Pipeline and Hazardous Materials Safety Administration Natural Gas Distribution Infrastructure Safety and Modernization Grant Program
Tier 2 Site Specific Environmental Assessment

For Agency Use Only:

PHMSA Signature Approval
Reviewed By: *Date:*
Concurrence by Approving Official: *Date:*

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; and to (4) document applicable mitigation commitments that will avoid, minimize, or mitigate potential effects. PHMSA will use the information provided in this Tier 2 to determine if any adverse or potentially significant environmental impacts are likely to occur, along with any positive, beneficial impacts. This Tier 2 will provide sufficient evidence and analysis for PHMSA to determine if a Finding of No Significant Impact (FONSI) can be made. If not, additional analysis or the preparation of an Environmental Impact Statement is warranted. This NEPA process must be complete before construction activity may begin.

The provisional selectee [hereinafter project proponent] is responsible for filling out the following sections with a sufficient level of documentation and analysis to help inform PHMSA's determination 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] Documentation and analysis may include background research, results of record searches, field investigations, field surveys, and other technical studies. PHMSA also requests project proponents clearly describe the project area and limits of disturbance, including staging areas, access areas, and location of all construction activities in the project description section below. If possible, please include an aerial map in Appendix 1. If available, please provide geographic information system coordinates for the project area in a geospatial data file. PHMSA will provide support to the project proponent as needed throughout the Tier 2 process.

I. Project Description/Proposed Action

Project Proponent Name	*Enter applicable information here*
Project Proponent Contact *(Phone Number and Email)*	*Enter applicable information here*
Grant Number	*Enter applicable information here*
Project Title	*Enter applicable information here*
Project Location *(city/county/state)*	*Enter applicable information here*

Project Description/Proposed Action:
Include a detailed description of the project including a general location of the project, the limits of construction, construction staging areas, type and duration of construction methods to be used, and a detailed list of any right-of-way acquisitions or easements needed to construct the project. Attach a project map identifying the project construction limits and supporting documentation in Appendix 1. The description should include the

[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

length of repair or replacement segment (in linear feet), diameter of existing pipe and replacement pipe, type of existing pipe and replacement pipe, and construction methods (e.g.: slip lining, directional boring, cut and cover, relocation, abandonment). If known, describe the cover depth and material of the pipeline being repaired or replaced and provide the date (approximation acceptable if records do not exist) the pipeline was installed. For pipe replacements, provide the intended location of the replacement pipe if it differs from the existing location (e.g., above, to the right by 1 foot, etc.). For projects that require the replacement or removal of utility meters, describe if any alteration of buildings would be required. Confirm if any new right-of-way or easements will be required.

Question	**Information**
What construction methods will be used? (Check all methods to be used)	☐ Slip lining ☐ Directional boring ☐ Cut and cover (trenching) ☐ Replacement adjacent to existing pipe ☐ Abandonment of an existing pipe for a new location ☐ Other: _____ ☐ Other_____
Does the project require new right-of-way not currently in the ownership of the utility?	☐ Right-of-way acquisitions (fee simple) ☐ Utility Easement ☐ No new right-of-way or easement needed
How many linear feet of pipe will be replaced or repaired?	☐ _____Linear Feet

Need for the Project:

Include a brief summary of the Project need from the grant application (2-3 sentences).

Equipment-Only Projects:

☐ Yes

Provisionally selected project proponents do not need to provide any additional information, if the project is an equipment-only project and does not involve any construction activities.

Equipment only purchases include hand-held leak detection devices, GIS/GPS monitoring computers or software, or vehicle mounted leak detection equipment. Equipment only purchases do not include new or relocated meters as their installation could include new physical impacts or alterations and/or construction.

Description of the Environmental Setting of the Project Area:
Briefly describe the environmental conditions in the project area that could be affected by the short-term construction impacts of the Project or the long-term effects of the Project(s). The project study area should encompass all areas that will be impacted by construction activities including any area used for staging of equipment or to gain access to the construction site. While the exact study area will vary by resource, a 300-foot buffer around the project construction limits should be considered as a starting point for the analysis of impacts. Describe the existing context and setting in general by identifying the existing land use, a description of prior development, the presence of environmental justice populations (low-income or minority), presence of natural habitat, presence of surface water resources (ponds, lakes, wetlands) and proximity of sensitive land uses such as, residences, schools, and churches. Provide a map and/or aerial photograph of the project area to support the presence or absence of such resources in Appendix 1.

II. Multiple Segments within a Single Project

Input information below for projects that involve multiple segments within a single grant application. Segment numbering should match nomenclature used the grant application. Segment description should include general project location information with GPS coordinates or other clarifying description of the starting and end point for each segment. Insert additional rows below if needed. A separate submission of Section III Resource Review is required for each segment listed in Table 1. Please use nomenclature of segment number for Section III and any supporting Appendices.

Table 1 Project Segments

Segment Number	Segment Location Description

III. Resource Review

Project proponents are to use the following section to assist PHMSA in evaluating potential impacts from construction activities by providing information and justification for the following environmental resource categories. A list of references is contained in Appendix 2 to assist project proponents in preparing the needed documentation.

Appendix 3 provides the mitigation measures included in the Tier 1 EA that could be used to avoid, minimize, or mitigate potential impacts. The project proponent must commit to mitigation measures, including the use of Best Management Practices (BMP), where adverse impacts would result from the construction of the Project. Include references to any technical studies, reports, or other data used in the evaluation and provide these references with your submittal. For projects with multiple segments as described in Section II above, please include section III resource review for each project segment.

Air Quality and Greenhouse Gases (GHG)	
Summary: If the project area is in a non-attainment or maintenance area and construction emissions exceed the de minimis thresholds[2], the EPA's AERMOD dispersion model (or another EPA-approved model) should be used to model construction emissions and the resulting impacts on air quality at sensitive receptors in the study area. PHMSA has developed a worst-case scenario for pipeline replacements that can be used instead of the emissions inventory, see Appendix 4. For project-level construction emissions below de minimis levels, no further analysis is required. PHMSA will work with the project proponent to confirm the project does not exceed the emissions listed in Appendix 4 or to develop an emissions inventory for the expected duration of construction activity and total construction emissions (exhaust and fugitive dust).	
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)?	
Will the construction activities produce emissions that exceed de minimis thresholds (tons per year) described in Table 2 of Appendix 4?	
Will mitigation measures be used to capture blowdown[3]? If not, provide the estimated amount of methane that will be released during construction based on the calculation provided in Appendix 5.	
Using Table 1 in Appendix 6, 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.	
Conclusion: For agency use.	
Mitigation Measures: Project proponents should identify the mitigation actions to be implemented as described in Appendix 3. If not applicable, describe why and list proposed alternative mitigation measures here.	

Water Resources	
Summary: If water resources are within the project area or immediately adjacent to the project area, then those resources must be described in the following section. Impacts should be quantified based on temporary or permanent fill, i.e. soil placement. While sources for identifying water resources vary by state, the U.S. Fish and Wildlife Service's National Wetland Inventory mapper provides a baseline to determine potential water resources within individual project areas.[4] The Federal Emergency Management Administration (FEMA) Flood Map Service Center provides information about flood hazards and flood maps.[5] Additional field surveys may be required to accurately delineate water resources within a project area if resources are potentially present based on the desktop review of available sources. While project proponents are required to provide information on a project's impacts to water resources, the U.S. Army Corps of Engineers (USACE) is responsible for determining whether property is regulated under federal statutes (i.e., whether it is a "waters of the United States"). If proposed actions require a Clean Water Act permit, the project proponent is responsible for working with the USACE, USEPA, and/or the state[6] to obtain such authorization. PHMSA can assist with this process. All permits must be acquired prior to construction.	
Question	**Information and Justification**
Are there water resources within the project area, such as	*Summarize type of resources present within the study area.*

[2] Green Book National Area and County-Level Multi-Pollutant Information | US EPA

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

[4] https://fwsprimary.wim.usgs.gov/wetlands/apps/wetlands-mapper/

[5] https://msc.fema.gov/portal/home

[6] Overview of CWA Section 401 Certification | US EPA

Water Resources	
wetlands, streams, rivers, or floodplains? If so, would the project temporarily or permanently impact wetlands or waterways?	*Include brief description of the type of impacts and quantify impacts in square feet or acreage. Include supporting documentation that identifies location of impacts on an aerial map. If no water resources are present, then no further analysis is required.*
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.	
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.	
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?	*If construction activities will result in more than 1 acre of ground disturbance, then a 402 permit is required.*
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.	
Will the proposed project activities potentially occur within a coastal zone[7] or affect any coastal use or natural resource of the coastal zone, requiring a Consistency Determination and Certification?	
Conclusion: For agency use.	
Mitigation Measures: Project proponents should identify the mitigation actions to be implemented as described in Appendix 3. If not applicable, describe why and list proposed alternative mitigation measures here.	

Groundwater and Hazardous Materials/Waste	
Summary: If hazardous waste is anticipated to occur within the project site, then a Phase I or II Environmental Site Assessment conducted under the American Society for Testing and Materials (ASTM) standards (ASTM 2021) may be necessary to identify and characterize the extent of contamination from all known hazardous materials/waste sites within the project area. Previous reports and data should be provided if available. PHMSA may request additional information or permit documentation from the appropriate state agency.	
Question	**Information and Justification**
Does the project have potential to encounter and impact groundwater? If yes, describe potential impacts from construction activities.	
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.	

[7] 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.)

Groundwater and Hazardous Materials/Waste	
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 proponent for required studies.	
Does the project have the potential to encounter or disturb lead pipes or asbestos?	
Conclusion: For agency use.	
Mitigation Measures: Project proponents should identify the mitigation actions to be implemented as described in Appendix 3. If not applicable, describe why and list proposed alternative mitigation measures here.	

Soils	
Summary: Consideration to soils is covered in other resource topics. If additional impacts related to soils is required, project proponent should document in this section.	
Will all bare soils be stabilized using methods in Appendix 3? Will additional measures be required?	
Will the project require unique impacts related to soils?	
Conclusion: For agency use to document the finding.	
Mitigation Measures: Project proponents should identify the mitigation actions to be implemented as described in Appendix 3. If not applicable, describe why and list proposed alternative mitigation measures here.	

Biological Resources	
Summary: Project proponents must provide information to PHMSA related to federally listed species and critical habitat based on data obtained from the United States Fish and Wildlife Service (USFWS) Information for Planning and Consultation (IPaC) [8] or NOAA Fisheries database for the project. Document any measures that will be taken to minimize or avoid impacts. Based on a review of this information, PHMSA will conduct consultation with USFWS if PHMSA determines a project has the potential to affect listed species or critical habitat.	
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 within the project area?,[9] If no, no further analysis is required.	
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.	
Conclusion: For agency use to document the finding.	

[8] https://ipac.ecosphere.fws.gov/

[9] https://www.fisheries.noaa.gov/species-directory/threatened-endangered

Biological Resources
Mitigation Measures: Project proponents should identify the mitigation actions to be implemented as described in Appendix 3. If not applicable, describe why and list proposed alternative mitigation measures here. PHMSA must be notified immediately to any changes to the scope of work that may change the impacts to biological resources or the areas that may be impacted, including location of work, or any vegetation clearing.

Cultural Resources	
Summary: PHMSA must consider the impact of projects for which they provide funding on historic and archeological properties[10] in accordance with Section 106 of the National Historic Preservation Act (Section 106). Project proponents must coordinate with PHMSA to prepare the required documentation for ensuring compliance with Section 106 including supporting documentation regarding the identification of National Register eligible or listed historic properties and potential effects (see 36 CFR Part 800). PHMSA will conduct Section 106 consultation with the State Historic Preservation Officer (SHPO)/Tribal Historic Preservation Officer (THPO), Advisory Council on Historic Preservation (ACHP) and any federally recognized tribes, as needed, using information provided by the project proponent. The Section 106 process may also include consultation with interested parties, including local historical organizations and Certified Local Governments, to identify any concerns regarding the project and its potential to impact historic properties. Documentation must note the identification of historic properties and evaluation of effects that may result from the project, and requires a project description, APE map, photographs of the project area and nearby properties, description of any consultation and outreach efforts, any cultural resources survey reports conducted for the project, an inventory of identified historic properties in the project area, and the effect determination for the project. Note that PHMSA may treat properties in the APE as eligible for the purposes of consultation on this project, which is not a formal determination of eligibility.	
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 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.[11]	
Does the project or any part of the project take place on tribal lands or land where a tribal cultural interest may exist?[12]	
Are there any nearby properties or resources that either appear to be or are documented to have been constructed more than 45 years ago?[13] 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.	
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.	

[10] Historic property means any prehistoric or historic district, site, building, structure, or object included in, or eligible for inclusion in, the National Register of Historic Places (National Register) maintained by the Secretary of the Interior. This term includes artifacts, records, and remains that are related to and located within such properties. The term includes properties of traditional religious and cultural importance to an Indian tribe or Native Hawaiian organization and that meet the National Register criteria.

[11] 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.

[12] 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/.

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

Cultural Resources	
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.	
Conclusion: For agency use to document finding.	
Mitigation Measures: Describe any measures necessary to avoid, reduce or mitigate impacts to historic properties, including aboveground historic resources and belowground archaeological resources that may be present or may be discovered during project implementation. Note any other conditions for implementation of the project, such as archaeological monitoring. PHMSA must be notified immediately to any changes to the scope of work that may change the impacts to historic properties or the areas that may be impacted, including location of work, depth of construction, or change in construction methods. If, during project implementation, and features or human remains are discovered or effects to historic properties occur that were not anticipated during the Section 106 process, PHMSA must be immediately notified and all construction in the area of the discovery must halt until further direction is provided. See unanticipated discoveries protocol for more detail.	

Section 4(f)	
Summary: Project proponents must provide an inventory of Section 4(f) properties[14] within the project area to assist PHMSA in identifying a potential use of Section 4(f) properties and determine any associated coordination and documentation requirements. Section 4(f) properties include publicly-owned parks, recreation areas, and wildlife and waterfowl refuges. PHMSA can assist with the identification of Section 4(f) properties.	
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.	
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.	
Conclusion: For agency use to document finding.	
Mitigation Measures: Project proponents should identify the mitigation actions to be implemented as described in Appendix 3. If not applicable, describe why and list proposed alternative mitigation measures here. PHMSA must be notified immediately to any changes to the scope of work that may change potential use of a Section 4(f) property or the areas that may be impacted, including location of work.	

Land Use and Transportation	
Summary: Environmental reviews, surrounding land uses and local land use plans, policies, and regulations will need to be assessed against the proposed project. Local policies concerning the context of transportation-related impacts should be evaluated with proposed construction impacts related to transportation access and connectivity.	
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	

[14] Sources for identifying potential Section 4(f) properties include state and local GIS mapping databases typically available through city or county accessors offices.

Land Use and Transportation	
needed.	
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 would changes affect the public?	
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?	
Conclusion: For agency use.	
Mitigation Measures: Will the project proponent adhere to all mitigation actions as described in Appendix 3? If not, describe why and list proposed alternative mitigation measures here.	

Noise and Vibration	
Summary: Based on the information provided, PHMSA will determine if adverse noise impacts may occur and if additional mitigation measures are required. PHMSA will work with Project proponents if there is potential for adverse noise impacts.	
Question	**Information and Justification**
Will the project construction occur for longer than a month at a single project location?	
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?	
Will the project require high-noise and vibration inducing construction methods? If so, please specify.	
Will the project comply with state and local ordinances? If so, identify applicable ordinances and limitations on noise/vibration times or sound levels.	
Will construction activities require large bulldozers, hoe ram, or other vibratory equipment within 20 feet of a structure?	
Conclusion: For agency use.	
Mitigation Measures: Project proponents should identify the mitigation actions to be implemented as described in Appendix 3. If not applicable, describe why and list proposed alternative mitigation measures here.	

Environmental Justice
Summary: PHMSA will work with Project proponents to conduct a project-specific Environmental Justice (EJ) analysis assessing the benefits and burdens that may be experienced by EJ populations. The project proponent may use the Environmental Protection Agency (EPA) EJScreen or other census data to determine presence or absence of EJ populations in the project area. PHMSA will work with project proponents to examine and document meaningful public outreach activities and to identify the benefits and burdens of the project on EJ populations. [15] See Appendix 7 for instructions about the use of EPA EJScreen. PHMSA will use results of the EJ analysis to confirm no disproportionately high and adverse effects would occur and to document any applicable avoidance, minimization, and/or mitigation efforts agreed to during the public outreach activities and those identified to reduce effects to EJ communities.

[15] EJScreen: Environmental Justice Screening and Mapping Tool | US EPA at https://www.epa.gov/ejscreen

Environmental Justice	
Question	**Information and Justification**
Using the EPA EJScreen or census data[16], 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.	
Will the project displace existing residents or workers from their homes and communities? If so, what is the expected duration?	
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?	
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?	
Conclusion: For agency use to document no disproportionately high and adverse effects would occur.	
Mitigation Measures: Project proponents should identify the mitigation actions to be implemented as described in Appendix 3. If not applicable, describe why and list proposed alternative mitigation measures here.	

Safety	
Summary: The Project proponent may reference the operator's Distribution Integrity Management Plan (DIMP) for the following safety related items.	
Question	**Information and Justification**
Has a risk profile been developed to describe the condition of the current infrastructure and potential safety concerns?	
Has a public awareness program been developed and implemented that follows the guidance provided by the American Petroleum Institute (API) Recommended Practice (RP) 1162?	
Does the project area include pipes prone to leakage?	
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.	
Has an assessment of the project been performed to analyze the risk and benefits of implementation?	
Conclusion: For agency use.	
Mitigation Measures: Project proponents should identify the mitigation actions to be implemented as described in Appendix 3. If not applicable, describe why and list proposed alternative mitigation measures here.	

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

IV. Public Involvement

On June 16, 2022, PHMSA published a Federal Register notice (87 FR 36374) with a 60-day comment period soliciting comments on its intent to request Office of Management and Budget three-year approval of an information collection titled: "The Natural Gas Distribution Infrastructure Safety and Modernization Grant Program". During the 60-day comment period three comment letters were received from the Distribution Contractors Association, the American Public Gas Association (APGA), and the Plastics Pipe Institute. These letters are available for public review at the Docket No: PHMSA-2022-0009[17]. The commenters noted support for the program and did not raise any specific environmental concerns. The APGA also provided comments related to the grant application process, providing general suggestions including a request to clarify the timing of the Tier 2 process.

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[18]. 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 solicited in this Tier 2.

The project proponent and PHMSA will list all planned public involvement for the individual Tier 2 EA such as:

- Coordination with local community leaders and groups;
- Advanced notification of service disruptions and construction schedule;
- Services maintained at temporary facilities, if appropriate;
- Public engagement to reduce project delivery delays and public controversy;
- Outreach plans to involve and engage all populations; and
- Incorporate public awareness programs.

Following publication of the draft Tier 2 EA and an opportunity for community members to comment, the Final Tier 2 EA/FONSI, will include a summary of all public involvement activities. The Final Tier 2 EA/FONSIs will be published on PHMSA's website and listed in the regulations.gov docket.

V. List of Agencies and Persons Consulted

Provide a summary of the interested and affected persons that were consulted during the preparation of this Tier 2. Please include a description of how and where the Environmental Assessment was published and include any agency consultation documents as Appendix 8.

VI. Unanticipated, Adverse Environmental Impacts

If unanticipated, adverse environmental impacts could result from the project, this section will reference the impacts, as identified above, and provide additional context and analysis. This section would also likely propose additional mitigation actions.

VII. Finding of No Significant Impact

[17] https://www.regulations.gov/docket/PHMSA-2022-0009/comments
[18] https://www.regulations.gov/document/PHMSA-2022-0123-0002/comment

Consistent with the Tier 1, PHMSA will make a Finding of No Significant Impact (FONSI) if a project demonstrates anticipated, nonsignificant impacts wherein the project proponent has committed to complete required mitigation.

The draft Tier 2 EA will be published for public comment on the project proponent's website and notice and the ability to submit comments will be provided to interested persons and the affected community. PHMSA will then review comments, consider environmental impacts, additional mitigation actions, and other factors before determining whether to: (1) proceed with preparation of an environmental impact statement; (2) decline to fund the project; or (3) publish a final Tier 2 EA document including responses to any comments received, modified analysis, and/or mitigation actions, and conclude with a FONSI.

PHMSA is proposing to a make a FONSI for each project site that meets the following conditions:

- The Tier 2 is complete and accurate.
- The types and extent of anticipated environmental impacts is as expected in the Tier 1 EA.
- Project proponent commits to compliance with applicable Federal and state and local environmental requirements.
- The project proponent has committed to perform appropriate and applicable mitigation as described in the Tier 2.

These completed documents will become Final Tier 2/FONSIs, and their publication on PHMSA's website and listed in the regulations.gov docket will complete the NEPA process for the sites.

If PHMSA determines that a Tier 2 demonstrates adverse types or levels of environmental impacts that were not sufficiently analyzed in the Tier 1 EA, the project proponent will prepare a draft Tier 2 EA, which will include a description and analysis of any unanticipated adverse environmental impacts based on environmental resources identified. This information will be added as a narrative section attached to the Tier 2. PHMSA and the project proponent will propose additional mitigation actions, if necessary, to minimize the unanticipated impacts resulting from project activities. In the event that the project proponent is unable or unwilling to perform additional mitigation actions necessary to support a FONSI, PHMSA may prepare an environmental impact statement or decline to fund the project.

Appendix 1: Project Maps

Appendix 2: List of References

Resource	Description	Source
Air Quality	Attainment status can be found in CFR 40 Part 81, or in EPA's Green Book.	https://www.epa.gov/green-book
Water Resources	The National Wetlands Inventory (NWI) was established by the US Fish and Wildlife Service (FWS) to conduct a nationwide inventory of U.S. wetlands to provide biologists and others with information on the distribution and type of wetlands to aid in conservation efforts.	https://fwsprimary.wim.usgs.gov/wetlands/apps/wetlands-mapper/
Water Resources	The FEMA Flood Map Service Center (MSC) is the official public source for flood hazard information produced in support of the National Flood Insurance Program (NFIP). Use the MSC to find your official flood map, access a range of other flood hazard products, and take advantage of tools for better understanding flood risk.	https://msc.fema.gov/portal/home
Biological Resources	Provides information to see if any listed species, critical habitat, migratory birds, or other natural resources may be impacted by your project.	https://ipac.ecosphere.fws.gov/
Biological Resources	Information for endangered and threatened marine species through NOAA Fisheries.	https://www.fisheries.noaa.gov/species-directory/threatened-endangered
Cultural Resources	Listing of SHPO websites.	https://www.nps.gov/subjects/nationalregister/state-historic-preservation-offices.htm
Cultural Resources	A Citizen's Guide to Section 106 Review	https://www.achp.gov/sites/default/files/documents/2017-01/CitizenGuide.pdf
Cultural Resources	TDAT allows users to identify tribes that may have an interest in a project and provide tribal contact information to assist users with initiating Section 106 consultation under the National Historic Preservation Act (54 U.S.C. § 300101 et seq.).	https://egis.hud.gov/TDAT/
Environmental Justice	EJScreen is an EPA's environmental justice mapping and screening tool that provides EPA with a nationally consistent dataset and approach for combining environmental and demographic socioeconomic indicators.	www.epa.gov/ejscreen

Appendix 3: Summary of Environmental Mitigation Measures

Resource	Activity	Standard Avoidance, Minimization, and/or Mitigation Measure[19]	Additional Mitigation Potentially Required Based on Construction Activities
Air Quality and Greenhouse Gas	Combustion Emissions from Construction Equipment	• Efficient use of on-road and non-road vehicles, by minimizing speeds and vehicles • Minimizing excavation to the greatest extent practical • Use of cleaner, newer, non-road equipment as practicable • Minimizing all vehicle idling and at minimum, conforming with local idling regulations • Ensuring that all vehicles and equipment are in proper operating condition	
Air Quality and Greenhouse Gas	Combustion Emissions from Construction Equipment	• On-road and non-road engines must meet EPA exhaust emission standards (40 CFR Parts 85, 86, and 89)	
Air Quality and Greenhouse Gas	Suppression of Particulate Matter	• Covering open-bodied trucks while transporting materials • Watering, or use of other approved dust suppressants, at construction sites and on unpaved roadways, as necessary • Minimizing the area of soil disturbance to those necessary for construction • Minimizing construction site traffic by the use of offsite parking and shuttle buses, as necessary	
Air Quality and Greenhouse Gas	GHG Emissions	• Minimizing/eliminating idling of equipment	
Air Quality and Greenhouse Gas	Methane Release/Pipeline Blowdown	• If possible, operate downstream compression after upstream valve is closed • If possible, use additional compressors to move gas or pull line down to lower pressure (e.g., incremental gain)	• Transfer gas to a parallel line

[19] If these measures are not possible or impracticable, project proponent can provide a brief explanation to justify the reason in the applicable resource section.

Resource	Activity	Standard Avoidance, Minimization, and/or Mitigation Measure[19]	Additional Mitigation Potentially Required Based on Construction Activities
Water Resources	Construction in Wetland and Stream Crossings	• Avoidance of staging and laydown areas in wetland or floodplain • Reseeding of native plant species, if disturbed • Restore to pre-construction contours • Adherence to additional mitigation measures in accordance with applicable permits	
Groundwater and Hazardous Materials/Waste	Construction and Restoration	• Stormwater Pollution Prevention Plan • No boring/drilling, staging, and laydown areas within EPA superfund sites or areas containing known waste	• Groundwater Management Plan • Soil Management Plan • Notification program to alert emergency response agencies, residents, regulatory agencies of release or exposure • IR plan to control and minimize impacts to sensitive resources, if boring/drilling required
Soils	Soil Stabilization	• Erosion and sediment control • Silt fence, check dams, covering all bare areas • All impacted areas to be restored to pre-construction contours • Permanent stabilization via appropriate materials	
Biological Resources	ESA Listed Species and Critical Habitat		• Avoid mating and nesting season • Placement of exclusion fencing • Use of biological monitors on-site • Adherence to additional measures based on agency consultation
Cultural Resources	Adverse Effects		• Archaeological monitoring during initial excavation • Post-review discovery plans
Section 4(f)	Use of Property	• Ensuring access to resource during construction • Restoring site to pre-existing conditions	• Additional measures determined through coordination with OWJ
Land Use	Construction	• Impacted areas restored to pre-construction conditions • Coordination with property owners	

Resource	Activity	Standard Avoidance, Minimization, and/or Mitigation Measure[19]	Additional Mitigation Potentially Required Based on Construction Activities
		• Traffic Control Plan • Coordination with emergency services and other agencies • Notification to residents and business of parking impacts	
Noise and Vibration	Construction and Equipment	• Adhere to state, local, and tribal noise regulations • Limiting activities to occur only during normal weekday business hours, when noise restrictions are not in place • Proper maintenance of equipment mufflers • Use of acoustical noise tent and/or enclosures surrounding hoe rams, jackhammers, or pavement breakers, to the extent practicable given space constraints at work sites	
Environmental Justice	Public Participation	• Coordination with local community leaders and groups • Advanced notification of service disruptions and construction schedule • Services maintained at temporary facilities, if appropriate	
Socioeconomics	Community Impacts	• Public engagement to reduce project delivery delays and public controversy • Outreach plans to involve and engage all populations	
Safety	Public Awareness	• Incorporate public awareness programs	
Safety	Construction	• Use of standard construction safety methods and procedures	

Appendix 4: Air Quality Construction Emissions Analysis

Construction emissions for a pipeline replacement project were assessed to determine whether projects funded by the Program are likely to require an air quality conformity analysis.[20] Emissions were modeled using the Federal Highway Administration's Congestion Mitigation and Air Quality Improvement (CMAQ) Toolkit. The Construction and Intermodal Equipment CMAQ tool[21] estimates the emissions benefits of projects that upgrade diesel non-road equipment to newer model years or cleaner engines (e.g., change in fuel type or retrofitting with an emissions control technology). The tool uses emission rates derived from the Environmental Protection Agency's Motor Vehicle Emissions Simulator (MOVES) model. Emission rates vary depending on equipment type, model year, and horsepower.
An emissions inventory for a typical pipeline replacement project was developed using Equation 1.

$$Emissions = ER \times LF \times opHr \times NumEquip \qquad (1)$$

where ER is the emission rate in kg/hr, LF is the load factor, opHr refers to the operating hours for one piece of equipment, and NumEquip is the fleet size. The load factor describes the average load a piece of equipment draws in a specified time period to the full (peak) load it could draw. The following assumptions were used in the emissions analysis.

Table 1. Assumptions used in construction emissions analysis

Parameter	Assumption
Year Project will be Implemented	2023
Model Year	2015 or 2022
Equipment Types	Backhoe/Excavator, Tractor, Paver, Roller, Dump Truck
Fuel Type	Diesel
Load Factor	Default factors from MOVES-nonroad
Horsepower	Derived from common manufacturer specifications for each equipment type

Table 2. Emissions modeling inputs for construction analysis

Equipment Type	Fleet Size	Rated Engine Power Range (hp)	Fuel Type	Operating Hours	Load Factor
Backhoe/Excavator	1	300 < hp ≤ 600	Diesel	16	0.59
Tractor	1	100 < hp ≤ 175	Diesel	8	0.21
Paver/Screed	1	100 < hp ≤ 175	Diesel	8	0.59
Roller	1	175 < hp ≤ 300	Diesel	8	0.59
Dump Truck	1	300 < hp ≤ 600	Diesel	16	0.59

[20] https://www.epa.gov/general-conformity
[21] https://www.fhwa.dot.gov/environment/air_quality/cmaq/toolkit/#sect2c

Appendix 5: Methane Blowdown Estimate

PHMSA estimated methane emissions from pipeline blowdowns, which are typically necessary to ensure that construction and maintenance work can be conducted safely on depressurized natural gas facilities and pipelines. A substantial amount of methane may be released during a blowdown event depending on the pipeline pressure, and the pipeline volume (V) between isolated parts of the system.

The following equation should be used to estimate blowdown emissions in metric cubic feet (MCF), using the length of pipeline being replaced, the existing 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):

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

Appendix 6: Methane Leak Rate pre/post Construction

Use the following table to identify methane leak rate based on pipeline material that will be replaced by the program based an Average Methane Emission Factors (kg/mile activity) for Natural Gas Pipelines.

Table 1 EPA GHG Inventory - Annex 3.6, Table 3.6-2

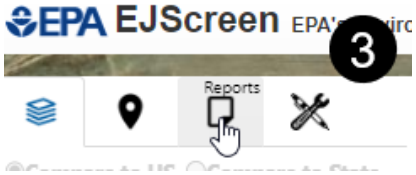
Pipeline Material Type	Average Rate (kg/mile/year)
Cast Iron	2,877.35
Unprotected steel	1,491.80
Protected steel	77.90
Plastic	109.85

Appendix 7: How to use EJScreen

The required demographic data is entered into the Environmental Justice Section above. Data from reports are used to confirm if minority or low income populations occur within the project area. [22]

The project proponent must perform the following:

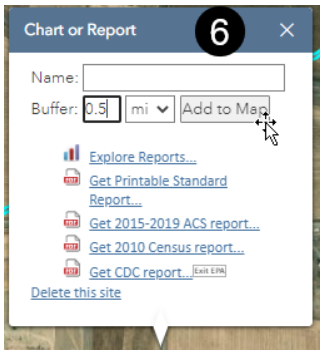
1. The project proponent must use the EJScreen Tool for the analysis, which is found at https://ejscreen.epa.gov/mapper/



2. Find location (by City etc) using the right-hand search bar
3. Click on Reports in the left-hand menu ❸.
4. Select Add a Path ❹

5. Click on the start point of line on map – add any additional point(s) to create the centerline – at the last point double click with your mouse to end the line creation.

[22] Minority*: The term minority is used in the currently active DOT Environmental Justice Order 5610.2(c). People of Color**: The term people of color is used in EPA's Environmental Justice Screening and mapping tool (EJSCREEN).



6. Chart or Report menu will pop up. Set Buffer to 0.5 miles. Click Add to Map 6

7. On the **Chart or Report** menu, click **Get Printable Standard Report**.
8. The EJScreen Report will open in a browser window.
9. Transcribe the data into the **Environmental Justice section above**:

- **Total Population (Along the Special Permit Segment)** with the Approximate Population on the top of document. A
- **Minority/People of Color Population (Percent)**, **Low Income Population (Percent),** and **Linguistically Isolated Population (Percent)** at the bottom of the document. The information from the first column **Value** should be used. B

Socioeconomic Indicators			
Demographic Index	65%	2 B	91
People of Color	61%	25%	87
Low Income	70%	32%	93
Unemployment Rate	12%	6%	88
Linguistically Isolated	15%	2%	97
Less Than High School Education	25%	9%	94
Under Age 5	8%	6%	78
Over Age 64	10%	17%	23

*Diesel particulate matter, air toxics cancer risk, ǂA's 2017 Air Toxics Data Update, which is th
toxics in the United States. This effort aims to priterest for further study. It is important to reme

10. Click the **Save as PDF** button as shown at the top left of the screen. ❿

Save the PDF with a title “EJScreen – Project Name’ for submittal with the application package.

Appendix 8: Agency Consultation Letters (i.e., Section 106 SHPO Consultation Letters, USFWS Consultation)