U.S. Department of Transportation
Pipeline and Hazardous Materials Safety Administration

Natural Gas Distribution Infrastructure Safety and Modernization Grant Program
City of Trinidad, CO
Tier 2 Site Specific Environmental Assessment
NGDISM-FY22-EA-2023-11

PHMSA Approval:

SHELBY MATTHEW FULLER

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Overview:

The purpose of this Tier 2 Site Specific Environmental Assessment (Tier 2) is to (1) document the proposed action (the Project) and the need for the action (2) identify existing conditions; (3) assess the social, economic, and environmental effects using appropriate tools and agency coordination to comply with local, state, and federal environmental laws, regulations, and ordinances; to (4) document applicable mitigation commitments that would avoid, minimize, or mitigate potential effects; and (5) seek comments from the public. This Tier 2 analysis informs PHMSA's assessment as to whether the Project is consistent with the impacts described in the Tier 1 Nationwide Environmental Assessment for the Natural Gas Distribution Infrastructure Safety and Modernization Grant Program.[1]

As part of this Tier 2, PHMSA is soliciting public comments through a public comment period. This Tier 2 is available on PHMSA's website where comments can be submitted to the contact noted below. PHMSA will accept public comments for 30 days on this Tier 2. PHMSA will consider comments received and incorporate them in the decision-making process. Consultation with appropriate agencies on related processes, regulations, and permits is ongoing. Please submit all comments to: PHMSABILGrantNEPAComments@dot.gov and reference NGDISM-FY22-EA-2023-11 in your response.

At the conclusion of the EA process, PHMSA will either issue a "Finding of No Significant Impact," further supplement this EA with additional analysis, mitigation measures or prepare an Environmental Impact Statement.

I. Project Description/Proposed Action

Project Title	City of Trinidad
Project Location	Trinidad, Las Animas County, Colorado

Project Description/Proposed Action:

The City of Trinidad (Trinidad), located in Las Animas County, is proposing to replace aging and failing steel pipeline with polyethylene (PE) pipe, which would enhance safety, improve operations, and reduce methane emissions of natural gas of Trinidad's natural gas transmission system, including pipeline modernization and interim safety enhancement measures. Trinidad's proposed Nona Alley Pipeline Project consists of replacing 450 linear feet of 4" uncoated steel pipe located in a residential area. This section of pipe would be replaced with 4" PE pipe and includes the replacement of two (2) control valves and the addition of one (1) valve. The new pipeline would be installed by cut and cover (trenching) methods, immediately adjacent to the existing pipeline. A single trench, approximately trench width of 48" wide and a depth of 42"deep, would be excavated to accommodate installation of the new PE pipe and removal of the existing bare steel pipeline.

The Tier 1 EA described that the majority of site-specific projects would utilize the insertion method of pipe replacement. As described in this document, Trinidad would utilize an open trench method, which generally involves greater soil disturbance and use of heavy equipment and related impacts than the insertion method. Seven (7) service taps would be replaced with new 1" PE service taps and excess flow valves. Once the new pipeline is active, existing gas would be vented and the bare steel pipeline would be removed. No new right-of-way (ROW) or easements are required to replace the 450 feet of pipeline.

[1] https://www.federalregister.gov/documents/2022/11/09/2022-24378/pipeline-safety-notice-of-availability-of-the-tier-1-nationwide-environmental-assessment-for-the

No Action:

The No Action alternative, as required under NEPA, serves as a baseline, and is used to compare impacts resulting from the Proposed Action. Under the No Action alternative, PHMSA would not fund this pipeline replacement project. Additionally, PHMSA would not be able to reduce the inventory of methane leaks and reduce safety risks by replacing pipe prone to leakage. Under this alternative, the City of Trinidad would continue to use bare steel and other leak prone pipeline material and conduct repairs or replacements in the future using non-federal sources of funding, and potentially on an emergency basis, when a pipeline fails. Impacts and benefits associated with replacing the leak prone pipeline within the City of Trinidad with updated material would not be seen in the near term. The safety risks and methane leaks would persist. The replacement pipeline activities would either not be taken or they would be undertaken at a later, uncertain date. Even if pipeline replacement were to happen at some point in the future, environmental mitigation measures during such a replacement would be unknown. Furthermore, existing economic losses, and increased risk associated with prolonged gas leaks would continue.

Need for the Project:

This project is needed to address corrosion on a 70-year-old bare steel pipeline, vulnerable to leaks. Repair of the pipeline should a failure occur would be challenging based on the condition of the pipeline. The overall needs addressed by this project would include (1) improving upon the safe delivery of energy by reducing the likelihood of incidents, as well as methane leaks; (2) avoiding economic losses caused by pipeline failures; and (3) protecting our environment and reducing climate impacts by remediating aged and failing pipelines and pipe prone to leakage.

Description of the Environmental Setting of the Project Area:

The project would be conducted within the existing Trinidad ROW, in a residential area south of the city center. The existing pipeline is within a gravel alleyway, running perpendicular to paved residential roads. The alleyway abuts grassy areas that lead to the yards of adjacent residential homes.

II. Resource Review

Air Quality and Greenhouse Gases (GHG)	
Question	**Information and Justification**
Is the project located in an area designated by the EPA as non-attainment or maintenance status for one or more of the National Ambient Air Quality Standards (NAAQS)?	No, based on a review of the EPA Greenbook.[2]
Will the construction activities produce emissions that exceed de minimis thresholds (tons per year) described in the initial Tier 2 EA worksheet?	No.
Will mitigation measures be used to capture blowdown[3]?	No.
Does the system have the capability to reduce pressure on the segments to be replaced? If yes, what is the lowest psi your system can reach prior to venting?	Yes, the system operates at 20 pounds per square inch (PSI).

[2] https://www.epa.gov/green-book/green-book-national-area-and-county-level-multi-pollutant-information

[3] Blowdown refers to the venting of natural gas in current facilities, in order to begin rehabilitation, repair, or replacement activities.

Will project proponent commit to reducing pressure on your line to this psi prior to venting? Please calculate venting emissions based on this commitment and also provide comparison figure of venting emissions volume without pressure reduction/drawdown using calculation methods identified in the initial Tier 2 EA worksheet.	The existing system operates at 20 PSI. Based on the size of the existing pipe, 0.09 thousand cubic feet (MCF) or 3 kg of methane would be vented during construction.
Estimate the current leak rate per mile based on the type of pipeline material. Based on mileage of replacement and new pipeline material, estimate the total reduction of methane.	The current leak rate is 191 kg/yr. Replacement would result in a new leak rate of 3 kg/yr or a reduction of 3,764 kg over a 20-year timeframe.[4]

Conclusion:

The project area is in City of Trinidad in Las Animas County, Colorado which is designated by the EPA as in attainment for all National Ambient Air Quality Standards (NAAQS). The existing pipeline within the project area consists of leak prone bare steel natural gas mains that were installed in 1952.

No Action:

Under the No Action alternative, existing and planned pipeline activities, including construction and maintenance activities, would continue unchanged. The project proponent would continue to use bare steel pipe material. Normal maintenance activities would occur, and pipes would be replaced under failed circumstances. The total methane emissions for the pipelines within the project area were extrapolated over 20 years to represent the continuation of methane release under the No Action alternative. Under the No Action alternative, PHMSA estimates that 191 kg of methane would be released each year from the existing pipelines within the project area. This amounts to 3,820 kg of methane over a 20-year time frame. See Appendix B, Methane Calculations, for the methane leak rate calculations.

Proposed Action:

The Proposed Action alternative consists of replacing 450 linear feet of bare steel pipe which would result in minor air quality impacts associated with construction activities, including the intentional venting of methane contained in the existing pipelines prior to replacement. Pipeline blowdowns are typically necessary to ensure that construction and maintenance work can be conducted safely on depressurized natural gas facilities and pipelines. Venting methane is required when service is switched from the existing line to the newly constructed line, but the volume of vented gas can depend on the ability to reduce pressure on the pipe segment or other mitigation actions. Therefore, some methane would be vented into the atmosphere during construction. Based on the existing operating pressure of 20 PSI, and an average inside pipe diameter of 4 inches, PHMSA estimates 0.09 MCF of methane (or 3 kg/yr) would be vented into the atmosphere during construction. See Appendix B for the methane blowdown calculations.

As described in the Tier 1 EA, methane leaks from natural gas distribution pipelines increase with age and are considerably higher for cast iron and steel pipelines, as compared with plastic. Replacing leak prone pipe with newer, more durable materials would reduce leaks and methane emissions. Based on the current leak rate of the existing pipe within the project area, this project would reduce overall emissions by 184 kg in the first year

[4] Leak rates are based on Pre-1990 Installation emission factors found in *Table 1 Average methane emission factors for natural gas pipelines (adopted from EPA GHG Inventory, Annex 3.6, Table 3.62)* in the November 9, 2022, PHMSA: Natural Gas Distribution Infrastructure Safety and Modernization Grant Program Programmatic Environmental Assessment, Tier 1 Nationwide Environmental Analysis.

(when considering the methane that would be released from blowdown that would occur during construction) and would reduce 188 kg of methane per year thereafter. With a life expectancy of approximately 20 years, the total reduction in methane emissions resulting from the conversion to plastic pipeline would be approximately 3,764 kg (over the 20-year span post construction). Therefore, it is PHMSA's assessment that the proposed project would provide a net benefit to air quality from the overall reduction of greenhouse gas emissions and that no indirect or cumulative impacts would result from the Proposed Action.

Mitigation Measures:

The City of Trinidad shall implement the following mitigation measures:

- Make efficient use of on-road and non-road vehicles, by minimizing speeds and vehicles;
- Minimize excavation to the greatest extent practical;
- Use cleaner, newer, non-road equipment as practicable;
- Ensure all vehicles and equipment are in proper operating condition;
- Meet EPA exhaust emission standards (40 CFR Parts 85, 86, and 89) for all on and off-road engines;
- Cover open-bodied trucks while transporting materials;
- Conduct watering, or use of other approved dust suppressants, at construction sites and on unpaved roadways, as necessary;
- Minimize the area of soil disturbance to those necessary for construction; and
- Minimize construction site traffic by the use of offsite parking and shuttle buses, as necessary.

Water Resources	
Question	**Information and Justification**
Are there water resources within the project area, such as wetlands, streams, rivers, or floodplains? If so, will the project temporarily or permanently impact wetlands or waterways?	No, according to U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) and Federal Emergency Management Agency (FEMA) National Flood Hazard Layer FIRMette maps.
Under the Clean Water Act, is a Section 401 State certification potentially required? If yes, describe anticipated permit and how project proponent will ensure permit compliance.	No.
Under the Clean Water Act, is a USACE Section 404 Permit required for the discharge of dredge and fill material? If yes, describe anticipated permit and how project proponent will ensure permit compliance.	No.
Under the Clean Water Act, is an EPA or State Section 402 permit required for the discharge of pollutants into the waters of the United States? Is a Stormwater Pollution Prevention Plan (SWPPP) required?	No.
Will work activities take place within a FEMA designated floodplain? If so, describe any permanent or temporary impacts and the required coordination efforts with state or local floodplain regulatory agencies.	No.
Will the proposed project activities potentially occur	No.

within a coastal zone[5] or affect any coastal use or natural resource of the coastal zone, requiring a Consistency Determination and Certification?	

Conclusion:

PHMSA reviewed USFWS NWI, FEMA National Flood Hazard Layer FIRMette maps, and water resources on NEPAssist[6] maps to assist in identifying aquatic features including wetlands, streams, and other water resources in or near the project area. Based on a review of the NWI maps, NRCS soils maps and reports, and topographic maps, no water resources have been identified within the proposed project area.

PHMSA also reviewed FEMA's National Flood Hazard Layer to identify any special flood hazard areas (SFHAs) potentially impacted by the project. The FIRMette map indicates the project includes areas designated as Zone X. Areas designated as Zone X are outside of any designated special flood hazard areas. Additionally, the project is not located within a Coastal Zone. See Appendix C, Water Resources.

No Action:

Under the No Action alternative, the existing pipeline would remain in the current location and normal maintenance activities would continue.

Proposed Action:

Based on a review of the NWI maps, FEMA maps and aerial photographs, no water resources have been identified within the proposed project area. Therefore, it is PHMSA's assessment that there would be no adverse impacts to water resources.

Mitigation Measures:

There are no water resources identified in the project area and therefore, no mitigative measures are necessary.

Groundwater and Hazardous Materials/Waste	
Question	**Information and Justification**
Does the project have potential to encounter and impact groundwater? If yes, describe potential impacts from construction activities.	No, based on review of the NRCS soils survey report, the project does not have the potential to impact groundwater.
Will the project require boring or directional drilling that may require pits containing mud and inadvertent return fluids? If yes, describe measures that will be taken during construction activities to prevent impacts to groundwater resources.	No.
Will the project potentially involve a site(s) contaminated by hazardous waste? Is there any indication that the pipeline was ever used to convey coal gas? If yes, PHMSA will work with the project	No, based on a review of the EPA's EnviroAtlas[7] site, the project would not involve contaminated hazardous waste.

[5] The term "coastal zone" means the coastal waters (including the lands therein and thereunder) and the adjacent shorelands (including the waters therein and thereunder), strongly influenced by each other and in proximity to the shorelines of the several coastal states, and includes islands, transitional and intertidal areas, salt marshes, wetlands, and beaches.)

[6] https://www.epa.gov/nepa/nepassist

proponent for required studies.	
Does the project have the potential to encounter or disturb lead pipes or asbestos?	No.

Conclusion:

PHMSA reviewed EPA's NEPAssist and EnviroAtlas websites to identify any Brownfields properties, hazardous waste sites, and superfund sites. There were no superfund properties or brownfield sites identified. PHMSA obtained a custom soil report for the project area from the USDA, NRCS's web soil survey which indicates that the project area is comprised of well-drained soils where the depth to the water table is found somewhere greater than 80 inches.

No Action:

Under the No Action alternative, the bare steel pipes would remain in their current location and ongoing and routine maintenance activities would occur. Pipes would be replaced under failed circumstances. While there are no adverse impacts to groundwater anticipated by the No Action alternative, increased methane emissions are likely to occur if the leak prone pipes remain (EPA, PRO Fact Sheet No. 402[8]) and the risk of failure is higher among these types of pipes. Therefore, under the no action alternative, PHMSA anticipates an increased risk for the release of methane, both as leaks and during a pipeline failure, which could then result in ground disturbances from construction activities, potentially impacting groundwater.

Proposed Action:

Trinidad proposes to replace 450 linear feet of existing bare steel pipeline in the City of Trinidad, Colorado. According to NRCS soils survey information, based on the soil types found in the project area, the water table is found somewhere greater than 80 inches, and a single trench would be installed at approximately 4 feet wide and deep. A single trench, approximately 48" wide and a depth of 42" deep, would be excavated to accommodate installation of the new PE pipe and removal of the existing bare steel pipeline. Therefore, PHMSA's assessment is that there would be no adverse impacts to groundwater associated with the project as the trenching would not be deep enough to intercept groundwater. Additionally, PHMSA has not identified any indirect or cumulative effects to groundwater or hazardous materials.

Mitigation Measures:

The City of Trinidad shall restore all impacted areas to pre-construction condition.

Soils	
Will all bare soils be stabilized using methods identified in the initial Tier 2 EA worksheet? Will additional measures be required?	Yes, all impacted soil would be restored to preconstruction contours and conditions.
Will the project require unique impacts related to soils?	No.

Conclusion:

PHMSA obtained a custom soil report for the project area from the USDA, NRCS's web soil survey which

[8] Insert Gas Main Flexible Liners at https://www.epa.gov/sites/default/files/2016-06/documents/insertgasmainflexibleliners.pdf#:~:text=Methane%20emissions%20reductions%20come%20from%20lower%20leakage%20rates,pipe%20and%20external%20corrosion%20in%20unprotected%20steel%20piping.

indicates that the project area is comprised of Baca silt loam (BaC) and Lorencito-Saracillo-Trujilo (LST) soil complex. The estimated depth to the water table is greater than 80 inches. [9] See Appendix C, Water Resources, which includes a soils map.

No Action:

Under the No Action alternative, the bare steel pipes would remain in the current location and soils would remain in their current state and condition. Normal maintenance activities would occur, and pipes would be replaced under failed circumstances. Some soil disturbance would occur during emergency repairs and the affected areas would be restored upon completion. Under either scenario, no adverse impacts to soils would be anticipated under the No Action alternative.

Proposed Action:

Trinidad would replace 450 linear feet of existing bare steel pipeline at approximately 36 inches deep and within the existing ROW. The project area is comprised of well-drained soils and the estimated depth to the water table is greater than 80 inches. Trinidad would utilize best management practices during construction and all impacted areas would be restored to pre-construction conditions. Therefore, PHMSA's assessment is that there would be no adverse impacts associated with soils resulting from the Proposed Action alternative. Additionally, there are no indirect or cumulative impacts anticipated as Trinidad would restore all areas to pre-construction conditions.

Mitigation Measures:

The City of Trinidad shall utilize best management practices, as appropriate, to control sediment and erosion during construction which may include silt fencing, check dams, and promptly covering all bare areas. All impacted areas shall be restored to pre-construction conditions.

Biological Resources	
Question	**Information and Justification**
Based on review of IPaC and NOAA Fisheries database, are there any federally threatened or endangered species and/or critical habitat potentially occurring within the geographic range of the project area? If no, no further analysis is required.	Yes, based on review of the USFWS's Information for Planning and Consultation (IPaC) and National Oceanic and Atmospheric Association (NOAA) Fisheries website.[10] Additionally, the Colorado Parks and Wildlife Department website[11], was reviewed to identify potential state listed species.
Will the project impact any areas in or adjacent to habitat for Federally listed threatened or endangered species or their critical habitat? If no, provide justification and avoidance measures. If yes, PHMSA will work with the project proponent to conduct necessary consultation with resource agencies.	No.

Conclusion:

The project would take place in Trinidad, Colorado, within current ROW, consisting of a gravel and dirt alleyway and a paved residential intersection. The only areas that contain vegetation are located in residential backyards or buffer areas along the streets. PHMSA requested an official species list through the USFWS's IPaC website.

[9] https://websoilsurvey.nrcs.usda.gov/app/HomePage.htm
[10] https://ipac.ecosphere.fws.gov/ and https://www.fisheries.noaa.gov/species-directory/threatened-endangered
[11] https://cpw.state.co.us/

The following species were identified as potentially occurring within the geographic area of the proposed project: gray wolf (*Canis lupus,* endangered); New Mexico meadow jumping mouse (*Zapus hudsonius leteus,* endangered); and Mexican spotted owl (*Strix occidentalis lucida,* threatened). A candidate species, the monarch butterfly (*Danaus plexippus*) was also identified as a federally listed species within the geographical range of the project. There was no critical habitat identified within the project area. See Appendix D, Biological Resources, for the USFWS IPaC species list.

The Colorado Parks and Wildlife Department website was reviewed to assist in identifying potential state protected species. Several state listed threatened and endangered species were identified that were not also included on the USFWS IPaC species list. The following state threatened and/or endangered species were identified as potentially occurring within the proposed project area: boreal toad (Bufo boreas boreas), burrowing owl (*Athene cunicularia*), least tern (Sterna antillarum), lesser prairie chicken (Tympanuchus pallidicinctus), plains sharp-tailed grouse (Tympanuchus phasianellus jamesii), piping plover (Charadrius melodus circumcinctus), southwestern willow flycatcher (Empidonax trailii extimus), whooping crane (Grus americana), black-footed ferret (Mustela nigripes), gray wolf (canis lupis), grizzly bear (Ursus arctos), kit fox (*Vulpes macrotis*), lynx (Lynx canadensis), preble's meadow jumping mouse (Zapus hudsonius preblei), river otter (Lontra canadensis), and wolverine (*Gulo gulu*). A full list of Colorado state protected species can be found in Appendix D, Biological Resources.

No Action:

Under the No Action alternative, existing conditions would remain, and normal maintenance activities would occur. The project area is in an urbanized environment and therefore has very limited biological resources present. Additionally, the project area does not contain suitable habitat for listed species, therefore no impacts to biological resources would occur under the No Action alternative.

Proposed Action:

The project area is in an urbanized, residential environment where the areas of disturbance would be mainly within/under an existing gravel alleyway. Because these areas are within existing ROW that has been previously disturbed, the immediate project area has very limited biological resources present. Additionally, the project area does not contain suitable or critical habitat for federally listed species. Therefore, in accordance with Section 7 of the Endangered Species Act[12] PHMSA's assessment is that the project would have no effect on gray wolf, New Mexico meadow jumping mouse, or the Mexican spotted owl. As a candidate species, the monarch butterfly receives no statutory protection under the ESA. PHMSA's assessment is that the project would have no adverse impacts to state listed species or other biological resources and that there are no indirect or cumulative impacts anticipated as no impacts to habitat or species would occur.

Mitigation Measures:

The City of Trinidad is responsible for abiding by all applicable federal, state, and local regulations

Cultural Resources	
Question	**Information and Justification**
Does the project include any ground disturbing activities, modifications to buildings or structures, or construction or installation of any new aboveground	Yes, the project includes ground disturbing activities; however, the project would not require modifications to buildings or structures.

[12] 50 CFR § 402.02

components?	
Is the project located within a previously identified local, state, or National Register historic district or adjacent to any locally or nationally recognized historic properties? This information can be gathered from the local government and/or State Historic Preservation Office.[13]	No.
Does the project or any part of the project take place on tribal lands or land where a tribal cultural interest may exist?[14]	No.
Are there any nearby properties or resources that either appear to be or are documented to have been constructed more than 45 years ago?[15] Does there appear to be a group of properties of similar age, design, or method of construction? Any designed landscapes such as a park or cemetery? Please provide photographs to show the context of the project area and adjacent properties.	Yes. Residential homes and underground utilities were constructed in the area more than 45 years ago. The seven affected residential homes appear to be similar in age and design, but there are no records to identify methods of construction.
Has the entire area and depth of construction for the project been previously disturbed by the original installation or other activities? If so, provide any documentation of prior ground disturbances.	Yes; however, there is no documentation. Other underground utilities are present in the area and improvements to roads and the alleyway have also occurred.
Will project implementation require removal or disturbance of any stone or brick sidewalk, roadway, or landscape materials or other old or unique features? Please provide photos of the project area that include the roadway and sidewalk materials in the project and staging areas.	Yes. Any disturbances to any of the roadways would be restored to pre-construction conditions upon completion of the project.

Conclusion:

PHMSA must consider the impact of projects for which they provide funding on historic and archeological properties[16] in accordance with Section 106 of the National Historic Preservation Act (Section 106). Pursuant to 36 CFR 800.4(a)(1), the Area of Potential Effects (APE) is defined as the geographic area(s) within which the Undertaking may directly or indirectly affect historic resources. Based on the proposed scope of work, PHMSA has delineated the APE for this Undertaking to encompass the existing ROW where the pipeline replacement will take place, which includes a dirt and gravel alley way and a small portion of Nona Street, as well as the staging area along Nona Street. The APE extends to the depth of proposed ground disturbance of up to 42 inches. See Appendix E, Cultural Resources, for a map of the APE.

No Action:

[13] Many SHPOs have an online system at https://www.nps.gov/subjects/nationalregister/state-historic-preservation-offices.htm that can tell you previously identified historic properties in your project area. The National Register list at https://www.nps.gov/subjects/nationalregister/database-research.htm can also be accessed online.

[14] The SHPO may have information on areas of tribal interest, or a good source is the HUD TDAT website at https://egis.hud.gov/TDAT/.

[15] Local tax and property records or historic maps may indicate dates of construction.

Under the No Action alternative, existing conditions would remain, and normal maintenance activities would occur. These activities could result in ground disturbance that might affect historic resources. However, no federal funding would be applied and therefore Section 106 would not be required.

Proposed Action:

PHMSA staff identified properties based on available information on previously identified historic properties in the APE, including the National Register of Historic Places (NRHP) database and Colorado Inventory of Cultural Resources, historic aerials, and the USDA Web Soil Survey. PHMSA staff also conducted research to determine if there are any previously unidentified properties within the APE that are 45 years of age or older and may be eligible for the NRHP. No NRHP-listed historic properties are within the APE. There are no known archaeological sites in the APE. One archaeological survey and one archeological site (Trinidad Country Club and Golf Course) were identified within a half-mile of the APE. The historic-age golf course site was determined to be not eligible for the NRHP in 2011. Due to the limited scope of work, low potential for encountering intact significant resources, and previous disturbance within the APE, no additional survey is needed. See Appendix E, Cultural Resources for additional information about the APE and the properties identified. PHMSA has determined that there are no historic properties as defined in 36 CFR 800.16(l) within the APE. Therefore, in accordance with 36 CFR Part 800.4(d)(1), PHMSA has determined the Undertaking would result in No Historic Properties Affected.

A letter was sent January 10, 2024, to the Colorado State Historic Preservation Officer (SHPO), federally recognized tribes with a potential interest in the project area, and all consulting parties outlining the Section 106 process, including a description of the undertaking, delineation and justification of the APE, identification of historic properties and an evaluation and proposed finding of no historic properties affected. PHMSA requested comments on the Section 106 process, identification of historic properties, and proposed finding within 30 days of receipt of the letter. See Appendix E, Cultural Resources, for additional information.

Mitigation Measures:

If, during project implementation, a previously undiscovered archeological or cultural resource that is or could reasonably be a historic property is encountered or a previously known historic property will be affected in an unanticipated manner, all project activities in the vicinity of the discovery will cease and the City of Trinidad will immediately notify PHMSA. This may include discovery of cultural features (e.g., foundations, water wells, trash pits, etc.) and/or artifacts (e.g., pottery, stone tools and flakes, animal bones, etc.) or damage to a historic property that was not anticipated. PHMSA will notify the State Historic Preservation Office and participating federally recognized tribes and conduct consultation as appropriate in accordance with 36 CFR § 800.13. Construction in the area of the discovery must not resume until PHMSA provides further direction.

In the event that unmarked human remains are encountered during permitted activities, all work shall halt and the City of Trinidad shall immediately contact PHMSA as well as the proper authorities in accordance with applicable state statutes to determine if the discovery is subject to a criminal investigation, of Native American origin, or associated with a potential archaeological resource. At all times human remains must be treated with the utmost dignity and respect. Human remains and associated artifacts will be left in place and not disturbed. No skeletal remains or materials associated with the remains will be photographed, collected, or removed until PHMSA has conducted the appropriate consultation and developed a plan of action. Project activities shall not resume until PHMSA provides further direction.

All work, material, equipment, and staging to remain within the road's existing right-of-way or utility easement or other staging areas as identified in the environmental documentation. If the scope of work changes in any

way that may alter the effects to historic properties as described herein, the grant recipient must notify PHMSA, and consultation may be reopened under Section 106.

Section 4(f)	
Question	**Information and Justification**
Are there Section 4(f) properties within or immediately adjacent to the project area? If yes, provide a list of properties or as an attachment.	No.
Will any construction activities occur within the property boundaries of a Section 4(f) property? If so, please detail these activities and indicate if these are temporary or permanent uses of the Section 4(f) property. Further coordination with PHMSA is required for all projects that might impact a Section 4(f) property.	No.
Conclusion: Section 4(f) of the US Department of Transportation (USDOT) Act of 1966 as amended (Section 4(f)) (49 U.S.C. § 303(c)); is a federal law that applies to transportation projects that require funding or other approvals by the USDOT. Section 4(f) prohibits the Secretary of Transportation from approving any program or project which requires the use of any publicly owned land from a public park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance, or any land from an historic site of national, state, or local significance unless: • There is no feasible and prudent alternative to the use of the land; • The program or project includes all possible planning to minimize harm to such park, recreational area, wildlife and waterfowl refuge, or historic site, resulting from such use. PHMSA conducted a review of the Project Area to identify properties that potentially qualify as Section 4(f). No Section 4(f) properties are located within or immediately adjacent to the project area. **No Action:** Under the No Action alternative, there would be no change to existing pipeline infrastructure pursuant to federal funding provided by the Program, and maintenance and repairs would continue. Additionally, there are no 4(f) resources identified in the project area and therefore, there would be no impacts to any Section 4(f) property under the No Action alternative. **Proposed Action:** Under the Proposed Action alternative, construction activities would not occur within or adjacent to 4(f) properties. Therefore, there would be no use of Section 4(f) resources.	
Mitigation Measures: There are no Section 4(f) resources identified in the project area and therefore, no mitigative measures are necessary.	

Land Use and Transportation	
Question	**Information and Justification**

Will the full extent of the project boundaries remain within the existing right-of-way or easements? If no, please describe any right-of-way acquisitions or additional easements needed.	Yes.
Will the project result in detours, transportation restrictions, or other impacts to normal traffic flow or to existing transportation facilities during construction? Will there be any permanent change to existing transportation facilities? If so, what are the changes, and how will changes affect the public?	Yes, all project detours would comply with an established traffic control plan during the course of the project.
Will the project interrupt or impede emergency response services from fire, police, ambulance or any other emergency or safety response providers? If so, describe any coordination that will occur with emergency response providers?	No.

Conclusion:

The project is located in the City of Trinidad in Las Animas County, Colorado. This area consists of residential areas, and the proposed project is located within a rural area. The areas containing natural habitat are limited to residential backyards or vegetated buffer areas near the alleyway.

No Action:

Under the No Action alternative, the bare steel pipes would remain in their current location and no changes to land use would occur. Normal maintenance activities would occur, and pipes would be replaced under failed circumstances.

Proposed Action:

The proposed pipeline replacement would occur within a gravel alleyway and within existing ROW. The area would be restored to pre-existing condition and contours. Therefore, PHMSA has determined that there would be no permanent change to land use. The project is replacing/upgrading the existing pipe and would not include new pipeline to serve any additional areas. Additionally, PHMSA's assessment is that there are no indirect impacts anticipated as land use remains the same.

During construction, there may be short-term impacts to adjacent residences and their normal traffic patterns in the areas immediately surrounding the alleyway where work would occur. Trinidad personnel would coordinate with the seven (7) residential property owners that may experience short-term impacts, prior to the start of the project. Potential impacts may include an increase in noise, dust, and minor transportation and pedestrian accessibility as a result of construction and construction staging. Temporary impacts may occur during construction but due to the limited scope of the project, any disruptions to access or normal traffic patterns would be very limited. The project would not result in detours and access to residences would not be impeded. Additionally, the project would not interrupt or impede emergency response activities.

Since the proposed work consists of the replacement of existing pipeline, would not convert any new areas into a different use, and impacts would only occur during construction, PHMSA's assessment is that there would be no impact to land use. Land use changes are not anticipated as the project is occurring in a previously established residential area and therefore would not change the existing residential or commercial use.

Mitigation Measures:

The City of Trinidad shall coordinate with property owners and emergency response services, as necessary, prior to construction.

Noise and Vibration	
Question	**Information and Justification**
Will the project construction occur for longer than a month at a single project location?	No.
Will the project location be in proximity (less than 50-ft.) to noise sensitive receivers (residences, schools, houses of worship, etc.)? If so, what measures will be taken to reduce noise and vibration impacts to sensitive receptors?	No.
Will the project require high-noise and vibration inducing construction methods? If so, please specify.	No.
Will the project comply with state and local ordinances? If so, identify applicable ordinances and limitations on noise/vibration times or sound levels.	Yes, the applicant would adhere to Colorado Noise Statute 25-12-103[17].
Will construction activities require large bulldozers, hoe ram, or other vibratory equipment within 20 feet of a structure?	No.

Conclusion:

The ambient noise in the project area consists of a combination of local residential road traffic and noise from a residential neighborhood. There are several sensitive noise receptors (residences, school, etc.) located near the proposed project area.

No Action:

Under the No Action alternative, the project would not move forward and the cast iron pipes would not be replaced at this time, and likely would not be replaced all at once. It is likely that these pipelines would be repaired or replaced due to a leak under emergency conditions. If replacement or repairs occur under emergency conditions, noise from construction equipment would add to that of the current ambient noise and would be of a shorter duration.

Proposed Action:

The pipeline replacement project may result in temporary construction noise impacts to nearby residences and Fisher's Peak Elementary School; however, no vibration impacts should occur. Construction equipment, such as backhoes, welding equipment, air compressors, and work trucks would be used to excavate the trench, lay pipes and restore the affected area. Based on Colorado Noise Statute 25-12-103, allowable residential noise levels vary, but most fall within the following ranges: 55 dB(A) from 7 a.m. – 10 p.m., and 50 dB(A) from 10 p.m. – 7 a.m.

Sensitive noise receptors are likely to experience temporary noise impacts while outdoors in the vicinity of the

[16] https://www.nonoise.org/lawlib/states/colorado/colorado.htm

work. All construction would occur during normal weekday business hours, when noise restrictions are not in place and Trinidad will adhere to Colorado's noise restriction ordinance. The project area consists of a gravel and dirt alleyway, therefore there would be no use of jackhammers or pavement cutters. Therefore, PHMSA's assessment is that the noise impacts would be minor and temporary and no adverse vibration impacts would result from the proposed work. Additionally, PHMSA's assessment is that there will be no indirect or cumulative noise or vibration impacts anticipated as a result of the proposed project.

Mitigation Measures:

The City of Trinidad shall adhere to all state and local noise ordinances.

Environmental Justice	
Question	**Information and Justification**
Using the EPA EJScreen or census data[18], is the project located in an area of minority and/or low-income individuals as defined by USDOT Order 5610.2(c)? If so, provide demographic data for minority and/or low-income individuals within ½ mile from the project area as a percentage of the total population.	Yes, based on review of socioeconomic data using the EPAs EJScreen, the population residing within the general project area contains 29% low income and 50% minority populations.
Will the project displace existing residents or workers from their homes and communities? If so, what is the expected duration?	No.
Will the project require service disruptions to homes and communities? If so, what is the expected communication and outreach plan to the residents and the duration of the outages?	Yes, service disruption would be no more than 1 hour.
Are there populations with Limited English Proficiency located in the project area? If so, what measures will be taken to provide communications in other languages?	No.

Conclusion:

Executive Order (E.O.) 14096—"Revitalizing Our Nation's Commitment to Environmental Justice for All" was enacted on April 21, 2023. E.O. 14096 on environmental justice does not rescind E.O. 12898 – "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," which has been in effect since February 11, 1994, and is currently implemented through DOT Order 5610.2C. This implementation would continue until further guidance is provided regarding the implementation of the new E.O. 14096 on environmental justice.

PHMSA reviewed socioeconomic data using the EPAs EJScreen and found the population residing within the City of Trinidad contains 29% low income and 50% minority populations. The percentage of low-income populations is lower than the Las Animas County average of 42%, and the percentage of minority population is higher than the Las Animas County average of 47%. See Appendix F, Environmental Justice, for socioeconomic data.

No Action:

Under the No Action alternative, existing and planned pipeline activities, including construction and maintenance activities, would continue unchanged. The City of Trinidad would continue to use leak prone pipe

[17] https://www.census.gov/quickfacts/fact/table/US/PST045222

material that could lead to safety incidents and service disruptions. Additionally, if a pipeline segment is not repaired or replaced prior to failure, it is likely to be associated with even more emissions under the No Action alternative. Thus, emissions benefits to the community associated with repairing or replacing existing pipelines with updated material would not be achieved and the incident risks and leaks would remain. There may be some degree of air pollution associated with construction activities for maintenance and repairs of existing pipelines under the No Action alternative, either through planned repair or replacement efforts or unplanned, emergency repairs or replacements.

Proposed Action:

The Proposed Action alternative would result in an overall reduction in GHG emissions. Construction activities would result in minor temporary air quality impacts, including the intentional venting of existing distribution lines prior to replacement. Noise impacts associated with construction are anticipated to be minor. Traffic impacts would be temporary, and disruptions or delays are not anticipated. However, removal of leak prone pipe would reduce the potential for leaks and incidents, resulting in an increase in pipeline safety across the system while also improving operation and reliability. The City would coordinate directly with the seven (7) property owners prior to the start of the project, and disruptions are anticipated to last less than one (1) hour. Therefore, consistent with Executive Order 12898 and DOT Order 5610.2(c), PHMSA's assessment is that the project would not result in disproportionately high and adverse effects on minority or low-income populations, or other underserved and disadvantaged communities. The project would have an overall beneficial effect on environmental justice populations and would not result in indirect or cumulative impacts.

Mitigation Measures:

The City of Trinidad shall provide advanced notification of service disruptions to all affected parties, including all residents adjacent to the project area.

Safety	
Question	**Information and Justification**
Has a risk profile been developed to describe the condition of the current infrastructure and potential safety concerns?	The City of Trinidad's Distribution Integrity Management Program (DIMP) has not shown leakage detection, but the potential for leaks is extremely high.
Has a public awareness program been developed and implemented that follows the guidance provided by the American Petroleum Institute (API) Recommended Practice (RP) 1162?	Yes.
Does the project area include pipes prone to leakage?	Yes.
Will construction safety methods and procedures to protect human health and prevent/minimize hazardous materials releases during construction, including personal protection, workplace monitoring and site-specific health and safety plans, be utilized? If yes, document measures and reference appropriate safety plans.	Yes.
Has an assessment of the project been performed to analyze the risk and benefits of implementation?	Yes, an assessment has been performed to analyze the risk and benefit of implementation.
Conclusion:	

The proposed project would replace 450 linear feet of historic bare steel pipeline. Pipelines that are known to leak based on the material include cast iron, bare steel, wrought iron, and historic plastics with known issues (PIPES Act of 2020). PHMSA establishes safety regulations for all pipelines (49 CFR Parts 190-199). In 2011, following major natural gas pipeline incidents, DOT and PHMSA issued a Call to Action to accelerate the repair, rehabilitation, and replacement of the highest-risk pipeline infrastructure. Among other factors, pipeline age and material are significant risk indicators. Pipelines constructed of cast and wrought iron, as well as bare steel, are among the pipelines that pose the highest risk. Trinidad's DIMP has not shown leakage detection, but the potential for leaks is extremely high. PHMSA continues to encourage vintage pipeline repair or replacement to increase the safety of these segments of the gas distribution systems. Pipeline incidents can result in death, injury, property damage, and environmental damage.

No Action:

Under the No Action alternative, the bare steel pipes would remain in their current location, state, and condition. Normal maintenance activities would occur, and pipes would be replaced under failed circumstances. Safety risks resulting from existing leak prone pipes remaining in place would persist until the existing leak-prone pipes are replaced.

Proposed Action:

The proposed project is necessary to replace 70-year-old unprotected, leak prone steel pipes. This replacement is in alignment with the City of Trinidad's DIMP plan, increasing the overall safety of the community.

The project would reduce the risk profile of existing pipeline systems prone to methane leakage and would also benefit disadvantaged communities with the safe provision of natural gas. The project responds to the need to address the potentially unsafe condition of the natural gas distribution system. The replacement of pipelines would be constructed in accordance with industry best practices and would comply with all local, state, and federal regulations, including those for safety. Additionally, the Trinidad's Gas Department has safety measures identified in the Gas Operations & Maintenance Manual and the City's Public Awareness Program complies with PHMSA regulations. Therefore, PHMSA's assessment is that this replacement project would improve the overall safety of Trinidad's infrastructure.

Mitigation Measures:

The City of Trinidad shall ensure their DIMP procedures are updated as necessary, and the work is constructed in accordance with industry best practices and the project would comply with all local, state, and federal regulations, including those for safety.

The City of Trinidad shall use standard construction safety methods and procedures; and conduct regular safety audits of crews performing work in the field and subsequent follow-up reporting and/or training, as required.

III. Public Involvement

On November 9, 2022, PHMSA published a Federal Register notice (87 FR 67748) with a 30-day comment period soliciting comments on the "Tier 1 Nationwide Environmental Assessment for the Natural Gas Distribution Infrastructure Safety and Modernization Grant Program." During the 30-day comment period, PHMSA received one comment letter from the APGA on various aspects of the program and air quality related analysis in the EA on December 9, 2022. This APGA letter is available for public review at the Docket No: PHMSA-2022-0123.[19] PHMSA reviewed the comment letter and determined the comments were not substantial and did not warrant further analysis. One comment provided by the APGA indicated that the majority of construction methods used for pipe replacements would be replacement by open trenching and that some may want to abandon the existing pipe rather than removing it for replacement. Any departures from methods described in the Tier 1 EA will require additional documentation from the project proponent, as reflected in this Tier 2.

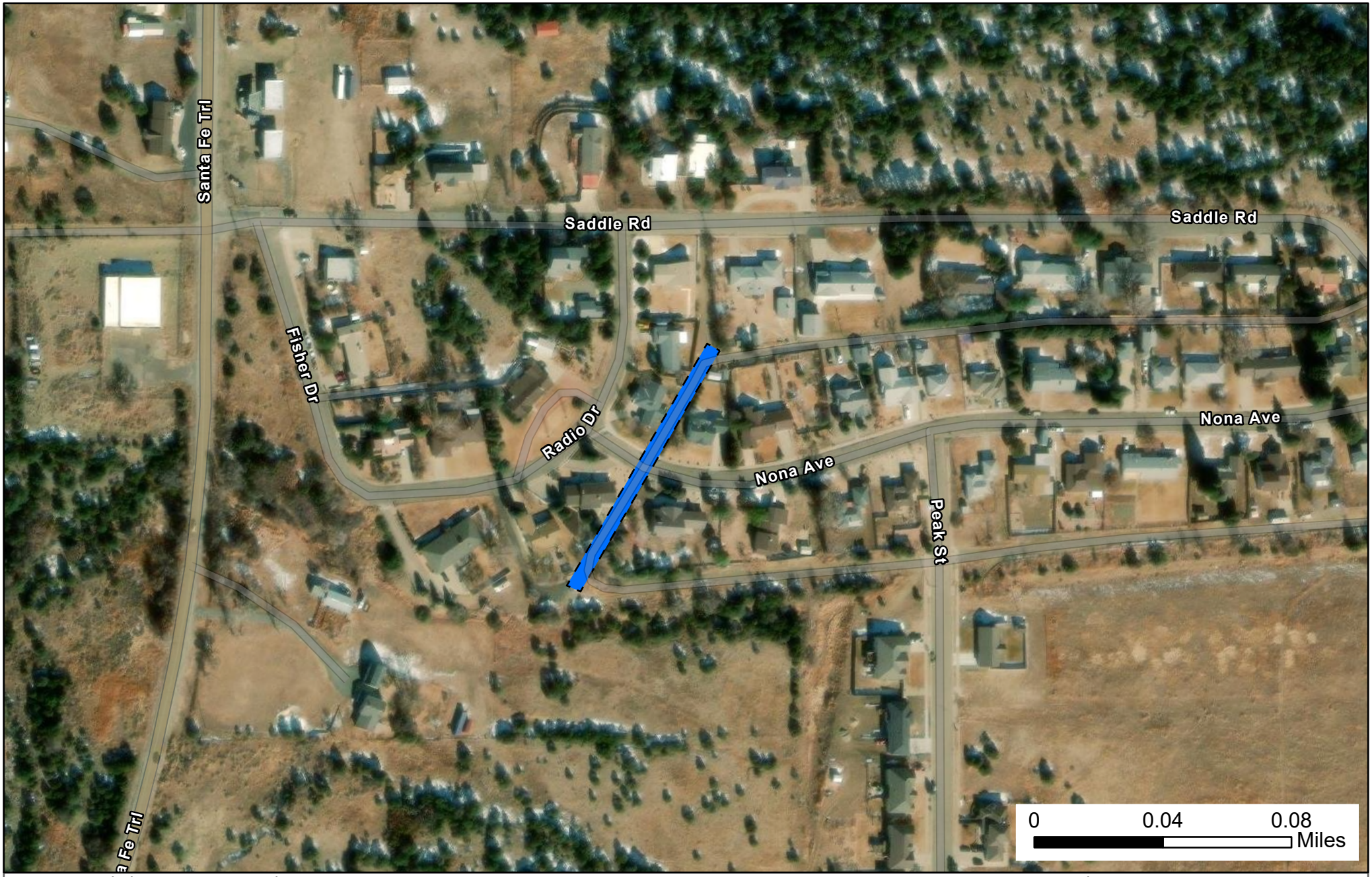
As part of this Tier 2, PHMSA is soliciting public comments through a public comment period. This Tier 2 is available on PHMSA's website where comments can be submitted to the contact noted below. PHMSA will accept public comments for 30 days on this Tier 2. PHMSA will consider comments received and incorporate them in the decision-making process. Consultation with appropriate agencies on related processes, regulations, and permits is ongoing. Please submit all comments to: PHMSABILGrantNEPAComments@dot.gov and reference NGDISM-FY22-EA-2023-11 in your response.

[18] https://www.regulations.gov/document/PHMSA-2022-0123-0002/comment

Appendix A

Project Map

Project Map



Name: Trinidad, CO Gas Line Replacement
Scale: 2,500
Area: 450 ft
Trinidad, Colorado, Las Animas County
Pipeline to be Replaced

N

Appendix B

Air Quality (Methane Calculations)

Table 1 No Action Leak Rate

Pipeline Material Type	Average Rate (kg/mile/year)	Miles	Current Methane Leak Rate (kg/year)
Cast Iron	4,597.4	0	0
Unprotected steel	2,122.3	0.09	191
Protected Steel	59.1	0	0
Plastic	190.9	0	0
Total Annual Methane Leak Rate			191
20-year Methane Emissions			3,820

Table 2 Proposed Action Leak Rate

Pipeline Material Type	Average Rate (kg/mile/year)	Miles	New Methane Leak Rate (kg/year)
Plastic	28.8	0.09	3
Year 1 Methane Reduction			184
Annual Methane Reduction			188
20-year Methane Reduction			3,764

Equation 1 was used to estimate blowdown emissions in MCF, assuming a pipeline diameter (d) and pressure (P).

$$E_{blowdown} = V \times \frac{P_{pipe} + P_{atm}}{P_{atm}} \qquad (1)$$

Where the pipeline volume (V) is calculated by multiplying the cross-sectional area of the pipe by the length of pipeline (L):

$$V = \pi \times \frac{d^2}{4} \times L \qquad (2)$$

Table 3 Proposed Action - Methane Blowdown

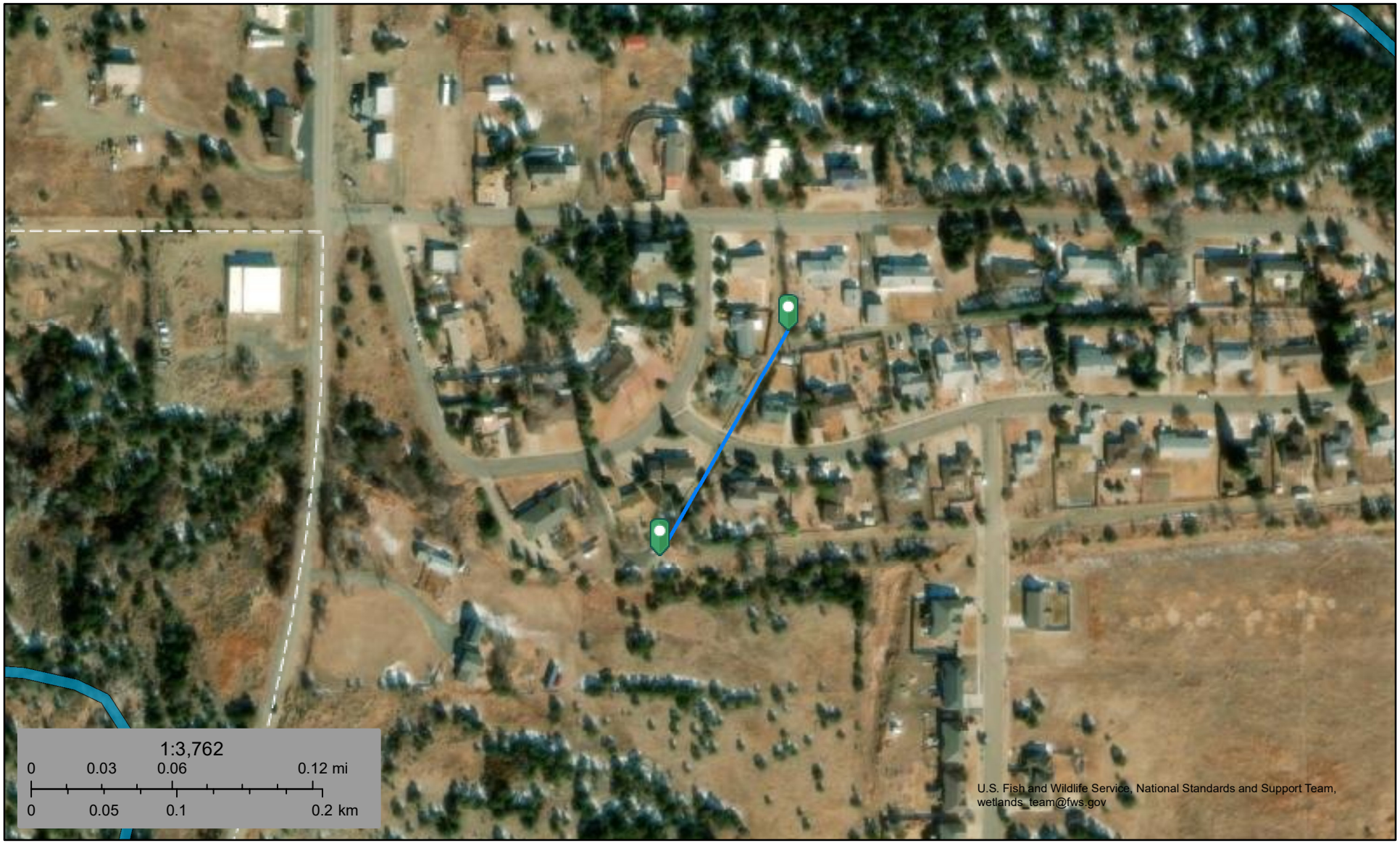
	Existing Pressure
Inside Diameter (in)	4
Blowdown Pressure (psi)	20
Length of Blowdown (ft)	450
Blowdown (MCF)	0.09
Total MCF	0.09
Total kg	3

Appendix C

Water Resources

U.S. Fish and Wildlife Service
National Wetlands Inventory

City of Trinidad 1



October 23, 2023

Wetlands

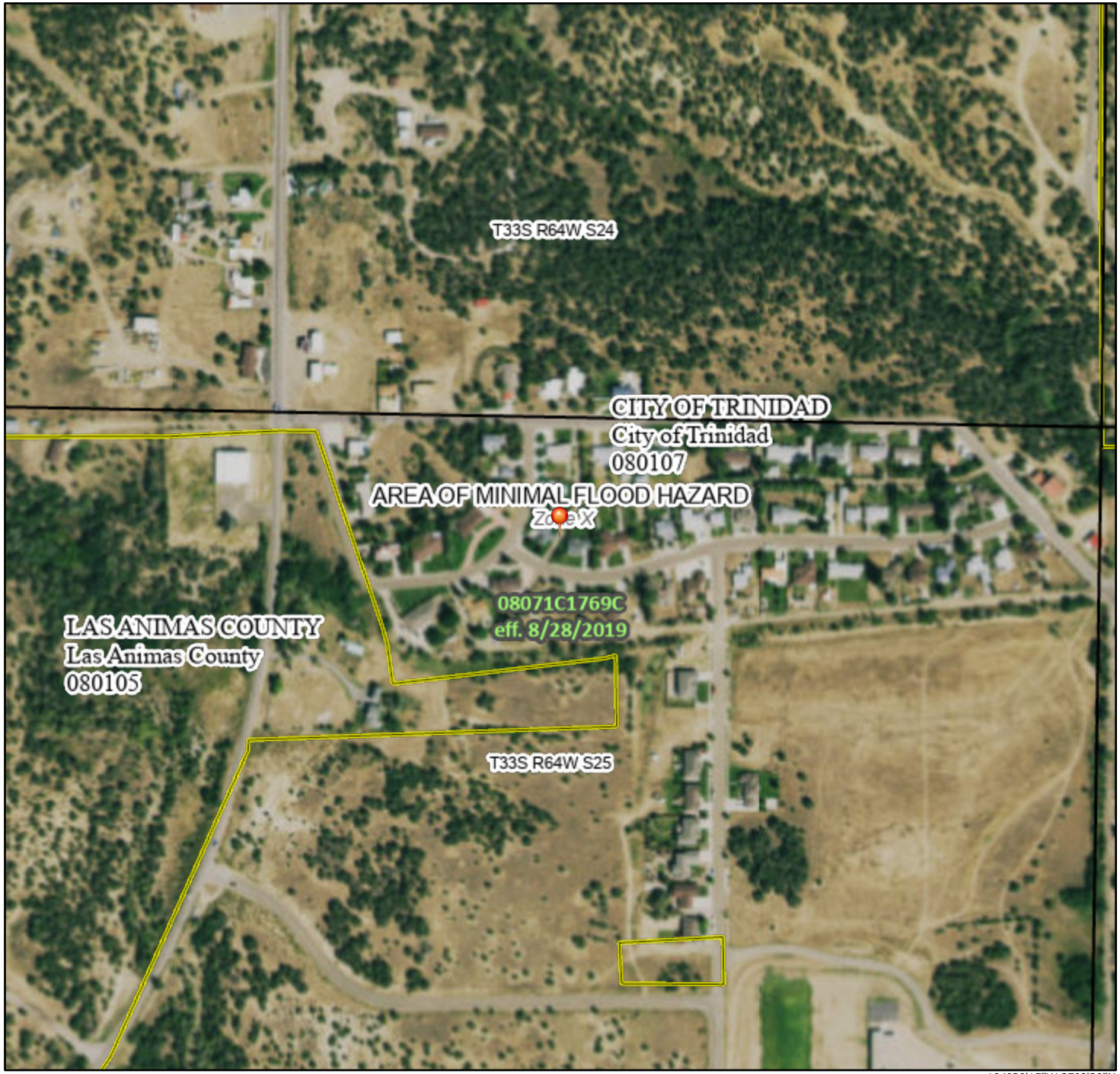
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine

This map is for general reference only. The US Fish and Wildlife Service is not responsible for the accuracy or currentness of the base data shown on this map. All wetlands related data should be used in accordance with the layer metadata found on the Wetlands Mapper web site.

National Flood Hazard Layer FIRMette

FEMA

104°30'52"W 37°9'8"N



0 250 500 1,000 1,500 2,000 Feet

1:6,000

104°30'15"W 37°8'39"N

Basemap Imagery Source: USGS National Map 2023

Legend

SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT

SPECIAL FLOOD HAZARD AREAS
- Without Base Flood Elevation (BFE) *Zone A, V, A99*
- With BFE or Depth *Zone AE, AO, AH, VE, AR*
- Regulatory Floodway

OTHER AREAS OF FLOOD HAZARD
- 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile *Zone X*
- Future Conditions 1% Annual Chance Flood Hazard *Zone X*
- Area with Reduced Flood Risk due to Levee. See Notes. *Zone X*
- Area with Flood Risk due to Levee *Zone D*

OTHER AREAS
- NO SCREEN Area of Minimal Flood Hazard *Zone X*
- Effective LOMRs
- Area of Undetermined Flood Hazard *Zone D*

GENERAL STRUCTURES
- Channel, Culvert, or Storm Sewer
- Levee, Dike, or Floodwall

OTHER FEATURES
- 20.2 Cross Sections with 1% Annual Chance
- 17.5 Water Surface Elevation
- Coastal Transect
- 513 Base Flood Elevation Line (BFE)
- Limit of Study
- Jurisdiction Boundary
- Coastal Transect Baseline
- Profile Baseline
- Hydrographic Feature

MAP PANELS
- Digital Data Available
- No Digital Data Available
- Unmapped

N

The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location.

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards

The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 10/23/2023 at 11:54 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time.

This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for unmapped and unmodernized areas cannot be used for regulatory purposes.

United States Department of Agriculture

NRCS

Natural Resources Conservation Service

A product of the National Cooperative Soil Survey, a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local participants

Custom Soil Resource Report for Las Animas County Area, Colorado, Parts of Huerfano and Las Animas Counties

Trinidad, CO

October 5, 2023

Preface

Soil surveys contain information that affects land use planning in survey areas. They highlight soil limitations that affect various land uses and provide information about the properties of the soils in the survey areas. Soil surveys are designed for many different users, including farmers, ranchers, foresters, agronomists, urban planners, community officials, engineers, developers, builders, and home buyers. Also, conservationists, teachers, students, and specialists in recreation, waste disposal, and pollution control can use the surveys to help them understand, protect, or enhance the environment.

Various land use regulations of Federal, State, and local governments may impose special restrictions on land use or land treatment. Soil surveys identify soil properties that are used in making various land use or land treatment decisions. The information is intended to help the land users identify and reduce the effects of soil limitations on various land uses. The landowner or user is responsible for identifying and complying with existing laws and regulations.

Although soil survey information can be used for general farm, local, and wider area planning, onsite investigation is needed to supplement this information in some cases. Examples include soil quality assessments (http://www.nrcs.usda.gov/wps/portal/nrcs/main/soils/health/) and certain conservation and engineering applications. For more detailed information, contact your local USDA Service Center (https://offices.sc.egov.usda.gov/locator/app?agency=nrcs) or your NRCS State Soil Scientist (http://www.nrcs.usda.gov/wps/portal/nrcs/detail/soils/contactus/?cid=nrcs142p2_053951).

Great differences in soil properties can occur within short distances. Some soils are seasonally wet or subject to flooding. Some are too unstable to be used as a foundation for buildings or roads. Clayey or wet soils are poorly suited to use as septic tank absorption fields. A high water table makes a soil poorly suited to basements or underground installations.

The National Cooperative Soil Survey is a joint effort of the United States Department of Agriculture and other Federal agencies, State agencies including the Agricultural Experiment Stations, and local agencies. The Natural Resources Conservation Service (NRCS) has leadership for the Federal part of the National Cooperative Soil Survey.

Information about soils is updated periodically. Updated information is available through the NRCS Web Soil Survey, the site for official soil survey information.

The U.S. Department of Agriculture (USDA) prohibits discrimination in all its programs and activities on the basis of race, color, national origin, age, disability, and where applicable, sex, marital status, familial status, parental status, religion, sexual orientation, genetic information, political beliefs, reprisal, or because all or a part of an individual's income is derived from any public assistance program. (Not all prohibited bases apply to all programs.) Persons with disabilities who require

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Contents

How Soil Surveys Are Made

Soil surveys are made to provide information about the soils and miscellaneous areas in a specific area. They include a description of the soils and miscellaneous areas and their location on the landscape and tables that show soil properties and limitations affecting various uses. Soil scientists observed the steepness, length, and shape of the slopes; the general pattern of drainage; the kinds of crops and native plants; and the kinds of bedrock. They observed and described many soil profiles. A soil profile is the sequence of natural layers, or horizons, in a soil. The profile extends from the surface down into the unconsolidated material in which the soil formed or from the surface down to bedrock. The unconsolidated material is devoid of roots and other living organisms and has not been changed by other biological activity.

Currently, soils are mapped according to the boundaries of major land resource areas (MLRAs). MLRAs are geographically associated land resource units that share common characteristics related to physiography, geology, climate, water resources, soils, biological resources, and land uses (USDA, 2006). Soil survey areas typically consist of parts of one or more MLRA.

The soils and miscellaneous areas in a survey area occur in an orderly pattern that is related to the geology, landforms, relief, climate, and natural vegetation of the area. Each kind of soil and miscellaneous area is associated with a particular kind of landform or with a segment of the landform. By observing the soils and miscellaneous areas in the survey area and relating their position to specific segments of the landform, a soil scientist develops a concept, or model, of how they were formed. Thus, during mapping, this model enables the soil scientist to predict with a considerable degree of accuracy the kind of soil or miscellaneous area at a specific location on the landscape.

Commonly, individual soils on the landscape merge into one another as their characteristics gradually change. To construct an accurate soil map, however, soil scientists must determine the boundaries between the soils. They can observe only a limited number of soil profiles. Nevertheless, these observations, supplemented by an understanding of the soil-vegetation-landscape relationship, are sufficient to verify predictions of the kinds of soil in an area and to determine the boundaries.

Soil scientists recorded the characteristics of the soil profiles that they studied. They noted soil color, texture, size and shape of soil aggregates, kind and amount of rock fragments, distribution of plant roots, reaction, and other features that enable them to identify soils. After describing the soils in the survey area and determining their properties, the soil scientists assigned the soils to taxonomic classes (units). Taxonomic classes are concepts. Each taxonomic class has a set of soil characteristics with precisely defined limits. The classes are used as a basis for comparison to classify soils systematically. Soil taxonomy, the system of taxonomic classification used in the United States, is based mainly on the kind and character of soil properties and the arrangement of horizons within the profile. After the soil

scientists classified and named the soils in the survey area, they compared the individual soils with similar soils in the same taxonomic class in other areas so that they could confirm data and assemble additional data based on experience and research.

The objective of soil mapping is not to delineate pure map unit components; the objective is to separate the landscape into landforms or landform segments that have similar use and management requirements. Each map unit is defined by a unique combination of soil components and/or miscellaneous areas in predictable proportions. Some components may be highly contrasting to the other components of the map unit. The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The delineation of such landforms and landform segments on the map provides sufficient information for the development of resource plans. If intensive use of small areas is planned, onsite investigation is needed to define and locate the soils and miscellaneous areas.

Soil scientists make many field observations in the process of producing a soil map. The frequency of observation is dependent upon several factors, including scale of mapping, intensity of mapping, design of map units, complexity of the landscape, and experience of the soil scientist. Observations are made to test and refine the soil-landscape model and predictions and to verify the classification of the soils at specific locations. Once the soil-landscape model is refined, a significantly smaller number of measurements of individual soil properties are made and recorded. These measurements may include field measurements, such as those for color, depth to bedrock, and texture, and laboratory measurements, such as those for content of sand, silt, clay, salt, and other components. Properties of each soil typically vary from one point to another across the landscape.

Observations for map unit components are aggregated to develop ranges of characteristics for the components. The aggregated values are presented. Direct measurements do not exist for every property presented for every map unit component. Values for some properties are estimated from combinations of other properties.

While a soil survey is in progress, samples of some of the soils in the area generally are collected for laboratory analyses and for engineering tests. Soil scientists interpret the data from these analyses and tests as well as the field-observed characteristics and the soil properties to determine the expected behavior of the soils under different uses. Interpretations for all of the soils are field tested through observation of the soils in different uses and under different levels of management. Some interpretations are modified to fit local conditions, and some new interpretations are developed to meet local needs. Data are assembled from other sources, such as research information, production records, and field experience of specialists. For example, data on crop yields under defined levels of management are assembled from farm records and from field or plot experiments on the same kinds of soil.

Predictions about soil behavior are based not only on soil properties but also on such variables as climate and biological activity. Soil conditions are predictable over long periods of time, but they are not predictable from year to year. For example, soil scientists can predict with a fairly high degree of accuracy that a given soil will have a high water table within certain depths in most years, but they cannot predict that a high water table will always be at a specific level in the soil on a specific date.

After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

identified each as a specific map unit. Aerial photographs show trees, buildings, fields, roads, and rivers, all of which help in locating boundaries accurately.

Soil Map

The soil map section includes the soil map for the defined area of interest, a list of soil map units on the map and extent of each map unit, and cartographic symbols displayed on the map. Also presented are various metadata about data used to produce the map, and a description of each soil map unit.

Custom Soil Resource Report
Soil Map

Map Scale: 1:1,080 if printed on A portrait (8.5" x 11") sheet.

N

Meters: 0 15 30 60 90

Feet: 0 50 100 200 300

Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 13N WGS84

MAP LEGEND

Area of Interest (AOI)
- Area of Interest (AOI)

Soils
- Soil Map Unit Polygons
- Soil Map Unit Lines
- Soil Map Unit Points

Special Point Features
- Blowout
- Borrow Pit
- Clay Spot
- Closed Depression
- Gravel Pit
- Gravelly Spot
- Landfill
- Lava Flow
- Marsh or swamp
- Mine or Quarry
- Miscellaneous Water
- Perennial Water
- Rock Outcrop
- Saline Spot
- Sandy Spot
- Severely Eroded Spot
- Sinkhole
- Slide or Slip
- Sodic Spot
- Spoil Area
- Stony Spot
- Very Stony Spot
- Wet Spot
- Other
- Special Line Features

Water Features
- Streams and Canals

Transportation
- Rails
- Interstate Highways
- US Routes
- Major Roads
- Local Roads

Background
- Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:24,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL:
Coordinate System: Web Mercator (EPSG:3857)

Maps from the Web Soil Survey are based on the Web Mercator projection, which preserves direction and shape but distorts distance and area. A projection that preserves area, such as the Albers equal-area conic projection, should be used if more accurate calculations of distance or area are required.

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Las Animas County Area, Colorado, Parts of Huerfano and Las Animas Counties
Survey Area Data: Version 26, Aug 24, 2023

Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: Mar 31, 2020—May 18, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background

MAP LEGEND

MAP INFORMATION

imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
BaC	Baca silt loam, 3 to 5 percent slopes, cool	5.7	90.3%
LST	Lorencito-Sarcillo-Trujillo complex, 3 to 25 percent slopes	0.6	9.7%
Totals for Area of Interest		**6.3**	**100.0%**

Map Unit Descriptions

The map units delineated on the detailed soil maps in a soil survey represent the soils or miscellaneous areas in the survey area. The map unit descriptions, along with the maps, can be used to determine the composition and properties of a unit.

A map unit delineation on a soil map represents an area dominated by one or more major kinds of soil or miscellaneous areas. A map unit is identified and named according to the taxonomic classification of the dominant soils. Within a taxonomic class there are precisely defined limits for the properties of the soils. On the landscape, however, the soils are natural phenomena, and they have the characteristic variability of all natural phenomena. Thus, the range of some observed properties may extend beyond the limits defined for a taxonomic class. Areas of soils of a single taxonomic class rarely, if ever, can be mapped without including areas of other taxonomic classes. Consequently, every map unit is made up of the soils or miscellaneous areas for which it is named and some minor components that belong to taxonomic classes other than those of the major soils.

Most minor soils have properties similar to those of the dominant soil or soils in the map unit, and thus they do not affect use and management. These are called noncontrasting, or similar, components. They may or may not be mentioned in a particular map unit description. Other minor components, however, have properties and behavioral characteristics divergent enough to affect use or to require different management. These are called contrasting, or dissimilar, components. They generally are in small areas and could not be mapped separately because of the scale used. Some small areas of strongly contrasting soils or miscellaneous areas are identified by a special symbol on the maps. If included in the database for a given area, the contrasting minor components are identified in the map unit descriptions along with some characteristics of each. A few areas of minor components may not have been observed, and consequently they are not mentioned in the descriptions, especially where the pattern was so complex that it was impractical to make enough observations to identify all the soils and miscellaneous areas on the landscape.

The presence of minor components in a map unit in no way diminishes the usefulness or accuracy of the data. The objective of mapping is not to delineate pure taxonomic classes but rather to separate the landscape into landforms or landform segments that have similar use and management requirements. The delineation of such segments on the map provides sufficient information for the

development of resource plans. If intensive use of small areas is planned, however, onsite investigation is needed to define and locate the soils and miscellaneous areas.

An identifying symbol precedes the map unit name in the map unit descriptions. Each description includes general facts about the unit and gives important soil properties and qualities.

Soils that have profiles that are almost alike make up a *soil series*. Except for differences in texture of the surface layer, all the soils of a series have major horizons that are similar in composition, thickness, and arrangement.

Soils of one series can differ in texture of the surface layer, slope, stoniness, salinity, degree of erosion, and other characteristics that affect their use. On the basis of such differences, a soil series is divided into *soil phases*. Most of the areas shown on the detailed soil maps are phases of soil series. The name of a soil phase commonly indicates a feature that affects use or management. For example, Alpha silt loam, 0 to 2 percent slopes, is a phase of the Alpha series.

Some map units are made up of two or more major soils or miscellaneous areas. These map units are complexes, associations, or undifferentiated groups.

A *complex* consists of two or more soils or miscellaneous areas in such an intricate pattern or in such small areas that they cannot be shown separately on the maps. The pattern and proportion of the soils or miscellaneous areas are somewhat similar in all areas. Alpha-Beta complex, 0 to 6 percent slopes, is an example.

An *association* is made up of two or more geographically associated soils or miscellaneous areas that are shown as one unit on the maps. Because of present or anticipated uses of the map units in the survey area, it was not considered practical or necessary to map the soils or miscellaneous areas separately. The pattern and relative proportion of the soils or miscellaneous areas are somewhat similar. Alpha-Beta association, 0 to 2 percent slopes, is an example.

An *undifferentiated group* is made up of two or more soils or miscellaneous areas that could be mapped individually but are mapped as one unit because similar interpretations can be made for use and management. The pattern and proportion of the soils or miscellaneous areas in a mapped area are not uniform. An area can be made up of only one of the major soils or miscellaneous areas, or it can be made up of all of them. Alpha and Beta soils, 0 to 2 percent slopes, is an example.

Some surveys include *miscellaneous areas*. Such areas have little or no soil material and support little or no vegetation. Rock outcrop is an example.

Las Animas County Area, Colorado, Parts of Huerfano and Las Animas Counties

BaC—Baca silt loam, 3 to 5 percent slopes, cool

Map Unit Setting

National map unit symbol: 2rh19
Elevation: 6,000 to 6,500 feet
Mean annual precipitation: 14 to 16 inches
Mean annual air temperature: 48 to 52 degrees F
Frost-free period: 120 to 140 days
Farmland classification: Prime farmland if irrigated

Map Unit Composition

Baca, cool, and similar soils: 90 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Baca, Cool

Setting

Landform: Fan remnants
Landform position (two-dimensional): Backslope, footslope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium derived from shale and siltstone

Typical profile

A - 0 to 6 inches: silt loam
Bt1 - 6 to 9 inches: silty clay loam
Bt2 - 9 to 25 inches: clay
Btk - 25 to 32 inches: silty clay loam
Bk1 - 32 to 45 inches: clay loam
Bk2 - 45 to 79 inches: loam

Properties and qualities

Slope: 3 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 15 percent
Gypsum, maximum content: 3 percent
Maximum salinity: Nonsaline to very slightly saline (0.5 to 3.0 mmhos/cm)
Sodium adsorption ratio, maximum: 2.0
Available water supply, 0 to 60 inches: High (about 10.2 inches)

Interpretive groups

Land capability classification (irrigated): 6e
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: C
Ecological site: R069XY006CO - Loamy Plains

Forage suitability group: Clayey (G067BW001CO)
Other vegetative classification: Loamy Plains #4 (049XY202CO_3), Clayey (G067BW001CO)
Hydric soil rating: No

Minor Components

Wiley, cool
Percent of map unit: 5 percent
Landform: Fans
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R069XY006CO - Loamy Plains
Other vegetative classification: Loamy (G067BW017CO), Loamy Plains #2 (067XY002CO_2)
Hydric soil rating: No

Manzanst, cool
Percent of map unit: 5 percent
Landform: Fans, closed depressions
Landform position (two-dimensional): Backslope, toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R069XY042CO - Clayey Plains
Other vegetative classification: Clayey (G069XW001CO)
Hydric soil rating: No

LST—Lorencito-Sarcillo-Trujillo complex, 3 to 25 percent slopes

Map Unit Setting
National map unit symbol: hw0x
Elevation: 6,500 to 7,800 feet
Mean annual precipitation: 15 to 18 inches
Mean annual air temperature: 43 to 52 degrees F
Frost-free period: 80 to 140 days
Farmland classification: Not prime farmland

Map Unit Composition
Lorencito and similar soils: 40 percent
Sarcillo and similar soils: 30 percent
Trujillo and similar soils: 20 percent
Minor components: 10 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lorencito

Setting
Landform: Hills
Landform position (two-dimensional): Shoulder, backslope

Landform position (three-dimensional): Head slope, side slope
Down-slope shape: Linear
Across-slope shape: Convex
Parent material: Slope alluvium and residuum weathered from shale and siltstone

Typical profile

A - 0 to 4 inches: channery clay loam
AC - 4 to 16 inches: parachannery clay
Cr - 16 to 26 inches: bedrock

Properties and qualities

Slope: 10 to 25 percent
Depth to restrictive feature: 10 to 20 inches to paralithic bedrock
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 2.0
Available water supply, 0 to 60 inches: Very low (about 2.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: D
Ecological site: R049XE223CO - Shrubby Foothill
Other vegetative classification: Pinyon/juniper (PIED/JUSC2)
Hydric soil rating: No

Description of Sarcillo

Setting

Landform: Hills
Landform position (two-dimensional): Toeslope
Landform position (three-dimensional): Interfluve, base slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Slope alluvium derived from sandstone and shale

Typical profile

A - 0 to 5 inches: loam
Bt - 5 to 8 inches: clay loam
Btss1 - 8 to 13 inches: clay
Btss2 - 13 to 16 inches: clay
R - 16 to 60 inches: bedrock

Properties and qualities

Slope: 3 to 15 percent
Depth to restrictive feature: 10 to 20 inches to lithic bedrock
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately high (0.00 to 0.20 in/hr)
Depth to water table: More than 80 inches

Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 5 percent
Available water supply, 0 to 60 inches: Very low (about 2.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: D
Ecological site: R049XE223CO - Shrubby Foothill
Other vegetative classification: Pinyon/juniper (PIED/JUSC2)
Hydric soil rating: No

Description of Trujillo

Setting

Landform: Hills
Landform position (two-dimensional): Footslope, toeslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Alluvium derived from sandstone

Typical profile

A - 0 to 9 inches: loam
Bt1 - 9 to 13 inches: loam
Bt2 - 13 to 20 inches: clay loam
Bt3 - 20 to 36 inches: sandy clay loam
C - 36 to 58 inches: fine sandy loam
Bk - 58 to 70 inches: fine sandy loam

Properties and qualities

Slope: 3 to 9 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.60 to 2.00 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Calcium carbonate, maximum content: 3 percent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 2.0
Available water supply, 0 to 60 inches: Moderate (about 8.3 inches)

Interpretive groups

Land capability classification (irrigated): 4e
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: B
Ecological site: R049XB202CO - Loamy Foothill
Forage suitability group: Loamy (G049XW017CO)
Other vegetative classification: Loamy (G049XW017CO), Loamy Foothills #202 (049XY202CO_2)
Hydric soil rating: No

Minor Components

Capulin

Percent of map unit: 10 percent
Landform: Fans
Landform position (two-dimensional): Backslope, footslope
Landform position (three-dimensional): Rise
Down-slope shape: Linear
Across-slope shape: Linear
Ecological site: R049XB202CO - Loamy Foothill
Other vegetative classification: Loamy (G070XW017CO), Loamy Plains #4 (049XY004CO_2)
Hydric soil rating: No

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Appendix D

Biological Resources

IPaC resource list

This report is an automatically generated list of species and other resources such as critical habitat (collectively referred to as *trust resources*) under the U.S. Fish and Wildlife Service's (USFWS) jurisdiction that are known or expected to be on or near the project area referenced below. The list may also include trust resources that occur outside of the project area, but that could potentially be directly or indirectly affected by activities in the project area. However, determining the likelihood and extent of effects a project may have on trust resources typically requires gathering additional site-specific (e.g., vegetation/species surveys) and project-specific (e.g., magnitude and timing of proposed activities) information.

Below is a summary of the project information you provided and contact information for the USFWS office(s) with jurisdiction in the defined project area. Please read the introduction to each section that follows (Endangered Species, Migratory Birds, USFWS Facilities, and NWI Wetlands) for additional information applicable to the trust resources addressed in that section.

Location

Las Animas County, Colorado

Local office

Colorado Ecological Services Field Office

(303) 236-4773
(303) 236-4005

MAILING ADDRESS
Denver Federal Center
P.O. Box 25486
Denver, CO 80225-0486

PHYSICAL ADDRESS
134 Union Boulevard, Suite 670
Lakewood, CO 80228-1807

Endangered species

This resource list is for informational purposes only and does not constitute an analysis of project level impacts.

The primary information used to generate this list is the known or expected range of each species. Additional areas of influence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly affected by activities in that area (e.g., placing a dam upstream of a fish population even if that fish does not occur at the dam site, may indirectly impact the species by reducing or eliminating water flow downstream). Because species can move, and site conditions can change, the species on this list are not guaranteed to be found on or near the project area. To fully determine any potential effects to species, additional site-specific and project-specific information is often required.

Section 7 of the Endangered Species Act **requires** Federal agencies to "request of the Secretary information whether any species which is listed or proposed to be listed may be present in the area of such proposed action" for any project that is conducted, permitted, funded, or licensed by any Federal agency. A letter from the local office and a species list which fulfills this requirement can **only** be obtained by requesting an official species list from either the Regulatory Review section in IPaC (see directions below) or from the local field office directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an official species list by doing the following:

1. Draw the project location and click CONTINUE.
2. Click DEFINE PROJECT.
3. Log in (if directed to do so).
4. Provide a name and description for your project.
5. Click REQUEST SPECIES LIST.

Listed species[1] and their critical habitats are managed by the Ecological Services Program of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries[2]).

Species and critical habitats under the sole responsibility of NOAA Fisheries are **not** shown on this list. Please contact NOAA Fisheries for species under their jurisdiction.

1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the listing status page for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
2. 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.

The following species are potentially affected by activities in this location:

Mammals

NAME	STATUS
Gray Wolf *Canis lupus* This species only needs to be considered if the following condition applies: • Lone, dispersing gray wolves may be present throughout the state of Colorado. If your activity includes a predator management program, please consider this species in your environmental review. There is **final** critical habitat for this species. https://ecos.fws.gov/ecp/species/4488	Endangered
New Mexico Meadow Jumping Mouse *Zapus hudsonius luteus* Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/7965	Endangered

Birds

NAME	STATUS
Mexican Spotted Owl *Strix occidentalis lucida* Wherever found There is **final** critical habitat for this species. Your location does not overlap the critical habitat. https://ecos.fws.gov/ecp/species/8196	Threatened

Insects

NAME	STATUS

Monarch Butterfly Danaus plexippus Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9743	Candidate

Critical habitats

Potential effects to critical habitat(s) in this location must be analyzed along with the endangered species themselves.

There are no critical habitats at this location.

You are still required to determine if your project(s) may have effects on all above listed species.

Bald & Golden Eagles

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act[1] and the Migratory Bird Treaty Act[2].

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats[3], should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

Additional information can be found using the following links:

- Eagle Managment https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/documents/nationwide-standard-conservation-measures.pdf
- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

There are bald and/or golden eagles in your project area.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Golden Eagle Aquila chrysaetos This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Dec 1 to Aug 31

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for

the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

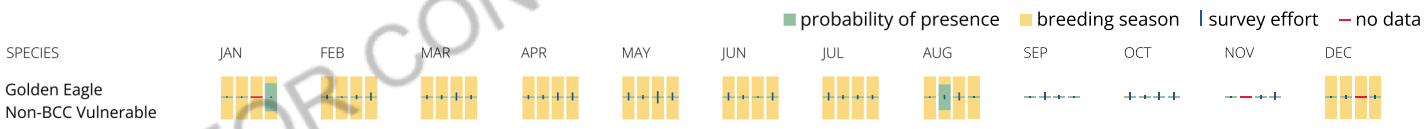
Breeding Season (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



What does IPaC use to generate the potential presence of bald and golden eagles in my specified location?

The potential for eagle presence is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply). To see a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs of bald and golden eagles in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur. Please contact your local Fish and Wildlife Service Field Office if you have questions.

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act[1] and the Bald and Golden Eagle Protection Act[2].

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats[3] should follow appropriate regulations and consider implementing appropriate conservation measures, as described below.

1. The Migratory Birds Treaty Act of 1918.
2. The Bald and Golden Eagle Protection Act of 1940.

Additional information can be found using the following links:

- Eagle Management https://www.fws.gov/program/eagle-management
- Measures for avoiding and minimizing impacts to birds https://www.fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds
- Nationwide conservation measures for birds https://www.fws.gov/sites/default/files/ documents/nationwide-standard-conservation-measures.pdf

- Supplemental Information for Migratory Birds and Eagles in IPaC https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action

The birds listed below are birds of particular concern either because they occur on the USFWS Birds of Conservation Concern (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ below. This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the E-bird data mapping tool (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found below.

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Cassin's Finch Carpodacus cassinii This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9462	Breeds May 15 to Jul 15
Evening Grosbeak Coccothraustes vespertinus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 15 to Aug 10
Golden Eagle Aquila chrysaetos This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1680	Breeds Dec 1 to Aug 31
Long-eared Owl asio otus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3631	Breeds Mar 1 to Jul 15
Olive-sided Flycatcher Contopus cooperi This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/3914	Breeds May 20 to Aug 31
Pinyon Jay Gymnorhinus cyanocephalus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9420	Breeds Feb 15 to Jul 15

Probability of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ "Proper Interpretation and Use of Your Migratory Bird Report" before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12 (0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is 0.25/0.25 = 1; at week 20 it is 0.05/0.25 = 0.2.
3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

To see a bar's probability of presence score, simply hover your mouse cursor over the bar.

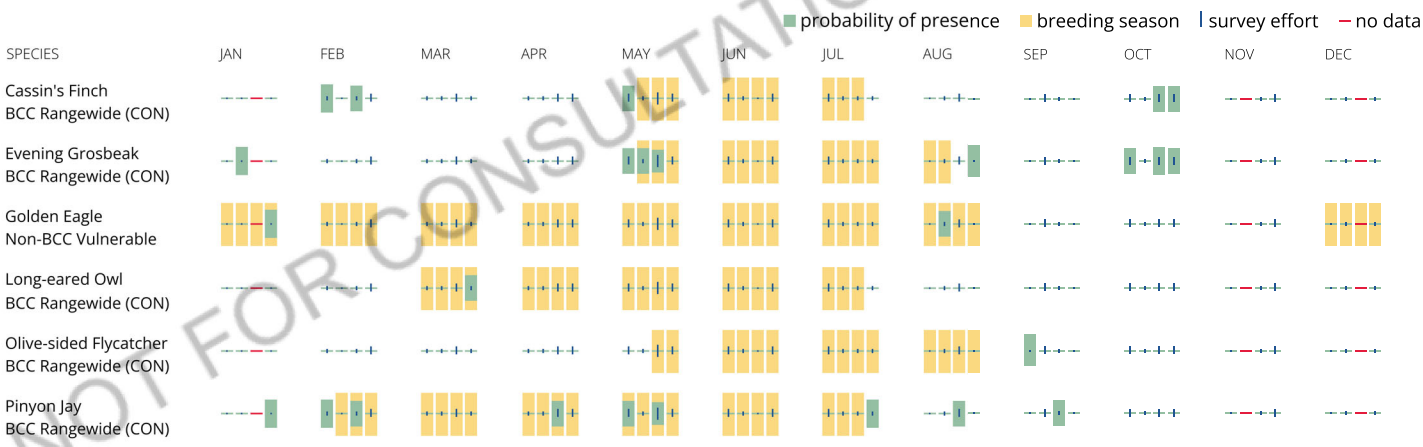
Breeding Season (▪)
Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (–)
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe
Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

Nationwide Conservation Measures describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. Additional measures or permits may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the list of migratory birds that potentially occur in my specified location?

The Migratory Bird Resource List is comprised of USFWS Birds of Conservation Concern (BCC) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the Avian Knowledge Network (AKN). The AKN data is based on a growing collection of survey, banding, and citizen science datasets and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle (Eagle Act requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the Rapid Avian Information Locator (RAIL) Tool.

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the Avian Knowledge Network (AKN). This data is derived from a growing collection of survey, banding, and citizen science datasets.

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering or migrating in my area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the RAIL Tool and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are Birds of Conservation Concern (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the Eagle Act requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the NOAA NCCOS Integrative Statistical Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the Diving Bird Study and the nanotag studies or contact Caleb Spiegel or Pam Loring.

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to obtain a permit to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

Any activity proposed on lands managed by the National Wildlife Refuge system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

Impacts to NWI wetlands and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local U.S. Army Corps of Engineers District.

This location did not intersect any wetlands mapped by NWI.

NOTE: This initial screening does **not** replace an on-site delineation to determine whether wetlands occur. Additional information on the NWI data is provided below.

Data limitations

The Service's objective of mapping wetlands and deepwater habitats is to produce reconnaissance level information on the location, type and size of these resources. The maps are prepared from the analysis of high altitude imagery. Wetlands are identified based on vegetation, visible hydrology and geography. A margin of error is inherent in the use of imagery; thus, detailed on-the-ground inspection of any particular site may result in revision of the wetland boundaries or classification established through image analysis.

The accuracy of image interpretation depends on the quality of the imagery, the experience of the image analysts, the amount and quality of the collateral data and the amount of ground truth verification work conducted. Metadata should be consulted to determine the date of the source imagery used and any mapping problems.

Wetlands or other mapped features may have changed since the date of the imagery or field work. There may be occasional differences in polygon boundaries or classifications between the information depicted on the map and the actual conditions on site.

Data exclusions

Certain wetland habitats are excluded from the National mapping program because of the limitations of aerial imagery as the primary data source used to detect wetlands. These habitats include seagrasses or submerged aquatic vegetation that are found in the intertidal and subtidal zones of estuaries and nearshore coastal waters. Some deepwater reef communities (coral or tuberficid worm reefs) have also been excluded from the inventory. These habitats, because of their depth, go undetected by aerial imagery.

Data precautions

Federal, state, and local regulatory agencies with jurisdiction over wetlands may define and describe wetlands in a different manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to define the limits of proprietary jurisdiction of any Federal, state, or local government or to establish the geographical scope of the regulatory programs of government agencies. Persons intending to engage in activities involving modifications within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning specified agency regulatory programs and proprietary jurisdictions that may affect such activities.

COLORADO PARKS & WILDLIFE

Threatened and Endangered List

COMMON NAME	SCIENTIFIC NAME	STATUS*
AMPHIBIANS		
Boreal Toad	Bufo boreas boreas	SE
Couch's Spadefoot	Scaphiopus couchii	SC
Great Plains Narrowmouth Toad	Gastrophryne olivacea	SC
Northern Cricket Frog	Acris crepitans	SC
Northern Leopard Frog	Rana pipiens	SC
Plains Leopard Frog	Rana blairi	SC
Wood Frog	Rana sylvatica	SC
BIRDS		
American Peregrine Falcon	Falco peregrinus anatum	SC
Bald Eagle	Haliaeetus leucocephalus	SC
Burrowing Owl	Athene cunicularia	ST
Columbian Sharp-Tailed Grouse	Tympanuchus phasianellus columbianus	SC
Ferruginous Hawk	Buteo regalis	SC
Greater Sage Grouse	Centrocercus urophasianus	SC
Greater Sandhill Crane	Grus canadensis tabida	SC
Gunnison Sage-Grouse	Centrocercus minimus	FT, SC
Least Tern	Sterna antillarum	SE
Lesser Prairie-Chicken	Tympanuchus pallidicinctus	FT, ST
Long-Billed Curlew	Numenius americanus	SC
Mexican Spotted Owl	Strix occidentalis lucida	FT, ST
Mountain Plover	Charadrius montanus	SC
Plains Sharp-Tailed Grouse	Tympanuchus phasianellus jamesii	SE

Piping Plover	Charadrius melodus circumcinctus	FT, ST
Southwestern Willow Flycatcher	Empidonax traillii extimus	FE, SE
Western Snowy Plover	Charadrius alexandrinus	SC
Western Yellow-Billed Cuckoo	Coccyzus americanus	SC, FT
Whooping Crane	Grus americana	FE, SE
FISH		
Arkansas Darter	Etheostoma cragini	ST
Bonytail	Gila elegans	FE, SE
Brassy Minnow	Hybognathus hankinsoni	ST
Colorado Pikeminnow	Ptychocheilus lucius	FE, ST
Colorado River Cutthroat Trout	Oncorhynchus clarki pleuriticus	SC
Colorado Roundtail Chub	Gila robusta	SC
Common Shiner	Luxilus cornutus	ST
Flathead Chub	Platygobio gracilis	SC
Greenback Cutthroat Trout	Oncorhynchus clarki stomias	FT, ST
Humpback Chub	Gila cypha	FE, ST
Iowa Darter	Etheostoma exile	SC
Lake Chub	Couesius plumbeus	SE
Mountain Sucker	Catostomus playtrhynchus	SC
Northern Redbelly Dace	Phoxinus eos	SE
Plains Minnow	Hybognathus placitus	SE
Plains Orangethroat Darter	Etheostoma spectabile	SC
Rio Grande Chub	Gila pandora	SC
Rio Grande Cutthroat Trout	Oncorhynchus clarki virginalis	SC
Rio Grande Sucker	Catostomus plebeius	SE
Razorback Sucker	Xyrauchen texanus	FE, SE
Southern Redbelly Dace	Phoxinus erythrogaster	SE
Stonecat	Noturus flavus	SC
Suckermouth Minnow	Phenacobius mirabilis	SE
MAMMALS		
Black-Footed Ferret	Mustela nigripes	FE, SE
Black-Tailed Prairie Dog	Cynomys ludovicianus	SC

Botta's Pocket Gopher	Thomomy bottae rubidus	SC
Gray Wolf	Canis lupus	SE, FE
Grizzly Bear	Ursus arctos	FT, SE
Kit Fox	Vulpes macrotis	SE
Lynx	Lynx canadensis	FT, SE
Northern Pocket Gopher	Thomomys talpoides macrotis	SC
Preble's Meadow Jumping Mouse	Zapus hudsonius preblei	FT, ST
River Otter	Lontra canadensis	ST
Swift fox	Vulpes velox	SC
Townsend's Big-Eared Bat	Corynorhinus townsendii pallescens	SC
Wolverine	Gulo gulo	SE
REPTILES		
Triploid Checkered Whiptail	Cnemidophorus neotesselatus	SC
Midget Faded Rattlesnake	Crotalus viridis concolor	SC
Longnose Leopard Lizard	Gambelia wislizenii	SC
Yellow Mud Turtle	Kinosternon flavescens	SC
Common King Snake	Lampropeltis getula	SC
Texas Blind Snake	Leptotyphlops dulcis	SC
Texas Horned Lizard	Phrynosoma cornutum	SC
Roundtail Horned Lizard	Phrynosoma modestum	SC
Massasauga	Sistrurus catenatus	SC
Common Garter Snake	Thamnophis sirtalis	SC
MOLLUSKS		
Rocky Mountain Capshell	Acroloxus coloradensis	SC
Cylindrical Papershell	Anodontoides ferussacianus	SC

*Status Codes

- FE = Federally Endangered
- FT = Federally Threatened
- SE = State Endangered
- ST = State Threatened
- SC = State Special Concern (not a statutory category)

Resources

- Species Profiles

Colorado's State Wildlife Action Plan (SWAP)

The approved State Wildlife Action Plan identifies priority species & habitats that need conservation efforts in the state, & potential conservation actions that can address threats these species & habitats face.

Appendix E

Cultural Resources

U.S. Department
of Transportation
**Pipeline and Hazardous
Materials Safety
Administration**

1200 New Jersey Avenue, SE
Washington, DC 20590

January 10, 2024

Dawn DiPrince
State Historic Preservation Officer
History Colorado
1200 Broadway
Denver, CO 80203

Section 106 Consultation: PHMSA Pipeline Replacement Project in Trinidad, Colorado
Grant Recipient: City of Trinidad
Project Location: City of Trinidad, Las Animas County, Colorado

Dear Dawn DiPrince:

The Pipeline and Hazardous Materials Safety Administration (PHMSA) provides funds authorized under the Natural Gas Distribution Infrastructure Safety and Modernization Grant Program. PHMSA proposes to provide funds to the City of Trinidad (City) for the replacement of pipeline (Undertaking). PHMSA is initiating consultation for the above referenced Undertaking in accordance with Section 106 of the National Historic Preservation Act of 1966, as amended, and the associated implementing regulations, 36 CFR Part 800 (Section 106).

Project Description/Background

The City, located in Las Animas County, proposes to replace aging and failing steel pipeline with polyethylene (PE) pipe, which would enhance safety, improve operations, and reduce methane emissions of natural gas from the City's natural gas transmission system. The Undertaking consists of replacing 450 linear feet of 4-inch uncoated steel pipe along the center of an alley way and across Nona Street within a residential area of the City. This section of pipe would be replaced with 4-inch PE pipe and includes the replacement of two control valves and the installation of one valve. Seven service taps would be replaced with 1-inch PE service taps and excess flow valves. The replacement pipeline would be installed by cut and cover (trenching) methods, approximately 6 inches from the east side of the existing pipeline. A single trench, which would be approximately 48 inches wide and 42 inches deep, would be excavated to accommodate the installation of the replacement PE pipe and the removal of the existing bare steel pipeline. Once the replacement pipeline is active, existing gas would be vented and the bare steel pipeline would be removed. No new right-of-way (ROW) or easements are required for the Undertaking.

Staging for the Undertaking would take place along Nona Street, which is a paved road. Project location maps are enclosed in **Attachment A**. Photographs showing the overall character of the project areas are included in **Attachment B**.

Area of Potential Effects (APE)

Pursuant to 36 CFR 800.4(a)(1), the Area of Potential Effects (APE) is defined as the geographic area(s) within which the Undertaking may directly or indirectly affect historic resources. Based on the proposed scope of work, PHMSA has delineated the APE for this Undertaking to encompass the existing ROW where

the pipeline replacement will take place, which includes a dirt and gravel alley way and a small portion of Nona Street, as well as the staging area along Nona Street. The APE extends from 37.14849, -104.50909 at the north end to 37.14736, -104.50993 at the south end and includes the limits of disturbance and any areas that may be particularly susceptible to any potential vibration effects. The APE extends to the depth of proposed ground disturbance of up to 42 inches. The Undertaking does not have the potential to cause visual or audible effects after the completion of construction. The APE map is shown on the map in **Attachment A**.

Identification and Evaluation

To identify historic properties in the APE, individuals who meet the Secretary of the Interior's (SOI) Professional Qualification Standards reviewed available information on previously identified historic properties in the APE, including the National Register of Historic Places (NRHP) database, data received from the Colorado Inventory of Cultural Resources, historic aerials, and the USDA Web Soil Survey. Individuals who meet the SOI Professional Qualification Standards also conducted research to determine if there are any previously unidentified properties within the APE that are 45 years of age or older and may be eligible for the NRHP.

Historic Architecture

There are no NRHP-listed above-ground resources within the APE. Additionally, a search of the Colorado Inventory of Cultural Resources found no known potentially significant above-ground resources within the APE. Due to the scale and nature of the Undertaking, which is limited to the replacement of pipeline within existing ROW, the identification effort for above-ground resources focused on identifying properties that are susceptible to the vibration or physical effects of pipeline replacement and could experience diminished integrity as a result of the Undertaking. The work will not have any lasting visual or audible effects. A review of the APE found no potentially significant above-ground resources that have the potential to be affected by the Undertaking.

Archaeology

U.S. DOT staff requested archaeological data from the Colorado Inventory of Cultural Resources, which was reviewed for the presence of previously recorded archeological sites and previously conducted archeological surveys within the APE or within a half-mile of the APE. As a result, no archaeological sites or surveys were identified within the APE. One archaeological survey (LA.CH.R25) and one archeological site (5LA.11136, Trinidad Country Club and Golf Course) were identified within a half-mile of the APE. Site 5LA.1136 is a historic-age golf course site that was determined to be not eligible for the NRHP in 2011. The Colorado Inventory of Cultural Resources and the Find a Grave online database were also examined to identify the presence of any historic-age cemeteries within the APE. As a result, no cemeteries were identified.

An examination of Web Soil Survey data within the APE revealed one soil type within the APE: Baca silt loam with a 3 to 5 percent slope. This soil type is very deep and well drained, which indicates suitable conditions for human habitation in both the pre-contact and historic periods. Proximity to major waterways generally indicates a suitable environment for both precontact and historic human activity. The closest water source to the APE is Purgatoire River, which flows into Trinidad Lake approximately 2.29 miles west of the APE.

While the APE has not been previously surveyed for archeological resources and the soil type indicates suitable conditions for human habitation, based on the lack of known NRHP-eligible sites in the surrounding area, there is a low potential for significant and intact archeological deposits to exist within the APE. The proposed project is limited to installing 450 linear feet of replacement gas pipeline adjacent to the existing pipeline within the existing ROW and then removing the existing pipeline. The replacement pipeline will be installed at a maximum depth of 42 inches and maximum width of 48 inches. Modern aerial

imagery indicates the Undertaking will occur along the existing alley way and roadway in paved areas and in moderate and heavily disturbed soils. Road and alley construction and previous installation of underground utilities, including the existing pipeline and water utilities, have likely contributed to significant ground disturbance within the APE. Due to the limited scope of work, low likelihood of encountering significant and intact archeological deposits, and previous disturbance of the APE, an archeological survey of the APE is not recommended at this time.

Determination of Effect

Based on the aforementioned identification and evaluation, PHMSA finds that there are no historic properties as defined in 36 CFR 800.16(l) within the APE. Therefore, in accordance with 36 CFR Part 800.4(d)(1), PHMSA has determined the Undertaking will result in No Historic Properties Affected.

Consulting Party Outreach

PHMSA identified parties that may be interested in the Project and its effects on historic properties. PHMSA invites the individuals/organizations copied on this letter to participate as Section 106 consulting parties. Invited parties should indicate their willingness to participate as a consulting party and provide comments on the enclosed form (**Attachment C**) within 30 calendar days from the date on this letter. Note that a non-response is considered to be a declination to participate; however, interested parties can request to join consultation at any time in the process. If any invited party expresses concerns about the Project's potential effects to historic properties, PHMSA will consult with the party to resolve those concerns prior to project implementation.

PHMSA will also invite the following federally recognized tribes to participate in consultation by separate letter:

- Apache Tribe of Oklahoma
- Comanche Nation, Oklahoma
- Fort Belknap Indian Community of the Fort Belknap Reservation of Montana
- Jicarilla Apache Nation, New Mexico
- Navajo Nation, Arizona, New Mexico, and Utah

Request for Section 106 Concurrence

Based on the information presented above, PHMSA finds that the Undertaking will result in No Historic Properties Affected. PHMSA is submitting this Undertaking to your office for your review and comment. PHMSA requests your concurrence with this determination of effect within 30 calendar days of the date of this letter. Should you need additional information, please contact Amy Hootman, Section 106 specialist, at PHMSASection106@dot.gov or 857-998-9981.

Sincerely,

Matt Fuller
Senior Environmental Protection Specialist

MF/ah

cc: Shelby Hanchera, Environmental Protection Specialist, USDOT Volpe Center
Elizabeth Williams, Environmental Protection Specialist, USDOT Volpe Center
Dana White, PHMSA Grant Coordinator
Steve Curro, Gas Utility Director, City of Trinidad

Al Melton, Director, Trinidad History Museum

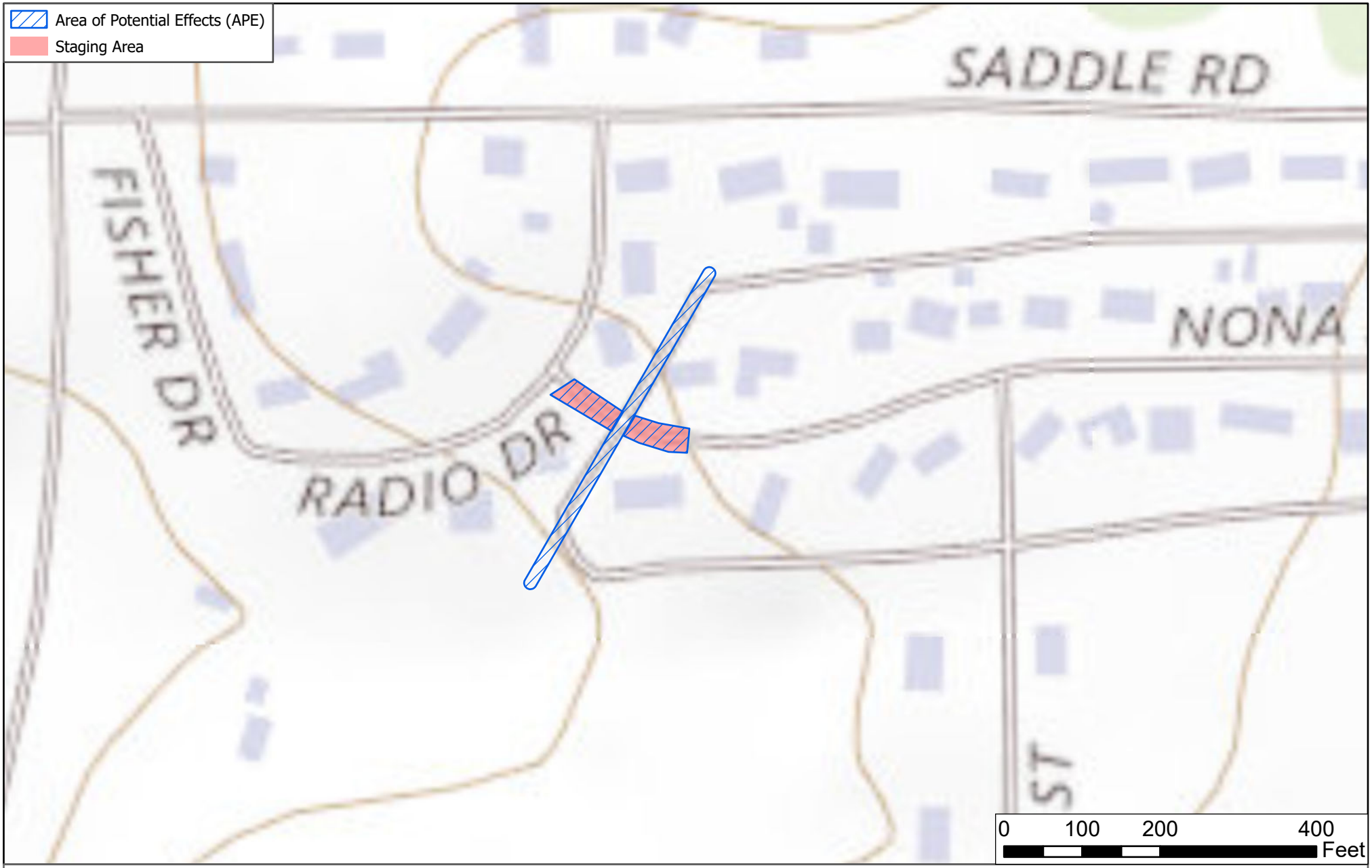
Enclosures:

Attachment A: Project Location and APE Maps
Attachment B: Project Area Photographs
Attachment C: Consulting Party Response Form

ATTACHMENT A

Project Location and APE Maps

Area of Potential Effects Map



Name: Trinidad, Colorado Pipeline Replacement
Scale: 2,000
Total Acreage: 0.29
USGS Basemap: Trinidad
Trinidad, CO, Las Animas County

N

Service Layer Credits: USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed April, 2023.

Area of Potential Effects Map

Name: Trinidad, Colorado Pipeline Replacement
Scale: 2,000
Total Acreage: 0.29
Trinidad, CO, Las Animas County

N

Service Layer Credits: Maxar, Microsoft, Esri Community Maps Contributors, © OpenStreetMap, Microsoft, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA

ATTACHMENT B

Project Area Photographs

Photo 1. Staging area on Nona Avenue, view looking west.

Photo 2. View looking north down APE along alley way in Trinidad, CO.

Photo 3. View looking north down APE along alley way in Trinidad, CO.

Photo 4. View looking north down APE along alley way in Trinidad, CO.

Photo 5. View looking south down APE along alley way in Trinidad, CO.

Photo 6. View looking south down APE along alley way in Trinidad, CO.

Photo 7. View looking south down APE along alley way in Trinidad, CO.

ATTACHMENT C

Consulting Party Response Form

Section 106 Consulting Party Response Form

Pipeline and Hazardous Materials Safety Administration (PHMSA)

Natural Gas Distribution Infrastructure Safety and Modernization Grant Program

Project Name/Location:

Date: _____

Organization: _____

Name: _____

Affiliation: _____

Address: _____

_____

_____

Phone Number: _____

E-mail: _____

Please check one of the following:

○ **Yes,** I, or my organization, would like to participate in consultation on the project's potential effects to historic properties. I, or my organization, has a legal or economic relation to the project or affected properties or have a concern with the project's effects on historic properties.

○ **No,** I, or my organization, do(es) not wish to participate as a consulting party for the project.

Do you know of any other potential consulting parties that should be contacted? If so, please list the name, email, or other contact information below.

_____

_____

_____

Comments: _____

_____

_____

_____

Please return by:

Please return to: Kathering Giraldo
USDOT Volpe Center
220 Binney Street, Cambridge, MA
E-mail: PHMSASection106@dot.gov

U.S. Department
of Transportation
**Pipeline and Hazardous
Materials Safety
Administration**

1200 New Jersey Avenue, SE
Washington, DC 20590

January 10, 2024

Wamblee Smith
Acting Environmental Director
Apache Tribe of Oklahoma
PO Box 1330
Anadarko, OK 73005

Section 106 Consultation: PHMSA Pipeline Replacement Project in Trinidad, Colorado
Grant Recipient: City of Trinidad
Project Location: City of Trinidad, Las Animas County, Colorado

Dear Director Smith:

The Pipeline and Hazardous Materials Safety Administration (PHMSA) provides funds authorized under the Natural Gas Distribution Infrastructure Safety and Modernization Grant Program. PHMSA proposes to provide funds to the City of Trinidad (City) for the replacement of pipeline (Undertaking). PHMSA is initiating consultation for the above referenced Undertaking in accordance with Section 106 of the National Historic Preservation Act of 1966, as amended, and the associated implementing regulations, 36 CFR Part 800 (Section 106). The purpose of this letter is to initiate Section 106 consultation for the Project to determine if there are historic properties of cultural or religious significance to your Tribe that may be affected by the Project, to determine if you want to be a consulting party, and to notify your Tribe of PHMSA's intention to make a finding of No Historic Properties Affected. PHMSA is also available for Government-to-Government consultation on this Program.

Project Description/Background

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Staging for the Undertaking would take place along Nona Street, which is a paved road. Project location maps are enclosed in **Attachment A**. Photographs showing the overall character of the project areas are included in **Attachment B**.

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Pursuant to 36 CFR 800.4(a)(1), the Area of Potential Effects (APE) is defined as the geographic area(s) within which the Undertaking may directly or indirectly affect historic resources. Based on the proposed scope of work, PHMSA has delineated the APE for this Undertaking to encompass the existing ROW where the pipeline replacement will take place, which includes a dirt and gravel alley way and a small portion of Nona Street, as well as the staging area along Nona Street. The APE extends from 37.14849, -104.50909 at the north end to 37.14736, -104.50993 at the south end and includes the limits of disturbance and any areas that may be particularly susceptible to any potential vibration effects. The APE extends to the depth of proposed ground disturbance of up to 42 inches. The Undertaking does not have the potential to cause visual or audible effects after the completion of construction. The APE map is shown on the map in **Attachment A**.

Identification and Evaluation

To identify historic properties in the APE, individuals who meet the Secretary of the Interior's (SOI) Professional Qualification Standards reviewed available information on previously identified historic properties in the APE, including the National Register of Historic Places (NRHP) database, data received from the Colorado Inventory of Cultural Resources, historic aerials, and the USDA Web Soil Survey. Individuals who meet the SOI Professional Qualification Standards also conducted research to determine if there are any previously unidentified properties within the APE that are 45 years of age or older and may be eligible for the NRHP.

Historic Architecture

There are no NRHP-listed above-ground resources within the APE. Additionally, a search of the Colorado Inventory of Cultural Resources found no known potentially significant above-ground resources within the APE. Due to the scale and nature of the Undertaking, which is limited to the replacement of pipeline within existing ROW, the identification effort for above-ground resources focused on identifying properties that are susceptible to the vibration or physical effects of pipeline replacement and could experience diminished integrity as a result of the Undertaking. The work will not have any lasting visual or audible effects. A review of the APE found no potentially significant above-ground resources that have the potential to be affected by the Undertaking.

Archaeology

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Determination of Effect

Based on the aforementioned identification and evaluation, PHMSA finds that there are no historic properties as defined in 36 CFR 800.16(l) within the APE. Therefore, in accordance with 36 CFR Part 800.4(d)(1), PHMSA has determined the Undertaking will result in No Historic Properties Affected.

Request for Information and Comments

PHMSA requests that you provide any information you have regarding historic properties of religious or cultural significance to your Tribe that may be present in the APE and affected by the Undertaking. If your Tribe is unaware of any historic properties beyond what we have identified to date, PHMSA is notifying your Tribe of our intention to make a No Historic Properties Affected finding. Please notify us within 30 days from the date of receipt of this letter if you have any concerns about the project's effects to historic properties. Should you need additional information please contact Amy Hootman, Section 106 specialist, at PHMSASection106@dot.gov or 857-998-9981.

Sincerely,

Matt Fuller
Senior Environmental Protection Specialist

MF/ah

cc: Shelby Hanchera, Environmental Protection Specialist, USDOT Volpe Center
Elizabeth Williams, Environmental Protection Specialist, USDOT Volpe Center
Dana White, PHMSA Grant Coordinator

Enclosures:
Attachment A: Project Location and APE Maps
Attachment B: Project Area Photographs

U.S. Department
of Transportation
**Pipeline and Hazardous
Materials Safety
Administration**

1200 New Jersey Avenue, SE
Washington, DC 20590

January 10, 2024

Jeffery Stiffarm
President
Fort Belknap Indian Community
656 Agency Main Street
Harlem, MT 59526

Section 106 Consultation: PHMSA Pipeline Replacement Project in Trinidad, Colorado
Grant Recipient: City of Trinidad
Project Location: City of Trinidad, Las Animas County, Colorado

Dear President Stiffarm:

The Pipeline and Hazardous Materials Safety Administration (PHMSA) provides funds authorized under the Natural Gas Distribution Infrastructure Safety and Modernization Grant Program. PHMSA proposes to provide funds to the City of Trinidad (City) for the replacement of pipeline (Undertaking). PHMSA is initiating consultation for the above referenced Undertaking in accordance with Section 106 of the National Historic Preservation Act of 1966, as amended, and the associated implementing regulations, 36 CFR Part 800 (Section 106). The purpose of this letter is to initiate Section 106 consultation for the Project to determine if there are historic properties of cultural or religious significance to your Tribe that may be affected by the Project, to determine if you want to be a consulting party, and to notify your Tribe of PHMSA's intention to make a finding of No Historic Properties Affected. PHMSA is also available for Government-to-Government consultation on this Program.

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Historic Architecture

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Archaeology

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Determination of Effect

Based on the aforementioned identification and evaluation, PHMSA finds that there are no historic properties as defined in 36 CFR 800.16(l) within the APE. Therefore, in accordance with 36 CFR Part 800.4(d)(1), PHMSA has determined the Undertaking will result in No Historic Properties Affected.

Request for Information and Comments

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Sincerely,

Matt Fuller
Senior Environmental Protection Specialist

MF/ah

cc: Shelby Hanchera, Environmental Protection Specialist, USDOT Volpe Center
Elizabeth Williams, Environmental Protection Specialist, USDOT Volpe Center
Dana White, PHMSA Grant Coordinator
Michael Blackwolf, Tribal Historic Preservation Officer

Enclosures:
Attachment A: Project Location and APE Maps
Attachment B: Project Area Photographs

U.S. Department
of Transportation
**Pipeline and Hazardous
Materials Safety
Administration**

1200 New Jersey Avenue, SE
Washington, DC 20590

January 10, 2024

Edward Velarde
President
Jicarilla Apache Nation
Building No. 25 Hawks Drive
Dulce, NM 87528

Section 106 Consultation: PHMSA Pipeline Replacement Project in Trinidad, Colorado
Grant Recipient: City of Trinidad
Project Location: City of Trinidad, Las Animas County, Colorado

Dear President Velarde:

The Pipeline and Hazardous Materials Safety Administration (PHMSA) provides funds authorized under the Natural Gas Distribution Infrastructure Safety and Modernization Grant Program. PHMSA proposes to provide funds to the City of Trinidad (City) for the replacement of pipeline (Undertaking). PHMSA is initiating consultation for the above referenced Undertaking in accordance with Section 106 of the National Historic Preservation Act of 1966, as amended, and the associated implementing regulations, 36 CFR Part 800 (Section 106). The purpose of this letter is to initiate Section 106 consultation for the Project to determine if there are historic properties of cultural or religious significance to your Tribe that may be affected by the Project, to determine if you want to be a consulting party, and to notify your Tribe of PHMSA's intention to make a finding of No Historic Properties Affected. PHMSA is also available for Government-to-Government consultation on this Program.

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Matt Fuller
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MF/ah

cc: Shelby Hanchera, Environmental Protection Specialist, USDOT Volpe Center
Elizabeth Williams, Environmental Protection Specialist, USDOT Volpe Center
Dana White, PHMSA Grant Coordinator
Jeffrey Blythe, Tribal Historic Preservation Officer

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U.S. Department
of Transportation
**Pipeline and Hazardous
Materials Safety
Administration**

1200 New Jersey Avenue, SE
Washington, DC 20590

January 10, 2024

Buu Nygren
President
Navajo Nation
PO Box 7440
Window Rock, AZ 86515-7440

Section 106 Consultation: PHMSA Pipeline Replacement Project in Trinidad, Colorado
Grant Recipient: City of Trinidad
Project Location: City of Trinidad, Las Animas County, Colorado

Dear President Nygren:

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Sincerely,

Matt Fuller
Senior Environmental Protection Specialist

MF/ah

cc: Shelby Hanchera, Environmental Protection Specialist, USDOT Volpe Center
Elizabeth Williams, Environmental Protection Specialist, USDOT Volpe Center
Dana White, PHMSA Grant Coordinator
Richard Begay, Tribal Historic Preservation Officer

Enclosures:
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Appendix F

Environmental Justice

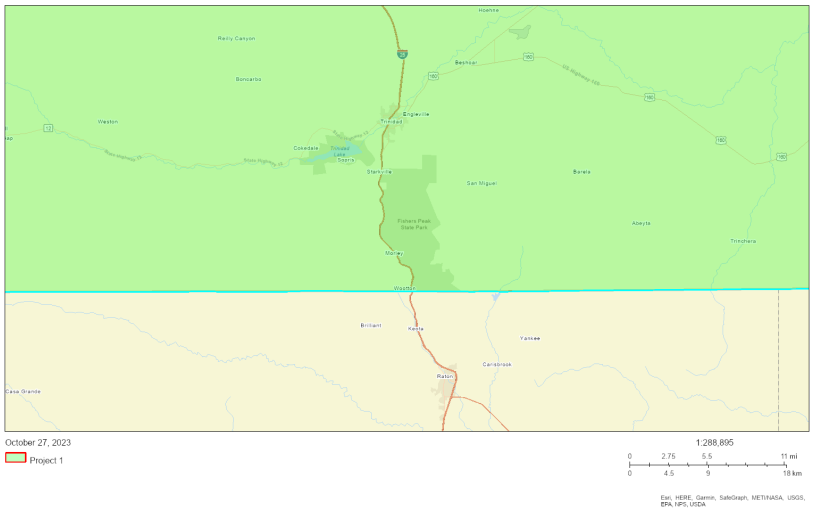
EJScreen Community Report

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

Las Animas County, CO

County: Las Animas
Population: 14,531
Area in square miles: 4775.59

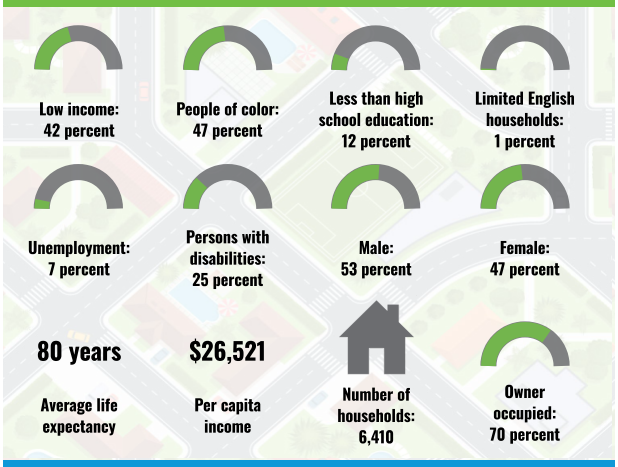
A3 Landscape



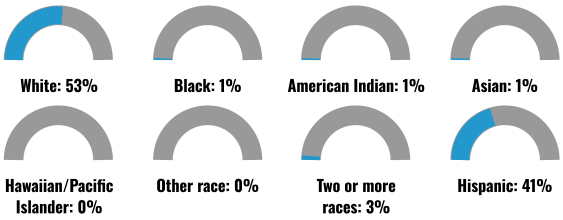
LANGUAGES SPOKEN AT HOME

LANGUAGE	PERCENT
English	87%
Spanish	11%
Total Non-English	13%

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.

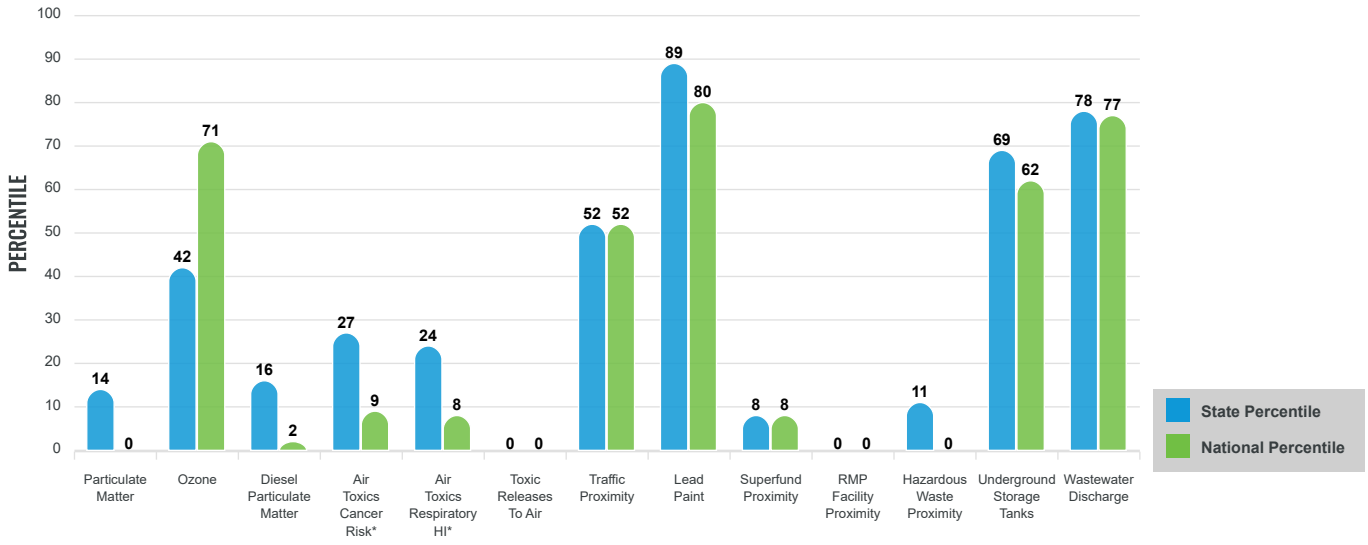
Environmental Justice & Supplemental Indexes

The environmental justice and supplemental indexes are a combination of environmental and socioeconomic information. There are thirteen EJ indexes and supplemental indexes in EJScreen re ecting 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.

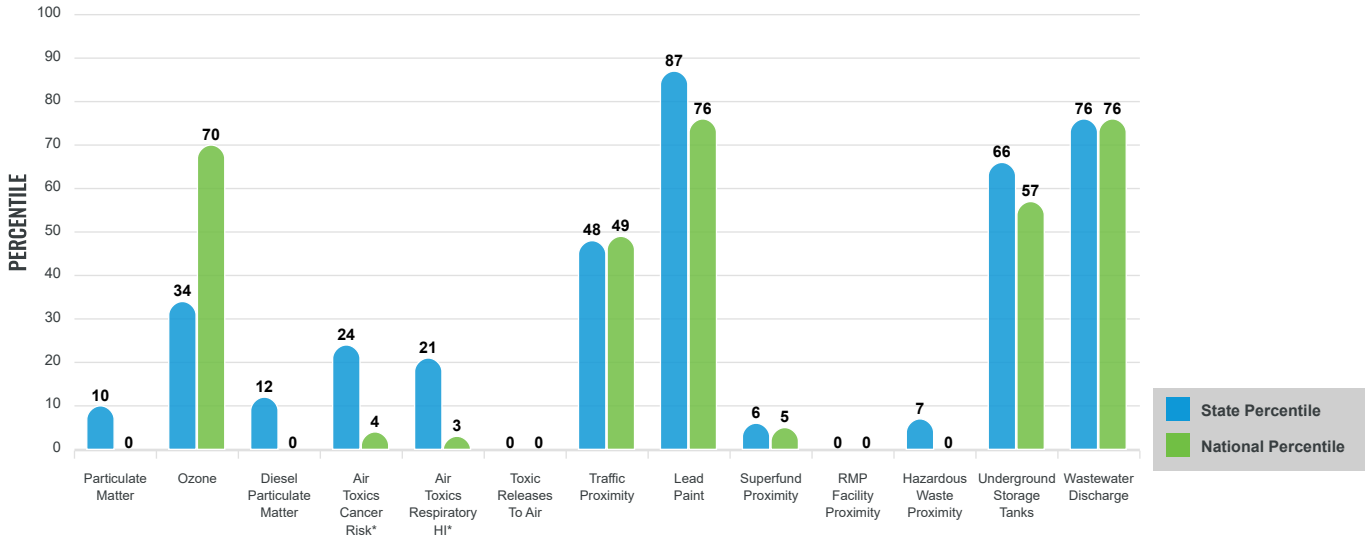
EJ INDEXES FOR THE SELECTED LOCATION



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 County: Las Animas

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)	3.81	6.45	5	8.08	0
Ozone (ppb)	61.5	64.9	18	61.6	53
Diesel Particulate Matter (µg/m^3)	0.0223	0.268	7	0.261	1
Air Toxics Cancer Risk* (lifetime risk per million)	10	21	4	25	1
Air Toxics Respiratory HI*	0.1	0.25	5	0.31	1
Toxic Releases to Air	0.005	3,400	6	4,600	1
Tra c Proximity (daily tra c count/distance to road)	41	180	27	210	36
Lead Paint (% Pre-1960 Housing)	0.46	0.2	81	0.3	71
Superfund Proximity (site count/km distance)	0.01	0.1	3	0.13	4
RMP Facility Proximity (facility count/km distance)	0.0088	0.35	0	0.43	0
Hazardous Waste Proximity (facility count/km distance)	0.0093	0.58	4	1.9	0
Underground Storage Tanks (count/km^2)	2.4	2.7	64	3.9	62
Wastewater Discharge (toxicity-weighted concentration/m distance)	0.021	710	61	22	73
SOCIOECONOMIC INDICATORS					
Demographic Index	44%	28%	80	35%	69
Supplemental Demographic Index	16%	11%	80	14%	66
People of Color	47%	32%	77	39%	64
Low Income	42%	25%	81	31%	71
Unemployment Rate	7%	5%	78	6%	71
Limited English Speaking Households	1%	2%	66	5%	60
Less Than High School Education	12%	8%	77	12%	63
Under Age 5	5%	5%	51	6%	49
Over Age 64	24%	16%	82	17%	79
Low Life Expectancy	19%	18%	60	20%	48

*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 150
Air Pollution 867
Brown elds 18
Toxic Release Inventory 0

Other community features within defined area:

Schools 12
Hospitals 1
Places of Worship 25

Other environmental data:

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

Selected location contains American Indian Reservation Lands* ..... No
Selected location contains a "Justice40 (CEJST)" disadvantaged community ..... Yes
Selected location contains an EPA IRA disadvantaged community ..... Yes

Report for County: Las Animas

EJScreen Environmental and Socioeconomic Indicators Data

HEALTH INDICATORS

INDICATOR	HEALTH VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Low Life Expectancy	19%	18%	60	20%	48
Heart Disease	7.3	4.8	93	6.1	72
Asthma	9.9	9.9	53	10	52
Cancer	6.9	5.9	72	6.1	64
Persons with Disabilities	24.3%	11.4%	97	13.4%	94

CLIMATE INDICATORS

INDICATOR	HEALTH VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Flood Risk	9%	5%	80	12%	63
Wild re Risk	91%	33%	77	14%	91

CRITICAL SERVICE GAPS

INDICATOR	HEALTH VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Broadband Internet	20%	10%	85	14%	73
Lack of Health Insurance	10%	8%	72	9%	69
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

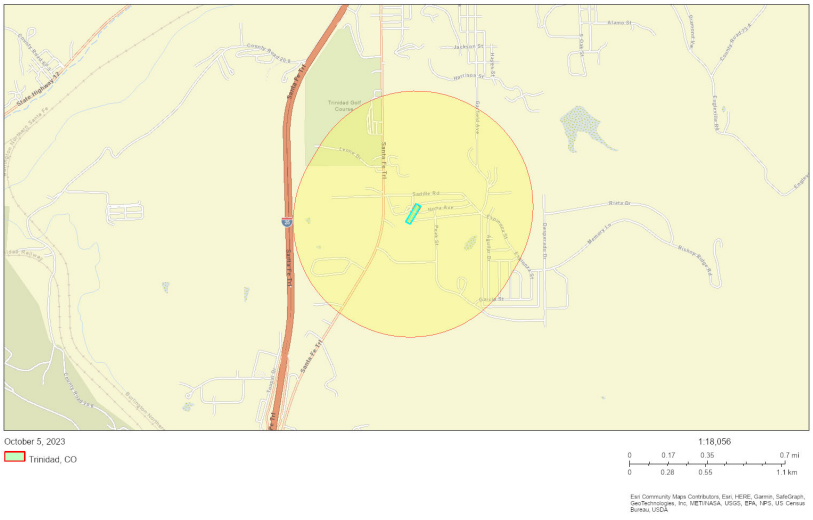
Report for County: Las Animas

E Scr n Communit d Report

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

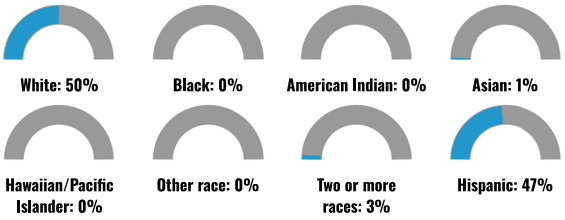
Trinidad, CO

0.5 miles Ring around the Area
Population: 762
Area in square miles: 0.90



COMMUNITY INFORMATION

BREAKDOWN BY RACE



BREAKDOWN BY AGE

LANGUAGES SPOKEN AT HOME

LANGUAGE	PERCENT
English	89%
Spanish	10%
Tagalog (including Filipino)	1%
Total Non-English	11%

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.

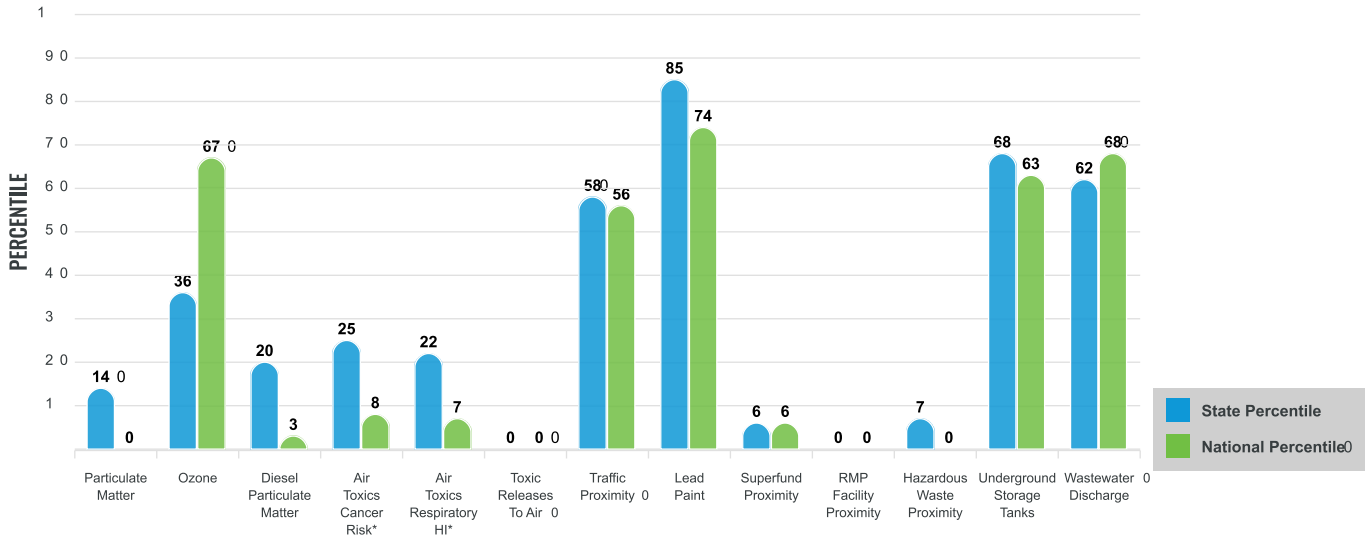
Env ronmental Just ce & Supplemental Indexes

' nmental justice a plemental i combination of environmental and socioeconomic i i . thirteen EJ indexes and supplemental indexes ' en reflectng the 13 nvironmental in icators. Th indexes for a selected area are compared to those for ll other l cation in the state or nation. F r more informa ion and cal ulation etails on the EJ and supplemental indexes, pleas visit th EJScree 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.

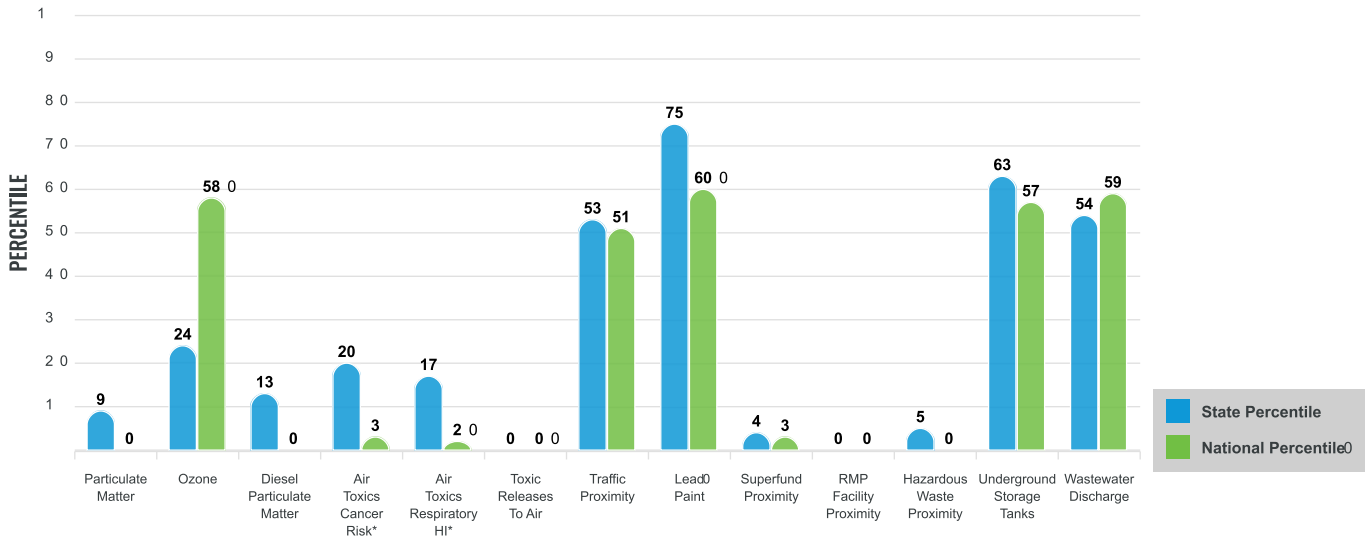
EJ INDEXES FOR THE SELECTED LOCATION0



SUPPLEMENTAL INDEXES 0

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



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Report for .5 miles Ring around the Area

EJScreen Environmental and Socioeconomic Indicators Data w

SELECTED VARIABLES	VALUE	STATE AVERAGE	PERCENTILE IN STATE	USA AVERAGE	PERCENTILE IN USA
POLLUTION AND SOURCES					
Particulate Matter (µg/m^3)	3.82	6.45	6	8.08	0
Ozone (ppb)	61.4	64.9	17	61.6	52
Diesel Particulate Matter (µg/m^3)	0.0256	0.268	8	0.261	1
Air Toxics Cancer Risk* (lifetime risk per million)	10	21	4	25	1
Air Toxics Respiratory HI*	0.1	0.25	5	0.31	1
Toxic Releases to Air	0	3,400	0	4,600	0
Traffic Proximity (daily traffic count/distance to road)	48	180	29	210	39
Lead Paint (% Pre-1960 Housing)	0.44	0.2	80	0.3	69
Superfund Proximity (site count/km distance)	0.0099	0.1	3	0.13	3
RMP Facility Proximity (facility count/km distance)	0.0082	0.35	0	0.43	0
Hazardous Waste Proximity (facility count/km distance)	0.0088	0.58	3	1.9	0
Underground Storage Tanks (count/km^2)	1	2.7	47	3.9	48
Wastewater Discharge (toxicity-weighted concentration/m distance)	0.0019	710	38	22	54
SOCIOECONOMIC INDICATORS					
Demographic Index	39%	28%	76	35%	63
Supplemental Demographic Index	12%	11%	65	14%	49
People of Color	50%	32%	79	39%	66
Low Income	29%	25%	65	31%	53
Unemployment Rate	2%	5%	33	6%	33
Limited English Speaking Households	2%	2%	69	5%	62
Less Than High School Education	6%	8%	59	12%	41
Under Age 5	1%	5%	17	6%	17
Over Age 64	17%	16%	62	17%	57
Low Life Expectancy	22%	18%	86	20%	77

*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 w significant figures here are due to rounding. More information on the Air Toxics Data Update can be found at: https://[redacted].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 1
Air Pollution 1
Brownfields 0
Toxic Release Inventory 0

Other community features within defined area:

Schools 1
Hospitals 0
Places of Worship 0

Other environmental data:

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

Selected location contains American Indian Reservation Lands* ..... No
Selected location contains a "Justice40 (CEJST)" disadvantaged community ..... Yes
Selected location contains an EPA IRA disadvantaged community ..... Yes

Report for 0.5 miles Ring around the Area w

EJScreen Environmental and Socioeconomic Indicators Data

HEALTH INDICATORS

INDICATOR	HEALTH VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Low Life Expectancy	22%	18%	86	20%	77
.	.	.		.	
Asthma	10.4	9.9	75	10	66
		.		.	
Persons with Disabilities	26%	11.4%	98	13.4%	96

INDICATOR	HEALTH VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Flood Risk	4%	5%	59	12%	35
. .					

CRITICAL SERVICE GAPS

INDICATOR	HEALTH VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Broadband Internet	14%	10%	75	14%	61
Lack of Health Insurance	17%	8%	92	9%	88
Housing Burden	No	N/A	N/A	N/A	N/A
Transportation Access	Yes	N/A	N/A	N/A	N/A
Food Desert	No	N/A	N/A	N/A	N/A

Footnotes

Re f 0.5 miles Ring a und he A ea **c**