



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

**Natural Gas Distribution Infrastructure Safety and Modernization Grant
Program**

**Westfield Gas and Electric Light Department, City of Westfield, MA
Tier 2 Site Specific Environmental Assessment
NGDISM-FY22-EA-2023-23**

PHMSA Approval:

**PHMSA Office of Planning and Analytics
Environmental Policy and Justice Division**

Matt Fuller

Matt.Fuller@dot.gov

Westfield Gas and Electric Light Department, City of Westfield

Michael S. Lee

mlee@wgeld.org

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 would 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-2023-23 in your response.

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

I. Project Description/Proposed Action

Project Title	Westfield Gas and Electric Light Department
Project Location	City of Westfield, Hampden County, Massachusetts
Project Description/Proposed Action:	
<p>Westfield Gas and Electric Light Department (WG+E) in the City of Westfield, Massachusetts, is proposing to replace a total of 71,721 linear feet (LF) of cast-iron, coated steel, and leak-prone polyethylene (PE) pipe, with 52,900 LF of PE pipe, which will enhance safety, improve operations, and reduce methane emissions of natural gas of Westfield’s natural gas transmission system, including pipeline modernization and interim safety enhancement measures. WG+E is proposing to abandon 71,721 LF of leak-prone pipe materials and renew 774 low-pressure services. There are several areas where two (2) mains exist in a single area and will be replaced with one main, resulting in the reduced linear feet of replacement PE mainlines. See Appendix A, Project Maps.</p> <p>All work would be performed within existing right-of-way (ROW). The existing cast iron, coated steel, and PE mains are at a depth of 24-36 inches. WG+E would install replacement pipe parallel to the existing pipe to avoid conflict with other utilities. All replacement main gas lines would be replaced by cut and cover (trenching) methods, with old cast iron, coated steel, or PE mains abandoned in place. The new PE high-pressure services would be inserted into old low-pressure piping or directly buried. 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, WG +E would also utilize an open trench method, which generally involves</p>	

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>

greater soil disturbance and use of heavy equipment and related impacts when compared to the insertion method. Most of the service renewals would not change the existing location of the meter. There are a small number of internal meters that would be relocated to the outside the dwelling, with coordination with the homeowner for the location of the new riser and meter set. Any alterations (i.e. pipe protrusions) would be conducted with the owner's pre-approval. All new mains and services would be high pressure (99 pounds per square inch (PSI) maximum allowable operating pressure (MAOP)) and abandoned mains and services are currently low pressure (0.33 PSI).

There would be four construction staging areas, three of which are located on property owned by WG+E, and the fourth location is jointly owned by WG+E and the City of Westfield Water Department. The existing cast iron mains were installed between 1910-1973, the existing coated steel mains were installed between 1969-1983, and the existing PE mains were installed between 1986 and 2017.

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, WG+E would continue to use legacy cast iron, steel, and other leak prone pipeline material, and conduct repairs or replacements in the future using non-federal sources of funding, and potentially on an emergency basis, when a pipeline fails. Impacts and benefits associated with replacing the leak prone pipeline within the City of Westfield 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:

The project is needed to ensure the safe, reliable operation and delivery of energy to the community by replacing leak prone cast iron, coated steel, and PE natural gas pipelines with PE pipelines and thereby reducing the likelihood of future leaks. The overall needs addressed by this project would include (1) improving upon the safe delivery of energy by reducing the likelihood of incidents, as well as methane leaks; (2) avoiding economic losses caused by pipeline failures; and (3) protecting our environment and reducing climate impacts by remediating aged and failing pipelines and pipe prone to leakage.

Description of the Environmental Setting of the Project Area:

The affected environment includes portions of pipeline located across the City of Westfield in Hampden County, Massachusetts. The project locations can be found in Appendix A, Project Maps. The Proposed Action would be conducted within existing ROW across established neighborhoods within the City of Westfield. The four (4) staging areas would be located either on property owned solely by WG+E or in tandem with the City of Westfield.

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?	No.
Will mitigation measures be used to capture blowdown ³ ?	No.
Does the system have the capability to reduce pressure on the segments to be replaced? If yes, what is the lowest psi your system can reach prior to venting?	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.	The existing system operates at 0.33 PSI. Based on the size of the existing pipes (2", 3", 4", 6", and 12"), 13.26 thousand cubic feet (MCF) or 407 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 55,137 kg/year. Replacement would result in a leak rate of 288 kg/year or a reduction of 54,849 kg/year. ⁴
<p>Conclusion:</p> <p>The project area is located within the City of Westfield in Hampden County, Massachusetts which is designated by the EPA as in attainment for all National Ambient Air Quality Standards (NAAQS). The existing pipelines within the project area consist of leak prone cast iron, installed between 1910-1973, and leak prone coated steel, installed between 1969-1983, and leak prone PE installed between 1986 and 2017.</p> <p>No Action:</p> <p>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 legacy cast iron, steel, and other leak prone pipe material. The No Action alternative would result in the existing leak rate continuing, which is estimated at 55,137 kg/year, encompassing all areas of this project where pipeline would be replaced. See Appendix B, Methane Calculations for the methane leak rate calculations.</p> <p>Proposed Action:</p> <p>The Proposed Action consists of abandoning a total of 71,721 LF of low-pressure of cast-iron, coated steel, and PE mains with approximately 10 miles (or 52,900 LF) of PE, along with renewing 774 low-pressure services,</p>	

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.

which would result in minor air quality impacts associated with construction activities, including the intentional venting of methane contained in the existing pipelines prior to replacement. Pipeline blowdowns are typically necessary to ensure that construction and maintenance work can be conducted safely on depressurized natural gas facilities and pipelines. Venting methane is required when service is switched from the existing line to the newly constructed line, but the volume of vented gas can depend on the ability to reduce pressure on the pipe segment or other mitigation actions. Therefore, some methane will be vented into the atmosphere during construction. Based on an operating pressure of 0.33 PSI and average inside pipe diameters ranging from 2 inches to 12 inches, PHMSA estimates 11.71 MCF of methane (or 360kg) would be vented into the atmosphere during construction. See Appendix B, Methane Calculations, for the methane blowdown calculations.

As described in the Tier 1 EA, methane leaks from natural gas distribution pipelines increase with age and are considerably higher for cast iron and steel pipelines, as compared with plastic. Replacing leak prone pipe with newer, more durable materials would reduce leaks and methane emissions. Based on the current leak rate of the existing pipe within the project area, this project would reduce overall emissions by 54,490 kg in the first year (when considering the methane that will be released from blowdown that will occur during construction) and would reduce overall methane emissions by 54,849 kg per year thereafter. The total reduction in methane emissions resulting from the conversion of the existing cast iron, coated steel, and PE pipes to plastic pipeline would be approximately 1,096,990 kg over a 20-year span post construction. See Appendix B, Methane Calculations, for the methane reduction calculations. Therefore, it is PHMSA's assessment that the proposed project would provide a net benefit to air quality from the overall reduction of greenhouse gas emissions and that no indirect or cumulate impacts would result from the Proposed Action.

Mitigation Measures:

Westfield Gas and Electric Light Department in the City of Westfield 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; and
- Minimizing construction site traffic by the use of offsite parking and shuttle buses, as necessary.

Water Resources	
Question	Information and Justification
Are there water resources within the project area, such as wetlands, streams, rivers, or floodplains? If so, would the project temporarily or permanently impact wetlands or waterways?	No, according to U.S. Fish and Wildlife Service (USFWS) National Wetland Inventory (NWI) and Federal Emergency Management Agency (FEMA) National Flood Hazard Layer FIRMette maps.

Under the Clean Water Act, is a Section 401 State certification potentially required? If yes, describe anticipated permit and how project proponent will ensure permit compliance.	No.
Under the Clean Water Act, is a USACE Section 404 Permit required for the discharge of dredge and fill material? If yes, describe anticipated permit and how project proponent will ensure permit compliance.	No.
Under the Clean Water Act, is an EPA or State Section 402 permit required for the discharge of pollutants into the waters of the United States? Is a Stormwater Pollution Prevention Plan (SWPPP) required?	No.
Will work activities take place within a FEMA designated floodplain? If so, describe any permanent or temporary impacts and the required coordination efforts with state or local floodplain regulatory agencies.	No, the project does not take place within a Special Flood Hazard Area.
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, the project is not located within a coastal zone.
<p>Conclusion:</p> <p>PHMSA reviewed USFWS NWI, FEMA National Flood Hazard Layer FIRMette maps, and water resources on NEPAAssist⁶ to identify aquatic features including wetlands, streams, and other water resources in or near the project area. Based on a review of the NWI maps, NRCS soils maps and reports, no streams or wetlands have been identified within the proposed project area.</p> <p>PHMSA also reviewed FEMA's National Flood Hazard Layer to identify any special flood hazard areas (SFHAs) potentially impacted by the project. The FIRMette maps indicate the project is in Zone X, outside of any SFHA but is adjacent to areas designated as Zone A and Zone AE. Both Zone A and AE areas are subject to inundation by the 1-percent-annual-chance flood event, however, areas designated as Zone A do not have base flood elevations (BFEs) established and areas designated as AE have BFEs established and identified on the FIRMette maps. Additionally, the project is not located within a Coastal Zone. See Appendix C, Water Resources.</p> <p>No Action:</p> <p>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. Depending on the location of the activities, the work could be in close proximity to an aquatic resource where the City of Westfield would need to take precautions to avoid adverse impacts to these sensitive areas.</p> <p>Proposed Action:</p>	

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

⁶ <https://www.epa.gov/nepa/nepassist>

Based on a review of the NWI maps, FEMA maps and NEPAAssist maps, no water resources have been identified within the proposed project area. Best Management Practices would be used during construction, as needed, to prevent the migration of sediments into adjacent waterways, outside of the project area. The pipeline placement and abandonment of the existing pipeline is not anticipated to cause any reasonably foreseeable indirect effects or cumulative effects to water resources. Therefore, it is PHMSA's assessment that there will be no adverse impacts to water resources.

Mitigation Measures:

Best Management Practices shall be used during construction to control sediment and erosion and prevent pollutants from entering adjacent waterways.

Groundwater and Hazardous Materials/Waste	
Question	Information and Justification
Does the project have potential to encounter and impact groundwater? If yes, describe potential impacts from construction activities.	No, based on review of the NRCS soils survey report, the project does not have the potential to impact groundwater.
Will the project require boring or directional drilling that may require pits containing mud and inadvertent return fluids? If yes, describe measures that will be taken during construction activities to prevent impacts to groundwater resources.	No.
Will the project potentially involve a site(s) contaminated by hazardous waste? Is there any indication that the pipeline was ever used to convey coal gas? If yes, PHMSA will work with the project proponent for required studies.	No, based on a review of the EPA's EnviroAtlas ⁷ site, the project would not involve contaminated hazardous waste.
Does the project have the potential to encounter or disturb lead pipes or asbestos?	No, WG+E has no record of using lead or asbestos piping.
<p>Conclusion:</p> <p>PHMSA reviewed EPA's NEPAAssist website to identify any brownfield properties, hazardous waste sites, Resource Conservation and Recovery Act (RCRA) sites, air pollution sites and superfund sites. There are numerous RCRA sites identified in the project area, which included a Tool & Die business, Police Station and Housing Authority, and a business that contains ignitable waste, but no brownfield properties or superfund sites were identified that could potentially impacted by the project. PHMSA obtained a custom soil report for the project area from the USDA, NRCS's web soil survey which indicates that the project area is comprised of moderate to well-drained soils where the depth to the water table is likely found between 24 and greater than 80 inches. It is noted that the project area is an urban, residential area where ground disturbance activities have already occurred and there are very few areas, if any, that remain in a natural state. Therefore, while the soils report provides valuable information, the soils have been disturbed and likely contain some degree of fill material brought in as a suitable base for construction.</p> <p>No Action:</p> <p>Under the No Action alternative, the cast iron, steel, and PE pipes would remain in their current location and</p>	

⁷ <https://enviroatlas.epa.gov/enviroatlas/interactivemap/>

ongoing and routine maintenance activities would occur. Pipes would be replaced under failed circumstances. While there are no adverse impacts to groundwater anticipated by the No Action alternative, increased methane emissions are likely to occur if the leak prone pipes remain (EPA, PRO Fact Sheet No. 402⁸) and the risk of failure is higher among these types of pipes. Therefore, under the no action alternative, PHMSA anticipates an increased risk for the release of methane, both as leaks and during a pipeline failure, which could then result in ground disturbances from construction activities, potentially impacting groundwater.

Proposed Action:

The Proposed Action includes the replacement of 52,900 LF of leak prone piping within the existing ROW in Westfield, Massachusetts. Construction methods consist of open cut trenching and direct bury, at approximate depths of 24 to 36 inches. Due to the likelihood that the work areas contain fill material and existing utilities, it is not anticipated that construction would intercept groundwater. The existing pipelines will be abandoned, in accordance with PHMSA requirements, and will be purged of natural gas and sealed on each end. The new main gas lines will be replaced adjacent to the existing gas lines and service lines will either be installed by insertion methods or direct bury. PHMSA's assessment is that there would be no adverse impacts to groundwater associated with the project as the trenching is unlikely to intercept groundwater and there are no identified hazardous waste sites in the areas of disturbance. Additionally, PHMSA has not identified any indirect or cumulative effects to groundwater or hazardous materials.

Mitigation Measures:

Westfield Gas and Electric Light Department in the City of Westfield shall restore all impacted areas to pre-construction condition.

Soils	
Question	Information and Justification
Will all bare soils be stabilized using methods using methods identified in the initial Tier 2 EA worksheet? Will additional measures be required?	Yes, all impacted soil would be restored to preconstruction contours and conditions.
Will the project require unique impacts related to soils?	No.
<p>Conclusion:</p> <p>PHMSA obtained a custom soil report for the project area from the USDA, NRCS's web soil survey which indicates that the project area is comprised of urban land, Hinckley loamy sand, Merrimac fine sandy loam, Windsor loamy sand, Pullox fine sandy loam, and Sudbury fine sandy loam. The project area is comprised of moderate to well-drained soils where the depth to the water table is found between 24 and greater than 80 inches.⁹ The project area consists of existing ROW in an urban, residential area where ground disturbance activities have already occurred. Therefore, while the soils report provides valuable information, the soils have been disturbed and likely contain some degree of fill material brought in as a suitable base for construction. See Appendix C, Water Resources, which includes a soils map.</p> <p>No Action:</p>	

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.](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.)

⁹ <https://websoilsurvey.nrcs.usda.gov/app/HomePage.htm>

Under the No Action alternative, the cast iron, coated steel, and PE 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 Proposed Action includes the replacement of 52,900 LF of cast-iron and coated steel piping, within the existing ROW in Westfield, Massachusetts. The new main pipeline would be installed by open trenching methods, approximately 24 to 36-inches deep and service lines would be installed by inserting new lines into existing lines or new installation adjacent to the existing lines approximately 18 to 24 inches deep. Therefore, PHMSA's assessment is that there would be no adverse impacts associated with soils resulting from the Proposed Action alternative. Additionally, there are no indirect or cumulative impacts anticipated as WG+E will restore all areas to pre-construction conditions.

Mitigation Measures:

Westfield Gas and Electric Light Department in the City of Westfield shall implement the following mitigation measures:

- Application of erosion and sediment control measures;
- Application of silt fence, check dams, and covering of all bare areas;
- Restore all impacted areas to pre-construction contours; and
- Permanently stabilize the areas via appropriate materials, as necessary.

Biological Resources	
Question	Information and Justification
Based on review of IPaC and NOAA Fisheries database, are there any federally threatened or endangered species and/or critical habitat potentially occurring within the geographic range of the project area? If no, no further analysis is required.	No, based on review of the USFWS's Information for Planning and Consultation (IPaC) and National Oceanic and Atmospheric Association (NOAA) Fisheries website. ¹⁰ Additionally, Massachusetts state resources were inventoried to identify state listed species. ¹¹
Will the project impact any areas in or adjacent to habitat for Federally, listed threatened or endangered species or their critical habitat? If no, provide justification and avoidance measures. If yes, PHMSA will work with the project proponent to conduct necessary consultation with resource agencies.	No.
Conclusion: The project would take place in Westfield, Massachusetts, within the existing ROW. The new main lines would be installed adjacent to the existing lines, under the pavement. Service lines would be replaced by insertion	

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

¹¹ <https://www.mass.gov/info-details/list-of-endangered-threatened-and-special-concern-species#summary-of-the-mesa-list->

methods or direct bury adjacent to the existing service line, likely in grassy areas or under pavement, to minimize ground disturbance. . The project area consists of both commercial and residential areas where the only vegetation and pervious surfaces are located in residential backyards or vegetated buffer areas along the streets.

PHMSA requested an official species list through the USFWS's IPaC website. See Appendix D, Biological Resources, for the IPaC species list. There was one endangered species identified, the northern long-eared bat (NLEB), (*Myotis septentrionalis*) that could potentially occur within the project 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. There was no critical habitat identified within 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.

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. Maintenance activities would not have any effect on the species identified above.

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 either the NLEB or the monarch butterfly. Therefore, in accordance with Section 7 of the Endangered Species Act¹² PHMSA's assessment is that the project would have no effect to the NLEB. Federal candidate species, and state listed species are not subject to Section 7 of the Endangered Species Act. No adverse impacts to state listed species or other biological resources would result from the proposed project. There are no indirect or cumulative impacts anticipated as no impacts to habitat or species would occur.

Mitigation Measures:

Westfield Gas and Electric Light Department in the City of Westfield 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 ground disturbing activities, including installation, replacement, or tie-over of natural gas service risers.
Is the project located within a previously identified local, state, or National Register historic district or	Yes, the NRHP-listed Westfield Center Historic District is located within the Area of Potential Effects (APE)

¹² 50 CFR § 402.02

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	and meter relocations will take place at seven contributing resources along Holland Street and King Street within the Westfield Center Historic District.
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, meter relocations would take place at 107 previously unevaluated properties that are all 50 years of age or older.
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.	No
Will project implementation require removal or disturbance of any stone or brick sidewalk, roadway, or landscape materials or other old or unique features? Please provide photos of the project area that include the roadway and sidewalk materials in the project and staging areas.	No
<p>Conclusion:</p> <p>PHMSA must consider the impact of projects for which they provide funding on historic and archeological properties¹⁶ in accordance with Section 106 of the National Historic Preservation Act (Section 106). Pursuant to 36 CFR 800.4(a)(1), the 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 to encompass the existing ROW and the parcels where meters are being replaced, which include the limits of disturbance, and the limits of any potential vibration, physical, or limited visual effects. The APE extends to the depth of proposed ground disturbance of up to 36 inches below grade. See Appendix E, Cultural Resources.</p> <p>No Action:</p> <p>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.</p> <p>Proposed Action:</p> <p>PHMSA staff identified properties based on available information on previously identified historic properties in</p>	

¹³ Many SHPOs have an [online system](https://www.nps.gov/subjects/nationalregister/state-historic-preservation-offices.htm) 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](https://www.nps.gov/subjects/nationalregister/database-research.htm) 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](https://egis.hud.gov/TDAT/) at <https://egis.hud.gov/TDAT/>.

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

the APE, including the National Register of Historic Places (NRHP) database, data gathered at the Massachusetts Historical Commission (MHC), data gathered using Massachusetts Cultural Resource Information System (MACRIS), and USDA Web Soil Survey. PHMSA staff also conducted research to determine if there are any previously unidentified properties within the APE that are 45 years of age or older and may be eligible for the NRHP. The Westfield Historic District (District) is the only NRHP-listed historic property within the APE. Meter relocations would take place at 107 previously unevaluated properties that are all 50 years of age or older, seven of these properties are within the Westfield Historic District. PHMSA is assuming that the 107 residential properties identified within the APE are eligible for listing in the NRHP under Criteria A and C for association with locally significant events and architecture. However, the Undertaking will not alter any of the characteristics or contributing features of historic properties that qualify them for inclusion in the NRHP under Criteria A or C in a manner that would diminish their integrity. 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. See Appendix E, Cultural Resources, for additional information about the APE and the properties identified.

PHMSA has determined the Proposed Project would not alter any of the characteristics or contributing features of the District that qualify it for inclusion in the NRHP. Project work is limited to the replacement of existing pipelines. The Undertaking would not result in lasting physical, visual, or audible effects to the District. 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 February 28, 2024, to the Massachusetts State Historic Preservation Officer (SHPO), federally recognized tribes with a potential interest in the project area, and all consulting parties outlining the Section 106 process, including a description of the undertaking, delineation and justification of the APE, identification of historic properties and an evaluation and proposed finding of no 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 E, 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 the Westfield Gas and Electric Light Department 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 Westfield Gas and Electric Light Department shall immediately contact PHMSA as well as the proper authorities in accordance with applicable state statutes to determine if the discovery is subject to a criminal investigation, of Native American origin, or associated with a potential archaeological resource. At all times human remains must be treated with the utmost dignity and respect. Human remains and associated artifacts will be left in place and not disturbed. No skeletal remains or materials associated with the remains will be photographed, collected, or removed until PHMSA has conducted the appropriate consultation and developed a plan of action. Project activities shall not resume until PHMSA provides further direction.

All work, material, equipment, and staging to remain within the road's existing right-of-way or utility easement or other staging areas as identified in the environmental documentation. If the scope of work changes in any way that may alter the effects to historic properties as described herein, the grant recipient must notify PHMSA, and consultation may be reopened under Section 106.

Section 4(f)	
Question	Information and Justification
Are there Section 4(f) properties within or immediately adjacent to the project area? If yes, provide a list of properties or as an attachment.	Yes, Allen Park and the Municipal Field Playground are adjacent to 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.
<p>Conclusion:</p> <p>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:</p> <ul style="list-style-type: none"> • 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. <p>PHMSA conducted a review of the Project Area to identify properties that potentially qualify as Section 4(f). The Municipal Field Playground and Allen Park, were identified as potential Section 4(f) properties. Allen Park is located in Segment 5 surrounded by King Street, Grand Street and W. School Street. Municipal Field Playground is located in Segment 10 and is surrounded by King Street, Hubbard Street and Franklin Street.</p> <p>No Action:</p> <p>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.</p> <p>Proposed Action:</p> <p>Under the Proposed Action alternative, construction activities would occur adjacent to the Municipal Field Playground/Bullen's Field and Chauncy Allen Park/Grandmother's Garden, however, no work would take place within the boundary of the parks. The cast iron main on King Street and King Street Extension would be</p>	

abandoned in place and the high-pressure main exists along Chauncy Allen Park/Grandmother's Garden. Ingress and egress routes, parking lots, and adjacent sidewalks would remain open throughout the duration of construction and no physical use of the parks would occur. In addition, as described in the Noise section of this EA, no adverse impacts associated with construction noise have been identified that could affect the use of these properties. Therefore, there would be no use of Section 4(f) resources.

Mitigation Measures:

Westfield Gas and Electric Light Department in the City of Westfield shall ensure public access to the Municipal Field Playground and Allen Park is maintained for the duration of construction.

Westfield Gas and Electric Light Department in the City of Westfield shall coordinate with park officials when implementing a traffic management plan prior to 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, all work would take place within the existing ROW.
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, minor traffic interruptions are anticipated. No permanent changes to transportation facilities would occur.
Will the project interrupt or impede emergency response services from fire, police, ambulance or any other emergency or safety response providers? If so, describe any coordination that will occur with emergency response providers?	No, the project would not interrupt or impede emergency response services.
<p>Conclusion:</p> <p>The project is located in Westfield, Massachusetts, an urbanized area comprised of both commercial and residential areas. All work would occur within existing ROW or easements.</p> <p>No Action:</p> <p>Under the No Action alternative, the cast iron, coated steel, and PE 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.</p> <p>Proposed Action:</p> <p>The Proposed Action would replace 59,000 LF of pipelines adjacent to the existing infrastructure, and all work would occur within the existing ROW. Roadway work would be completed as quickly and efficiently as possible, while maintaining safety and traffic flow. Any impacts to normal traffic flow would be temporary and would only occur during daylight working hours. Therefore, PHMSA's assessment is that there would be no</p>	

permanent change to land use. The project is replacing/upgrading the existing pipe and would not include new pipeline to serve any additional areas. Additionally, there are no indirect impacts anticipated as land use remains the same.

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. Local and state regulations guide the transport of machinery, equipment, and automobiles around the construction areas. Temporary traffic impacts may occur on the local road network and adjacent pedestrian routes. Where possible, WG+E would maintain a regular flow of traffic. Consideration of emergency response vehicles, travel restrictions, and other impacts to local transportation are anticipated to be temporary and would only last for the duration of construction. WG+E would coordinate with the appropriate local and state agencies regarding interruptions to traffic. WG+E would notify emergency services of the scheduled work and traffic implications of the work that would be conducted. Additionally, WG+E would use various methods of communication to notify any potentially impacted residents, business owners, and the general public when work could potentially impact normal traffic patterns. Therefore, because the work consists of the replacement of existing pipeline, would not convert any new areas into a different use and impacts would only occur during construction, and work will be completed within the existing ROW, PHMSA's assessment is that impacts related to land use are considered minor and temporary.

PHMSA considered the cumulative effects of this action with ongoing and planned transportation related construction projects that could cumulatively impact land use and transportation. The Town of Westfield currently has several bridge, roadwork, and municipal playground related projects ongoing within or near the project area. All municipalities and businesses must abide by the same requirements and coordinate with state and local agencies on 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. Land use changes are not anticipated as the projects are occurring in an urbanized area that is built out and therefore would not change the existing residential or commercial use.

Mitigation Measures:

Westfield Gas and Electric Light Department in the City of Westfield shall restore areas to pre-construction conditions.

Westfield Gas and Electric Light Department in the City of Westfield shall coordinate with state and local agencies regarding detours and/or routing adjustments during construction and will notify any potentially impacted residents and/or business owners.

Noise and Vibration	
Question	Information and Justification
Will the project construction occur for longer than a month at a single project location?	No.
Will the project location be in proximity (less than 50-ft.) to noise sensitive receivers (residences, schools, houses of worship, etc.)? If so, what measures will be taken to reduce noise and vibration impacts to sensitive receptors?	Yes, WG+E would adhere to City of Westfield sound ordinance ¹⁷ as well as Massachusetts State Ordinances, MGL 111 Section 142 A-M (Massachusetts State Noise Policy) ¹⁸ .

¹⁷ https://library.municode.com/MA/Westfield/CODES/Code_of_Ordinances?nodeId=PTIICOR_CH100FMIPR_ARTIINO

¹⁸ <https://malegislature.gov/Laws/GeneralLaws/PartI/TitleXVI/Chapter111>

Will the project require high-noise and vibration inducing construction methods? If so, please specify.	No, high-noise and vibration inducing construction methods are not anticipated.
Will the project comply with state and local ordinances? If so, identify applicable ordinances and limitations on noise/vibration times or sound levels.	Yes, MGL 111 Section 142 A-M (Massachusetts State Noise Policy) would be followed. Additionally, The City of Westfield Sound ordinance would be followed.
Will construction activities require large bulldozers, hoe ram, or other vibratory equipment within 20 feet of a structure?	No.
<p>Conclusion:</p> <p>The project is located in the urban and residential areas of Westfield, Massachusetts. The ambient noise consists of a combination of environmental noise from road traffic, construction, industry, the built environment, population density, residential neighborhoods, and other sources.</p> <p>No Action:</p> <p>Under the No Action, the project would not move forward and the pipelines along the designated streets in the project area would not be replaced at this time, and likely would not be replaced all at once. It is likely that these pipelines would be repaired or replaced due to a leak under emergency conditions. If replacement or repairs occur under emergency conditions, noise from construction equipment would add to that of the current ambient noise and would be of a shorter duration.</p> <p>Proposed Action:</p> <p>The pipeline replacement project would result in temporary construction noise impacts; however, no vibration impact should occur. Construction for the project is anticipated to last 8-10 months. The State of Massachusetts enforces an exterior noise ordinance that states any noise source that 1) Increases the broadband sound level by more than 10dB(A) above ambient, or 2) Produces a “puretone” condition (when any octave band center frequency sound pressure level exceeds the two adjacent center frequency sound pressure levels by 3 decibels or more), is considered to be in violation of the ordinance (M.G.L. Chapter 111, Section 142A-M). Additionally, the City of Westfield noise ordinance limits construction activities to be conducted from 7:00 AM to 9:00 PM Monday through Saturdays, and on Sundays from noon until 9:00 PM, and sound levels may not exceed 85 dBA. There are numerous sensitive noise receptors (residences, schools, houses of worship, etc.) located adjacent to the streets where work would occur. These receptors are likely to experience temporary noise impacts while outdoors in the vicinity of the work; however, noise is not anticipated to be 10db higher than ambient noise, due to state regulations. WG+E has committed to complying with applicable local town and state noise policies/ordinances, which limit both sound levels and hours of construction. Therefore, the level of noise during construction is considered minor and would not result in vibration impacts.</p> <p>PHMSA considered the cumulative effects of this action with ongoing and planned transportation related construction projects that could cumulatively have an impact on the noise and vibration impacts within the Town of Westfield. The Town of Westfield currently has several bridge, roadwork, and municipal playground related projects ongoing within or near the project area, which all contribute to increased noise. These other construction and maintenance projects may occur at the same time as the Proposed Action alternative and cause minor cumulative effects to noise during construction. However, adhering to state and local noise ordinances should ensure the project does not cause cumulatively adverse noise or vibration impacts.</p>	

Mitigation Measures:

Westfield Gas and Electric Light Department in the City of Westfield shall adhere to all state and local noise ordinances.

Environmental Justice	
Question	Information and Justification
Using the EPA EJScreen or census data ¹⁹ , is the project located in an area of minority and/or low-income individuals as defined by USDOT Order 5610.2(c)? If so, provide demographic data for minority and/or low-income individuals within ½ mile from the project area as a percentage of the total population.	Yes, based on review of socioeconomic data using the EPAs EJScreen, the population residing within the general project area contains 23% low income and 17% 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, renewal of low-pressure services would require temporary interruption of gas supply to residents.
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, WG+E's website provides the ability to translate information into seven (7) different languages that have been identified within the population of our customer base.
Conclusion: <p>Executive Order (E.O.) 14096—"Revitalizing Our Nation's Commitment to Environmental Justice for All" was enacted on April 21, 2023. E.O. 14096 on environmental justice does not rescind E.O. 12898 – "Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations," which has been in effect since February 11, 1994 and is currently implemented through DOT Order 5610.2C. This implementation would continue until further guidance is provided regarding the implementation of the new E.O. 14096 on environmental justice.</p> <p>PHMSA reviewed socioeconomic data using the EPAs EJScreen and found the population residing within the project area of Westfield, MA contains 23% low income and 17% minority populations. The percentage of these populations is below the Hampden County average of 32% low income and 39% minority populations. See Appendix F, Environmental Justice, for socioeconomic data.</p>	
No Action: <p>Under the No Action alternative, existing and planned pipeline activities, including construction and maintenance activities, would continue unchanged. WG+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 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</p>	

¹⁹ <https://www.census.gov/quickfacts/fact/table/US/PST045222>

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 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, replacement 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. 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 and would not result in indirect or cumulative impacts.

Mitigation Measures:

Westfield Gas and Electric Light Department in the City of Westfield shall provide advanced public notifications of service disruptions and construction schedules 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, the Westfield Gas and Electric Light Department 2022 Distribution Integrity Management Program (DIMP) Model.
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, A public awareness program would be implemented according to the API recommended practice 1162.
Does the project area include pipes prone to leakage?	Yes.
Will construction safety methods and procedures to protect human health and prevent/minimize hazardous materials releases during construction, including personal protection, workplace monitoring and site-specific health and safety plans, be utilized? If yes, document measures and reference appropriate safety plans.	Yes, APPA Safety Manual 17th Edition.
Has an assessment of the project been performed to analyze the risk and benefits of implementation?	Yes, an assessment has been performed to analyze the risk and benefit of implementation.
Conclusion: The proposed project would replace and abandon a total of 52,900 LF) of cast-iron and coated steel piping with polyethylene (PE) pipe. Pipelines that are known to leak based on the material include cast iron, bare steel, wrought iron, and historic plastics with known issues (PIPES Act of 2020). PHMSA establishes safety	

regulations for all pipelines (49 CFR Parts 190-199). In 2011, following major natural gas pipeline incidents, DOT and PHMSA issued a Call to Action to accelerate the repair, rehabilitation, and replacement of the highest-risk pipeline infrastructure. Among other factors, pipeline age and material are significant risk indicators. Pipelines constructed of cast and wrought iron, as well as bare steel, are among the pipelines that pose the highest risk. 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 cast iron, coated steel, and PE pipes would remain in their current location, state, and condition. Normal maintenance activities would occur, and pipes would be replaced under failed circumstances. Safety risks resulting from existing leak prone pipes remaining in place would persist until the existing pipes are replaced.

Proposed Action:

WG+E's DIMP has shown leakage detection, and the potential for leaks is high. The following ranking results for replacement of steel and cast-iron pipes identified as threats to the natural gas system due to corrosion and leaks: WG+E discovered and repaired approximately 229 leaks during the three-year timeframe from January 2019 through December 31, 2021. Of this total, there were 155 main system leaks (68%) and 74 leaks on company service lines (32%). Further, of the total 35 leaks were classified as Grade 1 (15%), 95 leaks were classified as Grade 2 (41%), and 97 leaks were classified as Grade 3 (42%).²⁰

The proposed project is necessary to replace leak prone cast iron, coated steel, and PE pipes. This replacement is in alignment with the City of Westfield's DIMP plan, increasing the overall safety of the community. WG+E would work in collaboration with the Northeast Gas Association and the proposed project would adhere to the American Public Power Association Safety Manual, 17th Edition. The project would reduce the risk profile of existing pipeline systems prone to methane leakage and would also benefit disadvantaged communities with the safe provision of natural gas. The project responds to the need to address the potentially unsafe condition of the natural gas distribution system. The replacement of pipelines would be constructed in accordance with industry best practices and would comply with all local, state, and federal regulations, including those for safety. Therefore, PHMSA's assessment is that this replacement project would improve the overall safety of Trinidad's infrastructure.

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 Westfield's infrastructure.

Mitigation Measures:

Westfield Gas and Electric Light Department in the City of Westfield shall ensure their DIMP procedures are updated as necessary, and the work is constructed in accordance with industry best practices and the project

²⁰ The Gas Piping and Technology Committee defines a Grade 1 leak as a leak that represents an existing or probable hazard to persons or property, and requires immediate repair or continuous action until the conditions are no longer hazardous. A Grade 2 leak is a leak that is recognized as being non-hazardous at the time of detection, but justifies scheduled repair based on probable future hazard. A Grade 3 leak is a leak that is not hazardous at the time of detection and can reasonably be expected to remain not hazardous.

would comply with all local, state, and federal regulations, including those for safety.

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

III. **Public Involvement**

On November 9, 2022, PHMSA published a Federal Register notice (87 FR 67748) with a 30-day comment period soliciting comments on the “Tier 1 Nationwide Environmental Assessment for the Natural Gas Distribution Infrastructure Safety and Modernization Grant Program.” During the 30-day comment period, PHMSA received one comment letter from the APGA on various aspects of the program and air quality related analysis in the EA on December 9, 2022. This APGA letter is available for public review at the Docket No: PHMSA-2022-0123.²¹ 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 would require additional documentation from the project proponent, as reflected in this Tier 2.

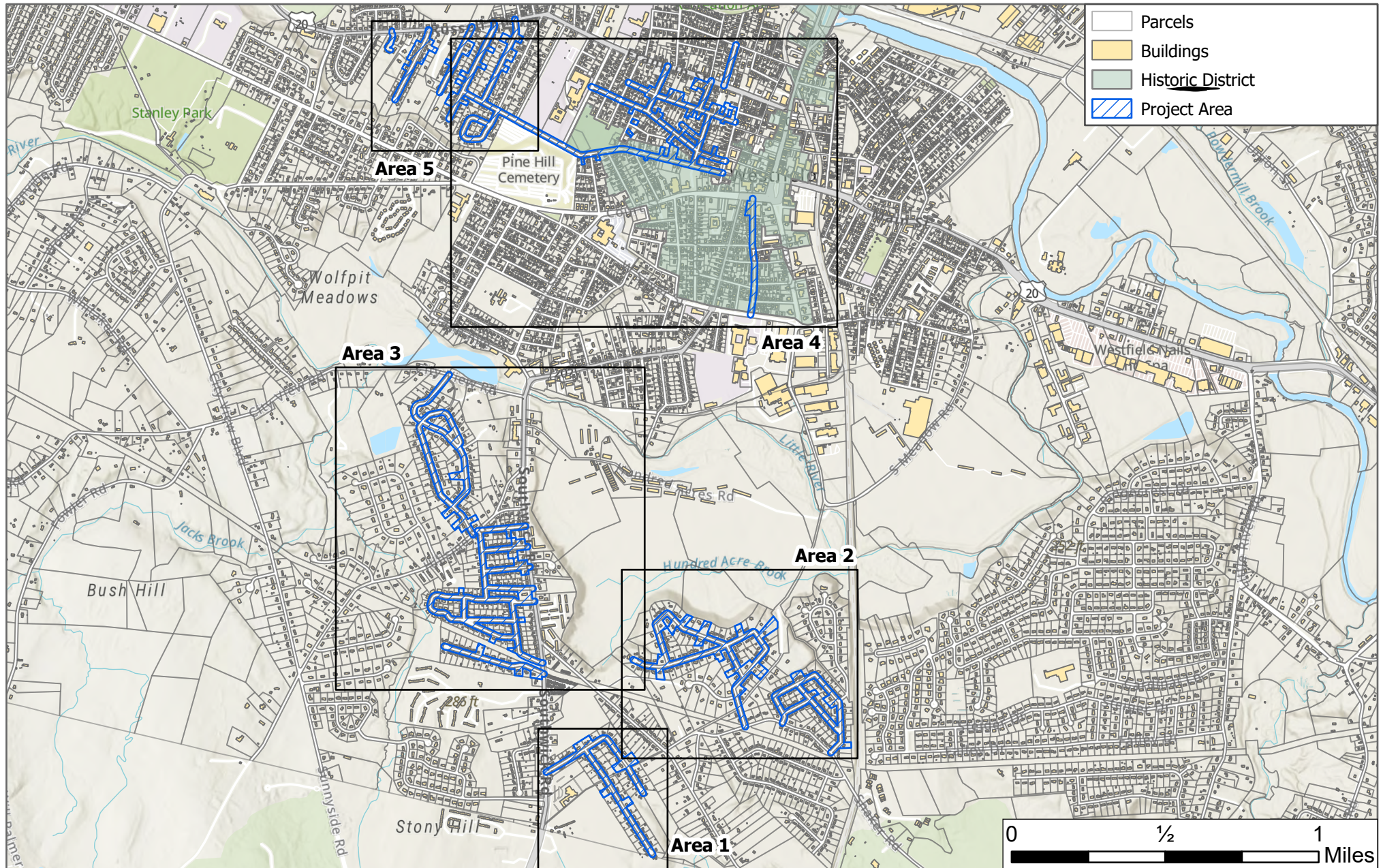
As part of this Tier 2, PHMSA is soliciting public comments through a public comment period. This Tier 2 is available on PHMSA’s website where comments can be submitted to the contact noted below. PHMSA will accept public comments for 30 days on this Tier 2. PHMSA will consider comments received and 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-2023-23 in your response.

²¹ <https://www.regulations.gov/document/PHMSA-2022-0123-0002/comment>

Appendix A

Project Map

Project Area Map



Name: Westfield Massachusetts Gas Line Replacement

Scale: 27,000

Total Acreage: 164.4

USGS Basemap: Woronoco, Mount Tom, Southwick, West Springfield
Westfield, MA, Hampden County

N



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

Appendix B

Air Quality (Methane Calculations)

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	Average Rate (kg/mile/year)	Miles	Current Methane Leak Rate (kg/year)
Cast Iron	4,597.40	11.98	55,077
Unprotected steel	2,122.30	0	0
Protected steel	59.1	0.48	28
Plastic	190.9	1.12	32
Total Annual Methane Leak Rate			55,137
20-year Methane Emissions			1,102,750

Table 3 Proposed Action Leak Rate

Pipeline Material Type	Average Rate (kg/mile/year)	Miles	New Methane Leak Rate (kg/year)
Plastic	28.8	10	288
Year 1 Methane Reduction			54,490
Annual Methane Reduction			54,849
20-year Methane Reduction			1,096,990

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

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

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

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

Table 4 Proposed Action - Methane Blowdown

Inputs									
Diameter (inches)	3	4	6	12	4	6	2	4	6
Blowdown Pressure	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33	0.33
Length of Blowdown (feet)	1587	18731.9	39895.5	3029.1	317	2232.5	232.6	4984.7	711.4
Blowdown (MCF)	0.08	1.67	8.01	2.43	0.03	0.45	0.01	0.44	0.14
Total MCF	13.26								
Total Blowdown (kg)	407								

Appendix C

Water Resources



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

NOTES TO USERS

For information and questions about this Flood Insurance Rate Map (FIRM), available products associated with this FIRM, including historic versions, the current map date for each FIRM panel, how to order products, or the National Flood Insurance Program (NFIP) in general, please call the FEMA Map Information eXchange at 1-877-FEMA-MAP (1-877-336-2627) or visit the FEMA Flood Map Service Center website at <https://msc.fema.gov>. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the website.

Communities annexing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM Index. These may be ordered directly from the Flood Map Service Center at the number listed above.

To determine if flood insurance is available in this community, contact your Insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

Basemap information shown on this FIRM was provided in digital format by the United States Geological Survey (USGS). The basemap shown is the USGS National Map: Orthoimagery. Last refreshed October, 2020.

This map was exported from FEMA's National Flood Hazard Layer (NFHL) on **12/19/2023 10:30 AM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time. For additional information, please see the Flood Hazard Mapping Updates Overview Fact Sheet at <https://www.fema.gov/media-library/assets/documents/118418>

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The FIRM panel shown complies with FEMA's base map accuracy standards. This map is a reproduction of the FIRM panel shown on the map with a note that the map is not for use in determining flood insurance rates. The map is not to be used for a later date to update the flood hazard information associated with this structure. The flood hazard data inside this boundary on the FIRM panel has been republished from the previous effective (historic) FIRM for this area, after being converted from NGVD 29 to NAVD 88.

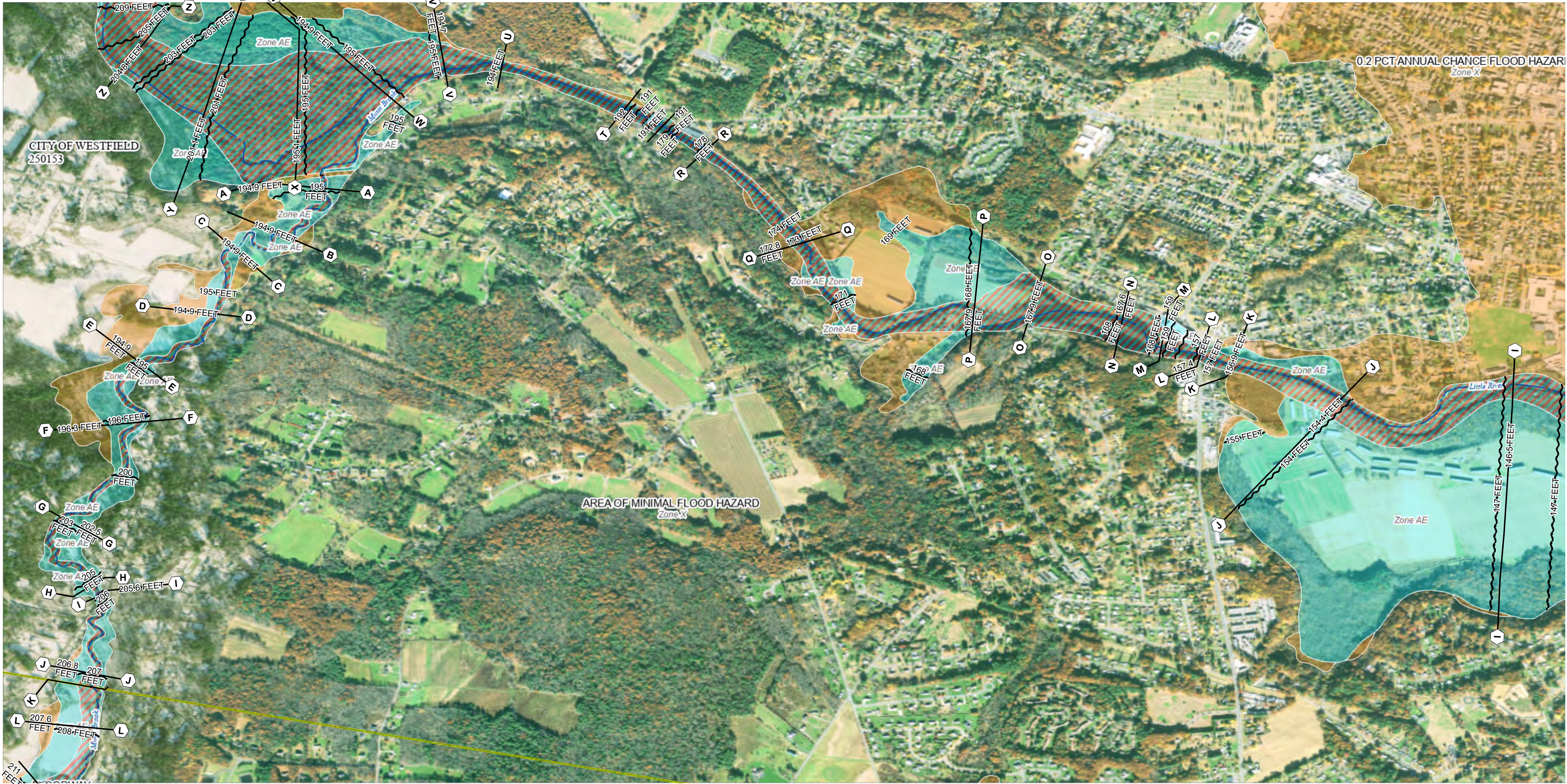
Map Projection:
GCS, Geodetic Reference System 1980;
Vertical Datum: NAVD88
For information about the specific vertical datum for elevation features, datum conversions, or vertical monuments used to create this map, please see the Flood Insurance Study (FIS) Report for your community at <https://msc.fema.gov>



FLOOD INSURANCE RATE MAP


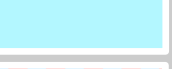







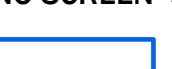
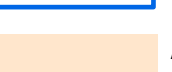


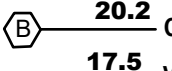
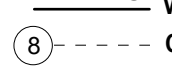
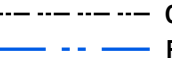
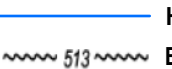




PANEL 170 OF 506

COMMUNITY	NUMBER	PANEL
CITY OF WESTFIELD	250153	0170
TOWN OF RUSSELL	250148	0170
TOWN OF MONTGOMERY	250146	0170



FLOOD HAZARD INFORMATION

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

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE)
		With BFE or Depth Zone AE, AO, AH, VE, AR
		Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee See Notes Zone X
		Area with Flood Risk due to Levee Zone D
OTHER AREAS		NO SCREEN Area of Minimal Flood Hazard Zone X
		Effective LOMRs
		Area of Undetermined Flood Hazard Zone D
GENERAL STRUCTURES		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
OTHER FEATURES		20.2 Cross Sections with 1% Annual Chance
		17.5 Water Surface Elevation
		8 Coastal Transect
		Coastal Transect Baseline
		Profile Baseline
		Hydrographic Feature
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary

NOTES TO USERS

For information and questions about this Flood Insurance Rate Map (FIRM), available products associated with this FIRM, including historic versions, the current map date for each FIRM panel, how to order products, or the National Flood Insurance Program (NFIP) in general, please call the FEMA Map Information eXchange at 1-877-FEMA-MAP (1-877-336-6627) or visit the FEMA Flood Map Service Center website at <https://msc.fema.gov>. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the website.

Communities annexing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM Index. These may be ordered directly from the Flood Map Service Center at the number listed above.

For community and countywide map dates, refer to the Flood Insurance Study Report for this jurisdiction.

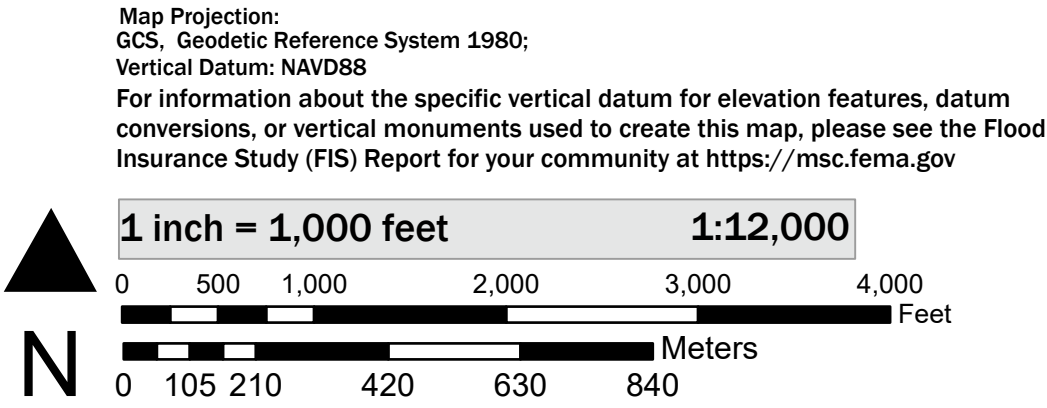
To determine if flood insurance is available in this community, contact your Insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

Basemap information shown on this FIRM was provided in digital format by the United States Geological Survey (USGS). The basemap shown is the USGS National Map: Orthoimagery. Last refreshed October, 2020.

This map was exported from FEMA's National Flood Hazard Layer (NFHL) on **12/19/2023 10:48 AM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time. For additional information, please see the Flood Hazard Mapping Updates Overview Fact Sheet at <https://www.fema.gov/media-library/assets/documents/118418>

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards. This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date.

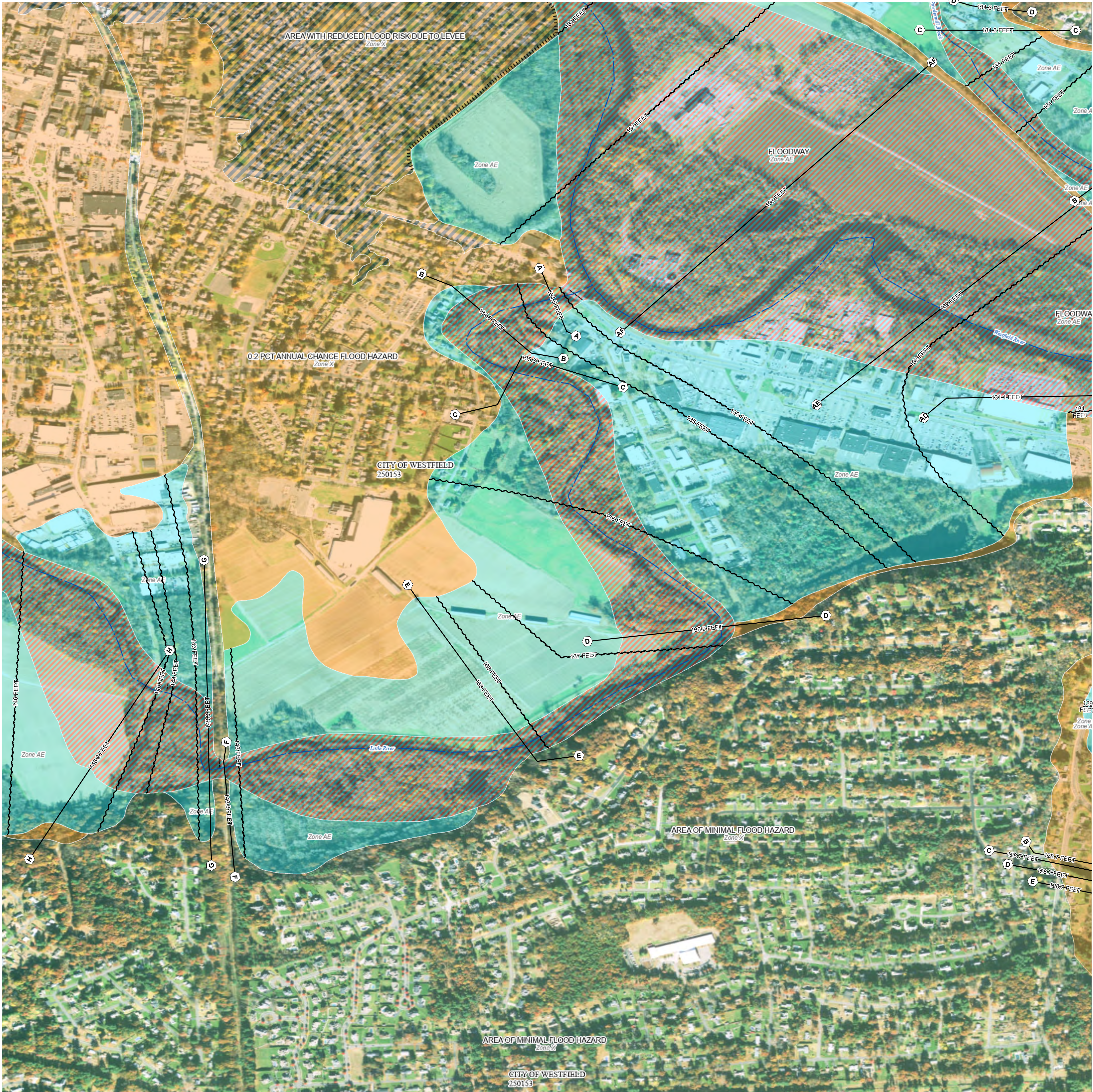
SCALE



NATIONAL FLOOD INSURANCE PROGRAM
FLOOD INSURANCE RATE MAP

PANEL 360 OF 506

Panel Contains:		
COMMUNITY	NUMBER	PANEL
CITY OF WESTFIELD	250153	0360
TOWN OF SOUTHWICK	250149	0360



FLOOD HAZARD INFORMATION

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

SPECIAL FLOOD HAZARD AREAS		Without Base Flood Elevation (BFE) Zone A, V, A99
		With BFE or Depth Zone AE, AO, AH, VE, AR Regulatory Floodway
OTHER AREAS OF FLOOD HAZARD		0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile Zone X
		Future Conditions 1% Annual Chance Flood Hazard Zone X
		Area with Reduced Flood Risk due to Levee See Notes Zone X
OTHER AREAS		Area with Flood Risk due to Levee Zone D
		NO SCREEN Area of Minimal Flood Hazard Zone X
GENERAL STRUCTURES		Effective LOMRs
		Area of Undetermined Flood Hazard Zone D
OTHER FEATURES		Channel, Culvert, or Storm Sewer
		Levee, Dike, or Floodwall
		20.2 Cross Sections with 1% Annual Chance
		17.5 Water Surface Elevation
		8 Coastal Transect
		Coastal Transect Baseline
		Profile Baseline
		Hydrographic Feature
		Base Flood Elevation Line (BFE)
		Limit of Study
		Jurisdiction Boundary

NOTES TO USERS

For information and questions about this Flood Insurance Rate Map (FIRM), available products associated with this FIRM, including historic versions, the current map date for each FIRM panel, how to order products, or the National Flood Insurance Program (NFIP) in general, please call the FEMA Map Information eXchange at 1-877-FEMA-MAP (1-877-336-6627) or visit the FEMA Flood Map Service Center website at <https://msc.fema.gov>. Available products may include previously issued Letters of Map Change, a Flood Insurance Study Report, and/or digital versions of this map. Many of these products can be ordered or obtained directly from the website.

Communities annexing land on adjacent FIRM panels must obtain a current copy of the adjacent panel as well as the current FIRM Index. These may be ordered directly from the Flood Map Service Center at the number listed above.

For community and countywide map dates, refer to the Flood Insurance Study Report for this jurisdiction.

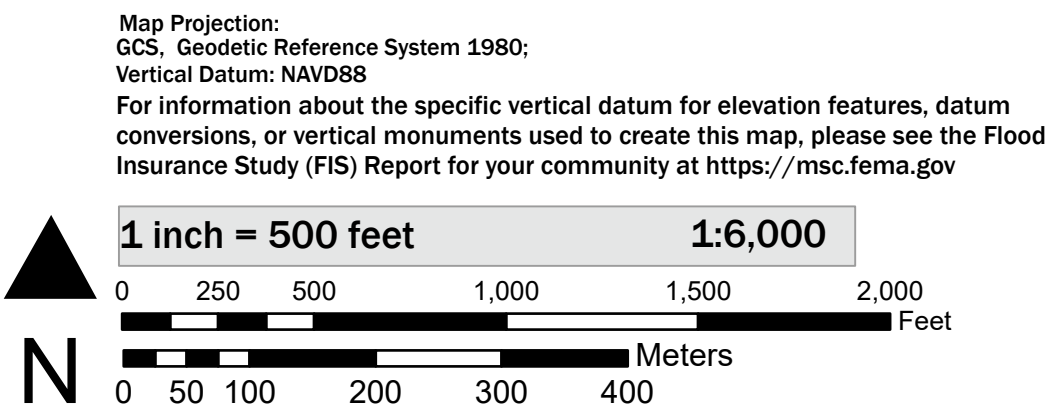
To determine if flood insurance is available in this community, contact your Insurance agent or call the National Flood Insurance Program at 1-800-638-6620.

Basemap information shown on this FIRM was provided in digital format by the United States Geological Survey (USGS). The basemap shown is the USGS National Map: Orthoimagery. Last refreshed October, 2020.

This map was exported from FEMA's National Flood Hazard Layer (NFHL) on **12/19/2023 10:54 AM** and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time. For additional information, please see the Flood Hazard Mapping Updates Overview Fact Sheet at <https://www.fema.gov/media-library/assets/documents/118418>

This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards. This map is void if the community or county has adopted a new base flood elevation (BFE) for the community or county that is not shown on this map. In such cases, the community or county must update the flood hazard data inside this boundary on the FIRM panel has been republished from the previous effective (historic) FIRM for this area, after being converted from NGVD 29 to NAVD 88.

SCALE



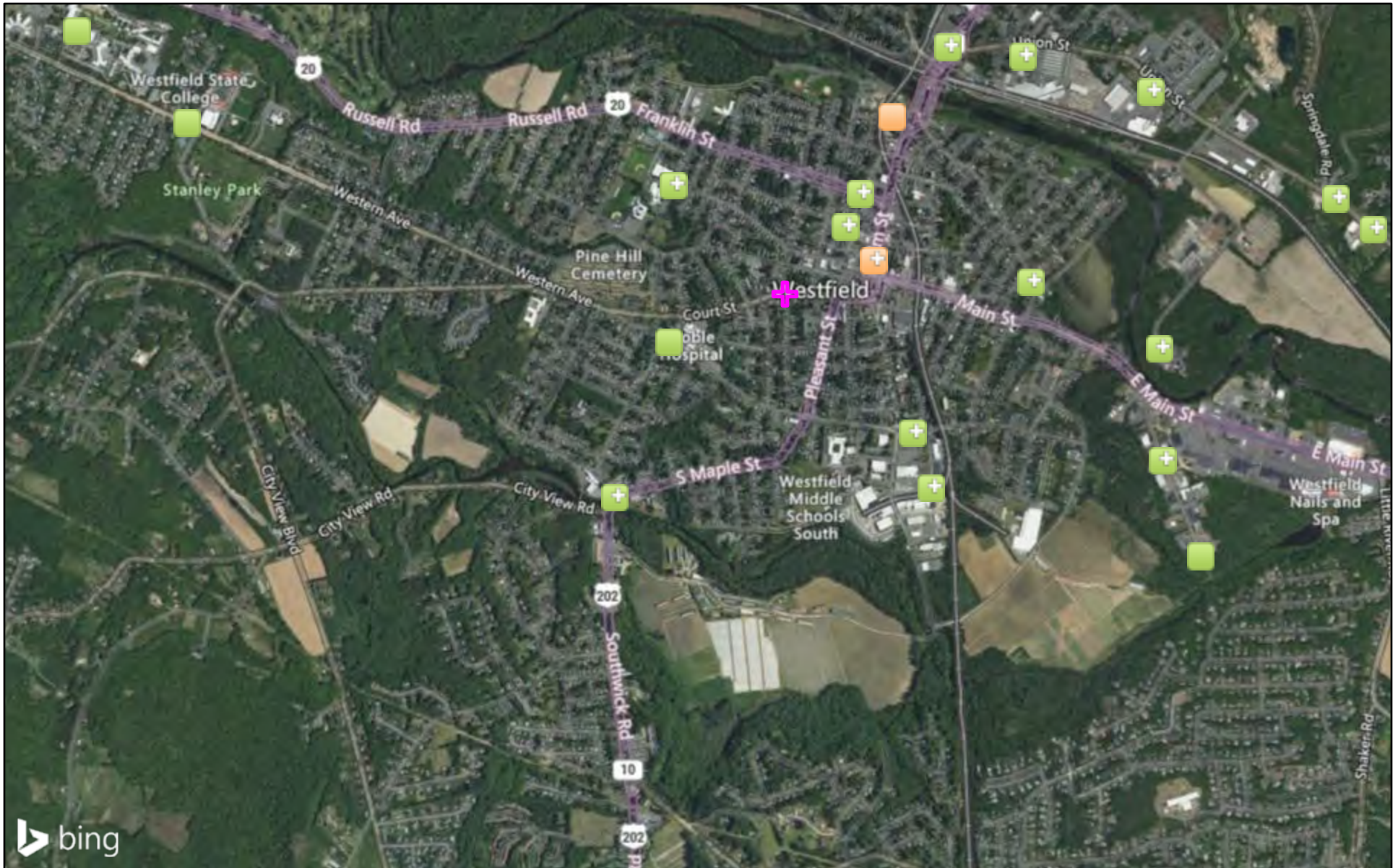
NATIONAL FLOOD INSURANCE PROGRAM
FLOOD INSURANCE RATE MAP

PANEL 376 OF 506





Panel Contains:

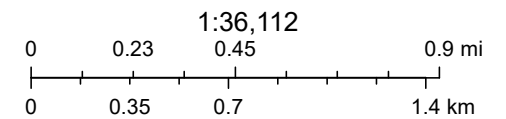
COMMUNITY	NUMBER	PANEL
CITY OF WESTFIELD	250153	0376

Westfield



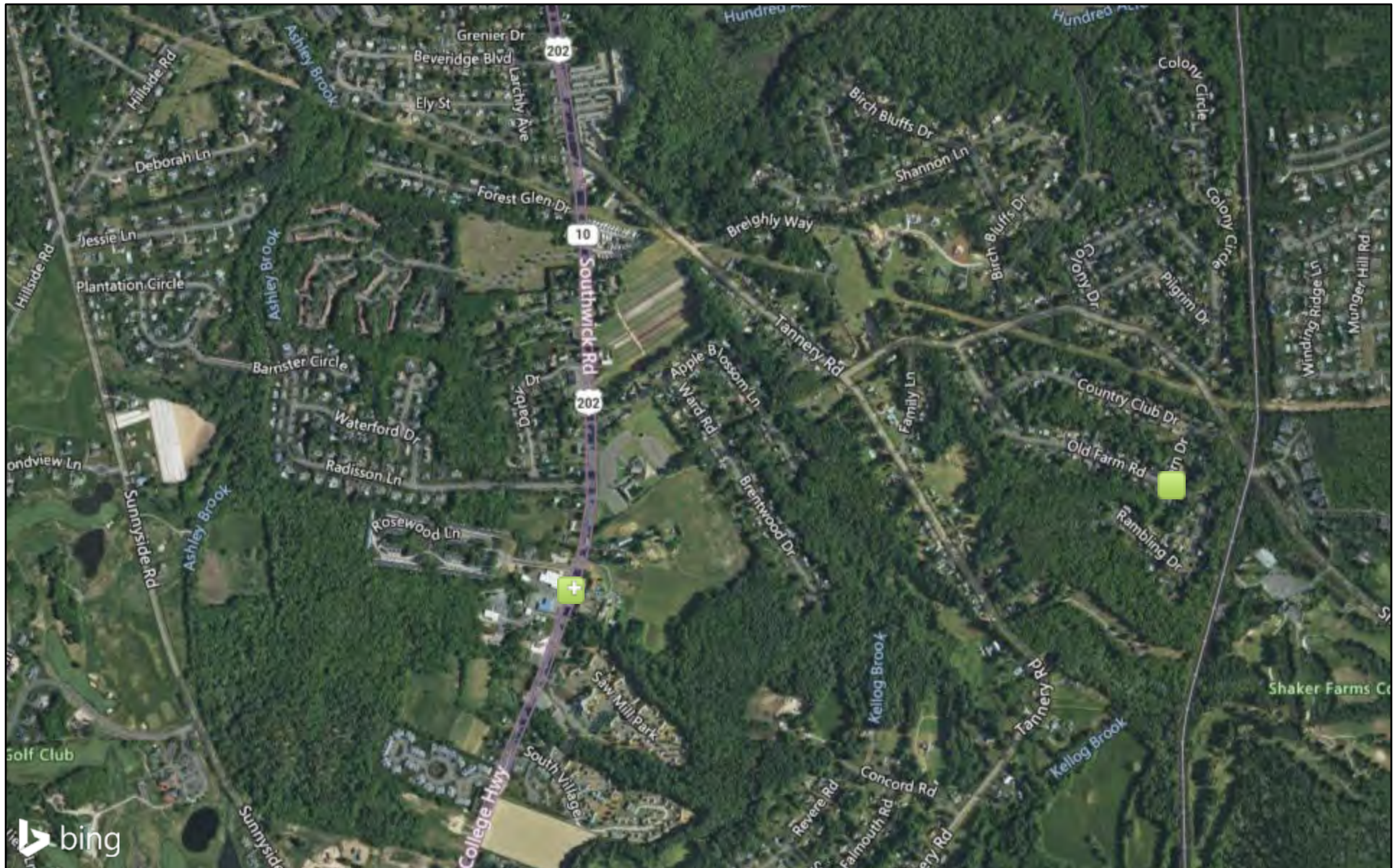
December 19, 2023

-  Hazardous Waste (RCRAInfo)
-  Brownfields (ACRES)
-  Hazardous Waste (RCRAInfo)
-  Search Result (point)



© 2023 Microsoft Corporation © 2023 Maxar ©CNES (2023) Distribution Airbus DS © 2023 TomTom

Westfield 2



December 19, 2023

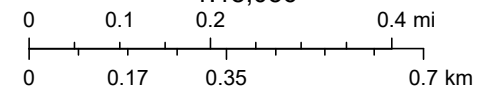


Hazardous Waste (RCRAInfo)



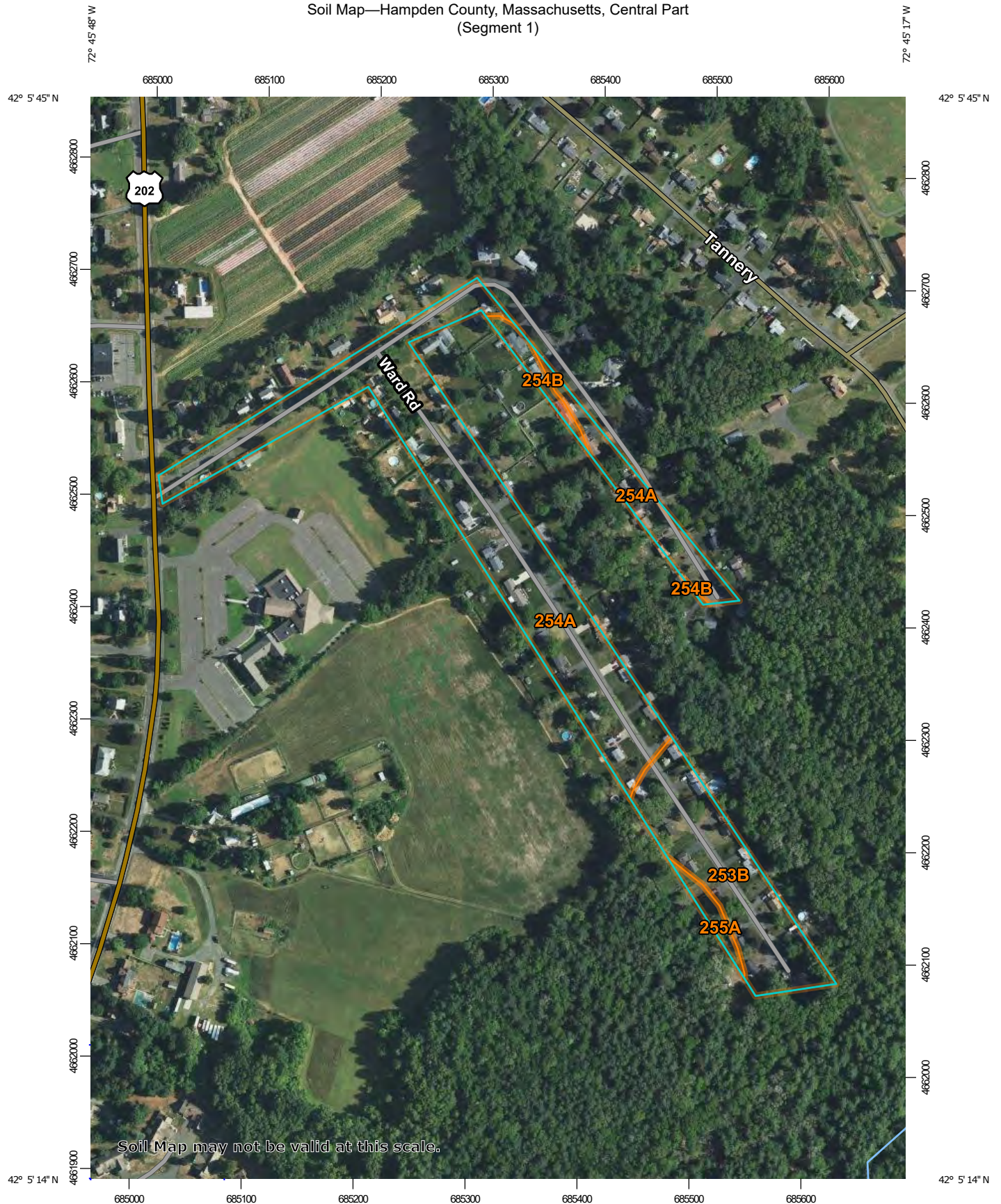
Hazardous Waste (RCRAInfo)

1:18,056

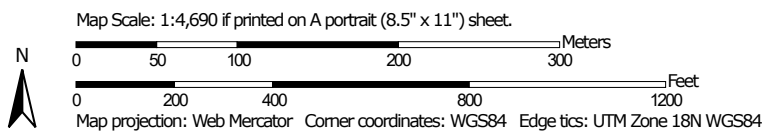


© 2023 Microsoft Corporation © 2023 Maxar ©CNES (2023) Distribution
Airbus DS © 2023 TomTom

Soil Map—Hampden County, Massachusetts, Central Part (Segment 1)



Soil Map may not be valid at this scale.



**Natural Resources
Conservation Service**

Web Soil Survey
National Cooperative Soil Survey

12/19/2023
Page 1 of 3

Soil Map—Hampden County, Massachusetts, Central Part
(Segment 1)

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

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

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

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

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

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

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

Soil Survey Area: Hampden County, Massachusetts, Central Part

Survey Area Data: Version 17, Sep 10, 2023

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

Date(s) aerial images were photographed: May 24, 2020—Aug 6, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
253B	Hinckley loamy sand, 3 to 8 percent slopes	3.5	25.2%
254A	Merrimac fine sandy loam, 0 to 3 percent slopes	9.5	69.5%
254B	Merrimac fine sandy loam, 3 to 8 percent slopes	0.4	3.0%
255A	Windsor loamy sand, 0 to 3 percent slopes	0.3	2.3%
Totals for Area of Interest		13.7	100.0%


Soil Map—Hampden County, Massachusetts, Central Part (Segment 2)




Soil Map—Hampden County, Massachusetts, Central Part
(Segment 2)

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

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

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

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

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

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

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

Soil Survey Area: Hampden County, Massachusetts, Central Part

Survey Area Data: Version 17, Sep 10, 2023

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

Date(s) aerial images were photographed: May 24, 2020—Aug 6, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

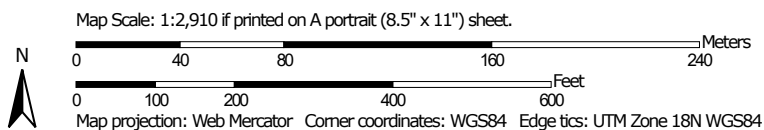
Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
255A	Windsor loamy sand, 0 to 3 percent slopes	26.3	100.0%
Totals for Area of Interest		26.3	100.0%

Soil Map—Hampden County, Massachusetts, Central Part (Segment 3)



Soil Map may not be valid at this scale.



**Natural Resources
Conservation Service**

Web Soil Survey
National Cooperative Soil Survey

12/19/2023
Page 1 of 3

Soil Map—Hampden County, Massachusetts, Central Part
(Segment 3)

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

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

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

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

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

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

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

Soil Survey Area: Hampden County, Massachusetts, Central Part

Survey Area Data: Version 17, Sep 10, 2023

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

Date(s) aerial images were photographed: Mar 15, 2016—Oct 30, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

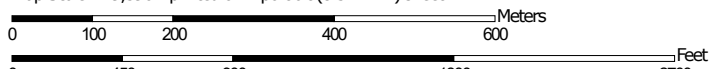
Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
255A	Windsor loamy sand, 0 to 3 percent slopes	3.0	20.4%
255B	Windsor loamy sand, 3 to 8 percent slopes	11.8	79.6%
Totals for Area of Interest		14.8	100.0%

Soil Map—Hampden County, Massachusetts, Central Part
(Segment 4)



Map Scale: 1:9,390 if printed on A portrait (8.5" x 11") sheet.



Map projection: Web Mercator Corner coordinates: WGS84 Edge tics: UTM Zone 18N WGS84



**Natural Resources
Conservation Service**

Web Soil Survey
National Cooperative Soil Survey

12/19/2023
Page 1 of 3

Soil Map—Hampden County, Massachusetts, Central Part
(Segment 4)

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

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

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

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

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

Soil Survey Area: Hampden County, Massachusetts, Central Part

Survey Area Data: Version 17, Sep 10, 2023

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

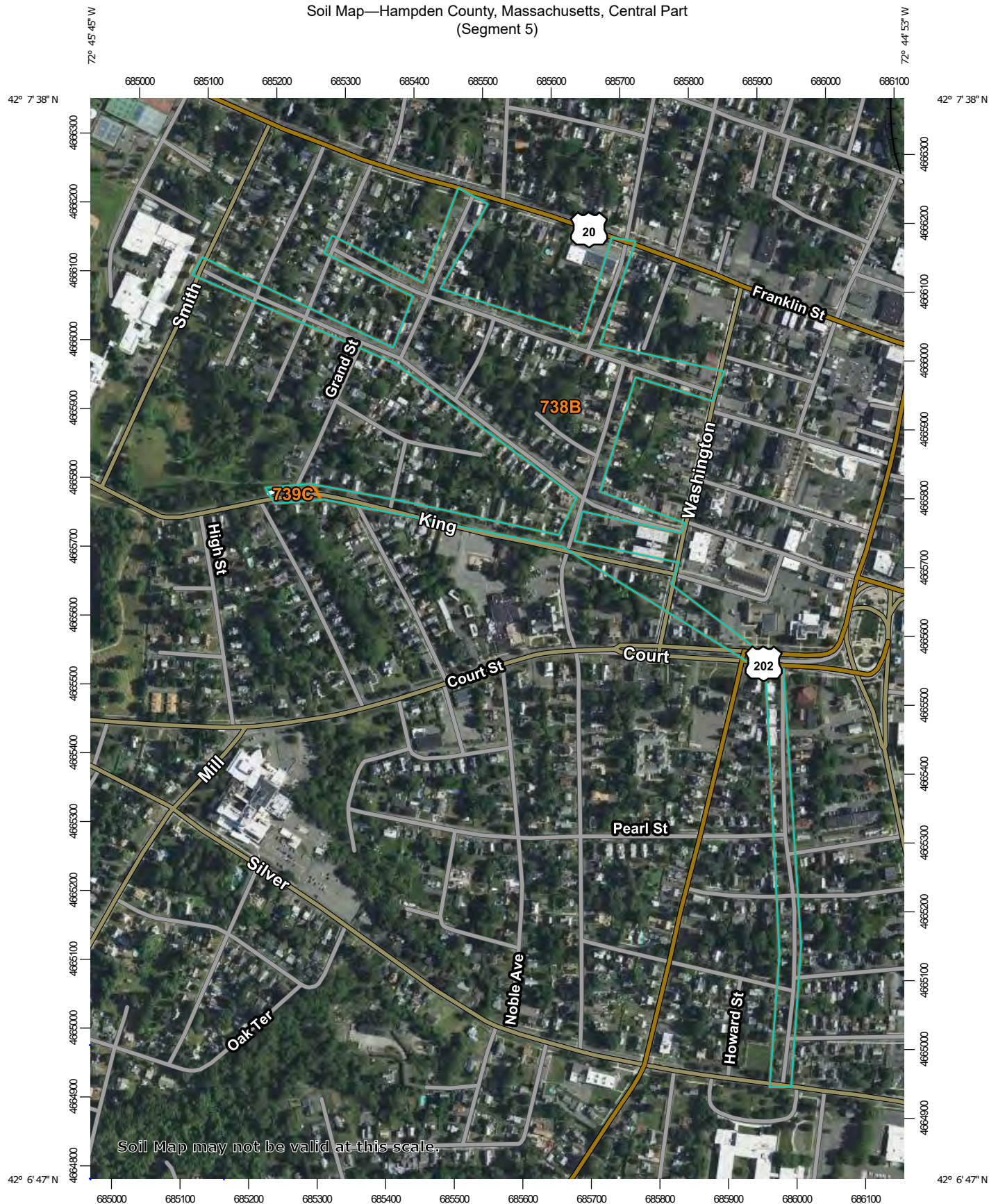
Date(s) aerial images were photographed: May 24, 2020—Aug 6, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

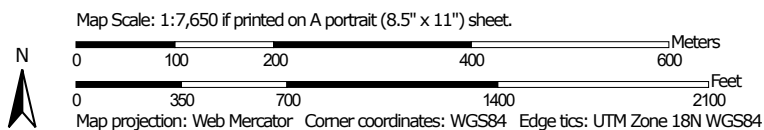
Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
250C	Pollux fine sandy loam, 8 to 15 percent slopes	0.2	0.2%
253B	Hinckley loamy sand, 3 to 8 percent slopes	18.2	21.4%
253C	Hinckley loamy sand, 8 to 15 percent slopes	0.0	0.0%
253E	Hinckley loamy sand, 25 to 35 percent slopes	0.6	0.7%
254A	Merrimac fine sandy loam, 0 to 3 percent slopes	13.5	15.9%
255A	Windsor loamy sand, 0 to 3 percent slopes	15.1	17.8%
255B	Windsor loamy sand, 3 to 8 percent slopes	24.6	28.9%
255C	Windsor loamy sand, 8 to 15 percent slopes	11.1	13.0%
260B	Sudbury fine sandy loam, 0 to 8 percent slopes	1.8	2.1%
Totals for Area of Interest		85.2	100.0%

Soil Map—Hampden County, Massachusetts, Central Part
(Segment 5)



Soil Map may not be valid at this scale.



**Natural Resources
Conservation Service**

Web Soil Survey
National Cooperative Soil Survey

12/19/2023
Page 1 of 3

Soil Map—Hampden County, Massachusetts, Central Part
(Segment 5)

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

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

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

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

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

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

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

Soil Survey Area: Hampden County, Massachusetts, Central Part

Survey Area Data: Version 17, Sep 10, 2023

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

Date(s) aerial images were photographed: May 24, 2020—Aug 6, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
738B	Urban land-Hadley-Winooski association, 0 to 8 percent slopes	32.4	98.8%
739C	Urban land-Hinckley-Windsor association, 0 to 15 percent slopes	0.4	1.2%
Totals for Area of Interest		32.8	100.0%


Soil Map—Hampden County, Massachusetts, Central Part
(Segment 6)



Soil Map—Hampden County, Massachusetts, Central Part
(Segment 6)


MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

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

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

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

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

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

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

Soil Survey Area: Hampden County, Massachusetts, Central Part

Survey Area Data: Version 17, Sep 10, 2023

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

Date(s) aerial images were photographed: Mar 15, 2016—Oct 30, 2017

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
738B	Urban land-Hadley-Winooski association, 0 to 8 percent slopes	1.4	100.0%
Totals for Area of Interest		1.4	100.0%

Soil Map—Hampden County, Massachusetts, Central Part (Segments 7, 8, 9, 10)



**Natural Resources
Conservation Service**

Web Soil Survey
National Cooperative Soil Survey

12/19/2023
Page 1 of 3

Soil Map—Hampden County, Massachusetts, Central Part
(Segments 7, 8, 9, 10)

MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Unit Polygons

 Soil Map Unit Lines

 Soil Map Unit Points

Special Point Features



Blowout



Borrow Pit



Clay Spot



Closed Depression



Gravel Pit



Gravelly Spot



Landfill



Lava Flow



Marsh or swamp



Mine or Quarry



Miscellaneous Water



Perennial Water



Rock Outcrop



Saline Spot



Sandy Spot



Severely Eroded Spot



Sinkhole



Slide or Slip



Sodic Spot



Spoil Area



Stony Spot



Very Stony Spot



Wet Spot



Other



Special Line Features

Water Features



Streams and Canals

Transportation



Rails



Interstate Highways



US Routes



Major Roads



Local Roads

Background



Aerial Photography

MAP INFORMATION

The soil surveys that comprise your AOI were mapped at 1:15,800.

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

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

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

Source of Map: Natural Resources Conservation Service

Web Soil Survey URL:

Coordinate System: Web Mercator (EPSG:3857)

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

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

Soil Survey Area: Hampden County, Massachusetts, Central Part

Survey Area Data: Version 17, Sep 10, 2023

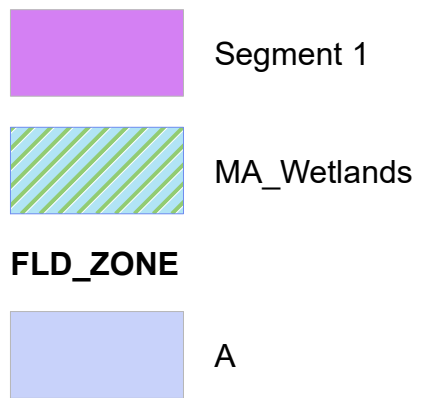
Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.

Date(s) aerial images were photographed: May 24, 2020—Aug 6, 2020

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
253B	Hinckley loamy sand, 3 to 8 percent slopes	3.8	14.3%
255A	Windsor loamy sand, 0 to 3 percent slopes	0.6	2.4%
255B	Windsor loamy sand, 3 to 8 percent slopes	1.8	6.8%
260B	Sudbury fine sandy loam, 0 to 8 percent slopes	2.0	7.7%
738B	Urban land-Hadley-Winooski association, 0 to 8 percent slopes	0.5	1.9%
739C	Urban land-Hinckley-Windsor association, 0 to 15 percent slopes	17.7	66.9%
Totals for Area of Interest		26.5	100.0%





- Segment 3
- Segment 2
- MA_Wetlands
- FLD_ZONE
- AE

0 175 350 700 1,050 1,400 Feet

WG+E

WESTFIELD GAS + ELECTRIC

Date: 10/11/2023

Segment 3

Segment 2

MA_Wetlands

FLD_ZONE

A



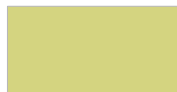


WESTFIELD GAS + ELECTRIC

Date: 10/11/2023



Segment 4



Segment 2



MA_Wetlands

FLD_ZONE



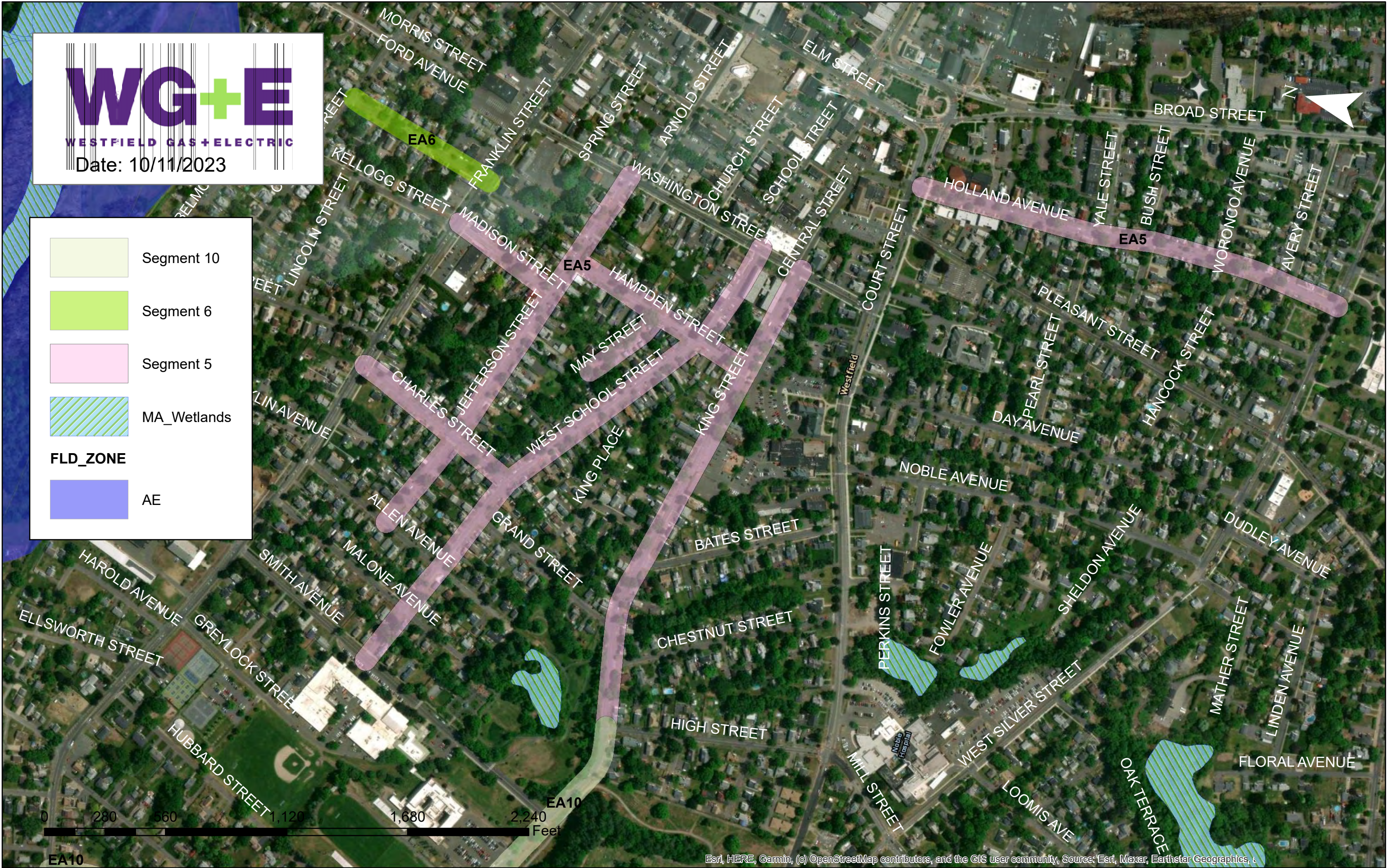
AE

0 350 700 1,400 2,100 2,800 Feet

WG+E
WESTFIELD GAS+ELECTRIC
Date: 10/11/2023

Legend:

- Segment 10
- Segment 6
- Segment 5
- MA_Wetlands
- FLD_ZONE
- AE



Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the GIS user community, Source: Esri, Maxar, Earthstar Geographics, &



0 175 350 700 1,050 1,400 Feet

- Segment 10
- Segment 9
- Segment 8
- Segment 7
- MA_Wetlands
- FLD_ZONE
- AE

0 175 350 700 1,050 1,400 Feet

- Segment 10
- Segment 9
- Segment 8
- Segment 7
- MA_Wetlands
- FLD_ZONE**
- AE

0 175 350 700 1,050 1,400 Feet



Date: 10/11/2023



Segment 10



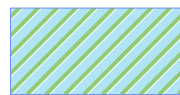
Segment 9



Segment 8



Segment 7



MA_Wetlands

FLD_ZONE



AE

HIGHLAND VIEW STREET

WOODBIDGE LANE

RIDGEWAY STREET

KING STREET EXT

BERKSHIRE DRIVE

KIPLING AVENUE

FAIRFIELD AVENUE

HAWTHORNE AVENUE

LOWELL AVENUE

LATHROP AVENUE

SPRUCE CIRCLE

DANA STREET

RUSSELL ROAD

CARROLL DRIVE

TEKOA TERRACE

WESTERN AVENUE

EA10

EA9

EA8

EA7

0 175 350 700 1,050 1,400 Feet

Esri, HERE, Garmin, (c) OpenStreetMap contributors, and the

EA7

	Segment 10
	Segment 9 EA8
	Segment 8
	Segment 7
	Segment 5
	MA_Wetlands
FLD_ZONE	
	AE



Appendix D

Biological Resources

IPaC resource list

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

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

Project information

NAME

West eld

LOCATION

Hampden County, Massachusetts



DESCRIPTION

Some(Segments 1 & 2)

Local office

New England Ecological Services Field Office

☎ (603) 223-2541

📅 (603) 223-0104

70 Commercial Street, Suite 300

Concord, NH 03301-5094

NOT FOR CONSULTATION

Endangered species

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

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

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

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

1. Log in to IPaC.
2. Go to your My Projects list.
3. Click PROJECT HOME for this project.
4. Click REQUEST SPECIES LIST.

Listed species¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

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

-
1. Species listed under the Endangered Species Act are threatened or endangered; IPaC also shows species that are candidates, or proposed, for listing. See the [listing status page](#) for more information. IPaC only shows species that are regulated by USFWS (see FAQ).
 2. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of

Commerce.

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

Mammals

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

Insects

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

Critical habitats

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

There are no critical habitats at this location.

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

Bald & Golden Eagles

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act¹ and the Migratory Bird Treaty Act².

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats³, should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, 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/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC
<https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

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

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, 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 <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	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"](#), specifically 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 effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

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

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

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

Breeding Season (■)

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

Survey Effort (|)

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

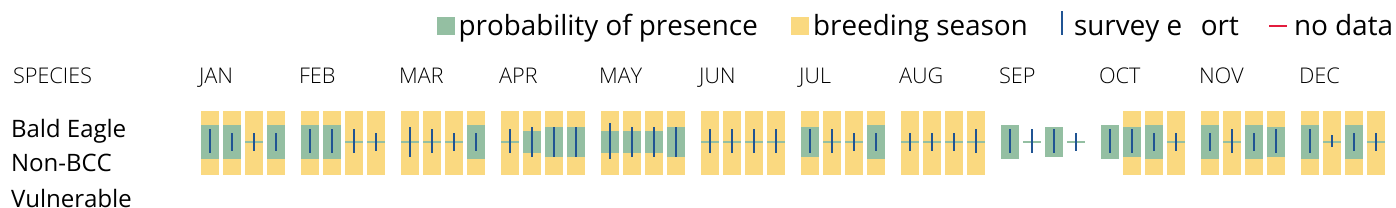
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (—)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

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



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

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

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

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

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

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

What if I have eagles on my list?

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

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats³ should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, 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/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC
<https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur on 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 <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Oct 15 to Aug 31
Black-billed Cuckoo <i>Coccyzus erythrophthalmus</i> 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 <i>Vermivora pinus</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds May 1 to Jun 30

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.

Pectoral Sandpiper *Calidris melanotos*

Breeds elsewhere

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

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.

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"](#), specifically 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 effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

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

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

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

Breeding Season (■)

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

Survey Effort (|)

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

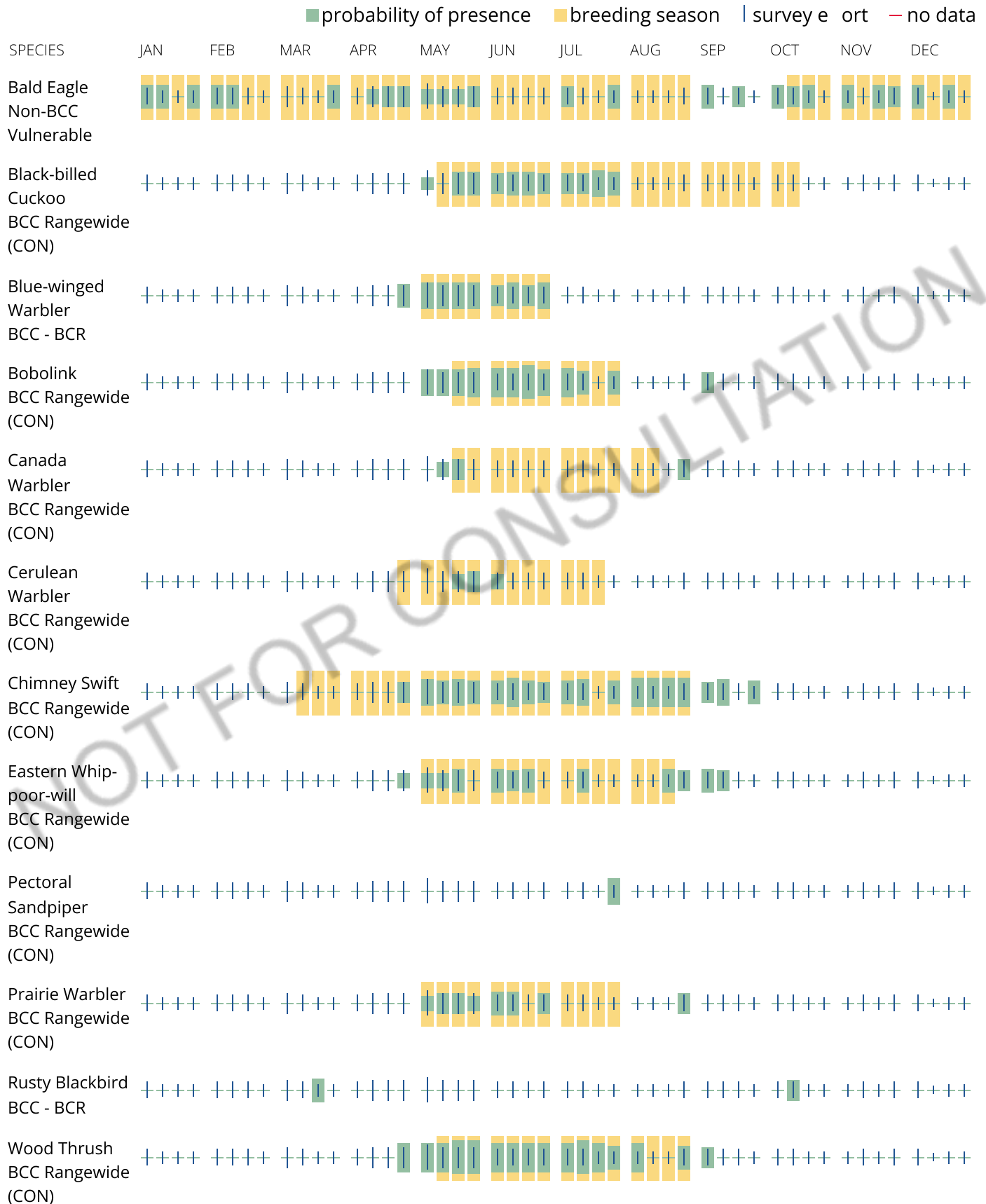
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

No Data (—)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

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



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

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

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

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

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

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

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

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

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

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

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

What are the levels of concern for migratory birds?

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

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

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

Details about birds that are potentially affected by offshore projects

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

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

What if I have eagles on my list?

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

Proper Interpretation and Use of Your Migratory Bird Report

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

minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

Wildlife refuges and fish hatcheries

Refuge and fish hatchery information is not available at this time

Wetlands in the National Wetlands Inventory (NWI)

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

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

This location did not intersect any wetlands mapped by NWI.

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

Data limitations

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

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

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

Data exclusions

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

Data precautions

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

NOT FOR CONSULTATION

IPaC resource list

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

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

Location

Hampden County, Massachusetts



Local office

New England Ecological Services Field Office

☎ (603) 223-2541

📅 (603) 223-0104

70 Commercial Street, Suite 300

Concord, NH 03301-5094

NOT FOR CONSULTATION

Endangered species

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

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

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

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

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

Listed species¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

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

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

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

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

Mammals

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

Insects

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

Critical habitats

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

There are no critical habitats at this location.

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

Bald & Golden Eagles

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act¹ and the Migratory Bird Treaty Act².

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats³, should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below.

Specifically, 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/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC
<https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

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

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, 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
<div>Bald Eagle <i>Haliaeetus leucocephalus</i></div> <div>This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.</div>	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"](#), specifically 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

effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

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

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

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

Breeding Season (■)

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

Survey Effort (|)

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

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

No Data (—)

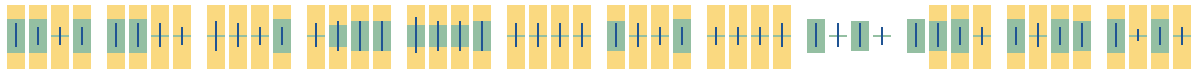
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

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



Bald Eagle
Non-BCC
Vulnerable



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

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

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

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

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

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

What if I have eagles on my list?

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

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats³ should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, 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/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC
<https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur on 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 <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Oct 15 to Aug 31
Black-billed Cuckoo <i>Coccyzus erythrophthalmus</i> 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 <i>Vermivora pinus</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds May 1 to Jun 30
Bobolink <i>Dolichonyx oryzivorus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 20 to Jul 31
Canada Warbler <i>Cardellina canadensis</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 20 to Aug 10
Cerulean Warbler <i>Dendroica cerulea</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/2974	Breeds Apr 29 to Jul 20
Chimney Swift <i>Chaetura pelagica</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 25
Eastern Whip-poor-will <i>Antrostomus vociferus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Aug 20
Pectoral Sandpiper <i>Calidris melanotos</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Prairie Warbler <i>Dendroica discolor</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Jul 31
Rusty Blackbird <i>Euphagus carolinus</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds elsewhere
Wood Thrush <i>Hylocichla mustelina</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 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"](#), specifically 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 effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

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

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

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

Breeding Season (■)

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

Survey Effort (|)

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

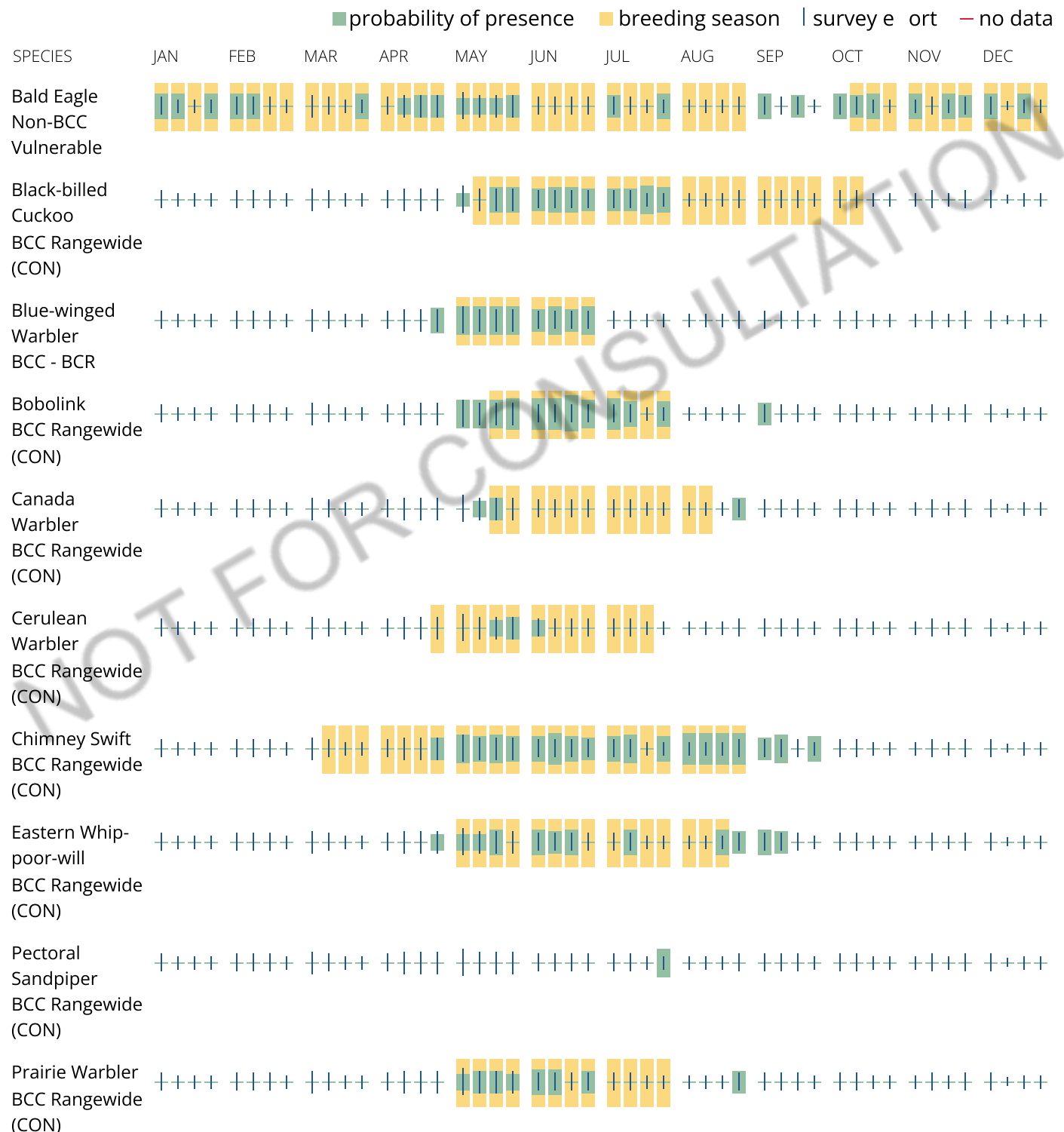
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

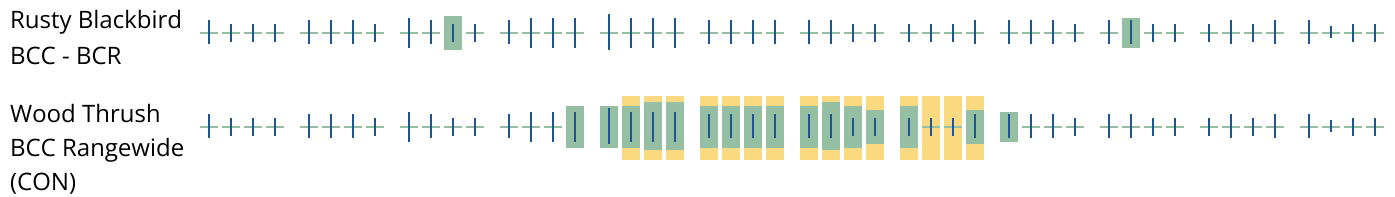
No Data (—)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

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





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

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

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

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

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

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

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

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

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

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

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the [RAIL Tool](#) and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird

on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

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

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

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

Details about birds that are potentially affected by offshore projects

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

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

What if I have eagles on my list?

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

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key

component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

Wildlife refuges and fish hatcheries

Refuge and fish hatchery information is not available at this time

Wetlands in the National Wetlands Inventory (NWI)

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

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

This location did not intersect any wetlands mapped by NWI.

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

Data limitations

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

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

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

Data exclusions

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

Data precautions

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

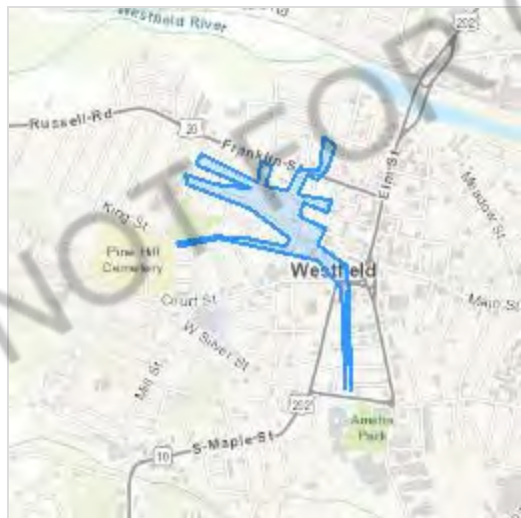
IPaC resource list

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

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

Location

Hampden County, Massachusetts



Local office

New England Ecological Services Field Office

☎ (603) 223-2541

📅 (603) 223-0104

70 Commercial Street, Suite 300

Concord, NH 03301-5094

NOT FOR CONSULTATION

Endangered species

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

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

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

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

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

Listed species¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

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

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

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

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

Mammals

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

Insects

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

Critical habitats

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

There are no critical habitats at this location.

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

Bald & Golden Eagles

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act¹ and the Migratory Bird Treaty Act².

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats³, should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below.

Specifically, 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/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC
<https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

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

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, 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 <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	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"](#), specifically 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

effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

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

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

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

Breeding Season (■)

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

Survey Effort (|)

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

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

No Data (—)

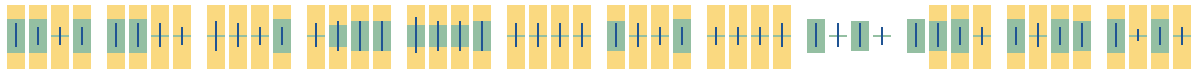
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

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



Bald Eagle
Non-BCC
Vulnerable



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

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

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

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

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

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

What if I have eagles on my list?

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

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats³ should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, 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/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC
<https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur on 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 <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Oct 15 to Aug 31
Black-billed Cuckoo <i>Coccyzus erythrophthalmus</i> 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 <i>Vermivora pinus</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds May 1 to Jun 30
Bobolink <i>Dolichonyx oryzivorus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 20 to Jul 31
Canada Warbler <i>Cardellina canadensis</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 20 to Aug 10
Cerulean Warbler <i>Dendroica cerulea</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/2974	Breeds Apr 29 to Jul 20
Chimney Swift <i>Chaetura pelagica</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 25
Eastern Whip-poor-will <i>Antrostomus vociferus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Aug 20
Pectoral Sandpiper <i>Calidris melanotos</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Prairie Warbler <i>Dendroica discolor</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Jul 31
Rusty Blackbird <i>Euphagus carolinus</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds elsewhere
Wood Thrush <i>Hylocichla mustelina</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 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"](#), specifically 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 effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

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

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

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

Breeding Season (■)

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

Survey Effort (|)

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

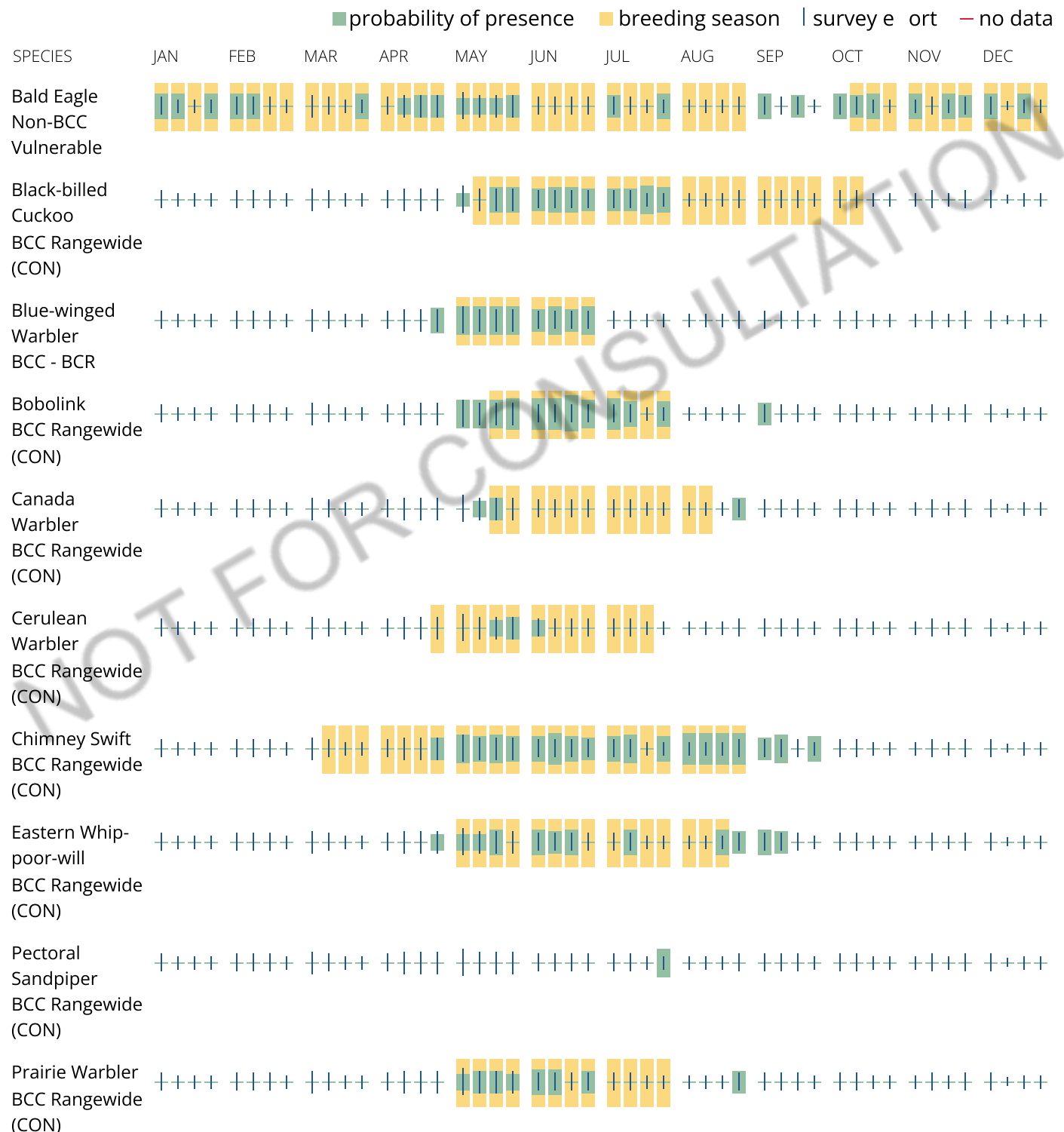
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

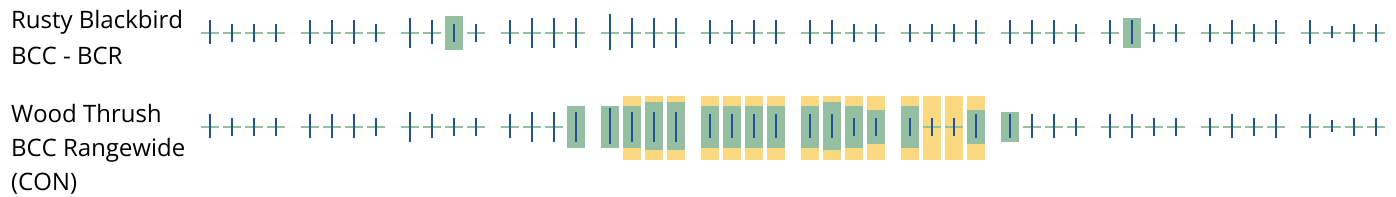
No Data (—)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

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





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

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

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

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

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

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

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

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

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

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

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the [RAIL Tool](#) and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird

on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

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

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

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

Details about birds that are potentially affected by offshore projects

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

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

What if I have eagles on my list?

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

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key

component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

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

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

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

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

This location did not intersect any wetlands mapped by NWI.

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

Data limitations

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

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

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

Data exclusions

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

Data precautions

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

IPaC resource list

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

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

Location

Hampden County, Massachusetts



Local office

New England Ecological Services Field Office

☎ (603) 223-2541

📅 (603) 223-0104

70 Commercial Street, Suite 300

Concord, NH 03301-5094

NOT FOR CONSULTATION

Endangered species

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

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

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

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

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

Listed species¹ and their critical habitats are managed by the [Ecological Services Program](#) of the U.S. Fish and Wildlife Service (USFWS) and the fisheries division of the National Oceanic and Atmospheric Administration (NOAA Fisheries²).

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

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

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

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

Mammals

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

Insects

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

Critical habitats

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

There are no critical habitats at this location.

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

Bald & Golden Eagles

Bald and golden eagles are protected under the Bald and Golden Eagle Protection Act¹ and the Migratory Bird Treaty Act².

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats³, should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below.

Specifically, 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/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC <https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

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

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, 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 <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	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"](#), specifically 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

effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

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

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

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

Breeding Season (■)

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

Survey Effort (|)

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

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

No Data (—)

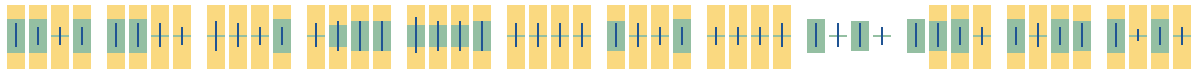
A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

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



Bald Eagle
Non-BCC
Vulnerable



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

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

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

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

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

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

What if I have eagles on my list?

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

Migratory birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats³ should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, 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/files/documents/nationwide-standard-conservation-measures.pdf>
- Supplemental Information for Migratory Birds and Eagles in IPaC
<https://www.fws.gov/media/supplemental-information-migratory-birds-and-bald-and-golden-eagles-may-occur-project-action>

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur on 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 <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities.	Breeds Oct 15 to Aug 31
Black-billed Cuckoo <i>Coccyzus erythrophthalmus</i> 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 <i>Vermivora pinus</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds May 1 to Jun 30
Bobolink <i>Dolichonyx oryzivorus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 20 to Jul 31
Canada Warbler <i>Cardellina canadensis</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 20 to Aug 10
Cerulean Warbler <i>Dendroica cerulea</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/2974	Breeds Apr 29 to Jul 20
Chimney Swift <i>Chaetura pelagica</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds Mar 15 to Aug 25
Eastern Whip-poor-will <i>Antrostomus vociferus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Aug 20
Pectoral Sandpiper <i>Calidris melanotos</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Prairie Warbler <i>Dendroica discolor</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Jul 31
Rusty Blackbird <i>Euphagus carolinus</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds elsewhere
Wood Thrush <i>Hylocichla mustelina</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 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"](#), specifically 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 effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

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

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

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

Breeding Season (■)

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

Survey Effort (|)

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

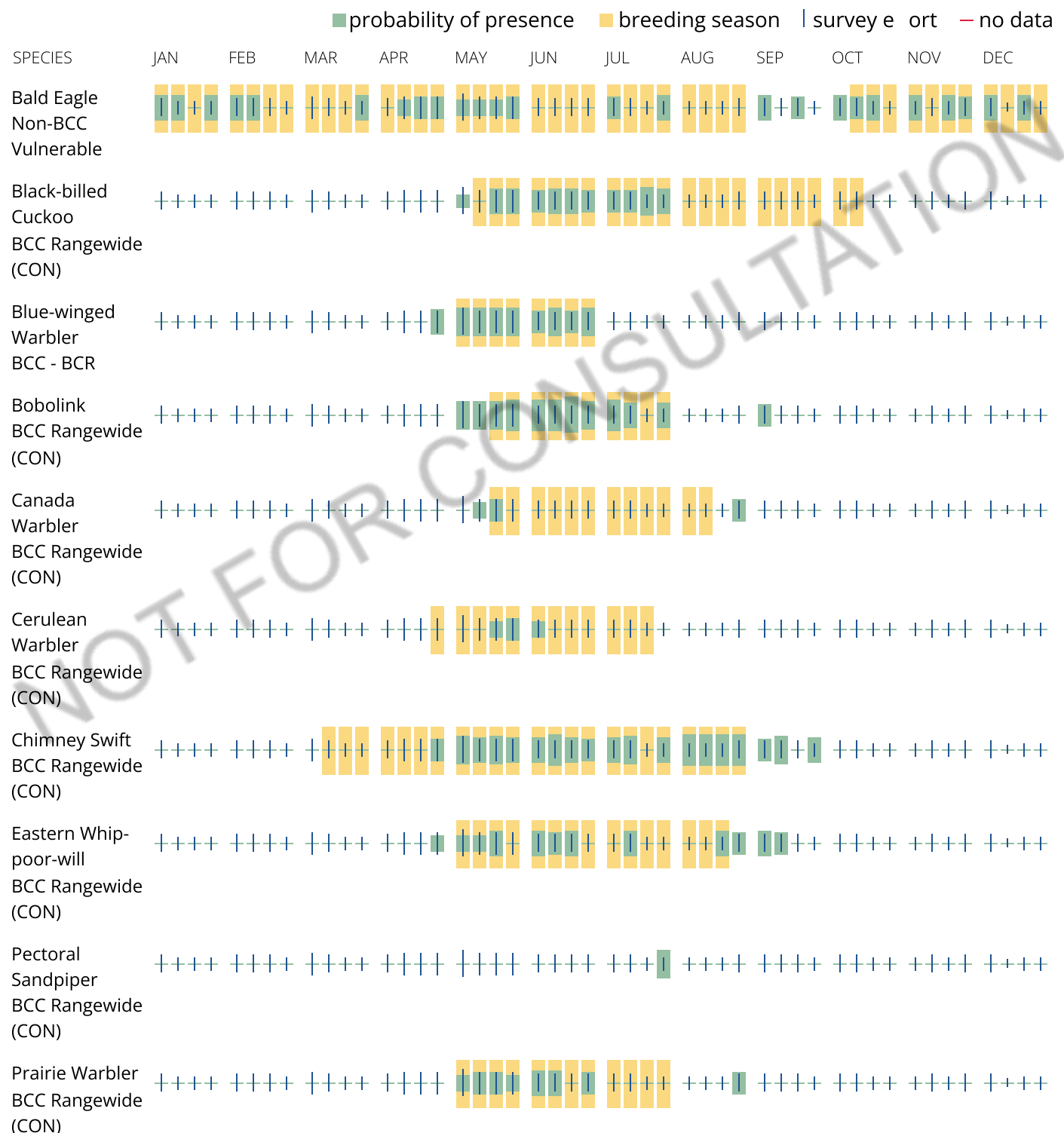
To see a bar's survey effort range, simply hover your mouse cursor over the bar.

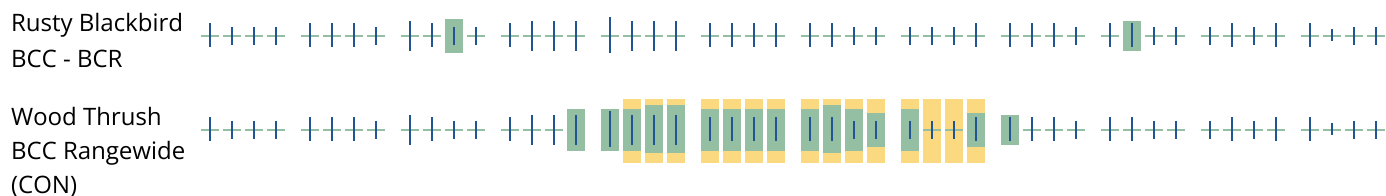
No Data (—)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

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





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

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

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

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

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

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

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

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

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

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

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may query your location using the [RAIL Tool](#) and look at the range maps provided for birds in your area at the bottom of the profiles provided for each bird in your results. If a bird

on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

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

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

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

Details about birds that are potentially affected by offshore projects

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

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

What if I have eagles on my list?

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

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ "What does IPaC use to generate the migratory birds potentially occurring in my specified location". Please be aware this report provides the "probability of presence" of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the "no data" indicator (a red horizontal bar). A high survey effort is the key

component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

Facilities

National Wildlife Refuge lands

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

There are no refuge lands at this location.

Fish hatcheries

There are no fish hatcheries at this location.

Wetlands in the National Wetlands Inventory (NWI)

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

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

This location overlaps the following wetlands:

FRESHWATER FORESTED/SHRUB WETLAND

[PFO1E](#)

A full description for each wetland code can be found at the [National Wetlands Inventory website](#)

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

Data limitations

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

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

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

Data exclusions

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

Data precautions

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

Appendix E

Cultural Resources

950 CMR: OFFICE OF THE SECRETARY OF THE COMMONWEALTH

APPENDIX A
MASSACHUSETTS HISTORICAL COMMISSION
220 MORRISSEY BOULEVARD
BOSTON, MASS. 02125
617-727-8470, FAX: 617-727-5128

PROJECT NOTIFICATION FORM

Project Name: PHMSA Pipeline Replacement Project in the City of Westfield, Hampden County, Massachusetts

Location / Address: City of Westfield, Massachusetts

City / Town: City of Westfield, Massachusetts Project Proponent
Name: Kathering Giraldo

Address: 220 Binney Street

City/Town/Zip/Telephone: Cambridge, MA 02142 857-320-1359

Agency license or funding for the project (list all licenses, permits, approvals, grants or other entitlements being sought from state and federal agencies).

Agency Name

Pipeline and Hazardous Materials Safety
Administration (PHMSA)

Type of License or funding (specify)

Natural Gas Distribution
Infrastructure Safety and
Modernization Grant Program

Project Description (narrative):

Replace 71,721 linear feet (LF) of cast-iron, coated steel, and leak-prone polyethylene (PE) pipe, with 52,900 LF of PE pipe, which will enhance safety, improve operations, and reduce methane emissions.

Does the project include demolition? If so, specify nature of demolition and describe the building(s) which are proposed for demolition.

N/A

Does the project include rehabilitation of any existing buildings? If so, specify nature of rehabilitation and describe the building(s) which are proposed for rehabilitation.

N/A

Does the project include new construction? If so, describe (attach plans and elevations if necessary).

Replace 71,721 LF of pipe with 52,900 LF of PE pipe by means of cut and cover (trenching) and insertion method, which entails insertion of PE pipe inside the existing pipe, limiting ground disturbance to only the entry and exit points. Main lines will be replaced within 24-36 inches of the existing pipe at a depth of 24-36 inches and existing mains will be abandoned in place to reduce ground disturbance. Service line replacements will also be done by means of insertion method with a depth of ground disturbance of 18-24 inches deep and 24 inches wide.

5/31/96 (Effective 7/1/93) - corrected

950 CMR - 275

950 CMR: OFFICE OF THE SECRETARY OF THE COMMONWEALTH

APPENDIX A (continued)

To the best of your knowledge, are any historic or archaeological properties known to exist within the project's area of potential impact? If so, specify.

Yes, see consultation letter.

What is the total acreage of the project area?

Woodland _____ acres
Wetland _____ acres
Floodplain _____ acres
Open space _____ acres
Developed 164.4 acres

Productive Resources:
Agriculture _____ acres
Forestry _____ acres
Mining/Extraction _____ acres
Total Project Acreage _____ acres

What is the acreage of the proposed new construction? 1.2 acres

What is the present land use of the project area?

Commercial and residential

Please attach a copy of the section of the USGS quadrangle map which clearly marks the project location.

This Project Notification Form has been submitted to the MHC in compliance with 950 CMR 71.00.

Signature of Person submitting this form: _____ Date: _____

Name: _____

Address: _____

City/Town/Zip: _____

Telephone: _____

REGULATORY AUTHORITY

950 CMR 71.00: M.G.L. c. 9, §§ 26-27C as amended by St. 1988, c. 254.



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

1200 New Jersey Avenue, SE
Washington, DC 20590

February 28, 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 Westfield, Hampden County, Massachusetts

Grant Recipient: Westfield Gas and Electric Light Department

Project Location: City of Westfield, 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 Westfield Gas and Electric Light Department (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 71,721 linear feet (LF) of cast-iron, coated steel, and leak-prone polyethylene (PE) pipe, with 52,900 LF of PE pipe, which will enhance safety, improve operations, and reduce methane emissions. Currently, many areas within the project have two mains in the road. However, the Grant recipient will only be installing 52,900 LF of new main and abandoning the rest. The existing cast iron mains were installed between 1910-1973, the existing coated steel mains were installed between 1969-1983, and the existing PE mains were installed between 1986-2017. Main line replacements and some service line replacements are included in this project. The Grant Recipient is also proposing to relocate 114 meters from inside of buildings to the outside.

The Undertaking will replace 71,721 LF of pipe with 52,900 LF of PE pipe by means of cut and cover (trenching) and insertion method, which entails insertion of PE pipe inside the existing pipe, limiting ground disturbance to only the entry and exit points. Main lines will be replaced within 24-36 inches of the existing pipe at a depth of 24-36 inches and existing mains will be abandoned in place to reduce ground disturbance. Service line replacements will also be done by means of insertion method with a depth of ground disturbance of 18-24 inches deep and 24 inches wide where the service lines connect to the main line in the right-of-way (ROW). Most of the service renewals will not change the existing location of the meter. However, there are 114 internal meters that would be relocated to the outside of buildings, including installation of new riser and meter sets.

All work will take place within the existing ROW and all main installations are to be installed under paved surfaces. The exact locations of staging areas for the project are unknown but will be city-owned property or parking lots, both of 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 and using insertion method for services, PHMSA has delineated the APE for this Undertaking to encompass the existing ROW and the parcels where meters are being replaced, which include the limits of disturbance, and the limits of any potential vibration, physical, or limited visual effects. The APE extends to the depth of proposed ground disturbance of up to 36 inches below grade. The Undertaking does not have the potential to cause audible effects after the completion of construction. The existing ROW encompasses various roads, signage, and grassy areas throughout the City of Westfield. 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 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.

Historic Architecture

National Register of Historic Places-Listed and -Eligible Properties

The Westfield Center Historic District (MHC ID WAF.N) is the only NRHP-listed historic property located within the APE. It is a 157-acre district that reflects the evolution of the town from a modest 18th-century farm village to a regionally important industrial community in the late 19th and early 20th centuries. The Westfield Center Historic District is significant as a representative, small, New England farm town, altered by the impact of the Industrial Revolution due to its location on a major river, the Westfield River. The river continued to play a role in the growth of commerce and in the production of waterpower through the late 19th century. Westfield Center retains buildings from its farming era as well as those that were constructed to make it an industrial cigar- and whip-making center. The Historic District is important for the retention of structures that reflect the history of commercial transportation in New England: from the Green as a center for cattle drovers, to an early 19th-century canal that was later broadened to include a railway line; to streetcars; and finally, automobiles and the bridges that supported them across the Westfield River. The Historic District is significant for its architectural resources that include early residential buildings from its agricultural beginnings to the tobacco warehouses, whip factories, multi-family housing, and institutional buildings of the late 19th and early 20th centuries. The Westfield Center Historic District retains integrity of location, design, setting, materials, workmanship, feeling and association, and meets Criteria A and C of the NRHP at the local level. Meter relocations will take place at seven contributing resources along Holland Street and King Street within the Westfield Center Historic District. The location of the NRHP-listed Westfield Center Historic District is shown on the APE map in **Attachment A**.

Identification of Additional Resources

Due to the scale and nature of the Undertaking, which 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.

A review of MACRIS found that most of the APE has not been previously inventoried. Due to the nature of the Undertaking and limited potential for effects, PHMSA is not individually documenting and evaluating all of the properties in the APE. The 107 previously unevaluated properties where meter relocations will take place are all 50 years of age or older (see **Attachment C**). For the purposes of this consultation, PHMSA is assuming that these residential properties within the APE are eligible for listing in the NRHP under Criteria A and C for association with locally significant events and architecture.

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, no archaeological sites or surveys were identified within the APE, four archaeological sites and one archaeological survey were located within one quarter of a mile (Table 1) of the APE.

Table 1. Archaeological Sites within One Quarter of a Mile of the APE

MHC ID Number	Type	NRHP Eligibility	Citation
19-HD-97	Historic period burial site	Unevaluated	John R. Cross (1975)
19-HD-158	Unknown	Unknown	Unknown
19-HD-283	Late Archaic lithic scatter	Unevaluated	Mulholland, et al. (1978)
19-HD-299	Archaic and Woodland lithic scatter	Unevaluated	Graves and Cherau, PAL report No. 1767 (2005)

Site 19-HD-97 contained human remains of European origin, which were found in the backyard of a home during construction of an in-ground swimming pool in 1985. This site has likely been destroyed due to the construction of the swimming pool. The site form for site 19-HD-158 could not be located during the file search thus no information about the site is available. Site 19-HD-283 was encountered during construction of a water treatment facility. Finally, site 19-HD-299 is associated with the Armory Site at 137 Franklin Street in Westfield. The site was encountered during testing performed to grade the site for a parking lot and lawn area.

One survey was identified within one quarter of a mile of the APE, which corresponds to site 19-HD-299. Several other surveys were identified at MHC, but further research found these documents did not exist or did not include archaeological or reconnaissance survey. As such, these surveys are not included in this review.

Table 2. Archaeological Surveys within One Quarter of a Mile of the APE

Report Title	Citation	Report Number
Intensive (Locational) Archaeological Survey Pittsfield MAARNG and Westfield MAARNG, Pittsfield and Westfield, Massachusetts.	Graves, Anna K. and Cherau, Suzanne G. (2005)	PAL report No. 1767

An examination of Web Soil Survey data within the APE reveals five soil types. These types, along with their drainage class, slope, and APE percentage are detailed in Table 3. Well drained and moderately well drained soils can be indicative of human habitation during both the precontact and historic periods. Approximately 38 percent of soils within the APE are well draining or moderately well-draining soil types. Typically slopes greater than 15 percent are not suitable for human occupation, and soil types within the APE vary from 0 to 15 percent slope. Approximately 36% 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 Westfield is primarily within the Westfield River watershed. Parts of the APE are located near the Little River, a tributary of the Westfield River that flows out of the Connecticut River. Proximity to major waterways generally indicates a suitable environment for both precontact and historic human activity.

Table 3. Soil Types within the APE

Soil Type	Drainage Class	Slope	Percent of APE
Hinckley loamy sand	Excessively drained	3-8%	10.2%
Merrimac fine sandy loam	Somewhat excessively drained	0-3%	13.0%
Windsor loamy sand,	Excessively drained	0-3%	20.6%
Windsor loamy sand,	Excessively drained	3-8%	13.7%
Windsor loamy sand	Excessively drained	8-15%	4.5%
Sudbury fine sandy loam	Moderately well drained	0-8%	1.9%
Urban land-Hadley-Winooski association	Moderately well drained	0-8%	21.2%
Urban land-Hinckley-Windsor association	Moderately well drained	0-15%	14.8%
Other			0.2%

The APE is limited to the existing ROW, some of which has been previously disturbed up to the proposed ground disturbance depth of 36 inches due to prior pipeline installation. Work for service line replacement will occur using the insertion method, which reduces ground disturbance. Furthermore, all work will take place under paved areas and the staging area will be on a paved surface. 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: the NRHP-listed Westfield Center Historic District and 107 additional properties assumed to be eligible as further described in the above *Historic Architecture* section.

The Undertaking will not alter any of the characteristics or contributing features of historic properties that qualify them for inclusion in the NRHP under Criteria A or C 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 will not result in lasting physical, visual, or audible effects to historic properties. Meter relocations will take place at seven contributing resources along Holland Street and King Street within the Westfield Center Historic District, as well as 107 additional properties

outside the Historic District 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 will have No Adverse Effect on historic properties.

Consulting Party Outreach

PHMSA identified parties that may be interested in the Undertaking 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 D**) 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 Undertaking'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 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

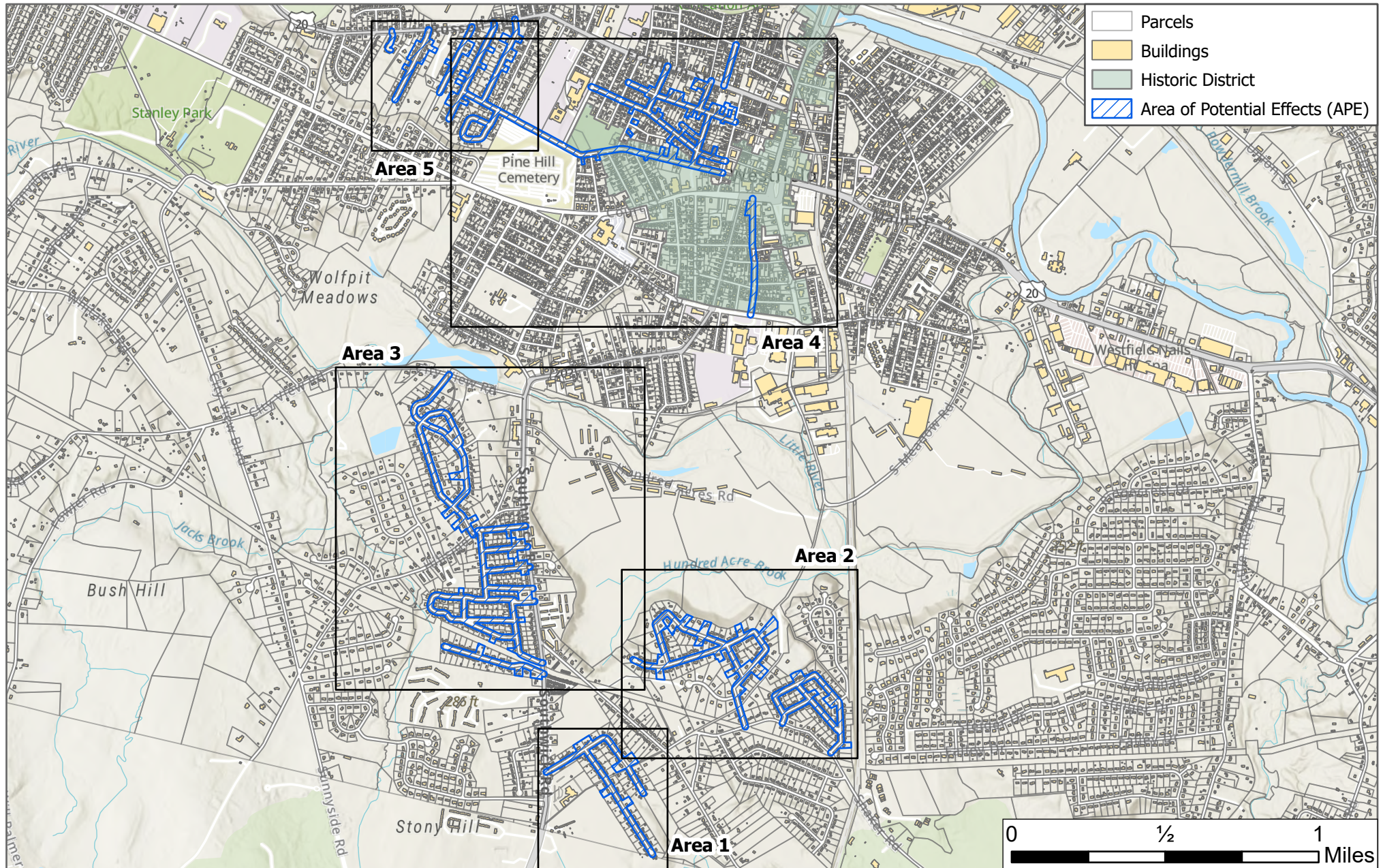
cc: Jason Holloman, Environmental Protection Specialist, USDOT Volpe Center
Renee Taylor, PHMSA Grant Specialist
Michael S. Lee, Westfield Gas and Electric Light Department

Cindy Gaylord, Westfield Historical Commission
Crystal Hollister, Westfield Historical Commission

Enclosures:

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

Area of Potential Effects Map



Name: Westfield Massachusetts Gas Line Replacement

Scale: 27,000

Total Acreage: 164.4

USGS Basemap: Woronoco, Mount Tom, Southwick, West Springfield

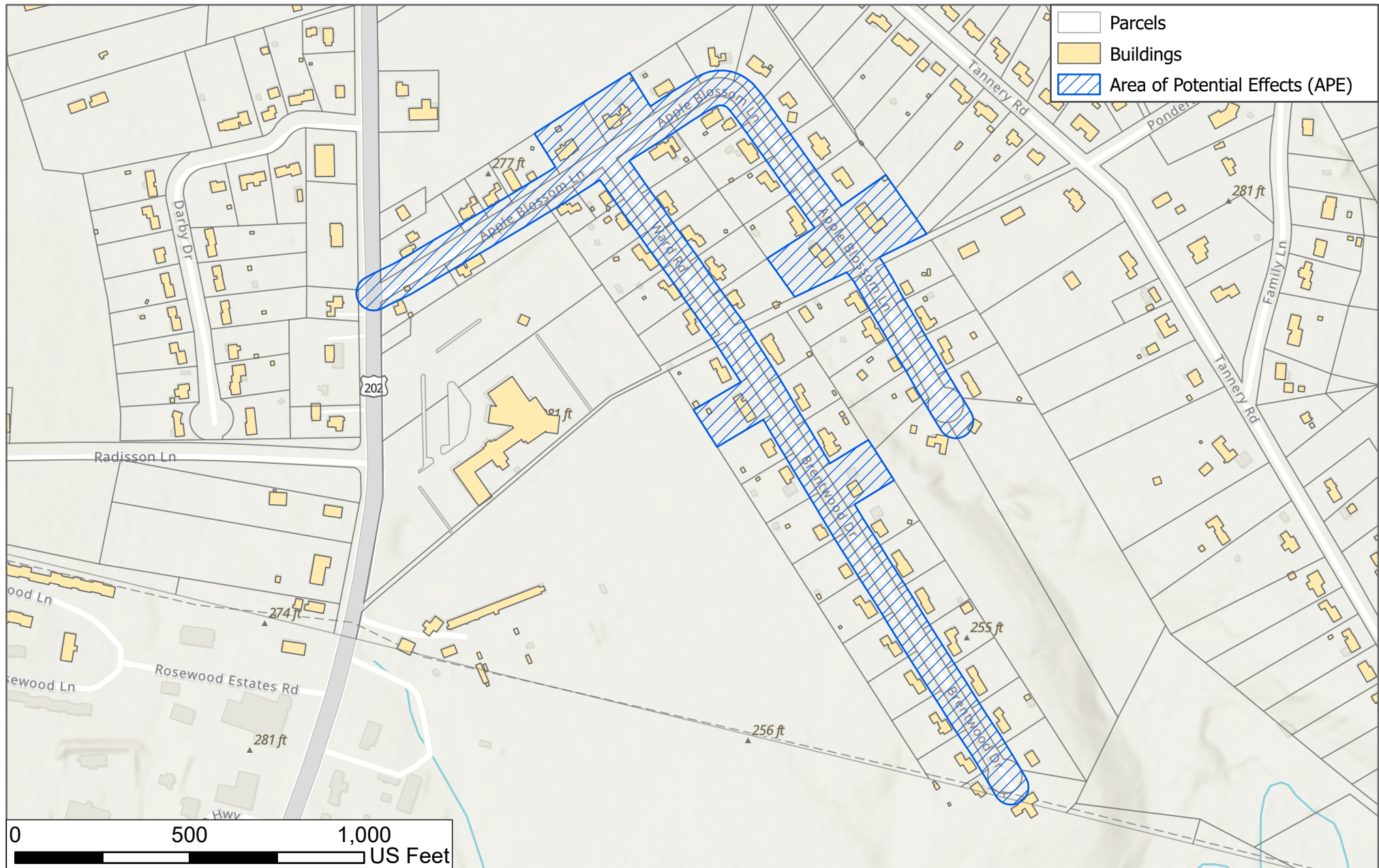
Westfield, MA, Hampden County

N



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

Area of Potential Effects Map



Name: Westfield Massachusetts Gas Line Replacement

Scale: 4,500

Total Acreage: 164.4

USGS Basemap: Woronoco, Mount Tom, Southwick, West Springfield

Westfield, MA, Hampden County

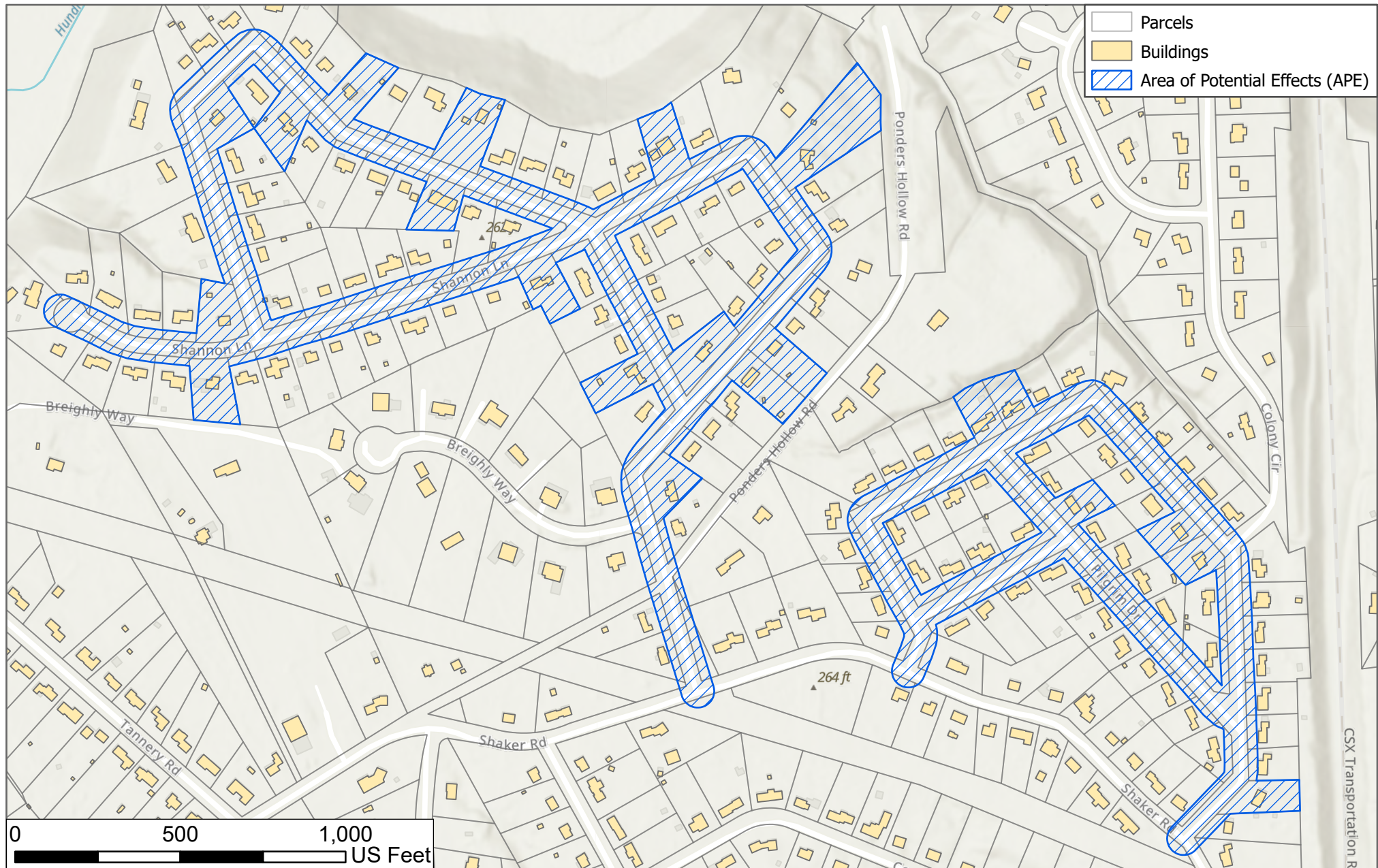
Area 1

N



Service Layer Credits: Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community, Esri Community Maps Contributors, MassGIS, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/ NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS

Area of Potential Effects Map



Name: Westfield Massachusetts Gas Line Replacement

Scale: 4,750

Total Acreage: 164.4

USGS Basemap: Woronoco, Mount Tom, Southwick, West Springfield

Westfield, MA, Hampden County

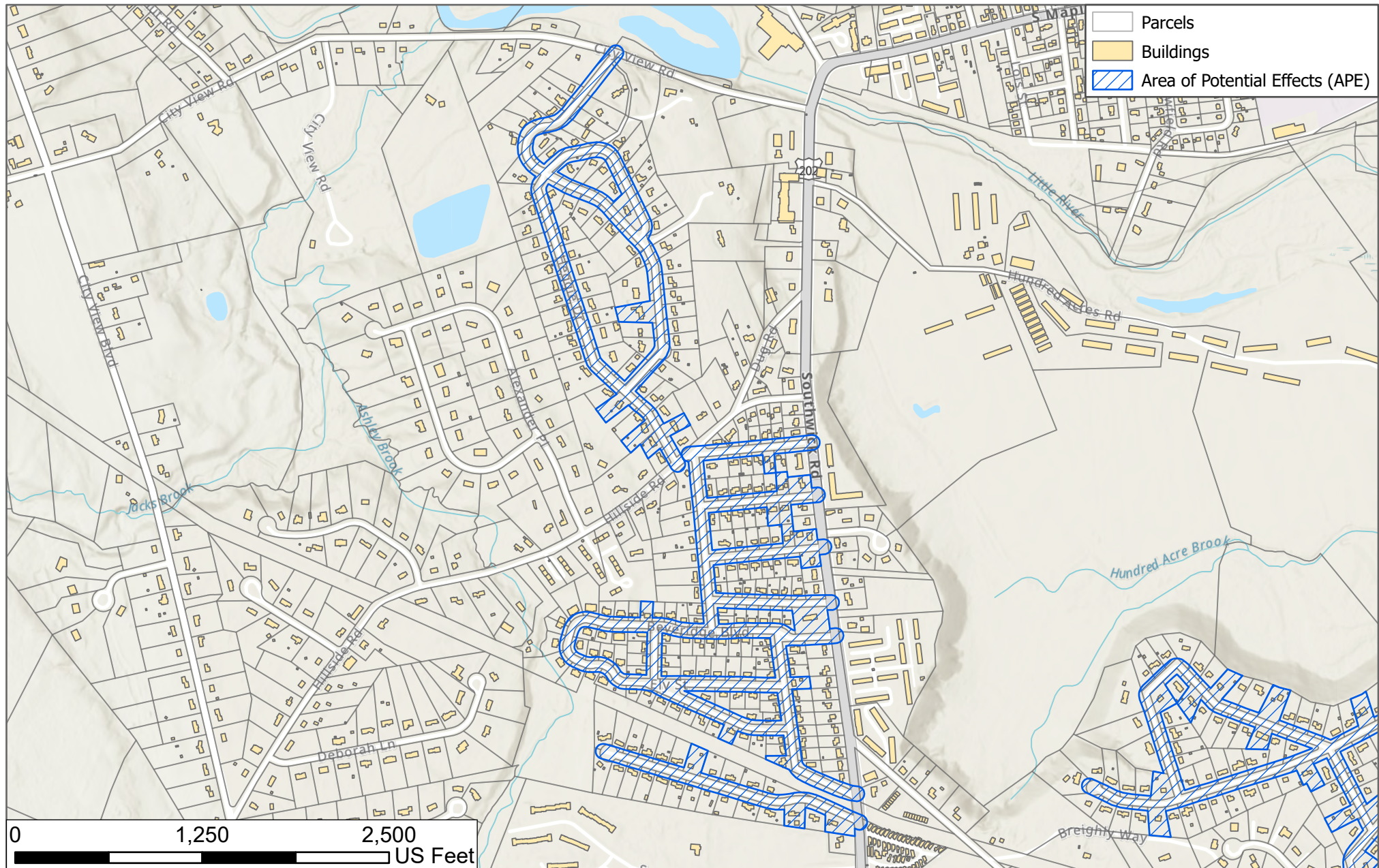
Area 2

N



Service Layer Credits: Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community, Esri Community Maps Contributors, MassGIS, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/ NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS

Area of Potential Effects Map



Name: Westfield Massachusetts Gas Line Replacement

Scale: 10,500

Total Acreage: 164.4

USGS Basemap: Woronoco, Mount Tom, Southwick, West Springfield

Westfield, MA, Hampden County

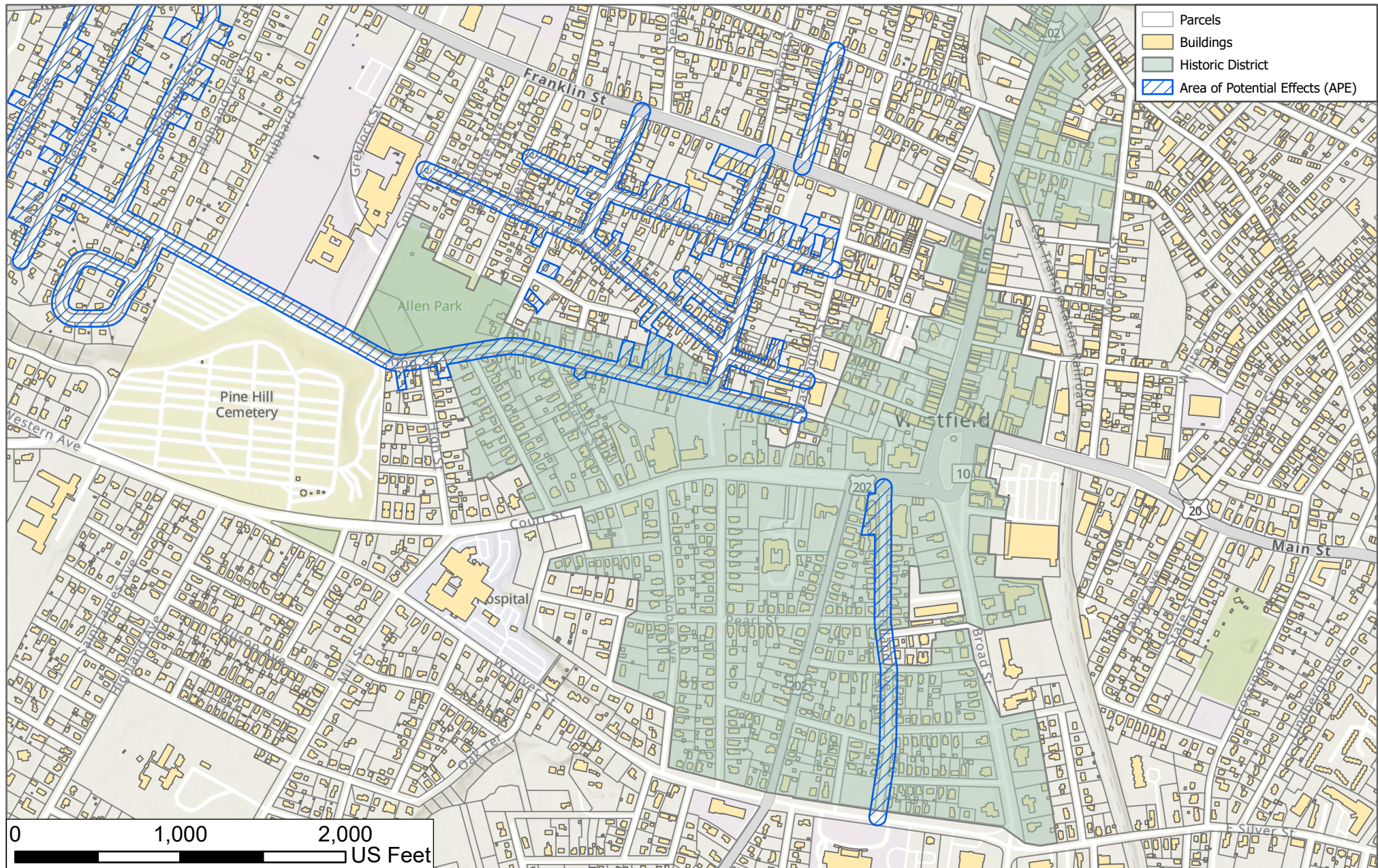
Area 3

N



Service Layer Credits: Esri, NASA, NGA, USGS, FEMA, Esri Community Maps Contributors, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS

Area of Potential Effects Map



Name: Westfield Massachusetts Gas Line Replacement

Scale: 9,500

Total Acreage: 164.4

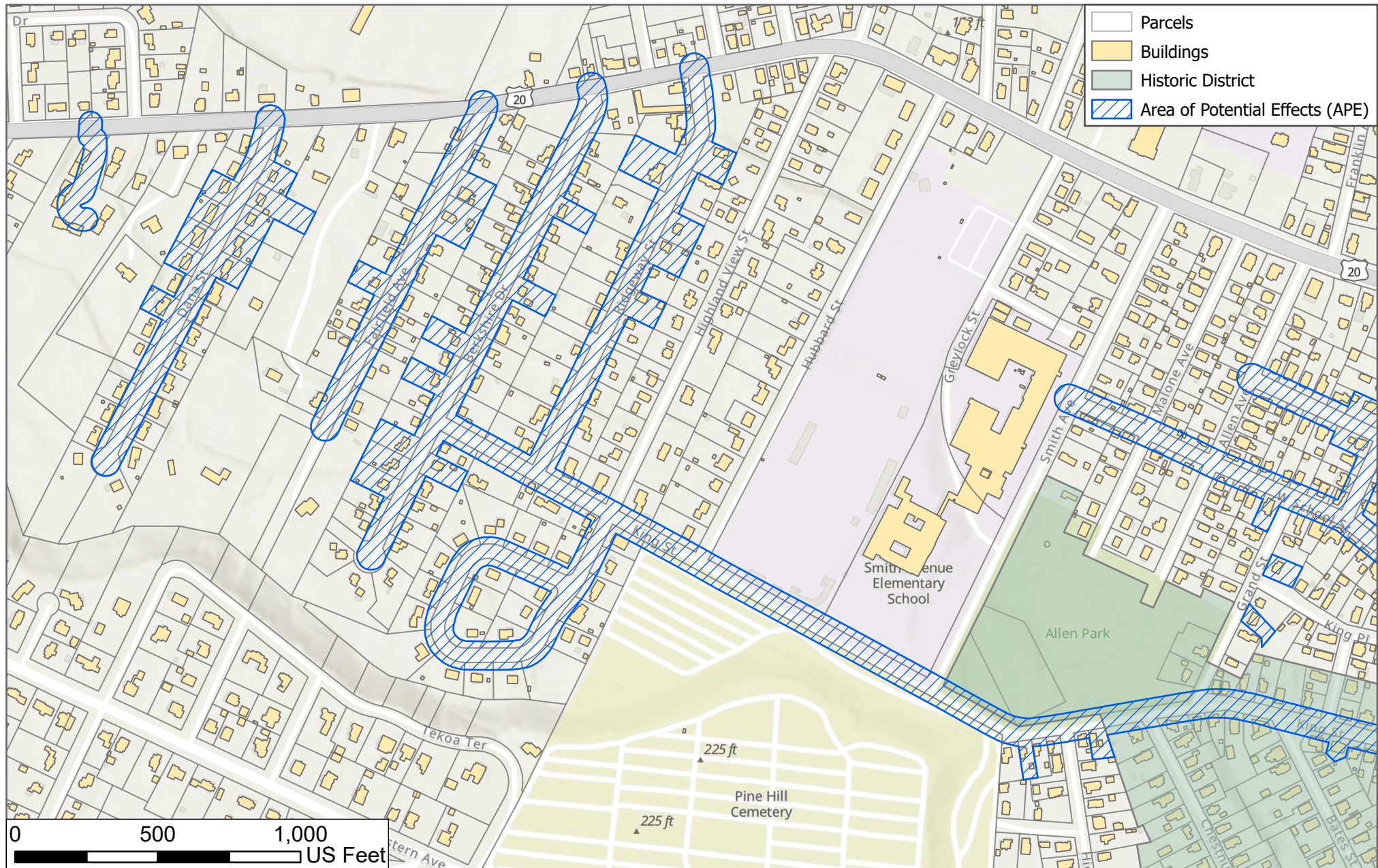
USGS Basemap: Woronoco, Mount Tom, Southwick, West Springfield

Westfield, MA, Hampden County

Area 4

Service Layer Credits: Esri, NASA, NGA, USGS, FEMA, Esri Community Maps Contributors, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS

Area of Potential Effects Map



Name: Westfield Massachusetts Gas Line Replacement

Scale: 5,500

Total Acreage: 164.4

USGS Basemap: Woronoco, Mount Tom, Southwick, West Springfield

Westfield, MA, Hampden County

Area 5

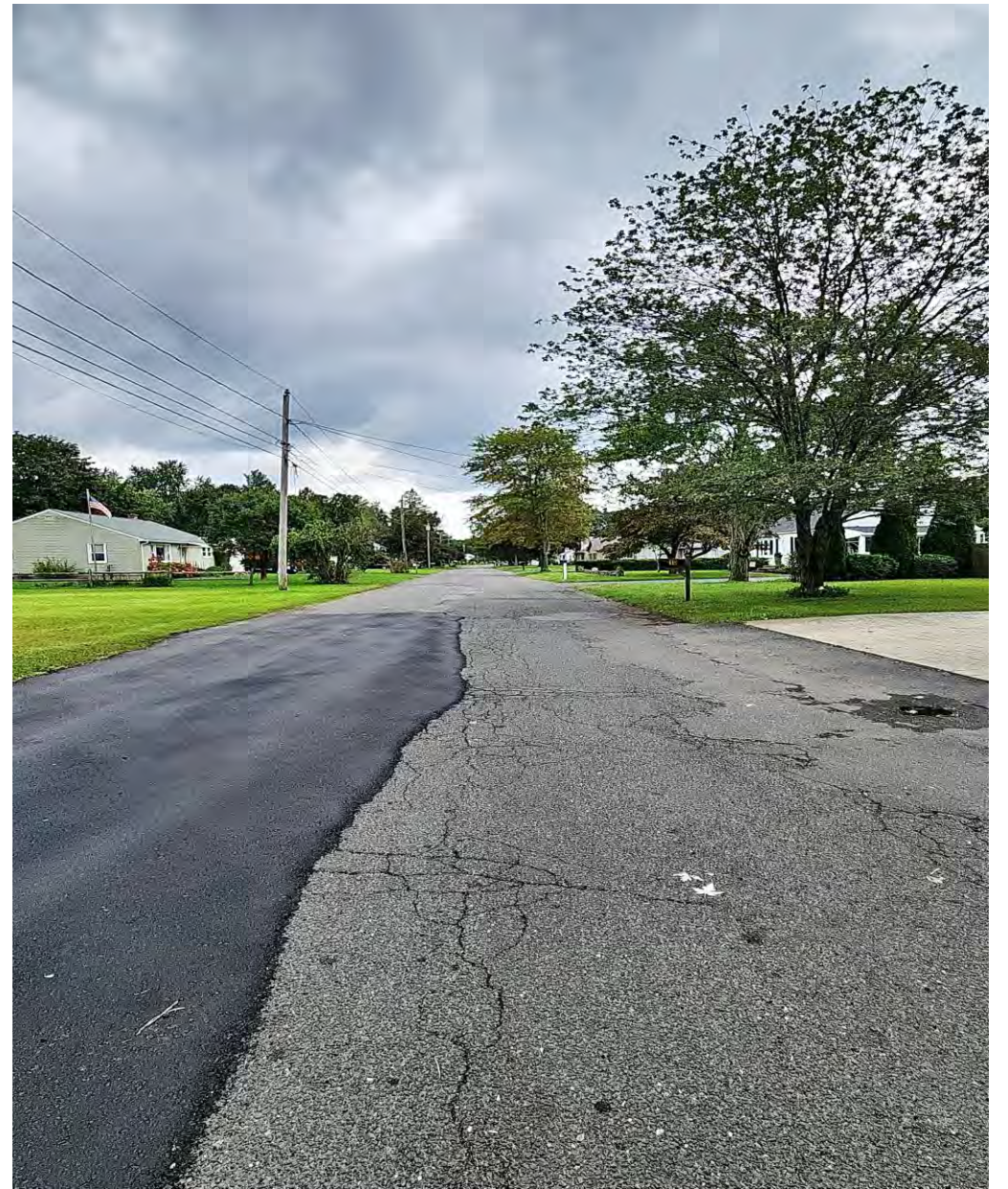
N



Service Layer Credits: Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodastyrrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community, Esri Community Maps Contributors, MassGIS, © OpenStreetMap, Microsoft, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/ NASA, USGS, EPA, NPS, US Census Bureau, USDA, USFWS



Segment 1 - Brentwood Dr



Segment 1 - Ward Rd



Segment 2 - Birch Bluff Dr



Segment 2 - Birchwood Lane



Segment 3 - Colony Dr



Segment 3 - Colony Cir



Segment 4 – Grenier St



Segment 4 – Larchley Ave



Segment 4 – Philip Ave



Segment 5 – May St



Segment 5 – West School St



Segment 5 – Green Ave



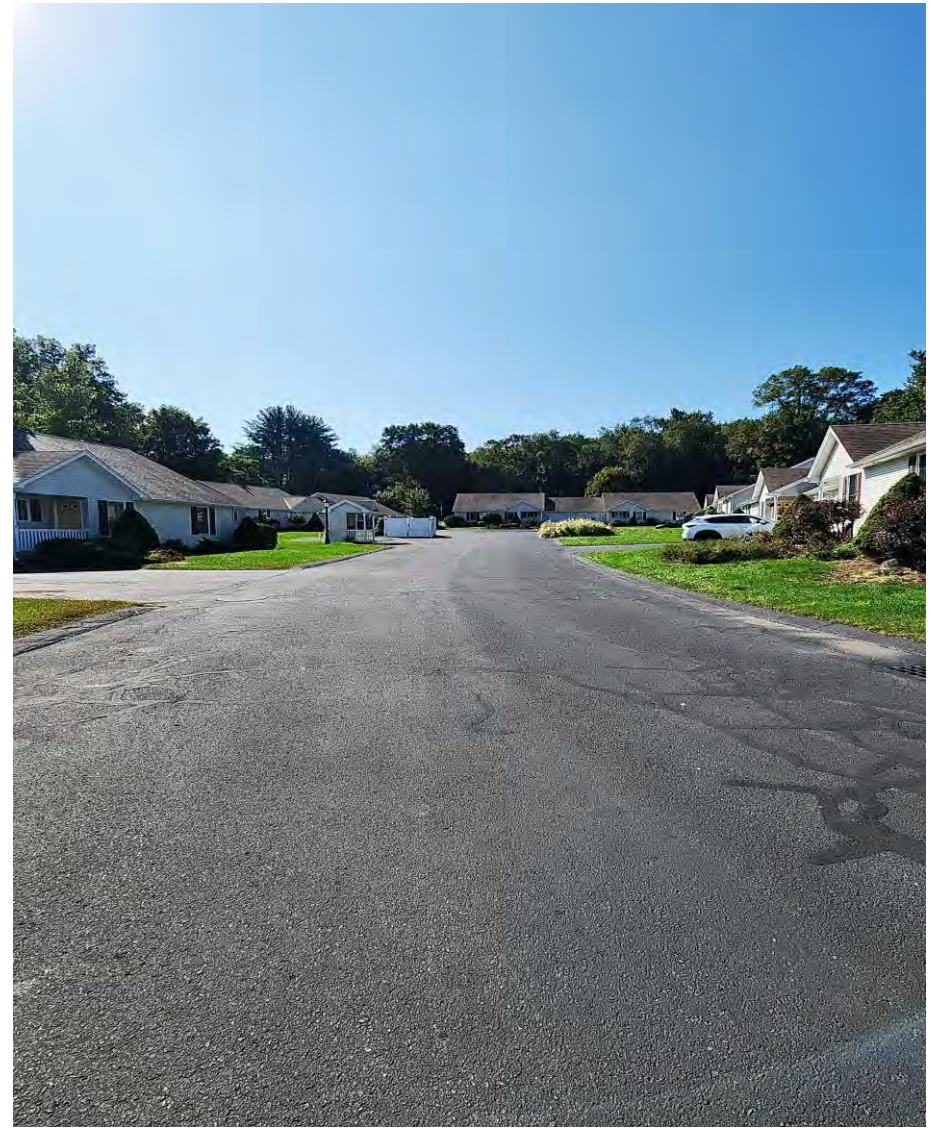
Segment 5 – Holland Ave



Segment 5 – King St



Segment 6 - Conner Ave



Segment 7 - 204 Russell Rd



Segment 8 - Dana St



Segment 9 - Fairfield Ave



Segment 10 - School on King St



Segment 10 - Woodbridge Lane



Segment 10 - Berkshire Dr

ATTACHMENT C

Meter Relocation Properties

Street Number	Street Name	Street Type	Segment	Build Date
79	APPLE BLOSSOM	LN	1	1950
91	APPLE BLOSSOM	LN	1	1952
209	APPLE BLOSSOM	LN	1	1964
212	APPLE BLOSSOM	LN	1	1968
36	BERKSHIRE	DR	10	1949
60	BERKSHIRE	DR	10	1951
81	BERKSHIRE	DR	10	1950
95	BERKSHIRE	DR	10	1950
122	BERKSHIRE	DR	10	1950
131	BERKSHIRE	DR	10	1950
147	BERKSHIRE	DR	10	1950
1	BEVERIDGE	BLVD	4	1956
81	BEVERIDGE	BLVD	4	1959
47	BIRCH BLUFFS	DR	2	1957
86	BIRCH BLUFFS	DR	2	1951
87	BIRCH BLUFFS	DR	2	1954
95	BIRCH BLUFFS	DR	2	1955
145	BIRCH BLUFFS	DR	2	1957
175	BIRCH BLUFFS	DR	2	1950
237	BIRCH BLUFFS	DR	2	1960
238	BIRCH BLUFFS	DR	2	1955
277	BIRCH BLUFFS	DR	2	1967
284	BIRCH BLUFFS	DR	2	1965
344	BIRCH BLUFFS	DR	2	1968
28	BIRCHWOOD	LN	2	1956
11	BRENTWOOD	DR	1	1962
38	BRENTWOOD	DR	1	1955
34	BRIARWOOD	PL	4	Unknown, but nearby buildings are over 50 years of age
13	CHARLES	ST	5	1900

Street Number	Street Name	Street Type	Segment	Build Date
19	CHARLES	ST	5	1946
17	COLONY	DR	3	1970
88	COLONY	DR	3	1970
96	COLONY	DR	3	1972
125	COLONY	DR	3	1972
129	COLONY	DR	3	1972
26	DANA	ST	8	1960
42	DANA	ST	8	1960
45	DANA	ST	8	1968
48	DANA	ST	8	1962
51	DANA	ST	8	1961
64	DANA	ST	8	1960
73	DANA	ST	8	1963
78	DANA	ST	8	1966
87	DANA	ST	8	1963
107	DANA	ST	8	1963
44	FAIRFIELD	AVE	9	1912
57	FAIRFIELD	AVE	9	1950
62	FAIRFIELD	AVE	9	1950
10	FOREST GLEN	DR	4	1974
23	FOREST GLEN	DR	4	1966
67	FOREST GLEN	DR	4	1970
44	GOVERNOR	DR	4	1958
11	GRAND	ST	5	1952
21	GRAND	ST	5	1920
5	GREEN	AVE	5	1880
7	GREEN	AVE	5	1880
9	GREEN	AVE	5	1880
5	HOLLAND	AVE	5	1927
7	HOLLAND	AVE	5	1927
9	HOLLAND	AVE	5	1927
11	HOLLAND	AVE	5	1927
3	JEFFERSON	AVE	5	1890
7	JEFFERSON	AVE	5	1920

Street Number	Street Name	Street Type	Segment	Build Date
10	JEFFERSON	ST	5	1870
13	JEFFERSON	ST	5	1960
19	JEFFERSON	ST	5	1870
32	JEFFERSON	ST	5	1925
36	JEFFERSON	ST	5	1900
45	JEFFERSON	ST	5	1900
49	JEFFERSON	ST	5	1865
49 1/2	JEFFERSON	ST	5	Exact build date unknown, but over 50 years according to historic aerals
51	JEFFERSON	ST	5	1897
65	JEFFERSON	ST	5	1900
69	JEFFERSON	ST	5	1910
29	KING	ST	5	1870
31	KING	ST	5	1855
37	KING	ST	5	1900
46	KING	ST	5	1900
48	KING	ST	5	1900
82	KING	ST	5	1900
92	KING	ST	5	1900
170	KING ST	EXT	5	1920
36	LARCHLY	AVE	4	1954
85	LARCHLY	AVE	4	1958
11	MADISON	ST	5	1890
15	PHILLIP	AVE	4	1953
27	PHILLIP	AVE	4	1955
28	PHILLIP	AVE	4	1955
40	PHILLIP	AVE	4	1955
31	PILGRIM	DR	3	1974
18	RIDGEWAY	ST	10	1920
27	RIDGEWAY	ST	10	1955
38	RIDGEWAY	ST	10	1953
48	RIDGEWAY	ST	10	1935
106	RIDGEWAY	ST	10	1955

Street Number	Street Name	Street Type	Segment	Build Date
14	SHANNON	LN	2	1861
112	SHANNON	LN	2	1965
113	SHANNON	LN	2	1965
14	SOUTHGATE	AVE	4	1955
15	SOUTHGATE	AVE	4	1955
20	SOUTHGATE	AVE	4	1955
29	SOUTHGATE	AVE	4	1955
14	VALLEY VIEW	DR	4	1961
15	VALLEY VIEW	DR	4	1960
24	VALLEY VIEW	DR	4	1950
44	VALLEY VIEW	DR	4	1954
100	VALLEY VIEW	DR	4	1950
295	VALLEY VIEW	DR	4	1955
304	VALLEY VIEW	DR	4	1950
11	W SCHOOL	ST	5	1900
16	W SCHOOL	ST	5	1900
27	W SCHOOL	ST	5	1895
29	W SCHOOL	ST	5	1920
44	W SCHOOL	ST	5	1900



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

1200 New Jersey Avenue, SE
Washington, DC 20590

February 28, 2024

Brad Killscrow
Chief
Delaware Tribe of Indians
5100 Tuxedo Blvd.
Bartlesville, OK - 74006-2838

Section 106 Consultation: PHMSA Pipeline Replacement Project in the City of Westfield, Hampden County, Massachusetts

Grant Recipient: Westfield Gas and Electric Light Department

Project Location: City of Westfield, Massachusetts

Dear Chief Killscrow:

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 Westfield Gas and Electric Light Department (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). The purpose of this letter is to initiate Section 106 consultation for the Undertaking to determine if there are historic properties of cultural or religious significance to your Tribe/Nation that may be affected by the Undertaking, to determine if you want to be a consulting party, and to notify your Tribe/Nation of PHMSA's intention to make a finding of No Adverse Effect to Historic Properties. PHMSA is also available for Government-to-Government consultation on this Program.

Project Description/Background

The Grant Recipient is proposing to replace 71,721 linear feet (LF) of cast-iron, coated steel, and leak-prone polyethylene (PE) pipe, with 52,900 LF of PE pipe, which will enhance safety, improve operations, and reduce methane emissions. Currently, many areas within the project have two mains in the road. However, the Grant recipient will only be installing 52,900 LF of new main and abandoning the rest. The existing cast iron mains were installed between 1910-1973, the existing coated steel mains were installed between 1969-1983, and the existing PE mains were installed between 1986-2017. Main line replacements and some service line replacements are included in this project. The Grant Recipient is also proposing to relocate 114 meters from inside of buildings to the outside.

The Undertaking will replace 71,721 LF of pipe with 52,900 LF of PE pipe by means of cut and cover (trenching) and insertion method, which entails insertion of PE pipe inside the existing pipe, limiting ground disturbance to only the entry and exit points. Main lines will be replaced within 24-36 inches of the existing pipe at a depth of 24-36 inches and existing mains will be abandoned in place to reduce ground disturbance. Service line replacements will also be done by means of insertion method with a depth of ground disturbance of 18-24 inches deep and 24 inches wide where the service lines connect to the main line in the

right-of-way (ROW). Most of the service renewals will not change the existing location of the meter. However, there are 114 internal meters that would be relocated to the outside of buildings, including installation of new riser and meter sets.

All work will take place within the existing ROW and all main installations are to be installed under paved surfaces. The exact locations of staging areas for the project are unknown but will be city-owned property or parking lots, both of 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 and using insertion method for services, PHMSA has delineated the APE for this Undertaking to encompass the existing ROW and the parcels where meters are being replaced, which include the limits of disturbance, and the limits of any potential vibration, physical, or limited visual effects. The APE extends to the depth of proposed ground disturbance of up to 36 inches below grade. The Undertaking does not have the potential to cause audible effects after the completion of construction. The existing ROW encompasses various roads, signage, and grassy areas throughout the City of Westfield. 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 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.

Historic Architecture

National Register of Historic Places-Listed and -Eligible Properties

The Westfield Center Historic District (MHC ID WAF.N) is the only NRHP-listed historic property located within the APE. It is a 157-acre district that reflects the evolution of the town from a modest 18th-century farm village to a regionally important industrial community in the late 19th and early 20th centuries. The Westfield Center Historic District is significant as a representative, small, New England farm town, altered by the impact of the Industrial Revolution due to its location on a major river, the Westfield River. The river continued to play a role in the growth of commerce and in the production of waterpower through the late 19th century. Westfield Center retains buildings from its farming era as well as those that were constructed to make it an industrial cigar- and whip-making center. The Historic District is important for the retention of structures that reflect the history of commercial transportation in New England: from the Green as a center for cattle drovers, to an early 19th-century canal that was later broadened to include a railway line; to streetcars; and finally, automobiles and the bridges that supported them across the Westfield River. The Historic District is significant for its architectural resources that include early residential buildings from its agricultural beginnings to the tobacco warehouses, whip factories, multi-family housing, and institutional buildings of the late 19th and early 20th centuries. The Westfield Center Historic District retains integrity of location, design, setting, materials, workmanship, feeling and association, and meets Criteria A and C of the NRHP at the local level. Meter relocations will take place at seven contributing resources along Holland Street and King Street within the Westfield Center Historic District. The location of the NRHP-listed Westfield Center Historic District is shown on the APE map in **Attachment A**.

Identification of Additional Resources

Due to the scale and nature of the Undertaking, which 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.

A review of MACRIS found that most of the APE has not been previously inventoried. Due to the nature of the Undertaking and limited potential for effects, PHMSA is not individually documenting and evaluating all of the properties in the APE. The 107 previously unevaluated properties where meter relocations will take place are all 50 years of age or older (see **Attachment C**). For the purposes of this consultation, PHMSA is assuming that these residential properties within the APE are eligible for listing in the NRHP under Criteria A and C for association with locally significant events and architecture.

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, no archaeological sites or surveys were identified within the APE, four archaeological sites and one archaeological survey were located within one quarter of a mile (Table 1) of the APE.

Table 1. Archaeological Sites within One Quarter of a Mile of the APE

MHC ID Number	Type	NRHP Eligibility	Citation
19-HD-97	Historic period burial site	Unevaluated	John R. Cross (1975)
19-HD-158	Unknown	Unknown	Unknown
19-HD-283	Late Archaic lithic scatter	Unevaluated	Mulholland, et al. (1978)
19-HD-299	Archaic and Woodland lithic scatter	Unevaluated	Graves and Cherau, PAL report No. 1767 (2005)

Site 19-HD-97 contained human remains of European origin, which were found in the backyard of a home during construction of an in-ground swimming pool in 1985. This site has likely been destroyed due to the construction of the swimming pool. The site form for site 19-HD-158 could not be located during the file search thus no information about the site is available. Site 19-HD-283 was encountered during construction of a water treatment facility. Finally, site 19-HD-299 is associated with the Armory Site at 137 Franklin Street in Westfield. The site was encountered during testing performed to grade the site for a parking lot and lawn area.

One survey was identified within one quarter of a mile of the APE, which corresponds to site 19-HD-299. Several other surveys were identified at MHC, but further research found these documents did not exist or did not include archaeological or reconnaissance survey. As such, these surveys are not included in this review.

Table 2. Archaeological Surveys within One Quarter of a Mile of the APE

Report Title	Citation	Report Number
Intensive (Locational) Archaeological Survey Pittsfield MAARNG and Westfield MAARNG, Pittsfield and Westfield, Massachusetts.	Graves, Anna K. and Cherau, Suzanne G. (2005)	PAL report No. 1767

An examination of Web Soil Survey data within the APE reveals five soil types. These types, along with their drainage class, slope, and APE percentage are detailed in Table 3. Well drained and moderately well drained soils can be indicative of human habitation during both the precontact and historic periods. Approximately 38 percent of soils within the APE are well draining or moderately well-draining soil types. Typically slopes greater than 15 percent are not suitable for human occupation, and soil types within the APE vary from 0 to 15 percent slope. Approximately 36% 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 Westfield is primarily within the Westfield River watershed. Parts of the APE are located near the Little River, a tributary of the Westfield River that flows out of the Connecticut River. Proximity to major waterways generally indicates a suitable environment for both precontact and historic human activity.

Table 3. Soil Types within the APE

Soil Type	Drainage Class	Slope	Percent of APE
Hinckley loamy sand	Excessively drained	3-8%	10.2%
Merrimac fine sandy loam	Somewhat excessively drained	0-3%	13.0%
Windsor loamy sand,	Excessively drained	0-3%	20.6%
Windsor loamy sand,	Excessively drained	3-8%	13.7%
Windsor loamy sand	Excessively drained	8-15%	4.5%
Sudbury fine sandy loam	Moderately well drained	0-8%	1.9%
Urban land-Hadley-Winooski association	Moderately well drained	0-8%	21.2%
Urban land-Hinckley-Windsor association	Moderately well drained	0-15%	14.8%
Other			0.2%

The APE is limited to the existing ROW, some of which has been previously disturbed up to the proposed ground disturbance depth of 36 inches due to prior pipeline installation. Work for service line replacement will occur using the insertion method, which reduces ground disturbance. Furthermore, all work will take place under paved areas and the staging area will be on a paved surface. 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: the NRHP-listed Westfield Center Historic District and 107 additional properties assumed to be eligible as further described in the above *Historic Architecture* section.

The Undertaking will not alter any of the characteristics or contributing features of historic properties that qualify them for inclusion in the NRHP under Criteria A or C 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 will not result in lasting physical, visual, or audible effects to historic properties. Meter relocations will take place at seven contributing resources along Holland Street and King Street within the Westfield Center Historic District, as well as 107 additional properties

outside the Historic District 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 will have No Adverse Effect on historic properties.

Request for Section 106 Concurrence

PHMSA requests that you provide any information you have regarding historic properties of religious or cultural significance to your Tribe/Nation that may be present in the APE and affected by the Undertaking. If your Tribe/Nation is unaware of any historic properties beyond what we have identified to date, PHMSA is notifying your Tribe/Nation of our intention to make a No Adverse Effect to Historic Properties finding. Please notify us within 30 days from the date of receipt of this letter if you have any concerns about the project's effects to historic properties. Should you need additional information please contact Kat Giraldo, Section 106 specialist, at PHMSASection106@dot.gov or 857-320-1359.

Sincerely,



Matt Fuller
Senior Environmental Protection Specialist

MF/kg

cc: Jason Holloman, Environmental Protection Specialist, USDOT Volpe Center
Renee Taylor, PHMSA Grant Specialist
Larry Heady, Tribal Historic Preservation Officer
Susan Bacher, Preservation Representative (East Coast)

Enclosures:

Attachment A: Project Location and APE Maps
Attachment B: Project Area Photographs
Attachment C: Meter Relocation Properties



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

1200 New Jersey Avenue, SE
Washington, DC 20590

February 28, 2024

R. James Gessner
Chairman
Mohegan Tribe of Indians of Connecticut
13 Crow Hill Road
Uncasville, CT – 06382

Section 106 Consultation: PHMSA Pipeline Replacement Project in the City of Westfield, Hampden County, Massachusetts

Grant Recipient: Westfield Gas and Electric Light Department

Project Location: City of Westfield, Massachusetts

Dear Chairman Gessner:

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 Westfield Gas and Electric Light Department (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). The purpose of this letter is to initiate Section 106 consultation for the Undertaking to determine if there are historic properties of cultural or religious significance to your Tribe/Nation that may be affected by the Undertaking, to determine if you want to be a consulting party, and to notify your Tribe/Nation of PHMSA's intention to make a finding of No Adverse Effect to Historic Properties. PHMSA is also available for Government-to-Government consultation on this Program.

Project Description/Background

The Grant Recipient is proposing to replace 71,721 linear feet (LF) of cast-iron, coated steel, and leak-prone polyethylene (PE) pipe, with 52,900 LF of PE pipe, which will enhance safety, improve operations, and reduce methane emissions. Currently, many areas within the project have two mains in the road. However, the Grant recipient will only be installing 52,900 LF of new main and abandoning the rest. The existing cast iron mains were installed between 1910-1973, the existing coated steel mains were installed between 1969-1983, and the existing PE mains were installed between 1986-2017. Main line replacements and some service line replacements are included in this project. The Grant Recipient is also proposing to relocate 114 meters from inside of buildings to the outside.

The Undertaking will replace 71,721 LF of pipe with 52,900 LF of PE pipe by means of cut and cover (trenching) and insertion method, which entails insertion of PE pipe inside the existing pipe, limiting ground disturbance to only the entry and exit points. Main lines will be replaced within 24-36 inches of the existing pipe at a depth of 24-36 inches and existing mains will be abandoned in place to reduce ground disturbance. Service line replacements will also be done by means of insertion method with a depth of ground disturbance of 18-24 inches deep and 24 inches wide where the service lines connect to the main line in the

right-of-way (ROW). Most of the service renewals will not change the existing location of the meter. However, there are 114 internal meters that would be relocated to the outside of buildings, including installation of new riser and meter sets.

All work will take place within the existing ROW and all main installations are to be installed under paved surfaces. The exact locations of staging areas for the project are unknown but will be city-owned property or parking lots, both of 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 and using insertion method for services, PHMSA has delineated the APE for this Undertaking to encompass the existing ROW and the parcels where meters are being replaced, which include the limits of disturbance, and the limits of any potential vibration, physical, or limited visual effects. The APE extends to the depth of proposed ground disturbance of up to 36 inches below grade. The Undertaking does not have the potential to cause audible effects after the completion of construction. The existing ROW encompasses various roads, signage, and grassy areas throughout the City of Westfield. 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 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.

Historic Architecture

National Register of Historic Places-Listed and -Eligible Properties

The Westfield Center Historic District (MHC ID WAF.N) is the only NRHP-listed historic property located within the APE. It is a 157-acre district that reflects the evolution of the town from a modest 18th-century farm village to a regionally important industrial community in the late 19th and early 20th centuries. The Westfield Center Historic District is significant as a representative, small, New England farm town, altered by the impact of the Industrial Revolution due to its location on a major river, the Westfield River. The river continued to play a role in the growth of commerce and in the production of waterpower through the late 19th century. Westfield Center retains buildings from its farming era as well as those that were constructed to make it an industrial cigar- and whip-making center. The Historic District is important for the retention of structures that reflect the history of commercial transportation in New England: from the Green as a center for cattle drovers, to an early 19th-century canal that was later broadened to include a railway line; to streetcars; and finally, automobiles and the bridges that supported them across the Westfield River. The Historic District is significant for its architectural resources that include early residential buildings from its agricultural beginnings to the tobacco warehouses, whip factories, multi-family housing, and institutional buildings of the late 19th and early 20th centuries. The Westfield Center Historic District retains integrity of location, design, setting, materials, workmanship, feeling and association, and meets Criteria A and C of the NRHP at the local level. Meter relocations will take place at seven contributing resources along Holland Street and King Street within the Westfield Center Historic District. The location of the NRHP-listed Westfield Center Historic District is shown on the APE map in **Attachment A**.

Identification of Additional Resources

Due to the scale and nature of the Undertaking, which 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.

A review of MACRIS found that most of the APE has not been previously inventoried. Due to the nature of the Undertaking and limited potential for effects, PHMSA is not individually documenting and evaluating all of the properties in the APE. The 107 previously unevaluated properties where meter relocations will take place are all 50 years of age or older (see **Attachment C**). For the purposes of this consultation, PHMSA is assuming that these residential properties within the APE are eligible for listing in the NRHP under Criteria A and C for association with locally significant events and architecture.

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, no archaeological sites or surveys were identified within the APE, four archaeological sites and one archaeological survey were located within one quarter of a mile (Table 1) of the APE.

Table 1. Archaeological Sites within One Quarter of a Mile of the APE

MHC ID Number	Type	NRHP Eligibility	Citation
19-HD-97	Historic period burial site	Unevaluated	John R. Cross (1975)
19-HD-158	Unknown	Unknown	Unknown
19-HD-283	Late Archaic lithic scatter	Unevaluated	Mulholland, et al. (1978)
19-HD-299	Archaic and Woodland lithic scatter	Unevaluated	Graves and Cherau, PAL report No. 1767 (2005)

Site 19-HD-97 contained human remains of European origin, which were found in the backyard of a home during construction of an in-ground swimming pool in 1985. This site has likely been destroyed due to the construction of the swimming pool. The site form for site 19-HD-158 could not be located during the file search thus no information about the site is available. Site 19-HD-283 was encountered during construction of a water treatment facility. Finally, site 19-HD-299 is associated with the Armory Site at 137 Franklin Street in Westfield. The site was encountered during testing performed to grade the site for a parking lot and lawn area.

One survey was identified within one quarter of a mile of the APE, which corresponds to site 19-HD-299. Several other surveys were identified at MHC, but further research found these documents did not exist or did not include archaeological or reconnaissance survey. As such, these surveys are not included in this review.

Table 2. Archaeological Surveys within One Quarter of a Mile of the APE

Report Title	Citation	Report Number
Intensive (Locational) Archaeological Survey Pittsfield MAARNG and Westfield MAARNG, Pittsfield and Westfield, Massachusetts.	Graves, Anna K. and Cherau, Suzanne G. (2005)	PAL report No. 1767

An examination of Web Soil Survey data within the APE reveals five soil types. These types, along with their drainage class, slope, and APE percentage are detailed in Table 3. Well drained and moderately well drained soils can be indicative of human habitation during both the precontact and historic periods. Approximately 38 percent of soils within the APE are well draining or moderately well-draining soil types. Typically slopes greater than 15 percent are not suitable for human occupation, and soil types within the APE vary from 0 to 15 percent slope. Approximately 36% 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 Westfield is primarily within the Westfield River watershed. Parts of the APE are located near the Little River, a tributary of the Westfield River that flows out of the Connecticut River. Proximity to major waterways generally indicates a suitable environment for both precontact and historic human activity.

Table 3. Soil Types within the APE

Soil Type	Drainage Class	Slope	Percent of APE
Hinckley loamy sand	Excessively drained	3-8%	10.2%
Merrimac fine sandy loam	Somewhat excessively drained	0-3%	13.0%
Windsor loamy sand,	Excessively drained	0-3%	20.6%
Windsor loamy sand,	Excessively drained	3-8%	13.7%
Windsor loamy sand	Excessively drained	8-15%	4.5%
Sudbury fine sandy loam	Moderately well drained	0-8%	1.9%
Urban land-Hadley-Winooski association	Moderately well drained	0-8%	21.2%
Urban land-Hinckley-Windsor association	Moderately well drained	0-15%	14.8%
Other			0.2%

The APE is limited to the existing ROW, some of which has been previously disturbed up to the proposed ground disturbance depth of 36 inches due to prior pipeline installation. Work for service line replacement will occur using the insertion method, which reduces ground disturbance. Furthermore, all work will take place under paved areas and the staging area will be on a paved surface. 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: the NRHP-listed Westfield Center Historic District and 107 additional properties assumed to be eligible as further described in the above *Historic Architecture* section.

The Undertaking will not alter any of the characteristics or contributing features of historic properties that qualify them for inclusion in the NRHP under Criteria A or C 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 will not result in lasting physical, visual, or audible effects to historic properties. Meter relocations will take place at seven contributing resources along Holland Street and King Street within the Westfield Center Historic District, as well as 107 additional properties

outside the Historic District 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 will have No Adverse Effect on historic properties.

Request for Section 106 Concurrence

PHMSA requests that you provide any information you have regarding historic properties of religious or cultural significance to your Tribe/Nation that may be present in the APE and affected by the Undertaking. If your Tribe/Nation is unaware of any historic properties beyond what we have identified to date, PHMSA is notifying your Tribe/Nation of our intention to make a No Adverse Effect to Historic Properties finding. Please notify us within 30 days from the date of receipt of this letter if you have any concerns about the project's effects to historic properties. Should you need additional information please contact Kat Giraldo, Section 106 specialist, at PHMSASection106@dot.gov or 857-320-1359.

Sincerely,



Matt Fuller
Senior Environmental Protection Specialist

MF/kg

cc: Jason Holloman, Environmental Protection Specialist, USDOT Volpe Center
Renee Taylor, PHMSA Grant Specialist
James Quinn, Tribal Historic Preservation Officer
Elaine Thomas, Deputy Tribal Historic Preservation Officer

Enclosures:

Attachment A: Project Location and APE Maps
Attachment B: Project Area Photographs
Attachment C: Meter Relocation Properties



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

1200 New Jersey Avenue, SE
Washington, DC 20590

February 28, 2024

Anthony Stanton
Chief Sachem
Narragansett Indian Tribe
4533 South County Trail
Charlestown, RI – 02813

Section 106 Consultation: PHMSA Pipeline Replacement Project in the City of Westfield, Hampden County, Massachusetts

Grant Recipient: Westfield Gas and Electric Light Department

Project Location: City of Westfield, Massachusetts

Dear Chief Sachem Stanton:

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 Westfield Gas and Electric Light Department (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). The purpose of this letter is to initiate Section 106 consultation for the Undertaking to determine if there are historic properties of cultural or religious significance to your Tribe/Nation that may be affected by the Undertaking, to determine if you want to be a consulting party, and to notify your Tribe/Nation of PHMSA's intention to make a finding of No Adverse Effect to Historic Properties. PHMSA is also available for Government-to-Government consultation on this Program.

Project Description/Background

The Grant Recipient is proposing to replace 71,721 linear feet (LF) of cast-iron, coated steel, and leak-prone polyethylene (PE) pipe, with 52,900 LF of PE pipe, which will enhance safety, improve operations, and reduce methane emissions. Currently, many areas within the project have two mains in the road. However, the Grant recipient will only be installing 52,900 LF of new main and abandoning the rest. The existing cast iron mains were installed between 1910-1973, the existing coated steel mains were installed between 1969-1983, and the existing PE mains were installed between 1986-2017. Main line replacements and some service line replacements are included in this project. The Grant Recipient is also proposing to relocate 114 meters from inside of buildings to the outside.

The Undertaking will replace 71,721 LF of pipe with 52,900 LF of PE pipe by means of cut and cover (trenching) and insertion method, which entails insertion of PE pipe inside the existing pipe, limiting ground disturbance to only the entry and exit points. Main lines will be replaced within 24-36 inches of the existing pipe at a depth of 24-36 inches and existing mains will be abandoned in place to reduce ground disturbance. Service line replacements will also be done by means of insertion method with a depth of ground disturbance of 18-24 inches deep and 24 inches wide where the service lines connect to the main line in the

right-of-way (ROW). Most of the service renewals will not change the existing location of the meter. However, there are 114 internal meters that would be relocated to the outside of buildings, including installation of new riser and meter sets.

All work will take place within the existing ROW and all main installations are to be installed under paved surfaces. The exact locations of staging areas for the project are unknown but will be city-owned property or parking lots, both of 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 and using insertion method for services, PHMSA has delineated the APE for this Undertaking to encompass the existing ROW and the parcels where meters are being replaced, which include the limits of disturbance, and the limits of any potential vibration, physical, or limited visual effects. The APE extends to the depth of proposed ground disturbance of up to 36 inches below grade. The Undertaking does not have the potential to cause audible effects after the completion of construction. The existing ROW encompasses various roads, signage, and grassy areas throughout the City of Westfield. 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 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.

Historic Architecture

National Register of Historic Places-Listed and -Eligible Properties

The Westfield Center Historic District (MHC ID WAF.N) is the only NRHP-listed historic property located within the APE. It is a 157-acre district that reflects the evolution of the town from a modest 18th-century farm village to a regionally important industrial community in the late 19th and early 20th centuries. The Westfield Center Historic District is significant as a representative, small, New England farm town, altered by the impact of the Industrial Revolution due to its location on a major river, the Westfield River. The river continued to play a role in the growth of commerce and in the production of waterpower through the late 19th century. Westfield Center retains buildings from its farming era as well as those that were constructed to make it an industrial cigar- and whip-making center. The Historic District is important for the retention of structures that reflect the history of commercial transportation in New England: from the Green as a center for cattle drovers, to an early 19th-century canal that was later broadened to include a railway line; to streetcars; and finally, automobiles and the bridges that supported them across the Westfield River. The Historic District is significant for its architectural resources that include early residential buildings from its agricultural beginnings to the tobacco warehouses, whip factories, multi-family housing, and institutional buildings of the late 19th and early 20th centuries. The Westfield Center Historic District retains integrity of location, design, setting, materials, workmanship, feeling and association, and meets Criteria A and C of the NRHP at the local level. Meter relocations will take place at seven contributing resources along Holland Street and King Street within the Westfield Center Historic District. The location of the NRHP-listed Westfield Center Historic District is shown on the APE map in **Attachment A**.

Identification of Additional Resources

Due to the scale and nature of the Undertaking, which 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.

A review of MACRIS found that most of the APE has not been previously inventoried. Due to the nature of the Undertaking and limited potential for effects, PHMSA is not individually documenting and evaluating all of the properties in the APE. The 107 previously unevaluated properties where meter relocations will take place are all 50 years of age or older (see **Attachment C**). For the purposes of this consultation, PHMSA is assuming that these residential properties within the APE are eligible for listing in the NRHP under Criteria A and C for association with locally significant events and architecture.

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, no archaeological sites or surveys were identified within the APE, four archaeological sites and one archaeological survey were located within one quarter of a mile (Table 1) of the APE.

Table 1. Archaeological Sites within One Quarter of a Mile of the APE

MHC ID Number	Type	NRHP Eligibility	Citation
19-HD-97	Historic period burial site	Unevaluated	John R. Cross (1975)
19-HD-158	Unknown	Unknown	Unknown
19-HD-283	Late Archaic lithic scatter	Unevaluated	Mulholland, et al. (1978)
19-HD-299	Archaic and Woodland lithic scatter	Unevaluated	Graves and Cherau, PAL report No. 1767 (2005)

Site 19-HD-97 contained human remains of European origin, which were found in the backyard of a home during construction of an in-ground swimming pool in 1985. This site has likely been destroyed due to the construction of the swimming pool. The site form for site 19-HD-158 could not be located during the file search thus no information about the site is available. Site 19-HD-283 was encountered during construction of a water treatment facility. Finally, site 19-HD-299 is associated with the Armory Site at 137 Franklin Street in Westfield. The site was encountered during testing performed to grade the site for a parking lot and lawn area.

One survey was identified within one quarter of a mile of the APE, which corresponds to site 19-HD-299. Several other surveys were identified at MHC, but further research found these documents did not exist or did not include archaeological or reconnaissance survey. As such, these surveys are not included in this review.

Table 2. Archaeological Surveys within One Quarter of a Mile of the APE

Report Title	Citation	Report Number
Intensive (Locational) Archaeological Survey Pittsfield MAARNG and Westfield MAARNG, Pittsfield and Westfield, Massachusetts.	Graves, Anna K. and Cherau, Suzanne G. (2005)	PAL report No. 1767

An examination of Web Soil Survey data within the APE reveals five soil types. These types, along with their drainage class, slope, and APE percentage are detailed in Table 3. Well drained and moderately well drained soils can be indicative of human habitation during both the precontact and historic periods. Approximately 38 percent of soils within the APE are well draining or moderately well-draining soil types. Typically slopes greater than 15 percent are not suitable for human occupation, and soil types within the APE vary from 0 to 15 percent slope. Approximately 36% 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 Westfield is primarily within the Westfield River watershed. Parts of the APE are located near the Little River, a tributary of the Westfield River that flows out of the Connecticut River. Proximity to major waterways generally indicates a suitable environment for both precontact and historic human activity.

Table 3. Soil Types within the APE

Soil Type	Drainage Class	Slope	Percent of APE
Hinckley loamy sand	Excessively drained	3-8%	10.2%
Merrimac fine sandy loam	Somewhat excessively drained	0-3%	13.0%
Windsor loamy sand,	Excessively drained	0-3%	20.6%
Windsor loamy sand,	Excessively drained	3-8%	13.7%
Windsor loamy sand	Excessively drained	8-15%	4.5%
Sudbury fine sandy loam	Moderately well drained	0-8%	1.9%
Urban land-Hadley-Winooski association	Moderately well drained	0-8%	21.2%
Urban land-Hinckley-Windsor association	Moderately well drained	0-15%	14.8%
Other			0.2%

The APE is limited to the existing ROW, some of which has been previously disturbed up to the proposed ground disturbance depth of 36 inches due to prior pipeline installation. Work for service line replacement will occur using the insertion method, which reduces ground disturbance. Furthermore, all work will take place under paved areas and the staging area will be on a paved surface. 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: the NRHP-listed Westfield Center Historic District and 107 additional properties assumed to be eligible as further described in the above *Historic Architecture* section.

The Undertaking will not alter any of the characteristics or contributing features of historic properties that qualify them for inclusion in the NRHP under Criteria A or C 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 will not result in lasting physical, visual, or audible effects to historic properties. Meter relocations will take place at seven contributing resources along Holland Street and King Street within the Westfield Center Historic District, as well as 107 additional properties

outside the Historic District 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 will have No Adverse Effect on historic properties.

Request for Section 106 Concurrence

PHMSA requests that you provide any information you have regarding historic properties of religious or cultural significance to your Tribe/Nation that may be present in the APE and affected by the Undertaking. If your Tribe/Nation is unaware of any historic properties beyond what we have identified to date, PHMSA is notifying your Tribe/Nation of our intention to make a No Adverse Effect to Historic Properties finding. Please notify us within 30 days from the date of receipt of this letter if you have any concerns about the project's effects to historic properties. Should you need additional information please contact Kat Giraldo, Section 106 specialist, at PHMSASection106@dot.gov or 857-320-1359.

Sincerely,



Matt Fuller
Senior Environmental Protection Specialist

MF/kg

cc: Jason Holloman, Environmental Protection Specialist, USDOT Volpe Center
Renee Taylor, PHMSA Grant Specialist
John Brown, Tribal Historic Preservation Officer

Enclosures:

Attachment A: Project Location and APE Maps
Attachment B: Project Area Photographs
Attachment C: Meter Relocation Properties



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

1200 New Jersey Avenue, SE
Washington, DC 20590

February 28, 2024

Shannon Holsey
President
Stockbridge Munsee Community
N8476 Mo He Con Nuck Road
Bowler, WI - 54416

Section 106 Consultation: PHMSA Pipeline Replacement Project in the City of Westfield, Hampden County, Massachusetts

Grant Recipient: Westfield Gas and Electric Light Department

Project Location: City of Westfield, Massachusetts

Dear President Holsey:

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 Westfield Gas and Electric Light Department (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). The purpose of this letter is to initiate Section 106 consultation for the Undertaking to determine if there are historic properties of cultural or religious significance to your Tribe/Nation that may be affected by the Undertaking, to determine if you want to be a consulting party, and to notify your Tribe/Nation of PHMSA's intention to make a finding of No Adverse Effect to Historic Properties. PHMSA is also available for Government-to-Government consultation on this Program.

Project Description/Background

The Grant Recipient is proposing to replace 71,721 linear feet (LF) of cast-iron, coated steel, and leak-prone polyethylene (PE) pipe, with 52,900 LF of PE pipe, which will enhance safety, improve operations, and reduce methane emissions. Currently, many areas within the project have two mains in the road. However, the Grant recipient will only be installing 52,900 LF of new main and abandoning the rest. The existing cast iron mains were installed between 1910-1973, the existing coated steel mains were installed between 1969-1983, and the existing PE mains were installed between 1986-2017. Main line replacements and some service line replacements are included in this project. The Grant Recipient is also proposing to relocate 114 meters from inside of buildings to the outside.

The Undertaking will replace 71,721 LF of pipe with 52,900 LF of PE pipe by means of cut and cover (trenching) and insertion method, which entails insertion of PE pipe inside the existing pipe, limiting ground disturbance to only the entry and exit points. Main lines will be replaced within 24-36 inches of the existing pipe at a depth of 24-36 inches and existing mains will be abandoned in place to reduce ground disturbance. Service line replacements will also be done by means of insertion method with a depth of ground disturbance of 18-24 inches deep and 24 inches wide where the service lines connect to the main line in the

right-of-way (ROW). Most of the service renewals will not change the existing location of the meter. However, there are 114 internal meters that would be relocated to the outside of buildings, including installation of new riser and meter sets.

All work will take place within the existing ROW and all main installations are to be installed under paved surfaces. The exact locations of staging areas for the project are unknown but will be city-owned property or parking lots, both of 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 and using insertion method for services, PHMSA has delineated the APE for this Undertaking to encompass the existing ROW and the parcels where meters are being replaced, which include the limits of disturbance, and the limits of any potential vibration, physical, or limited visual effects. The APE extends to the depth of proposed ground disturbance of up to 36 inches below grade. The Undertaking does not have the potential to cause audible effects after the completion of construction. The existing ROW encompasses various roads, signage, and grassy areas throughout the City of Westfield. 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 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.

Historic Architecture

National Register of Historic Places-Listed and -Eligible Properties

The Westfield Center Historic District (MHC ID WAF.N) is the only NRHP-listed historic property located within the APE. It is a 157-acre district that reflects the evolution of the town from a modest 18th-century farm village to a regionally important industrial community in the late 19th and early 20th centuries. The Westfield Center Historic District is significant as a representative, small, New England farm town, altered by the impact of the Industrial Revolution due to its location on a major river, the Westfield River. The river continued to play a role in the growth of commerce and in the production of waterpower through the late 19th century. Westfield Center retains buildings from its farming era as well as those that were constructed to make it an industrial cigar- and whip-making center. The Historic District is important for the retention of structures that reflect the history of commercial transportation in New England: from the Green as a center for cattle drovers, to an early 19th-century canal that was later broadened to include a railway line; to streetcars; and finally, automobiles and the bridges that supported them across the Westfield River. The Historic District is significant for its architectural resources that include early residential buildings from its agricultural beginnings to the tobacco warehouses, whip factories, multi-family housing, and institutional buildings of the late 19th and early 20th centuries. The Westfield Center Historic District retains integrity of location, design, setting, materials, workmanship, feeling and association, and meets Criteria A and C of the NRHP at the local level. Meter relocations will take place at seven contributing resources along Holland Street and King Street within the Westfield Center Historic District. The location of the NRHP-listed Westfield Center Historic District is shown on the APE map in **Attachment A**.

Identification of Additional Resources

Due to the scale and nature of the Undertaking, which 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.

A review of MACRIS found that most of the APE has not been previously inventoried. Due to the nature of the Undertaking and limited potential for effects, PHMSA is not individually documenting and evaluating all of the properties in the APE. The 107 previously unevaluated properties where meter relocations will take place are all 50 years of age or older (see **Attachment C**). For the purposes of this consultation, PHMSA is assuming that these residential properties within the APE are eligible for listing in the NRHP under Criteria A and C for association with locally significant events and architecture.

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, no archaeological sites or surveys were identified within the APE, four archaeological sites and one archaeological survey were located within one quarter of a mile (Table 1) of the APE.

Table 1. Archaeological Sites within One Quarter of a Mile of the APE

MHC ID Number	Type	NRHP Eligibility	Citation
19-HD-97	Historic period burial site	Unevaluated	John R. Cross (1975)
19-HD-158	Unknown	Unknown	Unknown
19-HD-283	Late Archaic lithic scatter	Unevaluated	Mulholland, et al. (1978)
19-HD-299	Archaic and Woodland lithic scatter	Unevaluated	Graves and Cherau, PAL report No. 1767 (2005)

Site 19-HD-97 contained human remains of European origin, which were found in the backyard of a home during construction of an in-ground swimming pool in 1985. This site has likely been destroyed due to the construction of the swimming pool. The site form for site 19-HD-158 could not be located during the file search thus no information about the site is available. Site 19-HD-283 was encountered during construction of a water treatment facility. Finally, site 19-HD-299 is associated with the Armory Site at 137 Franklin Street in Westfield. The site was encountered during testing performed to grade the site for a parking lot and lawn area.

One survey was identified within one quarter of a mile of the APE, which corresponds to site 19-HD-299. Several other surveys were identified at MHC, but further research found these documents did not exist or did not include archaeological or reconnaissance survey. As such, these surveys are not included in this review.

Table 2. Archaeological Surveys within One Quarter of a Mile of the APE

Report Title	Citation	Report Number
Intensive (Locational) Archaeological Survey Pittsfield MAARNG and Westfield MAARNG, Pittsfield and Westfield, Massachusetts.	Graves, Anna K. and Cherau, Suzanne G. (2005)	PAL report No. 1767

An examination of Web Soil Survey data within the APE reveals five soil types. These types, along with their drainage class, slope, and APE percentage are detailed in Table 3. Well drained and moderately well drained soils can be indicative of human habitation during both the precontact and historic periods. Approximately 38 percent of soils within the APE are well draining or moderately well-draining soil types. Typically slopes greater than 15 percent are not suitable for human occupation, and soil types within the APE vary from 0 to 15 percent slope. Approximately 36% 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 Westfield is primarily within the Westfield River watershed. Parts of the APE are located near the Little River, a tributary of the Westfield River that flows out of the Connecticut River. Proximity to major waterways generally indicates a suitable environment for both precontact and historic human activity.

Table 3. Soil Types within the APE

Soil Type	Drainage Class	Slope	Percent of APE
Hinckley loamy sand	Excessively drained	3-8%	10.2%
Merrimac fine sandy loam	Somewhat excessively drained	0-3%	13.0%
Windsor loamy sand,	Excessively drained	0-3%	20.6%
Windsor loamy sand,	Excessively drained	3-8%	13.7%
Windsor loamy sand	Excessively drained	8-15%	4.5%
Sudbury fine sandy loam	Moderately well drained	0-8%	1.9%
Urban land-Hadley-Winooski association	Moderately well drained	0-8%	21.2%
Urban land-Hinckley-Windsor association	Moderately well drained	0-15%	14.8%
Other			0.2%

The APE is limited to the existing ROW, some of which has been previously disturbed up to the proposed ground disturbance depth of 36 inches due to prior pipeline installation. Work for service line replacement will occur using the insertion method, which reduces ground disturbance. Furthermore, all work will take place under paved areas and the staging area will be on a paved surface. 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: the NRHP-listed Westfield Center Historic District and 107 additional properties assumed to be eligible as further described in the above *Historic Architecture* section.

The Undertaking will not alter any of the characteristics or contributing features of historic properties that qualify them for inclusion in the NRHP under Criteria A or C 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 will not result in lasting physical, visual, or audible effects to historic properties. Meter relocations will take place at seven contributing resources along Holland Street and King Street within the Westfield Center Historic District, as well as 107 additional properties

outside the Historic District 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 will have No Adverse Effect on historic properties.

Request for Section 106 Concurrence

PHMSA requests that you provide any information you have regarding historic properties of religious or cultural significance to your Tribe/Nation that may be present in the APE and affected by the Undertaking. If your Tribe/Nation is unaware of any historic properties beyond what we have identified to date, PHMSA is notifying your Tribe/Nation of our intention to make a No Adverse Effect to Historic Properties finding. Please notify us within 30 days from the date of receipt of this letter if you have any concerns about the project's effects to historic properties. Should you need additional information please contact Kat Giraldo, Section 106 specialist, at PHMSASection106@dot.gov or 857-320-1359.

Sincerely,



Matt Fuller
Senior Environmental Protection Specialist

MF/kg

cc: Jason Holloman, Environmental Protection Specialist, USDOT Volpe Center
Renee Taylor, PHMSA Grant Specialist
Jeffery C. Bendremer, Tribal Historic Preservation Officer

Enclosures:

Attachment A: Project Location and APE Maps
Attachment B: Project Area Photographs
Attachment C: Meter Relocation Properties

Appendix F

Environmental Justice



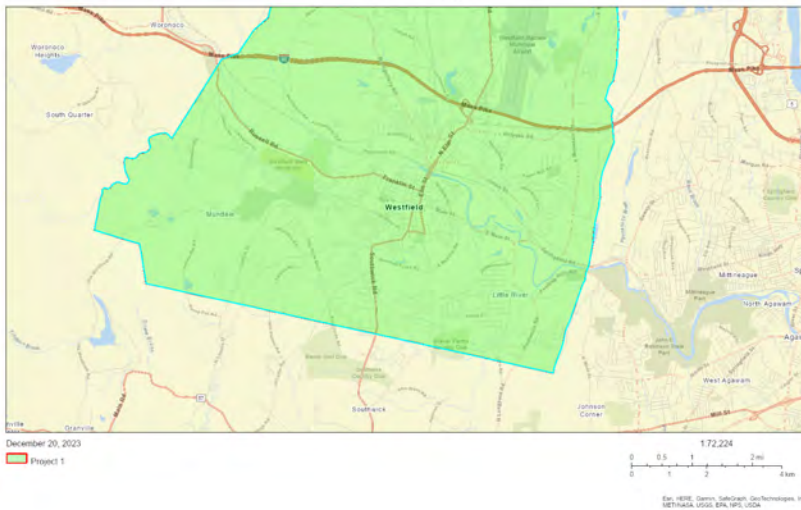
EJScreen Community Report

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

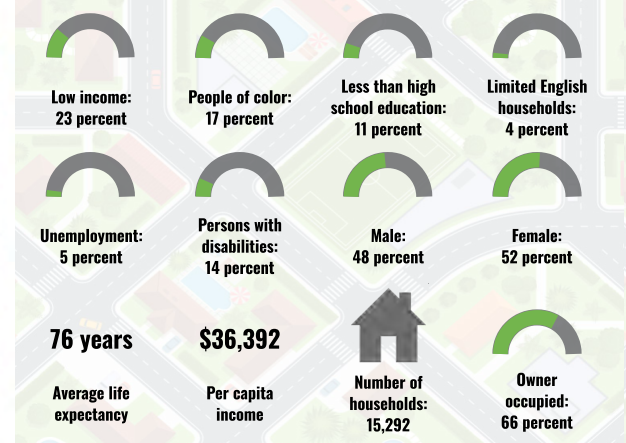
Westfield, MA

City: Westfield
Population: 40,922
Area in square miles: 47.31

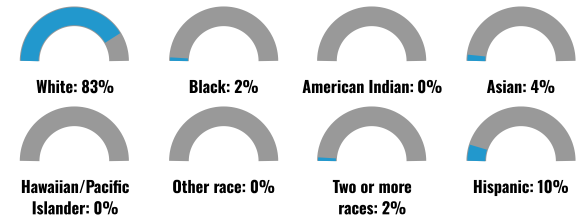
A3 Landscape



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	84%
Spanish	6%
Russian, Polish, or Other Slavic	5%
Other Indo-European	3%
Total Non-English	16%

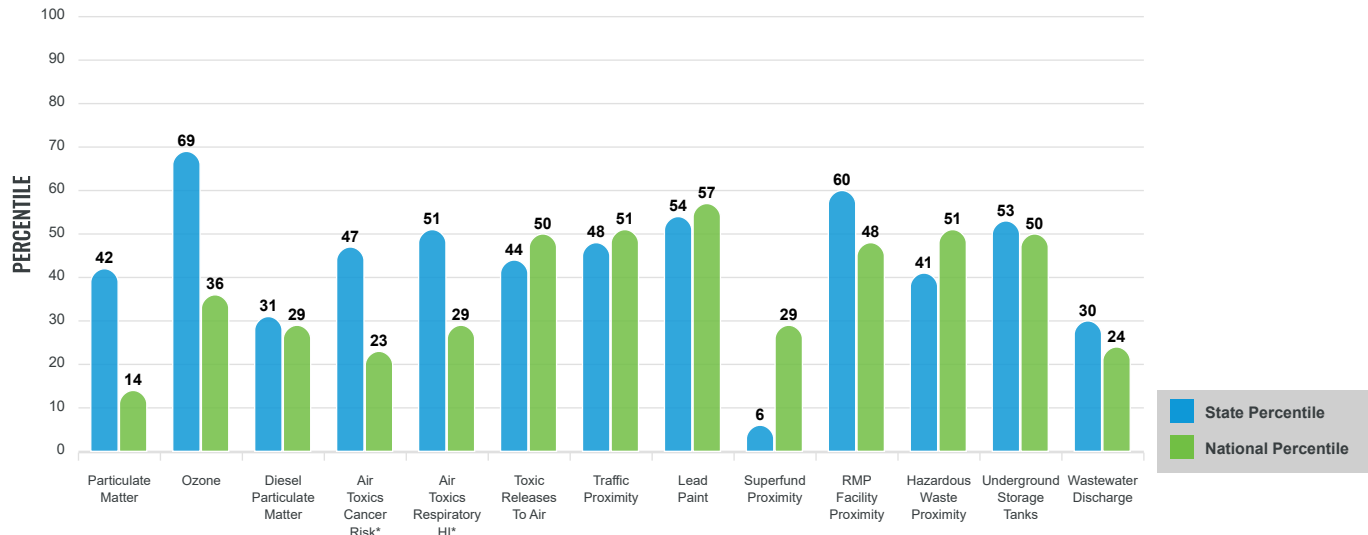
Environmental Justice & Supplemental Indexes

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

EJ INDEXES

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

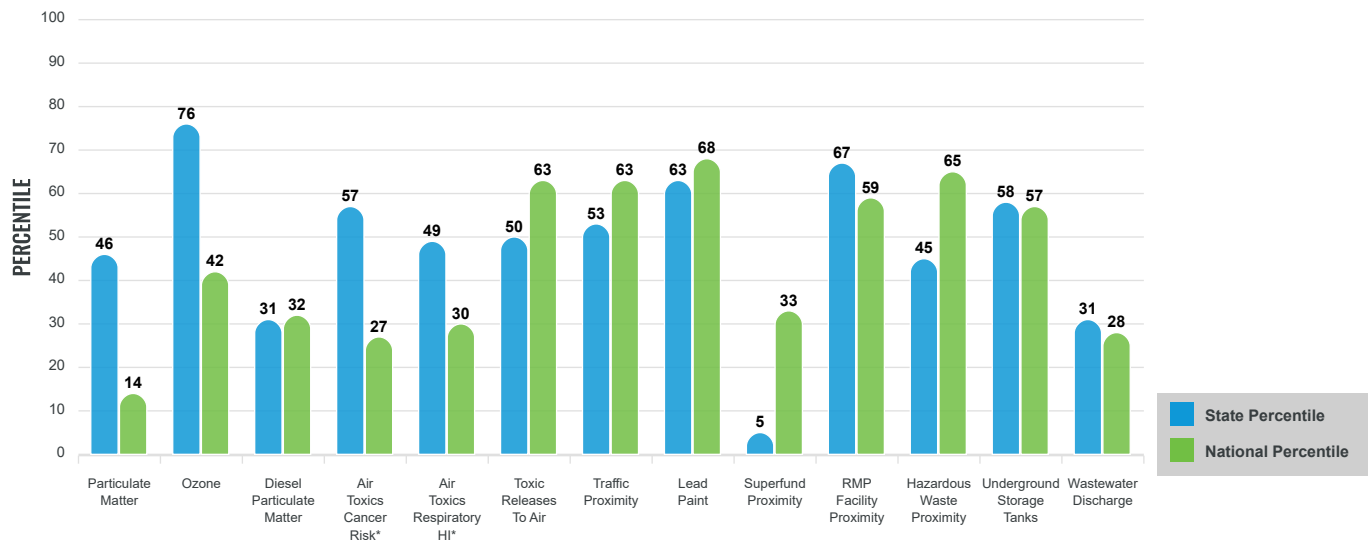
EJ INDEXES FOR THE SELECTED LOCATION



SUPPLEMENTAL INDEXES

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

SUPPLEMENTAL INDEXES FOR THE SELECTED LOCATION



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

Report for City: Westfield

EJScreen Environmental and Socioeconomic Indicators Data

SELECTED VARIABLES	VALUE	STATE AVERAGE	PERCENTILE IN STATE	USA AVERAGE	PERCENTILE IN USA
POLLUTION AND SOURCES					
Particulate Matter ($\mu\text{g}/\text{m}^3$)	6.4	6.62	32	8.08	11
Ozone (ppb)	59.7	58.3	77	61.6	38
Diesel Particulate Matter ($\mu\text{g}/\text{m}^3$)	0.13	0.253	18	0.261	25
Air Toxics Cancer Risk* (lifetime risk per million)	20	21	3	25	5
Air Toxics Respiratory HI*	0.22	0.26	2	0.31	4
Toxic Releases to Air	1,400	2,800	36	4,600	66
Traffic Proximity (daily traffic count/distance to road)	220	630	45	210	77
Lead Paint (% Pre-1960 Housing)	0.46	0.51	42	0.3	71
Superfund Proximity (site count/km distance)	0.032	0.18	3	0.13	29
RMP Facility Proximity (facility count/km distance)	0.42	0.36	77	0.43	73
Hazardous Waste Proximity (facility count/km distance)	1.6	6.7	31	1.9	70
Underground Storage Tanks (count/km ²)	2.2	3.4	54	3.9	61
Wastewater Discharge (toxicity-weighted concentration/m distance)	9.6E-05	0.2	26	22	30
SOCIOECONOMIC INDICATORS					
Demographic Index	19%	26%	49	35%	30
Supplemental Demographic Index	12%	12%	62	14%	44
People of Color	17%	30%	41	39%	34
Low Income	23%	22%	63	31%	43
Unemployment Rate	5%	5%	58	6%	57
Limited English Speaking Households	4%	6%	63	5%	73
Less Than High School Education	11%	9%	70	12%	60
Under Age 5	4%	5%	49	6%	43
Over Age 64	17%	17%	58	17%	57
Low Life Expectancy	18%	17%	53	20%	31

*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	8
Water Dischargers	97
Air Pollution	51
Brownfields	4
Toxic Release Inventory	17

Other community features within defined area:

Schools	12
Hospitals	2
Places of Worship	14

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	No
Selected location contains an EPA IRA disadvantaged community	Yes

Report for City: Westfield

EJScreen Environmental and Socioeconomic Indicators Data

HEALTH INDICATORS					
INDICATOR	HEALTH VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Low Life Expectancy	18%	17%	53	20%	31
Heart Disease	5.6	5.4	58	6.1	41
Asthma	11.2	10.8	69	10	81
Cancer	6.5	6.6	40	6.1	54
Persons with Disabilities	13.9%	11.9%	71	13.4%	59

CLIMATE INDICATORS					
INDICATOR	HEALTH VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Flood Risk	12%	12%	66	12%	71
Wild re Risk	0%	0%	0	14%	0

CRITICAL SERVICE GAPS					
INDICATOR	HEALTH VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Broadband Internet	12%	10%	66	14%	53
Lack of Health Insurance	2%	3%	52	9%	14
Housing Burden	No	N/A	N/A	N/A	N/A
Transportation Access	Yes	N/A	N/A	N/A	N/A
Food Desert	Yes	N/A	N/A	N/A	N/A

Footnotes

Report for City: Westfield



EJScreen Community Report

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

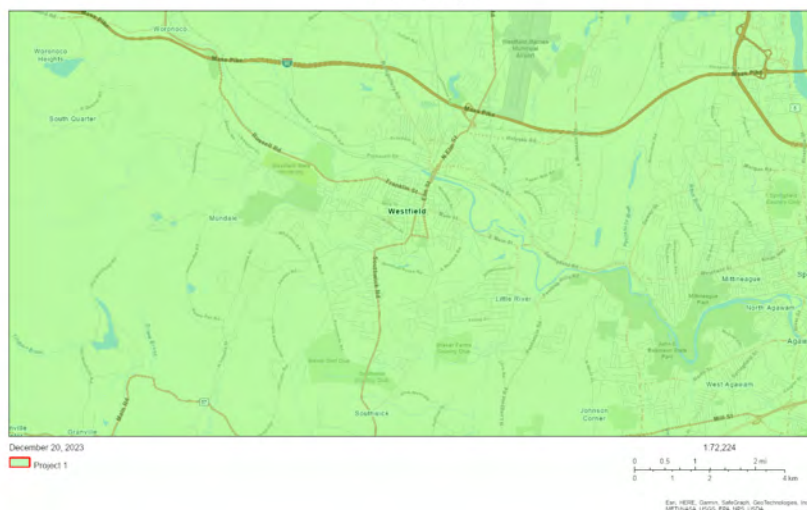
Hampden County, MA

County: Hampden

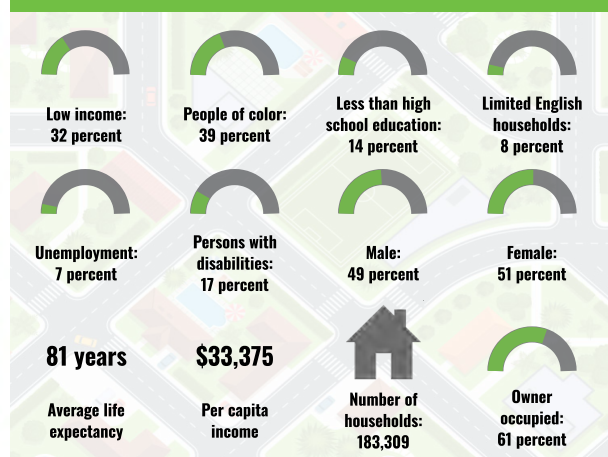
Population: 466,265

Area in square miles: 634.15

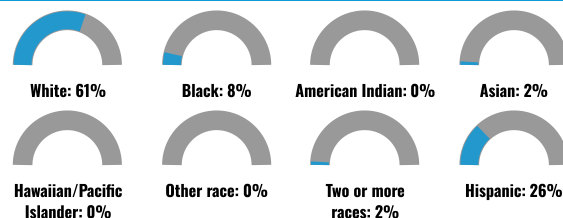
A3 Landscape



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 Pacific Island	1%
Other and Unspecified	1%
Total Non-English	26%

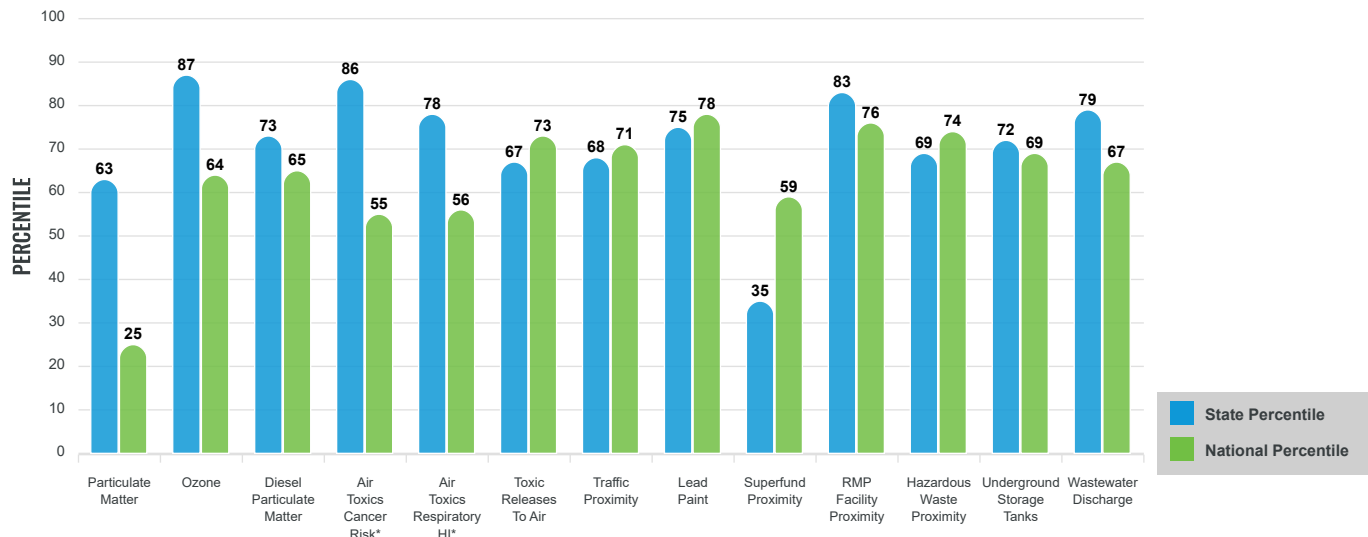
Environmental Justice & Supplemental Indexes

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

EJ INDEXES

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

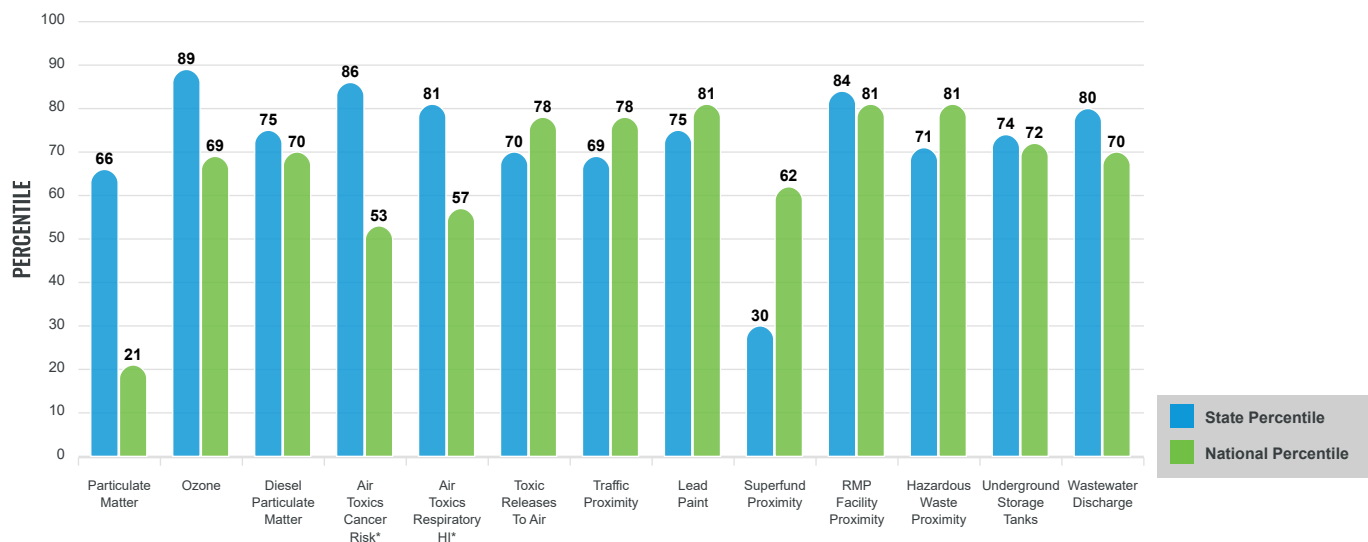
EJ INDEXES FOR THE SELECTED LOCATION



SUPPLEMENTAL INDEXES

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

SUPPLEMENTAL INDEXES FOR THE SELECTED LOCATION



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

Report for 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 ($\mu\text{g}/\text{m}^3$)	6.51	6.62	37	8.08	12
Ozone (ppb)	61.6	58.3	91	61.6	53
Diesel Particulate Matter ($\mu\text{g}/\text{m}^3$)	0.218	0.253	52	0.261	50
Air Toxics Cancer Risk* (lifetime risk per million)	21	21	3	25	5
Air Toxics Respiratory HI*	0.28	0.26	2	0.31	4
Toxic Releases to Air	2,500	2,800	51	4,600	76
Traffic Proximity (daily traffic count/distance to road)	320	630	55	210	84
Lead Paint (% Pre-1960 Housing)	0.54	0.51	50	0.3	76
Superfund Proximity (site count/km distance)	0.065	0.18	22	0.13	52
RMP Facility Proximity (facility count/km distance)	0.98	0.36	90	0.43	88
Hazardous Waste Proximity (facility count/km distance)	2.9	6.7	47	1.9	80
Underground Storage Tanks (count/km ²)	2.5	3.4	57	3.9	63
Wastewater Discharge (toxicity-weighted concentration/m distance)	0.014	0.2	83	22	70
SOCIOECONOMIC INDICATORS					
Demographic Index	36%	26%	74	35%	59
Supplemental Demographic Index	16%	12%	76	14%	65
People of Color	39%	30%	70	39%	58
Low Income	32%	22%	75	31%	59
Unemployment Rate	7%	5%	70	6%	68
Limited English Speaking Households	8%	6%	74	5%	81
Less Than High School Education	14%	9%	77	12%	69
Under Age 5	5%	5%	61	6%	55
Over Age 64	17%	17%	55	17%	55
Low Life Expectancy	19%	17%	68	20%	44

*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	1
Hazardous Waste, Treatment, Storage, and Disposal Facilities	47
Water Dischargers	650
Air Pollution	487
Brownfields	121
Toxic Release Inventory	151

Other community features within defined area:

Schools	170
Hospitals	17
Places of Worship	231

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 County: Hampden

EJScreen Environmental and Socioeconomic Indicators Data

HEALTH INDICATORS					
INDICATOR	HEALTH 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	HEALTH 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	HEALTH 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	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

Footnotes

Report for County: Hampden