074		MONDAY	6	38759
TUESDAY	6	21128		TUESDAY	10	33899		TUESDAY	7	43345
WEDNESDAY	7	19494		WEDNESDAY	11	21918		WEDNESDAY	8	18250
THURSDAY	8	18130		THURSDAY	12	20072		THURSDAY	9	23523
FRIDAY	9	16278		FRIDAY	13	24470		FRIDAY	10	28230
SATURDAY	10	19859		SATURDAY	14	27244		SATURDAY	11	32829
WEEKLY AVERAGE		**19580.71429**		**WEEKLY AVERAGE**		**25942**		**WEEKLY AVERAGE**		**30132**
CONVERSION CALC		**0.019580714**		**CONVERSION CALC**		**0.025942**		**CONVERSION CALC**		**0.030131714**
SUNDAY	11	20788		SUNDAY	15	24663		SUNDAY	12	34232
MONDAY	12	18178		MONDAY	16	28137		MONDAY	13	36494
TUESDAY	13	24351		TUESDAY	17	34630		TUESDAY	14	52504
WEDNESDAY	14	17934		WEDNESDAY	18	22489		WEDNESDAY	15	33189
THURSDAY	15	18393		THURSDAY	19	22439		THURSDAY	16	27685
FRIDAY	16	18252		FRIDAY	20	21020		FRIDAY	17	26801
SATURDAY	17	23901		SATURDAY	21	24716		SATURDAY	18	28255
WEEKLY AVERAGE		**20256.71429**		**WEEKLY AVERAGE**		**25442**		**WEEKLY AVERAGE**		**34166**
CONVERSION CALC		**0.020256714**		**CONVERSION CALC**		**0.025442**		**CONVERSION CALC**		**0.034165714**
SUNDAY	18	19477		SUNDAY	22	25241		SUNDAY	19	32505
MONDAY	19	21592		MONDAY	23	37425		MONDAY	20	56514
TUESDAY	20	19104		TUESDAY	24	28863		TUESDAY	21	31765
WEDNESDAY	21	21926		WEDNESDAY	25	19045		WEDNESDAY	22	25761
THURSDAY	22	19814		THURSDAY	26	20461		THURSDAY	23	20446
FRIDAY	23	22088		FRIDAY	27	19824		FRIDAY	24	23373
SATURDAY	24	26946		SATURDAY	28	25134		SATURDAY	25	22240
WEEKLY AVERAGE		**21563.85714**		**WEEKLY AVERAGE**		**25142**		**WEEKLY AVERAGE**		**30372**
CONVERSION CALC		**0.021563857**		**CONVERSION CALC**		**0.025141857**		**CONVERSION CALC**		**0.030372**
SUNDAY	25	29386		SUNDAY	29	25134		SUNDAY	26	23556
MONDAY	26	28039		MONDAY	30	26570		MONDAY	27	30370
TUESDAY	27	20621		TUESDAY	31	28581		TUESDAY	28	28369
WEDNESDAY	28	22998		WEDNESDAY				WEDNESDAY	29	21437
THURSDAY	29	18830		THURSDAY				THURSDAY	30	21454
FRIDAY	30	20014		FRIDAY				FRIDAY		
SATURDAY	31	24025		SATURDAY				SATURDAY		
WEEKLY AVERAGE		**23416.14286**		**WEEKLY AVERAGE**		**26761.66667**		**WEEKLY AVERAGE**		**25037**
CONVERSION CALC		**0.023416143**		**CONVERSION CALC**		**0.026761667**		**CONVERSION CALC**		**0.0250372**
MONTHLY AVERAGE		**21230.25806**		**MONTHLY AVERAGE**		**24809**		**MONTHLY AVERAGE**		**29167.76667**
CONVERSION CALC		**0.021230258**		**CONVERSION CALC**		**0.024809**		**CONVERSION CALC**		**0.029167767**

2021	OCT	DAILY FLOW			NOV	DAILY FLOW			DEC	DAILY FLOW	
SUNDAY	**26-Sep**	**23556**		**SUNDAY**	**31-Oct**	**27188**		**SUNDAY**	**28-Nov**	**0**	
MONDAY	**27-Sep**	**30370**		MONDAY	1	25159		**MONDAY**	**29-Nov**	**0**	
TUESDAY	**28-Sep**	**28369**		TUESDAY	2	23916		**TUESDAY**	**30-Nov**	**0**	
WEDNESDAY	**29-Sep**	**21437**		WEDNESDAY	3	22204		WEDNESDAY	1	19145	
THURSDAY	**30-Sep**	**21454**		THURSDAY	4	22039		THURSDAY	2	15878	
FRIDAY	1	29421		FRIDAY	5	26726		FRIDAY	3	18462	
SATURDAY	2	33802		SATURDAY	6	24177		SATURDAY	4	21081	
WEEKLY AVERAGE		**26916**		**WEEKLY AVERAGE**		**24487**		**WEEKLY AVERAGE**		**10652**	
CONVERSION CALC		**0.026915571**		**CONVERSION CALC**		**0.024487**		**CONVERSION CALC**		**0.010652286**	
SUNDAY	**3**	36293		SUNDAY	7	26518		SUNDAY	5	23198	
MONDAY	4	29044		MONDAY	8	22128		MONDAY	6	18310	
TUESDAY	5	24123		TUESDAY	9	24028		TUESDAY	7	21351	
WEDNESDAY	6	18875		WEDNESDAY	10	21555		WEDNESDAY	8	19260	
THURSDAY	7	19876		THURSDAY	11	21386		THURSDAY	9	20168	
FRIDAY	8	24412		FRIDAY	12	24834		FRIDAY	10	20799	
SATURDAY	9	24347		SATURDAY	13	26873		SATURDAY	11	24753	
WEEKLY AVERAGE		**25281.42857**		**WEEKLY AVERAGE**		**23903**		**WEEKLY AVERAGE**		**21120**	
CONVERSION CALC		**0.025281429**		**CONVERSION CALC**		**0.023903143**		**CONVERSION CALC**		**0.021119857**	
SUNDAY	10	25651		SUNDAY	14	25715		SUNDAY	12	25959	
MONDAY	11	24106		MONDAY	15	22013		MONDAY	13	22437	Samples dropped off
TUESDAY	12	22963		TUESDAY	16	20353		TUESDAY	14	14276	
WEDNESDAY	13	22095		WEDNESDAY	17	20951		WEDNESDAY	15	29017	
THURSDAY	14	22535		THURSDAY	18	23150		THURSDAY	16	23732	
FRIDAY	15	23365		FRIDAY	19	32553		FRIDAY	17	24592	
SATURDAY	16	23678		SATURDAY	20	27758		SATURDAY	18	25580	
WEEKLY AVERAGE		**23484.71429**		**WEEKLY AVERAGE**		**24642**		**WEEKLY AVERAGE**		**23656**	
CONVERSION CALC		**0.023484714**		**CONVERSION CALC**		**0.024641857**		**CONVERSION CALC**		**0.023656143**	
SUNDAY	17	23713		SUNDAY	21	33117		SUNDAY	19	24862	
MONDAY	18	22002		MONDAY	22			MONDAY	20	24171	Flow meter unable to r
TUESDAY	19	22452		TUESDAY	23			TUESDAY	21	20314	
WEDNESDAY	20	22192		WEDNESDAY	24			WEDNESDAY	22	21967	
THURSDAY	21	20555		THURSDAY	25			THURSDAY	23	18311	
FRIDAY	22	25363		FRIDAY	26			FRIDAY	24	24650	
SATURDAY	23	27202		SATURDAY	27			SATURDAY	25	16536	
WEEKLY AVERAGE		**23354.14286**		**WEEKLY AVERAGE**		**33117**		**WEEKLY AVERAGE**		**21544**	
CONVERSION CALC		**0.023354143**		**CONVERSION CALC**		**0.033117**		**CONVERSION CALC**		**0.021544429**	
SUNDAY	24	35242		SUNDAY	28			SUNDAY	26	21485	
MONDAY	25	30817		MONDAY	29			MONDAY	27	28220	
TUESDAY	26	27253		TUESDAY	30			TUESDAY	28	22816	
WEDNESDAY	27	23708		**WEDNESDAY**	**1-Dec**	**19145**		WEDNESDAY	29	19790	
THURSDAY	28	24607		**THURSDAY**	**2-Dec**	**15878**		THURSDAY	30	29889	
FRIDAY	29	25773		**FRIDAY**	**3-Dec**	**18462**		FRIDAY	31	19105	
SATURDAY	30	27680		**SATURDAY**	**4-Dec**	**21081**		SATURDAY			
WEEKLY AVERAGE		**27868.57143**		**WEEKLY AVERAGE**		**18641.5**		**WEEKLY AVERAGE**		**23551**	
CONVERSION CALC		**0.027868571**		**CONVERSION CALC**		**0.0186415**		**CONVERSION CALC**		**0.023550833**	
SUNDAY	31	27188									
MONTHLY MIN FLOW		**18875**		**MONTHLY MIN FLOW**		**20353**		**MONTHLY MIN FLOW**		**14276**	
MONTHLY MAX FLOW		**36293**		**MONTHLY MAX FLOW**		**33117**		**MONTHLY MAX FLOW**		**29889**	
MONTHLY AVERAGE		**25494.6129**		**MONTHLY AVERAGE**		**24626**		**MONTHLY AVERAGE**		**21939.16129**	
CONVERSION CALC		**0.025494613**		**CONVERSION CALC**		**0.024626333**		**CONVERSION CALC**		**0.021939161**	

2022	Jan	DAILY FLOW			Feb	DAILY FLOW			Mar	DAILY FLOW
SUNDAY	**26-Dec**									
MONDAY	**27-Dec**									
TUESDAY	**28-Dec**									
WEDNESDAY	**29-Dec**									
THURSDAY	**30-Dec**									
FRIDAY	**31-Dec**									
SATURDAY	1-Jan	21122								
WEEKLY AVERAGE		**21122**		**WEEKLY AVERAGE**		**#DIV/0!**		**WEEKLY AVERAGE**		**#DIV/0!**
CONVERSION CALC		**0.021122**		**CONVERSION CALC**		**#DIV/0!**		**CONVERSION CALC**		**#DIV/0!**
SUNDAY	2-Jan	26396		SUNDAY	30-Jan	**21430**		SUNDAY	27-Feb	**24082**
MONDAY	3-Jan	25570		MONDAY	31-Jan	21383		MONDAY	28-Feb	19820
TUESDAY	4-Jan	23264		TUESDAY	1	18085		TUESDAY	1	12393
WEDNESDAY	5-Jan	21235		WEDNESDAY	2	15807		WEDNESDAY	2	15676
THURSDAY	6-Jan	17948		THURSDAY	3	20297		THURSDAY	3	15158
FRIDAY	7-Jan	20299		FRIDAY	4	24558		FRIDAY	4	20066
SATURDAY	8-Jan	20405		SATURDAY	5	25247		SATURDAY	5	23269
WEEKLY AVERAGE		**22160**		**WEEKLY AVERAGE**		**20972**		**WEEKLY AVERAGE**		**18638**
CONVERSION CALC		**0.022159571**		**CONVERSION CALC**		**0.020972429**		**CONVERSION CALC**		**0.018637714**
SUNDAY	9	23504		SUNDAY	6	24027		SUNDAY	6	22861
MONDAY	10	20228		MONDAY	7	20449		MONDAY	7	20905
TUESDAY	11	17114		TUESDAY	8	22943		TUESDAY	8	20493
WEDNESDAY	12	18445		WEDNESDAY	9	18329		WEDNESDAY	9	19449
THURSDAY	13	17847		THURSDAY	10	20030		THURSDAY	10	18250
FRIDAY	14	18118		FRIDAY	11	19718		FRIDAY	11	21136
SATURDAY	15	19117		SATURDAY	12	23757		SATURDAY	12	21347
WEEKLY AVERAGE		**19196.14286**		**WEEKLY AVERAGE**		**21322**		**WEEKLY AVERAGE**		**20634**
CONVERSION CALC		**0.019196143**		**CONVERSION CALC**		**0.021321857**		**CONVERSION CALC**		**0.020634429**
SUNDAY	16	22010		SUNDAY	13	22974		SUNDAY	13	23887
MONDAY	17	14112		MONDAY	14	24167		MONDAY	14	21948
TUESDAY	18	17908		TUESDAY	15	17412		TUESDAY	15	19980
WEDNESDAY	19	19663		WEDNESDAY	16	18112		WEDNESDAY	16	17362
THURSDAY	20	22939		THURSDAY	17	20525		THURSDAY	17	16658
FRIDAY	21	20168		FRIDAY	18	22780		FRIDAY	18	18601
SATURDAY	22	21306		SATURDAY	19	22785		SATURDAY	19	20741
WEEKLY AVERAGE		**19729.42857**		**WEEKLY AVERAGE**		**21251**		**WEEKLY AVERAGE**		**19882**
CONVERSION CALC		**0.019729429**		**CONVERSION CALC**		**0.021250714**		**CONVERSION CALC**		**0.019882429**
SUNDAY	23	18882		SUNDAY	20	24106		SUNDAY	20	20103
MONDAY	24	22528		MONDAY	21	25512		MONDAY	21	19433
TUESDAY	25	17682		TUESDAY	22	18016		TUESDAY	22	22600
WEDNESDAY	26	18353		WEDNESDAY	23	20236		WEDNESDAY	23	21914
THURSDAY	27	18616		THURSDAY	24	20905		THURSDAY	24	18574
FRIDAY	28	18629		FRIDAY	25	20872		FRIDAY	25	18951
SATURDAY	29	17437		SATURDAY	26	25431		SATURDAY	26	21930
WEEKLY AVERAGE		**18875**		**WEEKLY AVERAGE**		**22154**		**WEEKLY AVERAGE**		**20501**
CONVERSION CALC		**0.018875286**		**CONVERSION CALC**		**0.022154**		**CONVERSION CALC**		**0.020500714**
SUNDAY	30	21430		SUNDAY	27	24082		SUNDAY	27	22608
MONDAY	31	21383		MONDAY	28	19820		MONDAY	28	21518
TUESDAY	1	18085		TUESDAY	1	12393		TUESDAY	29	17174
WEDNESDAY	2	15807		WEDNESDAY	2	15676		WEDNESDAY	30	19320
THURSDAY	3	20297		THURSDAY	3	15158		THURSDAY	31	19542
FRIDAY	4	24558		FRIDAY	4	20066		FRIDAY	1	20282
SATURDAY	5	25247		SATURDAY	5	23269		SATURDAY	2	22551
WEEKLY AVERAGE		**20972**		**WEEKLY AVERAGE**		**18638**		**WEEKLY AVERAGE**		**20428**
CONVERSION CALC		**0.020972429**		**CONVERSION CALC**		**0.018637714**		**CONVERSION CALC**		**0.020427857**
MIN		**14112**		**MIN**		**15807**		**MIN**		**12393**
MAX		**26396**		**MAX**		**25512**		**MAX**		**23887**
TOTAL FLOW		**623658**		**TOTAL FLOW**		**600982**		**TOTAL FLOW**		**613847**
MONTHLY AVERAGE		**20118**		**MONTHLY AVERAGE**		**21464**		**MONTHLY AVERAGE**		**19802**
CONVERSION CALC		**0.020118**		**CONVERSION CALC**		**0.02**		**CONVERSION CALC**		**0.019801516**

	Lab Results						DMR Calculations		
	January_mg/L	January	Februrary		March		January	Februrary	March
Grab Date	1/13/2022	1/25/2022	2/24/2022	2/28/2022	3/10/2022	28-Mar			
BOD/Eff	4.4		7.6		2.7				
BOD/Inf	780		107		195		0.994358974	0.928971963	0.986153846
TSS/Inf	970		660		820		0.997938144	0.989393939	0.997560976
TSS/Eff	ND		7		ND				
E.Coli	1		238.2		5.2		1	15.43	2.35
T.Nitrogen	8.3	4.5	20	22	17	26	1.073818368	3.75914241	3.550609857
T.Phosphorus	1.1	0.5	0.54	0.4	0.2	0.29	0.134227296	0.084133187	0.040460438
Arsenic	0.11		0.027		0.022		0.018456253	0.004833183	0.003633182
Boron	2.1		2		2.2		0.352346652	0.358013563	0.363318218
Aluminum	ND		ND		0.021		0.003355682	0.003580136	0.003468038
Flow on grab	17847	17682	20236	19820	18250	21518			
Monthly flow av	**20118**		**29678**		**19802**				
Min pH	6.89		6.83		7.00				
Max pH	7.38		7.35		7.63				

Aluminum calculation?	Monthly Average Concentration * Monthly Average Flow * 8.34 mg/L MGD weight of gallon of water
BOD5/TSS	Influent - effluent / influent * 100%
T. Nitrogen/T. Phosphorus	grab1+grab2/2 * monthly average * 8.34 mg/L MGD weight of gallon of water

Sample * 8.34 * flow	NITROGEN		
Sample * 8.34 * flow	PHOSPHOROUS		
Sample * 8.34 * flow	BORON		
Sample * 8.34 * flow	ARSENIC		
Sample * 8.34 * flow	ALUMINUM		
Sample * 8.34 * flow	BOD5-EFF	0.17514 7DAY	0.36696
		0.1668 30DAY	
			0.057546
		3.5028	
JAN DDAILY MAX 86.2			221
LOADING 0.1			

2022	APR	DAILY FLOW			MAY	DAILY FLOW			JUNE	DAILY FLOW	
SUNDAY	**27-Mar**	**22608**		SUNDAY	1	47245		**SUNDAY**	**29-May**	**0**	
MONDAY	**28-Mar**	**21518**		MONDAY	2	25420		**MONDAY**	**30-May**	**0**	
TUESDAY	**29-Mar**	**17174**		TUESDAY	3	20736		**TUESDAY**	**31-May**	**31520**	
WEDNESDAY	**30-Mar**	**19320**		WEDNESDAY	4	19701		WEDNESDAY	1	23075	
THURSDAY	**31-Mar**	**19542**		THURSDAY	5	28464		THURSDAY	2	24872	
FRIDAY	1	20282		FRIDAY	6	41241		FRIDAY	3	22197	
SATURDAY	2	22551		SATURDAY	7	40235		SATURDAY	4	22677	
WEEKLY AVERAGE		**20428**		**WEEKLY AVERAGE**		**31863**		**WEEKLY AVERAGE**		**17763**	
CONVERSION CALC		**0.020427857**		**CONVERSION CALC**		**0.031863143**		**CONVERSION CALC**		**0.017763**	
SUNDAY	3	22109		SUNDAY	8	34589		SUNDAY	5	26941	
MONDAY	4	18738		MONDAY	9	37963		MONDAY	6	24532	
TUESDAY	5	22976		TUESDAY	10	35390		TUESDAY	7	21902	
WEDNESDAY	6	17521		WEDNESDAY	11	31703		WEDNESDAY	8	21132	
THURSDAY	7	20175		THURSDAY	12	32346		THURSDAY	9	24085	
FRIDAY	8	21629		FRIDAY	13	36401		FRIDAY	10	25867	
SATURDAY	9	20731		SATURDAY	14	35126		SATURDAY	11	23096	
WEEKLY AVERAGE		**20554**		**WEEKLY AVERAGE**		**34788**		**WEEKLY AVERAGE**		**23936**	
CONVERSION CALC		**0.020554143**		**CONVERSION CALC**		**0.034788286**		**CONVERSION CALC**		**0.023936429**	
SUNDAY	10	20730		SUNDAY	15	45593		SUNDAY	12	31148	THIS WAS WHEN THE DIGESTER VALVE DROPPED INTO THE BASIN
MONDAY	11	19701		MONDAY	16	34782		MONDAY	13	21232	
TUESDAY	12	17798		TUESDAY	17	33268		TUESDAY	14	20822	
WEDNESDAY	13	20662		WEDNESDAY	18	33102		WEDNESDAY	15	20201	
THURSDAY	14	23923		THURSDAY	19	32684		THURSDAY	16	19761	
FRIDAY	15	22669		FRIDAY	20	30002		FRIDAY	17	18622	
SATURDAY	16	24879		SATURDAY	21	30782		SATURDAY	18	35624	simulated flow for UV flow test
WEEKLY AVERAGE		**21480**		**WEEKLY AVERAGE**		**34316**		**WEEKLY AVERAGE**		**23916**	
CONVERSION CALC		**0.021480286**		**CONVERSION CALC**		**0.034316143**		**CONVERSION CALC**		**0.023915714**	
SUNDAY	17	21082		SUNDAY	22	40195		SUNDAY	19	27438	
MONDAY	18	20177		MONDAY	23	35649		MONDAY	20	27914	
TUESDAY	19	20292		TUESDAY	24	35851		TUESDAY	21	24727	
WEDNESDAY	20	17496		WEDNESDAY	25	35887		WEDNESDAY	22	26466	
THURSDAY	21	22540		THURSDAY	26	34105		THURSDAY	23	23313	
FRIDAY	22	19660		FRIDAY	27	32392		FRIDAY	24	27922	
SATURDAY	23	31742		SATURDAY	28	33694		SATURDAY	25	24714	
WEEKLY AVERAGE		**21856**		**WEEKLY AVERAGE**		**35396**		**WEEKLY AVERAGE**		**26071**	
CONVERSION CALC		**0.021855571**		**CONVERSION CALC**		**0.035396143**		**CONVERSION CALC**		**0.026070571**	
SUNDAY	24	29689		SUNDAY	29	39540		SUNDAY	26	27588	
MONDAY	25	21980		MONDAY	30	37505		MONDAY	27	31471	
TUESDAY	26	25420		TUESDAY	31	31520		TUESDAY	28	24515	
WEDNESDAY	27	21764		WEDNESDAY	1	23075		WEDNESDAY	29	27198	
THURSDAY	28	26240		THURSDAY	2	24872		THURSDAY	30	21108	
FRIDAY	29	26458		FRIDAY	3	22197		FRIDAY	1	25499	
SATURDAY	30	24646		SATURDAY	4	22677		SATURDAY	2	25928	
WEEKLY AVERAGE		**25171**		**WEEKLY AVERAGE**		**28769**		**WEEKLY AVERAGE**		**26187**	
CONVERSION CALC		**0.025171**		**CONVERSION CALC**		**0.028769429**		**CONVERSION CALC**		**0.026186714**	
MIN		**17496**		**MIN**		**19701**		**MIN**		**18622**	
MAX		**31742**		**MAX**		**47245**		**MAX**		**35624**	
MAX MONTHLY FLOW		**31742**		**MAX MONTHLY FLOW**		**47245**		**MAX MONTHLY FLOW**		**35624**	
TOTAL FLOW		**691139**		**TOTAL FLOW**		**1063111**		**TOTAL FLOW**		**742160**	
MONTHLY AVERAGE		**22208.66667**		**MONTHLY AVERAGE**		**34294**		**MONTHLY AVERAGE**		**24738.66667**	
CONVERSION CALC		**0.022208667**		**CONVERSION CALC**		**0.034293903**		**CONVERSION CALC**		**0.024738667**	

	Lab Results						DMR Calculations					
	Apr_mg/L	Apr	May		June		April	%removal	May	%Removal	June	%Removal
Grab Date	4/13/2022		5/19/2022	5/31/2022	6/17/2022	27-Jun	30-Day	7-Day	30-Day	7-Day	30-Day	7-Day
BOD/Eff	2.3		2		8.2		0.425993856	0.9689189	0.572022	**0.972973**	**1.691828**	**92**
BOD/Inf	74		74		100			0.4120294		**0.5723909**		0.1994571
TSS/Inf	90		44		70			0.9888889		0.9772727	0.20632	
TSS/Eff	1		1		1		0.18521472	0.1791432	0.286011	0.2861954		0.9857143
E.Coli	1		1		43.5			daily max		daily max		daily max
T.Nitrogen	21	19	18	20	16	21	5.64904896		8.008312		3.816929	
T.Phosphorus	0.36	1.7	0.31	1.5	2.4	5.1	0.224109811		0.303172		0.773702	
Arsenic	0.042		0.14		0.11		0.007779018		0.040042		0.022695	
Boron	2.3		1.7		1.5		0.425993856		0.486219		0.309481	
Aluminum	1		0.024		0.02	nd	0.18521472		0.006864		**0.004126**	
Flow on grab	20662		32684		18622							
Weekly flow avg on grab	21480		34316		23916							
Monthly flow av	**22208**		**34294**		**24739**							
Total Monthly Flow	**691139**		**1063111**		**742160**				0.28894			
Max Monthly Flow	**31742**		**47245**		**35624**				1.063111			
Min pH	6.96		6.96		6.90				0.034316			
Max pH	7.61		7.56		7.25				0.034294			

Monthly Average Concentration * Monthly Average Flow * 8.34 **#NAME?**
mg/L **MGD** **weight of gallon of water**

BOD5/TSS Influent - effluent / influent * 100%

T. Nitrogen/T. Phosphorus grab1+grab2/2 * monthly average * 8.34
mg/L MGD weight of gallon of water

Sample * 8.34 * flow NITROGEN ?
Sample * 8.34 * flow PHOSPHOROUS ?
Sample * 8.34 * flow BORON
Sample * 8.34 * flow ARSENIC
Sample * 8.34 * flow ALUMINUM
Sample * 8.34 * flow **BOD5-EFF** **0.17514 7DAY** **0.36696**
0.1668 30DAY

0.057546

3.5028

JAN DDAILY MAX 86.2 221
LOADING 0.1

2022	JULY	DAILY FLOW			AUG	DAILY FLOW			SEP	DAILY FLOW
SUNDAY	26-Jun	27588		SUNDAY	31	23724		SUNDAY	28	21228
MONDAY	27-Jun	31471		MONDAY	1	36125		MONDAY	29	36766
TUESDAY	28-Jun	24515		TUESDAY	2	22420		TUESDAY	30	33654
WEDNESDAY	29-Jun	27198		WEDNESDAY	3	17419		WEDNESDAY	31	15983
THURSDAY	30-Jun	21108		THURSDAY	4	14351		THURSDAY	1	18544
FRIDAY	1	25499		FRIDAY	5	21019		FRIDAY	2	16573
SATURDAY	2	25928		SATURDAY	6	17821		SATURDAY	3	18323
WEEKLY AVERAGE		26187		WEEKLY AVERAGE		21840		WEEKLY AVERAGE		23010
CONVERSION CALC		0.026186714		CONVERSION CALC		0.021839857		CONVERSION CALC		0.023010143
SUNDAY	3	29725		SUNDAY	7	25711		SUNDAY	4	22522
MONDAY	4	33019		MONDAY	8	30242		MONDAY	5	36851
TUESDAY	5	23097		TUESDAY	9	44498		TUESDAY	6	24650
WEDNESDAY	6	22899		WEDNESDAY	10	19566		WEDNESDAY	7	15629
THURSDAY	7	21824		THURSDAY	11	16121		THURSDAY	8	16828
FRIDAY	8	27209		FRIDAY	12	19852		FRIDAY	9	18672
SATURDAY	9	27581		SATURDAY	13	20060		SATURDAY	10	25306
WEEKLY AVERAGE		26479.14286		WEEKLY AVERAGE		25150		WEEKLY AVERAGE		22923
CONVERSION CALC		0.026479143		CONVERSION CALC		0.02515		CONVERSION CALC		0.022922571
SUNDAY	10	28967		SUNDAY	14	23571		SUNDAY	11	23862
MONDAY	11	25516		MONDAY	15	34214		MONDAY	12	45581
TUESDAY	12	26575		TUESDAY	16	31120		TUESDAY	13	41412
WEDNESDAY	13	25073		WEDNESDAY	17	15610		WEDNESDAY	14	21721
THURSDAY	14	21935		THURSDAY	18	22029		THURSDAY	15	17815
FRIDAY	15	20475		FRIDAY	19	23574		FRIDAY	16	20295
SATURDAY	16	22461		SATURDAY	20	24446		SATURDAY	17	32897
WEEKLY AVERAGE		24428.85714		WEEKLY AVERAGE		24938		WEEKLY AVERAGE		29083
CONVERSION CALC		0.024428857		CONVERSION CALC		0.024937714		CONVERSION CALC		0.029083286
SUNDAY	17	23498		SUNDAY	21	23831		SUNDAY	18	34861
MONDAY	18	27073		MONDAY	22	43759		MONDAY	19	38678
TUESDAY	19	27332		TUESDAY	23	39174		TUESDAY	20	47588
WEDNESDAY	20	19048		WEDNESDAY	24	20817		WEDNESDAY	21	42602
THURSDAY	21	21644		THURSDAY	25	20841		THURSDAY	22	36179
FRIDAY	22	22175		FRIDAY	26	23441		FRIDAY	23	45876
SATURDAY	23	22891		SATURDAY	27	23670		SATURDAY	24	47173
WEEKLY AVERAGE		23380.14286		WEEKLY AVERAGE		27933		WEEKLY AVERAGE		41851
CONVERSION CALC		0.023380143		CONVERSION CALC		0.027933286		CONVERSION CALC		0.041851
SUNDAY	24	23724		SUNDAY	28	21228		SUNDAY	25	46761
MONDAY	25	42175		MONDAY	29	36766		MONDAY	26	41797
TUESDAY	26	43963		TUESDAY	30	33654		TUESDAY	27	54590
WEDNESDAY	27	20586		WEDNESDAY	31	15983		WEDNESDAY	28	38238
THURSDAY	28	17323		THURSDAY	1	18544		THURSDAY	29	28799
FRIDAY	29	18541		FRIDAY	2	16573		FRIDAY	30	43767
SATURDAY	30	19662		SATURDAY	3	18323		SATURDAY		41876
WEEKLY AVERAGE		26567.71429		WEEKLY AVERAGE		23010.14286		WEEKLY AVERAGE		42261
CONVERSION CALC		0.026567714		CONVERSION CALC		0.023010143		CONVERSION CALC		0.042261143
SUNDAY	31	23724								
MONDAY	1	36125								
TUESDAY	2	22420								
WEDNESDAY	3	17419								
THURSDAY	4	14351								
FRIDAY	5	21019								
SATURDAY	6	17821								
WEEKLY AVERAGE		21839.85714		WEEKLY AVERAGE		#DIV/0!		WEEKLY AVERAGE		#DIV/0!
CONVERSION CALC		0.021839857		CONVERSION CALC		#DIV/0!		CONVERSION CALC		#DIV/0!
MIN		17323		MIN		14351		MIN		15629
MAX		43963		MAX		44498		MAX		54590
TOTAL FLOW		781142		TOTAL FLOW		782933		TOTAL FLOW		964390
MONTHLY AVERAGE		25198.12903		MONTHLY AVERAGE		25256		MONTHLY AVERAGE		32146
CONVERSION CALC		0.025198129		CONVERSION CALC		0.025255903		CONVERSION CALC		0.032146333

	Lab Results						DMR Calculations					
	July	July	August	August	Sept	Sept	July	%removal	August	%Removal	Sept	%Removal
Grab Date	7/19/2022	7/29/2022	8/18/2022				30-Day	7-Day	30-Day	7-Day	30-Day	7-Day
BOD/Eff	2.1		2.1		1		0.44132	0.928571429	0.442332	**0.991322**	**0.2681**	**0.995475**
BOD/Inf	29.4		242		221			0.409479822		**0.436759**		
TSS/Inf	60		120		180			0.983333333		0.991667	1.072402	
TSS/Eff	1		1		4		0.210152	0.194990391	0.210634	0		0.977778
E.Coli	7.5		1		1			daily max		daily max		daily max
T.Nitrogen	14	18	11	9.7	10	9.4	3.34	3.336	3.338553		3.941076	
T.Phosphorus	1.3	0.6	0.54	0.88	1.4	1.4	0.199645		0.206422		0.563011	
Arsenic	0.097		0.023		0.16		97		23		160	
Boron	1.8		2		1.2		1800		2000		1200	
Aluminum	1		1		1		0.210152		0.210634		**0.2681**	
Flow on grab	27332	18541	22029		45581							
Weekly flow avg on grab	23380		24938		29083							
Monthly flow av	**25198**		**25256**		**32146**							
Total Monthly Flow	**781142**		**782933**		**964390**				0.267133			
Max Monthly Flow	**43963**		**44498**		**54590**				0.782933			
Min pH	6.62		6.67		6.76				0.024938			
Max pH	7.33		6.92		7.25				0.025256			

42896.07
0.042896

2022	OCT	DAILY FLOW			NOV	DAILY FLOW			DEC	DAILY FLOW
SUNDAY	**25-Sep**	**46761**		SUNDAY	**30-Oct**	**30913**		**SUNDAY**	**27-Nov**	**2532**
MONDAY	**26-Sep**	**41797**		MONDAY	**31-Oct**	28907		**MONDAY**	**28-Nov**	**1981**
TUESDAY	**27-Sep**	**54590**		TUESDAY	**1-Nov**	**24772**		**TUESDAY**	**29-Nov**	**0**
WEDNESDAY	**28-Sep**	**38238**		WEDNESDAY	**2-Nov**	21644		WEDNESDAY	**30-Nov**	0
THURSDAY	**29-Sep**	**28799**		THURSDAY	**3-Nov**	16928		THURSDAY	**1-Dec**	
FRIDAY	**30-Sep**	41876		FRIDAY	**4-Nov**	20865		FRIDAY	**2-Dec**	
SATURDAY	**1-Oct**	41910		SATURDAY	**5-Nov**	22920		SATURDAY	**3-Dec**	
WEEKLY AVERAGE		**41996**		**WEEKLY AVERAGE**		**23850**		**WEEKLY AVERAGE**		**1128**
CONVERSION CALC		**0.041995857**		**CONVERSION CALC**		**0.023849857**		**CONVERSION CALC**		**0.00112825**
SUNDAY	**2-Oct**	41735		SUNDAY	6-Nov	27292		SUNDAY	4-Dec	
MONDAY	**3-Oct**	45447		MONDAY	7-Nov	25475		MONDAY	5-Dec	
TUESDAY	**4-Oct**	45623		TUESDAY	8-Nov	22920		TUESDAY	6-Dec	
WEDNESDAY	**5-Oct**	40646		WEDNESDAY	9-Nov	19289		WEDNESDAY	7-Dec	
THURSDAY	**6-Oct**	29131		THURSDAY	10-Nov	12788		THURSDAY	8-Dec	
FRIDAY	**7-Oct**	24879		FRIDAY	11-Nov	4074		FRIDAY	9-Dec	
SATURDAY	**8-Oct**	26734		SATURDAY	12-Nov	7744		SATURDAY	10-Dec	
WEEKLY AVERAGE		**36313.57143**		**WEEKLY AVERAGE**		**17083**		**WEEKLY AVERAGE**		**#DIV/0!**
CONVERSION CALC		**0.036313571**		**CONVERSION CALC**		**0.017083143**		**CONVERSION CALC**		**#DIV/0!**
SUNDAY	9-Oct	26870		SUNDAY	13-Nov	12955		SUNDAY	11-Dec	
MONDAY	10-Oct	25469		MONDAY	14-Nov	2115		MONDAY	12-Dec	
TUESDAY	11-Oct	26480		TUESDAY	15-Nov	3607		TUESDAY	13-Dec	
WEDNESDAY	12-Oct	25677		WEDNESDAY	16-Nov	1388		WEDNESDAY	14-Dec	
THURSDAY	13-Oct	22599		THURSDAY	17-Nov	2395		THURSDAY	15-Dec	
FRIDAY	14-Oct	21928		FRIDAY	18-Nov	1113		FRIDAY	16-Dec	
SATURDAY	15-Oct	26349		SATURDAY	19-Nov	1780		SATURDAY	17-Dec	
WEEKLY AVERAGE		**25053.14286**		**WEEKLY AVERAGE**		**3622**		**WEEKLY AVERAGE**		**#DIV/0!**
CONVERSION CALC		**0.025053143**		**CONVERSION CALC**		**0.003621857**		**CONVERSION CALC**		**#DIV/0!**
SUNDAY	16-Oct	25354		SUNDAY	20-Nov	3685		SUNDAY	18-Dec	
MONDAY	17-Oct	25780		MONDAY	21-Nov	5977		MONDAY	19-Dec	
TUESDAY	18-Oct	23581		TUESDAY	22-Nov	1759		TUESDAY	20-Dec	
WEDNESDAY	19-Oct	18835		WEDNESDAY	23-Nov	7453		WEDNESDAY	21-Dec	
THURSDAY	20-Oct	24832		THURSDAY	24-Nov	1481		THURSDAY	22-Dec	
FRIDAY	21-Oct	36095		FRIDAY	25-Nov	2556		FRIDAY	23-Dec	
SATURDAY	22-Oct	29793		SATURDAY	26-Nov	8252		SATURDAY	24-Dec	
WEEKLY AVERAGE		**26324.28571**		**WEEKLY AVERAGE**		**4452**		**WEEKLY AVERAGE**		**#DIV/0!**
CONVERSION CALC		**0.026324286**		**CONVERSION CALC**		**0.004451857**		**CONVERSION CALC**		**#DIV/0!**
SUNDAY	23-Oct	25799		SUNDAY	27-Nov	2532		SUNDAY	25-Dec	
MONDAY	24-Oct	37800		MONDAY	28-Nov	1981		MONDAY	26-Dec	
TUESDAY	25-Oct	23344		TUESDAY	29-Nov			TUESDAY	27-Dec	
WEDNESDAY	26-Oct	23490		WEDNESDAY	30-Nov			WEDNESDAY	28-Dec	
THURSDAY	27-Oct	21481						THURSDAY	29-Dec	
FRIDAY	28-Oct	23004						FRIDAY	30-Dec	
SATURDAY	29-Oct	25219						SATURDAY	31-Dec	
WEEKLY AVERAGE		**25733.85714**		**WEEKLY AVERAGE**		**2256.5**		**WEEKLY AVERAGE**		**#DIV/0!**
CONVERSION CALC		**0.025733857**		**CONVERSION CALC**		**0.0022565**		**CONVERSION CALC**		**#DIV/0!**
SUNDAY	**30-Oct**	**30913**								
MONDAY	**31-Oct**	**28907**								
MIN		**18835.00**		**MIN**		**1113**		**MIN**		**0**
MAX		**45623.00**		**MAX**		**27292**		**MAX**		**0**
TOTAL FLOW		**895704**		**TOTAL FLOW**		**287740**		**TOTAL FLOW**		**0**
MONTHLY AVERAGE		**28894**		**MONTHLY AVERAGE**		**22456**		**MONTHLY AVERAGE**		**#DIV/0!**
CONVERSION CALC		**0.028893677**		**CONVERSION CALC**		**0.022456111**		**CONVERSION CALC**		**#DIV/0!**

Grab Date
BOD/Eff
BOD/Inf
TSS/Inf
TSS/Eff
E.Coli
T.Nitrogen
T.Phosphorus
Arsenic
Boron
Aluminum
Flow on grab
Weekly flow avg on grab
Monthly flow av
Total Monthly Flow
Max Monthly Flow
Min pH
Max pH

Grab Date
BOD/Eff
BOD/Inf
TSS/Inf
TSS/Eff
E.Coli
T.Nitrogen
T.Phosphorus
Arsenic
Boron
Aluminum
Flow on grab
Weekly flow avg on grab
Monthly flow av
Total Monthly Flow
Max Monthly Flow
Min pH
Max pH

Lowest detect TSS
Lowest detect Al

Lab Results						DMR Calculations					
							%removal		%Removal		%Removal
10/12/2022		11/9/2022				30-Day	7-Day	30-Day	7-Day	30-Day	7-Day
2.5						0.602433	0.943182	0	**#DIV/0!**	**0**	**#DIV/0!**
44							0.522358		**0**		
80							0.9875		#DIV/0!	0	
1		1				0.240973	0.208943	0.227615	0		#DIV/0!
4.1		1					daily max		daily max		daily max
3.6	3	4					0.795212	0.910461		0	
0.27	0.4					0.080726		0		0	
0.013						13	0.003133	0		0	
1.7						1700	0.409655	0		0	
1		1				0.240973		0.227615		**0**	
25677	23490	16928		#DIV/0!							
25053		23850		0							
28894		**27292**		**0**							
895704		**1113**		**0**				0			
45623		**0**		**0**				0.001113			
6.82								0.02385			
7.10								0.027292			

0.0288937
0.0250531

3

Lab Results						DMR Calculations								
OCT	OCT	NOV	NOV	DEC	DEC				NOV			DEC		
		11.3.22	11.9.22	12.14.22	1.29.22	30-Day	7-Day	%removal	30-Day	7-Day	%Removal	30-Day	7-Day	%Removal
2.5		2		2										
44		62		217										
80		40		220										
4		4		4										
4.1		1		1										
3.6	3.2	3.7	3.2	12										
0.27	1.5	1.3	1.5	0.59	0.3									
0.013		0.58		0.035										
1.7		1.5												
0.02		0.02												
28907	0	22029		0										
25053		27292		0.014										
28894		**22456**		**0.022**										
895704		**0**		**0.068**										
45623		**0**		**0.030**										
6.82														
7.10														
6.82		6.72		6.95										
7.10		7.13		7.05										

4
0.02

2023	Jan	DAILY FLOW			Feb	DAILY FLOW			Mar	DAILY FLOW
SUNDAY	1-Jan	1803		SUNDAY	29-Jan			SUNDAY	26-Feb	
MONDAY	2-Jan	1908		MONDAY	30-Jan			MONDAY	27-Feb	
TUESDAY	3-Jan	1116		TUESDAY	31-Jan			TUESDAY	28-Feb	
WEDNESDAY	4-Jan	459		WEDNESDAY	1-Feb	16532		WEDNESDAY	1-Mar	16387
THURSDAY	5-Jan	797		THURSDAY	2-Feb	16943		THURSDAY	2-Mar	15378
FRIDAY	6-Jan	1931		FRIDAY	3-Feb	16748		FRIDAY	3-Mar	20543
SATURDAY	7-Jan	2795		SATURDAY	4-Feb	18498		SATURDAY	4-Mar	24107
WEEKLY AVERAGE		**1544**		**WEEKLY AVERAGE**		**17180**		**WEEKLY AVERAGE**		**19104**
CONVERSION CALC		**0.001544143**		**CONVERSION CALC**		**0.01718025**		**CONVERSION CALC**		**0.01910375**
SUNDAY	8-Jan	2032		SUNDAY	5-Feb	19290		SUNDAY	5-Mar	21454
MONDAY	9-Jan	1504		MONDAY	6-Feb	19776		MONDAY	6-Mar	16931
TUESDAY	10-Jan	1378		TUESDAY	7-Feb	16099		TUESDAY	7-Mar	14766
WEDNESDAY	11-Jan	630		WEDNESDAY	8-Feb	17884		WEDNESDAY	8-Mar	17136
THURSDAY	12-Jan	27613		THURSDAY	9-Feb	18514		THURSDAY	9-Mar	16925
FRIDAY	13-Jan	19023		FRIDAY	10-Feb	24180		FRIDAY	10-Mar	18145
SATURDAY	14-Jan	22619		SATURDAY	11-Feb	24179		SATURDAY	11-Mar	21651
WEEKLY AVERAGE		**10686**		**WEEKLY AVERAGE**		**19988.86**		**WEEKLY AVERAGE**		**18144.00**
CONVERSION CALC		**0.010685571**		**CONVERSION CALC**		**0.019988857**		**CONVERSION CALC**		**0.018144**
SUNDAY	15-Jan	21357		SUNDAY	12-Feb	21166		SUNDAY	12-Mar	23469
MONDAY	16-Jan	21245		MONDAY	13-Feb	17292		MONDAY	13-Mar	22231
TUESDAY	17-Jan	23419		TUESDAY	14-Feb	20797		TUESDAY	14-Mar	21820
WEDNESDAY	18-Jan	19781		WEDNESDAY	15-Feb	18973		WEDNESDAY	15-Mar	18521
THURSDAY	19-Jan	17306		THURSDAY	16-Feb	20579		THURSDAY	16-Mar	16974
FRIDAY	20-Jan	19796		FRIDAY	17-Feb	22774		FRIDAY	17-Mar	22087
SATURDAY	21-Jan	24441		SATURDAY	18-Feb	23127		SATURDAY	18-Mar	21743
WEEKLY AVERAGE		**21049**		**WEEKLY AVERAGE**		**20672.57**		**WEEKLY AVERAGE**		**20977.86**
CONVERSION CALC		**0.021049286**		**CONVERSION CALC**		**0.020672571**		**CONVERSION CALC**		**0.020977857**
SUNDAY	22-Jan	24367		SUNDAY	19-Feb	24197		SUNDAY	19-Mar	22512
MONDAY	23-Jan	24095		MONDAY	20-Feb	24057		MONDAY	20-Mar	24849
TUESDAY	24-Jan	20694		TUESDAY	21-Feb	21125		TUESDAY	21-Mar	20901
WEDNESDAY	25-Jan	18095		WEDNESDAY	22-Feb	16021		WEDNESDAY	22-Mar	14098
THURSDAY	26-Jan	17086		THURSDAY	23-Feb	16723		THURSDAY	23-Mar	14806
FRIDAY	27-Jan	21267		FRIDAY	24-Feb	20293		FRIDAY	24-Mar	20634
SATURDAY	28-Jan	22584		SATURDAY	25-Feb	20451		SATURDAY	25-Mar	23745
WEEKLY AVERAGE		**21169.71**		**WEEKLY AVERAGE**		**20409.57**		**WEEKLY AVERAGE**		**20220.71**
CONVERSION CALC		**0.021169714**		**CONVERSION CALC**		**0.020409571**		**CONVERSION CALC**		**0.020220714**
SUNDAY	29-Jan	22728		SUNDAY	26-Feb	22585		SUNDAY	26-Mar	23878
MONDAY	30-Jan	22212		MONDAY	27-Feb	24267		MONDAY	27-Mar	23306
TUESDAY	31-Jan	17817		TUESDAY	28-Feb	19808		TUESDAY	28-Mar	24677
WEDNESDAY	1-Feb			WEDNESDAY	1-Mar			WEDNESDAY	29-Mar	18332
THURSDAY	2-Feb			THURSDAY	2-Mar			THURSDAY	30-Mar	18535
FRIDAY	3-Feb			FRIDAY	3-Mar			FRIDAY	31-Mar	19927
SATURDAY	4-Feb			SATURDAY	4-Mar			SATURDAY	1-Apr	
WEEKLY AVERAGE		**20919**		**WEEKLY AVERAGE**		**22220**		**WEEKLY AVERAGE**		**21443**
CONVERSION CALC		**0.020919**		**CONVERSION CALC**		**0.02222**		**CONVERSION CALC**		**0.0214425**
MIN		**6.75**		**MIN**		**7.14**		**MIN**		**7.08**
MAX		**7.49**		**MAX**		**7.65**		**MAX**		**7.90**
MAX MONTH FLOW		**27613.00**		**MAX MONTH FLOW**		**24267.00**		**MAX MONTH FLOW**		**24849.00**
TOTAL FLOW		**443898**		**TOTAL FLOW**		**562878**		**TOTAL FLOW**		**620468**
MONTHLY AVERAGE		**14319**		**MONTHLY AVERAGE**		**20103**		**MONTHLY AVERAGE**		**20015**
CONVERSION CALC		**0.01431929**		**CONVERSION CALC**		**0.02**		**CONVERSION CALC**		**0.020015097**

	Lab Results						DMR Calculations		
	JAN	JAN	FEB	FEB	MAR	MAR	January	Februrary	March
Grab Date	1/9/2023	1/30/2023	2/17/2023	2/28/2023	3/8/2023	3/15/2023			
BOD/Eff	6.2		ND		16				
BOD/Inf	124		130		371		0.95	#VALUE!	0.956873315
TSS/Inf	50		670		10		0.96	0.994029851	0.8
TSS/Eff	4		4		300				
E.Coli	24.7		1		27.2		1	15.43	2.35
T.Nitrogen	16	21	16	24	16	26	2.209323304	3.353144657	3.505444049
T.Phosphorus	0.54	0.85	0.39	1.2	0.26	0.52	0.082998902	0.1332875	0.065101104
Arsenic	0.044		0.052		0.035		0.005254607	0.008718176	0.005842407
Boron	1.9		1.8		2		0.226903474	0.301783019	0.333851814
Aluminum	ND		ND		ND		0.002388458	0.003353145	0.003505444
Flow on grab	1504	22212	22774	19808	17136	18521			
Monthly flow av	**14319**		**22220**		**21443**				
Min pH	6.75		7.14		7.08				
Max pH	7.49		7.65		7.90				

Aluminum calculation?	Monthly Average Concentration * Monthly Average Flow * 8.34 mg/L MGD weight of gallon of water
BOD5/TSS	Influent - effluent / influent * 100%
T. Nitrogen/T. Phosphorus	grab1+grab2/2 * monthly average * 8.34 mg/L MGD weight of gallon of water

Sample * 8.34 * flow	NITROGEN			
Sample * 8.34 * flow	PHOSPHOROUS			
Sample * 8.34 * flow	BORON			
Sample * 8.34 * flow	ARSENIC			
Sample * 8.34 * flow	ALUMINUM			
Sample * 8.34 * flow	BOD5-EFF	0.17514	7DAY	0.36696
		0.1668	30DAY	
				0.057546
		3.5028		
				221

2023	APR	DAILY FLOW			MAY	DAILY FLOW			JUNE	DAILY FLOW
SUNDAY	26-Mar			SUNDAY	30-Apr			SUNDAY	28-May	
MONDAY	27-Mar			MONDAY	1-May			MONDAY	29-May	
TUESDAY	28-Mar			TUESDAY	2-May			TUESDAY	30-May	
WEDNESDAY	29-Mar			WEDNESDAY	3-May			WEDNESDAY	31-May	
THURSDAY	30-Mar			THURSDAY	4-May			THURSDAY	1-Jun	18441
FRIDAY	31-Mar			FRIDAY	5-May			FRIDAY	2-Jun	22821
SATURDAY	1-Apr	21519		SATURDAY	6-May			SATURDAY	3-Jun	23120
WEEKLY AVERAGE		**21519**		**WEEKLY AVERAGE**		**#DIV/0!**		**WEEKLY AVERAGE**		**21461**
CONVERSION CALC		**0.021519**		**CONVERSION CALC**		**#DIV/0!**		**CONVERSION CALC**		**0.021460667**
SUNDAY	2-Apr	26355		SUNDAY	7-May			SUNDAY	4-Jun	21072
MONDAY	3-Apr	24552		MONDAY	8-May			MONDAY	5-Jun	19970
TUESDAY	4-Apr	37954		TUESDAY	9-May	12261		TUESDAY	6-Jun	17191
WEDNESDAY	5-Apr	61784		WEDNESDAY	10-May	21043		WEDNESDAY	7-Jun	16854
THURSDAY	6-Apr	49350		THURSDAY	11-May	27064		THURSDAY	8-Jun	17066
FRIDAY	7-Apr	70887		FRIDAY	12-May	32442		FRIDAY	9-Jun	18666
SATURDAY	8-Apr	57590		SATURDAY	13-May	30610		SATURDAY	10-Jun	21882
WEEKLY AVERAGE		**46925**		**WEEKLY AVERAGE**		**24684**		**WEEKLY AVERAGE**		**18957**
CONVERSION CALC		**0.046924571**		**CONVERSION CALC**		**0.024684**		**CONVERSION CALC**		**0.018957286**
SUNDAY	9-Apr	63041		SUNDAY	14-May	31095		SUNDAY	11-Jun	22606
MONDAY	10-Apr	80873		MONDAY	15-May	21997		MONDAY	12-Jun	17983
TUESDAY	11-Apr	129953		TUESDAY	16-May	20358		TUESDAY	13-Jun	18742
WEDNESDAY	12-Apr	330084		WEDNESDAY	17-May	18954		WEDNESDAY	14-Jun	21745
THURSDAY	13-Apr	156892		THURSDAY	18-May	17834		THURSDAY	15-Jun	18403
FRIDAY	14-Apr	31920		FRIDAY	19-May	21883		FRIDAY	16-Jun	20232
SATURDAY	15-Apr	3435		SATURDAY	20-May	23587		SATURDAY	17-Jun	21806
WEEKLY AVERAGE		**113743**		**WEEKLY AVERAGE**		**22244**		**WEEKLY AVERAGE**		**20217**
CONVERSION CALC		**0.113742571**		**CONVERSION CALC**		**0.022244**		**CONVERSION CALC**		**0.020216714**
SUNDAY	16-Apr	8974		SUNDAY	21-May	23157		SUNDAY	18-Jun	16518
MONDAY	17-Apr	2971		MONDAY	22-May	20598		MONDAY	19-Jun	18127
TUESDAY	18-Apr	908		TUESDAY	23-May	18169		TUESDAY	20-Jun	18430
WEDNESDAY	19-Apr	1034		WEDNESDAY	24-May	14925		WEDNESDAY	21-Jun	15760
THURSDAY	20-Apr	2099		THURSDAY	25-May	16064		THURSDAY	22-Jun	15963
FRIDAY	21-Apr	1525		FRIDAY	26-May	18203		FRIDAY	23-Jun	19780
SATURDAY	22-Apr	1493		SATURDAY	27-May	21164		SATURDAY	24-Jun	28306
WEEKLY AVERAGE		**2715**		**WEEKLY AVERAGE**		**18897**		**WEEKLY AVERAGE**		**18983**
CONVERSION CALC		**0.002714857**		**CONVERSION CALC**		**0.018897143**		**CONVERSION CALC**		**0.018983429**
SUNDAY	23-Apr	1754		SUNDAY	28-May	22598		SUNDAY	25-Jun	34397
MONDAY	24-Apr	1193		MONDAY	29-May	22104		MONDAY	26-Jun	25523
TUESDAY	25-Apr	1895		TUESDAY	30-May	20543		TUESDAY	27-Jun	20666
WEDNESDAY	26-Apr			WEDNESDAY	31-May	15934		WEDNESDAY	28-Jun	19645
THURSDAY	27-Apr			THURSDAY	1-Jun			THURSDAY	29-Jun	18669
FRIDAY	28-Apr			FRIDAY	2-Jun			FRIDAY	30-Jun	17644
SATURDAY	29-Apr			SATURDAY	3-Jun			SATURDAY	1-Jul	
WEEKLY AVERAGE		**1614**		**WEEKLY AVERAGE**		**20295**		**WEEKLY AVERAGE**		**22757**
CONVERSION CALC		**0.001614**		**CONVERSION CALC**		**0.02029475**		**CONVERSION CALC**		**0.022757333**
SUNDAY	30-Apr									
MONDAY	1-May									
TUESDAY	2-May									
WEDNESDAY	3-May									
THURSDAY	4-May									
FRIDAY	5-May									
SATURDAY	6-May									
WEEKLY AVERAGE		**#DIV/0!**								
CONVERSION CALC		**#DIV/0!**								
MIN		**7.00**		**MIN**		**6.78**		**MIN**		**7.00**
MAX		**7.98**		**MAX**		**7.36**		**MAX**		**7.36**
MAX MONTHLY FLOW		**330084**		**MAX MONTHLY FLOW**		**32442**		**MAX MONTHLY FLOW**		**34397**
TOTAL FLOW		**1170035**		**TOTAL FLOW**		**492587**		**TOTAL FLOW**		**608028**
MONTHLY AVERAGE		**46801.4**		**MONTHLY AVERAGE**		**21417**		**MONTHLY AVERAGE**		**20267.6**
CONVERSION CALC		**0.0468014**		**CONVERSION CALC**		**0.021416826**		**CONVERSION CALC**		**0.0202676**

	Monthly Average Concentration		**Monthly Average Flow * 8.34**	
	mg/L		**MGD**	**weight of gallon of water**
BOD5/TSS	Influent - effluent / influent * 100%			
T. Nitrogen/T. Phosphorus	grab1+grab2/2 * monthly average * 8.34			
	mg/L	MGD	weight of gallon of water	
Sample * 8.34 * flow	NITROGEN		?	
Sample * 8.34 * flow	PHOSPHOROUS		?	
Sample * 8.34 * flow	BORON			
Sample * 8.34 * flow	ARSENIC			
Sample * 8.34 * flow	ALUMINUM			
Sample * 8.34 * flow	**BOD5-EFF**		**0.17514 7DAY**	**0.36696**
			0.1668 30DAY	
				0.057546
			3.5028	
JAN DDAILY MAX 86.2				221
LOADING 0.1				

2023	JULY	DAILY FLOW			AUG	DAILY FLOW			SEP	DAILY FLOW
SUNDAY	25-Jun			SUNDAY	30	0		SUNDAY	27	0
MONDAY	26-Jun			MONDAY	31			MONDAY	28	0
TUESDAY	27-Jun			TUESDAY	1			TUESDAY	29	0
WEDNESDAY	28-Jun			WEDNESDAY	2			WEDNESDAY	30	0
THURSDAY	29-Jun			THURSDAY	3			THURSDAY	31	
FRIDAY	30-Jun			FRIDAY	4			FRIDAY	1	
SATURDAY	1	19966		SATURDAY	5			SATURDAY	2	
WEEKLY AVERAGE		19966		WEEKLY AVERAGE		0		WEEKLY AVERAGE		0
CONVERSION CALC		0.019966		CONVERSION CALC		0		CONVERSION CALC		0
SUNDAY	2	24386		SUNDAY	6			SUNDAY	3	
MONDAY	3	21992		MONDAY	7			MONDAY	4	
TUESDAY	4	21758		TUESDAY	8			TUESDAY	5	
WEDNESDAY	5	18067		WEDNESDAY	9			WEDNESDAY	6	
THURSDAY	6	18394		THURSDAY	10			THURSDAY	7	
FRIDAY	7	19308		FRIDAY	11			FRIDAY	8	
SATURDAY	8	22270		SATURDAY	12			SATURDAY	9	
WEEKLY AVERAGE		20882		WEEKLY AVERAGE		#DIV/0!		WEEKLY AVERAGE		#DIV/0!
CONVERSION CALC		0.020882143		CONVERSION CALC		#DIV/0!		CONVERSION CALC		#DIV/0!
SUNDAY	9	26374		SUNDAY	13			SUNDAY	10	
MONDAY	10	22514		MONDAY	14			MONDAY	11	
TUESDAY	11	21254		TUESDAY	15			TUESDAY	12	
WEDNESDAY	12	19094		WEDNESDAY	16			WEDNESDAY	13	
THURSDAY	13	14673		THURSDAY	17			THURSDAY	14	
FRIDAY	14	20819		FRIDAY	18			FRIDAY	15	
SATURDAY	15	27142		SATURDAY	19			SATURDAY	16	
WEEKLY AVERAGE		21695.71429		WEEKLY AVERAGE		#DIV/0!		WEEKLY AVERAGE		#DIV/0!
CONVERSION CALC		0.021695714		CONVERSION CALC		#DIV/0!		CONVERSION CALC		#DIV/0!
SUNDAY	16	25020		SUNDAY	20			SUNDAY	17	
MONDAY	17	18651		MONDAY	21			MONDAY	18	
TUESDAY	18	21076		TUESDAY	22			TUESDAY	19	
WEDNESDAY	19	21161		WEDNESDAY	23			WEDNESDAY	20	
THURSDAY	20	26553		THURSDAY	24			THURSDAY	21	
FRIDAY	21	27586		FRIDAY	25			FRIDAY	22	
SATURDAY	22	28905		SATURDAY	26			SATURDAY	23	
WEEKLY AVERAGE		24136		WEEKLY AVERAGE		#DIV/0!		WEEKLY AVERAGE		#DIV/0!
CONVERSION CALC		0.024136		CONVERSION CALC		#DIV/0!		CONVERSION CALC		#DIV/0!
SUNDAY	23	29352		SUNDAY	27			SUNDAY	24	
MONDAY	24	27835		MONDAY	28			MONDAY	25	
TUESDAY	25	22091		TUESDAY	29			TUESDAY	26	
WEDNESDAY	26			WEDNESDAY	30			WEDNESDAY	27	
THURSDAY	27			THURSDAY	31			THURSDAY	28	
FRIDAY	28			FRIDAY	1			FRIDAY	29	
SATURDAY	29			SATURDAY	2			SATURDAY	30	
WEEKLY AVERAGE		26426		WEEKLY AVERAGE		#DIV/0!		WEEKLY AVERAGE		#DIV/0!
CONVERSION CALC		0.026426		CONVERSION CALC		#DIV/0!		CONVERSION CALC		#DIV/0!
SUNDAY	30									
MONDAY	31									
WEEKLY AVERAGE		#DIV/0!		WEEKLY AVERAGE		#DIV/0!		WEEKLY AVERAGE		#DIV/0!
CONVERSION CALC		#DIV/0!		CONVERSION CALC		#DIV/0!		CONVERSION CALC		#DIV/0!
MIN		6.97		MIN		0		MIN		0
MAX		7.61		MAX		0		MAX		0
TOTAL FLOW		566241		TOTAL FLOW		0		TOTAL FLOW		0
MONTHLY AVERAGE		22650		MONTHLY AVERAGE		#DIV/0!		MONTHLY AVERAGE		#DIV/0!
CONVERSION CALC		0.02264964		CONVERSION CALC		#DIV/0!		CONVERSION CALC		#DIV/0!

Appendix F

Jemez Springs WWTP Financials

DBS&A
a Geo-Logic Company

Jemez Springs Sewer System
Profit & Loss
July 2020 through June 2021

	Jul '20 - Jun 21	
Ordinary Income/Expense		
Income		
3600 · Interest Income		62.15
3700 · Reimbursements		-515.31
3801 · Miscellaneous Income		89,094.90
3810 · Waste Water Billings		106,654.49
Total Income		195,296.23
Gross Profit		195,296.23
Expense		
4100 · Salaries and Wages		53,019.27
4200 · PAYROLL TAX EXPENSE		
4250 · PERA & RHCA EXPENSE-W/C FEE		
4260 · Health/Dental Ins	212.50	
4270 · PERA	12,794.03	
4250 · PERA & RHCA EXPENSE-W/C FEE - Other	4,965.33	
Total 4250 · PERA & RHCA EXPENSE-W/C FEE	17,971.86	
4200 · PAYROLL TAX EXPENSE - Other	754.47	
Total 4200 · PAYROLL TAX EXPENSE		18,726.33
4400 · Repair / Maintenance		
4410 · Buiding Repair & Maintenance	101.95	
Total 4400 · Repair / Maintenance		101.95
4500 · Professional Fees		
4510 · Contractor/ labor	100.00	
4520 · Engineer/Consulting	1,226.84	
4530 · Lab Fees	7,394.16	
4500 · Professional Fees - Other	160.97	
Total 4500 · Professional Fees		8,881.97
4540 · Pumping		2,554.50
4550 · Services		
4560 · Telephone	1,085.38	
4565 · Utilities	11,402.33	
4570 · Credit Card Fees	48.26	
4550 · Services - Other	841.64	
Total 4550 · Services		13,377.61
4600 · Supplies		
4610 · Operating Supplies	2,742.42	
4620 · Office Supplies	893.39	
4630 · Postage	471.42	
Total 4600 · Supplies		4,107.23
4650 · Equipment Purchase		1,353.62
4670 · Dues & Subscriptions		1,200.00
4700 · Insurances		
4710 · Property Insurance	2,767.07	
4720 · Liability Insurance	568.22	
4730 · Worker's Comp Insurance	842.75	
Total 4700 · Insurances		4,178.04
4800 · Miscellaneous		
4820 · Rent / Lease	152.37	
4800 · Miscellaneous - Other	-170.42	
Total 4800 · Miscellaneous		-18.05
4851 · Training & Meeting Expense		-269.25

Jemez Springs Sewer System
Profit & Loss
July 2020 through June 2021

	Jul '20 - Jun 21
4900 · Debt Service Payments	
4910 · PRINCIPAL	5,202.67
4920 · INTEREST EXPENSE	3,351.03
Total 4900 · Debt Service Payments	8,553.70
4930 · ADMINISTRATIVE FEE	569.22
66900 · Reconciliation Discrepancies	-31,113.21
Total Expense	85,222.93
Net Ordinary Income	110,073.30
Net Income	**110,073.30**

Jemez Springs Sewer System
Profit & Loss
July 2021 through June 2022

	Jul '21 - Jun 22
Ordinary Income/Expense	
Income	
3600 · Interest Income	2.89
3801 · Miscellaneous Income	9,695.61
3810 · Waste Water Billings	122,766.33
Total Income	132,464.83
Gross Profit	132,464.83
Expense	
4100 · Salaries and Wages	70,514.12
4200 · PAYROLL TAX EXPENSE	
4250 · PERA & RHCA EXPENSE-W/C FEE	5,162.79
4200 · PAYROLL TAX EXPENSE - Other	954.34
Total 4200 · PAYROLL TAX EXPENSE	6,117.13
4320 · Gas/diesel	3,361.36
4400 · Repair / Maintenance	
4410 · Buiding Repair & Maintenance	2,880.00
4430 · Vehicle Repair	3,952.82
4400 · Repair / Maintenance - Other	2,500.00
Total 4400 · Repair / Maintenance	9,332.82
4500 · Professional Fees	
4520 · Engineer/Consulting	4,422.90
4530 · Lab Fees	5,552.67
4500 · Professional Fees - Other	52,420.64
Total 4500 · Professional Fees	62,396.21
4540 · Pumping	12,946.23
4550 · Services	
4560 · Telephone	2,231.32
4565 · Utilities	13,063.45
4570 · Credit Card Fees	170.62
Total 4550 · Services	15,465.39
4600 · Supplies	
4610 · Operating Supplies	4,541.40
4620 · Office Supplies	6,115.07
Total 4600 · Supplies	10,656.47
4650 · Equipment Purchase	22,894.09
4655 · Small Equipment	376.69
4851 · Training & Meeting Expense	255.00
4900 · Debt Service Payments	
4910 · PRINCIPAL	5,202.67
4920 · INTEREST EXPENSE	3,351.03
Total 4900 · Debt Service Payments	8,553.70
4930 · ADMINISTRATIVE FEE	9,732.22
Total Expense	232,601.43
Net Ordinary Income	-100,136.60
Net Income	**-100,136.60**

Jemez Springs Sewer System
Profit & Loss
July 2022 through June 2023

	Jul '22 - Jun 23
Ordinary Income/Expense	
Income	
3700 · Reimbursements	-768.76
3801 · Miscellaneous Income	53,941.87
3810 · Waste Water Billings	115,245.16
Total Income	168,418.27
Gross Profit	168,418.27
Expense	
4100 · Salaries and Wages	58,253.03
4200 · PAYROLL TAX EXPENSE	
4250 · PERA & RHCA EXPENSE-W/C FEE	5,291.69
4200 · PAYROLL TAX EXPENSE - Other	787.16
Total 4200 · PAYROLL TAX EXPENSE	6,078.85
4320 · Gas/diesel	2,019.62
4400 · Repair / Maintenance	
4430 · Vehicle Repair	339.50
Total 4400 · Repair / Maintenance	339.50
4500 · Professional Fees	
4510 · Contractor/ labor	13,293.69
4520 · Engineer/Consulting	6,324.17
4530 · Lab Fees	9,945.46
4500 · Professional Fees - Other	43,570.76
Total 4500 · Professional Fees	73,134.08
4540 · Pumping	14,689.78
4550 · Services	
4560 · Telephone	3,090.70
4565 · Utilities	13,521.32
4570 · Credit Card Fees	4.95
Total 4550 · Services	16,616.97
4600 · Supplies	
4610 · Operating Supplies	3,380.88
4600 · Supplies - Other	5,432.06
Total 4600 · Supplies	8,812.94
4650 · Equipment Purchase	14,084.35
4655 · Small Equipment	310.42
4670 · Dues & Subscriptions	83.00
4800 · Miscellaneous	4,193.90
4850 · Miscellaneous - Cash Overage/Sh	58.34
4900 · Debt Service Payments	
4910 · PRINCIPAL	8,814.44
4920 · INTEREST EXPENSE	4.92
Total 4900 · Debt Service Payments	8,819.36
4930 · ADMINISTRATIVE FEE	569.22
Total Expense	208,063.36
Net Ordinary Income	-39,645.09
Net Income	**-39,645.09**

Jemez Springs Sewer System

Profit and Loss

July 2022 - June 2023

	TOTAL
Income	
3700 Reimbursements	-768.76
3801 Miscellaneous Income	0.00
3810 Waste Water Billings	175,376.68
3900 Transfer In	3,000.00
Total Income	**$177,607.92**
GROSS PROFIT	**$177,607.92**
Expenses	
4100 Salaries and Wages	58,253.03
4200 PAYROLL TAX EXPENSE	787.16
4250 PERA & RHCA EXPENSE-W/C FEE	5,291.69
Total 4200 PAYROLL TAX EXPENSE	**6,078.85**
4320 Gas/diesel	2,019.62
4400 Repair / Maintenance	3,095.56
4430 Vehicle Repair	339.50
Total 4400 Repair / Maintenance	**3,435.06**
4500 Professional Fees	64,780.11
4510 Contractor/ labor	13,293.69
4520 Engineer/Consulting	34,158.40
4530 Lab Fees	10,558.70
Total 4500 Professional Fees	**122,790.90**
4540 Pumping	16,514.09
4550 Services	
4560 Telephone	3,361.79
4565 Utilities	14,635.56
4570 Credit Card Fees	258.61
4575 Bank Fees	60.00
Total 4550 Services	**18,315.96**
4600 Supplies	6,862.50
4610 Operating Supplies	3,380.88
Total 4600 Supplies	**10,243.38**
4650 Equipment Purchase	37,699.48
4655 Small Equipment	1,289.67
4670 Dues & Subscriptions	344.40
4800 Miscellaneous	4,252.24
4850 Miscellaneous - Cash Overage/Sh	55.34
4900 Debt Service Payments	
4910 PRINCIPAL	8,814.44
4920 INTEREST EXPENSE	4.92
Total 4900 Debt Service Payments	**8,819.36**
4930 ADMINISTRATIVE FEE	569.22

Jemez Springs Sewer System

Profit and Loss

July 2022 - June 2023

	TOTAL
Payroll Expenses	
Company Contributions	
Health Insurance	86.52
Retirement	330.94
Total Company Contributions	**417.46**
Taxes	340.92
Wages	4,326.00
Total Payroll Expenses	**5,084.38**
Total Expenses	**$295,764.98**
NET OPERATING INCOME	**$ -118,157.06**
NET INCOME	**$ -118,157.06**

Jemez Springs Wastewater Finances

	FY2021	FY2022	FY2023
Income			
Interest	$ 62.15	$ 2.89	$ -
Reimbursements	$ (515.31)	$ -	$ (768.76)
Miscellaneous	$ 89,094.90	$ 9,695.61	$ 53,941.87
Wastewater Billing	$ 106,654.49	$ 122,766.33	$ 115,245.16
Total Income	**$ 195,296.23**	**$ 132,464.83**	**$ 168,418.27**
Expenses			
Salaries and Wages	$ 53,019.27	$ 70,514.12	$ 58,253.03
Payroll Tax Expense	$ 18,726.33	$ 6,117.13	$ 6,078.85
Gas/Diesel	$ -	$ 3,361.36	$ 2,019.62
Repair/Maintenance	$ 101.95	$ 9,332.82	$ 339.50
Professional Fees	$ 8,881.97	$ 62,396.21	$ 73,134.08
Pumping	$ 2,554.50	$ 12,946.23	$ 14,689.78
Services/Utilities	$ 13,377.61	$ 15,465.39	$ 16,616.97
Supplies	$ 4,107.23	$ 10,656.47	$ 8,812.94
Equipment Purchase	$ 1,353.62	$ 22,894.09	$ 14,084.35
Small Equipment	$ -	$ 376.69	$ 310.42
Dues & Subscriptions	$ 1,200.00	$ -	$ 83.00
Insurances	$ 4,178.04	$ -	$ -
Miscellaneous	$ (18.05)	$ -	$ 4,252.24
Training & Meeting Expense	$ (269.25)	$ 255.00	$ -
Debt Service Payments	$ 8,553.70	$ 8,553.70	$ 8,819.36
Admin Fee	$ 569.22	$ 9,732.22	$ 569.22
Reconcilliation Discrepancies	$ (31,113.21)		
Total Expenses	**$ 85,222.93**	**$ 232,601.43**	**$ 208,063.36**
Net Income	**$ 110,073.30**	**$ (100,136.60)**	**$ (39,645.09)**

Jemez Springs Sewer System Gross Income Fund
P.O. Box 269
Jemez Springs, NM 87025

December 19, 2022

Dear Sewer Customer,

We here at the Village of Jemez Springs have been asked by a handful of Customers for a break-down of how the Sewer billing is determined as well as how it was before the Rate increase that happened this year. Below is what the rates are now compared to how it was before the increase.

New Rates as of August 2022			Old Sewer Rates 2011-2022	
Base Rate Residential In Village	$45.00		Base Rate Residential In Village	$30.42
Base Rate Residential Out of Village	$47.00		Base Rate Residential Out of Village	$32.35
Base Rate Commercial In Village	$58.00		Base Rate Commercial In Village	$43.34
Base Rate Commercial Out of Village	$60.00		Base Rate Commercial Out of Village	$43.34
Per 1000 Gallons	$7.00		Per 1000 Gallons	$5.18
Taxes	Varies due to In or Out of Village		Taxes	Varies due to In or Out of Village

The office hours are Monday through Friday 8:00am-4:00pm; should you have any questions regarding your account, please feel free to call us at 575-829-3540.

Sincerely,

Roger Sweet, Mayor of Jemez Springs
Jemez Springs Sewer System Gross Income Fund

cc: file

Jemez Springs Sewer System Gross Income Fund
P.O. Box 269
Jemez Springs, NM 87025

July 5, 2023

Dear Sewer Customer,

The rates are raising again. Below is the projected increases.

New Rates as of August 2023	
Base Rate Residential In Village	$50.00
Per 1000 Gallons	$8.25
Base Rate Residential Out of Village	$52.00
Per 1000 Gallons	$8.25
Base Rate Commercial In Village	$100.00
Per 1000 Gallons	$9.75
Base Rate Commercial Out of Village	$105.00
Per 1000 Gallons	$9.75
Taxes	Varies due to In or Out of Village

The office hours are Monday through Friday 8:00am-4:00pm; should you have any questions regarding your account, please feel free to call us at 575-829-3540.

Sincerely,

Roger Sweet, Mayor of Jemez Springs
Jemez Springs Sewer System Gross Income Fund

cc: file

Projected Water Budget

Connections:	179	180	181	182	183	184	184
Residential Rate	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!
Commercial Rate	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!	#REF!

	% Inflation	Starting Amount	2023	2024	2025	2026	2027	2028	2029
% Increase in Customer Base				**0.5%**	**0.5%**	**0.5%**	**0.5%**	**0.5%**	**0.5%**
% Increase in Water Rates				**340.0%**	**0.0%**	**0.0%**	**1.0%**	**1.0%**	**35.0%**
REVENUE									
Wastewater Billing			$ 50,910.79	$224,262.04	$225,383.35	$226,510.27	$229,907.93	$233,356.54	$316,198.12
Miscellaneous			114,888.66	$115,463.10	$116,040.42	$116,620.62	$117,203.72	$117,789.74	$118,378.69
Total Operating Revenue			$165,799.45	$339,725.15	$341,423.77	$343,130.89	$347,111.65	$351,146.29	$434,576.81
EXPENSES									
RESERVE FUND CONTRIBUTIONS:									
Total Reserve		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
LOAN & BOND PAYMENTS	0%		$8,642.25	$8,642.25	$8,642.25	$8,642.25	$8,642.25	$8,642.25	$8,642.25
Recommended Project Phase 1 (1 - 5 years)	0%		$0.00	$145,432.20	$145,432.20	$145,432.20	$145,432.20	$145,432.20	$145,432.20
Recommended Project Phase 2 (5 - 10 years)	0%		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$76,416.21
Recommended Project Phase 3 (10 - 20 years)	0%		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
OPERATING EXPENSES:									
Salaries and Wages	2%		60595.47	$61,807.38	$63,043.53	$64,304.40	$65,590.49	$66,902.30	$68,240.34
Payroll Tax Expense	2%		10,307.44	$10,513.59	$10,723.86	$10,938.33	$11,157.10	$11,380.24	$11,607.85
Gas/Diesel	2%		2,690.49	$2,744.30	$2,799.19	$2,855.17	$2,912.27	$2,970.52	$3,029.93
Repair/Maintenance	2%		3258.09	$3,323.25	$3,389.72	$3,457.51	$3,526.66	$3,597.19	$3,669.14
Professional Fees	2%		48,137.42	$49,100.17	$50,082.17	$51,083.82	$52,105.49	$53,147.60	$54,210.55
Pumping	2%		10063.50	$10,264.77	$10,470.07	$10,679.47	$10,893.06	$11,110.92	$11,333.14
Services/Utilities	2%		15,153.32	$15,456.39	$15,765.52	$16,080.83	$16,402.44	$16,730.49	$17,065.10
Supplies	2%		7,858.88	$8,016.06	$8,176.38	$8,339.91	$8,506.70	$8,676.84	$8,850.38
Equipment Purchase	2%		12777.35	$13,032.90	$13,293.56	$13,559.43	$13,830.62	$14,107.23	$14,389.38
Small Equipment	2%		229.04	$233.62	$238.29	$243.06	$247.92	$252.87	$257.93
Dues & Subscriptions	2%		0,427.67	$436.22	$444.94	$453.84	$462.92	$472.18	$481.62
Insurances	2%		1392.68	$1,420.53	$1,448.94	$1,477.92	$1,507.48	$1,537.63	$1,568.38
Miscellaneous	2%		1,411.40	$1,439.62	$1,468.42	$1,497.79	$1,527.74	$1,558.30	$1,589.46
Admin Fee	2%		3623.55	$3,696.02	$3,769.94	$3,845.34	$3,922.25	$4,000.70	$4,080.71
Total Operating Expenses			$177,926.30	$181,484.83	$185,114.53	$188,816.82	$192,593.15	$196,445.02	$200,373.92
CAPITAL OUTLAY:									
CAPITAL OUTLAY	2%		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
CAPITAL OUTLAY-METERS	2%		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
WATER METERS	2%		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Total Capital Outlay			$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
TOTAL EXPENSES (including debt and reserve)			$186,568.56	$335,559.28	$339,188.98	$342,891.27	$346,667.60	$350,519.47	$430,864.58
REVENUE – EXPENSES			**($20,769.10)**	**$4,165.87**	**$2,234.80**	**$239.62**	**$444.05**	**$626.82**	**$3,712.23**
Cash Balance**		**$0.00**	**($20,769.10)**	**($16,603.24)**	**($14,368.44)**	**($14,128.82)**	**($13,684.77)**	**($13,057.95)**	**($9,345.72)**

** This amount does not include reserve funds.

Projected Water Budget

Connections:		**179**	**180**	**181**	**182**	**183**	**184**	**184**
Residential Rate		**#REF!**	**#REF!**	**#REF!**	**#REF!**	**#REF!**	**#REF!**	**#REF!**
Commercial Rate		**#REF!**	**#REF!**	**#REF!**	**#REF!**	**#REF!**	**#REF!**	**#REF!**

	% Inflation	Starting Amount	2023	2024	2025	2026	2027	2028	2029
% Increase in Customer Base				**0.5%**	**0.5%**	**0.5%**	**0.5%**	**0.5%**	**0.5%**
% Increase in Water Rates				**195.0%**	**2.0%**	**1.0%**	**2.0%**	**1.0%**	**30.0%**
REVENUE									
Miscellaneous			$ 50,910.79	$150,441.39	$154,202.43	$156,515.47	$160,428.35	$162,834.78	$212,499.38
Wastewater Billing			114,888.66	$115,463.10	$116,040.42	$116,620.62	$117,203.72	$117,789.74	$118,378.69
Total Operating Revenue			$165,799.45	$265,904.50	$270,242.85	$273,136.09	$277,632.08	$280,624.52	$330,878.08
EXPENSES									
RESERVE FUND CONTRIBUTIONS:									
Total Reserve		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
LOAN & BOND PAYMENTS	0%		$8,642.25	$8,642.25	$8,642.25	$8,642.25	$8,642.25	$8,642.25	$8,642.25
Recommended Project Phase 1 (1 - 5 years)	0%		$0.00	$75,360.47	$75,360.47	$75,360.47	$75,360.47	$75,360.47	$75,360.47
Recommended Project Phase 2 (5 - 10 years)	0%		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$39,597.57
Recommended Project Phase 3 (10 - 20 years)	0%		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
OPERATING EXPENSES:									
Salaries and Wages	2%		60595.47	$61,807.38	$63,043.53	$64,304.40	$65,590.49	$66,902.30	$68,240.34
Payroll Tax Expense	2%		10,307.44	$10,513.59	$10,723.86	$10,938.33	$11,157.10	$11,380.24	$11,607.85
Gas/Diesel	2%		2,690.49	$2,744.30	$2,799.19	$2,855.17	$2,912.27	$2,970.52	$3,029.93
Repair/Maintenance	2%		3258.09	$3,323.25	$3,389.72	$3,457.51	$3,526.66	$3,597.19	$3,669.14
Professional Fees	2%		48,137.42	$49,100.17	$50,082.17	$51,083.82	$52,105.49	$53,147.60	$54,210.55
Pumping	2%		10063.50	$10,264.77	$10,470.07	$10,679.47	$10,893.06	$11,110.92	$11,333.14
Services/Utilities	2%		15,153.32	$15,456.39	$15,765.52	$16,080.83	$16,402.44	$16,730.49	$17,065.10
Supplies	2%		7,858.88	$8,016.06	$8,176.38	$8,339.91	$8,506.70	$8,676.84	$8,850.38
Equipment Purchase	2%		12777.35	$13,032.90	$13,293.56	$13,559.43	$13,830.62	$14,107.23	$14,389.38
Small Equipment	2%		229.04	$233.62	$238.29	$243.06	$247.92	$252.87	$257.93
Dues & Subscriptions	2%		0,427.67	$436.22	$444.94	$453.84	$462.92	$472.18	$481.62
Insurances	2%		1392.68	$1,420.53	$1,448.94	$1,477.92	$1,507.48	$1,537.63	$1,568.38
Miscellaneous	2%		1,411.40	$1,439.62	$1,468.42	$1,497.79	$1,527.74	$1,558.30	$1,589.46
Admin Fee	2%		3623.55	$3,696.02	$3,769.94	$3,845.34	$3,922.25	$4,000.70	$4,080.71
Total Operating Expenses			$177,926.30	$181,484.83	$185,114.53	$188,816.82	$192,593.15	$196,445.02	$200,373.92
CAPITAL OUTLAY:									
CAPITAL OUTLAY	2%		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
CAPITAL OUTLAY-METERS	2%		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
WATER METERS	2%		$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
Total Capital Outlay			$0.00	$0.00	$0.00	$0.00	$0.00	$0.00	$0.00
TOTAL EXPENSES (including debt and reserve)			$186,568.56	$265,487.55	$269,117.25	$272,819.54	$276,595.87	$280,447.74	$323,974.20
REVENUE – EXPENSES			**($20,769.10)**	**$416.95**	**$1,125.60**	**$316.55**	**$1,036.20**	**$176.78**	**$6,903.87**
Cash Balance**		**$0.00**	**($20,769.10)**	**($20,352.15)**	**($19,226.55)**	**($18,910.00)**	**($17,873.80)**	**($17,697.01)**	**($10,793.14)**

** This amount does not include reserve funds.

Appendix G

Engineer's Opinion of Probable Cost

DBS&A
a Geo-Logic Company

Village of Jemez Springs Wastewater System Improvements PER
Engineer's Opinion of Probable Cost
Collection Alternative 2: Rehabilitate Critical Areas of Sanitary Sewer System

Item No.	Item Description	Quantity	Unit	Unit Cost	Total Cost	Asset Life (years)	Salvage Value ($)	Replacement Cost ($)	Annual Payment Amount ($)
Construction Cost									
Site Work & Miscellaneous									
1	Mobilization and demobilization	10%	%	$ 4,001,000	$ 400,100				
2	Construction surveying and staking	3%	%	$ 4,001,000	$ 120,030				
3	Clearing and grubbing along easement, including removing and replacing fencing, installing new gates	4.0	Acre	$ 20,000	$ 80,000				
4	Traffic Control	1.0	LS	$ 25,000	$ 25,000				
Collection System Improvements									
5	New 8-inch PVC sewer line to replace existing 6-inch sewer line by method of pipe bursting	3,200	LF	$ 100	$ 320,000	35	$ 137,142.86	$639,964.66	$ 18,284.70
6	Manhole rehabilitation (Repair Method A); Replace frame and cover, including waterproof seal	55	EA	$ 2,200	$ 121,000	40	$ 60,500.00	$267,172.80	$ 6,679.32
7	Manhole rehabilitation (Repair Method B); Make frame height adjustment and replace cover, frame, and seal, including internal/external waterproof seal	45	EA	$ 3,000	$ 135,000	40	$ 67,500.00	$298,085.35	$ 7,452.13
8	Manhole rehabilitation (Repair Method C); Clean and remove roots, grout and seal leaks and cracks, including waterproof sealant	650	VF	$ 400	$ 260,000	40	$ 130,000.00	$574,090.31	$ 14,352.26
9	Manhole rehabilitation (Repair Method D); Reestablish flow channels, bench, pipe connections, and reseal, including waterproof sealant	70	EA	$ 3,200	$ 224,000	40	$ 112,000.00	$494,600.88	$ 12,365.02
10	Manhole rehabilitation (Repair Method E); Apply waterproof coating, including full interior of the manhole	8,000	SF	$ 60	$ 480,000	40	$ 240,000.00	$1,059,859.04	$ 26,496.48
11	Sewer line rehabilitation, point repair	1,100	LF	$ 100	$ 110,000	35	$ 47,142.86	$219,987.85	$ 6,285.37
12	Sewer line rehabilitation	12,000	LF	$ 120	$ 1,440,000	35	$ 617,142.86	$2,879,840.96	$ 82,281.17
13	Reestablish service connections	80	EA	$ 3,000	$ 240,000	35	$ 102,857.14	$479,973.49	$ 13,713.53
14	CCTV sewer line inspection, including flushing	30,000	LF	$ 8	$ 240,000				
15	Temporary bypass pumping	16,300	LF	$ 20	$ 326,000				
				Construction Subtotal	**$ *4,521,130***				
				Contingency *25%*	*$ 1,130,283*				
				Construction Subtotal (including contingency)	***$ 5,651,413***				
				NMGRT *7.1875%*	*$ 406,195*				
				Construction Total (including NMGRT)	**$ 6,057,608**		**$ 1,515,000.00**	**$ 6,914,000.00**	**$ 188,000.00**
Non-Construction Cost									
1	Engineering Design	5.0%	%	$ 5,651,413	$ 282,571				
2	Topographical Survey	2.5%	%	$ 5,651,413	$ 141,285				
3	Engineering Services during construction including on-site observation	8.0%	%	$ 5,651,413	$ 452,113				
4	Permitting & Geotechnical Investigations	1.5%	%	$ 5,651,413	$ 84,771				
				Non-Construction Subtotal	**$ 960,740**				
				NMGRT *7.6250%*	*$ 73,256*				
				Total Non-Construction Cost (including NMGRT)	**$ 1,033,997**				
				TOTAL PROJECT COST (rounded to nearest $1,000)	**$ 7,092,000**				

Village of Jemez Springs Wastewater System Improvements PER
Engineer's Opinion of Probable Cost
Collection Alternative 3: Replace the Sanitary Sewer System

Item No.	Item Description	Quantity	Unit	Unit Cost	Total Cost	Asset Life (years)	Salvage Value ($)	Replacement Cost ($)	Annual Payment Amount ($)
Construction Cost									
Site Work & Miscellaneous									
1	Mobilization and demobilization	10%	%	$ 7,533,000	$ 753,300				
2	Construction surveying and staking	3%	%	$ 7,533,000	$ 225,990				
3	Clearing and grubbing along easement, including removing and replacing fencing, installing new gates	5.0	Acre	$ 20,000	$ 100,000				
4	Traffic Control	1.0	LS	$ 25,000	$ 25,000				
Collection System Improvements									
5	New 8-inch PVC sewer line to replace existing 6-inch sewer line by method of pipe bursting	3,200	LF	$ 100	$ 320,000	35	$ 137,142.86	$639,964.66	$ 18,284.70
6	Manhole rehabilitation (Repair Method A); Replace frame and cover, including waterproof seal	90	EA	$ 2,200	$ 198,000	40	$ 99,000.00	$437,191.85	$ 10,929.80
7	Manhole rehabilitation (Repair Method B); Make frame height adjustment and replace cover, frame, and seal, including internal/external waterproof seal	45	EA	$ 3,000	$ 135,000	40	$ 67,500.00	$298,085.35	$ 7,452.13
8	Manhole rehabilitation (Repair Method C); Clean and remove roots, grout and seal leaks and cracks, including waterproof sealant	1,250	VF	$ 400	$ 500,000	40	$ 250,000.00	$1,104,019.83	$ 27,600.50
9	Manhole rehabilitation (Repair Method D); Reestablish flow channels, bench, pipe connections, and reseal, including waterproof sealant	135	EA	$ 3,200	$ 432,000	40	$ 216,000.00	$953,873.13	$ 23,846.83
10	Manhole rehabilitation (Repair Method E); Apply waterproof coating, including full interior of the manhole	8,000	SF	$ 60	$ 480,000	40	$ 240,000.00	$1,059,859.04	$ 26,496.48
11	Sewer line rehabilitation, point repair	7,500	LF	$ 100	$ 750,000	35	$ 321,428.57	$1,499,917.16	$ 42,854.78
12	Sewer line rehabilitation	26,800	LF	$ 120	$ 3,216,000	35	$ 1,378,285.71	$6,431,644.80	$ 183,761.28
13	Reestablish service connections	179	EA	$ 3,000	$ 537,000	35	$ 230,142.86	$1,073,940.69	$ 30,684.02
14	CCTV sewer line inspection, including flushing	30,000	LF	$ 8	$ 240,000				
15	Temporary bypass pumping	30,000	LF	$ 20	$ 600,000				
				Construction Subtotal	***$ 8,512,290***				
				Contingency *25%*	*$ 2,128,073*				
				Construction Subtotal (including contingency)	***$ 10,640,363***				
				NMGRT *7.1875%*	*$ 764,776*				
				Construction Total (including NMGRT)	**$ 11,405,139**		**$ 2,940,000.00**	**$ 13,499,000.00**	**$ 372,000.00**
Non-Construction Cost									
1	Engineering Design	5.0%	%	$ 10,640,363	$ 532,018				
2	Topographical Survey	2.0%	%	$ 10,640,363	$ 212,807				
3	Engineering Services during construction including on-site observation	8.0%	%	$ 10,640,363	$ 851,229				
4	Permitting & Geotechnical Investigations	1.5%	%	$ 10,640,363	$ 159,605				
				Non-Construction Subtotal	**$ 1,755,660**				
				NMGRT *7.6250%*	*$ 133,869*				
				Total Non-Construction Cost (including NMGRT)	**$ 1,889,529**				
				TOTAL PROJECT COST (rounded to nearest $1,000)	**$ 13,295,000**				

Village of Jemez Springs Wastewater System Improvements PER
Engineer's Opinion of Probable Cost
WWTP Alternative 2: Renovate Critical Components of the Existing WWTP

Item No.	Item Description	Quantity	Unit	Unit Cost	Total Cost	Asset Life (years)	Salvage Value ($)	Replacement Cost ($)	Annual Payment Amount ($)
Construction Cost									
1	Mobilization and demobilization	10%	%	$ 1,099,450	$ 109,945				
2	New PLC & HMI, including AB CompactLogix 1769-L33ER processor, all I/O modules, power supply and end cap, AB PanelView Plus 15" HMI display, eWon webport modem/router	1	LS	$ 39,000	$ 39,000	$ 10	$ -	$ 47,541	$ 4,754
3	YSI IQ SensorNet 2030 3G system, including DO and NH4/NO3 sensors, controller, analyzer, power supply, 8mm SNCIQ two-wire connection cables, added control logic	1	LS	$ 102,000	$ 102,000	$ 10	$ -	$ 124,337	$ 12,434
4	Diffused aeration system, including all equipment downstream of SS drop pipe	1	LS	$ 22,500	$ 22,500	$ 10	$ -	$ 27,427	$ 2,743
5	Alum metering pump, including one skid, 2.4 GPH, 4-20 mA, NEMA 4X enclosure	1	LS	$ 54,000	$ 54,000	$ 10	$ -	$ 65,826	$ 6,583
6	Influent screening, including influent trash grinder, vertical auger monster, motor controller, heat trace and jacketing, and weather protection structure	1	LS	$ 285,000	$ 285,000	$ 10	$ -	$ 347,413	$ 34,741
7	New lift station wet well, including pulling and resetting pumps	1	LS	$ 50,000	$ 50,000	$ 40	$ 25,000	$ 110,402	$ 2,760
8	Sludge drying bed improvements	1	LS	$ 25,000	$ 25,000	$ 10	$ -	$ 30,475	$ 3,047
9	Electrical improvements	1	LS	$ 50,000	$ 50,000	$ 10	$ -	$ 60,950	$ 6,095
10	New CMU building for ferric chloride	275	SF	$ 250	$ 68,750	$ 50	$ 41,250	$ 185,047	$ 3,701
11	New CMU building for office and laboratory	1,008	SF	$ 400	$ 403,200	$ 50	$ 241,920	$ 1,085,248	$ 21,705
				Construction Subtotal	***$ 1,209,395***				
				Contingency 25%	*$ 302,349*				
				Construction Subtotal (including contingency)	***$ 1,511,744***				
				NMGRT 7.1875%	*$ 108,657*				
				Construction Total (including NMGRT)	**$ 1,620,400**		**$ 309,000**	**$ 2,085,000**	**$ 99,000**
Non-Construction Cost									
1	Engineering Design	5.0%	%	$1,511,744	$ 75,587				
2	Topographical Survey	2.0%	%	$1,511,744	$ 30,235				
3	Engineering Services during construction including on-site observation	8.0%	%	$1,511,744	$ 120,940				
4	Permitting & Geotechnical Investigations	1.5%	%	$1,511,744	$ 22,676				
				Non-Construction Subtotal	**$ 249,438**				
				NMGRT 7.6250%	*$ 19,020*				
				Total Non-Construction Cost (including NMGRT)	**$ 268,457**				
				TOTAL PROJECT COST (rounded to nearest $1,000)	**$ 1,889,000**				

Village of Jemez Springs Wastewater System Improvements PER
Engineer's Opinion of Probable Cost
WWTP Alternative 3: Replace the Existing WWTP with a New Plant

Item No.	Item Description	Quantity	Unit	Unit Cost	Total Cost	Asset Life (years)	Salvage Value ($)	Replacement Cost ($)	Annual Payment Amount ($)
Construction Cost									
1	Mobilization and demobilization	10%	%	$ 2,455,450	$ 245,545				
1	New sequencing batch reactor (SBR) treatment system	1	LS	$ 1,356,000	$ 1,356,000	50	$ 813,600	$3,649,793	$72,996
1	New PLC & HMI, including AB CompactLogix 1769-L33ER processor, all I/O modules, power supply and end cap, AB PanelView Plus 15" HMI display, eWon webport modem/router	1	LS	$ 39,000	$ 39,000	10	$ -	$47,541	$4,754
2	YSI IQ SensorNet 2030 3G system, including DO and NH4/NO3 sensors, controller, analyzer, power supply, 8mm SNCIQ two-wire connection cables, added control logic	1	LS	$ 102,000	$ 102,000	10	$ -	$124,337	$12,434
3	Diffused aeration system, including all equipment downstream of SS drop pipe	1	LS	$ 22,500	$ 22,500	10	$ -	$27,427	$2,743
4	Alum metering pump, including one skid, 2.4 GPH, 4-20 mA, NEMA 4X enclosure	1	LS	$ 54,000	$ 54,000	10	$ -	$65,826	$6,583
5	Influent screening, including influent trash grinder, vertical auger monster, motor controller, heat trace and jacketing, and weather protection structure	1	LS	$ 285,000	$ 285,000	10	$ -	$347,413	$34,741
6	New lift station wet well, including pulling and resetting pumps	1	LS	$ 50,000	$ 50,000	40	$ 25,000	$110,402	$2,760
7	Sludge drying bed improvements	1	LS	$ 25,000	$ 25,000	10	$ -	$30,475	$3,047
8	Electrical improvements	1	LS	$ 50,000	$ 50,000	10	$ -	$60,950	$6,095
9	New pre-fabricated building for ferric chloride and belt filter press	275	SF	$ 250	$ 68,750	50	$ 41,250	$185,047	$3,701
10	New CMU building for office and laboratory	1,008	SF	$ 400	$ 403,200	50	$ 241,920	$1,085,248	$21,705
				Construction Subtotal	***$ 2,700,995***				
				Contingency *25%*	*$ 675,249*				
				Construction Subtotal (including contingency)	***$ 3,376,244***				
				NMGRT *7.1875%*	*$ 242,668*				
				Construction Total (including NMGRT)	**$ 3,618,911**		**$ 1,122,000**	**$ 5,735,000**	**$ 172,000**
Non-Construction Cost									
1	Engineering Design	5.0%	%	$3,376,244	$ 168,812				
2	Topographical Survey	2.0%	%	$3,376,244	$ 67,525				
3	Engineering Services during construction including on-site observation	8.0%	%	$3,376,244	$ 270,100				
4	Permitting & Geotechnical Investigations	1.5%	%	$3,376,244	$ 50,644				
				Non-Construction Subtotal	**$ 557,080**				
				NMGRT *7.6250%*	*$ 42,477*				
				Total Non-Construction Cost (including NMGRT)	**$ 599,558**				
				TOTAL PROJECT COST (rounded to nearest $1,000)	**$ 4,219,000**				

Village of Jemez Springs Wastewater System Improvements PER
Engineer's Opinion of Probable Cost
Recommended Project: Rehabiltate Sewer Collection System and Renovate WWTP

Item No.	Item Description	Quantity	Unit	Unit Cost	Total Cost	Asset Life (years)	Salvage Value ($)	Replacement Cost ($)	Annual Payment Amount ($)
Construction Cost									
Site Work & Miscellaneous									
1	Mobilization and demobilization	10%	%	$ 5,100,450	$ 510,045				
2	Construction surveying and staking	3%	%	$ 4,001,000	$ 120,030				
3	Clearing and grubbing along easement, including removing and replacing fencing, installing new gates	4	Acre	$ 20,000	$ 80,000				
4	Traffic Control	1	LS	$ 25,000	$ 25,000				
Collection System Improvements									
5	New 8-inch PVC sewer line to replace existing 6-inch sewer line by method of pipe bursting	3,200	LF	$ 100	$ 320,000	35	$ 137,143	$ 639,965	$ 18,285
6	Manhole rehabilitation (Repair Method A); Replace frame and cover, including waterproof seal	55	EA	$ 2,200	$ 121,000	40	$ 60,500	$ 267,173	$ 6,679
7	Manhole rehabilitation (Repair Method B); Make frame height adjustment and replace cover, frame, and seal, including internal/external waterproof seal	45	EA	$ 3,000	$ 135,000	40	$ 67,500	$ 298,085	$ 7,452
8	Manhole rehabilitation (Repair Method C); Clean and remove roots, grout and seal leaks and cracks, including waterproof sealant	650	VF	$ 400	$ 260,000	40	$ 130,000	$ 574,090	$ 14,352
9	Manhole rehabilitation (Repair Method D); Reestablish flow channels, bench, pipe connections, and reseal, including waterproof sealant	70	EA	$ 3,200	$ 224,000	40	$ 112,000	$ 494,601	$ 12,365
10	Manhole rehabilitation (Repair Method E); Apply waterproof coating, including full interior of the manhole	8,000	SF	$ 60	$ 480,000	40	$ 240,000	$ 1,059,859	$ 26,496
11	Sewer line rehabilitation, point repair	1,100	LF	$ 100	$ 110,000	35	$ 47,143	$ 219,988	$ 6,285
12	Sewer line rehabilitation	12,000	LF	$ 120	$ 1,440,000	35	$ 617,143	$ 2,879,841	$ 82,281
13	Reestablish service connections	80	EA	$ 3,000	$ 240,000	35	$ 102,857	$ 479,973	$ 13,714
14	CCTV sewer line inspection, including flushing	30,000	LF	$ 8	$ 240,000				
15	Temporary bypass pumping	16,300	LF	$ 20	$ 326,000				
WWTP Improvements									
16	New PLC & HMI, including AB CompactLogix 1769-L33ER processor, all I/O modules, power supply and end cap, AB PanelView Plus 15” HMI display, eWon webport modem/router	1	LS	$ 39,000	$ 39,000	10	$ -	$ 47,541	$ 4,754
17	YSI IQ SensorNet 2030 3G system, including DO and NH4/NO3 sensors, controller, analyzer, power supply, 8mm SNCIQ two-wire connection cables, added control logic	1	LS	$ 102,000	$ 102,000	10	$ -	$ 124,337	$ 12,434
18	Diffused aeration system, including all equipment downstream of SS drop pipe	1	LS	$ 22,500	$ 22,500	10	$ -	$ 27,427	$ 2,743
19	Alum metering pump, including one skid, 2.4 GPH, 4-20 mA, NEMA 4X enclosure	1	LS	$ 54,000	$ 54,000	10	$ -	$ 65,826	$ 6,583
20	Influent screening, including influent trash grinder, vertical auger monster, motor controller, heat trace and jacketing, and weather protection structure	1	LS	$ 285,000	$ 285,000	10	$ -	$ 347,413	$ 34,741

Village of Jemez Springs Wastewater System Improvements PER
Engineer's Opinion of Probable Cost
Recommended Project: Rehabiltate Sewer Collection System and Renovate WWTP

Item No.	Item Description	Quantity	Unit	Unit Cost	Total Cost	Asset Life (years)	Salvage Value ($)	Replacement Cost ($)	Annual Payment Amount ($)
21	New lift station wet well, including pulling and resetting pumps	1	LS	$ 50,000	$ 50,000	40	$ 25,000	$ 110,402	$ 2,760
22	Sludge drying bed improvements	1	LS	$ 25,000	$ 25,000	10	$ -	$ 30,475	$ 3,047
23	Electrical improvements	1	LS	$ 50,000	$ 50,000	10	$ -	$ 60,950	$ 6,095
24	New CMU building for ferric chloride	275	SF	$ 250	$ 68,750	50	$ 41,250	$ 185,047	$ 3,701
25	New CMU building for office and laboratory	1,008	SF	$ 400	$ 403,200	50	$ 241,920	$ 1,085,248	$ 21,705
				Construction Subtotal	***$ 5,730,525***				
				Contingency *25%*	*$ 1,432,631*				
				Construction Subtotal (including contingency)	***$ 7,163,156***				
				NMGRT *7.1875%*	*$ 514,852*				
				Construction Total (including NMGRT)	**$ 7,678,008**		**$ 1,823,000**	**$ 8,999,000**	**$ 287,000**
Non-Construction Cost									
1	Engineering Design	5.0%	%	$ 7,163,156	$ 358,158				
2	Topographical Survey	2.5%	%	$ 7,163,156	$ 179,079				
3	Engineering Services during construction including on-site observation	8.0%	%	$ 7,163,156	$ 573,053				
4	Permitting & Geotechnical Investigations	1.5%	%	$ 7,163,156	$ 107,447				
				Non-Construction Subtotal	**$ 1,217,737**				
				NMGRT *7.6250%*	*$ 92,852*				
				Total Non-Construction Cost (including NMGRT)	**$ 1,310,589**				
				TOTAL PROJECT COST (rounded to nearest $1,000)	**$ 8,989,000**				

Village of Jemez Springs Wastewater System Improvements PER
Engineer's Opinion of Probable Cost
Recommended Project Phase 1

Item No.	Item Description	Quantity	Unit	Unit Cost	Total Cost	Asset Life (years)	Salvage Value ($)	Replacement Cost ($)	Annual Payment Amount ($)
Construction Cost									
Site Work & Miscellaneous									
1	Mobilization and demobilization	10%	%	$ 1,960,500	$ 196,050				
2	Construction surveying and staking	3%	%	$ 1,960,500	$ 58,815				
3	Clearing and grubbing along easement, including removing and replacing fencing, installing new gates	2	Acre	$ 20,000	$ 40,000				
4	Traffic Control	0.5	LS	$ 25,000	$ 12,500				
Collection System Improvements									
5	Manhole rehabilitation (Repair Method A); Replace frame and cover, including waterproof seal	28	EA	$ 2,200	$ 60,500	40	$ 30,250	$ 133,586	$ 3,340
6	Manhole rehabilitation (Repair Method B); Make frame height adjustment and replace cover, frame, and seal, including internal/external waterproof seal	23	EA	$ 3,000	$ 67,500	40	$ 33,750	$ 149,043	$ 3,726
7	Manhole rehabilitation (Repair Method C); Clean and remove roots, grout and seal leaks and cracks, including waterproof sealant	325	VF	$ 400	$ 130,000	40	$ 65,000	$ 287,045	$ 7,176
8	Manhole rehabilitation (Repair Method D); Reestablish flow channels, bench, pipe connections, and reseal, including waterproof sealant	35	EA	$ 3,200	$ 112,000	40	$ 56,000	$ 247,300	$ 6,183
9	Manhole rehabilitation (Repair Method E); Apply waterproof coating, including full interior of the manhole	4,000	SF	$ 60	$ 240,000	40	$ 120,000	$ 529,930	$ 13,248
10	Sewer line rehabilitation, point repair	550	LF	$ 100	$ 55,000	35	$ 23,571	$ 109,994	$ 3,143
11	Sewer line rehabilitation	6,000	LF	$ 120	$ 720,000	35	$ 308,571	$ 1,439,920	$ 41,141
12	Reestablish service connections	40	EA	$ 3,000	$ 120,000	35	$ 51,429	$ 239,987	$ 6,857
13	CCTV sewer line inspection, including flushing	30,000	LF	$ 8	$ 240,000				
14	Temporary bypass pumping	8,150	LF	$ 20	$ 163,000				
				Construction Subtotal	***$ 2,215,365***				
				Contingency *25%*	*$ 553,841*				
				Construction Subtotal (including contingency)	***$ 2,769,206***				
				NMGRT *7.1875%*	*$ 199,037*				
				Construction Total (including NMGRT)	**$ 2,968,243**		**$ 689,000**	**$ 3,137,000**	**$ 85,000**
Non-Construction Cost									
1	Engineering Design of Phase 1 and Phase 2	5.0%	%	$ 4,280,950	$ 214,048				
2	Topographical Survey	2.5%	%	$ 7,163,156	$ 179,079				
3	Engineering Services during construction including on-site observation	8.0%	%	$ 2,769,206	$ 221,537				
4	Permitting & Geotechnical Investigations	1.5%	%	$ 2,769,206	$ 41,538				
				Non-Construction Subtotal	**$ 656,201**				
				NMGRT *7.6250%*	*$ 50,035*				
				Total Non-Construction Cost (including NMGRT)	**$ 706,236**				
				TOTAL PROJECT COST (rounded to nearest $1,000)	**$ 3,675,000**				

Village of Jemez Springs Wastewater System Improvements PER
Engineer's Opinion of Probable Cost
Recommended Project Phase 1

Item No.	Item Description	Quantity	Unit	Unit Cost	Total Cost	Asset Life (years)	Salvage Value ($)	Replacement Cost ($)	Annual Payment Amount ($)
Construction Cost									
WWTP Improvements									
1	Mobilization and demobilization	10%	%	$ 1,099,450	$ 109,945				
2	New PLC & HMI, including AB CompactLogix 1769-L33ER processor, all I/O modules, power supply and end cap, AB PanelView Plus 15" HMI display, eWon webport modem/router	1	LS	$ 39,000	$ 39,000	10	$ -	$ 47,541	$ 4,754
3	YSI IQ SensorNet 2030 3G system, including DO and NH4/NO3 sensors, controller, analyzer, power supply, 8mm SNCIQ two-wire connection cables, added control logic	1	LS	$ 102,000	$ 102,000	10	$ -	$ 124,337	$ 12,434
4	Diffused aeration system, including all equipment downstream of SS drop pipe	1	LS	$ 22,500	$ 22,500	10	$ -	$ 27,427	$ 2,743
5	Alum metering pump, including one skid, 2.4 GPH, 4-20 mA, NEMA 4X enclosure	1	LS	$ 54,000	$ 54,000	10	$ -	$ 65,826	$ 6,583
6	Influent screening, including influent trash grinder, vertical auger monster, motor controller, heat trace and jacketing, and weather protection structure	1	LS	$ 285,000	$ 285,000	10	$ -	$ 347,413	$ 34,741
7	New lift station wet well, including pulling and resetting pumps	1	LS	$ 50,000	$ 50,000	40	$ 25,000	$ 110,402	$ 2,760
8	Sludge drying bed improvements	1	LS	$ 25,000	$ 25,000	10	$ -	$ 30,475	$ 3,047
9	Electrical improvements	1	LS	$ 50,000	$ 50,000	10	$ -	$ 60,950	$ 6,095
10	New CMU building for ferric chloride	275	SF	$ 250	$ 68,750	50	$ 41,250	$ 185,047	$ 3,701
11	New CMU building for office and laboratory	1,008	SF	$ 400	$ 403,200	50	$ 241,920	$ 1,085,248	$ 21,705
				Construction Subtotal	***$ 1,209,395***				
				Contingency 25%	*$ 302,349*				
				Construction Subtotal (including contingency)	***$ 1,511,744***				
				NMGRT 7.1875%	*$ 108,657*				
				Construction Total (including NMGRT)	**$ 1,620,400**		**$ 309,000**	**$ 2,085,000**	**$ 99,000**
Non-Construction Cost									
1	Engineering Design of Phase 3	5.0%	%	$ 2,882,206	$ 144,110				
2	Engineering Services during construction including on-site observation	8.0%	%	$ 1,511,744	$ 120,940				
3	Permitting & Geotechnical Investigations	1.5%	%	$ 1,511,744	$ 22,676				
				Non-Construction Subtotal	**$ 287,726**				
				NMGRT 7.6250%	*$ 21,939*				
				Total Non-Construction Cost (including NMGRT)	**$ 309,665**				
				TOTAL PROJECT COST (rounded to nearest $1,000)	**$ 1,931,000**				

Village of Jemez Springs Wastewater System Improvements PER
Engineer's Opinion of Probable Cost
Recommended Project Phase 1

Item No.	Item Description	Quantity	Unit	Unit Cost	Total Cost	Asset Life (years)	Salvage Value ($)	Replacement Cost ($)	Annual Payment Amount ($)
Construction Cost									
Site Work & Miscellaneous									
1	Mobilization and demobilization	10%	%	$ 2,040,500	$ 204,050				
2	Construction surveying and staking	3%	%	$ 2,040,500	$ 61,215				
3	Clearing and grubbing along easement, including removing and replacing fencing, installing new gates	2	Acre	$ 20,000	$ 40,000				
4	Traffic Control	0.5	LS	$ 25,000	$ 12,500				
Collection System Improvements									
5	New 8-inch PVC sewer line to replace existing 6-inch sewer line by method of pipe bursting	3,200	LF	$ 100	$ 320,000	35	$ 137,143	$ 639,965	$ 18,285
6	Manhole rehabilitation (Repair Method A); Replace frame and cover, including waterproof seal	28	EA	$ 2,200	$ 60,500	40	$ 30,250	$ 133,586	$ 3,340
7	Manhole rehabilitation (Repair Method B); Make frame height adjustment and replace cover, frame, and seal, including internal/external waterproof seal	23	EA	$ 3,000	$ 67,500	40	$ 33,750	$ 149,043	$ 3,726
8	Manhole rehabilitation (Repair Method C); Clean and remove roots, grout and seal leaks and cracks, including waterproof sealant	325	VF	$ 400	$ 130,000	40	$ 65,000	$ 287,045	$ 7,176
9	Manhole rehabilitation (Repair Method D); Reestablish flow channels, bench, pipe connections, and reseal, including waterproof sealant	35	EA	$ 3,200	$ 112,000	40	$ 56,000	$ 247,300	$ 6,183
10	Manhole rehabilitation (Repair Method E); Apply waterproof coating, including full interior of the manhole	4,000	SF	$ 60	$ 240,000	40	$ 120,000	$ 529,930	$ 13,248
11	Sewer line rehabilitation, point repair	550	LF	$ 100	$ 55,000	35	$ 23,571	$ 109,994	$ 3,143
12	Sewer line rehabilitation	6,000	LF	$ 120	$ 720,000	35	$ 308,571	$ 1,439,920	$ 41,141
13	Reestablish service connections	40	EA	$ 3,000	$ 120,000	35	$ 51,429	$ 239,987	$ 6,857
14	Temporary bypass pumping	8,150	LF	$ 20	$ 163,000				
				Construction Subtotal	***$ 2,305,765***				
				Contingency *25%*	*$ 576,441*				
				Construction Subtotal (including contingency)	***$ 2,882,206***				
				NMGRT *7.1875%*	*$ 207,159*				
				Construction Total (including NMGRT)	**$ 3,089,365**		**$ 826,000**	**$ 3,777,000**	**$ 104,000**
Non-Construction Cost									
1	Engineering Services during construction including on-site observation	8.0%	%	$ 2,882,206	$ 230,577				
2	Permitting & Geotechnical Investigations	1.5%	%	$ 2,882,206	$ 43,233				
				Non-Construction Subtotal	**$ 273,810**				
				NMGRT *7.6250%*	*$ 20,878*				
				Total Non-Construction Cost (including NMGRT)	**$ 294,688**				
				TOTAL PROJECT COST (rounded to nearest $1,000)	**$ 3,385,000**				

Village of Jemez Springs Wastewater System Improvements PER
Annual O&M Cost
Alternative 1: No Action

Item No.	Item Description	Quantity	Unit	Unit Cost	Total Cost
Annual O&M Costs					
1	Salaries and Wages	1	LS	$ 60,595.47	$ 60,595.47
2	Payroll Tax Expense	1	LS	$ 10,307.44	$ 10,307.44
3	Gas/Diesel	1	LS	$ 1,793.66	$ 1,793.66
4	Repair/Maintenance	1	LS	$ 3,258.09	$ 3,258.09
5	Professional Fees	1	LS	$ 48,137.42	$ 48,137.42
6	Pumping	1	LS	$ 10,063.50	$ 10,063.50
7	Services/Utilities	1	LS	$ 15,153.32	$ 15,153.32
8	Supplies	1	LS	$ 7,858.88	$ 7,858.88
9	Equipment Purchase	1	LS	$ 12,777.35	$ 12,777.35
10	Small Equipment	1	LS	$ 229.04	$ 229.04
11	Dues & Subscriptions	1	LS	$ 427.67	$ 427.67
12	Insurances	1	LS	$ 1,392.68	$ 1,392.68
13	Miscellaneous	1	LS	$ 1,411.40	$ 1,411.40
14	Debt Service Payments	1	LS	$ 8,642.25	$ 8,642.25
15	Admin Fee	1	LS	$ 3,623.55	$ 3,623.55
16	Annualized Infrastructure Replacement Cost	1	LS	$ 544,000.00	$ 544,000.00
				Annual O&M Costs (rounded)	**$ 730,000**

Village of Jemez Springs Wastewater System Improvements PER
Annual O&M Cost
Collection Alternative 2: Rehabilitate Critical Areas of Sanitary Sewer System

Item No.	Item Description	Quantity	Unit	Unit Cost	Total Cost
Annual O&M Costs					
1	Salaries and Wages	1	LS	$ 60,595.47	$ 60,595.47
2	Payroll Tax Expense	1	LS	$ 10,307.44	$ 10,307.44
3	Gas/Diesel	1	LS	$ 2,690.49	$ 2,690.49
4	Repair/Maintenance	1	LS	$ 2,443.57	$ 2,443.57
5	Professional Fees	1	LS	$ 36,103.07	$ 36,103.07
6	Pumping	1	LS	$ 7,547.63	$ 7,547.63
7	Services/Utilities	1	LS	$ 15,153.32	$ 15,153.32
8	Supplies	1	LS	$ 7,858.88	$ 7,858.88
9	Equipment Purchase	1	LS	$ 12,777.35	$ 12,777.35
10	Small Equipment	1	LS	$ 229.04	$ 229.04
11	Dues & Subscriptions	1	LS	$ 427.67	$ 427.67
12	Insurances	1	LS	$ 1,392.68	$ 1,392.68
13	Miscellaneous	1	LS	$ 1,411.40	$ 1,411.40
14	Debt Service Payments	1	LS	$ 8,642.25	$ 8,642.25
15	Admin Fee	1	LS	$ 3,623.55	$ 3,623.55
16	Annualized Infrastructure Replacement Cost	1	LS	$ 188,000.00	$ 188,000.00
				Annual O&M Costs (rounded)	**$ 359,000**

Village of Jemez Springs Wastewater System Improvements PER
Annual O&M Cost
Collection Alternative 3: Replace the Sanitary Sewer System

Item No.	Item Description	Quantity	Unit	Unit Cost	Total Cost
Annual O&M Costs					
1	Salaries and Wages	1	LS	$ 60,595.47	$ 60,595.47
2	Payroll Tax Expense	1	LS	$ 10,307.44	$ 10,307.44
3	Gas/Diesel	1	LS	$ 2,690.49	$ 2,690.49
4	Repair/Maintenance	1	LS	$ 1,629.05	$ 1,629.05
5	Professional Fees	1	LS	$ 24,068.71	$ 24,068.71
6	Pumping	1	LS	$ 5,031.75	$ 5,031.75
7	Services/Utilities	1	LS	$ 15,153.32	$ 15,153.32
8	Supplies	1	LS	$ 7,858.88	$ 7,858.88
9	Equipment Purchase	1	LS	$ 12,777.35	$ 12,777.35
10	Small Equipment	1	LS	$ 229.04	$ 229.04
11	Dues & Subscriptions	1	LS	$ 427.67	$ 427.67
12	Insurances	1	LS	$ 1,392.68	$ 1,392.68
13	Miscellaneous	1	LS	$ 1,411.40	$ 1,411.40
14	Debt Service Payments	1	LS	$ 8,642.25	$ 8,642.25
15	Admin Fee	1	LS	$ 3,623.55	$ 3,623.55
16	Annualized Infrastructure Replacement Cost	1	LS	$ 372,000.00	$ 372,000.00
				Annual O&M Costs (rounded)	**$ 528,000**

Village of Jemez Springs Wastewater System Improvements PER
Annual O&M Cost
WWTP Alternative 2

Item No.	Item Description	Quantity	Unit	Unit Cost	Total Cost
Annual O&M Costs					
1	Salaries and Wages	1	LS	$ 60,595.47	$ 60,595.47
2	Payroll Tax Expense	1	LS	$ 10,307.44	$ 10,307.44
3	Gas/Diesel	1	LS	$ 2,690.49	$ 2,690.49
4	Repair/Maintenance	1	LS	$ 2,443.57	$ 2,443.57
5	Professional Fees	1	LS	$ 36,103.07	$ 36,103.07
6	Pumping	1	LS	$ 7,547.63	$ 7,547.63
7	Services/Utilities	1	LS	$ 11,364.99	$ 11,364.99
8	Supplies	1	LS	$ 7,858.88	$ 7,858.88
9	Equipment Purchase	1	LS	$ 6,388.68	$ 6,388.68
10	Small Equipment	1	LS	$ 229.04	$ 229.04
11	Dues & Subscriptions	1	LS	$ 427.67	$ 427.67
12	Insurances	1	LS	$ 1,392.68	$ 1,392.68
13	Miscellaneous	1	LS	$ 1,411.40	$ 1,411.40
14	Debt Service Payments	1	LS	$ 8,642.25	$ 8,642.25
15	Admin Fee	1	LS	$ 3,623.55	$ 3,623.55
16	Annualized Infrastructure Replacement Cost	1	LS	$ 99,000.00	$ 99,000.00
				Annual O&M Costs (rounded)	**$ 260,000**

Village of Jemez Springs Wastewater System Improvements PER
Annual O&M Cost
WWTP Alternative 3

Item No.	Item Description	Quantity	Unit	Unit Cost	Total Cost
Annual O&M Costs					
1	Salaries and Wages	1	LS	$ 60,595.47	$ 60,595.47
2	Payroll Tax Expense	1	LS	$ 10,307.44	$ 10,307.44
3	Gas/Diesel	1	LS	$ 2,690.49	$ 2,690.49
4	Repair/Maintenance	1	LS	$ 1,629.05	$ 1,629.05
5	Professional Fees	1	LS	$ 24,068.71	$ 24,068.71
6	Pumping	1	LS	$ 5,031.75	$ 5,031.75
7	Services/Utilities	1	LS	$ 11,364.99	$ 11,364.99
8	Supplies	1	LS	$ 7,858.88	$ 7,858.88
9	Equipment Purchase	1	LS	$ 6,388.68	$ 6,388.68
10	Small Equipment	1	LS	$ 229.04	$ 229.04
11	Dues & Subscriptions	1	LS	$ 427.67	$ 427.67
12	Insurances	1	LS	$ 1,392.68	$ 1,392.68
13	Miscellaneous	1	LS	$ 1,411.40	$ 1,411.40
14	Debt Service Payments	1	LS	$ 8,642.25	$ 8,642.25
15	Admin Fee	1	LS	$ 3,623.55	$ 3,623.55
16	Annualized Infrastructure Replacement Cost	1	LS	$ 172,000.00	$ 172,000.00
				Annual O&M Costs (rounded)	**$ 318,000**

Village of Jemez Springs Wastewater System Improvements PER
Annual O&M Cost
Recommended Project

Item No.	Item Description	Quantity	Unit	Unit Cost	Total Cost
Annual O&M Costs					
1	Salaries and Wages	1	LS	$ 60,595.47	$ 60,595.47
2	Payroll Tax Expense	1	LS	$ 10,307.44	$ 10,307.44
3	Gas/Diesel	1	LS	$ 2,690.49	$ 2,690.49
4	Repair/Maintenance	1	LS	$ 1,629.05	$ 1,629.05
5	Professional Fees	1	LS	$ 24,068.71	$ 24,068.71
6	Pumping	1	LS	$ 5,031.75	$ 5,031.75
7	Services/Utilities	1	LS	$ 3,788.33	$ 3,788.33
8	Supplies	1	LS	$ 7,858.88	$ 7,858.88
9	Equipment Purchase	1	LS	$ 6,388.68	$ 6,388.68
10	Small Equipment	1	LS	$ 229.04	$ 229.04
11	Dues & Subscriptions	1	LS	$ 427.67	$ 427.67
12	Insurances	1	LS	$ 1,392.68	$ 1,392.68
13	Miscellaneous	1	LS	$ 1,411.40	$ 1,411.40
14	Debt Service Payments	1	LS	$ 8,642.25	$ 8,642.25
15	Admin Fee	1	LS	$ 3,623.55	$ 3,623.55
16	Annualized Infrastructure Replacement Cost	1	LS	$ 287,000.00	$ 287,000.00
				Annual O&M Costs (rounded)	**$ 425,000**

Appendix H

Rehabilitation Data Sheets

DBS&A
a Geo-Logic Company

SEKISUI SPR
Leading-Edge Trenchless Solutions

Spiral Wound

PIPE REHABILITATION

SEWER PIPE LINING

CULVERT LINING

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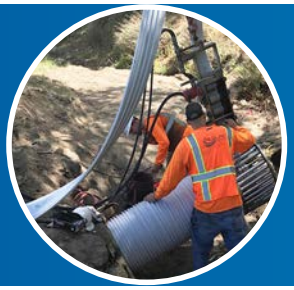
1-866-627-7772 www.sekisuispra.com sekisui.info@sekisui-spr.com

WHY CHOOSE SPIRAL WOUND

Spiral Wound liners are a structural rehabilitation solution for gravity pipe applications from 6” to over 200”. Utilizing machinery, a continuous strip of PVC is constructed as a uniform liner. Spiral Wound lining is 100% trenchless; only existing access points are used for rehabilitation.

With over 4 million ft. installed in the United States, and over 20 million ft. globally, Spiral Wound offers numerous advantages compared to other pipe renewal methods.

- FULLY STRUCTURAL REHABILITATION
- LIVE FLOW INSTALLATIONS
- 100% TRENCHLESS TECHNOLOGY
- ASTM F1697-18 & ASTM F1741-18 STANDARDS



INNOVATIVE INSTALLATIONS

For installations, a continuous strip of PVC is fed from a spool above ground into the winding machine. From there, the machine continuously winds the profile to construct the PVC liner within the host pipe. We offer 3 different winding methods based upon the host pipe.

SPR™EX | 6” - 42”

The SPR™EX liner is formed by a static machine that pushes the liner from access chamber to access chamber. A wire within the liner is then pulled, severing a secondary lock. This expands the PVC liner to fit tightly against the host pipe, requiring no annular space grouting.

SPR™TF | 40” - 60”

SPR™TF is a tight-fitting liner that does not require annular space grouting. Profile is fed into a traverse winding machine which forms a continuous liner between access points.

SPR™TF features 2 different winding machines depending on the project; a lightweight, compact machine or one featuring rotating hydraulic arms. Both machines traverse the pipeline while constructing a tight-fit liner.

SPR™ | 32” - 200+”

SPR™ renews large diameter, round and non-round shaped pipelines. The PVC is wound by a traversing machine that forms the liner while traveling the pipe segment. The liner is constructed leaving a gap between the PVC and pipe wall. This annular space is subsequently grouted.

LIVE FLOW INSTALLATION

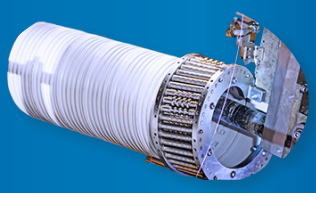
Bypass pumping often reaches 15% - 25% of the total project bid. As Spiral Wound liners can **be installed in live flow, the cost of flow management is often eliminated if not significantly** reduced.

STATIC & TRAVERSE WINDING MACHINES

SPR™EX is a stationary installation process. The equipment pushes the wound PVC liner from access chamber to access chamber.

In contrast, SPR™TF and SPR™ traverse the pipeline while winding and pulling the liner along with the machine.

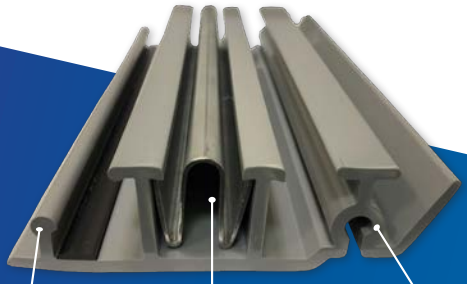
SPR™EX Static Winding Machine



SPR™TF Traverse Winding Machine

SPR™ Traverse Winding Machine

PVC PROFILE



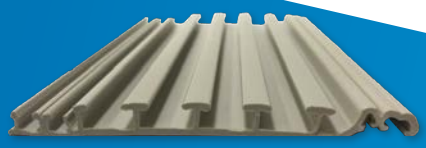
Male Lock *Optional Steel Reinforcement* *Female Lock*

SPR™ | 32” - 200+”

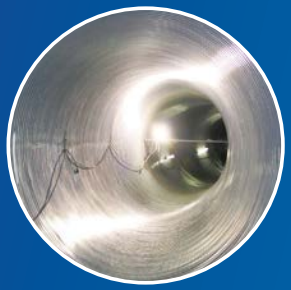
LINING MATERIAL

The liner material is a pipe grade PVC with a ribbed profile design, which is for added strength. The profile features a male and female lock along the edge of the material. These are interlocked as successive wraps of the strip are wound by the machine.

SPR™TF | 40” - 60”



SPR™EX | 6” - 42”



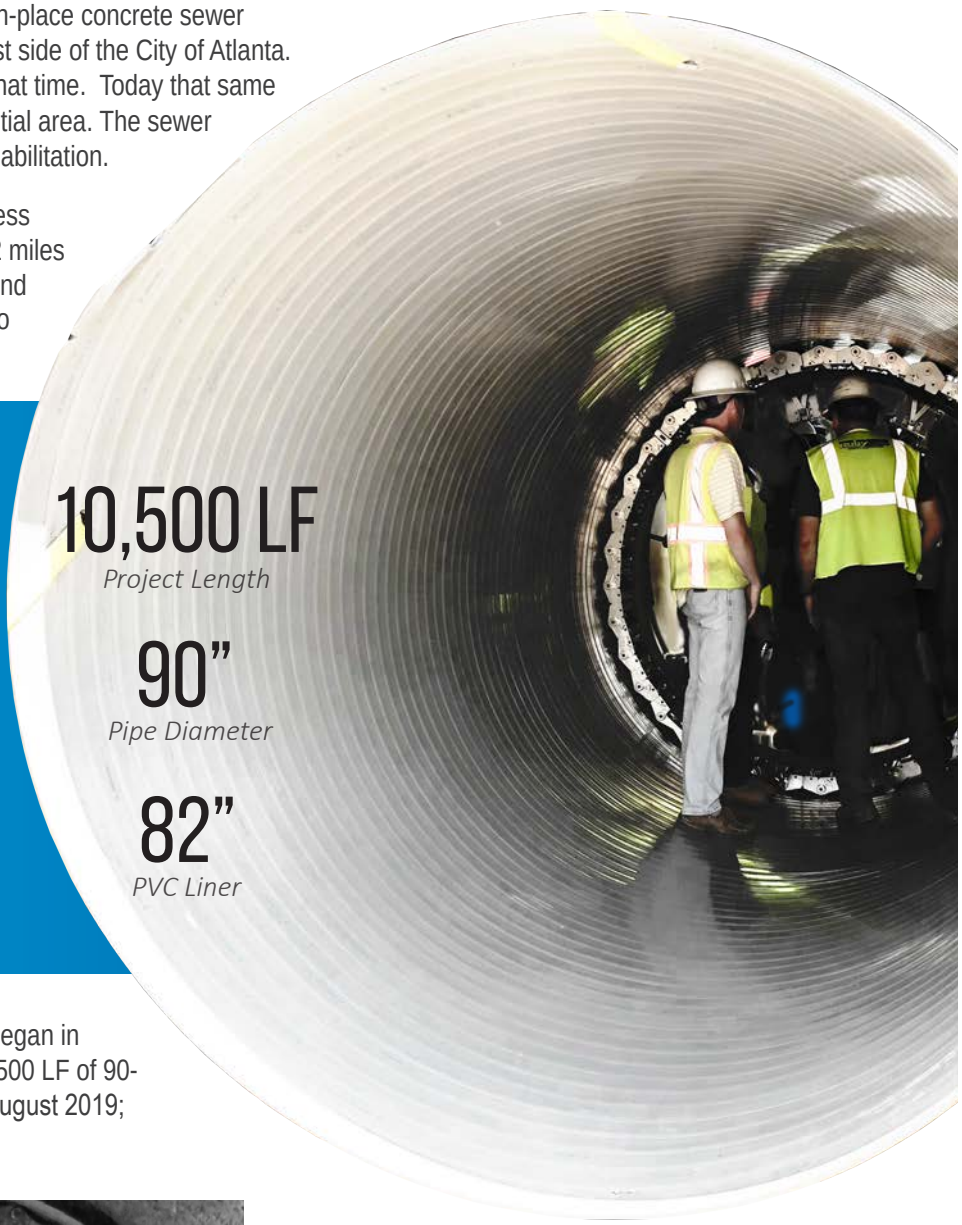
- **Pipe Grade PVC**
- **Mechanical Lock with Gasketing Material**
- **Impervious to I/I & Root Intrusion**
- **.009 Manning’s N Value**

CASE STUDY

LARGEST SPR™ PROJECT IN USA

The Peachtree Creek Trunk is a 90” arched cast-in-place concrete sewer pipeline constructed in the 1930‘s on the northwest side of the City of Atlanta. This section of town was largely undeveloped at that time. Today that same pipe alignment is surrounded by a thriving residential area. The sewer recently showed signs of failures and need for rehabilitation.

With the area being densely populated, a trenchless lining solution was needed to fully restore nearly 2 miles of the sewer. The City determined that Spiral Wound liners were the best trenchless pipe lining option to fully restore the old sewer.



The SPR™ design called for installation of an 82" PVC liner inside the 90" arch sewer. The annular space was to be filled with lightweight grout to serve as load-transfer for the PVC liner.

Installation began in the Fall of 2018, where Ruby-Collins set out to rehabilitate over 10,500 linear feet of sewer. The combination of innovative technology and efficient installers resulted in early project completion.

10,500 LF
Project Length

90”
Pipe Diameter

82”
PVC Liner

The Peachtree Creek Trunk Stabilization project began in October 2018. The rehabilitation of more than 10,500 LF of 90-in. arched sewer finished just 10 months later in August 2019; roughly four months ahead of schedule.

“The SEKISUI SPR Lining Technology was the perfect fit for the specific needs of this project. The technology was able to accommodate variable flow conditions and continuous rehabilitation through numerous curves in the pipe alignment with ease.”

- Scott Cline, President & COO
Ruby-Collins Inc.

2 DECADES OF SPR™EX

CASE STUDY

The City of San Diego's Metropolitan Wastewater Division has been rehabilitating their deteriorated sewers for nearly twenty years. This program however was not completely voluntary. The City entered a Consent Decree with the Environmental Protection Agency in 2001 to address the chronic problem of sanitary sewer spills.

Before 2000, the City had hundreds of sewer overflows each year, largely due to root intrusion and deteriorating pipe joints. As part of their EPA agreement, the City of San Diego embarked on an aggressive Sewer Spill Reduction Program.

"We've reduced the problem dramatically and anticipate even fewer overflows as we continue to renew our sewers."

Craig Whittemore, P.E., San Diego Metropolitan Wastewater Department

+1M LF
Installed since '01

8" - 42"
Pipe Diameters

+ 90%
Reduction in Spills

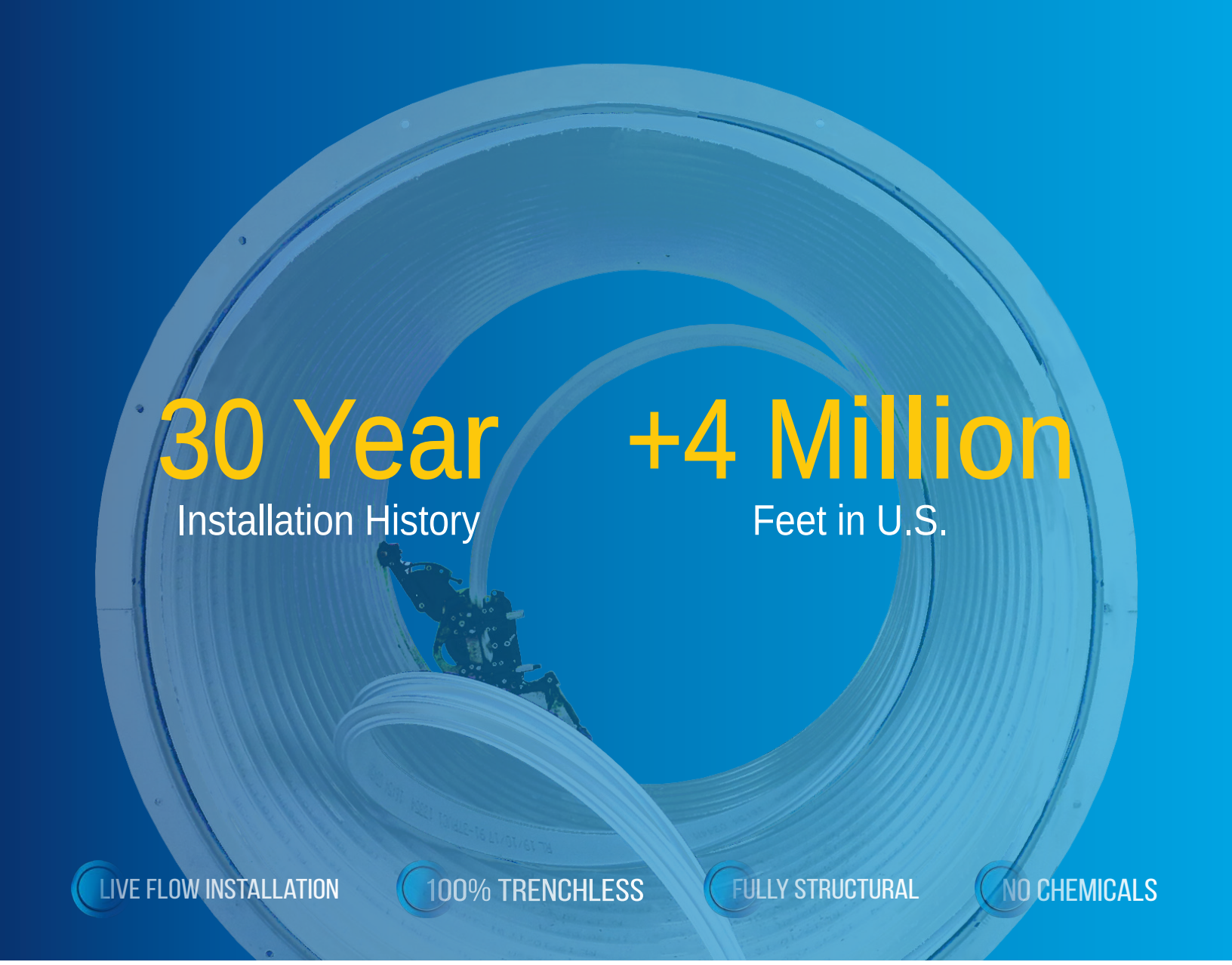
Since the program was implemented, the spill problem has been reduced dramatically. In 2001 the City had 365 sewer spills – one a day. By 2015 that number was down to 35; a greater than 90% reduction.

As of 2020, the City has inspected over 2040 miles of sewer and have identified 779 miles for replacement/rehabilitation. Over 300 miles of sewers have been rehabilitated with more slated for repair.

Since 2001, Sekisui licensees have bid on over 50 sewer rehabilitation projects and to date have installed **over 1 million feet of SPR™EX liners on City projects** with several projects currently in construction.

Though the mandatory repairs as outlined in the EPA Consent Decree were completed in 2015, the City continues a robust rehabilitation schedule.

The current CIP program is funded through 2024 with an annual goal of 40 to 45 miles of sewer to be replaced or rehabilitated per year. With the cost savings associated with trenchless technologies, the focus is to use structural liners where possible.



www.sekisuispra.com
sekisui.info@sekisui-spr.com

5000 Austell-Powder Springs Rd.
Austell, GA 30106

1-866-627-7772

See Spiral Wound in action on YouTube and LinkedIn

SEKISUI SPR
Leading-Edge Trenchless Solutions

Version 1.2020

VERTICAL AUGER MONSTER®

All-in-one solution to remove trash and unwanted solids from your pump station

Overview

The Vertical Auger Monster is a fine screening device that captures debris, conveys it vertically out of the pump station, launders the screenings to remove fecal matter and finally dewaters the debris before depositing the clean and dry material into a bin. When paired with a dual-shafted JWC Monster Grinder, the cleanliness of the screenings is maximized. The grinder breaks up rags and tough solids allowing for a higher level of separation of the organics from the solids.

JWC Environmental offers a selection of Vertical Auger Monster products to serve a wide range of applications. The **ACV** and **AGV Vertical Auger Monsters** incorporate Muffin Monster® grinding technology and have peak flows up to 4.8 mgd (759 m^3/hr). The **ALV Vertical Auger Monster** is a cost-effective solution with the capability of flows as high as 9.4 mgd (1474 m^3/hr).

Vertical Auger Monster®

Wall-mounted support frame
- Placement in existing pump station with minimal civil work
- Quick and easy installation and removal of grinder or auger in confined space

Twin-shafted grinder
- Shreds wipes, stringy material to prevent wrapping
- Breaks up clumps to separate organics
- Proven Muffin Monster® grinding technology

Perforated plate screen
- Fine screening with perforation sizes from 3/32" to 1/4" (2 to 6 mm)
- Integrated spray wash launders screenings
- Solids are captured; soft organics are washed back into the waste stream

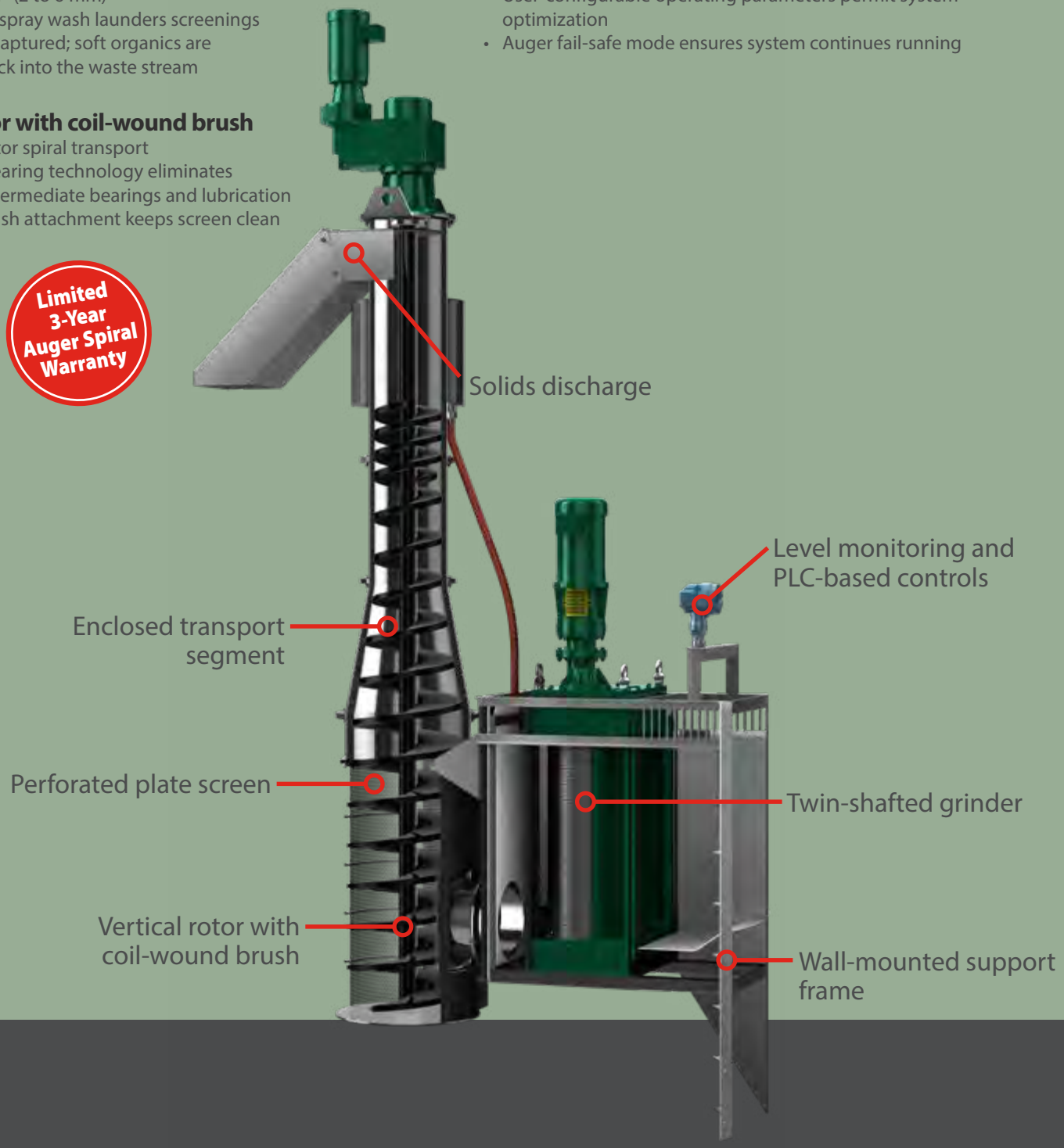
Vertical rotor with coil-wound brush
- Rugged rotor spiral transport
- External bearing technology eliminates bottom/intermediate bearings and lubrication
- Unique brush attachment keeps screen clean

Enclosed transport segment
- Keeps odors contained within the auger casing
- Customizable length

Solids discharge
- Configurable for 1 of 8 positions around auger to simplify placement
- Unique connection facilitates removal and re-installation of discharge chute

Level monitoring and PLC-based controls
- Auto load sensing and reversing protects the system
- User-configurable operating parameters permit system optimization
- Auger fail-safe mode ensures system continues running

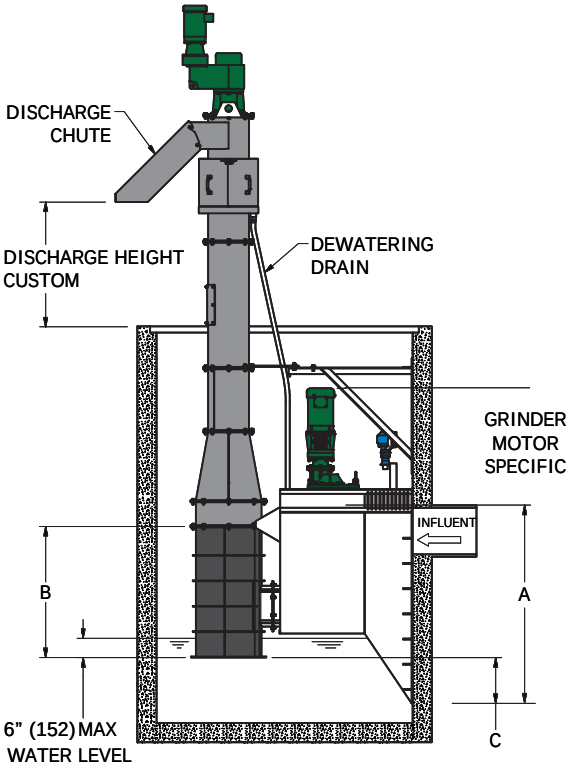
Limited 3-Year Auger Spiral Warranty



Vertical Auger Monster®

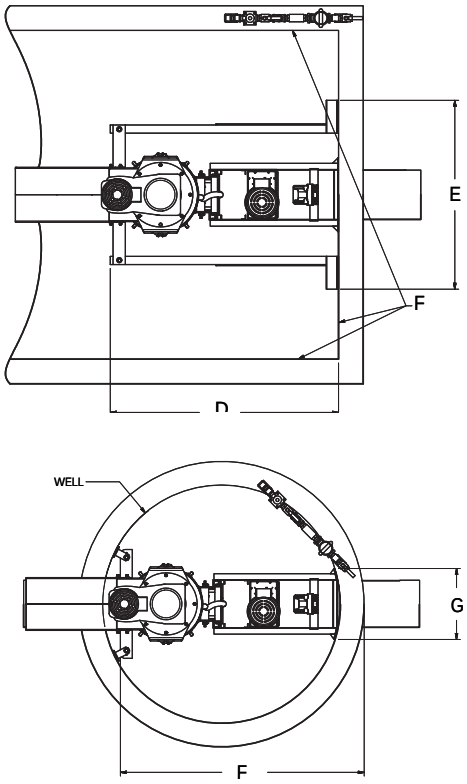
ACV Vertical Auger Monster®

The top-of-the-line ACV Vertical Auger Monster is designed to handle high flows with high solids loading. It utilizes a JWC Channel Monster® grinder to precondition the solids and separate the organics from the other trash and debris. The ACV has peak flow capabilities of 4.8 mgd (759 m^3/hr).



AGV Vertical Auger Monster®

The AGV Vertical Auger Monster incorporates either a 30K or 40K Muffin Monster® grinder to precondition the solids before conveying them out of the pump station. It is capable of flows up to 3.1 mgd (487 m^3/hr).



ACV Model	Max pipe size - inch (mm)	Standard dimensions - inch (mm)			Wall mount dimensions - inch (mm)		Round wall mount dimensions - inch (mm)		Max flow* - mgd (m^3/hr)		
		A	B	C	D	E	F	G	0% Blind	30% Blind	50% Blind
ACV1801-480	20 (500)	48-1/16 (1221)	27-1/2 (699)	14-3/8 (365)	69-3/8 (1762)	43-1/2 (1105)	70-3/8 (1788)	24-3/4 (629)	2.40 (379)	2.05 (323)	1.67 (263)
ACV2401-480	20 (500)	54-1/8 (1375)	33-1/4 (845)	14-3/8 (365)	69-3/8 (1762)	43-1/2 (1105)	70-3/8 (1788)	24-3/4 (629)	3.37 (532)	2.90 (457)	2.37 (374)
ACV3201-480	20 (500)	61-5/8 (1565)	41 (1041)	14-3/8 (365)	69-3/8 (1762)	43-1/2 (1105)	70-3/8 (1788)	24-3/4 (629)	4.81 (759)	4.18 (659)	3.44 (543)

Note: Please consult factory for final application assistance.

* Max flow based on 6mm screening section, domestic wastewater.

AGV Model	Max pipe size - inch (mm)	Standard dimensions - inch (mm)			Wall mount dimensions - inch (mm)		Round wall mount dimensions - inch (mm)		Max flow* - mgd (m^3/hr)		
		A	B	C	D	E	F	G	0% Blind	30% Blind	50% Blind
AGV1801-285	12 (300)	38-1/4 (972)	27-1/2 (699)	3-1/2 (89)	55-5/8 (1413)	46 (1168)	61-9/16 (1564)	17-15/16 (456)	1.23 (195)	1.03 (162)	0.81 (128)
AGV2401-285	12 (300)	44 (1118)	32-1/2 (826)	3-1/2 (89)	55-5/8 (1413)	46 (1168)	61-9/16 (1564)	17-15/16 (456)	1.71 (270)	1.37 (217)	1.06 (167)
AGV3201-285	12 (300)	51-3/7 (1314)	41 (1041)	3-1/2 (89)	55-5/8 (1413)	46 (1168)	61-9/16 (1564)	17-15/16 (456)	2.42 (381)	1.85 (292)	1.39 (219)
AGV4001-285	12 (300)	59-3/4 (1518)	49 (1245)	3-1/2 (89)	55-5/8 (1413)	46 (1168)	61-9/16 (1564)	17-15/16 (456)	3.09 (487)	2.31 (364)	1.70 (269)
AGV1801-480	12 (300)	47-11/16 (1211)	27-1/2 (699)	14-3/8 (365)	63-1/8 (1603)	43-1/2 (1105)	64-1/4 (1632)	23-1/4 (591)	1.39 (219)	1.31 (207)	1.19 (187)
AGV2401-480	12 (300)	53-3/4 (1365)	33-1/4 (845)	14-3/8 (365)	63-1/8 (1603)	43-1/2 (1105)	64-1/4 (1632)	23-1/4 (591)	2.05 (324)	1.98 (313)	1.80 (284)
AGV3201-480	12 (300)	61-1/4 (1556)	41 (1041)	14-3/8 (365)	63-1/8 (1603)	43-1/2 (1105)	64-1/4 (1632)	23-1/4 (591)	3.08 (486)	3.00 (472)	2.73 (430)

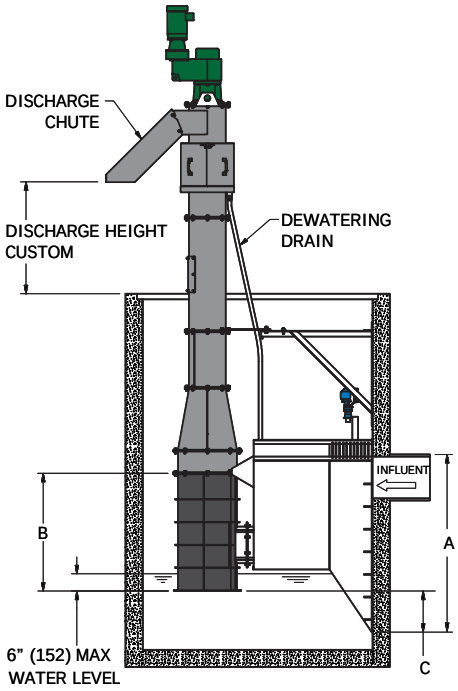
Note: Please consult factory for final application assistance.

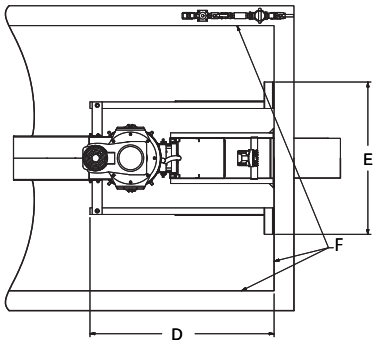
* Max flow based on 6 mm screening section, domestic wastewater.

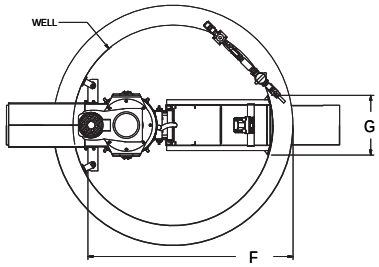
Vertical Auger Monster®

ALV Vertical Auger Monster®

The ALV Vertical Auger Monster is for applications with lower solids loading and high flows. This cost-effective solution captures, conveys and dewaters debris utilizing a rugged dual-helix auger to compact and dewater the solids. This version can hanled peak flows up to 9.4 mgd (1474 m^3/hr).







ALV Model	Max pipe size - inch (mm)	Standard dimensions - inch (mm)			Wall mount dimensions - inch (mm)		Round wall mount dimensions - inch (mm)		Max flow* - mgd (m^3/hr)		
		A	B	C	D	E	F	G	0% Blind	30% Blind	50% Blind
ALV1801-285	12 (300)	38-1/4 (972)	27-1/2 (699)	3-1/2 (89)	55-5/8 (1413)	46 (1168)	61-9/16 (1564)	17-15/16 (456)	2.06 (324)	1.44 (227)	1.03 (162)
ALV2401-285	12 (300)	44 (1118)	32-1/2 (826)	3-1/2 (89)	55-5/8 (1413)	46 (1168)	61-9/16 (1564)	17-15/16 (456)	2.50 (395)	1.75 (276)	1.25 (197)
ALV3201-285	12 (300)	51-3/4 (1314)	41 (1041)	3-1/2 (89)	55-5/8 (1413)	46 (1168)	61-9/16 (1564)	17-15/16 (456)	3.09 (487)	2.16 (341)	1.54 (244)
ALV4001-285	12 (300)	59-3/4 (1518)	49 (1245)	3-1/2 (89)	55-5/8 (1413)	46 (1168)	61-9/16 (1564)	17-15/16 (456)	3.67 (579)	2.57 (405)	1.84 (290)
ALV1801-480	12 (300)	47-11/16 (1211)	27-1/2 (699)	14-3/8 (365)	63-1/8 (1603)	43-1/2 (1105)	62-3/4 (1597)	23-1/4 (591)	4.59 (725)	3.22 (507)	2.30 (362)
ALV2401-480	12 (300)	53-3/4 (1365)	33-1/4 (845)	14-3/8 (365)	63-1/8 (1603)	43-1/2 (1105)	62-3/4 (1597)	23-1/4 (591)	6.55 (1034)	4.59 (724)	3.28 (517)
ALV3201-480	12 (300)	61-1/4 (1556)	41 (1041)	14-3/8 (365)	63-1/8 (1603)	43-1/2 (1105)	62-3/4 (1597)	23-1/4 (591)	9.35 (1474)	6.54 (1032)	4.67 (737)

Note: Please consult factory for final application assistance.

* Max flow based on 6 mm screening section, domestic wastewater.

Since its founding in 1973, JWC Environmental has become a world leader in solids reduction and removal for the wastewater industry with its Muffin Monster grinders and Monster Separation Systems. JWC also solves challenging size reduction and processing problems in commercial and industrial applications through its Monster Industrial division. JWC Environmental is headquartered in Santa Ana, California, USA, and has a global network of representatives, distributors and regional service centers to provide customer support.

For more information, visit JWC Environmental at www.jwce.com.

JWC Environmental®
A Sulzer Brand

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Santa Ana, CA 92705 USA
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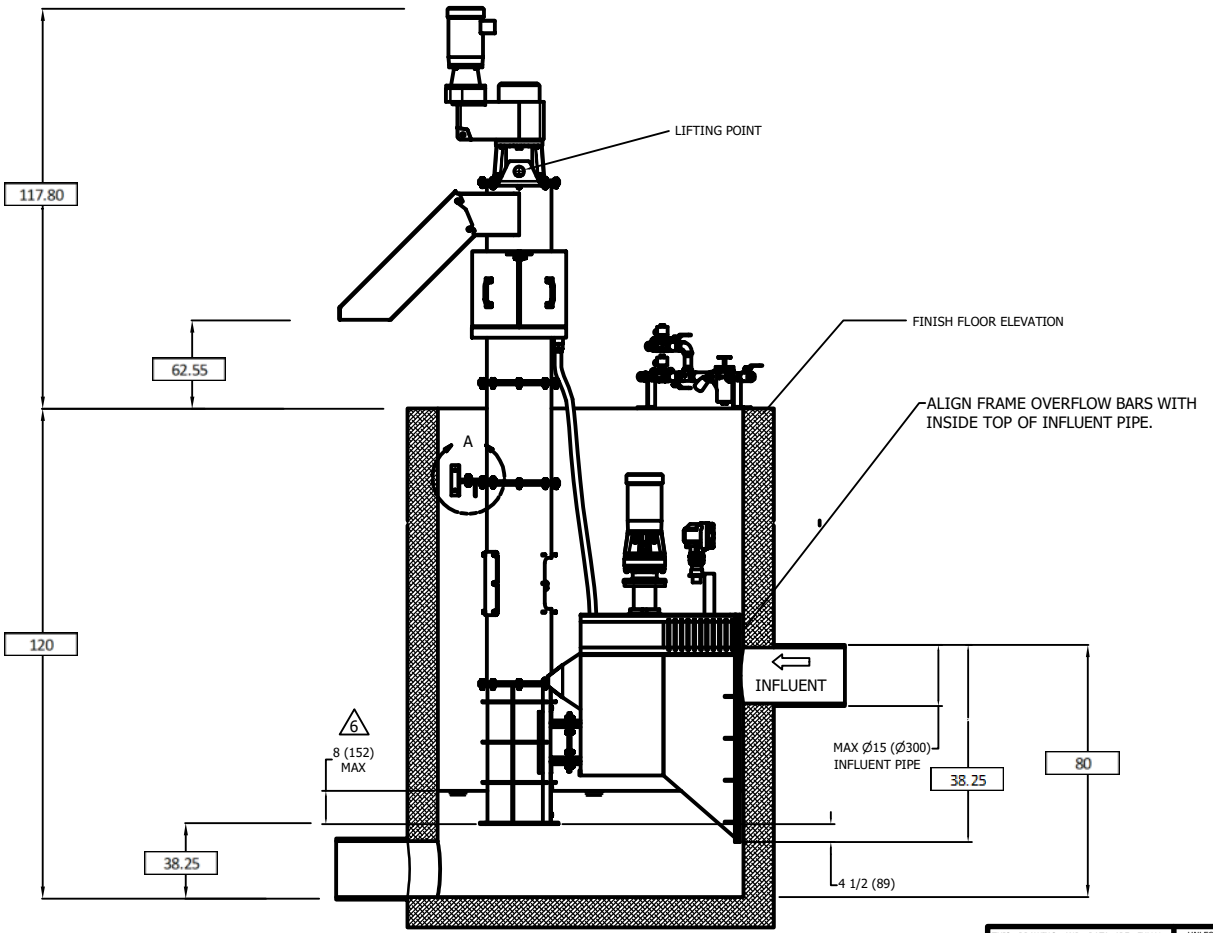
fax: **949.833.8858**
email: **jwce@jwce.com**

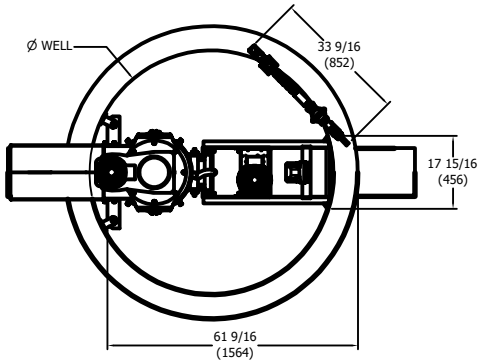
MUFFIN MONSTER® MONSTER INDUSTRIAL IPEC®

www.jwce.com

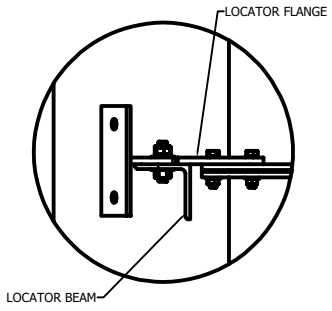
(VertAugerMonster-4pg-NA-JWCE-0621)

REVISION HISTORY								
ZONE	REV	DESCRIPTION	ECO NO.	DATE	CHK	PE	MFG	QC
ALL	A	INITIAL RELEASE	AM-0484	08/13/12	CG	RS	NA	NA
ALL	B	NOTES UPDATED. ITEM 7 PART NO. TABLE UPDATED. BOM ITEM 7 WAS AVA1313-000X IS E15-022-00X, ITEM 8 WAS 30113 IS 30102, ITEM 9 WAS 30121 IS 30140, ITEM 10 WAS 30112 IS 30141.	AM-0498	09/28/12				





Top View



DETAIL A
7

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
FRACTIONS ± | DECIMALS .XX ± .XXX± | ANGLES ± °

MATERIAL: NOTED

FINISH:

DO NOT SCALE DRAWING

CONTRACT NO.

APPROVALS	DATE
DRAWN M.EMAN	08/13/12
CHECKED C.GLAUBERMAN	9/12/12
ENGR. N/A	
Q.C. N/A	

JWC ENVIRONMENTAL
290 PAULARINO AVE, COSTA MESA, CA 92626

GENERAL ARRANGEMENT
ROUND WALL, 285 MM DIAMETER AUGER
WALLMOUNT VERTICAL AUGER MONSTER-AGV

SIZE D | DRAWING NO. AGV0031-0285-R-GA | REV B

SCALE: 1/15 | CAD MODEL: AGV0031-0285-R-GA | SHEET 1 OF 1

REV A, ECN000026, 03/02/21, CG

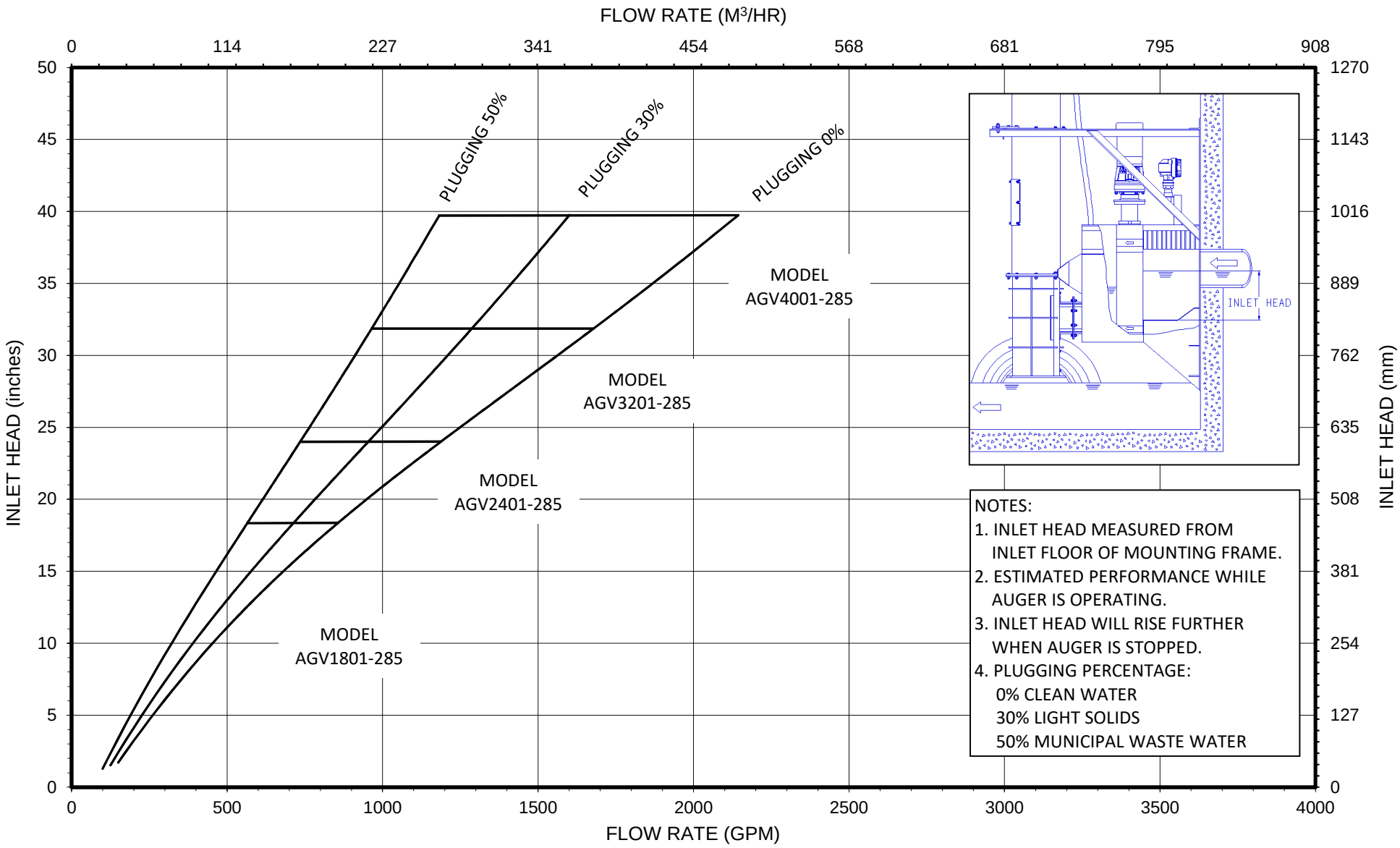
JWC Environmental
A Sulzer Brand

UNRESTRICTED DISCHARGE

MODEL AGV-285 WALL MOUNTED

Ø6MM SCREEN PERFORATIONS

8-13-20

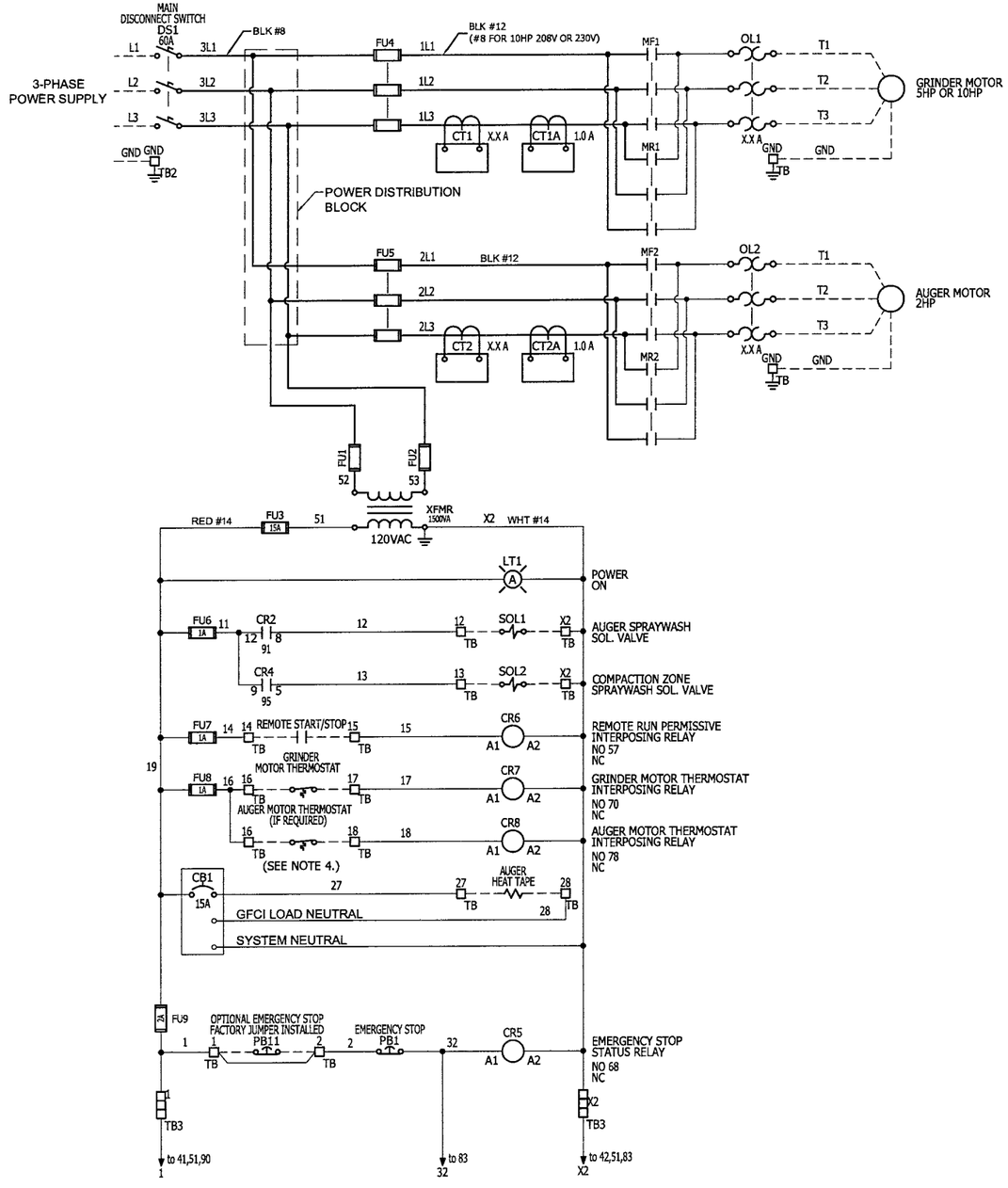


NOTES:
1. INLET HEAD MEASURED FROM INLET FLOOR OF MOUNTING FRAME.
2. ESTIMATED PERFORMANCE WHILE AUGER IS OPERATING.
3. INLET HEAD WILL RISE FURTHER WHEN AUGER IS STOPPED.
4. PLUGGING PERCENTAGE:
   0% CLEAN WATER
   30% LIGHT SOLIDS
   50% MUNICIPAL WASTE WATER

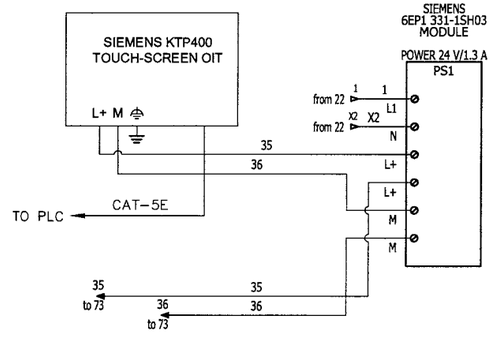
FC-AGV0000-XE-285-90D-06P-UD-DOM-A

DRAWING NO. **PC2252SV-011**

REVISION HISTORY							
ZONE	REV	DESCRIPTION	ECN NO	DATE	CHK	PE	MFG	QC
ALL	A	INITIAL RELEASE		11-11-13	TCS	SDT		



FUSE SELECTION TABLE BASED ON VOLTAGE AND HORSE-POWER					
VOLTAGE	TAG	MOTOR HORSE-POWER			
		2HP	5HP	10HP	FUSE TYPE
208V	FU1-FU2	17A			CLASS CC TIME-DELAY
	FU4	-	30A	50A	CLASS J TIME-DELAY
	FU5	15A	-	-	CLASS J TIME-DELAY
230V	FU1-FU2	15A			CLASS CC TIME-DELAY
	FU4	-	30A	50A	CLASS J TIME-DELAY
	FU5	15A	-	-	
460V	FU1-FU2	8A			CLASS CC TIME-DELAY
	FU4	-	15A	25A	CLASS J TIME-DELAY
	FU5	6A	-	-	CLASS J TIME-DELAY
575V	FU1-FU2	6A			CLASS CC TIME-DELAY
	FU4	-	15A	20A	CLASS J TIME-DELAY
	FU5	6A	-	-	CLASS J TIME-DELAY



CONTROLLED

NOTES: UNLESS OTHERWISE SPECIFIED.
1. PROGRAM NUMBER: PC2252SV-000.
2. CALIBRATED AMPERAGE X.X A TO BE DETERMINED AFTER THE MOTORS HAVE BEEN SELECTED.
3. SHORT CIRCUIT CURRENT RATING (SCCR) FOR THE CONTROLLER IS 100kA.
4. A WIRE JUMPER IS REQUIRED, IF THE MOTOR IS NOT EQUIPPED WITH THE THERMOSTAT.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
FRACTIONS ± 1/32 DECIMALS .XX ± .06 .XXX± .005 ANGLES ± 1/2°
MATERIAL
FINISH 250 (CAST) 125 (MACHINED) UNLESS OTHERWISE SPECIFIED
DO NOT SCALE DRAWING

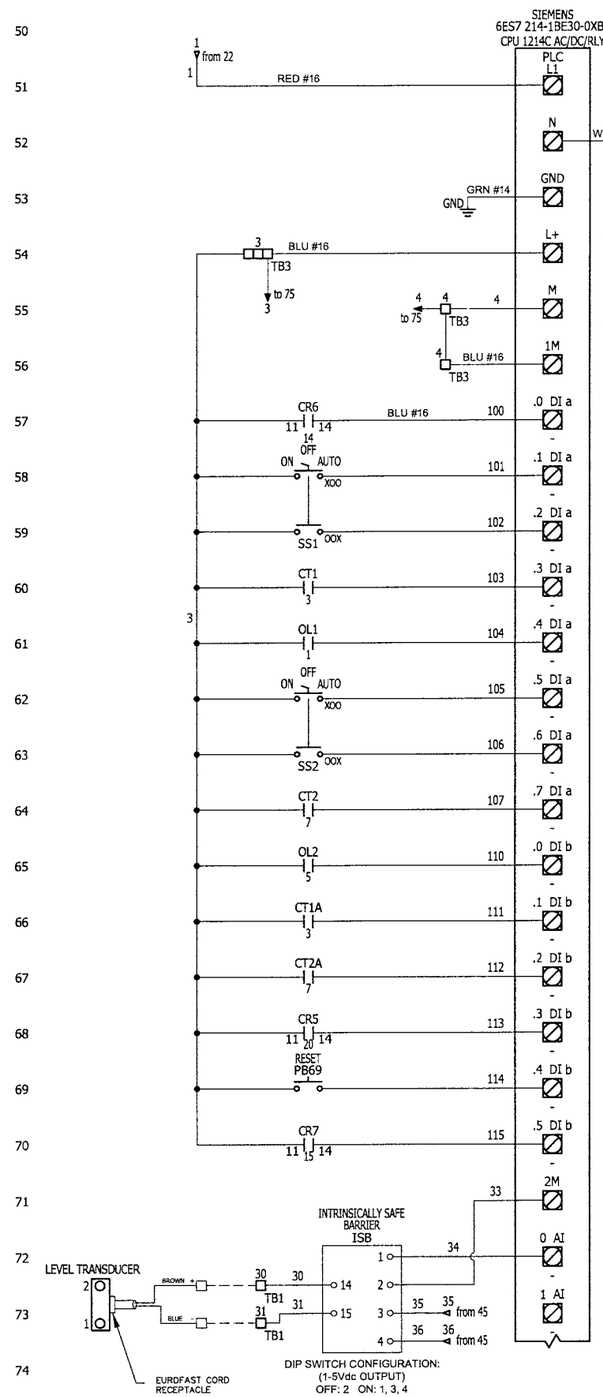
APPROVALS	DATE
DRAWN TRAN, T.	11-11-13
CHECKED	11-14-13
MANUF.	
Q.C.	

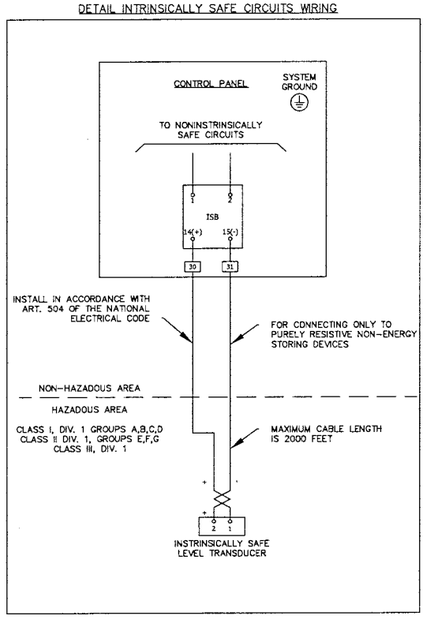
JWC ENVIRONMENTAL
290 PAULARINO AVE, COSTA MESA, CA 92626

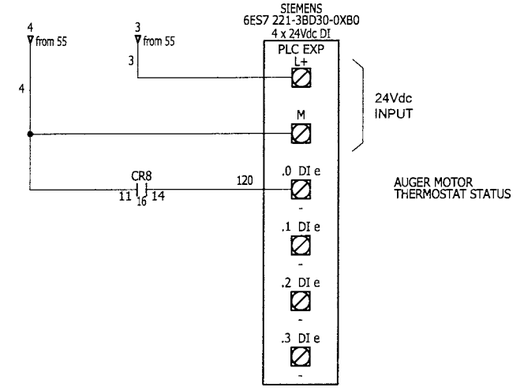
PC2252SV MOTOR CONTROLLER
NEMA 4X STAINLESS STEEL - DUAL MOTORS VERTICAL AUGER MONSTER

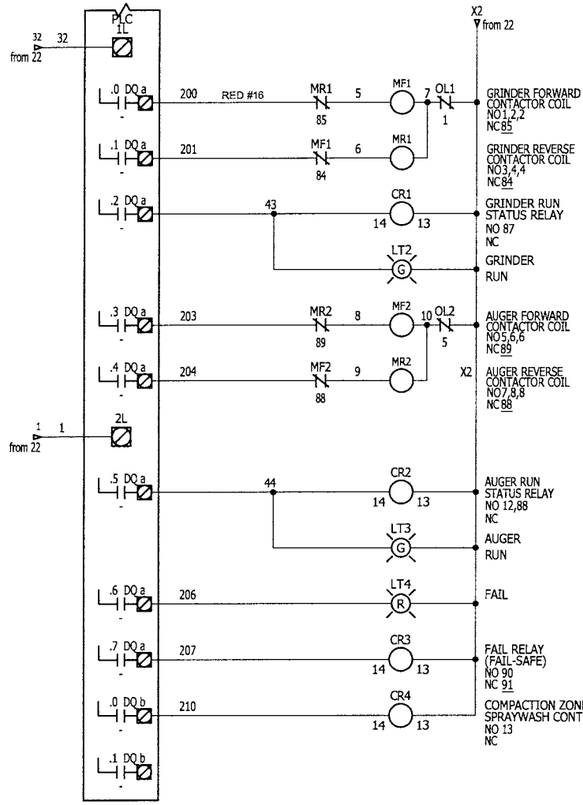
SIZE	DRAWING NO.	REV
D	PC2252SV-011	A
SCALE:		1 OF 4

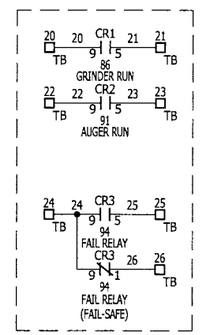
DRAWING NO. **PC2252SV-011**











#16 ORANGE WIRE CIRCUITS.

*** CAUTION ***
OPEN MAIN DISCONNECT SWITCH WILL NOT DE-ENERGIZE ORANGE COLOR WIRE CIRCUITS.

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VERTICAL AUGER MONSTER

SIZE	DRAWING NO.	REV
D	PC2252SV-011	A
SCALE: NTS		2 OF 4

Sequence of Operation:

Ultrasonic Probe Configuration
- establish a Probe Empty Distance value, programmable via the OIT; value shall be a minimum of 5 characters with 2 decimal points; parameter shall be programmed with a value that represents the distance in feet from the face of the probe to the bottom of the 'channel' (zero level); value shall be used for scaling the 4mA signal received from the ultrasonic probe
- establish a Span value, programmable via the OIT; value shall be a minimum of 5 characters with 2 decimal points; parameter shall be programmed with a value that represents the highest level in feet to be measured by the probe; value shall not exceed the Probe Empty Distance minus the probe deadband (min. 10" or 0.83'); value shall be used for scaling the 20mA signal received from the probe

Grinder selector switch, ON
- energize grinder motor forward contactor, Grinder Run indicator lamp & Grinder Run relay

Grinder selector switch, OFF
- de-energize grinder motor contactors, Grinder Run indicator lamp & Grinder Run relay

Grinder selector switch, AUTO
- when Remote Run Permissive input to PLC is On and probe level exceeds Grinder Start Level setpoint; energize grinder motor forward contactor; energize the Grinder Run indicator lamp & Grinder Run relay; de-energize the grinder motor contactors when the probe level falls below the Grinder Stop Level setpoint

Auger selector switch, ON
- energize auger motor forward contactor, Auger Run indicator lamp & Auger Run relay; energize auger spray wash solenoid valve

Auger selector switch, OFF
- de-energize motor contactors, Auger Run indicator lamp, Auger Run relay & auger spray wash solenoid valve

Auger selector switch, AUTO
- establish "Run Cycle" consisting of five time elements: Forward (F), Stop (S1), Reverse (R), Stop (S2), Final Forward (FF), where each time element is programmable via OIT; values: 0-999 s; default run cycle: 60-0-0-0-0; if R<>0, ensure S1 and S2 are a minimum of 3 seconds
- when the Grinder selector switch is in the ON position or the AUTO position & the Remote Run input to the PLC is ON, AND the probe level exceeds the Auger Start Level, energize the auger motor contactors in accordance with the run cycle parameters; energize the Auger Run indicator lamp, Auger Run relay & auger spray wash solenoid valve for the duration of the run cycle
- if the probe level continues to exceed the Auger Start Level just prior to the beginning of the FF time element, revert back to the beginning of the Run Cycle and continue running through the first 4 time elements until probe level falls below the setpoint
- establish a Compaction Zone Spray Time value (0-999s; default: 30 seconds) and a Compaction Zone Spray Delay value (0-99 min.; default: 2 min.)
- initiate a counter when the run cycle begins; when the counter exceeds the Compaction Zone Spray Delay, energize the compaction zone wash water valve for the Compaction Zone Spray Time value
- establish a Level Probe Backup Timer (0-999 min.; default: 360 min.), programmable via the OIT
- monitor the period since the last run cycle and initiate a new run cycle when that period exceeds the Level Probe Backup Timer setpoint

Emergency Stop pushbutton
- establish a fail-safe emergency stop circuit that de-energizes the PLC outputs controlling the motor contactors, indicator lamps and relays
- ensure the system returns to its previous operating state in the event of a power failure

Reset pushbutton
- re-establish the Emergency Stop circuit in the event the Emergency Stop pushbutton is depressed
- acknowledge any alarm conditions that may exist

Grinder Reverse Jog soft switch
- de-energize the grinder motor forward contactor (if applicable) and energize the grinder motor reverse contactor while the pushbutton is depressed; this feature is only available when the Grinder selector switch is in either the ON or REMOTE position

Auger Reverse Jog soft switch
- de-energize the auger motor forward contactor (if applicable) and energize the auger motor reverse contactor while the pushbutton is depressed; this feature is only available when the Auger selector switch is in either the ON or LEVEL position

High Level Condition
- establish a High Level Alarm setpoint, programmable via the OIT; value shall be a minimum of 5 characters with 2 decimal places representing a measure in feet; value shall not exceed the Span value
- establish a High Level Alarm Delay setpoint, 0-999 seconds; default 60 seconds
- when upstream water level reaches the high level setpoint, energize the auger in forward only; return to normal operation when water level drops below high level setpoint
- if water level remains above high level setpoint for a value that exceeds the High Level Alarm Delay; latch the High Level Alarm
- if water level drops below high level setpoint once High Level Alarm is latched, return to normal operation while maintaining latch on High Level Alarm

Ultrasonic Probe Loss of Signal
- initiate a continuous run cycles on loss of signal from the ultrasonic probe

Grinder Jam Clearing Sequence
- when the current sensor detects a jam, the motor forward contactor will be momentarily de-energized
- the motor reverse contactor will be energized for a pre-determined period of time and de-energized
- the motor forward contactor will be re-energized
- this sequence is repeated, as required, to clear the jam for a total of no more than 3 reversals in a 30-second period
- if the jam is not cleared in accordance with this sequence, an alarm condition is set
- in order to avoid nuisance trips, the inrush current is ignored for 2.5 seconds when the motor is energized

Auger Jam Clearing Sequence
- when the current sensor detects a jam, the motor forward contactor will be momentarily de-energized
- the motor reverse contactor will be energized for a pre-determined period of time and de-energized
- the motor forward contactor will be re-energized
- this sequence is repeated, as required, to clear the jam for a total of no more than 2 reversals in a 30-second period
- if the jam is not cleared in accordance with this sequence, an alarm condition is set
- in order to avoid nuisance trips, the inrush current is ignored for 2.5 seconds when the motor is energized

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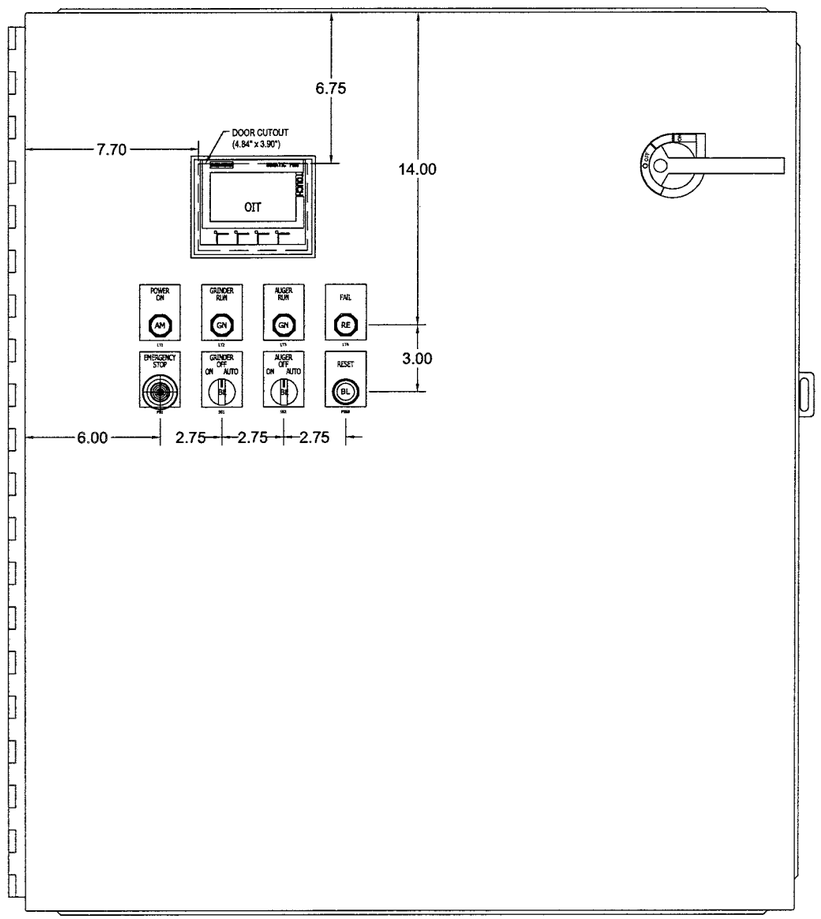
PC2252SV MOTOR CONTROLLER
NEMA 4X STAINLESS STEEL - DUAL MOTORS
VERTICAL AUGER MONSTER

SIZE	DRAWING NO.	REV
D	PC2252SV-011	A

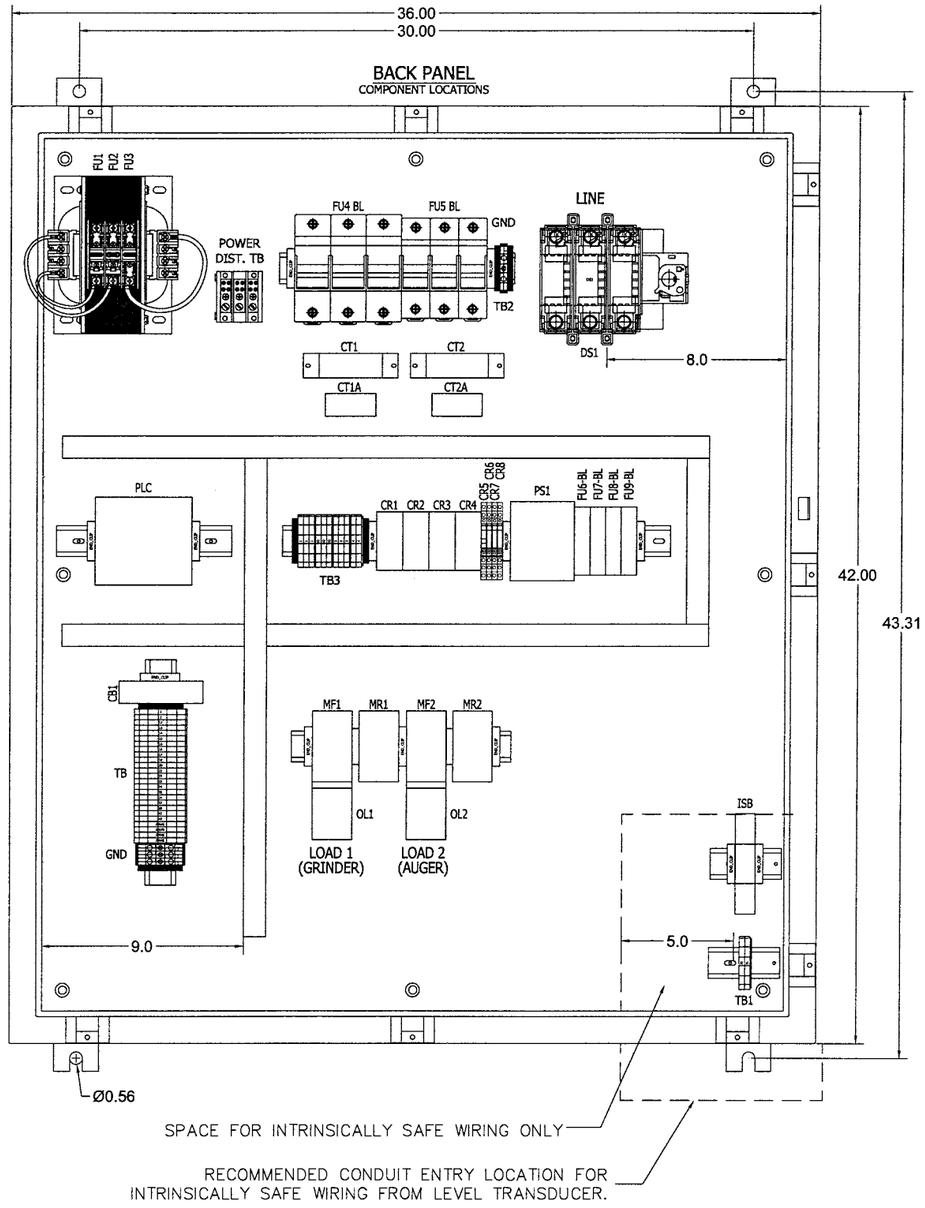
SCALE: NTS

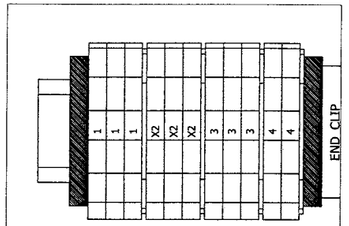
DRAWING NO. **PC2252SV-011**

FRONT PANEL
COMPONENT LOCATIONS

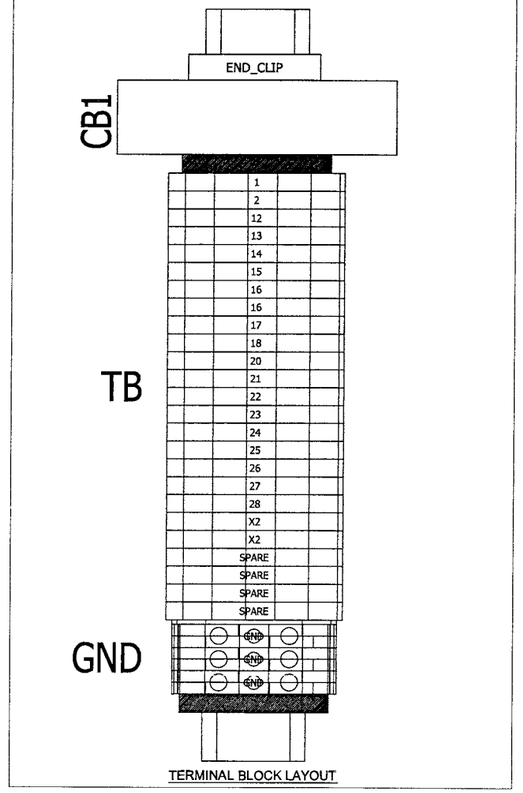


BACK PANEL
COMPONENT LOCATIONS





TB3 IS FOR INTERNAL WIRING USE ONLY



TERMINAL BLOCK LAYOUT

ASSEMBLY NOTE:
- USE SELF-TAPPING SCREWS 8-32 FOR MOUNTING OF COMPONENTS.

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VERTICAL AUGER MONSTER

SIZE	DRAWING NO.	REV
D	PC2252SV-011	A
SCALE: NTS		4 OF 4

JWC Environmental®
A Sulzer Brand

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jwce@jwce.com

VERTICAL AUGER MONSTER® BUDGET DESIGN INFORMATION

DATE: 9/20/2023

PROJECT: Jemez Springs, NM - WWTP Improvements

TO: Misco Water - Nick Lucas

Thank you for choosing JWC's equipment. Enclosed you will find a specification and drawing based on the design parameters listed below. Please let us know if any of the information below changes.

Number of units:	1
Model:	AGV1801-285
Flow:	42 gpm (2.7 l/s)
Tank diameter:	60 inches (1524.0mm)
Perforations:	6mm
Weight:	4707 lbs (2135 kg)

5HP XPNV Immersible Grinder Motor

2HP TEFC Auger Motor

PC2252SV Motor Controller in a NEMA 4X 304SS Enclosure

Transport Segment, 2500mm

BUDGET PRICE PER UNIT	**$169,000**

(shipping & handling and one startup service included)

*Optional adder; discharge bagger	$1,400
*Optional adder; weather protection (includes heat trace and jacketing)	$8,000

Not to be used for construction

Please contact JWC if you have any questions.