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

Natural Gas Distribution Infrastructure Safety and Modernization Grant Program
City of Holyoke Gas and Electric Company, Massachusetts
Tier 2 Site Specific Environmental Assessment
NGDISM-FY22-EA-2023-26

PHMSA Approval:

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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; (4) document applicable mitigation commitments that will avoid, minimize, or mitigate potential effects; and (5) seek comments from the public. This Tier 2 analysis informs the Pipeline and Hazardous Materials Safety Administration's (PHMSA) 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-2023-26 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 measure, or prepare an Environmental Impact Statement

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I. Project Description/Proposed Action

Project Title	City of Holyoke Gas and Electric Company
Project Location	Holyoke, Hampden County, Massachusetts

Project Description/Proposed Action:

The City of Holyoke Gas and Electric Company (HG&E) proposes to replace approximately 16,265 feet (3.08 miles) of low-pressure cast iron natural gas and 0.25 mile of protected steel mains in Ward 1-A of Holyoke, MA. Ward 1A consists of the oldest gas infrastructure in HG&E's distribution system; installed between 1880 and 1960.

The replacement of the pipeline mains and service lines would require trenching beneath pavement. Approximately 1.78 miles of polyethene pipe and 1.38 miles of protected steel would be installed within the project area. 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, HG&E would utilize an open trench method, which generally involves greater soil disturbance and use of heavy equipment and related impacts than the insertion method. Newly installed natural gas mains and services would be installed at a depth of four to six feet within the existing right-of-way (ROW) or utility easements. The Proposed Action also includes replacement of service lines and meters. Natural gas meters would be relocated outside the building serviced if feasible. Building alterations would consist of up to three-inch core drill holes in the building to reconnect to existing customer owned pipe.

[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

The existing pipelines would be abandoned in place. Abandonment of the existing pipeline (versus excavation and removal) would minimize ground disturbance and facilitate the replacement process in a more efficient manner. PHMSA has specific requirements for gas and hazardous liquid pipeline abandonment, found in 49 CRF 192.727 and 195.402(c)(10). These requirements include disconnecting pipelines from all sources and supplies of gas, purging all combustibles and sealing the facilities left in place. By complying with PHMSA requirements for purging and sealing abandoned pipelines HG&E would ensure that the abandoned pipelines pose no risk to safety in their abandoned state.

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, HG&E would continue to use cast iron 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 HG&E 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 pipe 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:

Replacing the leak prone cast iron mains, along with associated services, would eliminate the majority of the two highest identified risks in HG&E's gas distribution system and within an underserved community. Eliminating those risks greatly reduces the risk of an incident or fatality occurring resulting from a natural gas leak. 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 the environment by reducing climate impacts by remediating aged and failing pipelines and pipe prone to leakage.

Description of the Environmental Setting of the Project Area:

Ward 1A of Holyoke is a completely paved urban area that contains residential, commercial, and industrial buildings. The residential buildings range from single family homes to four story or greater apartment blocks. The commercial properties include bodegas, storefronts, and restaurants.

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 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?	N/A
Will mitigation measures be used to capture blowdown[3]?	Yes, methane would be captured using cross compression technology.
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?	No
Will project proponent commit to reducing pressure on the 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.	No, however the system currently operates at a low pressure of 0.33 pounds per square inch (PSI). If cross compression technology is not utilized, based on the size of the existing pipes,8.24 thousand cubic feet (MCF) or 253 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 existing leak rate is 14,175 kg/year. Replacement would result in a leak rate of 185 kg/year or a reduction of 14,124 kg/yr. [4]

Conclusion:

The project area is located in an area designated by the EPA as in attainment for all National Ambient Air Quality Standards (NAAQS).

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 leak prone pipe material. Under the No Action alternative, PHMSA estimates that 14,175 kg of methane would be released each year from the existing pipelines within the project area. The total methane emissions within the project area were extrapolated over 20 years to represent the continuation of methane release under the No Action alternative. This amounts to 283,495 kg of methane over a 20-year time frame. See Appendix B for the methane leak rate calculations.

Proposed Action:

The Proposed Action alternative would result in minor air quality impacts associated with construction activities.

[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.

[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.

Pipeline blowdowns are typically necessary to ensure that construction and maintenance work can be conducted safely on depressurized natural gas facilities and pipelines. All methane would be captured using cross compression technology when feasible. Therefore, a minimal amount of methane could be vented during construction. As described in the Tier 1 EA, methane leaks from natural gas distribution pipelines increase with age and are considerably higher for bare 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 14,124 kg of methane per year. This amounts to a reduction of 282,470 kg of methane over a 20-year time frame. See Appendix B for the methane reduction calculations. Therefore, it is PHMSA's assessment that the proposed project would provide a net positive 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:

HG&E shall implement the following mitigation measures:

- 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
- On-road and non-road engines must meet EPA exhaust emission standards (40 CFR Parts 85, 86, and 89)
- 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
- Cross-compression technology will be used to capture methane

Water Resources	
Question	**Information and Justification**
Are there water resources within the project area, such as wetlands, streams, rivers, or floodplains? If so, would the project temporarily or permanently impact wetlands or waterways?	Yes, wetlands and waterways are located adjacent to the project area according to United States Fish and Wildlife (USFWS) National Wetland Inventory (NWI).
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, based on review of FEMA National Flood Hazard Layer FIRMette map.
Will the proposed project activities potentially occur within a coastal zone[5] or affect any coastal use or natural resource of the coastal zone, requiring a Consistency Determination and Certification?	No

Conclusion:

PHMSA reviewed NWI maps, as well as the FEMA National Flood Hazard Layer FIRMette map. The project traverses within 100 feet of NWI mapped waterways. These waterways are constructed canals lined with concrete floodwalls. FEMA's FIRMette map indicates portions of the project area are located adjacent but outside of a FEMA Zone AE, which is a special flood hazard area (SFHA) and corresponds to the one percent annual chance of flooding. See Appendix C for water resource related documentation.

No Action:

Under the No Action alternative, the existing pipeline would remain in the current location and normal maintenance activities would continue without any impact anticipated to water resources. Minor impacts to waterways and wetlands could occur due to maintenance and repair.

Proposed Action:

As noted above, there are several concrete lined canals identified within close proximity to where the work would occur. Because work is limited to the paved ROW, there would be no direct impact to these waterways. To ensure offsite sedimentation does not impact these waterways, all staging and stock piling of soil would be protected using sediment control measures such as straw wattles and covering of bare soils. All work would take place outside of the designated FEMA Zone AE floodplain, avoiding potential impacts.

Based on information provided by the project proponent and a review of available information, PHMSA's assessment is that there would be no temporary or permanent impacts to wetland resources. The new pipeline placement and abandonment of the existing pipeline is not anticipated to cause any reasonably foreseeable indirect effects or cumulative effects to water resources as none are in the footprint of the proposed work. Therefore, it is PHMSA's assessment that there would be no adverse impacts to water resources.

Mitigation Measures:

- HG&E shall ensure its employees and contractors do not use floodplain areas for staging or stockpiling of soil.
- HG&E shall ensure staging and stockpiling of soil does not occur within 100 feet of waterways. Where 100 feet is not feasible all bare soil will be protected with straw wattles or covered to ensure off site sedimentation does not occur.
- All tree belt areas between paved roads and sidewalks (if disturbed) will be seeded, and all road grades will be restored to pre-construction contours.

[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.)

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, groundwater is not anticipated to be encountered.
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 proponent for required studies.	No
Does the project have the potential to encounter or disturb lead pipes or asbestos?	No

Conclusion:

PHMSA reviewed EPA's NEPAssist website to identify any brownfield properties, hazardous waste sites, and superfund sites. [6] No sites were identified within the project area. PHMSA reviewed the USDA NRCS's web soil survey which indicates that the project area is comprised of urban, previously disturbed soils. [7]

No Action:

Under the No Action alternative, the cast iron and 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 cast iron and steel pipes remain (EPA, PRO Fact Sheet No. 402 [8]) and risks of failure is higher among these type pipes. Therefore, PHMSA anticipates an increased risk for the release of methane both as leaks and during a pipeline failure, which could result in greater impacts to soils and ground water, under the No Action alternative.

Proposed Action:

The majority of the new gas lines would be located next to the existing gas lines. If utilities or other logistical issues arise with replacing pipeline immediately adjacent to the existing facilities, pipeline may be placed on the opposite side of the road, but entirely contained within the current ROW below paved streets. All existing gas lines would be abandoned, in accordance with PHMSA requirements, and would be purged of natural gas and sealed on each end. The new gas lines would be installed at a depth of four to six feet below grade and would be installed by cut and cover (trenching). All excavated trench materials would be stored on site and used to back fill, unless otherwise deemed unsuitable. In these cases, unsuitable soils would be hauled offsite, and the trench

[6] https://nepassisttool.epa.gov/nepassist/nepamap.aspx?wherestr=Norwich+Ct

[7] https://websoilsurvey.nrcs.usda.gov/app/WebSoilSurvey.aspx

[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.

would be backfilled with clean soils. All disturbed areas would be re-seeded or paved (as appropriate) and restored to preexisting conditions. PHMSA's assessment is that there would be no adverse impacts to groundwater, associated with the project. PHMSA has not identified any indirect or cumulative effects to groundwater or hazardous materials.

Mitigation Measures:

To reduce Groundwater and Hazardous Materials/Waste HG&E shall ensure its employees and contractors follow best management practices.

Soils	
Will all bare soils be stabilized using methods using methods identified in the initial Tier 2 EA worksheet? Will additional measures be required?	Yes, erosion and sediment control would be utilized during the project. All impacted areas would be restored to pre-construction contours.
Will the project require unique impacts related to soils?	No

Conclusion:

PHMSA reviewed the USDA, NRCS's web soil survey which indicates that the project area is comprised of previously disturbed urban soil types. [9]

No Action:

Under the No Action alternative, the existing pipes would remain in their 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:

The new gas lines would be installed at a depth of four to six feet below grade beneath existing pavement. Little soil disturbance would occur. All disturbed areas would be paved and restored to pre-existing conditions. Therefore, PHMSA's assessment is that there would be no adverse impact to soils resulting from the Proposed Action alternative. Additionally, there are no indirect or cumulative impacts anticipated as HG&E would restore all areas to pre-construction conditions.

Mitigation Measures:

HG&E 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	Yes, based on review of the USFWS's Information for

[9] https://websoilsurvey.nrcs.usda.gov/app/HomePage.htm

species and/or critical habitat potentially occurring within the geographic range of the project area? [10] If no, no further analysis is required.	Planning and Consultation (IPaC). [11] Additionally, Massachusetts state resources were inventoried to identify potential state listed species. [12]
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, all work would occur within existing ROW which is paved in an urban environment.

Conclusion:

The project area is an urban area comprised of industrial, commercial and residential properties. The only areas that contain vegetation and pervious surfaces are located along vegetated buffer areas. PHMSA requested an official species list through the USFWS's IpaC website. There was one endangered species identified, the Northern Long-eared Bat (NLEB), (*Myotis septentrionalis)* that could potentially occur within the geographical range of the project. Additionally, the candidate species, Monarch Butterfly (*Danaus plexippus)* was identified as a species that could potentially occur in the project area. However, no habitat for either of these species is present within the project area. No critical habitat overlaps with the project area. Several state listed species also occur within the geographical range, however based on the disturbed nature of the project area, no habitat is present for these species. See 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 environment where the areas of disturbance would be mainly within/under existing paved streets. Because these areas are within ROW that has been previously impacted (pipeline laid in the ground in close proximity to the location where new pipes would be laid and subsequently paved), the immediate project area has very limited biological resources present. Additionally, the project area does not contain suitable habitat for species whose geographic range overlaps with the project area. All pipeline replacement work would be contained within the existing disturbed ROW beneath pavement. Therefore, in accordance with Section 7 of the Endangered Species Act PHMSA's assessment is that the project would have no effect to federally endangered species. Under Section 7(a)(4) of the Endangered Species Act (ESA), Federal agencies must confer with the USFWS if their action would jeopardize the continued existence of a proposed species. 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

[10] https://ipac.ecosphere.fws.gov/ and https://www.fisheries.noaa.gov/species-directory/threatened-endangered

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

[12] https://www.mass.gov/info-details/list-of-endangered-threatened-and-special-concern-species

would occur.
Mitigation Measures: HG&E 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 components?	Yes, the project includes the relocation of natural gas meters to the outside of buildings. The project does not include any other modifications to buildings or structures, or construction or installation of any new above ground components on any identified properties. All work will take place within existing ROW.
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]	Yes, a portion of the would take place within several historic districts and adjacent to listed or eligible properties.
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 and commercial housing that dates back to the 1800's is located throughout the project area.
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, HG&E has record of over fifty excavations throughout the project area for gas main/service installations, maintenance, and abandonments at the depth of intended constructions.
Will project implementation require removal or disturbance of any stone or brick sidewalk, roadway, or landscape materials or other old or unique features?	Yes, the project may require disturbance of brick sidewalk. Any disturbed materials shall be returned back to their original state upon completion of

[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.

Please provide photos of the project area that include the roadway and sidewalk materials in the project and staging areas.	construction.

Conclusion:

PHMSA must consider the impact of projects for which they provide funding on historic and archeological properties 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 project to encompass the existing ROW, which includes the limits of disturbance, staging areas, and any resources that may be particularly susceptible to any potential vibration effects. (See Appendix G, Cultural Resources)

No Action:

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 data received from the Massachusetts State Historic Preservation Office (SHPO). 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. A list of NRHP-listed or eligible properties is provided in Appendix G, Cultural Resources. No archaeological sites or archaeological surveys were located within one quarter of a mile of the APE. The Undertaking would not alter any of the characteristics or contributing features of historic properties that qualify them for inclusion in the NRHP in a manner that would diminish their integrity. The replacement of pipelines and service lines within the existing ROW and utility easements is expected to mainly take place under paved surfaces and would not result in lasting physical, visual, or audible effects to historic properties. Meter relocations would take place within National Register-listed and eligible historic properties, as well as additional properties that are assumed to be eligible for listing in the NRHP for the purposes of this consultation. This proposed work consists of relocating the existing interior gas meter to the exterior of the building, close to the front or side of the building. In some cases, a meter mounting bracket would be installed to the foundation of a building and a small pipe would be installed from the new meter location into the building to reconnect the customer's internal gas piping. This work would have limited, if any, visual and physical effects to the associated buildings, and does not have the potential to adversely affect the contributing features of any of these properties that qualify them as eligible for listing in the NRHP. The Undertaking also does not include land acquisition, nor would it limit access to or change the use of any of the historic properties identified above. Project work is limited to areas that demonstrate a low probability for intact significant archaeological resources. In accordance with 36 CFR Part 800.5, PHMSA has determined the Undertaking would have No Adverse Effect on historic properties.

A letter was sent on March 14, 2024, to the SHPO, federally recognized tribes with a potential interest in the project area, and potential 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 adverse effects. PHMSA has requested comments on the Section 106 process, identification

of historic properties, and proposed finding within 30 days of receipt of the letter. See Appendix G, Cultural Resources, for more information.

Mitigation Measures:

If, during project implementation, a previously undiscovered archaeological 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 HG&E 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 HG&E 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.

Staging areas for the Undertaking are currently unknown. Staging should be confined to paved areas; if staging cannot be confined to paved areas, geotextile fabric or other similar protective measures (such as pressure distributing mats) must be laid in any affected unpaved area to minimize ground disturbance, prevent soil compaction, and protect archaeological features and artifacts.

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.	Yes, Soucey Park (Clemente Street Holyoke, MA) is located within the project area.
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, construction activities may occur near the park.

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 potential properties that qualify as Section 4(f). One 4(f) resource was identified, Soucey Park, which is located adjacent to the project.

No Action:

Under the No Action alternative, there would be no change to existing pipeline infrastructure pursuant to federal funding provided by the Program. Therefore, there would be no use of Section 4(f) property under the No Action alternative.

Proposed Action:

Under the Proposed Action alternative, construction activities would not occur within the boundary of the park. Access to Soucey Park would remain throughout the duration of construction and no physical use of the park would occur. In addition, as described in the Noise section of this Tier 2 EA, no adverse impacts associated with construction noise have been identified that could affect the use of this property. Therefore, PHMSA has determined there would be no use of any Section 4(f) resources.

Mitigation Measures:

HG&E shall ensure its employees and contractors ensure access to Soucey park throughout construction.

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, no additional ROW or easements are required.
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?	Yes. HG&E will obtain all required permits from the City of Holyoke, which includes traffic control measures.
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?	HG&E coordinates construction projects with emergency services to notify them of any traffic detours and utilizes traffic control officers to assist emergency vehicles through affected areas.

Conclusion:

The project is located in Holyoke, an urban area. The public owns and maintains the road ROW. Replacement gas

lines would be installed on both sides of the public roadway under concrete sidewalks and or roadways.

No Action:

Under the No Action alternative, the existing 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 or when funding becomes available for pipeline replacement.

Proposed Action:

HG&E is proposing to replace pipeline infrastructure within the existing ROW and would not include adding pipeline to serve new areas. During construction, there may be short-term impacts to adjacent residences, businesses and normal traffic patterns. Potential impacts include an increase in noise, dust, and transportation accessibility, as a result of construction and construction staging. Any work that would result in detours, transportation restrictions or other impacts to normal traffic flows would follow City of Holyoke standards and any applicable permits would be obtained prior to work commencing. There are no permanent impacts to transportation facilities anticipated. HG&E would ensure that all emergency responses entities would be informed of construction schedule and emergency response services would not be impeded or interrupted during construction. Therefore, because the work consists of the replacement of existing pipelines, 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.

PHMSA considered the cumulative effects of this action with ongoing and planned transportation related construction projects that could cumulatively impact land use and transportation. HG&E would coordinate with appropriate authorities. All municipalities and businesses must abide by the same requirements and coordinate with the appropriate authorities regarding any disruptions to normal traffic patterns. Through this coordination, the overall cumulative effects of multiple projects occurring would be minimized by planning and scheduling efforts with responsible agency oversight.

Mitigation Measures:

HG&E will obtain all required permits from the City of Holyoke, which includes traffic control measures.

HG&E shall ensure its contractors and employees restore all impacted areas to pre-construction conditions, coordinate with property owners, implement traffic control plans, coordinate with emergency services or other affected agencies and notify residents and businesses of parking impacts.

Noise and Vibration	
Question	**Information and Justification**
Will the project construction occur for longer than a month at a single project location?	No. Construction may occur within the entire project area for longer than a month but not at one single 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?	Yes. Construction activities will only take place during normal hours in accordance with local noise regulations

Will the project require high-noise and vibration inducing construction methods? If so, please specify.	Yes, jack hammers and hoe-rammers may be required intermittently throughout the project.
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 erection, including excavating, demolition, alteration or repair, of any building further than between 7:00 a.m. and 6:00 p.m. on weekdays, except in case of an urgent necessity in the interest of public safety and then only with a permit from the board of public works, which permit may be renewed for a period of three days or less while the emergency continues.
Will construction activities require large bulldozers, hoe ram, or other vibratory equipment within 20 ft of a structure?	Yes. The use of jack hammers and hoe-rams may be required intermittently throughout the project.

Conclusion:

The ambient noise in the project area consists of a combination of environmental noise from road traffic, the built environment, population density and other sources. There are several sensitive noise receptors (residences, schools, etc.) along the streets where work would occur.

No Action:

Under the No Action alternative, the project would not move forward and the pipelines along the designated streets in the project area would not be replaced at this time. If replacement or repairs occur under emergency conditions, noise from construction equipment would add to that of the current ambient noise and would likely be of a shorter duration.

Proposed Action:

Excavators, drill rigs, rollers, pavers, hoe-rams, and other similar construction equipment would be used to excavate trenches, drill, lay pipes, compact soils, re-pave the affected areas, etc. Sensitive noise receptors are likely to experience temporary noise impacts. HG&E would limit work to daylight hours and ensure that all construction activities abide by State and City noise regulations. 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.

PHMSA considered the cumulative effects of this action with other potential transportation related construction projects that could cumulatively contribute to noise and/or vibration impacts in the project area. Cities often have paving, drainage improvement, and other construction or maintenance projects occurring throughout the year. These construction and maintenance projects could occur at the same time as the Proposed Action Alternative and would contribute to an increase in cumulative noise effects during construction. However, adhering to state and local noise ordinances would ensure the project does not cause cumulatively more than minor adverse noise or vibration impacts.

Mitigation Measures:

HG&E shall ensure that its employees and contractors adhere to state and local noise regulations which includes limiting activities to normal weekday hours when noise restrictions are not in place, the proper maintenance of construction equipment mufflers and the use of noise tents as required.

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.	Based on review of socioeconomic data using EPAs EJScreen tool, the population residing within the general project area contains 45% low income and 52% 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. HG&E values the importance of community awareness and engagement. HG&E posts routine constructions updates on its website as well as distributes construction notices to impacted parties through available platforms, such as its SpryEngage notification platform and through the mail, in both English and Spanish. HG&E has also shared information relating to this application and grant opportunity with the local ward councilor. HG&E will continue to promote awareness and engagement through these available means throughout this project.
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?	Yes. HG&E will distribute notifications to customers in both English and Spanish.

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 will 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 project area contains 45% low income and 52% minority populations. The percentage of these populations is above the Hampden County average of 32% low income and 39% minority populations. 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. HG&E would continue to use leak prone pipe material that could lead to safety incidents and service disruptions. Additionally, if a pipeline segment is not repaired or

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

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 only minor disruptions or delays would occur. However, removal of leak prone pipe would reduce leaks and the potential for incidents, resulting in an increase in pipeline safety across the system while also improving operation and reliability. All work would occur within existing ROW and no residents or businesses would be displaced due to the project. There would be a short time period where residents and business would experience a short loss of service during the transfer of service to the new system. Outages are expected to last approximately 4-6 hours. Affected customers would be notified appropriately through posting a notification with tentative timelines on social media, notifying local news outlets (TV and/or newspaper), and notifying customers on an individual basis through the HG&E notification system that provides electronic messages in the form of phone calls, emails and text messages. 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:

HG&E shall provide advanced notification of service disruptions and traffic impacts to all affected parties including residents and businesses 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?	Yes. HG&E evaluates the risk profile of its infrastructure including potential safety concerns through its Distribution Integrity Management Program to evaluate, track, identify, and prioritize risks to continue to improve overall system safety and reliability
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. HG&E maintains a Public Awareness Program in accordance with 49 CFR 192.616 with the objectives of educating the community we serve on how to recognize the odor of natural gas and how to respond if detected, raising awareness of the affected public and key stakeholders of the presence of buried natural gas line in the communities we serve, helping homeowners and excavators understand the steps that they can take to prevent third party damage, helping emergency responders that may assist HG&E

	understand the proper actions to take in response to a gas emergency, and educating the public about the symptom of CO poisoning and appropriate response.
Does the project area include pipes prone to leakage?	Yes. HG&E has identified the replacement of leak prone cast iron gas mains as the target of this project.
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. All work will be performed in accordance with HG&E's Environmental Health and Safety Plan (HASP) which complies with all applicable State and Federal Occupational Health & Safety Standards. The construction contractor hired shall also be responsible for the development and implementation of a HASP which shall be written in compliance with applicable sections of OSHA 29 CFR 1926 and 1910, as well as state and local regulations.
Has an assessment of the project been performed to analyze the risk and benefits of implementation?	Yes. The HASP will be reviewed prior to starting this project to ensure that all risks have been addressed.

Conclusion:

The proposed project would replace leak prone pipes in the system. Pipelines that are known to leak based on their material include cast iron, bare steel, wrought iron, and historic plastics (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. PHMSA continues to encourage legacy 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 existing leak prone pipes would remain in their current location and condition. Normal maintenance activities would occur, and pipes would be replaced under failed circumstances or as funding is available. Safety risks resulting from existing leak prone pipes remaining in place would persist until the existing steel pipes are replaced.

Proposed Action:

The proposed project is necessary to replace the existing dated pipes and is in alignment with HG&E Distribution Integrity Management Program. The project would reduce the risk profile of the existing pipeline system 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 of pipelines. 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.

The abandonment of the existing pipeline would be conducted in accordance with PHMSA requirements found in 49 CRF 192.727 and 195.402(c)(10). These requirements include disconnecting pipelines from all sources and supplies of gas, purging all combustibles and sealing the facilities left in place. These requirements for purging

and sealing abandoned pipelines would ensure that the abandoned pipelines are properly purged and cleaned and pose no risk to safety in their abandoned state. Therefore, PHMSA's assessment is that this replacement project would improve the overall safety of the City of Holyoke's infrastructure.
Mitigation Measures: HG&E shall ensure their DIMP procedures are updated as necessary, the work is constructed in accordance with industry best practices and the project will comply with all local, state, and federal regulations, including those for safety. HG&E shall ensure its employees and contractors incorporate its Public Awareness Program and use approved construction standard safety methods and procedures. All work will be performed in accordance with HG&E's Environmental Health and Safety Plan which complies with all applicable State and Federal Occupational Health & Safety Standards. The construction contractor hired shall also be responsible for the development and implementation of a HASP which shall be written in compliance with applicable sections of OSHA 29 CFR 1926 and 1910, as well as state and local regulations.

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.[17] 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-2023-26 in your response.

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

Appendix A

Project Map

City of Holyoke NGDISM Project Area

Project Area

1:18,056

0 0.1 0.2 0.4 mi

0 0.17 0.35 0.7 km

Esri Community Maps Contributors, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau,

Appendix B

Air Quality

Table 1. Average methane emission factors for natural gas pipelines (adapted from EPA GHG Inventory, Annex 3.6, Table 3.6-2)

Pipeline Material	Pre-1990 Installation (kg/mile)	1990-2020 Installation (kg/mile)	Average Rate (kg/mile/year)
Cast Iron	4,597.40	1,157.30	2,877.35
Unprotected steel	2,122.30	861.3	1,491.80
Protected steel	59.1	96.7	77.90
Plastic	190.9	28.8	109.85

Table 2: No Action Leak Rate

Pipeline Material Type	Pre-1990 Installation (kg/mile/year)	Miles	Current Methane Leak Rate (kg/year)
Cast Iron	4,597.40	3.08	14160
Unprotected steel	2,122.30	0	0
Protected steel	59.1	0.25	15
Plastic	190.9	0	0
Total Annual Methane Leak Rate			14175
20-year Methane Emissions			283495

Table 3: Proposed Action Leak Rate

Pipeline Material Type	1990-2020 Installation (kg/mile/year)	Miles	New Methane Leak Rate (kg/year)
Plastic	28.8	1.78	51
Protected Steel	96.7	1.38	133
Annual Methane Reduction			14124
20-year Methane Reduction			282470

Equation 1 was used to estimate blowdown emissions in MCF, assuming a pipeline diameter (d) and pressure (P) described in Table 3.

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

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

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

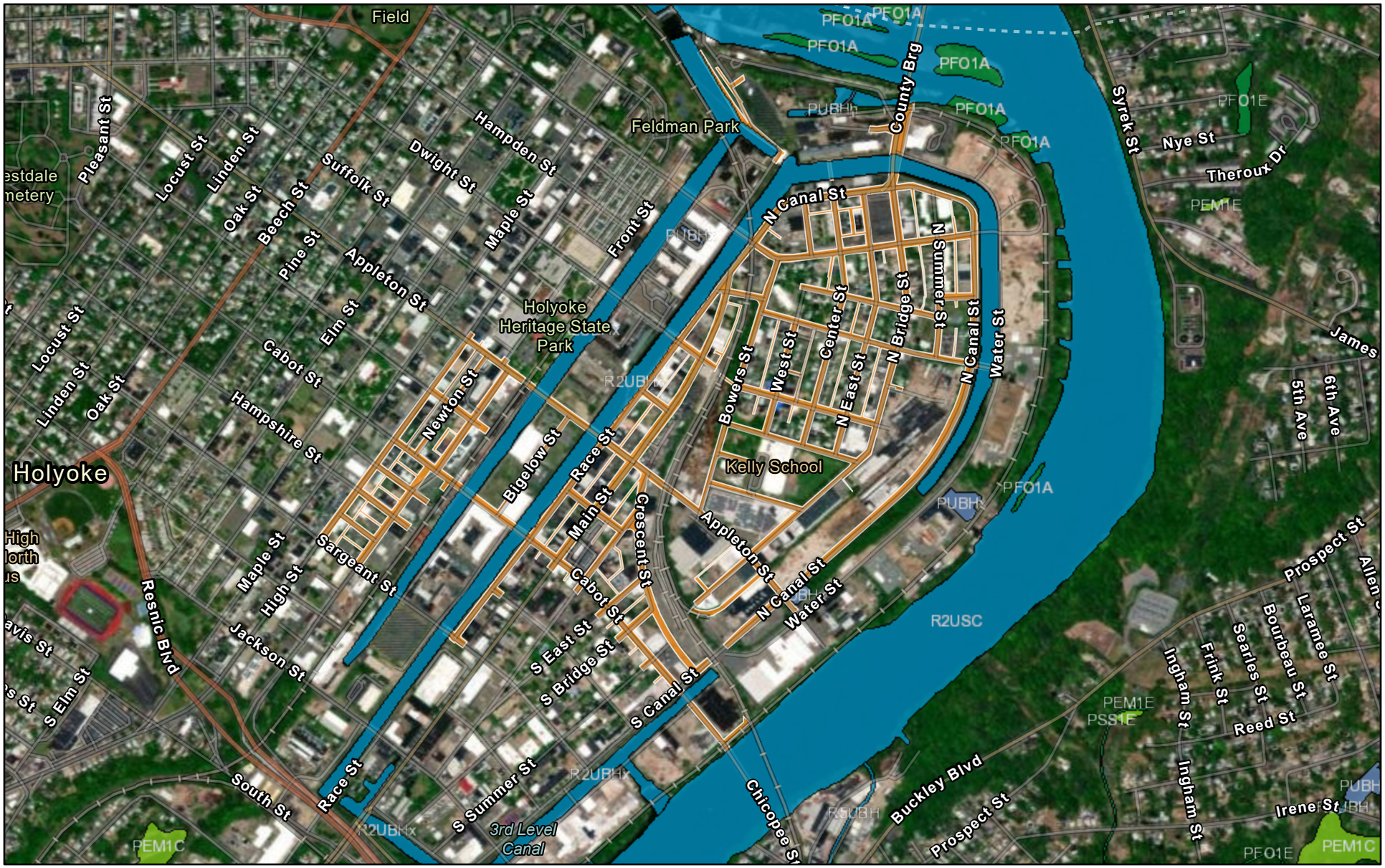
Table 4 Proposed Action - Methane Blowdown

Equation Inputs	Segment 1	Segment 2	Segment 3	Segment 4	Segment 5
Diameter (inches)	4	6	8	12	16
Blowdown Pressure	0.33	0.33	0.33	0.33	0.33
Length of Blowdown (feet)	3970	4030	2510	6275	800
Blowdown (MCF)	0.35	0.81	0.90	5.04	1.14
Total MCF					8.24
Total kg					253

Appendix C

Water Resources

City of Holyoke - Water Resources



February 14, 2024

Wetlands

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

1:18,056

0 0.1 0.2 0.4 mi

0 0.17 0.35 0.7 km

U.S. Fish and Wildlife Service, National Standards and Support Team, wetlands_team@fws.gov, Esri Community Maps Contributors, Esri, TomTom,

Appendix D

Biological Resources

IPaC **U.S. Fish & Wildlife Service**

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 a ected by activities in the project area. However, determining the likelihood and extent of e ects a project may have on trust resources typically requires gathering additional site-speci c (e.g., vegetation/species surveys) and project-speci c (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 o ce(s) with jurisdiction in the de ned 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

Hampden and Hampshire counties, Massachusetts

Local office

New England Ecological Services Field O ce

(603) 223-2541
(603) 223-0104

70 Commercial Street, Suite 300

Concord, NH 03301-5094

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 in uence (AOI) for species are also considered. An AOI includes areas outside of the species range if the species could be indirectly a ected by activities in that area (e.g., placing a dam upstream of a sh population even if that sh does not occur at the dam site, may indirectly impact the species by reducing or eliminating water ow 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 e ects to species, additional site-speci c and project-speci c 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 o ce and a species list which ful lls this requirement can **only** be obtained by requesting an o cial species list from either the Regulatory Review section in IPaC (see directions below) or from the local eld o ce directly.

For project evaluations that require USFWS concurrence/review, please return to the IPaC website and request an o cial 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 sheries 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 o ce of the National Oceanic and Atmospheric Administration within the Department of Commerce.

The following species are potentially a ected by activities in this location:

Mammals

NAME	STATUS
Northern Long-eared Bat Myotis septentrionalis Wherever found No critical habitat has been designated for this species. https://ecos.fws.gov/ecp/species/9045	Endangered

Insects

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

Critical habitats

Potential e ects 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 e ects 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 in the links below.

Speci cally, please review the "Supplemental Information on Migratory Birds and Eagles".

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/ les/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, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle Haliaeetus leucocephalus 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 o shore areas from certain types of development or activities.	Breeds Oct 15 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 "Supplemental Information on Migratory Birds and Eagles", speci cally the FAQ section titled "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

e ort (see below) can be used to establish a level of con dence in the presence score. One can have higher con dence in the presence score if the corresponding survey e ort 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.

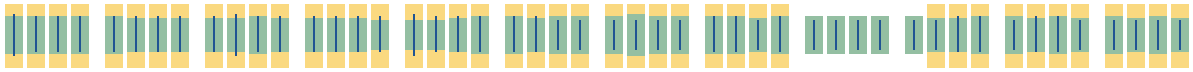
Survey Effort (|)
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

To see a bar's survey e ort 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 o the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.

Bald Eagle
Non-BCC
Vulnerable



What does IPaC use to generate the potential presence of bald and golden eagles in my speci ed 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 ltered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identi ed 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 speci ed 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 ltered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identi ed 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 o shore 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 O ce 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 in the links below. Speci cally, please review the "Supplemental Information on Migratory Birds and Eagles".

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/ les/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 nd 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 o 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, see the PROBABILITY OF PRESENCE SUMMARY below to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle Haliaeetus leucocephalus 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 o shore areas from certain types of development or activities.	Breeds Oct 15 to Aug 31
Black-billed Cuckoo Coccyzus erythropthalmus This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9399	Breeds May 15 to Oct 10

Blue-winged Warbler Vermivora pinus — Breeds May 1 to Jun 30
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Bobolink Dolichonyx oryzivorus — Breeds May 20 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Canada Warbler Cardellina canadensis — Breeds May 20 to Aug 10
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Cerulean Warbler Dendroica cerulea — Breeds Apr 29 to Jul 20
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/2974

Chimney Swift Chaetura pelagica — Breeds Mar 15 to Aug 25
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Eastern Whip-poor-will Antrostomus vociferus — Breeds May 1 to Aug 20
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Lesser Yellowlegs Tringa flavipes — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.
https://ecos.fws.gov/ecp/species/9679

Prairie Warbler Dendroica discolor — Breeds May 1 to Jul 31
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Purple Sandpiper Calidris maritima — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

Rusty Blackbird Euphagus carolinus — Breeds elsewhere
This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA

Wood Thrush Hylocichla mustelina — Breeds May 10 to Aug 31

This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.

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 "Supplemental Information on Migratory Birds and Eagles", speci cally the FAQ section titled "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 e ort (see below) can be used to establish a level of con dence in the presence score. One can have higher con dence in the presence score if the corresponding survey e ort 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.

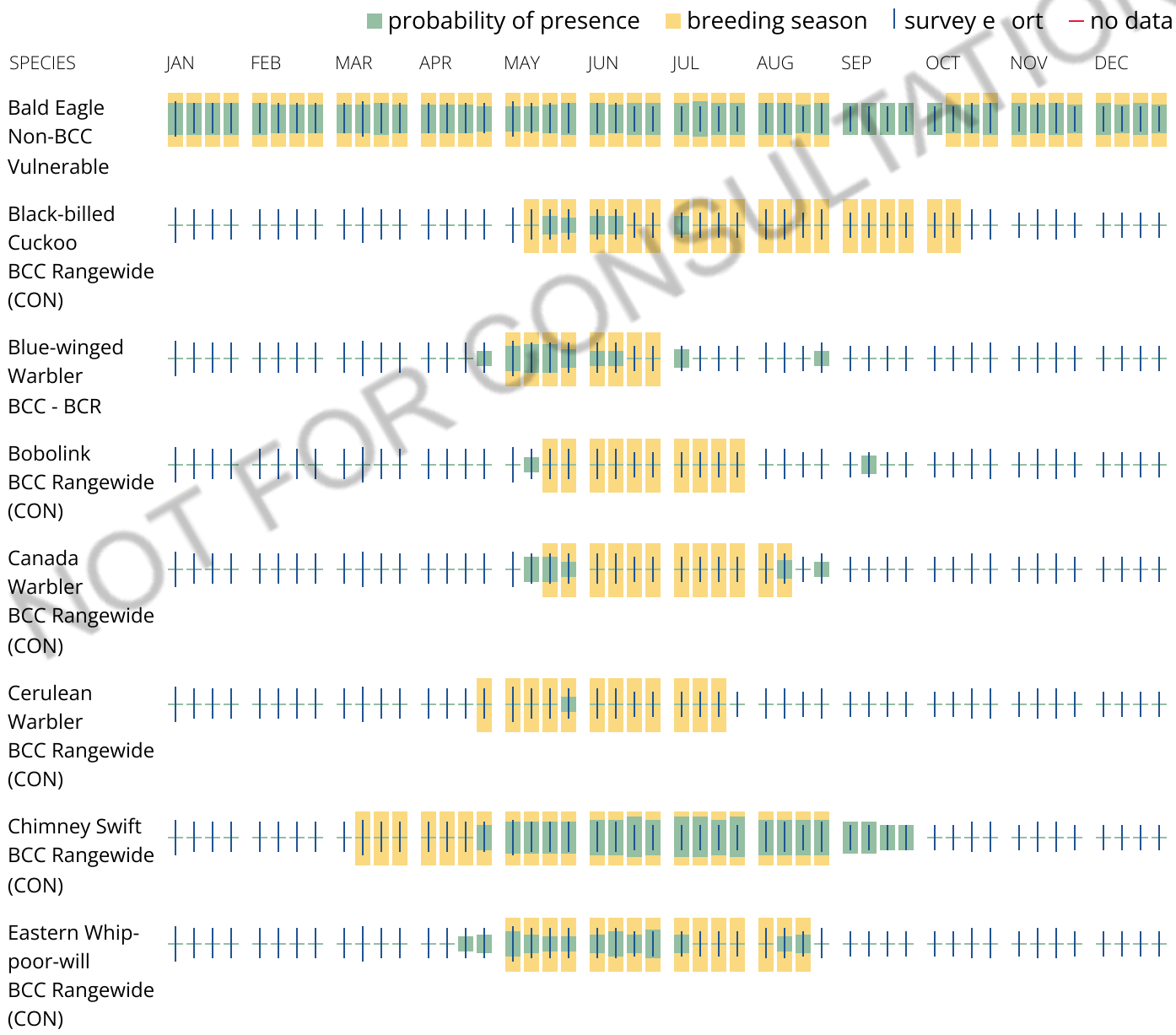
To see a bar's survey e ort range, simply hover your mouse cursor over the bar.

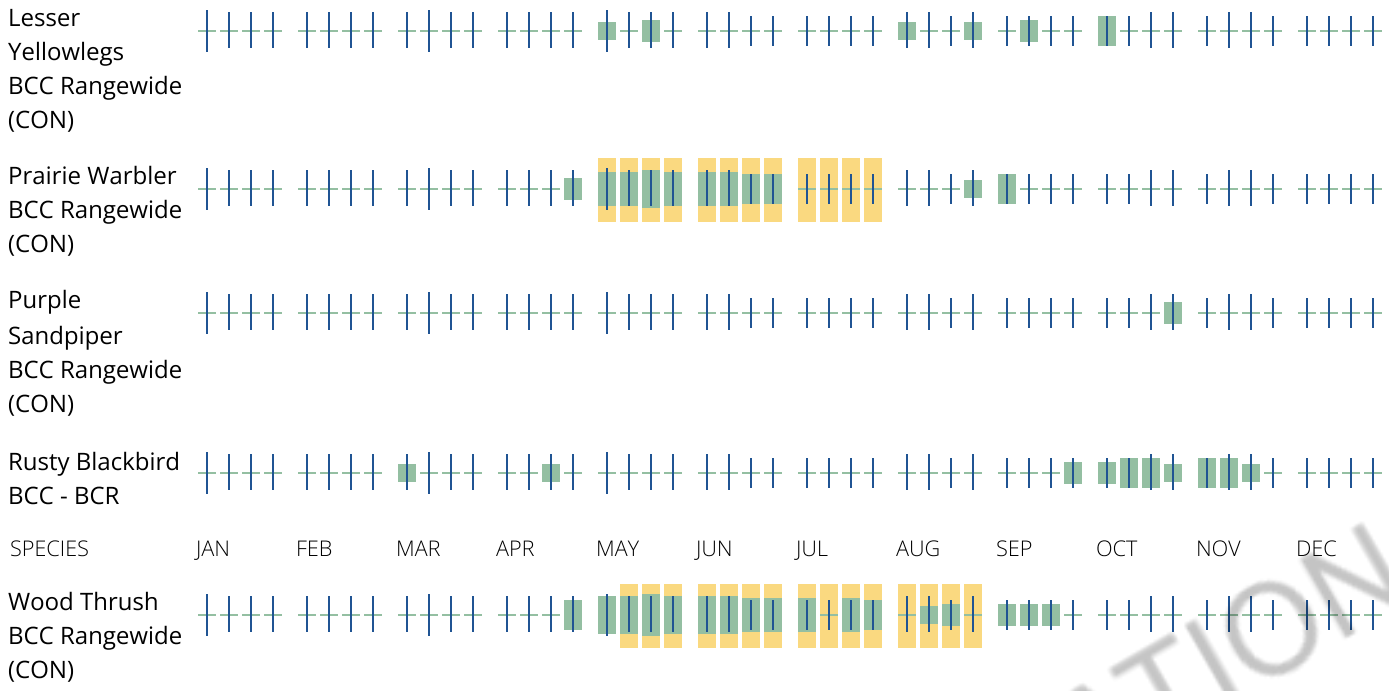
No Data (–)

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 o 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 speci ed 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 ltered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identi ed 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 o shore 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 speci ed 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 pro les 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 speci ed. 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 Paci c 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 o shore areas from certain types of development or activities (e.g. o shore energy development or longline shing).

Although it is important to try to avoid and minimize impacts to all birds, e orts 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 a ected by o shore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area o the Atlantic Coast, please visit the Northeast Ocean Data Portal. The Portal also o ers 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 les 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 speci ed 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 e ort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey e ort is the key component. If the survey e ort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey e ort 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 con rm 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 con rmed. 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 sh 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.

Wetland information is not available at this time

This can happen when the National Wetlands Inventory (NWI) map service is unavailable, or for very large projects that intersect many wetland areas. Try again, or visit the NWI map to view wetlands at this location.

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 identi ed 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 classi cation 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 veri cation 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 eld work. There may be occasional di erences in polygon boundaries or classi cations 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 tuber cid 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 de ne and describe wetlands in a di erent manner than that used in this inventory. There is no attempt, in either the design or products of this inventory, to de ne 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 modi cations within or adjacent to wetland areas should seek the advice of appropriate Federal, state, or local agencies concerning speci ed agency regulatory programs and proprietary jurisdictions that may a ect such activities.

Appendix E

Cultural Resources

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

1200 New Jersey Avenue, SE
Washington, DC 20590

March 14, 2024

Ms. Brona Simon
Executive Director & State Historic Preservation Officer
Massachusetts Historical Commission
Mass. Archives Bldg.
220 Morrissey Blvd.
Boston, MA 02125

Section 106 Consultation: PHMSA Pipeline Replacement Project in the City of Holyoke, Hampden County, Massachusetts
Grant Recipient: City of Holyoke Gas and Electric Company
Project Location: City of Holyoke, Massachusetts

Dear Ms. Brona Simon:

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 Holyoke Gas and Electric Company (Grant Recipient) 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 Grant Recipient is proposing to replace 16,265 feet of (3.08 miles) of cast-iron gas mains and service lines that were installed between 1880 and 1960. Main line replacements and some service line replacements are included in this project. Meter sets that are still inside buildings will be moved outside. The Grant Recipient is also proposing to relocate some gas meters that are currently outside buildings if feasible.

Replacement of mains will occur within the same footprint or within 36 inches of the existing main on whichever side allows greater clearance from other utilities/structures. Main installations will be completed in accordance with the Grant Recipient's historical construction practices that include cut and cover methods (trench) at a depth of 48 inches deep and 30 inches wide. All main installations will occur under paved roadway surfaces. No main installation will occur in grassy or unpaved areas.

Service lines will be tied to the main pipeline in accordance with the Grant Recipient's historical construction practices that include cut and cover methods to a depth of 48 inches deep and width of 24 inches. Service line work will occur within existing utility easements due to prescriptive rights under Massachusetts G.L. c. 187, § 2. Service line work will occur under paved or concrete surfaces. Building alterations due to meter relocations will consist of up to a 3-inch core drill holes into the building to reconnect to existing customer owned pipe.

All work will take place within the existing ROW or utility easement and all main installations and services are to be installed under paved or concrete surfaces. The exact locations of staging areas for the project are unknown but will be city-owned property or parking lots, which are paved surfaces. 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. Due to the scale and nature of the Undertaking, which is limited to the replacement of pipelines within existing ROW or utility easements and relocation of meters, PHMSA has delineated the APE for this Undertaking to encompass the existing ROW and adjacent parcels. This includes the limits of disturbance and the limits of any potential vibration, physical, or visual effects including areas where meters may be replaced or relocated. The APE extends to the depth of proposed ground disturbance of up to 48 inches below grade. The Undertaking does not have the potential to cause audible effects after the completion of construction. The APE is shown on the maps in **Attachment A**.

Identification and Evaluation

To identify historic properties in the APE, U.S. Department of Transportation (U.S. DOT) staff 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 and data gathered at the Massachusetts Historical Commission (MHC), data gathered using Massachusetts Cultural Resource Information System (MACRIS), and the USDA Web Soil Survey. U.S. DOT 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 and assess archaeological sensitivity of the APE.

Historic Architecture

National Register of Historic Places-Listed and -Eligible Properties

Research was conducted to identify historic properties within the APE. A review of MACRIS found that most of the APE has been previously inventoried. A list of previously-documented NRHP-listed, NRHP-eligible, and unevaluated historic properties within the APE can be found in Tables 1 and 2. The location of the NRHP-listed historic properties is shown on the APE map in **Attachment A**.

Table 1. Listed Historic Properties within the APE

Historic Property Name (MACRIS ID)	NRHP Designation	Significance
Hadley Falls Company Housing District (HLY.S)	Listed	Architecture; Community Planning; Industry
Holyoke Canal System (HLY.T)	Listed	Commerce; Community Planning; Engineering; Industry
North High Street Historic District HLY.X)	Listed	Architecture; Commerce; Community Planning
Robert, Clovis Block (HLY.324)	Listed	Architecture; Commerce; Ethnic Heritage

Table 2. Eligible and Unevaluated Historic Properties within the APE

Historic Property Name (MACRIS ID)	NRHP Designation	Significance
The Flats (HLY.W)	Eligible	Architecture; Commerce; Industry
Downtown (HLY.B)	Eligible	Architecture; Commerce; Politics Government
Churchill Historic District (HLY.C)	Eligible	Architecture; Commerce
Newton Streetscape (HLY.L)	Eligible	Architecture; Community Planning
South Bridge Street Area (HLY.AN)	Eligible	Architecture; Commerce
O'Brien, Daniel Apartments (HLY.1628)	Eligible – Potential Historic District	Architecture
Miller, William A. Row House (HLY.1625)	Eligible – Potential Historic District	Architecture
Potvin, Gilbert Tenement (HLY.1627)	Eligible – Potential Historic District	Architecture
Richards, Charles H. Tenement (HLY.1629)	Eligible – Potential Historic District	Architecture
Vashon Block – Lionel, The (HLY.1592)	Eligible – Potential Historic District	Architecture; Commerce
Potvin, Gilbert and Jennie Prew Oliver Tenement (HLY.1590)	Eligible – Potential Historic District	Architecture
Miller, William A. Row House (HLY.1624)	Eligible – Potential Historic District	Architecture
Potvin, Gilbert Tenement (HLY.1591)	Eligible – Potential Historic District	Architecture
Dufresne Tenement (HLY.1490)	Eligible – Potential Historic District	Architecture
Kennedy, James Tenement (HLY.1456)	Eligible – Potential Historic District	Architecture
Justine Apartments – Gagnon, Hermina Tenement (HLY.1623)	Eligible	Architecture
Gamache, Octave Tenement (HLY.1499)	Eligible	Architecture
Precious Blood Roman Catholic Church Rectory (HLY.50)	Eligible	Architecture; Ethnic Heritage; Religion
Prew, John J. Clemente Street Subdivision (HLY.AL)	Unevaluated	Architecture
American Tissue Mills (HLY.AI)	Unevaluated	Architecture
Dowd, Edward Tenement (HLY.1599)	Unevaluated	Architecture
Bluteau, Pierre and Honorine Tenement (HLY.1598)	Unevaluated	Architecture
O'Neil, Michael Tenement (HLY.1613)	Unevaluated	Architecture
O'Neill Apartments (HLY.1576)	Unevaluated	Architecture
Dowd, Edward and Mary Tenement (HLY.1607)	Unevaluated	Architecture; Commerce
Ruddy, William House (HLY.45)	Unevaluated	Architecture
Bluteau, Pierre Tenement (HLY.1583)	Unevaluated	Architecture; Commerce

Historic Property Name (MACRIS ID)	NRHP Designation	Significance
Potvin, Gilbert and Ella B. Tenement (HLY.1584)	Unevaluated	Architecture
Potvin and LaFrance Tenement (HLY.1612)	Unevaluated	Architecture
Ordway, T. Warren Double House (HLY.1626)	Unevaluated	Architecture
Tucker, Thomas J. and Theresa Tenement (HLY.1577)	Unevaluated	Architecture
Jolly Machine Company (HLY.1489)	Unevaluated	Architecture; Industry; Invention
Ducharme, Valere Block (HLY.313)	Unevaluated	Architecture; Commerce; Health Medicine
Holyoke Warehouse Company Building (HLY.1457)	Unevaluated	Architecture; Industry
Lanoue, Ambrose Tenement (HLY.1458)	Unevaluated	Architecture
Sawin, Albert Ernstus and Elizabeth House – Sawin Boarding House (HLY.1476)	Unevaluated	Architecture; Commerce

Significant development in the City of Holyoke at the end of the nineteenth century is owed to the construction of a dam along the Connecticut River within the city's limits. The waterpower created by the dam was transferred to planned industrial sites through an extensive series of three level canal systems of 7.5 miles of hand dug canals and raceways to bring power to machine mills and factories throughout the city. This was known as the Holyoke Canal System, which today possesses integrity of location, design, setting and materials and remains an essentially unaltered example of nineteenth century engineering dating to 1847-1893. Due to the rapid expansion of the canal system and growing industry, a system of gridded streets, factory worker housing and building lots for grander homes of factory owners, made Holyoke one of the first planned industrial cities in the United States. Between 1860 and 1880 Holyoke's population grew by over 100 percent mainly consisting of working-class immigrants, where the first wave of mill workers was predominantly of Irish heritage. Immigrant populations continued growing with an influx of French Canadian, Polish, and German people coming to work in Holyoke's industries.

Although not as industrial as it once was, the dams, canals and much of Holyoke's industrial and commercial architecture remain intact. For example, the Flats/South Holyoke area is characterized by 3-5 story brick mill buildings that line the canals. The Main Street axis near the center of the APE consists of densely built commercial blocks of brick and stone. Secondary streets throughout the area are primarily residential with multi-family housing from various periods. Much of the historic housing stock is fragmentary. The earliest buildings in the area date from 1848 when the Holyoke Falls Company began construction of the canals. Significant development continued in the area until the 1920s. In addition to a large number of mill buildings and a lesser number of commercial blocks, the area contains examples of late nineteenth and early twentieth century churches, fire stations, apartment blocks, rowhouses, a school, a railroad station, a coffee house, and a boy's club. Alteration within the area is primarily limited to the secondary streets where much of the housing stock has been remodeled or removed.

One example of an important survivor of Holyoke's once-extensive landscape of Roman Catholic ecclesiastical buildings is the Precious Blood Rectory. The building is eligible under Criteria A at the local level for its association with an event, a series of events or activities, or patterns of an area's development. Further, it was associated with powerful parish curé Charles E. Crevier, who hoped to use the building as the seat of the Primate of French Canadians in the United States. It is therefore eligible under Criteria B at the local level for its association with the life of an important person. It is also eligible under Criteria C,

embodying distinctive characteristics of a type, period, or method of construction, and possessing high artistic value.

The Hadley Falls Company Housing District, the North High Street Historic District, the Newton Streetscape, the South Bridge Street Area, and the Churchill neighborhood (originally Church Hill) all reflect the industrial city's commercial development. The buildings found in these areas form collections of well-preserved tenements, particularly large masonry blocks, built by immigrants or housing built by manufacturing firms specifically for its employees. The extant buildings here retain integrity as they usually only have alterations of sashes and doors and rebuilt rear porches. As a result, most retain sufficient integrity of location, setting, feeling, association, workmanship, and design, despite piecemeal demolition and infill. These tenement buildings are eligible under Criterion A, significant for connections to Holyoke's immigrant communities and Criterion C, embodying the types of dense, multi-family tenements that were unique to Holyoke in this period.

Similarly, Downtown is significant based on two main phases of development. The first phase (1870-1890) resulted in the construction of modest, steam-heated apartment blocks on public water lines that represented a step up from the tenement housing in the mill district. The second phase (1900-1920) resulted in more expansive "modern" apartment blocks that reflected the progressive concern for more light, more air, and better sanitary conditions. There has been very little new construction southwest of Lyman Street since 1940, although many buildings have been lost to fire and urban renewal.

The rest of the eligible and unevaluated properties within the APE (listed in Table 2) form concentrations of extant buildings dating back to Holyoke’s industrial history. Some of these buildings represent the tenements and commercial blocks related to the working-class immigrant mill workers that lived in Holyoke and worked in the various industries. Most of the previously surveyed buildings retain sufficient integrity of location, setting, feeling, association, workmanship, and design, and could make up a NRHP-eligible district. Based on available documentation, PHMSA assumes that from Bowers Street to Canal Street, along East Dwight Street and its intersecting streets, there is a historic district eligible for listing in the NRHP under Criterion A, association with events that have made a significant contribution to the broad patterns of our history for its connection to Holyoke's immigrant communities, and Criterion C, embodying the distinctive characteristics of a type, period, or method of construction, or representing a significant and distinguishable entity whose components lack individual distinction, at the local level.

Identification of Additional Resources

As the Undertaking is limited to the replacement of pipelines and service lines within the existing ROW and utility easements and the replacement or relocation of existing gas meters, the identification effort for additional above-ground historic properties focused on identifying properties that are susceptible to the any limited vibration, physical, or visual effects of the Undertaking and could experience diminished integrity. Most of the APE has been previously documented. Due to the nature of the Undertaking, limited potential for effects, and because the addresses of those properties that will have meter relocations have not been identified, PHMSA is not individually documenting and evaluating all of the properties within the APE. PHMSA is instead treating any property within the APE that is 50 years of age or older as eligible for listing in the NRHP under Criteria A and C for potential association with locally significant events and architecture, for the purposes of this consultation.

Archaeology

An in-person file search was conducted at MHC to identify the presence of previously recorded archaeological sites and previously conducted archaeological surveys within the APE and one quarter of a mile of the APE. As a result of the site file search, one archaeological site and one archaeological survey

were identified within the APE (Table 3). No archaeological sites or archaeological surveys were located within one quarter of a mile of the APE.

Table 3. Archaeological Sites within the APE

MHC ID Number	Type	NRHP Eligibility	Citation
19-HD-55	Pre-historic burial ground	Not Eligible	Waller, Joseph N., Jr. 2010 Reconnaissance Archaeological Survey, Holyoke Appleton Street Area (Drainage Area 13) Sewer Separation Project Holyoke, Massachusetts. PAL. MHC 1984 Historic and Archaeological Resources of the Connecticut River Valley Young, William R. 1969 Introduction to the Archaeology and History of the Connecticut Valley Indian. Howes, William J. 1942 The problematical thin shell stone tubes. MAS Bulletin 3(2): 11-19. Willoughby,C.C. 1935 Antiquities of the New England Indian Anonymous 1869 The Historical Magazine

Site 19-HD-55, a pre-historic burial ground, was discovered during the construction of a school. The original record of the burial ground was in a newspaper article dated August 14, 1868 (*The Evening Post*, New York, NY), and in January 1869, the *Springfield Republican* recounted the discovery of a burial ground. The site form for site 19-HD-55 was updated in 2010 to indicate that the site has been destroyed. The update came from a reconnaissance archaeological survey conducted for a sewer project (Table 4), which concluded that the project area demonstrated low archaeological sensitivity.

Table 4. Archaeological Surveys within One Quarter of a Mile of the APE

Report Title	Citation	Report Number
Reconnaissance Archaeological Survey, Holyoke Appleton Street Area (Drainage Area 13) Sewer Separation Project. Holyoke, Massachusetts	Waller, Joseph N., Jr. (2010)	PAL report No. 2474

An examination of Web Soil Survey data within the APE revealed that 100% of the APE is composed of the Urban Land soil type, which consists of areas where the soil has been altered or obscured by buildings, industrial areas, paved parking lots, sidewalks, roads, and railroad yards. The City of Holyoke is primarily within the Connecticut River watershed. The South Hadley Falls area of the Connecticut River was an important location that drew Native Americans from the pre-contact era into the seventeenth century. The falls themselves likely served as an important fishing location, while the fertile Connecticut River area would have been an ideal setting for the establishment of horticultural plots. Documentation of Native American burial ground 19-HD-55 on the west bank of the Connecticut River indicates that this section of the city once supported a substantial Native American population and that additional Native American sites could be located in Holyoke.

Historical maps from 1877 indicate that the APE was little developed at the time. Much of the surrounding land appears to have been comprised of dwellings and industrial buildings situated along the river's margin surrounded by farm fields. The American Industrial Revolution transformed Holyoke from a farming community into a bustling industrial center by the mid-nineteenth century. By 1920, Holyoke appears to be heavily developed into a network of streets and avenues; canals and large brick-faced mills were built along their peripheral margins.

The APE is limited to the existing ROW, some of which has been previously disturbed up to the proposed ground disturbance depth of 48 inches due to prior pipeline installation, and all work will take place under paved areas. Furthermore, impacts will be limited to areas of urbanized development that have a long history of use (i.e. grading, paving, resurfacing, etc.). Gas, water, electricity, and sewer lines are all buried beneath existing roads adjacent to the proposed work. Due to the lack of significant archaeological sites in the vicinity of the APE and the previous ground disturbance that has occurred, there is low probability for intact significant archaeological resources to be present in the APE, and no archaeological survey is recommended at this time.

Determination of Effect

Based on the aforementioned identification and evaluation, PHMSA has determined that there are historic properties as defined in 36 CFR 800.16(l) within the APE: see the above *Historic Architecture* section for a list of historic properties (Table 1 and 2) as well as note of those PHMSA is assuming or treating as historic properties for the purposes of this consultation.

The Undertaking will not alter any of the characteristics or contributing features of historic properties that qualify them for inclusion in the NRHP in a manner that would diminish their integrity. The replacement of pipelines and service lines within the existing ROW and utility easements will take place under paved surfaces and will not result in lasting physical, visual, or audible effects to historic properties.

Meter relocations will take place within National Register-listed and eligible historic properties, as well as additional properties that are being treated as eligible for listing in the NRHP for the purposes of this consultation. This proposed work consists of relocating the existing interior gas meter to the exterior of the building. In some cases, a meter mounting bracket would be installed to the foundation of a building and a small pipe would be installed from the new meter location into the building to reconnect the customer's internal gas piping. This work would have limited, if any, visual and physical effects to the associated buildings, and does not have the potential to adversely affect the contributing features of any of these properties that qualify them as eligible for listing in the NRHP.

The Undertaking also does not include land acquisition, nor would it limit access to or change the use of any of the historic properties identified above. Project work is limited to areas that demonstrate a low probability for intact significant archaeological resources. While the exact staging areas for the Undertaking are currently unknown, staging will be confined to paved areas; however, if staging cannot be confined to paved areas, geotextile fabric or other similar protective measures (such as pressure distributing mats) must be laid in any affected unpaved area to minimize ground disturbance, prevent soil compaction, and protect potential archaeological features and artifacts.

In accordance with 36 CFR Part 800.5, PHMSA has determined the Undertaking will have No Adverse Effect on historic properties.

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 concern 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:

- Delaware Tribe of Indians
- Mohegan Tribe of Indians of Connecticut
- Narragansett Indian Tribe
- Stockbridge Munsee Community, Wisconsin

Request for Section 106 Concurrence

Based on the information presented above, PHMSA has determined that the Undertaking will result in No Adverse Effect to properties that are either listed in, or eligible for inclusion in, the NRHP. 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 Kat Giraldo, Section 106 specialist, at PHMSASection106@dot.gov or 857-320-1359.

Sincerely,

Matt Fuller
Senior Environmental Protection Specialist

MF/kg

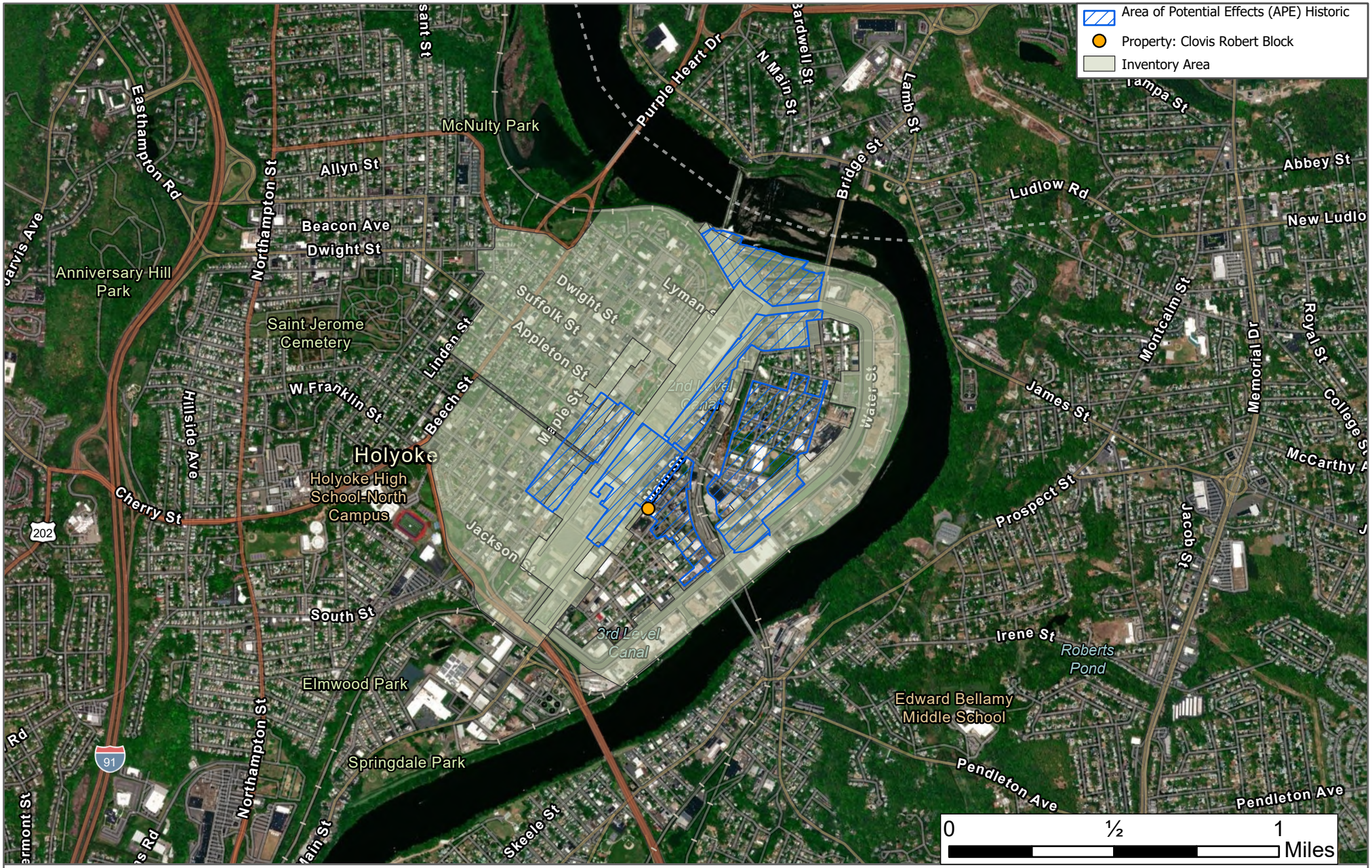
cc: Travis Mast, Environmental Protection Specialist, USDOT Volpe Center
Renee Taylor, PHMSA Grant Specialist
Bill Sullivan, City of Holyoke Gas and Electric Department
Lauren Niles, Holyoke Historical Commission
Amy Landau, Holyoke Community Preservation Act Committee

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

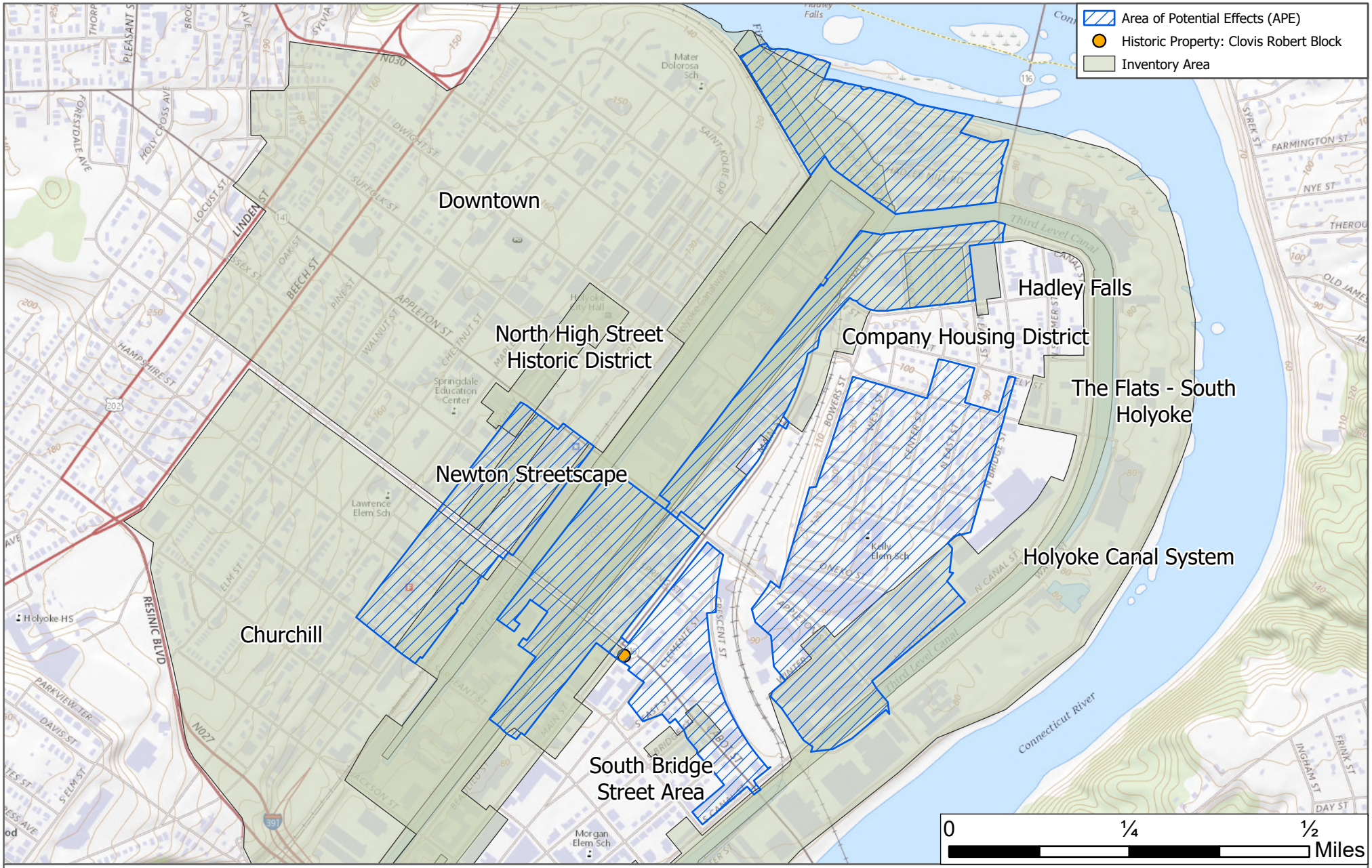


Name: Holyoke Massachusetts Gas Line Replacement
Scale: 25,000
Total Acreage: 199.6
Holyoke, Hampden County, MA

N

Service Layer Credits: Maxar, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS

Area of Potential Effects Map



Name: Holyoke Massachusetts Gas Line Replacement
Scale: 11,450
Total Acreage: 199.6
USGS Basemap: Springfield North
Holyoke, Hampden County, MA

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: Holyoke Massachusetts Gas Line Replacement
Scale: 11,450
Total Acreage: 199.6
Holyoke, Hampden County, MA

N

Service Layer Credits: Maxar

ATTACHMENT B

Project Area Photographs

Worcester Place

Cabot St. and Commercial St. intersection

Essex St.

Nick Cosmos Way

Commercial St.

Areas within The Flats

Race St. looking east. Second level canal on the left.

Race St. looking east. Second level canal on the left.

Race St. looking east. Second level canal on the left.

Cabot St. looking west.

Looking toward Cabot St. from the Race St. intersection.

Looking toward Appleton St. from the Race St. intersection.

Areas within The Flats

Cabot St. looking west

Clement St. and Cabot St intersection looking south. Precious Blood Roman Catholic Church Rectory on the left

Clement St. looking south.

Cabot St. looking toward Main St.

Cabot St. looking west. South East St. intersects.

Cabot St. looking west

Bowers St. looking south.

Appleton St. and Winter St. intersection

Winter St. looking northeast

Bowers St. at Samosett St. intersection looking south.

Appleton St. looking east

Water St. looking northeast

Areas within

The Flats

Race St. looking east. Second level canal on the left.

Race St. looking east. Second level canal on the left.

Race St. and Dwight St. intersection.

Dwight St. looking toward Holyoke Station

Areas within

The Flats

Grover St. looking north

Center St. looking south

Center St. looking south

Canal St. looking west

Tenements and other industrial buildings in the East Dwight St. area

Center St. looking south toward Mosher St.

Center St. looking south toward East Dwight St.

Center St. looking south toward Samosett St.

West St. looking north toward East Dwight St.

West St. looking north toward Mosher St.

West St. looking north toward Mosher St.

North Bridge St. looking north.

North Bridge St. looking north.

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

Appendix F

Environmental Justice

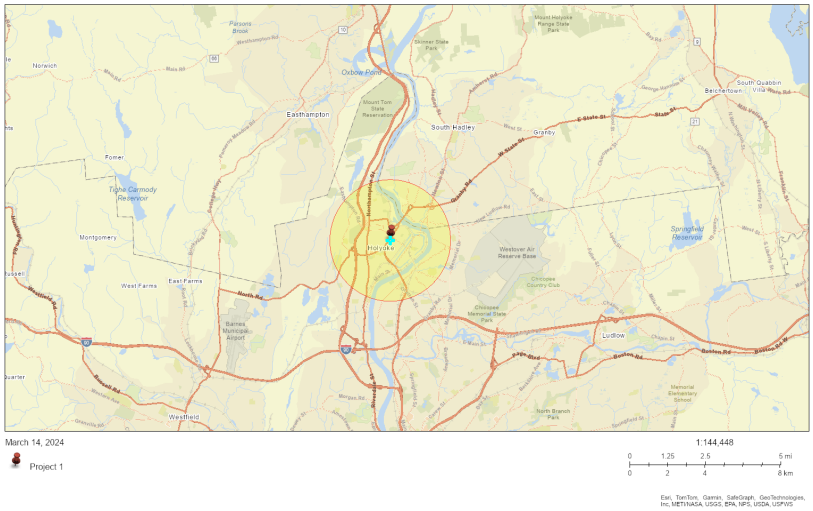
EJScreen Community Report

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

Holyoke, MA

2 miles Ring Centered at 42.205917, 72.615922
Population: 46,634
Area in square miles: 12.56

A3 Landscape



LANGUAGES SPOKEN AT HOME

LANGUAGE	PERCENT
English	62%
Spanish	33%
French, Haitian, or Cajun	1%
Russian, Polish, or Other Slavic	2%
Other Asian and Paci c Island	1%
Total Non-English	38%

COMMUNITY INFORMATION

- Low income: 45 percent
- People of color: 52 percent
- Less than high school education: 20 percent
- Limited English households: 14 percent
- Unemployment: 7 percent
- Persons with disabilities: 20 percent
- Male: 48 percent
- Female: 52 percent
- 75 years — Average life expectancy
- $28,759 — Per capita income
- Number of households: 19,065
- Owner occupied: 43 percent

BREAKDOWN BY RACE

- White: 48%
- Black: 3%
- American Indian: 0%
- Asian: 1%
- Hawaiian/Pacific Islander: 0%
- Other race: 0%
- Two or more races: 2%
- Hispanic: 46%

BREAKDOWN BY AGE

From Ages 1 to 4	6%
From Ages 1 to 18	22%
From Ages 18 and up	78%
From Ages 65 and up	16%

LIMITED ENGLISH SPEAKING BREAKDOWN

Speak Spanish	94%
Speak Other Indo-European Languages	5%
Speak Asian-Paci c Island Languages	1%
Speak Other Languages	0%

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.

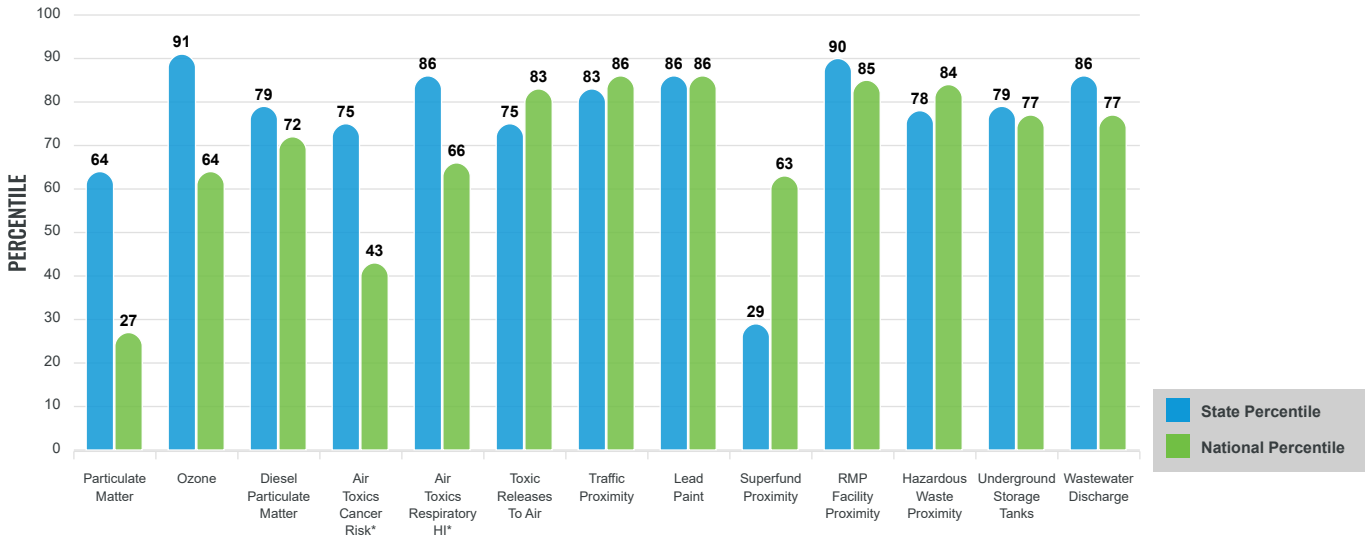
Environmental Justice & Supplemental Indexes

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.

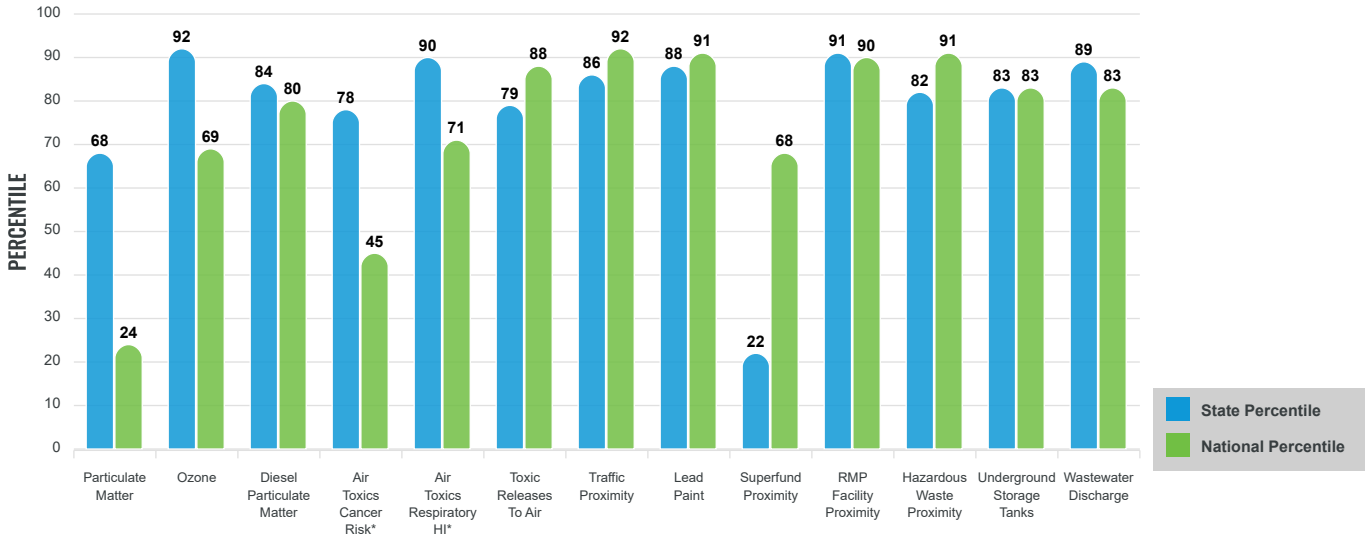
EJ INDEXES FOR THE SELECTED LOCATION



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 2 miles Ring Centered at 42.205917,-72.615922

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)	6.34	6.62	29	8.08	11
Ozone (ppb)	59.8	58.3	77	61.6	38
Diesel Particulate Matter (µg/m^3)	0.229	0.253	55	0.261	53
Air Toxics Cancer Risk* (lifetime risk per million)	20	21	3	25	5
Air Toxics Respiratory HI*	0.3	0.26	49	0.31	31
Toxic Releases to Air	1,700	2,800	39	4,600	69
Tra c Proximity (daily tra c count/distance to road)	530	630	68	210	91
Lead Paint (% Pre-1960 Housing)	0.68	0.51	67	0.3	84
Superfund Proximity (site count/km distance)	0.041	0.18	9	0.13	37
RMP Facility Proximity (facility count/km distance)	0.88	0.36	88	0.43	86
Hazardous Waste Proximity (facility count/km distance)	3.5	6.7	53	1.9	83
Underground Storage Tanks (count/km^2)	2.7	3.4	59	3.9	65
Wastewater Discharge (toxicity-weighted concentration/m distance)	0.0041	0.2	70	22	60
SOCIOECONOMIC INDICATORS					
Demographic Index	48%	26%	84	35%	73
Supplemental Demographic Index	22%	12%	88	14%	83
People of Color	52%	30%	80	39%	67
Low Income	45%	22%	86	31%	75
Unemployment Rate	7%	5%	69	6%	67
Limited English Speaking Households	14%	6%	84	5%	89
Less Than High School Education	20%	9%	86	12%	81
Under Age 5	6%	5%	64	6%	58
Over Age 64	16%	17%	51	17%	52
Low Life Expectancy	19%	17%	75	20%	50

*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	3
Water Dischargers	63
Air Pollution	70
Brown elds	24
Toxic Release Inventory	25

Other community features within defined area:

Schools	11
Hospitals	2
Places of Worship	23

Other environmental data:

Air Non-attainment	Yes
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 2 miles Ring Centered at 42.205917,-72.615922

EJScreen Environmental and Socioeconomic Indicators Data

HEALTH INDICATORS

INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Low Life Expectancy	19%	17%	75	20%	50
Heart Disease	7	5.4	89	6.1	67
Asthma	12.1	10.8	85	10	91
Cancer	6	6.6	32	6.1	45
Persons with Disabilities	18.9%	11.9%	89	13.4%	82

CLIMATE INDICATORS

INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Flood Risk	14%	12%	73	12%	77
Wild re Risk	0%	0%	0	14%	0

CRITICAL SERVICE GAPS

INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Broadband Internet	17%	10%	80	14%	67
Lack of Health Insurance	3%	3%	68	9%	22
Housing Burden	Yes	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

Report for 2 miles Ring Centered at 42.205917,-72.615922

EJScreen Community Report

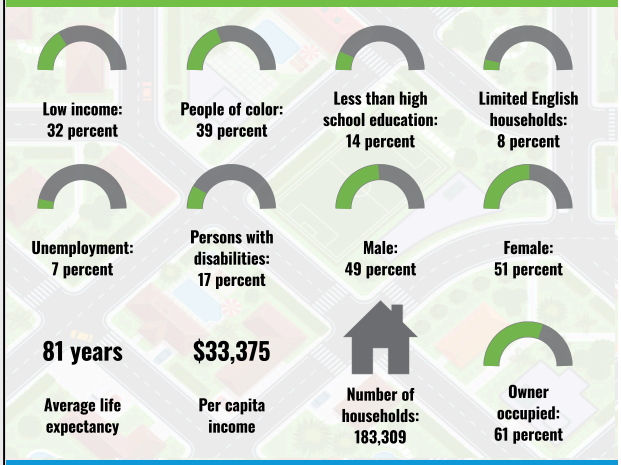
This report provides environmental and socioeconomic information for user defined areas, and combines that data into environmental justice and supplemental indexes.

XX

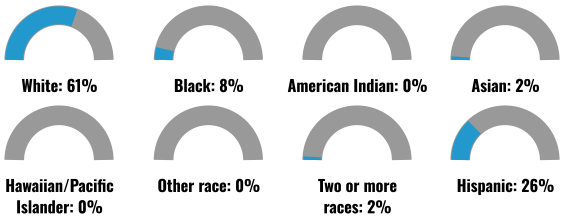
County: Hampden
Population: 466,265
Area in square miles: 634.15

Area reserved for map

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.

LANGUAGES SPOKEN AT HOME

LANGUAGE	PERCENT
English	74%
Spanish	18%
French, Haitian, or Cajun	1%
Russian, Polish, or Other Slavic	2%
Other Indo-European	2%
Other Asian and Paci c Island	1%
Other and Unspeci ed	1%
Total Non-English	26%

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.

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.

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

Report for County: Hampden

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)	XX	XX	XX	XX	XX
Ozone (ppb)	XX	XX	XX	XX	XX
Diesel Particulate Matter (µg/m^3)	XX	XX	XX	XX	XX
Air Toxics Cancer Risk* (lifetime risk per million)	XX	XX	XX	XX	XX
Air Toxics Respiratory HI*	XX	XX	XX	XX	XX
Toxic Releases to Air	XX	XX	XX	XX	XX
Tra c Proximity (daily tra c count/distance to road)	XX	XX	XX	XX	XX
Lead Paint (% Pre-1960 Housing)	XX	XX	XX	XX	XX
Superfund Proximity (site count/km distance)	XX	XX	XX	XX	XX
RMP Facility Proximity (facility count/km distance)	XX	XX	XX	XX	XX
Hazardous Waste Proximity (facility count/km distance)	XX	XX	XX	XX	XX
Underground Storage Tanks (count/km^2)	XX	XX	XX	XX	XX
Wastewater Discharge (toxicity-weighted concentration/m distance)	XX	XX	XX	XX	XX
SOCIOECONOMIC INDICATORS					
Demographic Index	XX%	XX%	XX	XX%	XX
Supplemental Demographic Index	XX%	XX%	XX	XX%	XX
People of Color	XX%	XX%	XX	XX%	XX
Low Income	XX%	XX%	XX	XX%	XX
Unemployment Rate	XX%	XX%	XX	XX%	XX
Limited English Speaking Households	XX%	XX%	XX	XX%	XX
Less Than High School Education	XX%	XX%	XX	XX%	XX
Under Age 5	XX%	XX%	XX	XX%	XX
Over Age 64	XX%	XX%	XX	XX%	XX
Low Life Expectancy	XX%	XX%	XX	XX%	XX

*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 XX
Hazardous Waste, Treatment, Storage, and Disposal Facilities XX
Water Dischargers XX
Air Pollution XX
Brown elds XX
Toxic Release Inventory XX

Other community features within defined area:

Schools XX
Hospitals XX
Places of Worship XX

Other environmental data:

Air Non-attainment XX
Impaired Waters XX

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

Report for County: Hampden

EJScreen Environmental and Socioeconomic Indicators Data

HEALTH INDICATORS

INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Low Life Expectancy	19%	17%	68	20%	44
Heart Disease	6.4	5.4	79	6.1	58
Asthma	11.7	10.8	81	10	88
Cancer	6.5	6.6	40	6.1	54
Persons with Disabilities	16.3%	11.9%	83	13.4%	72

CLIMATE INDICATORS

INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Flood Risk	10%	12%	58	12%	64
Wild re Risk	0%	0%	0	14%	0

CRITICAL SERVICE GAPS

INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Broadband Internet	16%	10%	77	14%	64
Lack of Health Insurance	3%	3%	65	9%	20
Housing Burden	XX	N/A	N/A	N/A	N/A
Transportation Access	XX	N/A	N/A	N/A	N/A
Food Desert	XX	N/A	N/A	N/A	N/A

Report for County: Hampden