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

Natural Gas Distribution Infrastructure Safety and Modernization Grant Program
City of Lawrenceville, GA Tier 2 Site Specific Environmental Assessment
NGDISM-FY22-EA-2023-25

PHMSA Approval:

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Overview:

The purpose of this Tier 2 Site Specific Environmental Assessment (Tier 2) is to: (1) document the proposed action (the Project) and the need for the action; (2) identify existing conditions; (3) assess the social, economic, and environmental effects using appropriate tools and agency coordination to comply with local, state, and federal environmental laws, regulations, and ordinances; (4) document applicable mitigation commitments that would avoid, minimize, or mitigate potential effects; and (5) seek comments from the public. This Tier 2 analysis informs 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 (Tier 1).[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-2023-25 in your response.

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

I. Project Description/Proposed Action

Project Title	City of Lawrenceville Pipeline Replacement
Project Location	City of Lawrenceville & City of Loganville, Gwinnett and Walton Counties, Georgia

Project Description/Proposed Action:

The City of Lawrenceville Gas Department (COL) has an on-going program for identifying and replacing vintage leak prone natural gas pipelines to improve safety by reducing the number of leaks in the distribution system. A total of approximately 111,500 linear feet (LF), or approximately 21 miles, of 50 to 70-year-old coated steel (77,700 LF) and vintage plastic pipes (33,800 LF) are proposed for replacement. The entirety of the project would take place in existing right-of-way (ROW) and utility easements, and the existing pipe would be abandoned in place. All pipes operate at pressure of 60 pounds per square inch (PSI). See Appendix A, Project Maps.

Construction methods would include cut and cover (trenching) and directional boring. 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, COL would include utilizing cut and cover trenching construction methods, which generally involves greater soil disturbance and the use of heavy equipment, when compared to using the insertion method. Directional boring construction methods have similar impacts to the insertion methods. COL would install the new pipes adjacent to the existing pipes and abandon the existing pipes in place after utility services have been moved to the new pipeline. Abandonment of the existing pipeline (versus excavation and removal) would minimize ground disturbance and facilitate the replacement process in a more efficient manner. PHMSA

[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

has specific requirements for gas and hazardous liquid pipeline abandonment, found in 49 CRF 192.727 and 195.402(c)(10). These requirements include disconnecting pipelines from all sources and supplies of gas, purging all combustibles and sealing the facilities left in place. By complying with PHMSA requirements for purging and sealing abandoned pipelines, COL would ensure that the abandoned pipelines pose no risk to safety in their abandoned state.

In addition to replacing existing pipelines, COL would acquire modern leak detection equipment to include a hand-held laser remote methane gas detector and four multi-gas detection instruments.

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 the existing pipes that are prone to leakage. Under this alternative, COL would continue to use vintage steel and plastic pipeline materials, 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 Lawrenceville, 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. No equipment would be purchased to assist COL in leak detection.

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 steel and vintage plastic 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 or minimizing economic losses caused by pipeline failures; and (3) protecting the environment and reducing climate impacts by remediating aged and failing pipelines and pipes prone to leakage.

Description of the Environmental Setting of the Project Area:

The Proposed Action alternative is comprised of numerous discontinuous segments located in the City of Lawrenceville, Georgia and one small segment located southeast of Loganville, Georgia. Lawrenceville is a suburb of Atlanta, located approximately 30 miles northeast of downtown. These areas are all within urban environments consisting of a mix of residential housing and commercial businesses. Approximately 16,270 feet of pipeline replacement would occur in industrial or transportation corridors within the existing ROW. The remainder of pipeline replacement would take place in residential areas within the existing utility ROW.

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)?	Yes, based on a review of EPA's 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]?	Yes, all methane would be captured using cross compression technology during construction.
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?	Cross compression technology would be used to eliminate the need for venting emissions.
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 60 pounds per square inch (PSI). Based on the size of the existing pipe, 23.86 thousand cubic feet (MCF) or 733 kg of methane would be vented during construction. However, methane would be captured using cross compression technology 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 methane leak rate is 2,092 kg/year. Replacement would result in a methane leak rate of 608 kg/year or a reduction of 1,483 kg/year.[4]

Conclusion:

The project area is located in Gwinnett and Walton Counties, Georgia which fall in a National Ambient Air Quality Standards (NAAQS) maintenance area for ozone. Ozone is one of the six common air pollutants identified in the Clean Air Act.[5] The Environmental Protection Agency (EPA) calls these "criteria air pollutants" because their levels in outdoor air need to be limited based on health criteria.

No Action:

Under the No Action alternative, existing and planned pipeline activities, including construction and maintenance activities, would continue unchanged. COL would continue to use vintage, leak prone pipe materials. The total methane emissions for the pipelines within the project area were extrapolated over 20 years to represent the continuation of methane release under the No Action alternative. Under the No Action alternative, PHMSA estimates that 2,092 kg of methane would be released each year from the existing vintage

[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.
[5] https://www.epa.gov/ground-level-ozone-pollution/ground-level-ozone-basics

steel and plastic pipelines within the project area. This amounts to 41,834 kg of methane over a 20-year time frame. See Appendix B, Air Quality for the methane leak rate calculations.

Proposed Action:

PHMSA reviewed information provided by COL and estimated construction emissions that would likely be produced by construction equipment that would install pipelines and used information from EPA's MOVES model[6] to determine if the project would exceed the EPS thresholds for NAAQS[7]. See Appendix B, Air Quality, for the emissions calculations. Due to the relatively minor scope of the proposed action, impacts to local air quality resulting from construction activities such as dust and exhaust from construction equipment, would be temporary and considered de minimis. Thus, the Proposed Action alternative does not require a General Conformity Analysis under Section 176(c)(4) of the Clean Air Act at the proposed project sites.

The Proposed Action alternative would result in minor air quality impacts associated with construction activities. 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. COL would utilize cross compression technology to prevent the release of methane. Without methane capture measures, PHMSA estimates 8.5 MCF of methane (or 733 kg) would be vented into the atmosphere during construction. As described in the Tier 1 EA, methane leaks from natural gas distribution pipelines increase with age and are considerably higher for vintage steel and PE pipelines, as compared with new PE pipelines. 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 1,483 kg of methane per year. This amounts to a reduction of 29,669 kg of methane over a 20-year time frame. See Appendix B, Air Quality for the methane reduction calculations. Therefore, it is PHMSA's assessment that the proposed project would provide a net positive benefit to air quality from the overall reduction of greenhouse gas emissions and that no indirect or cumulative impacts would result from the Proposed Action.

Mitigation Measures:

The City of Lawrenceville shall implement the following mitigation measures:

- Practice efficient use of on-road and non-road vehicles, by minimizing speeds and vehicles;
- Minimize excavation to the greatest extent practical;
- Practice use of cleaner, newer, non-road equipment as practicable;
- Minimize all vehicle idling and at minimum, conforming with local idling regulations;
- Ensure that all vehicles and equipment are in proper operating condition;
- Ensure on-road and non-road engines must meet EPA exhaust emission standards (40 CFR Parts 85, 86, and 89);
- Cover open-bodied trucks while transporting materials;
- Practice watering, or use of other approved dust suppressants, at construction sites and on unpaved roadways, as necessary;
- Minimize the area of soil disturbance to those necessary for construction;
- Minimize construction site traffic by the use of offsite parking and shuttle buses, as necessary;
- Utilize cross-compression technology to capture methane.

[6] https://www.epa.gov/moves
[7] https://www.epa.gov/general-conformity/de-minimis-tables

Water Resources	
Question	**Information and Justification**
Are there water resources within the project area, such as wetlands, streams, rivers, or floodplains? If so, would the project temporarily or permanently impact wetlands or waterways?	Yes, according to United States Fish and Wildlife Service's (USFWS) National Wetland Inventory (NWI), and Federal Emergency Management Agency (FEMA) 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?	Yes. A stormwater pollution prevention plan (SWPPP) would be developed prior to construction.
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.	Yes. COL would coordinate with the local floodplain administrator to obtain any necessary approvals.
Will the proposed project activities potentially occur within a coastal zone[8] or affect any coastal use or natural resource of the coastal zone, requiring a Consistency Determination and Certification?	No.

Conclusion:

PHMSA used NEPAssist[9] to assist in identifying aquatic features including wetlands, streams, flood hazard areas, and other water resources in or near the project area. The project area is comprised of numerous discontinuous segments located in the City of Lawrenceville and one small segment located southeast of Loganville. Based on a review of the available information, there are numerous areas within these segments located in Lawrenceville identified by USFWS as wetlands, streams and/or ponds located within the project area. One stream crosses Azalea Drive in one area north of Brookfield Drive. The segment along Russell Road Northeast is in close proximity to a freshwater pond; however, the project area does not include the pond. A tributary of the Yellow River crosses and runs perpendicular to Coronada Drive and then crosses under Los Alamos Place. There are several tributaries in the project segment around Morningside Drive and Swanson Drive. One tributary crosses East Morningside Drive, flows south and then crosses Swanson Drive, and a second tributary crosses Swanson Drive near the end of the east side of the project area in this section. A tributary of City Lake crosses Harris Drive and this same tributary crosses Industrial Park Drive. Where the tributary flows out of City Lake, it is near the project area at the end of Pine Valley Lane and Pine Valley Circle. A pond and tributary are located adjacent to

[8] 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.)

[9] https://nepassisttool.epa.gov/nepassist/nepamap.aspx

and behind residential units along Sandalwood Circle. A linear wetland was identified crossing Grayland Hills Drive. One tributary crosses Pin Oak Way. Two separate tributaries cross Grayson Highway. Another tributary enters the project area near Crane Drive and crosses at the intersection of Crane Drive and Lockridge Lane and continues south and crosses Red Oak Lane. See Appendix C, Water Resources for depictions and locations of these aquatic features.

FEMA maps indicate the project includes areas designated as Zone X, AE, and A. Areas designated as Zone X are outside of any designated special flood hazard areas (SFHA). Areas designated as Zone AE and A are SFHA and these areas correspond to the one percent annual chance of flooding (100-year floodplain).

No Action:

Under the No Action alternative, the existing pipeline would remain in its current location and normal maintenance activities would continue. Depending on the location of the activities, the work could be in close proximity to an aquatic resource where the COL would need to take precautions to avoid adverse impacts to these sensitive areas. Additionally, if work was to occur in an area identified as a SFHA, prior coordination with the local floodplain manager may be required.

Proposed Action:

The Proposed Action alternative includes replacing approximately 21 miles (111,500 LF) of existing pipelines. New gas lines would be placed adjacent to the existing gas lines and the existing gas line would be abandoned in place. The new gas lines would be installed by trenching and directional boring. As noted above, there are various aquatic resources identified in the project area. All locations where water resource cross the project area, new gas lines would be installed by horizontal directional drilling (HDD) under the existing stream or culverts. HDD methods provide a way to avoid impacting sensitive areas, such as wetlands or streams, by boring relatively shallow arcs along a specific path underground using a surface drill rig. Directional boring begins with excavating pits where the pipe would enter and go underground and exit where the pipe would then come back to the surface to tie into existing pipelines. The pits collect the drilling fluids that are pumped to the cutting head or the drill to create and lubricate the passage of the new pipe. The fluids in the pits can then be collected and disposed of or reclaimed. While bore pits for have not been identified, each pit would be excavated a minimum distance of 25 feet from the edge of the water resource, as required by Georgia Rules & Regulations Department 391, Chapter 391-3, Subject 391-3-7 Erosion and Sediment Control. Therefore, there would be no direct impact to wetlands or other open waters.

The National Flood Insurance Program (NFIP) requires a permit before new construction or development begins within any SFHA to ensure that project development projects meet the requirements of the NFIP program and the local community's floodplain management ordinances. The proposed pipeline replacement is not considered new construction or development as pipes would be installed in existing, previously impacted ROW and all areas would be restored to their existing contours and condition. These activities would not affect the flood-holding capacity of the 100-year floodplain or cause any adverse impacts to the SFHA. There would be temporary impacts from trenching and bore pits; however, all areas would be restored to pre-construction contours and conditions and there would be no permanent impacts. To ensure compliance with local floodplain ordinances, COL should coordinate with the local floodplain administrator to inquire and obtain all necessary permits, prior to beginning work.

Based on information provided by the COL and a review of available information, PHMSA has determined that there would be no permanent impacts to water resources located within 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 would be no adverse impacts to water resources.

Mitigation Measures:

The City of Lawrenceville shall avoid staging in wetlands or floodplains and all preconstruction contours shall be restored with natural areas, reseeded, or repaved as soon as practical. Best Management Practices (BMPs) shall be used during construction to control sediment and erosion and prevent pollutants from entering adjacent waterways.

The City of Lawrenceville shall coordinate with the local floodplain administrator to obtain any necessary permits for conducting work in special flood hazard areas, prior to the commencement of work.

The City of Lawrenceville shall avoid any direct impacts to open water resources by using directional bore methods and maintain appropriate distances from the edge of any water resources for entrance and exit pits and tie-ins.

The City of Lawrenceville shall develop a stormwater pollution prevention plan prior to the commencement of work.

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.	Yes. Groundwater runoff is possible during construction activities.
Will the project require boring or directional drilling that may require pits containing mud and inadvertent return fluids? If yes, describe measures that will be taken during construction activities to prevent impacts to groundwater resources.	Yes. A stormwater pollution prevention plan would be developed prior to construction.
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. The project will not involve sites contaminated by hazardous waste. No. The pipeline has never been used to convey coal gas.
Does the project have the potential to encounter or disturb lead pipes or asbestos?	No. The project does not have the potential to encounter or disturb lead pipes or asbestos.

Conclusion:

PHMSA reviewed EPA's NEPAssist website to identify any hazardous waste, brownfields properties or superfund sites identified in the project area for either segment. There were numerous hazardous waste sites identified in close proximity to the project area. Hazardous waste information is identified in the Resource Conservation and Recovery Act Information (RCRAInfo), which is a national program that includes an inventory of all generators, transporters, treaters, storers, and disposers of hazardous waste that are required to provide information about their activities to state environmental agencies.[10] While there were several RCRA sites identified in the project

[10] https://www.epa.gov/enviro/rcrainfo-overview

area, it is noted that the presence of a hazardous waste site does not indicate an identified environmental concern. There were no brownfields sites or superfund sites identified in the project area. (See Appendix D, Hazardous Materials).

PHMSA obtained a custom soil report for the project area from the United States Department of Agriculture, Natural Resources Conservation Services' (NRCS) Web Soil Survey[11] which indicates that the majority of these soils are well-drained soils where the depth to the water table is found at a depth greater than 80 inches. There are some soils where the depth to the water table can be found at more shallow depths in the areas of streams or other water resources. 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.

No Action:

Under the No Action alternative, the coated steel and vintage plastic pipes would remain in their current location and ongoing and routine maintenance activities would occur. Pipes would likely be replaced under failed circumstances or incrementally, as funds become available to COL for replacement. While there are no adverse impacts to groundwater anticipated by the No Action alternative, increased methane emissions are likely to occur if the leak prone pipes remain (EPA, PRO Fact Sheet No. 402[6]) 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:

Under the Proposed Action Alternative, COL would replace approximately 21 miles of existing pipelines within the existing ROW within the City of Lawrenceville. The existing gas lines would be abandoned, in accordance with PHMSA requirements, and would be purged of natural gas and sealed on each end. The new gas lines would be installed by either directional drilling or cut and cover (trenching). Trenching and/or directional drilling work is not likely to intercept groundwater; however, if this occurs, COL would use appropriate dewatering methods. All excavated trench materials and excavated materials from bore pits would be stored on site and used to back fill, unless otherwise deemed unsuitable. In these cases, unsuitable soils would be hauled offsite, and the trench would be backfilled with clean soils. All disturbed areas would be re-seeded or paved (as appropriate) and restored to preexisting conditions. Containment of boring fluids in pits would be properly disposed of to ensure there would be no adverse impacts to groundwater associated with the project.

There are no brownfield, or superfund sites identified in the area where work would occur that could be potentially impacted by the Proposed Action Alternative. While there are identified sites that contain, store or dispose of hazardous materials, these are not within the construction areas as work is limited to existing ROW and no RCRA sites would be impacted by the proposed project. The COL would utilize a Stormwater Pollution Prevention Plan which would identify appropriate construction and restoration activities to minimize the potential impacts to groundwater. With the inclusion of mitigative measures to assist in the prevention of potential impacts, PHMSA's assessment is that that there would be no adverse impacts to groundwater associated with the project and PHMSA has not identified any indirect or cumulative effects to groundwater or hazardous materials.

[11] https://websoilsurvey.sc.egov.usda.gov/WssProduct/by2qs4td4p1wrd2wecm5lrcl/DL_00000/20240110_13510701091_20_Soil_Report.pdf

Mitigation Measures:

In the event of a release of hazardous materials/waste into the environment during construction, the City of Lawrenceville shall notify the appropriate emergency response agencies, potentially impacted residents, and regulatory agencies of the release or exposure.

There shall be no boring/drilling, staging or laydown areas within EPA superfund sites or areas containing known waste.

The City of Lawrenceville shall utilize a Stormwater Pollution Prevention Plan which would identify appropriate construction and restoration activities to minimize the potential impacts to groundwater. All impacted areas shall be restored to pre-construction conditions.

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

Conclusion:

PHMSA obtained a soil map for the project area from the NRCS' Web Soil Survey which indicates that the project area is comprised of a variety of soil types. These types, along with their drainage class, slope, and specific locations within the project area can be found in Appendix E, Soils Report. Approximately 92 percent of soils within the project areas are well draining or moderately well-draining soil types. Because this is an urban area taking place within existing ROW and areas previously disturbed, the soil is anticipated to contain a mixture of fill and other materials.

No Action:

Under the No Action alternative, the coated steel and vintage plastic pipelines 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:

Under the Proposed Action alternative, COL would replace the existing coated steel and vintage plastic pipes within the existing ROW. The new gas lines would be installed within existing, previously disturbed ROW by either directional drilling or cut and cover trenching construction methods. All disturbed areas would be re-seeded or paved (as appropriate) and restored to pre-construction conditions. Therefore, PHMSA has determined that there would be no adverse impact to soils resulting from the Proposed Action alternative. Additionally, there are no indirect or cumulative impacts anticipated as the COL would use Best Management Practices (BMPs) during construction and restore all areas to pre-construction conditions.

Mitigation Measures:

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

Biological Resources	
Question	**Information and Justification**
Based on review of IPaC and NOAA Fisheries database, are there any federally threatened or endangered species and/or critical habitat potentially occurring within the geographic range of the project area?12 If no, no further analysis is required.	Yes, based on review of the USFWS's Information for Planning and Consultation (IPaC)[13]. Additionally, Louisiana state resources were inventoried to identify potential state listed species.
Will the project impact any areas in or adjacent to habitat for Federally, listed threatened or endangered species or their critical habitat? If no, provide justification and avoidance measures. If yes, PHMSA will work with the project proponent to conduct necessary consultation with resource agencies.	No. The project is unlikely to disturb threatened and endangered species/habitats. Project area exists within the habitat range of the listed species, however no known nesting sites exist within project boundaries.

Conclusion:

PHMSA requested an official species list through the US Fish and Wildlife Service's IPaC website. See Appendix F, Biological Resources, for the IPaC species list. The following were identified as protected species potentially occurring within the geographic area:

- Whooping Crane (bird) *Grus americana* - Experimental Population, Non-Essential
- Monarch Butterfly (insect) *Danaus plexippus* -Candidate
- Tricolored Bat (mammal) *Perimyotis subflavus*- Proposed Endangered
- Little Amphianthus (flowering plant) - *Amphianthus pusillus*- Threatenend
- Black Spored Quillwort (ferns an allies) *Isoetes melanospora*- Endangered

There is no designated critical habitat within the project area. The project area is primarily within the City of Lawrenceville, with a small portion of the project located near Loganville where existing land uses within the construction limits consist of residential and commercial areas. Due to the nature of the project area being an existing ROW, heavily used by traffic and frequently maintained, there is no suitable habitat for any of the identified species. Additionally, Georgia Department of Natural Resources[14] maintains a list of Georgia state protected species that can be searched by County or species. A list of state protected species was reviewed for both Gwinnett and Walton Counties which can be found in Appendix F, Biological Resources.

No Action:

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

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

[14] https://georgiabiodiversity.org/portal/natural_locations/ga_protected

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 within existing previously impacted ROW. Because the ROW has been previously impacted and contains active roadways, residential and commercial activity, the project area has limited natural biological resources present. To ensure proposed activities would not have any potential impact to protected species, in accordance with Section 7 of the Endangered Species Act, PHMSA used the IPaC determination key 'Clearance to Proceed with Federally-Insured Loan and Grant Project Requests' dated November 15, 2023, in the U.S. Fish and Wildlife Service's online IPaC tool to evaluate potential impacts to listed species. As a result, PHMSA's assessment is that the project is unlikely to have any detrimental effects to federally- listed species or critical habitat and PHMSA's assessment is that the project would have no effect to federally threatened or endangered species. This is documented in a letter from USFWS dated January 11, 2024, and can be found in Appendix F, Biological Resources. Additionally, PHMSA's assessment is that no adverse impacts to state protected species or other biological resources would result from the proposed project.

Mitigation Measures:

The City of Lawrenceville 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. Ground disturbing activities would include excavations for installation of main and service lines. The only aboveground components to be installed would be service risers to existing meters. The project would not include any modification to existing buildings or structures.
Is the project located within a previously identified local, state, or National Register historic district or adjacent to any locally or nationally recognized historic properties? This information can be gathered from the local government and/or State Historic Preservation Office.[15]	No. There is one registered historic property zone east of Lawrenceville off US 29 between Winder Hwy and Seaboard Industrial Drive. (William Terrell House). Pipe replacement would occur across the street from designated historic zone and not within the referenced area.
Does the project or any part of the project take place on tribal lands or land where a tribal cultural interest may exist?[16]	No.

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

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

Are there any nearby properties or resources that either appear to be or are documented to have been constructed more than 45 years ago?[17] 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. Several neighborhoods in the project area include properties that were constructed more than 45 years ago. Yes. Properties appear to be of similar age, design, or method of construction. Yes. Approximately 500 feet of new pipe to be installed along Lawrenceville Highway at Gwinnett Memorial Park. Pipeline is to be installed in right of way and not to disturb designed landscapes.
Has the entire area and depth of construction for the project been previously disturbed by the original installation or other activities? If so, provide any documentation of prior ground disturbances.	Yes.
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. Project implementation would not require removal or disturbance of stone or brick sidewalk, roadway, or landscape materials or other old or unique features.

Conclusion:

PHMSA must consider the impact of projects for which they provide funding on historic and archeological properties in accordance with Section 106 of the National Historic Preservation Act (Section 106). Pursuant to 36 CFR 800.4(a)(1), the Area of Potential Effects (APE) is defined as the geographic area(s) within which the Undertaking may directly or indirectly affect historic resources. Due to the scale and nature of the Undertaking, which is limited to the replacement of pipelines within existing ROW and utility easements, PHMSA has delineated the APE for this Undertaking to encompass the existing ROW in the areas proposed for main replacement and the parcels where service lines will be replaced, which includes the limits of disturbance. The APE is comprised of numerous discontinuous segments of ROW in Lawrenceville in addition to one small segment in Loganville. The APE extends to the depth of proposed ground disturbance of up to 5 feet below grade. The Undertaking does not have the potential to cause visual or audible effects after the completion of construction. The existing ROW encompasses various roads, signage, sidewalks, and grassy areas throughout the City of Lawrenceville.

No Action:

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

Proposed Action:

PHMSA staff identified properties based on available information on previously identified historic properties in the APE, including the National Register of Historic Places (NRHP) database and data gathered from Georgia's

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

Natural, Archaeological, and Historic Resources Geographic Information System database. Individuals who meet the Secretary of the Interior's Professional Qualification Standards also conducted research to determine if there are any previously unidentified properties within the APE that are 45 years of age or older and may be eligible for the NRHP. PHMSA's assessment is that there are no historic properties as defined in 36 CFR 800.16(l) within the APE. Therefore, in accordance with 36 CFR Part 800.4(d)(1), PHMSA has determined the Undertaking would result in No Historic Properties Affected. While the exact staging areas for the Undertaking are currently unknown, staging should be confined to paved areas. A mitigative measure would be included requiring that if staging cannot be confined to paved areas, geotextile fabric or other similar protective measures (such as pressure distributing mats) must be laid in any affected unpaved area to minimize ground disturbance, prevent soil compaction, and protect potential archaeological features and artifacts.

A letter was sent on January 25, 2024, to the Georgia Historic Preservation Division, 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 G, Cultural Resources, for additional information.

Mitigation Measures:

If, during project implementation, a previously undiscovered archeological or cultural resource that is or could reasonably be a historic property is encountered or a previously known historic property will be affected in an unanticipated manner, all project activities in the vicinity of the discovery will cease and the City of Lawrenceville 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 City of Lawrenceville 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.

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

Section 4(f)	
Question	**Information and Justification**
Are there Section 4(f) properties within or immediately adjacent to the project area? If yes, provide a list of properties or as an attachment.	No.
Will any construction activities occur within the property boundaries of a Section 4(f) property? If so, please detail these activities and indicate if these are temporary or permanent uses of the Section 4(f) property. Further coordination with PHMSA is required for all projects that might impact a Section 4(f) property.	NA

Conclusion:

Section 4(f) of the US Department of Transportation (USDOT) Act of 1966 as amended (Section 4(f)) (49 U.S.C. § 303(c)); is a federal law that applies to transportation projects that require funding or other approvals by the USDOT. Section 4(f) prohibits the Secretary of Transportation from approving any program or project which requires the use of any publicly owned land from a public park, recreation area, or wildlife and waterfowl refuge of national, state, or local significance, or any land from an historic site of national, state, or local significance unless:

- There is no feasible and prudent alternative to the use of the land;
- The program or project includes all possible planning to minimize harm to such park, recreational area, wildlife and waterfowl refuge, or historic site, resulting from such use.

PHMSA conducted a review of properties that are located within the Project Area to identify properties that qualify as Section 4(f). No Section 4(f) properties are located within or immediately adjacent to the project area.

No Action:

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

Proposed Action:

Under the Proposed Action alternative, construction activities would not occur within or adjacent to 4(f) properties. Therefore, there would be no use of Section 4(f) resources.

Mitigation Measures:

There are no 4(f) resources identified in the project area and therefore, no mitigation measures are necessary.

Land Use and Transportation	
Question	**Information and Justification**
Will the full extent of the project boundaries remain within the existing right-of-way or easements? If no, please describe any right-of-way acquisitions or	Yes. No additional easements or right-of-way acquisitions would be required as the project would take place within existing ROW and utility easements.

additional easements needed.	
Will the project result in detours, transportation restrictions, or other impacts to normal traffic flow or to existing transportation facilities during construction? Will there be any permanent change to existing transportation facilities? If so, what are the changes, and how would changes affect the public?	As necessary, a traffic control plan would be developed and COL would coordinate with emergency services and other agencies, notify residents and businesses of parking impacts and restore areas to pre-construction conditions. No. There would be no changes to existing transportation facilities.
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. Emergency response providers would be contacted and informed of project locations and dates prior to construction.

Conclusion:

The Proposed Action alternative is comprised of numerous discontinuous segments located in the City of Lawrenceville and one small segment located southeast of Loganville. These areas are all within urban environments consisting of a mix of residential housing and commercial businesses.

No Action:

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

Proposed Action:
The pipeline would be installed within the existing infrastructure ROW with all work occurring within existing ROW or utility easements. All impacted areas would be restored to pre-existing conditions and contours. The project is replacing and upgrading existing pipeline and COL would not include new pipeline to serve any additional areas. Therefore, PHMSA's assessment is that there would be no permanent change or indirect impacts to land use.

During construction, 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. The project would not result in detours and the regular flow of traffic would be maintained to the maximum extent practical. 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, PHMSA's assessment is that impacts related to land use are considered minor and temporary.

PHMSA considered the cumulative effects of the Proposed Action with ongoing and planned transportation related construction projects that could cumulatively impact land use and transportation. While other maintenance or construction related projects could occur in 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, PHMSA's assessment is that the overall cumulative effects of multiple projects occurring would be minimized by planning and scheduling efforts with responsible agency oversight.

Land Use and Transportation
Mitigation Measures: The City of Lawrenceville shall maintain traffic flows to the extent possible and use traffic control measures to assist traffic negotiating through construction areas, as needed. The City of Lawrenceville 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. The City of Lawrenceville shall have a traffic control plan in place as needed, prior to construction, and coordinate with the appropriate agency well in advance of any impacted emergency services or essential agency functions.

Noise and Vibration	
Question	**Information and Justification**
Will the project construction occur for longer than a month at a single project location?	No. The project would not occur for longer than a month at a single location.
Will the project location be in proximity (less than 50-ft.) to noise sensitive receivers (residences, schools, houses of worship, etc.)? If so, what measures will be taken to reduce noise and vibration impacts to sensitive receptors?	No. The following avoidances, minimizations, and mitigations would be observed: COL would adhere to state and local noise regulations; activities would be limited to occur only during normal weekday business hours when noise restrictions are not in place; proper maintenance of equipment mufflers would be performed.
Will the project require high-noise and vibration inducing construction methods? If so, please specify.	No. Mini-excavator and HDD machines would be used during the project.
Will the project comply with state and local ordinances? If so, identify applicable ordinances and limitations on noise/vibration times or sound levels.	Yes. The Code of the City of Lawrenceville, Georgia. Chapter 20 Article III - Noise Control. Construction activities would occur during normal business hours.
Will construction activities require large bulldozers, hoe ram, or other vibratory equipment within 20 ft of a structure?	No. Construction activities would not require the use of vibratory equipment within 20 feet of a structure.
Conclusion: The project is located in Cities of Lawrenceville and Loganville where the ambient noise in the project area consists of a combination of environmental noise from road traffic, construction, industry, the built environment, population density and other sources. There are several sensitive noise receptors (residences, schools, churches, etc.) located adjacent to the streets where work would occur. **No Action:** Under the No Action alternative, the project would not move forward and the pipelines along the designated streets in the project area would not be replaced at this time. It is likely that these pipelines would need to be repaired or replaced due to leaks or deteriorating conditions in the future. If replacement or repairs occur under maintenance or emergency conditions, noise from construction equipment would add to that of the current ambient noise and would be of a shorter duration.	

Proposed Action:

The pipeline replacement project would result in temporary construction noise impacts; however, no vibration impacts should occur. Excavators, dump trucks, pavers, drill rigs, reamers, and similar equipment would be used to install pipeline and restore the affected areas. Construction of the project is not expected to last longer than one month at any single project location. Sensitive noise receptors are likely to experience temporary noise impacts; however, PHMSA has determined that the noise impacts would be minor and temporary and no adverse vibration impacts would result from the proposed work. PHMSA considered the cumulative effects of this action with ongoing and planned transportation related construction projects that could cumulatively have an impact on the noise and vibration impacts within the Cities of Lawrenceville and Loganville. Rural areas often have paving, drainage improvement, and other construction or maintenance projects on going which could occur within or near the project area which would contribute to increased noise. These construction and maintenance projects could occur at the same time as the Proposed Action alternative and would contribute to an increase in cumulative noise effects during construction. However, adhering to state and local noise ordinances would ensure the project does not cause cumulatively more than minor adverse noise or vibration impacts.

Mitigation Measures:

The City of Lawrenceville shall adhere to applicable local and/or state noise ordinances.

Environmental Justice	
Question	**Information and Justification**
Using the EPA EJScreen or census data[18], is the project located in an area of minority and/or low-income individuals as defined by USDOT Order 5610.2(c)? If so, provide demographic data for minority and/or low-income individuals within ½ mile from the project area as a percentage of the total population.	Yes. According to EJScreen[19], the Lawrenceville segments contain 34 percent low income and 68 percent minority populations, and the Loganville segment contains 21 percent low income and 32 percent minority populations.
Will the project displace existing residents or workers from their homes and communities? If so, what is the expected duration?	No. The project would not displace existing residents or workers from their homes and communities.
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. Project outages would occur during service line replacements. Minimal time is expected for each outage.
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. COL would coordinate with local community leaders and groups. Advanced notification of service disruptions and construction schedule would be communicated to the community.

Conclusion:

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

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

[19] https://ejscreen.epa.gov/mapper/

will continue until further guidance is provided regarding the implementation of the new E.O. 14096 on environmental justice.

PHMSA reviewed socioeconomic data using the EPA's EJScreen and found the population residing within the project area for the Lawrenceville segments contains 34 percent low income and 68 percent minority populations, and the Loganville segment contains 21 percent low income and 32 percent minority populations. The Lawrenceville segment is located in Gwinette County which contains 28 percent low income and 65 percent minority populations, and Logansville is located in Walton County which contains 29 percent low income and 27 percent minority populations. See Appendix H, Environmental Justice, for socioeconomic data.

No Action:
Under the No Action alternative, existing and planned pipeline activities, including construction and maintenance activities, would continue unchanged. The project proponent 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 degree of air pollution associated with construction activity for maintenance and repairs of existing pipelines under the No Action alternative, either through planned repair or replacement efforts or unplanned, emergency repairs or replacements.

Proposed Action:
The Proposed Action alternative would result in an overall reduction in GHG emissions. Construction activities would result in minor temporary air quality impacts, including the intentional venting of existing distribution lines prior to replacement. Noise impacts associated with construction are anticipated to be minor and temporary. Although not anticipated at this time, should temporary detours need to occur to ensure safety of both construction workers and members of the public, they would be temporary and only minor disruptions or delays would occur. However, removal of leak prone pipe would reduce leaks and the potential for incidents, resulting in an increase in pipeline safety across the system while also improving operation and reliability. Therefore, consistent with Executive Order 12898 and DOT Order 5610.2(c), PHMSA's assessment is the project would not result in disproportionately high and adverse effects on minority or low-income populations, or other underserved and disadvantaged communities. The project would have an overall beneficial effect on environmental justice populations and would not result in indirect or cumulative impacts.

Environmental Justice
Mitigation Measures: The City of Lawrenceville shall coordinate with local community leaders and groups and provide advanced notification of service disruptions and construction schedule to all affected parties including residents and businesses adjacent to the project area. Project will coordinate with local community leaders and groups.

Safety	
Question	**Information and Justification**
Has a risk profile been developed to describe the condition of the current infrastructure and potential safety concerns?	Yes. A risk profile has been developed, it can be found in the City of Lawrenceville Distribution Integrity Management Program (DIMP).
Has a public awareness program been developed and implemented that follows the guidance provided by the	Yes. A public awareness program has been developed and would be executed by City of Lawrenceville.

American Petroleum Institute (API) Recommended Practice (RP) 1162?	
Does the project area include pipes prone to leakage?	Yes, existing pipes to be replaced are vintage (pipeline was constructed between the 1950s and 1970s).
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. COL would incorporate public awareness programs and adhere to City of Lawrenceville safety standards.
Has an assessment of the project been performed to analyze the risk and benefits of implementation?	Yes. An assessment of the project has been performed.

Conclusion:
The proposed project would replace vintage steel and plastic pipes. 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. This is reflected in the COL's DIMP plan. 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 vintage steel and plastic pipes would remain in their current location, state, and condition. Normal maintenance activities would occur, and pipes would be replaced under failed circumstances. Safety risks resulting from existing leak prone pipes remaining in place would persist until the existing leak-prone pipes are replaced.

Proposed Action:
The proposed project is necessary to replace leak prone pipes. This replacement is in alignment with COL's DIMP plan, increasing the overall safety of the community. The project would reduce the risk profile of existing pipeline systems prone to methane leakage and would also benefit disadvantaged communities with the safe provision of natural gas. The project responds to the need to address the potentially unsafe condition of the natural gas distribution system of pipelines. The repair, rehabilitation, or replacement of pipelines would be constructed in accordance with industry best practices and would comply with all local, state, and federal regulations, including those for safety.

The abandonment of the existing pipeline would be conducted in accordance with PHMSA requirements found in 49 CRF 192.727 and 195.402(c)(10). These requirements include disconnecting pipelines from all sources and supplies of gas, purging all combustibles and sealing the facilities left in place. These requirements for purging and sealing abandoned pipelines would ensure that the abandoned pipelines are properly purged and cleaned and pose no risk to safety in their abandoned state. Therefore, PHMSA's assessment is that this replacement project would improve the overall safety of COL's infrastructure.

Mitigation Measures:

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

The City of Lawrenceville 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[20]. PHMSA reviewed the comment letter and determined the comments were not substantial and did not warrant further analysis. One comment provided by the APGA indicated that the majority of construction methods used for pipe replacements would be replacement by open trenching and that some may want to abandon the existing pipe rather than removing it for replacement. Any departures from methods described in the Tier 1 EA will require additional documentation from the project proponent, as reflected in this Tier 2.

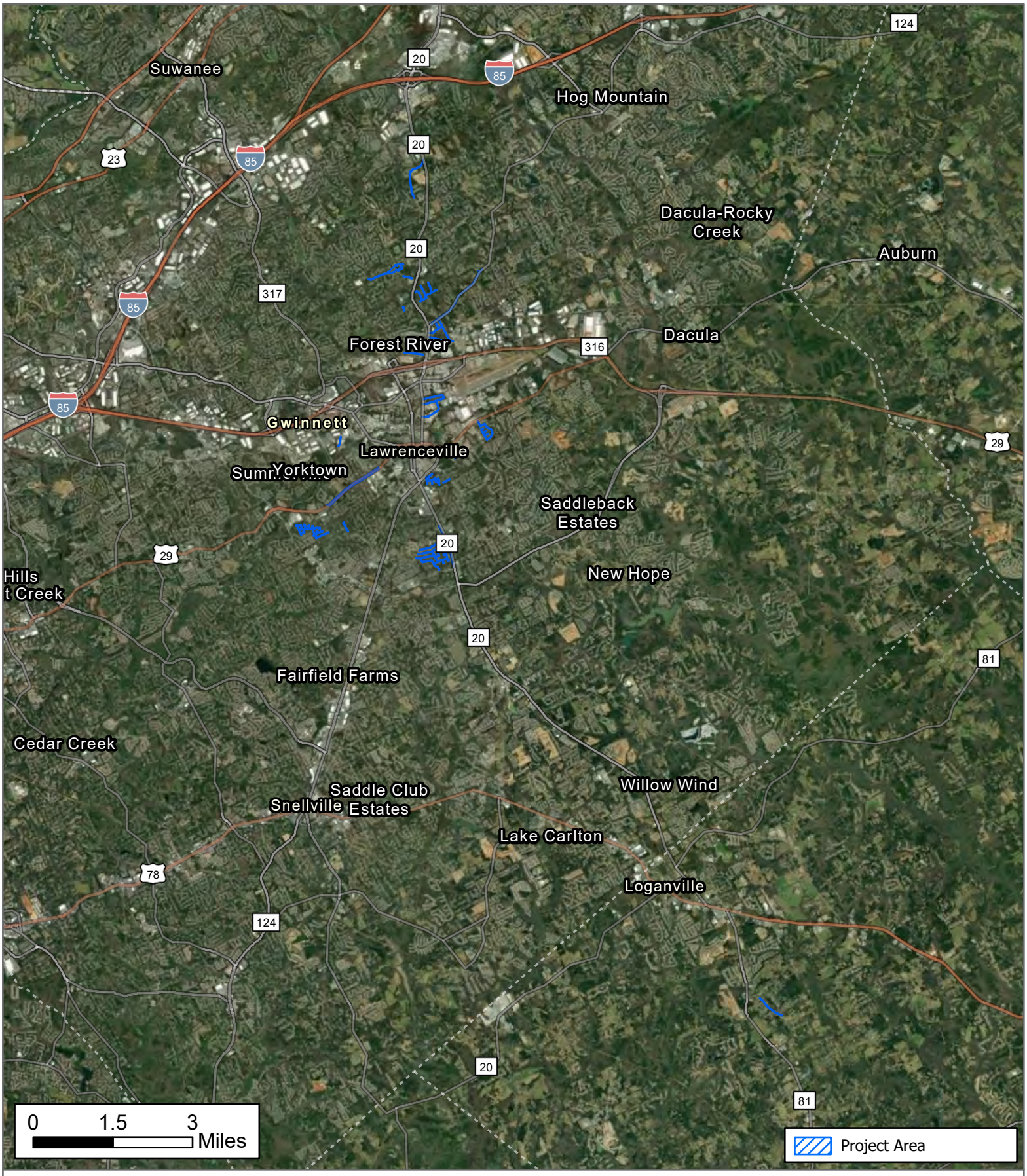
As part of this Tier 2, PHMSA is soliciting public comments through a public comment period. This Tier 2 is available on PHMSA's website where comments can be submitted to the contact noted below. PHMSA will accept public comments for 30 days on this Tier 2. PHMSA will consider comments received and incorporate them in the decision-making process. Consultation with appropriate agencies on related processes, regulations, and permits is ongoing. Please submit all comments to: PHMSABILGrantNEPAComments@dot.gov and reference NGDISM-FY22-EA-2023-25 in your response.

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

Appendix A

Project Maps

City of Lawrenceville Project Maps

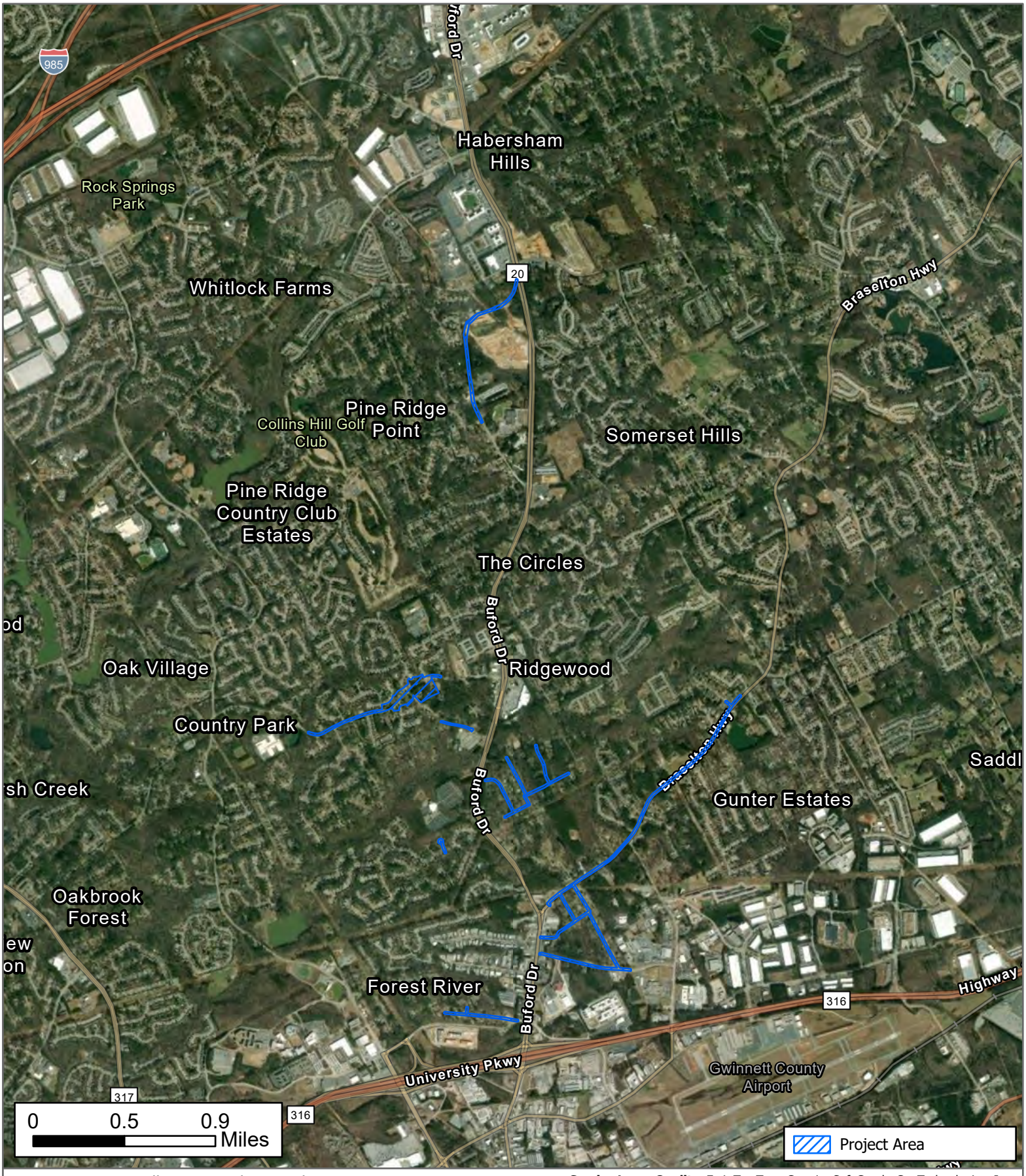


Name: Lawrenceville, GA Pipeline Replacement
Scale: 150,000
Total Acreage: 142
Gwinnett County, Georgia

N

Service Layer Credits: Earthstar Geographics, Esri, TomTom, Garmin, SafeGraph, METI/NASA, USGS, EPA, NPS, USDA, USFWS

City of Lawrenceville Project Maps



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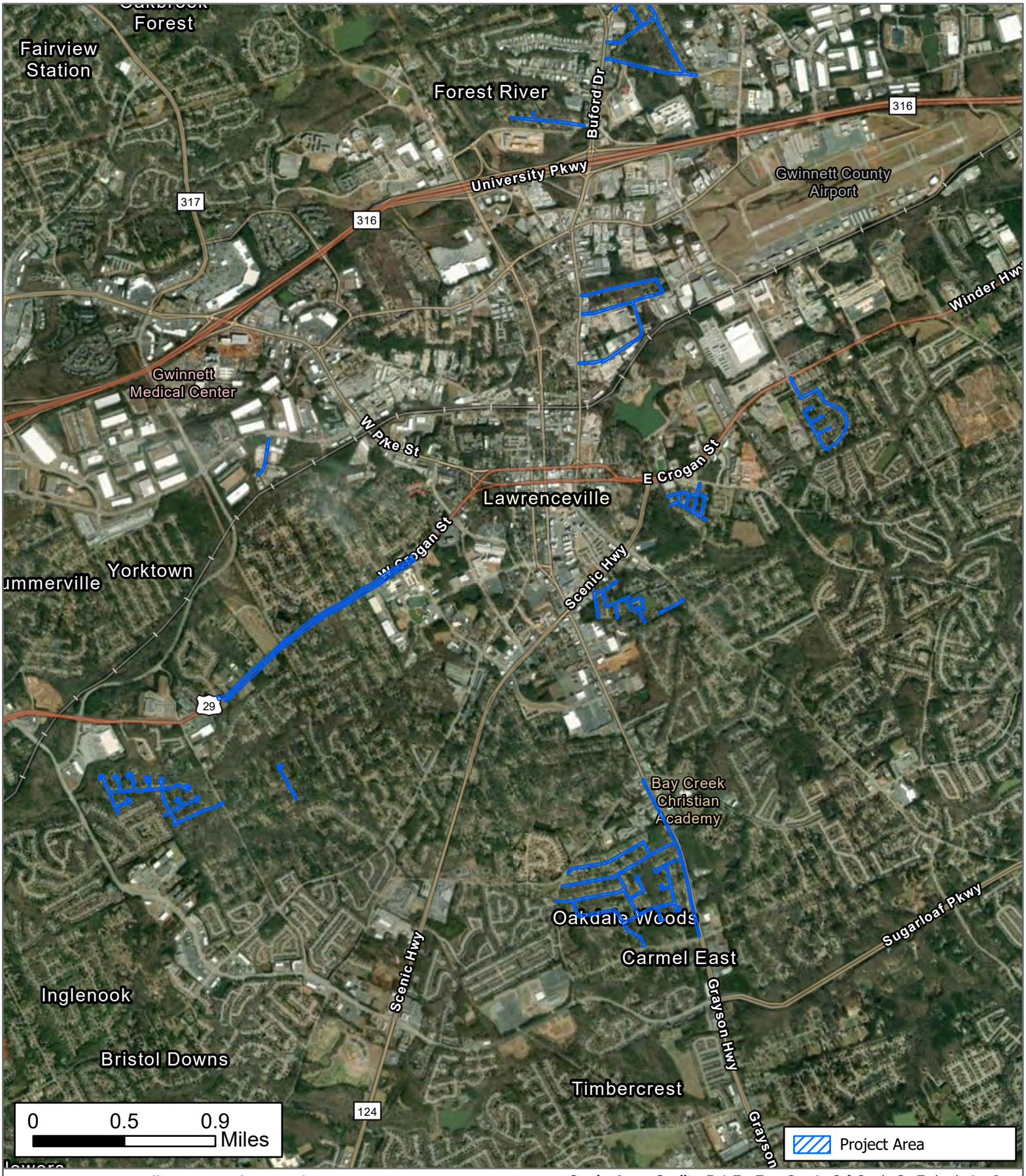
Gwinnett County, Georgia

N

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

City of Lawrenceville Project Maps

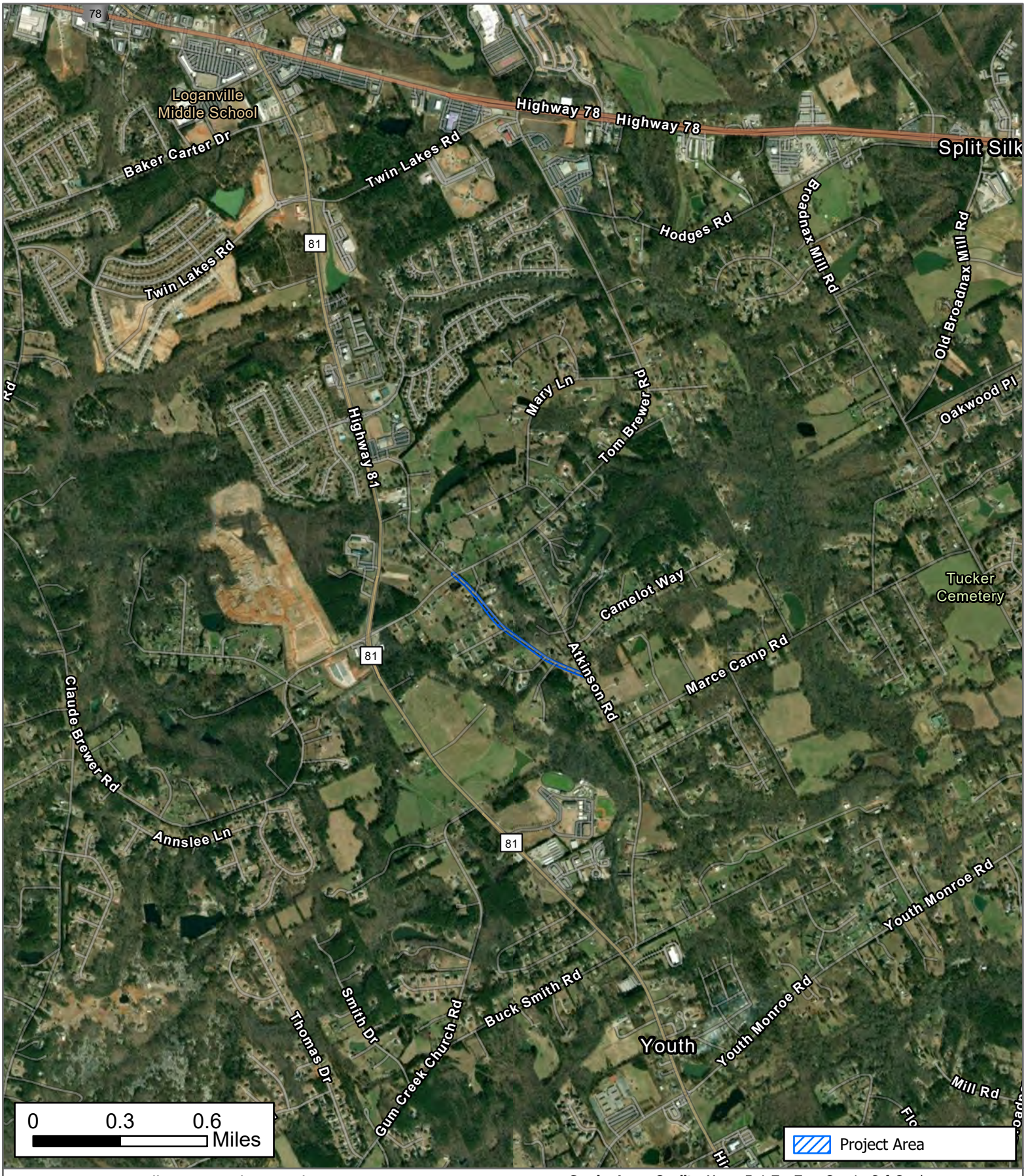


Name: Lawrenceville, GA Pipeline Replacement
Scale: 40,000
Total Acreage: 142
Gwinnett County, Georgia

N

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

City of Lawrenceville Project Maps



Name: Lawrenceville, GA Pipeline Replacement
Scale: 25,000
Total Acreage: 142
Gwinnett County, Georgia

N

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

Appendix B

Air Quality

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

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

Table 2. No Action Leak Rate

Pipeline Material Type	Average Rate (kg/mile/year)	Miles	Current Methane Leak Rate (kg/year)
Cast Iron	4,597.40	0	0
Unprotected steel	2,122.30	0	0
Protected steel	59.1	14.72	870
Plastic	190.9	6.4	1222
Total Annual Methane Leak Rate			2092
20-year Methane Emissions			41834

Table 3. Proposed Action Leak Rate

Pipeline Material Type	Average Rate (kg/mile/year)	Miles	New Methane Leak Rate (kg/year)
Plastic	28.8	21.12	608
Year 1 Methane Reduction			1483
Annual Methane Reduction			1483
20-year Methane Reduction			29669

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

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

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

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

Table 4. Proposed Action - Methane blowdown if cross-compression technology was not utilized.

Equation Inputs	Pipe Section	
Diameter (inches)	2	4
Blowdown Pressure	60	60
Length of Blowdown (feet)	76800	34700
Blowdown (MCF)	8.50	15.36
Total Blowdown (MCF)		**23.86**
Total Blowdown (kg)		**733**

Appendix C

Water Resources

NEPAssist- Water Resources

December 15, 2023

Project Area

Streams

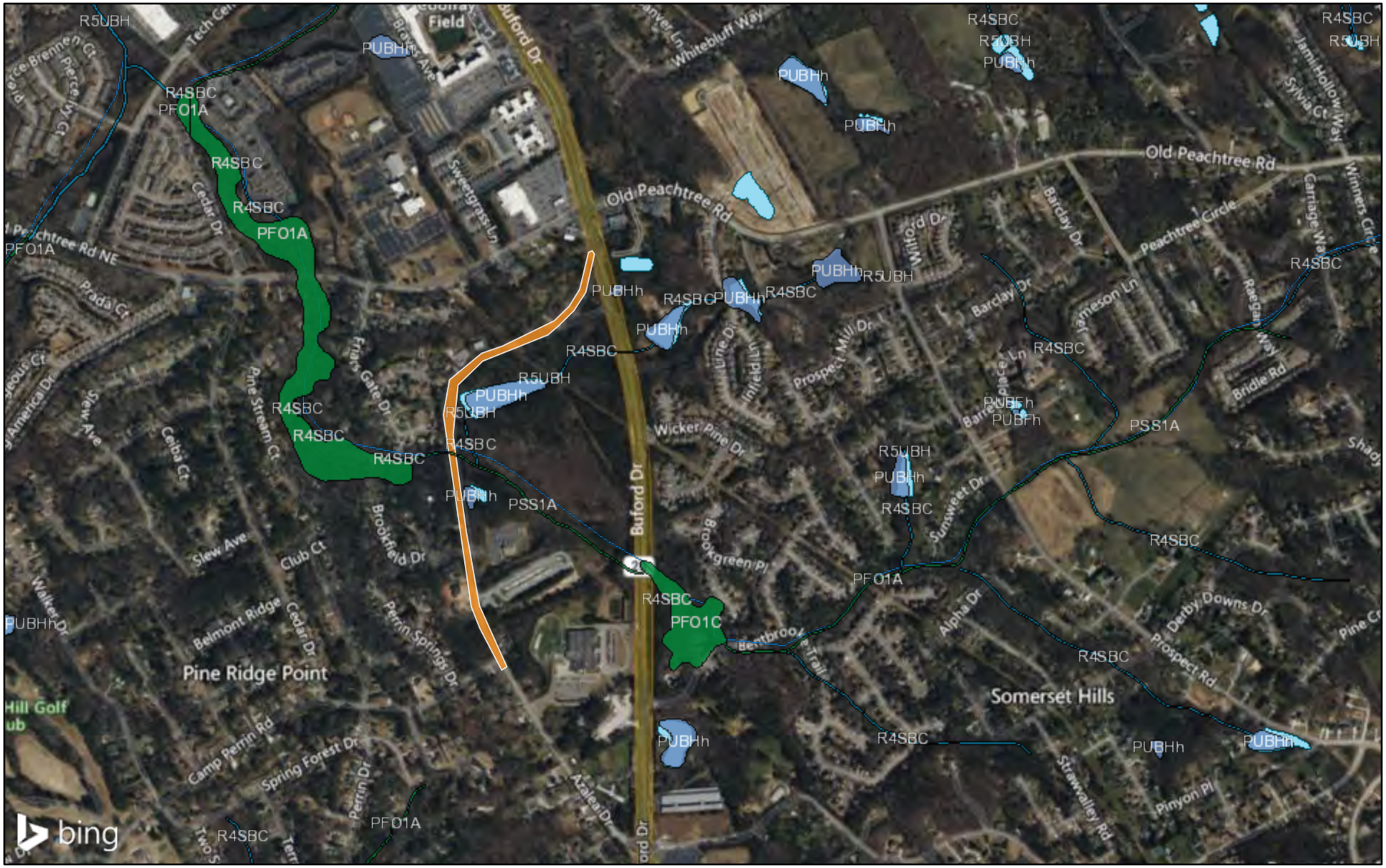
1:144,448

0 1 2 4 mi

0 1.5 3 6 km

Earthstar Geographics

NEPAssist-Water & NWI



December 12, 2023

Wetlands

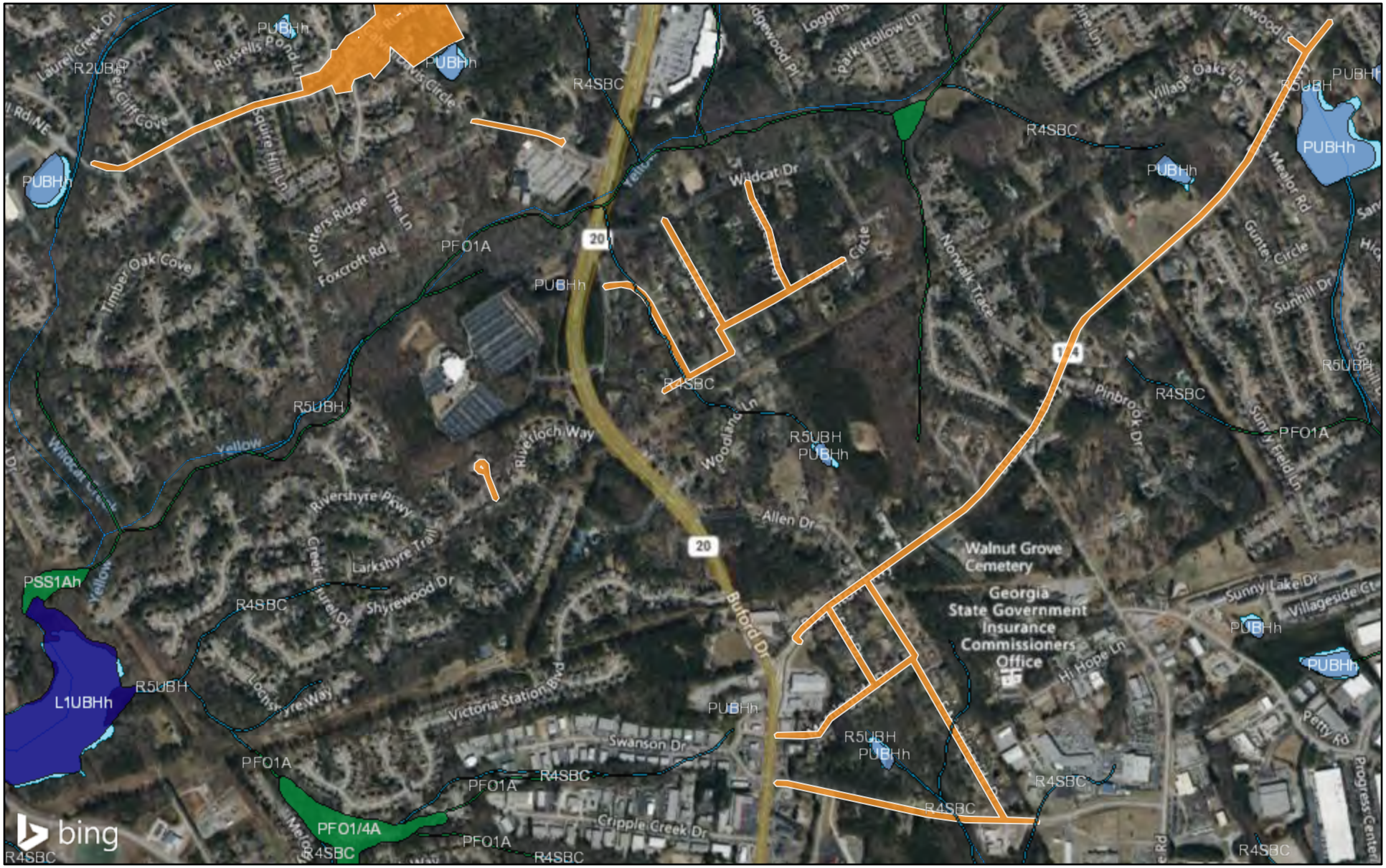
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine
- Project Area
- Streams
- Water Bodies

1:18,056

0 0.13 0.25 0.5 mi

0 0.2 0.4 0.8 km

NEPAssist-Water & NWI



December 12, 2023

Wetlands

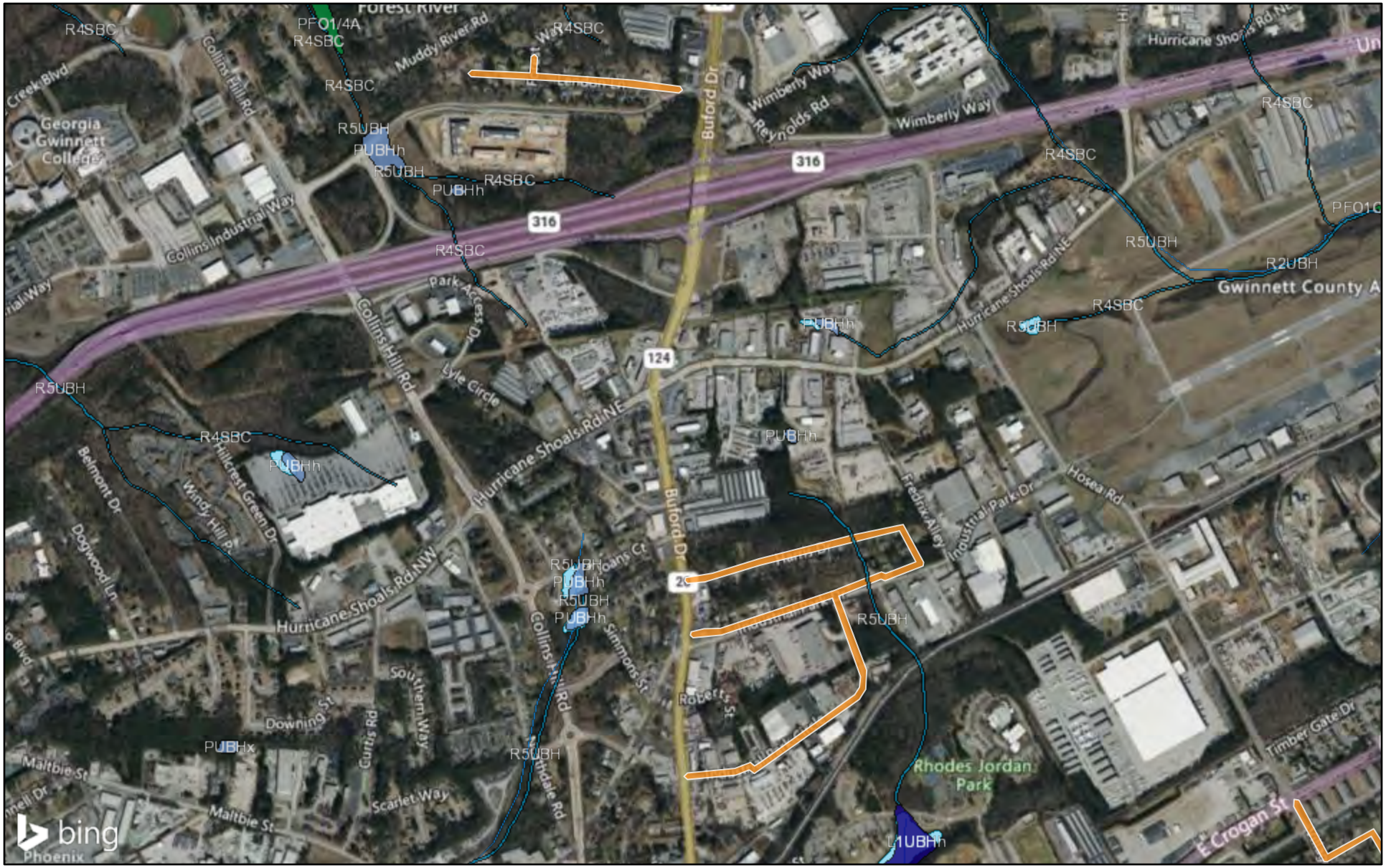
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine
- Project Area
- Streams
- Water Bodies

1:18,056

0 0.13 0.25 0.5 mi

0 0.2 0.4 0.8 km

NEPAssist-Water & NWI



December 12, 2023

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
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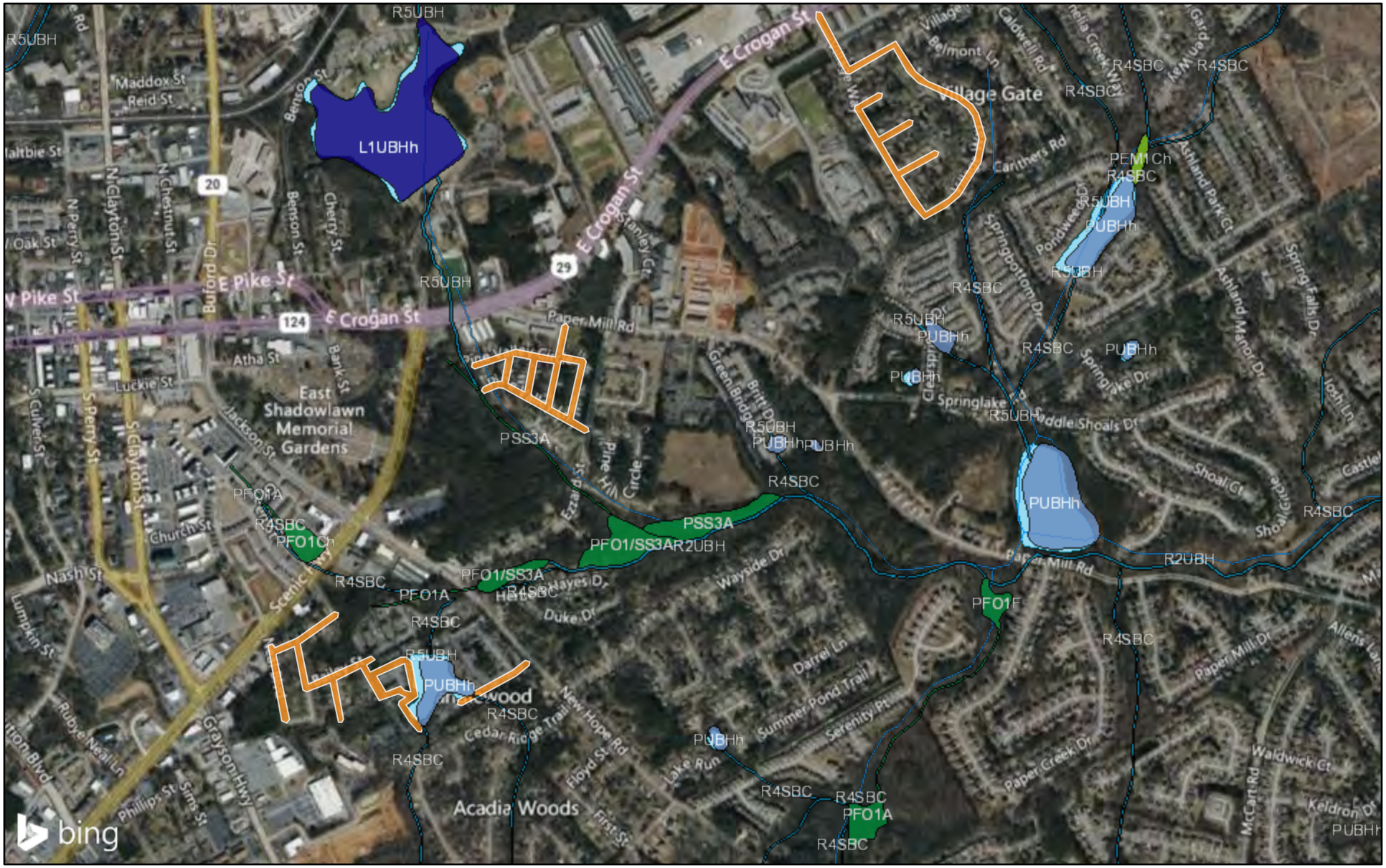
1:18,056

0 0.13 0.25 0.5 mi

0 0.2 0.4 0.8 km

NEPAssist-Water & NWI



December 12, 2023

Wetlands

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- Estuarine and Marine Wetland
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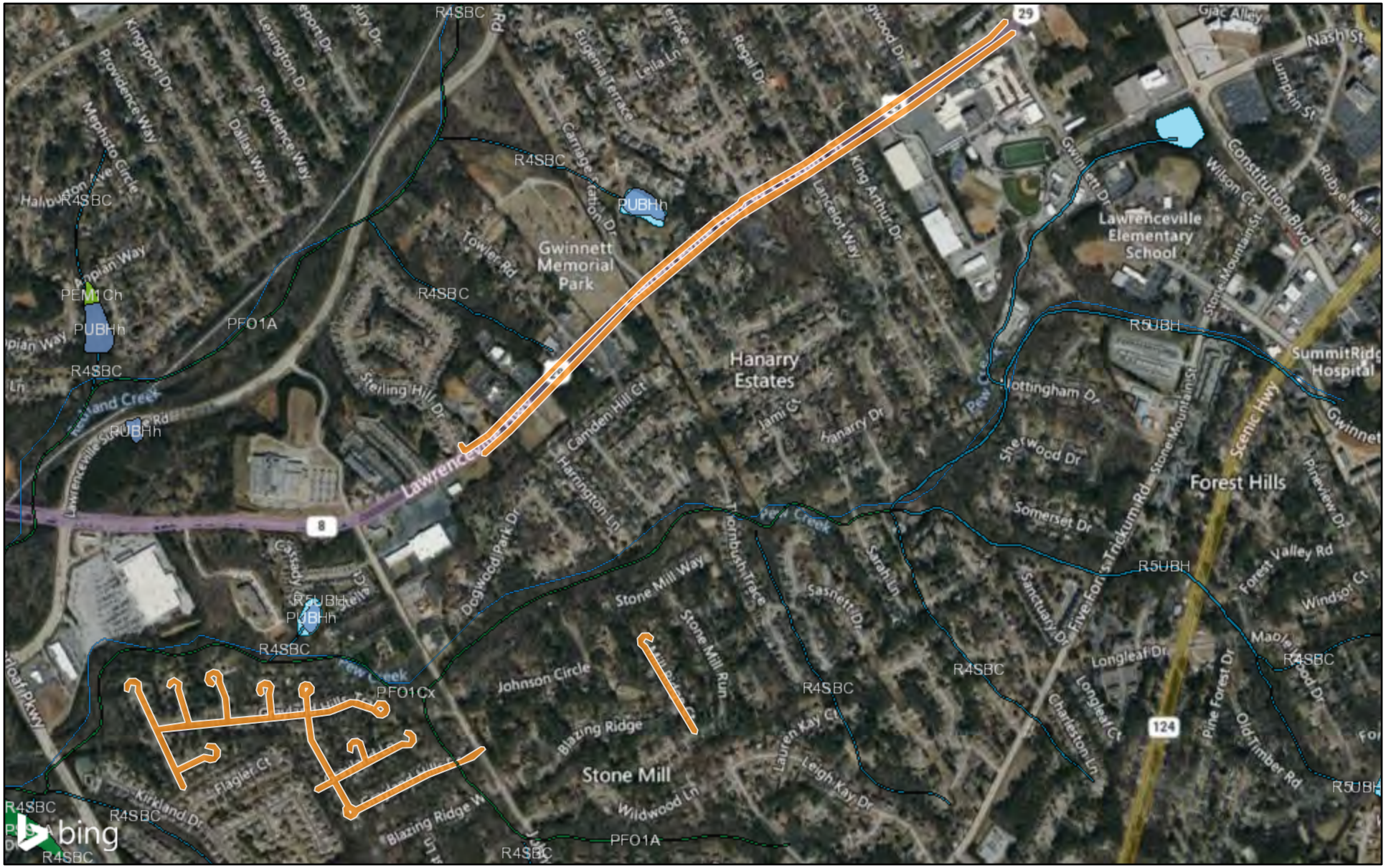
0 0.13 0.25 0.5 mi

0 0.2 0.4 0.8 km

NEPAssist-Water & NWI



December 12, 2023

Wetlands

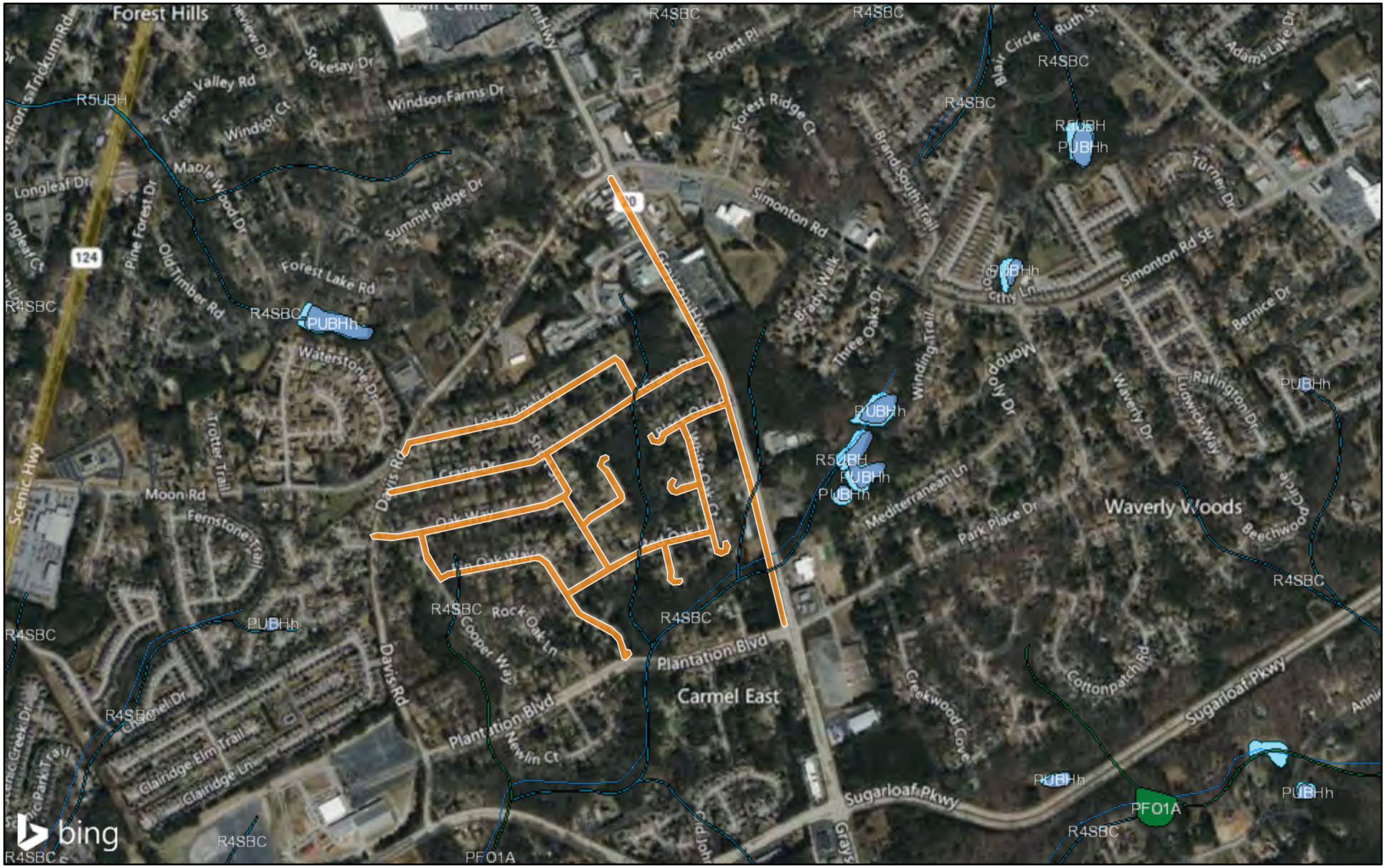
- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine
- Project Area
- Streams
- Water Bodies

1:18,056

0 0.13 0.25 0.5 mi

0 0.2 0.4 0.8 km

NEPAssist-Water & NWI



December 12, 2023

Wetlands

- Estuarine and Marine Deepwater
- Estuarine and Marine Wetland
- Freshwater Emergent Wetland
- Freshwater Forested/Shrub Wetland
- Freshwater Pond
- Lake
- Other
- Riverine
- Project Area
- Streams
- Water Bodies

1:18,056

0 0.13 0.25 0.5 mi

0 0.2 0.4 0.8 km

NEPAssist Water & NWI, Lawrenceville- Tig Knight Road

January 11, 2024

Wetlands

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

1:9,028

0 0.05 0.1 0.2 mi

0 0.1 0.2 0.4 km

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

EPA NEPAssist, FEMA Flood Maps, Lawrenceville- Azalea Dr

January 10, 2024

Flood Hazard Zones

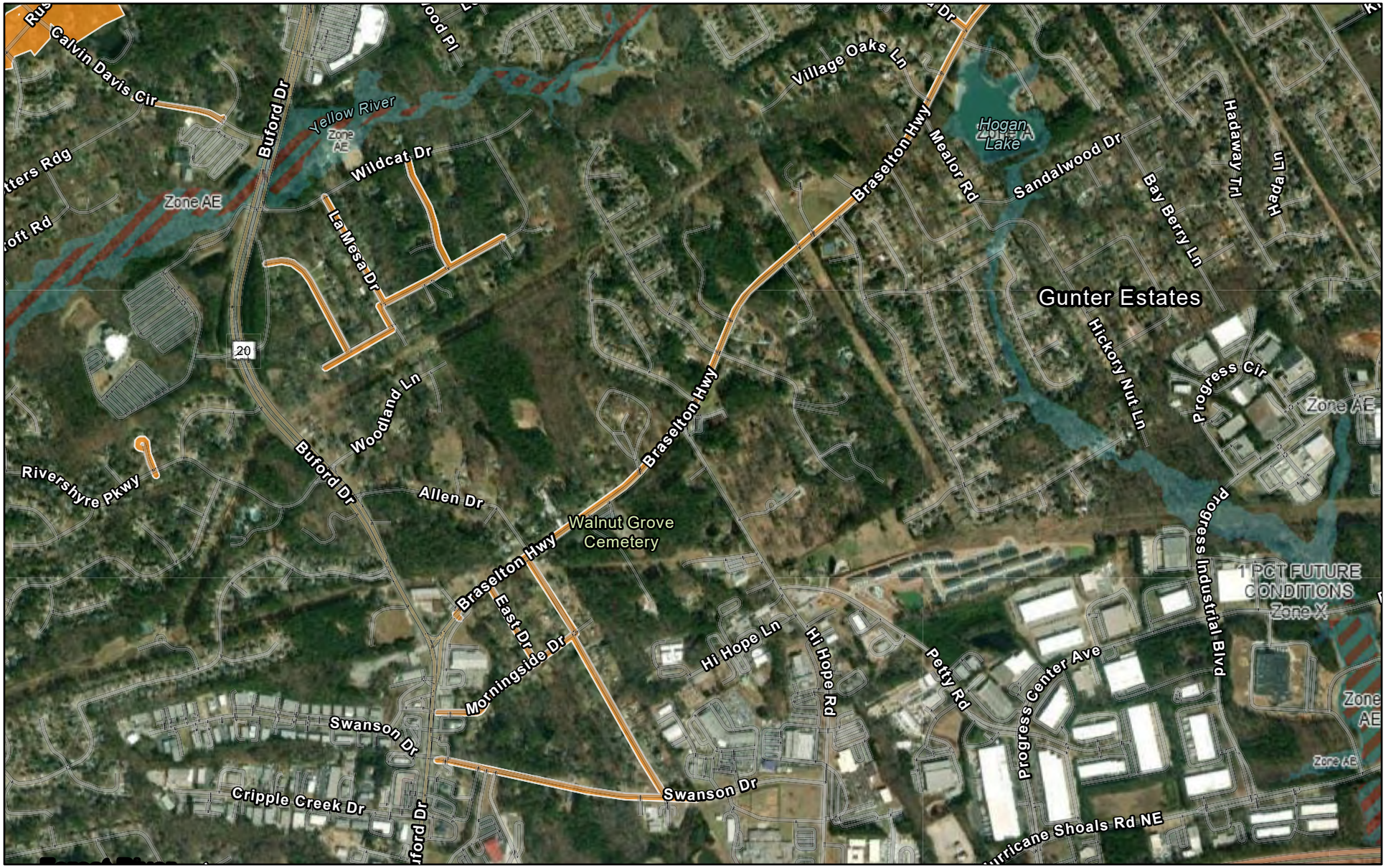
- 1% Annual Chance Flood Hazard
- Regulatory Floodway
- Special Floodway
- Area of Undetermined Flood Hazard
- 0.2% Annual Chance Flood Hazard
- Future Conditions 1% Annual Chance Flood Hazard
- Area with Reduced Risk Due to Levee
- Area with Risk Due to Levee
- Project Area

1:9,028

0 0.05 0.1 0.2 mi

0 0.1 0.2 0.4 km

EPA NEPAssist, FEMA FLood Maps, Lawrenceville- Braselton Hwy



January 10, 2024

Flood Hazard Zones

- 1% Annual Chance Flood Hazard
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- Special Floodway
- Area of Undetermined Flood Hazard
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- Project Area

1:18,056

0 0.13 0.25 0.5 mi

0 0.2 0.4 0.8 km

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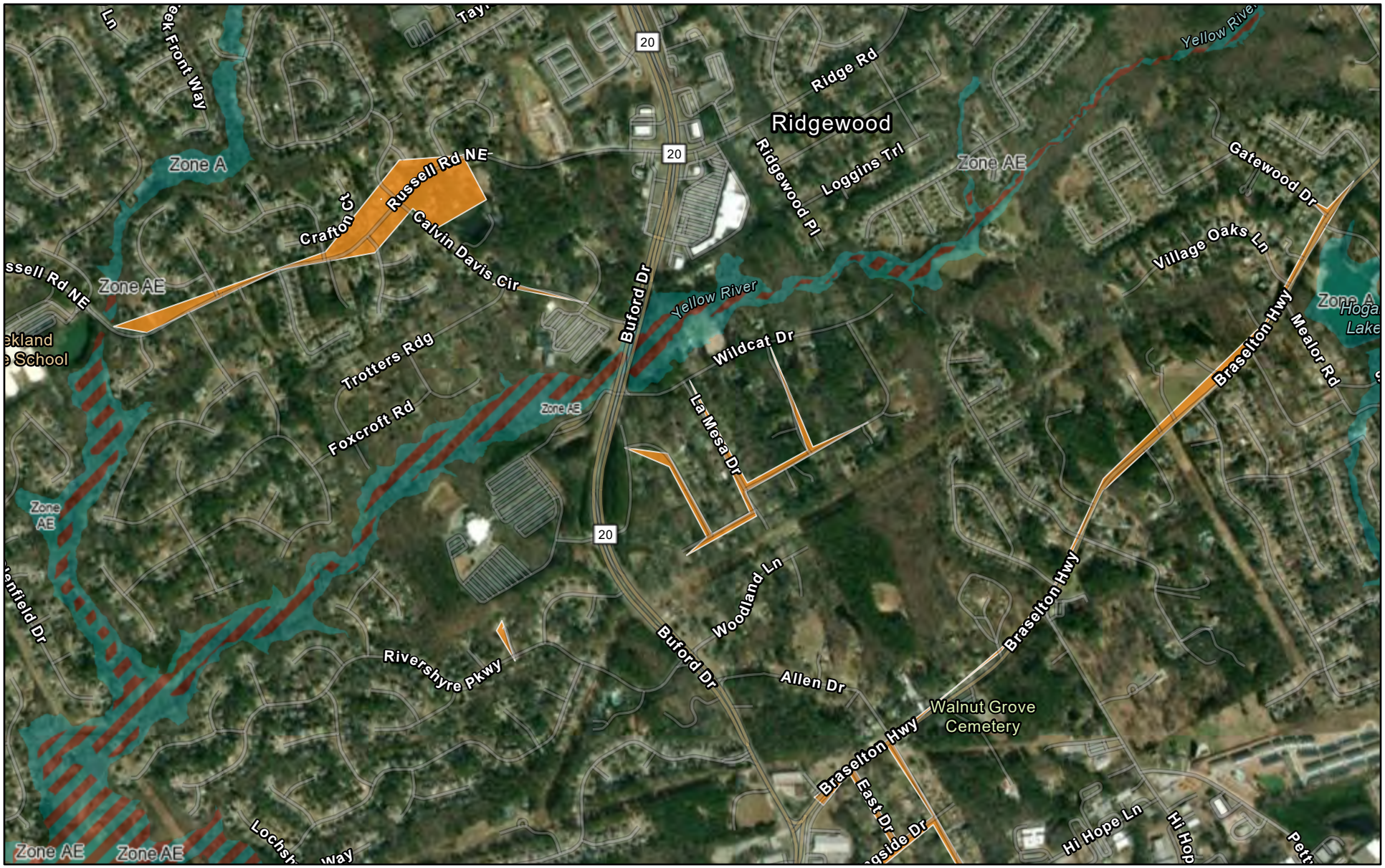

January 10, 2024

Flood Hazard Zones

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- Special Floodway
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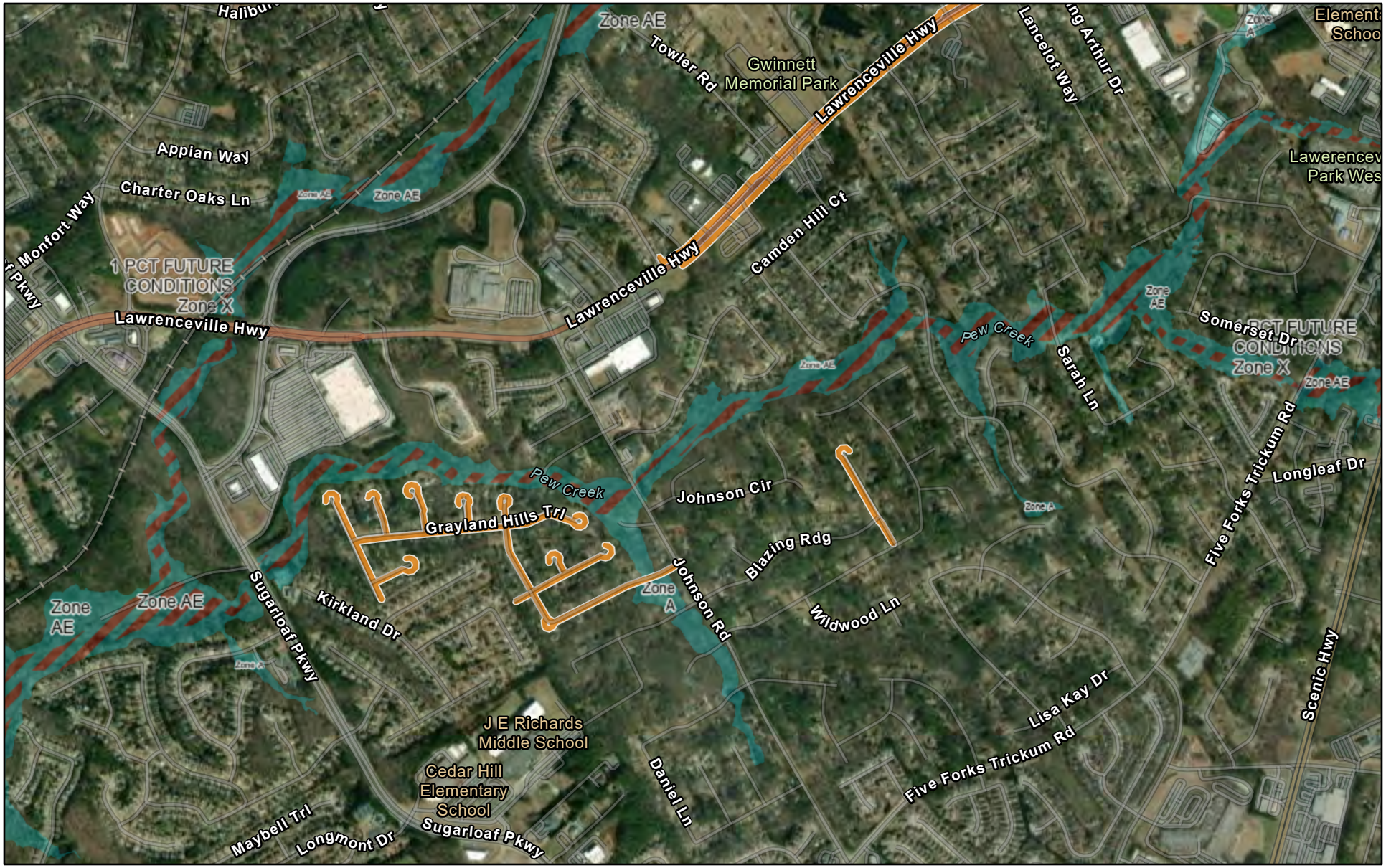
- Project Area

1:18,056

0 0.13 0.25 0.5 mi

0 0.2 0.4 0.8 km

EPA NEPAssist, FEMA Flood Maps, Lawrenceville- Grayland Hills Trail



January 10, 2024

Flood Hazard Zones

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- Area with Risk Due to Levee
- Project Area

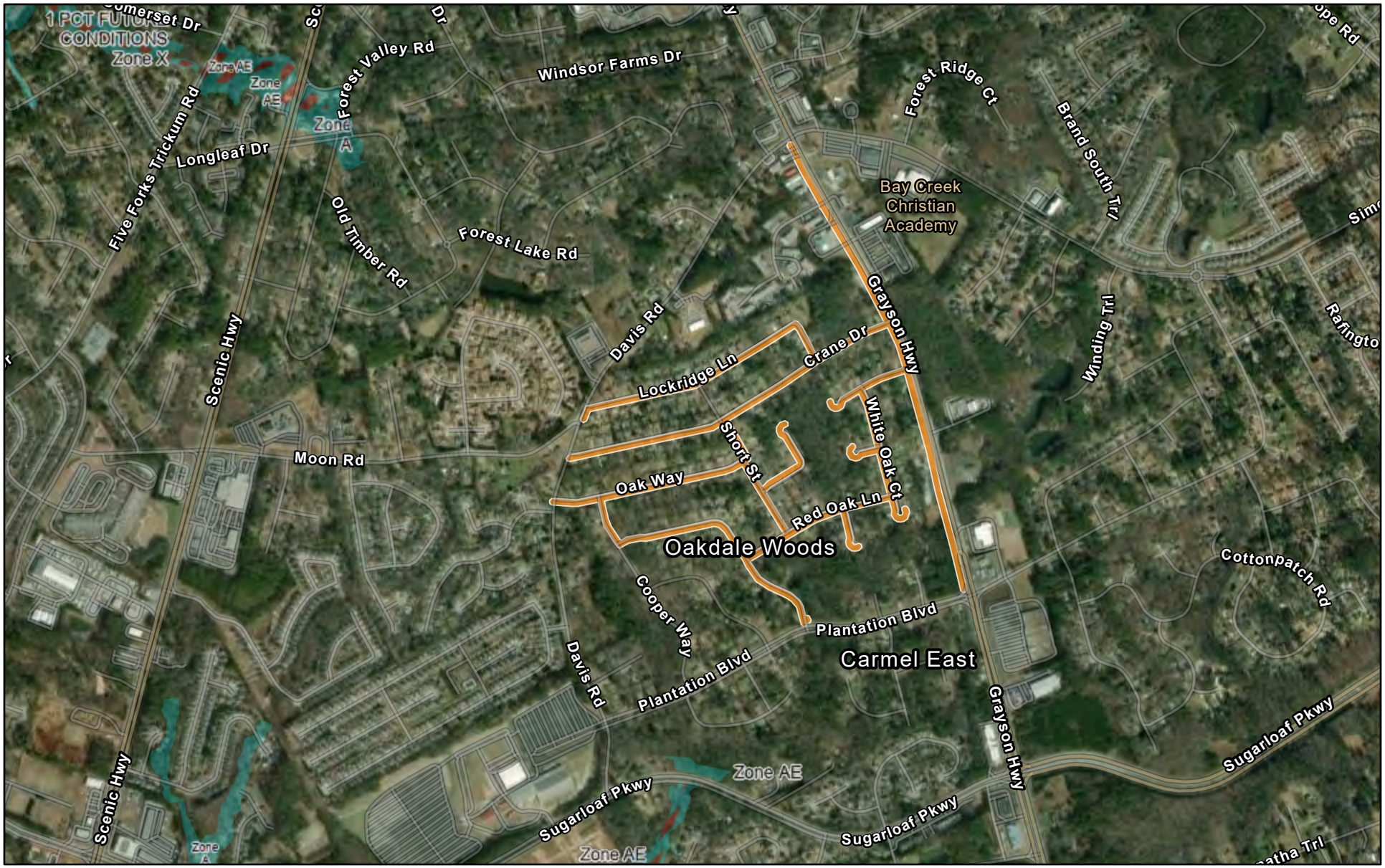
1:18,056

0 0.13 0.25 0.5 mi

0 0.2 0.4 0.8 km

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

EPA NEPAssist, FEMA Flood Maps, Lawrenceville- Grayson Hwy



January 10, 2024

Project Area

Flood Hazard Zones

- 1% Annual Chance Flood Hazard
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- Special Floodway
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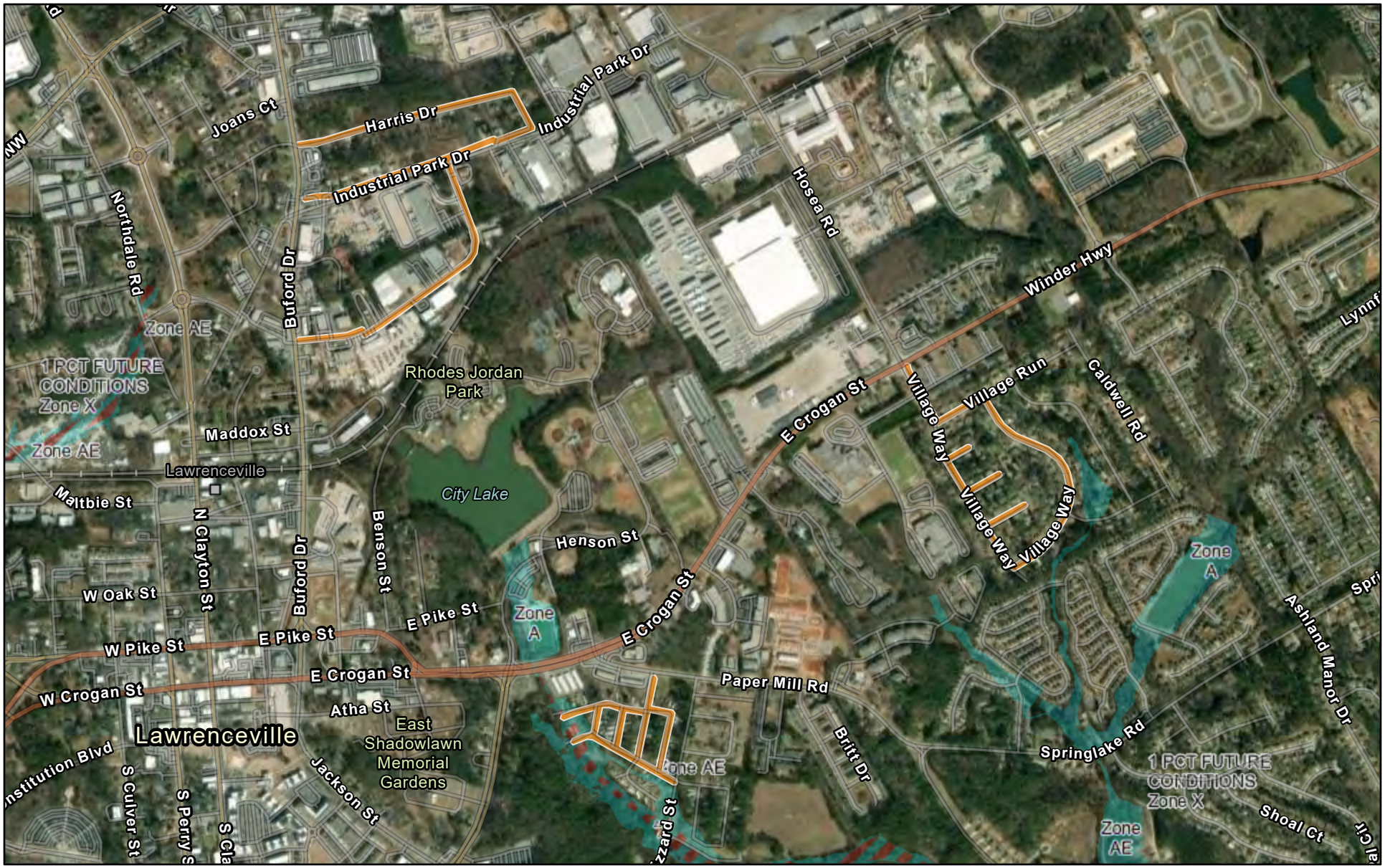
- Area with Risk Due to Levee

1:18,056

0 0.13 0.25 0.5 mi

0 0.2 0.4 0.8 km

EPA NEPAssist, FEMA Flood Maps, Lawrenceville



January 10, 2024

Project Area

Flood Hazard Zones

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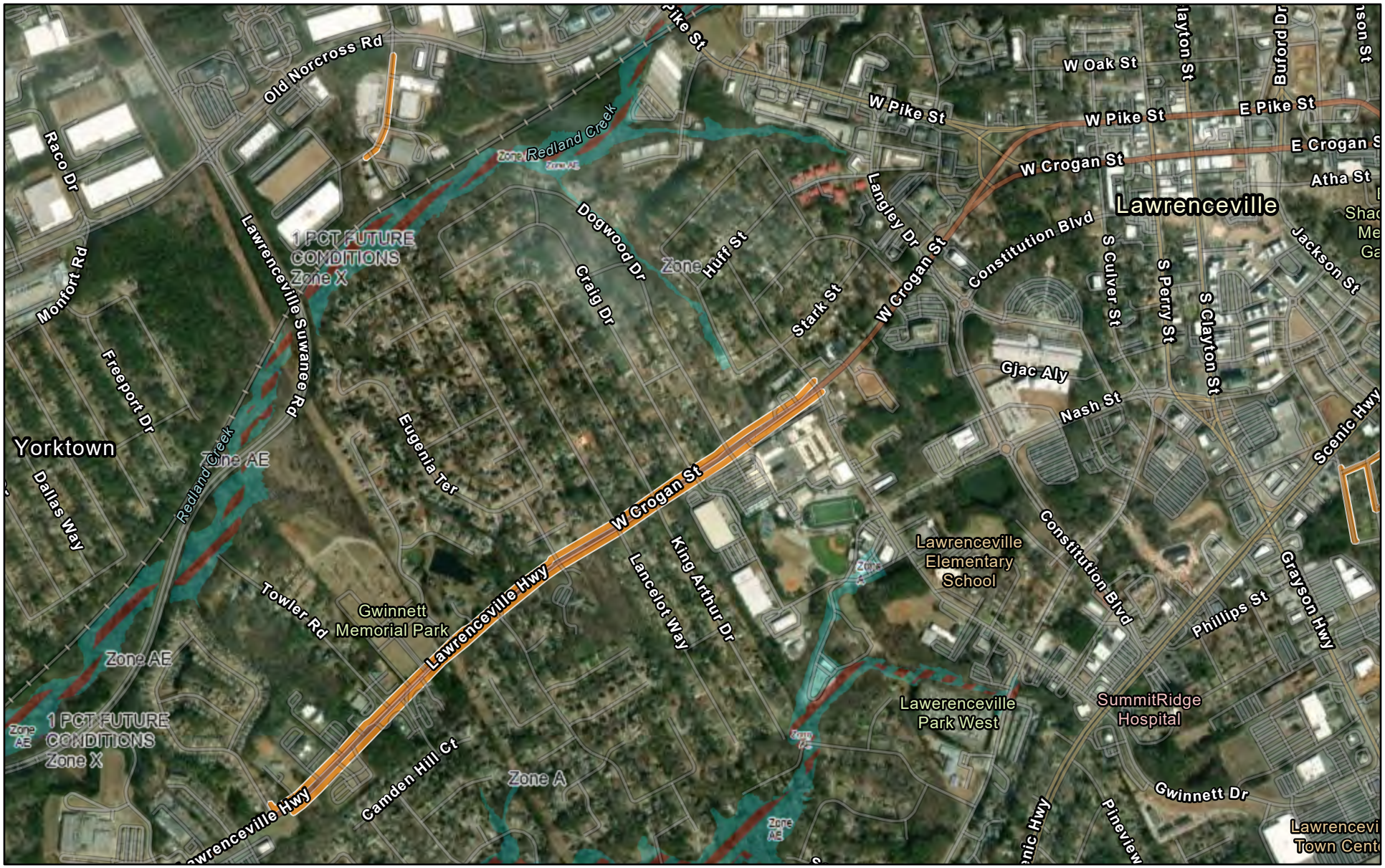
1:18,056

0 0.13 0.25 0.5 mi

0 0.2 0.4 0.8 km

EPA NEPAssist, FEMA Flood Maps, Lawrenceville- W. Crogan



January 10, 2024

Project Area

Flood Hazard Zones

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1:18,056

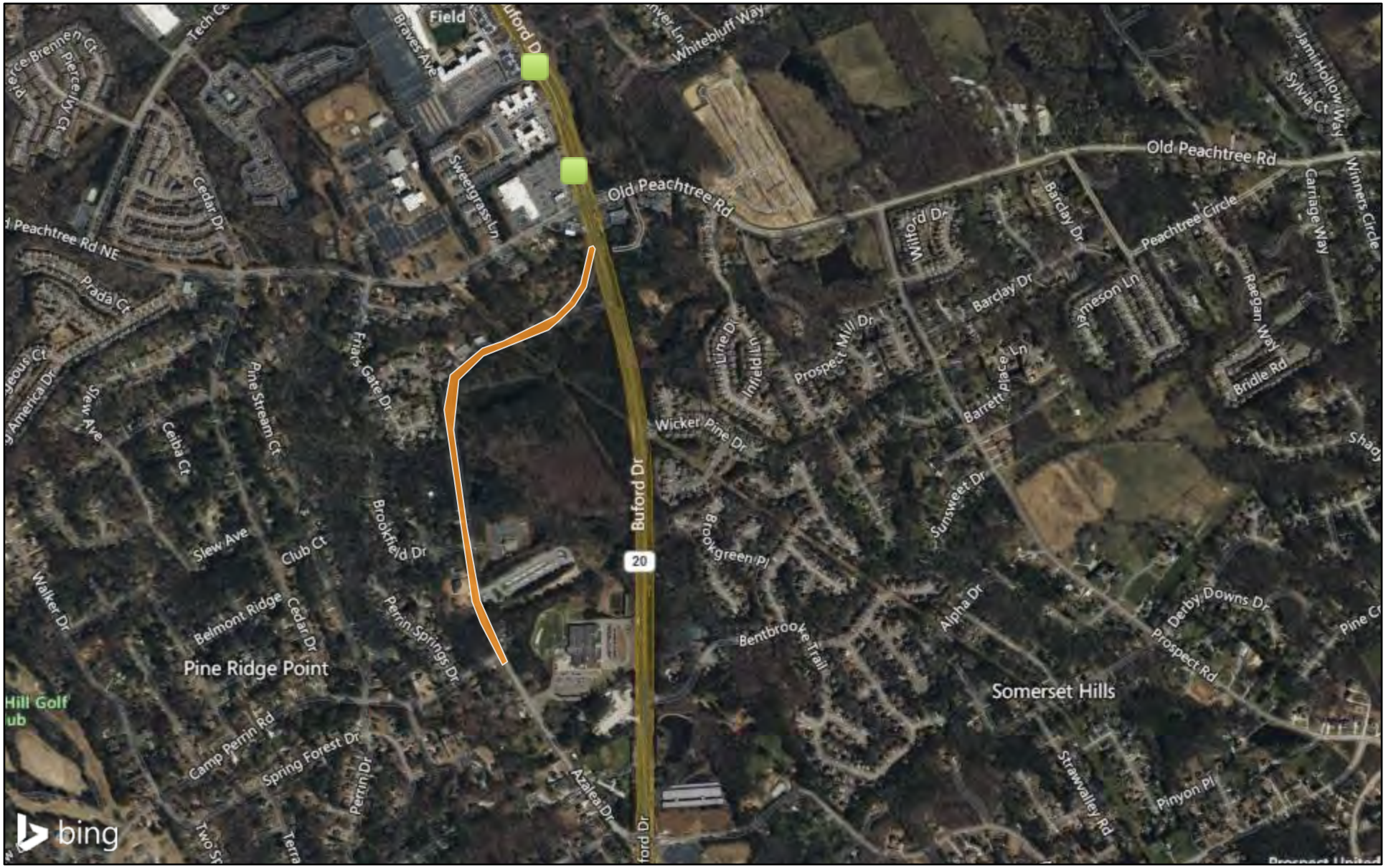
0 0.13 0.25 0.5 mi

0 0.2 0.4 0.8 km

Appendix D

Hazardous Materials

NEPAssist-EPA Facilities



December 12, 2023

Hazardous Waste (RCRAInfo)

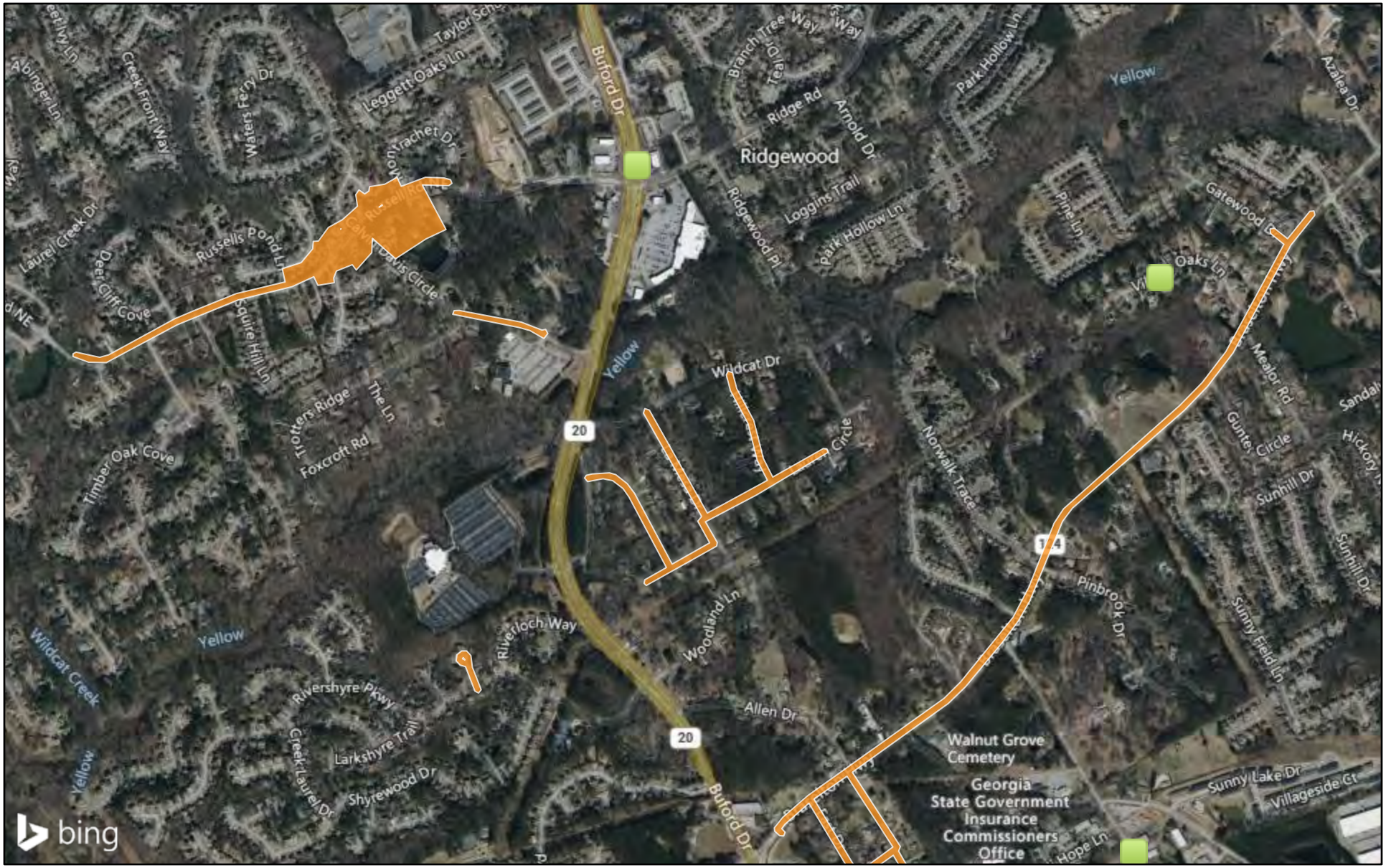
Project Area

1:18,056

0 0.13 0.25 0.5 mi

0 0.2 0.4 0.8 km

NEPAssist-EPA Facilities



December 12, 2023

Hazardous Waste (RCRAInfo)

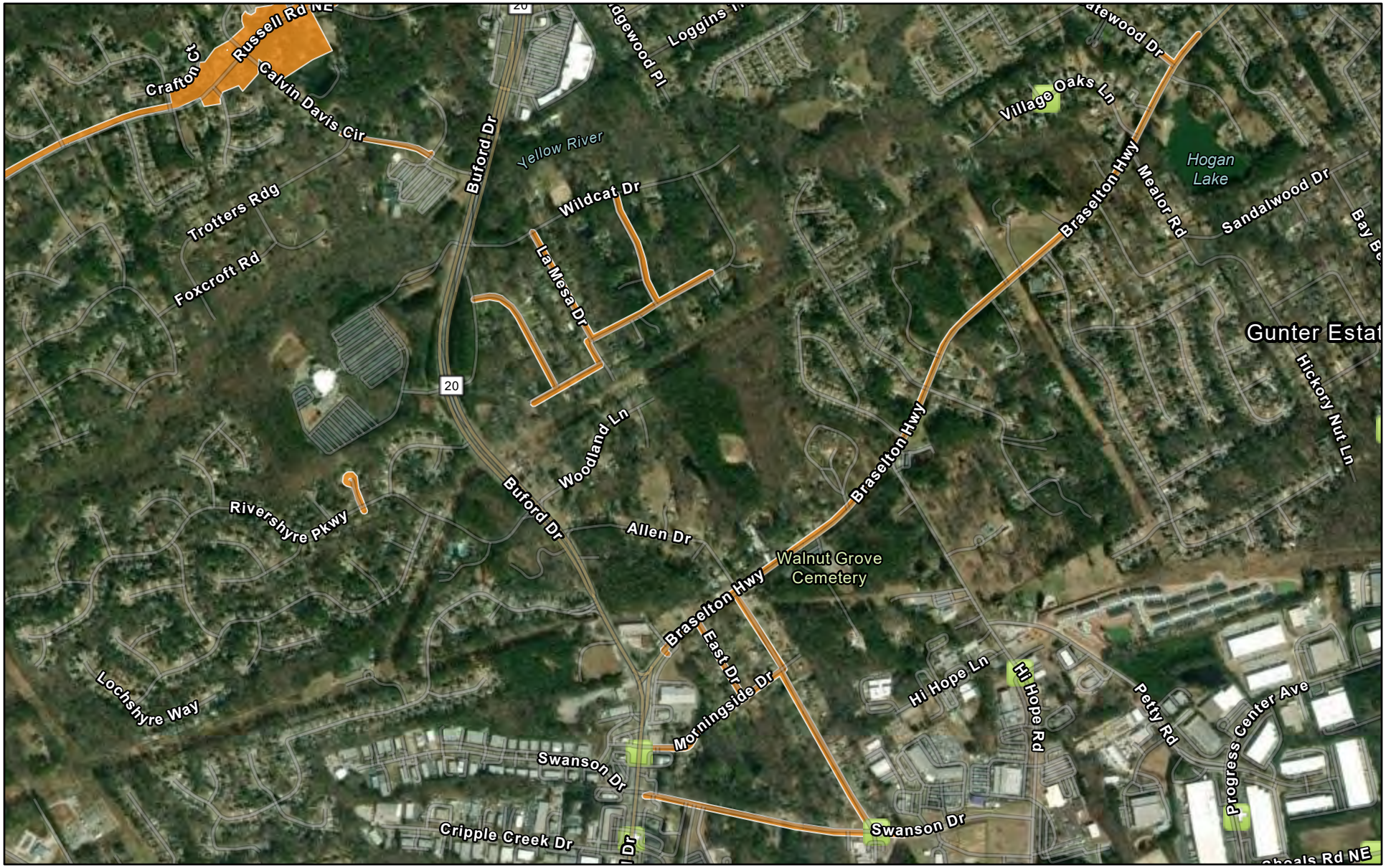
Project Area

1:18,056

0 0.13 0.25 0.5 mi

0 0.2 0.4 0.8 km

EPA NEPAssist, EPA Facilities



January 10, 2024

Hazardous Waste (RCRAInfo)

Project Area

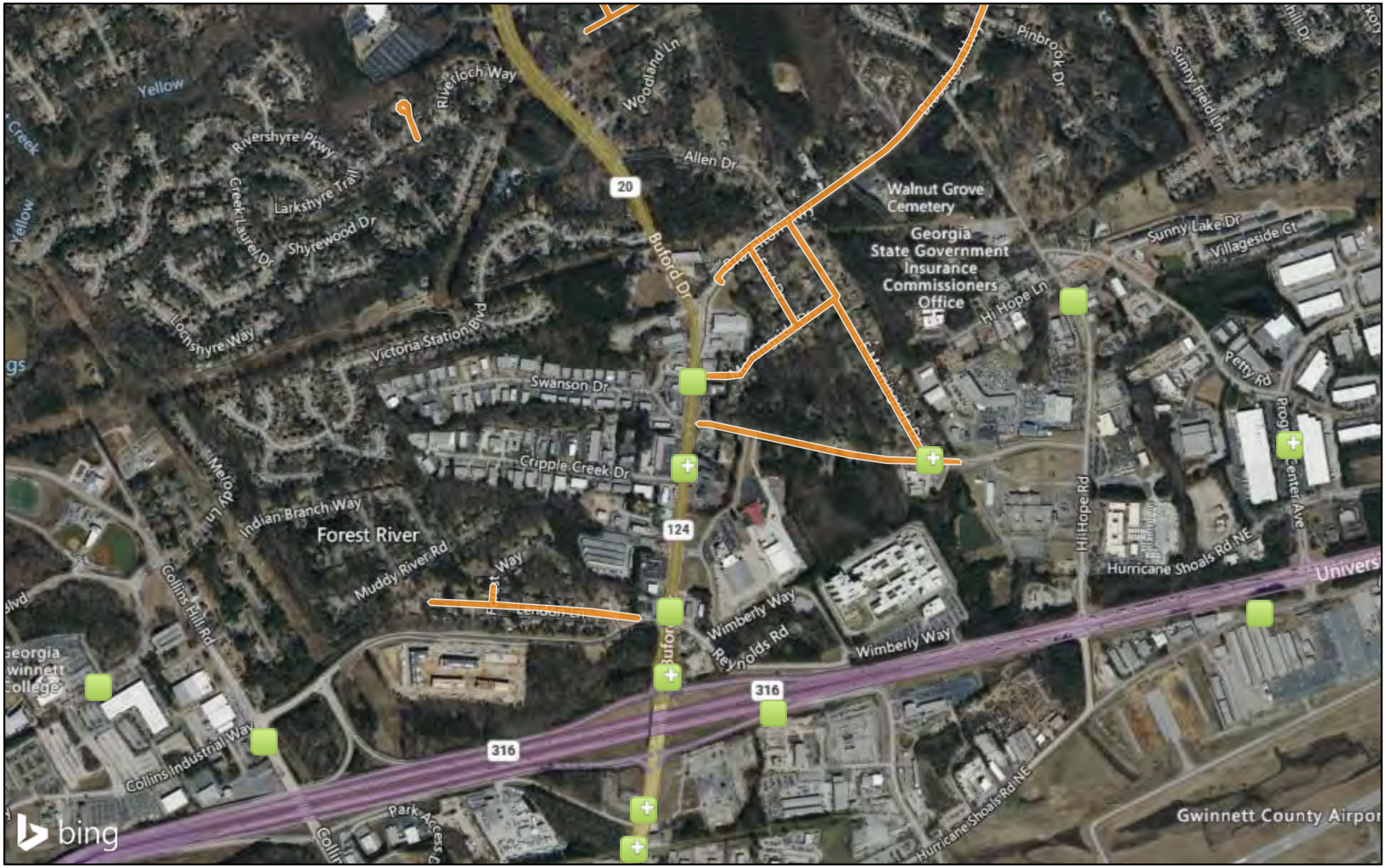
Hazardous Waste (RCRAInfo)

1:18,056

0 0.13 0.25 0.5 mi

0 0.2 0.4 0.8 km

NEPAssist-EPA Facilities



December 12, 2023

Hazardous Waste (RCRAInfo)

Project Area

Hazardous Waste (RCRAInfo)

1:18,056

0 0.13 0.25 0.5 mi

0 0.2 0.4 0.8 km

NEPAssist-EPA Facilities

December 12, 2023

Hazardous Waste (RCRAInfo)

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Hazardous Waste (RCRAInfo)

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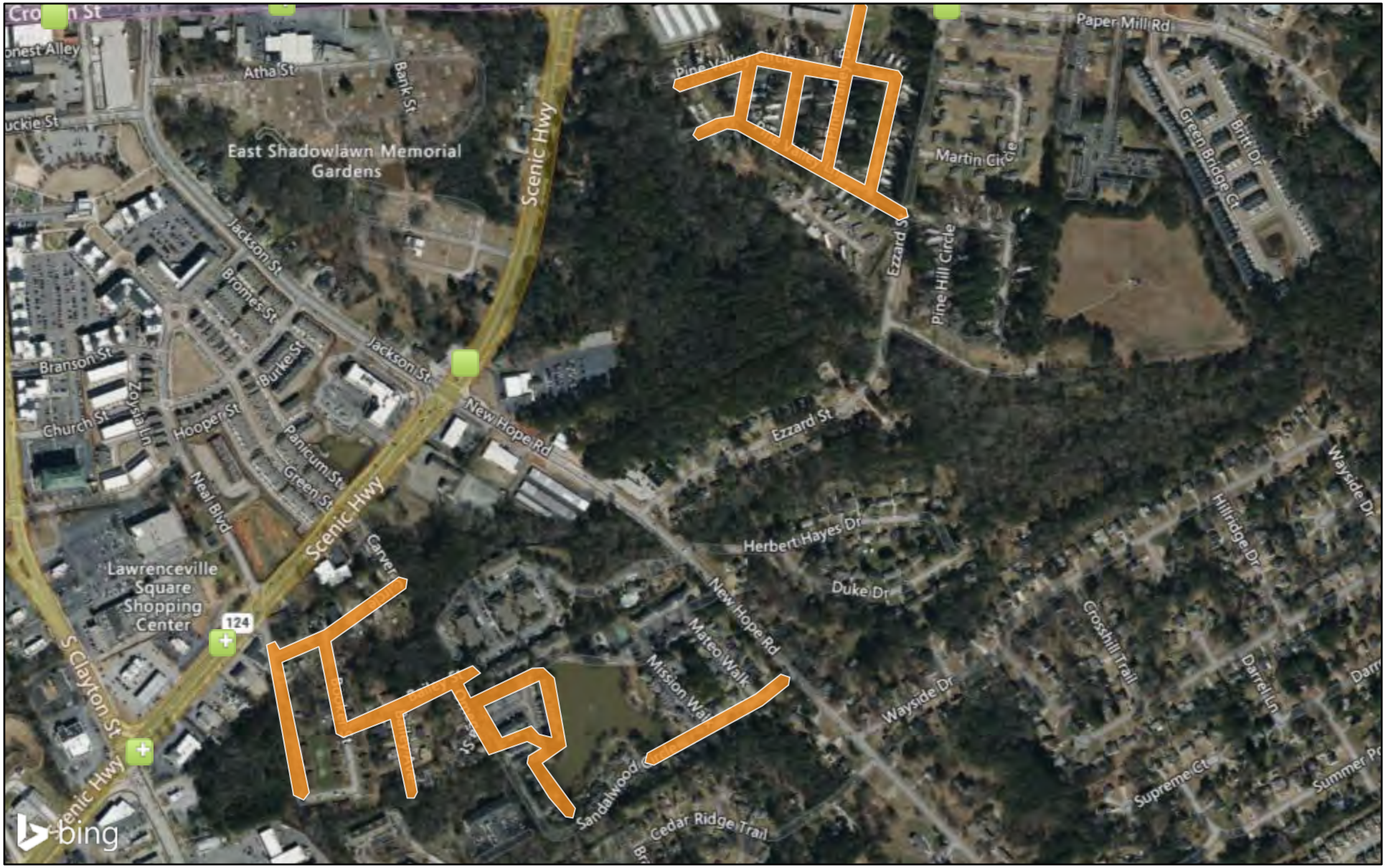
NEPAssist-EPA Facilities



December 12, 2023

Hazardous Waste (RCRAInfo)

Project Area

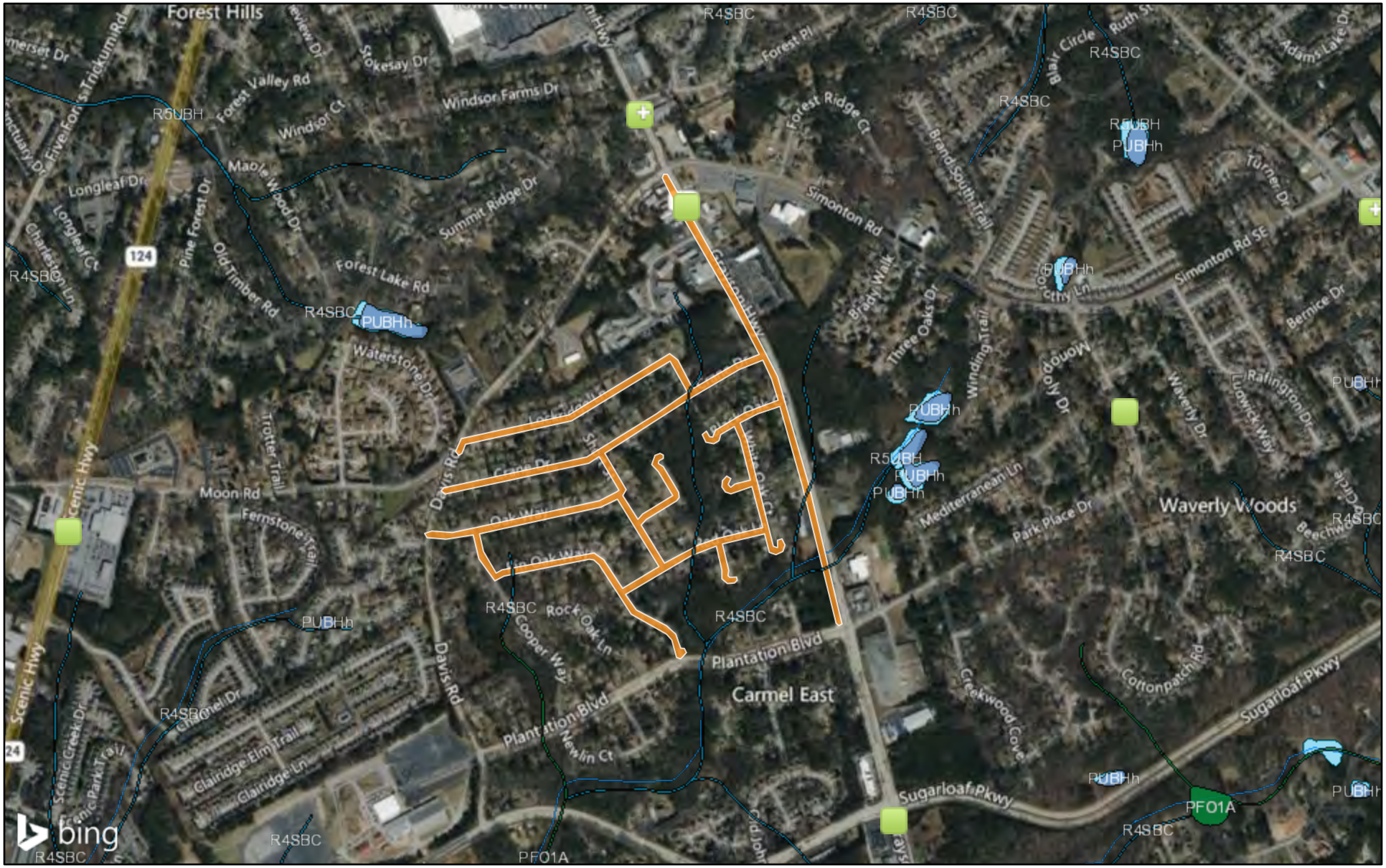
Hazardous Waste (RCRAInfo)

1:9,028

0 0.05 0.1 0.2 mi

0 0.1 0.2 0.4 km

NEPAssist-EPA Facilities



December 12, 2023

- Hazardous Waste (RCRAInfo)
- Hazardous Waste (RCRAInfo)

Wetlands

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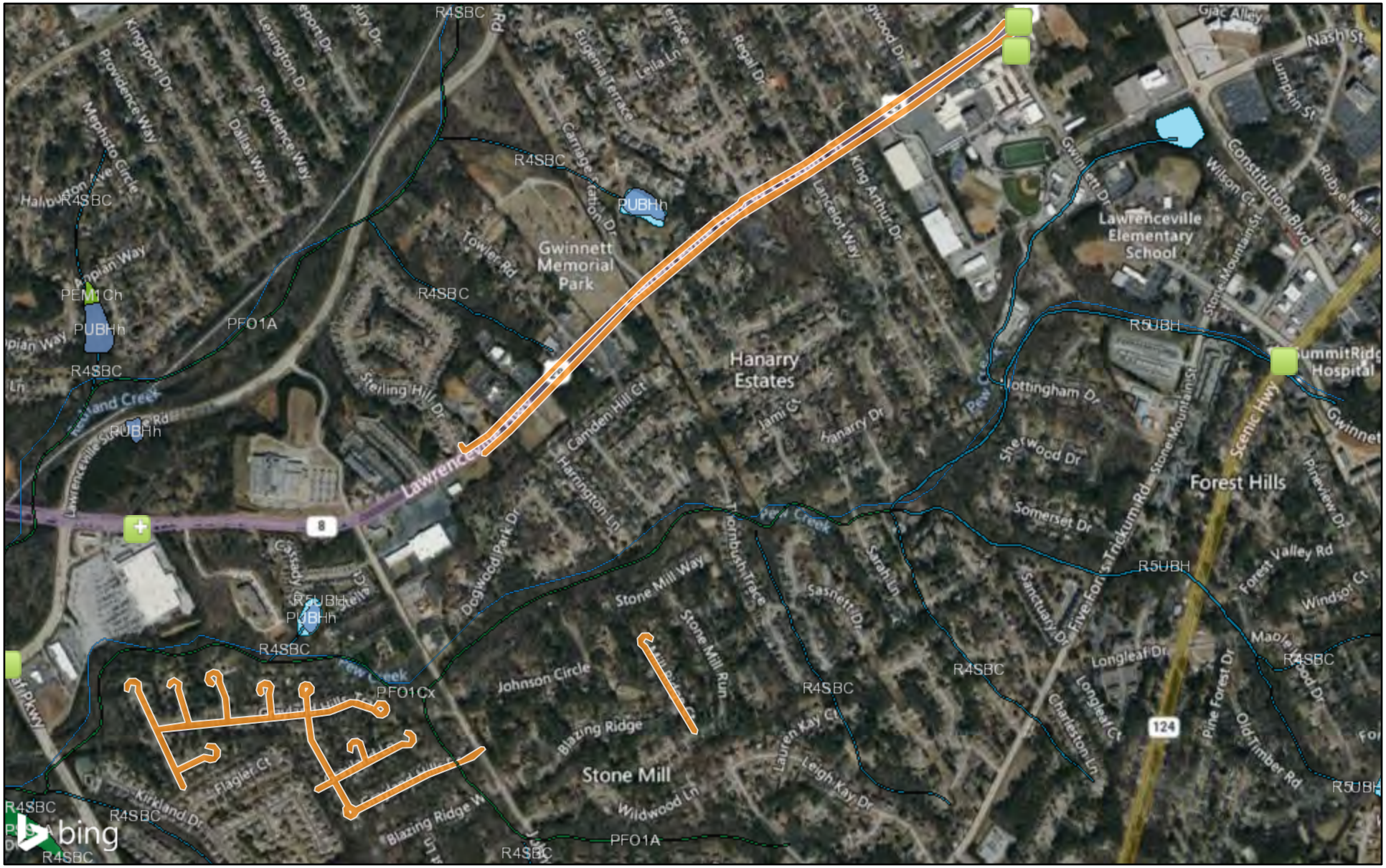

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1:18,056

0 0.13 0.25 0.5 mi

0 0.2 0.4 0.8 km

Appendix E

Soils Report

United States Department of Agriculture

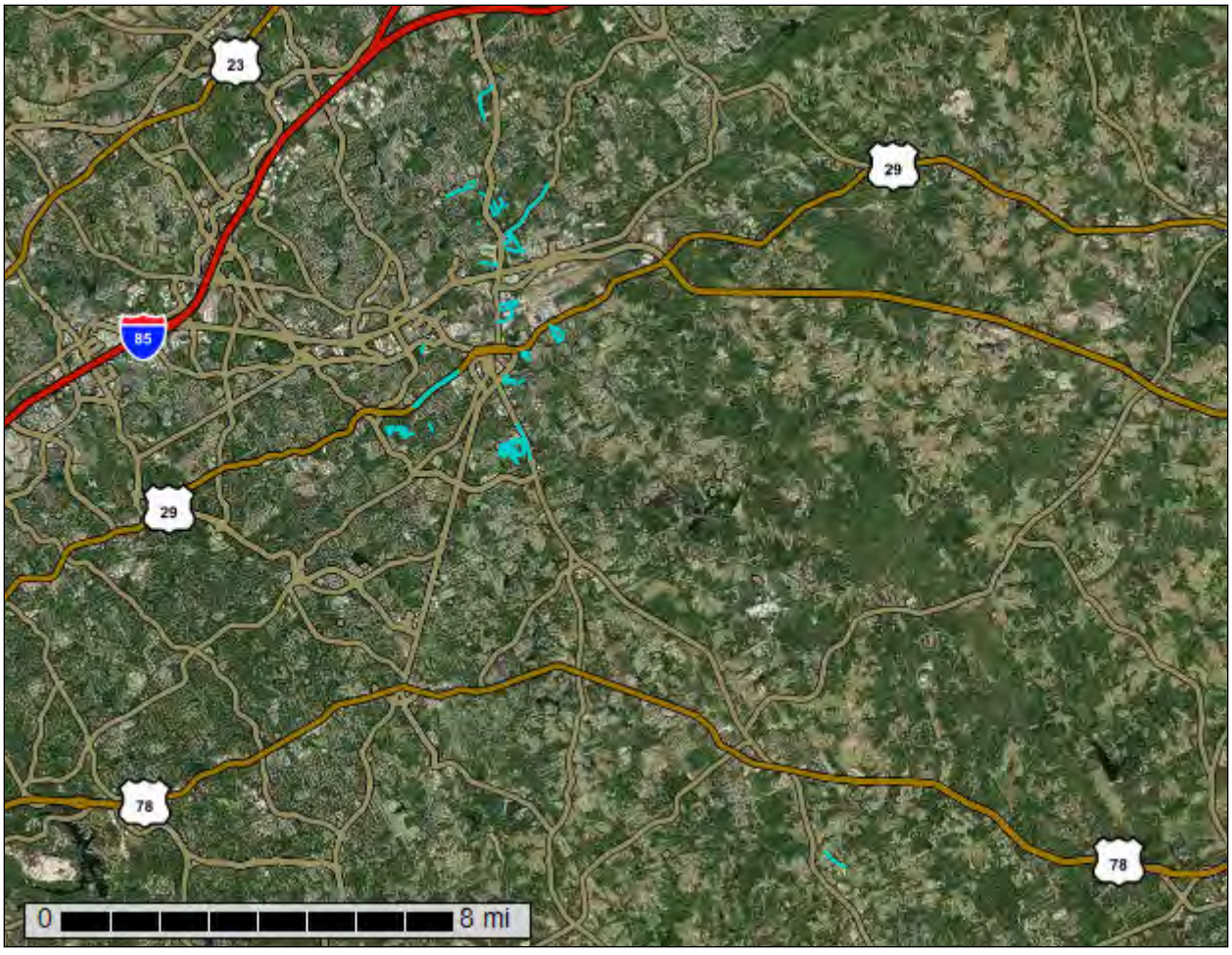
NRCS

Natural Resources Conservation Service

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

Custom Soil Resource Report for Gwinnett County, Georgia, and Walton County, Georgia

Lawrenceville



January 10, 2024

Preface

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

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

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

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

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

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

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Contents

How Soil Surveys Are Made

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

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

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

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

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

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

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

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

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

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

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

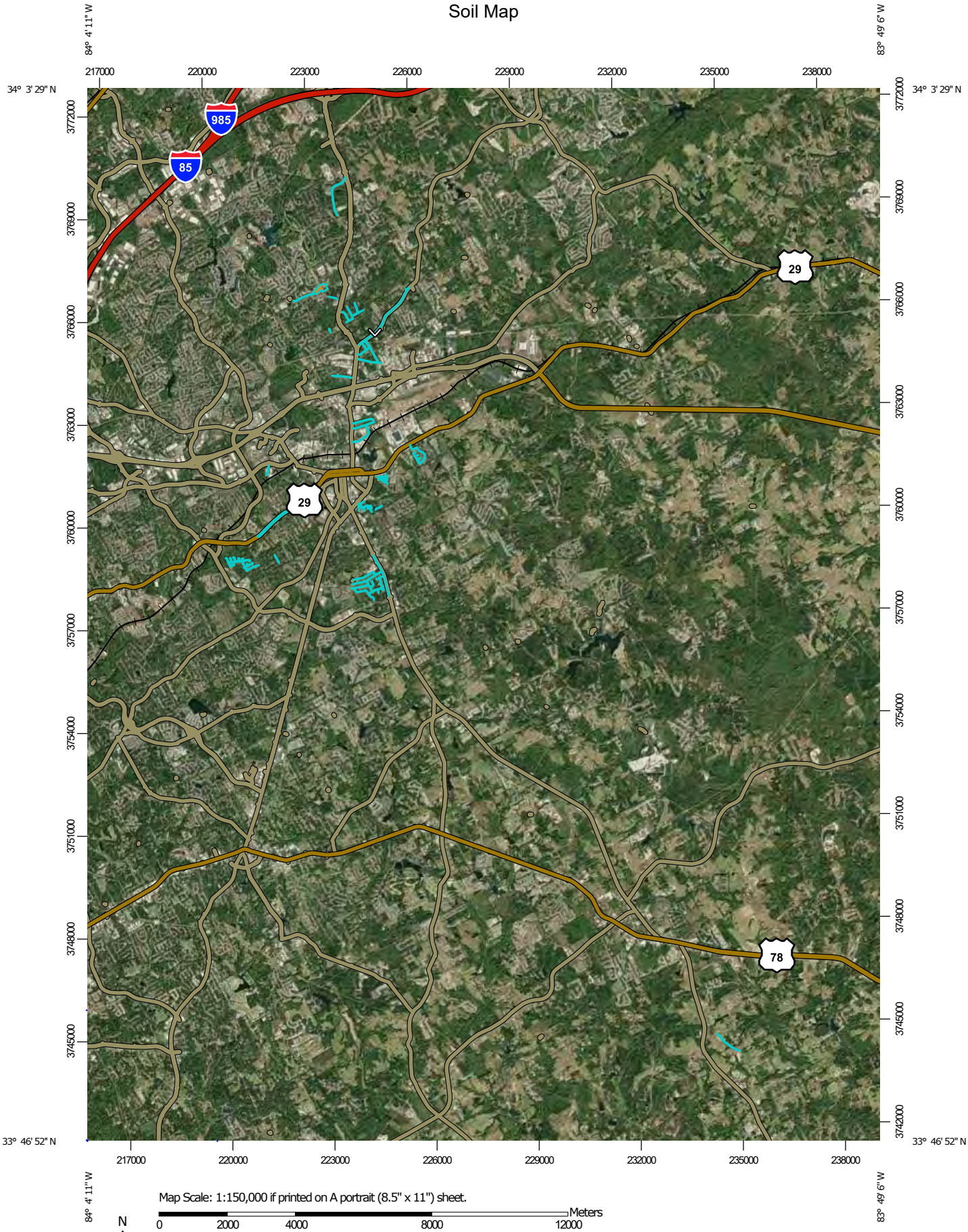
After soil scientists located and identified the significant natural bodies of soil in the survey area, they drew the boundaries of these bodies on aerial photographs and

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

Soil Map

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

Custom Soil Resource Report
Soil Map



MAP 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: Gwinnett County, Georgia
Survey Area Data: Version 14, Aug 30, 2023

Soil Survey Area: Walton County, Georgia
Survey Area Data: Version 15, Aug 30, 2023

Your area of interest (AOI) includes more than one soil survey area. These survey areas may have been mapped at different scales, with a different land use in mind, at different times, or at different levels of detail. This may result in map unit symbols, soil properties, and interpretations that do not completely agree across soil survey area boundaries.

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

Date(s) aerial images were photographed: Oct 5, 2014—Feb 18, 2023

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

MAP LEGEND

MAP INFORMATION

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

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AmC2	Appling sandy loam, 6 to 10 percent slopes, moderately eroded	35.3	22.8%
AnC2	Appling sandy clay loam, 6 to 10 percent slopes, eroded	2.6	1.7%
ApB	Appling-Hard Labor complex, 2 to 6 percent slopes	26.9	17.4%
ARE	Ashlar, Rion, and Wateree soils, 10 to 25 percent slopes	2.6	1.7%
BCD	Bethlehem and Cecil soils, 6 to 15 percent slopes	2.2	1.4%
Cfs	Chewacla silt loam, 0 to 2 percent slopes, frequently flooded	4.3	2.8%
CYB2	Cecil sandy loam, 2 to 6 percent slopes, moderately eroded	10.3	6.6%
CYC2	Cecil sandy loam, 6 to 10 percent slopes, moderately eroded	7.8	5.0%
GeB2	Gwinnett clay loam, 2 to 6 percent slopes, eroded	6.2	4.0%
GeC2	Gwinnett clay loam, 6 to 10 percent slopes, eroded	3.6	2.3%
GeE2	Gwinnett clay loam, 10 to 25 percent slopes, eroded	2.0	1.3%
GgB2	Gwinnett loam, 2 to 6 percent slopes, eroded	0.0	0.0%
GgC2	Gwinnett loam, 6 to 10 percent slopes, eroded	3.7	2.4%
GgE2	Gwinnett loam, 10 to 25 percent slopes, eroded	2.3	1.5%
HdB	Hard Labor sandy loam, 2 to 6 percent slopes	1.2	0.7%
HYB	Helena sandy loam, 2 to 6 percent slopes	0.2	0.1%
LdB	Lloyd loam, 2 to 6 percent slopes	0.2	0.1%
MCD	Musella cobbly loam, 6 to 15 percent slopes	2.3	1.5%
MhC2	Madison gravelly sandy loam, 6 to 10 percent slopes, eroded	1.6	1.0%
MiC2	Madison sandy clay loam, 6 to 10 percent slopes, moderately eroded	0.6	0.4%

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
MiD2	Madison sandy clay loam, 10 to 15 percent slopes, moderately eroded	1.5	1.0%
MiF2	Madison sandy clay loam, 15 to 45 percent slopes, eroded	0.1	0.1%
PfB2	Pacolet sandy loam, 2 to 6 percent slopes, moderately eroded	6.6	4.2%
PfC2	Pacolet sandy loam, 6 to 10 percent slopes, moderately eroded	5.8	3.7%
PgB2	Pacolet sandy clay loam, 2 to 6 percent slopes, moderately eroded	2.2	1.4%
PgC2	Pacolet sandy clay loam, 6 to 10 percent slopes, moderately eroded	3.6	2.3%
PgD2	Pacolet sandy clay loam, 10 to 15 percent slopes, moderately eroded	3.9	2.5%
PgE2	Pacolet sandy clay loam, 15 to 25 percent slopes, moderately eroded	0.9	0.6%
RAC	Rawlings and Rion soils, 2 to 10 percent slopes	1.5	0.9%
RNF	Rion and Bethlehem soils, 15 to 45 percent slopes, stony	1.6	1.0%
ToA	Toccoa fine sandy loam, 0 to 4 percent slopes, frequently flooded	0.0	0.0%
Ub	Urban land-Udorthents complex	0.2	0.1%
W	Water	0.2	0.1%
Wed	Wehadkee soils, 0 to 2 percent slopes, frequently flooded	0.6	0.4%
WgB2	Wickham sandy loam, 2 to 6 percent slopes	3.4	2.2%
WkB	Worsham sandy loam, 2 to 6 percent slopes	1.3	0.8%
WrE2	Wedowee sandy loam, 10 to 25 percent slopes, eroded	2.1	1.3%
Subtotals for Soil Survey Area		**151.3**	**97.4%**
Totals for Area of Interest		**155.3**	**100.0%**

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
AxB2	Appling coarse sandy loam, 2 to 6 percent slopes, eroded	1.0	0.7%
AxC2	Appling coarse sandy loam, 6 to 10 percent slopes, eroded	0.3	0.2%

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
CdB2	Cecil coarse sandy loam, 2 to 6 percent slopes, eroded	0.8	0.5%
CiB	Colfax sandy loam, 2 to 6 percent slopes	1.0	0.6%
DjA	Durham loamy coarse sand, 0 to 2 percent slopes	0.4	0.2%
DjB	Durham loamy coarse sand, 2 to 6 percent slopes	0.5	0.3%
Subtotals for Soil Survey Area		**4.0**	**2.6%**
Totals for Area of Interest		**155.3**	**100.0%**

Map Unit Descriptions

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

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

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

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

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

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

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

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

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

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

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

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

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

Gwinnett County, Georgia

AmC2—Appling sandy loam, 6 to 10 percent slopes, moderately eroded

Map Unit Setting

National map unit symbol: 2tfg7
Elevation: 350 to 900 feet
Mean annual precipitation: 44 to 60 inches
Mean annual air temperature: 59 to 64 degrees F
Frost-free period: 190 to 230 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Appling, moderately eroded, and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Appling, Moderately Eroded

Setting

Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Residuum weathered from granite and gneiss and/or residuum weathered from schist

Typical profile

A - 0 to 6 inches: sandy loam
BA - 6 to 11 inches: sandy clay loam
Bt1 - 11 to 16 inches: sandy clay
Bt2 - 16 to 40 inches: clay
BC - 40 to 60 inches: sandy clay loam
C - 60 to 65 inches: sandy loam

Properties and qualities

Slope: 6 to 10 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 8.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Ecological site: F136XY820GA - Acidic upland forest, moist
Hydric soil rating: No

AnC2—Appling sandy clay loam, 6 to 10 percent slopes, eroded

Map Unit Setting

National map unit symbol: pgwx
Elevation: 770 to 1,250 feet
Mean annual precipitation: 44 to 60 inches
Mean annual air temperature: 59 to 64 degrees F
Frost-free period: 190 to 230 days
Farmland classification: Not prime farmland

Map Unit Composition

Appling and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Appling

Setting

Landform: Hills
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Residuum weathered from granite and gneiss and/or residuum weathered from schist

Typical profile

H1 - 0 to 9 inches: sandy clay loam
H2 - 9 to 35 inches: sandy clay
H3 - 35 to 46 inches: sandy clay
H4 - 46 to 65 inches: sandy clay loam

Properties and qualities

Slope: 6 to 10 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 8.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Ecological site: F136XY820GA - Acidic upland forest, moist
Hydric soil rating: No

ApB—Appling-Hard Labor complex, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: pgyv
Elevation: 350 to 1,250 feet
Mean annual precipitation: 44 to 60 inches
Mean annual air temperature: 59 to 64 degrees F
Frost-free period: 190 to 230 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Appling and similar soils: 60 percent
Hard labor and similar soils: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Appling

Setting

Landform: Hills
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Residuum weathered from granite and gneiss and/or residuum weathered from schist

Typical profile

H1 - 0 to 9 inches: sandy loam
H2 - 9 to 35 inches: sandy clay
H3 - 35 to 46 inches: sandy clay
H4 - 46 to 65 inches: sandy clay loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 8.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Ecological site: F136XY820GA - Acidic upland forest, moist
Hydric soil rating: No

Description of Hard Labor

Setting

Landform: Hills
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Residuum weathered from granite and gneiss and/or residuum weathered from schist

Typical profile

A - 0 to 3 inches: sandy loam
E - 3 to 7 inches: coarse sandy loam
Bt - 7 to 32 inches: clay
BC - 32 to 48 inches: sandy clay loam
C - 48 to 60 inches: sandy clay loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 30 to 39 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 8.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Ecological site: F136XY810SC - Acidic upland forest, seasonally wet
Hydric soil rating: No

ARE—Ashlar, Rion, and Wateree soils, 10 to 25 percent slopes

Map Unit Setting

National map unit symbol: pgzg
Elevation: 200 to 1,400 feet
Mean annual precipitation: 44 to 60 inches
Mean annual air temperature: 59 to 64 degrees F
Frost-free period: 190 to 230 days
Farmland classification: Not prime farmland

Map Unit Composition

Ashlar and similar soils: 40 percent
Wateree and similar soils: 25 percent
Rion and similar soils: 20 percent

Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Ashlar

Setting

Landform: Hills
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear

Typical profile

H1 - 0 to 30 inches: sandy loam
H2 - 30 to 33 inches: sandy loam
R - 33 to 60 inches: unweathered bedrock

Properties and qualities

Slope: 10 to 25 percent
Depth to restrictive feature: 22 to 40 inches to lithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: B
Ecological site: F136XY870GA - Lower piedmont acidic upland woodland, depth restriction, dry
Hydric soil rating: No

Description of Wateree

Setting

Landform: Hills
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear

Typical profile

H1 - 0 to 9 inches: sandy loam
H2 - 9 to 25 inches: gravelly coarse sandy loam
Cr - 25 to 43 inches: weathered bedrock
R - 43 to 47 inches: unweathered bedrock

Properties and qualities

Slope: 10 to 25 percent
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None

Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 2.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: B
Ecological site: F136XY870GA - Lower piedmont acidic upland woodland, depth restriction, dry
Hydric soil rating: No

Description of Rion

Setting

Landform: Hills
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Residuum weathered from granite and gneiss

Typical profile

H1 - 0 to 5 inches: sandy loam
H2 - 5 to 30 inches: sandy clay loam
H3 - 30 to 60 inches: sandy loam

Properties and qualities

Slope: 10 to 25 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 6.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: B
Ecological site: F136XY820GA - Acidic upland forest, moist
Hydric soil rating: No

BCD—Bethlehem and Cecil soils, 6 to 15 percent slopes

Map Unit Setting

National map unit symbol: pgz7
Elevation: 200 to 1,400 feet
Mean annual precipitation: 44 to 60 inches

Mean annual air temperature: 59 to 64 degrees F
Frost-free period: 190 to 230 days
Farmland classification: Not prime farmland

Map Unit Composition

Bethlehem and similar soils: 60 percent
Cecil and similar soils: 25 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Bethlehem

Setting

Landform: Hills
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Residuum weathered from mica schist and/or residuum weathered from schist

Typical profile

H1 - 0 to 8 inches: gravelly sandy loam
H2 - 8 to 12 inches: sandy clay loam
H3 - 12 to 25 inches: clay
H4 - 25 to 31 inches: gravelly sandy clay loam
Cr - 31 to 60 inches: weathered bedrock

Properties and qualities

Slope: 6 to 15 percent
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: C
Ecological site: F136XY830NC - Acidic upland forest, depth restriction, dry-moist
Hydric soil rating: No

Description of Cecil

Setting

Landform: Hills
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Residuum weathered from granite and gneiss and/or residuum weathered from schist

Typical profile

H1 - 0 to 7 inches: sandy loam
H2 - 7 to 11 inches: sandy clay loam
H3 - 11 to 50 inches: clay
H4 - 50 to 75 inches: sandy loam

Properties and qualities

Slope: 6 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 8.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: B
Ecological site: F136XY820GA - Acidic upland forest, moist
Hydric soil rating: No

Cfs—Chewacla silt loam, 0 to 2 percent slopes, frequently flooded

Map Unit Setting

National map unit symbol: 2rrtg
Elevation: 340 to 610 feet
Mean annual precipitation: 35 to 55 inches
Mean annual air temperature: 50 to 70 degrees F
Frost-free period: 175 to 250 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Chewacla and similar soils: 95 percent
Minor components: 5 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Chewacla

Setting

Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy alluvium

Typical profile

A - 0 to 6 inches: silt loam
Bw - 6 to 32 inches: silty clay loam

Bg - 32 to 38 inches: sandy clay loam
C - 38 to 80 inches: silt loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 6 to 24 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Available water supply, 0 to 60 inches: High (about 11.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: B/D
Ecological site: F136XY610GA - Flood plain forest, wet
Hydric soil rating: No

Minor Components

Wehadkee

Percent of map unit: 5 percent
Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Hydric soil rating: Yes

CYB2—Cecil sandy loam, 2 to 6 percent slopes, moderately eroded

Map Unit Setting

National map unit symbol: 2tfg8
Elevation: 200 to 1,400 feet
Mean annual precipitation: 44 to 60 inches
Mean annual air temperature: 59 to 64 degrees F
Frost-free period: 190 to 230 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Cecil, moderately eroded, and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Cecil, Moderately Eroded

Setting

Landform: Hills
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest

Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Clayey residuum weathered from igneous and metamorphic rock

Typical profile

Ap - 0 to 4 inches: sandy loam
Bt1 - 4 to 12 inches: clay loam
Bt2 - 12 to 39 inches: clay
Bt3 - 39 to 50 inches: clay loam
BC - 50 to 64 inches: clay loam
C - 64 to 80 inches: sandy loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 8.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Ecological site: F136XY820GA - Acidic upland forest, moist
Hydric soil rating: No

CYC2—Cecil sandy loam, 6 to 10 percent slopes, moderately eroded

Map Unit Setting

National map unit symbol: 2tfg9
Elevation: 200 to 1,400 feet
Mean annual precipitation: 44 to 60 inches
Mean annual air temperature: 59 to 64 degrees F
Frost-free period: 190 to 230 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Cecil, moderately eroded, and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Cecil, Moderately Eroded

Setting

Landform: Hills
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Side slope
Down-slope shape: Convex
Across-slope shape: Convex

Parent material: Clayey residuum weathered from igneous and metamorphic rock

Typical profile

Ap - 0 to 4 inches: sandy loam
Bt1 - 4 to 12 inches: clay loam
Bt2 - 12 to 39 inches: clay
Bt3 - 39 to 50 inches: clay loam
BC - 50 to 64 inches: clay loam
C - 64 to 80 inches: sandy loam

Properties and qualities

Slope: 6 to 10 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 8.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Ecological site: F136XY820GA - Acidic upland forest, moist
Hydric soil rating: No

GeB2—Gwinnett clay loam, 2 to 6 percent slopes, eroded

Map Unit Setting

National map unit symbol: pgxh
Elevation: 700 to 1,200 feet
Mean annual precipitation: 44 to 60 inches
Mean annual air temperature: 59 to 64 degrees F
Frost-free period: 190 to 230 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Gwinnett and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Gwinnett

Setting

Landform: Hills
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Convex

Parent material: Residuum weathered from amphibolite and/or residuum weathered from gneiss

Typical profile

H1 - 0 to 7 inches: clay loam
H2 - 7 to 35 inches: clay
H3 - 35 to 45 inches: sandy clay loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: 40 to 60 inches to paralithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 6.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Ecological site: F136XY820GA - Acidic upland forest, moist
Hydric soil rating: No

GeC2—Gwinnett clay loam, 6 to 10 percent slopes, eroded

Map Unit Setting

National map unit symbol: pgxj
Elevation: 700 to 1,200 feet
Mean annual precipitation: 44 to 60 inches
Mean annual air temperature: 59 to 64 degrees F
Frost-free period: 190 to 230 days
Farmland classification: Not prime farmland

Map Unit Composition

Gwinnett and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Gwinnett

Setting

Landform: Hills
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Residuum weathered from amphibolite and/or residuum weathered from gneiss

Typical profile

H1 - 0 to 7 inches: clay loam

H2 - 7 to 35 inches: clay
H3 - 35 to 45 inches: sandy clay loam

Properties and qualities

Slope: 6 to 10 percent
Depth to restrictive feature: 40 to 60 inches to paralithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 6.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: B
Ecological site: F136XY820GA - Acidic upland forest, moist
Hydric soil rating: No

GeE2—Gwinnett clay loam, 10 to 25 percent slopes, eroded

Map Unit Setting

National map unit symbol: pgxk
Elevation: 700 to 1,200 feet
Mean annual precipitation: 44 to 60 inches
Mean annual air temperature: 59 to 64 degrees F
Frost-free period: 190 to 230 days
Farmland classification: Not prime farmland

Map Unit Composition

Gwinnett and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Gwinnett

Setting

Landform: Hills
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Residuum weathered from amphibolite and/or residuum weathered from gneiss

Typical profile

H1 - 0 to 7 inches: clay loam
H2 - 7 to 35 inches: clay
H3 - 35 to 45 inches: sandy clay loam

Properties and qualities

Slope: 10 to 25 percent

Depth to restrictive feature: 40 to 60 inches to paralithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 6.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: B
Ecological site: F136XY820GA - Acidic upland forest, moist
Hydric soil rating: No

GgB2—Gwinnett loam, 2 to 6 percent slopes, eroded

Map Unit Setting

National map unit symbol: pgxl
Elevation: 700 to 1,200 feet
Mean annual precipitation: 44 to 60 inches
Mean annual air temperature: 59 to 64 degrees F
Frost-free period: 190 to 230 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Gwinnett and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Gwinnett

Setting

Landform: Hills
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Residuum weathered from amphibolite and/or residuum weathered from gneiss

Typical profile

H1 - 0 to 7 inches: loam
H2 - 7 to 35 inches: clay
H3 - 35 to 45 inches: sandy clay loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: 40 to 60 inches to paralithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)

Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 6.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Ecological site: F136XY820GA - Acidic upland forest, moist
Hydric soil rating: No

GgC2—Gwinnett loam, 6 to 10 percent slopes, eroded

Map Unit Setting

National map unit symbol: pgxm
Elevation: 700 to 1,200 feet
Mean annual precipitation: 44 to 60 inches
Mean annual air temperature: 59 to 64 degrees F
Frost-free period: 190 to 230 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Gwinnett and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Gwinnett

Setting

Landform: Hills
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Residuum weathered from amphibolite and/or residuum weathered from gneiss

Typical profile

H1 - 0 to 7 inches: loam
H2 - 7 to 35 inches: clay
H3 - 35 to 45 inches: sandy clay loam

Properties and qualities

Slope: 6 to 10 percent
Depth to restrictive feature: 40 to 60 inches to paralithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 6.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: B
Ecological site: F136XY820GA - Acidic upland forest, moist
Hydric soil rating: No

GgE2—Gwinnett loam, 10 to 25 percent slopes, eroded

Map Unit Setting

National map unit symbol: pgxn
Elevation: 700 to 1,200 feet
Mean annual precipitation: 44 to 60 inches
Mean annual air temperature: 59 to 64 degrees F
Frost-free period: 190 to 230 days
Farmland classification: Not prime farmland

Map Unit Composition

Gwinnett and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Gwinnett

Setting

Landform: Hills
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Residuum weathered from amphibolite and/or residuum weathered from gneiss

Typical profile

H1 - 0 to 7 inches: loam
H2 - 7 to 35 inches: clay
H3 - 35 to 45 inches: sandy clay loam

Properties and qualities

Slope: 10 to 25 percent
Depth to restrictive feature: 40 to 60 inches to paralithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 6.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: B

Ecological site: F136XY820GA - Acidic upland forest, moist
Hydric soil rating: No

HdB—Hard Labor sandy loam, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: pgyy
Elevation: 350 to 900 feet
Mean annual precipitation: 44 to 60 inches
Mean annual air temperature: 59 to 64 degrees F
Frost-free period: 190 to 230 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Hard labor and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Hard Labor

Setting

Landform: Hills
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Residuum weathered from granite and gneiss and/or residuum weathered from schist

Typical profile

A - 0 to 3 inches: sandy loam
E - 3 to 7 inches: coarse sandy loam
Bt - 7 to 32 inches: clay
BC - 32 to 48 inches: sandy clay loam
C - 48 to 60 inches: sandy clay loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 30 to 39 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 8.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: C
Ecological site: F136XY810SC - Acidic upland forest, seasonally wet
Hydric soil rating: No

HYB—Helena sandy loam, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: pgxq
Elevation: 750 to 1,100 feet
Mean annual precipitation: 44 to 60 inches
Mean annual air temperature: 59 to 64 degrees F
Frost-free period: 190 to 230 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Helena and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Helena

Setting

Landform: Hills
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear
Parent material: Residuum weathered from granite and gneiss and/or residuum weathered from schist

Typical profile

H1 - 0 to 12 inches: sandy loam
H2 - 12 to 19 inches: sandy clay loam
H3 - 19 to 43 inches: clay
H4 - 43 to 60 inches: sandy clay loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 18 to 30 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: D
Ecological site: F136XY810SC - Acidic upland forest, seasonally wet
Hydric soil rating: No

LdB—Lloyd loam, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: sc55
Elevation: 400 to 1,200 feet
Mean annual precipitation: 44 to 60 inches
Mean annual air temperature: 59 to 64 degrees F
Frost-free period: 190 to 230 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Lloyd and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lloyd

Setting

Landform: Hills
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Residuum weathered from amphibolite and/or residuum weathered from gneiss

Typical profile

H1 - 0 to 7 inches: loam
H2 - 7 to 61 inches: clay
H3 - 61 to 70 inches: sandy clay loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 8.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Ecological site: F136XY820GA - Acidic upland forest, moist
Hydric soil rating: No

MCD—Musella cobbly loam, 6 to 15 percent slopes

Map Unit Setting

National map unit symbol: pgxz
Elevation: 600 to 1,200 feet
Mean annual precipitation: 44 to 60 inches
Mean annual air temperature: 59 to 64 degrees F
Frost-free period: 190 to 230 days
Farmland classification: Not prime farmland

Map Unit Composition

Musella and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Musella

Setting

Landform: Hills
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Residuum weathered from amphibolite and/or residuum weathered from gneiss

Typical profile

H1 - 0 to 4 inches: stony clay loam
H2 - 4 to 14 inches: gravelly clay loam
H3 - 14 to 18 inches: very gravelly clay loam
Cr - 18 to 60 inches: weathered bedrock

Properties and qualities

Slope: 6 to 15 percent
Depth to restrictive feature: 14 to 20 inches to paralithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to high (0.00 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 2.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: D
Ecological site: F136XY870GA - Lower piedmont acidic upland woodland, depth restriction, dry
Hydric soil rating: No

MhC2—Madison gravelly sandy loam, 6 to 10 percent slopes, eroded

Map Unit Setting

National map unit symbol: pgy2
Elevation: 740 to 1,260 feet
Mean annual precipitation: 44 to 60 inches
Mean annual air temperature: 59 to 64 degrees F
Frost-free period: 190 to 230 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Madison and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Madison

Setting

Landform: Hills
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Residuum weathered from mica schist and/or residuum weathered from gneiss

Typical profile

H1 - 0 to 6 inches: gravelly sandy loam
H2 - 6 to 30 inches: clay
H3 - 30 to 35 inches: clay loam
H4 - 35 to 66 inches: fine sandy loam

Properties and qualities

Slope: 6 to 10 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 8.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Ecological site: F136XY820GA - Acidic upland forest, moist
Hydric soil rating: No

MiC2—Madison sandy clay loam, 6 to 10 percent slopes, moderately eroded

Map Unit Setting

National map unit symbol: 2tx4k
Elevation: 360 to 1,700 feet
Mean annual precipitation: 44 to 60 inches
Mean annual air temperature: 59 to 64 degrees F
Frost-free period: 190 to 230 days
Farmland classification: Not prime farmland

Map Unit Composition

Madison, moderately eroded, and similar soils: 97 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Madison, Moderately Eroded

Setting

Landform: Ridges, hills
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Crest, side slope
Down-slope shape: Convex
Across-slope shape: Linear
Parent material: Residuum weathered from mica schist and/or residuum weathered from gneiss

Typical profile

Ap - 0 to 5 inches: sandy clay loam
Bt - 5 to 29 inches: clay
BC - 29 to 36 inches: sandy clay loam
C - 36 to 60 inches: sandy loam

Properties and qualities

Slope: 6 to 10 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: B
Ecological site: F136XY820GA - Acidic upland forest, moist
Hydric soil rating: No

MiD2—Madison sandy clay loam, 10 to 15 percent slopes, moderately eroded

Map Unit Setting

National map unit symbol: 2tx3v
Elevation: 360 to 1,700 feet
Mean annual precipitation: 44 to 60 inches
Mean annual air temperature: 59 to 64 degrees F
Frost-free period: 190 to 230 days
Farmland classification: Not prime farmland

Map Unit Composition

Madison, moderately eroded, and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Madison, Moderately Eroded

Setting

Landform: Hills
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Residuum weathered from mica schist and/or residuum weathered from gneiss

Typical profile

A - 0 to 5 inches: sandy clay loam
Bt - 5 to 25 inches: clay
BC - 25 to 35 inches: sandy clay loam
C - 35 to 60 inches: sandy loam

Properties and qualities

Slope: 10 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: B
Ecological site: F136XY820GA - Acidic upland forest, moist
Hydric soil rating: No

MiF2—Madison sandy clay loam, 15 to 45 percent slopes, eroded

Map Unit Setting

National map unit symbol: pgy6
Elevation: 740 to 1,280 feet
Mean annual precipitation: 44 to 60 inches
Mean annual air temperature: 59 to 64 degrees F
Frost-free period: 190 to 230 days
Farmland classification: Not prime farmland

Map Unit Composition

Madison and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Madison

Setting

Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Residuum weathered from mica schist and/or residuum weathered from gneiss

Typical profile

H1 - 0 to 6 inches: sandy clay loam
H2 - 6 to 30 inches: clay
H3 - 30 to 35 inches: clay loam
H4 - 35 to 66 inches: fine sandy loam

Properties and qualities

Slope: 15 to 45 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 8.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: B
Ecological site: F136XY820GA - Acidic upland forest, moist
Hydric soil rating: No

PfB2—Pacolet sandy loam, 2 to 6 percent slopes, moderately eroded

Map Unit Setting

National map unit symbol: 2tfgb
Elevation: 200 to 1,400 feet
Mean annual precipitation: 44 to 62 inches
Mean annual air temperature: 59 to 64 degrees F
Frost-free period: 190 to 230 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Pacolet, moderately eroded, and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pacolet, Moderately Eroded

Setting

Landform: Hills
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Residuum weathered from igneous and metamorphic rock

Typical profile

A - 0 to 4 inches: sandy loam
Bt - 4 to 25 inches: clay loam
BC - 25 to 43 inches: sandy loam
C - 43 to 80 inches: sandy loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Ecological site: F136XY820GA - Acidic upland forest, moist
Hydric soil rating: No

PfC2—Pacolet sandy loam, 6 to 10 percent slopes, moderately eroded

Map Unit Setting

National map unit symbol: 2tfgc
Elevation: 200 to 1,400 feet
Mean annual precipitation: 44 to 62 inches
Mean annual air temperature: 59 to 64 degrees F
Frost-free period: 190 to 230 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Pacolet, moderately eroded, and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pacolet, Moderately Eroded

Setting

Landform: Hills
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Crest
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Residuum weathered from igneous and metamorphic rock

Typical profile

A - 0 to 4 inches: sandy loam
Bt - 4 to 25 inches: clay loam
BC - 25 to 43 inches: sandy loam
C - 43 to 80 inches: sandy loam

Properties and qualities

Slope: 6 to 10 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Ecological site: F136XY820GA - Acidic upland forest, moist
Hydric soil rating: No

PgB2—Pacolet sandy clay loam, 2 to 6 percent slopes, moderately eroded

Map Unit Setting

National map unit symbol: 2tfgk
Elevation: 200 to 1,400 feet
Mean annual precipitation: 44 to 62 inches
Mean annual air temperature: 59 to 64 degrees F
Frost-free period: 190 to 230 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Pacolet, moderately eroded, and similar soils: 99 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pacolet, Moderately Eroded

Setting

Landform: Hills
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Residuum weathered from granite and gneiss and/or residuum weathered from schist

Typical profile

Ap - 0 to 6 inches: sandy clay loam
Bt - 6 to 26 inches: clay
BCt - 26 to 36 inches: sandy clay loam
C - 36 to 60 inches: sandy loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Ecological site: F136XY820GA - Acidic upland forest, moist
Hydric soil rating: No

PgC2—Pacolet sandy clay loam, 6 to 10 percent slopes, moderately eroded

Map Unit Setting

National map unit symbol: 2tfgl
Elevation: 200 to 1,400 feet
Mean annual precipitation: 44 to 62 inches
Mean annual air temperature: 59 to 64 degrees F
Frost-free period: 190 to 230 days
Farmland classification: Not prime farmland

Map Unit Composition

Pacolet, moderately eroded, and similar soils: 98 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pacolet, Moderately Eroded

Setting

Landform: Hills
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Residuum weathered from granite and gneiss and/or residuum weathered from schist

Typical profile

Ap - 0 to 6 inches: sandy clay loam
Bt - 6 to 26 inches: clay
BCt - 26 to 36 inches: sandy clay loam
C - 36 to 60 inches: sandy loam

Properties and qualities

Slope: 6 to 10 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4e
Hydrologic Soil Group: B
Ecological site: F136XY820GA - Acidic upland forest, moist
Hydric soil rating: No

PgD2—Pacolet sandy clay loam, 10 to 15 percent slopes, moderately eroded

Map Unit Setting

National map unit symbol: 2tfgm
Elevation: 200 to 1,400 feet
Mean annual precipitation: 44 to 62 inches
Mean annual air temperature: 59 to 64 degrees F
Frost-free period: 190 to 230 days
Farmland classification: Not prime farmland

Map Unit Composition

Pacolet, moderately eroded, and similar soils: 98 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pacolet, Moderately Eroded

Setting

Landform: Hills
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Residuum weathered from granite and gneiss and/or residuum weathered from schist

Typical profile

Ap - 0 to 6 inches: sandy clay loam
Bt - 6 to 26 inches: clay
BCt - 26 to 36 inches: sandy clay loam
C - 36 to 60 inches: sandy loam

Properties and qualities

Slope: 10 to 15 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Medium
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6e
Hydrologic Soil Group: B
Ecological site: F136XY820GA - Acidic upland forest, moist
Hydric soil rating: No

PgE2—Pacolet sandy clay loam, 15 to 25 percent slopes, moderately eroded

Map Unit Setting

National map unit symbol: 2tfgn
Elevation: 200 to 1,400 feet
Mean annual precipitation: 44 to 62 inches
Mean annual air temperature: 59 to 64 degrees F
Frost-free period: 190 to 230 days
Farmland classification: Not prime farmland

Map Unit Composition

Pacolet, moderately eroded, and similar soils: 98 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Pacolet, Moderately Eroded

Setting

Landform: Hills
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Residuum weathered from granite and gneiss and/or residuum weathered from schist

Typical profile

Ap - 0 to 6 inches: sandy clay loam
Bt - 6 to 26 inches: clay
BCt - 26 to 36 inches: sandy clay loam
C - 36 to 60 inches: sandy loam

Properties and qualities

Slope: 15 to 25 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: High
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.4 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: B
Ecological site: F136XY820GA - Acidic upland forest, moist
Hydric soil rating: No

RAC—Rawlings and Rion soils, 2 to 10 percent slopes

Map Unit Setting

National map unit symbol: pgzd
Elevation: 200 to 1,400 feet
Mean annual precipitation: 44 to 60 inches
Mean annual air temperature: 59 to 64 degrees F
Frost-free period: 190 to 230 days
Farmland classification: Not prime farmland

Map Unit Composition

Rawlings and similar soils: 50 percent
Rion and similar soils: 30 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Rawlings

Setting

Landform: Hills
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Residuum weathered from granite and gneiss

Typical profile

A1 - 0 to 2 inches: sandy loam
A2 - 2 to 10 inches: sandy loam
Bt1 - 10 to 15 inches: sandy loam
Bt2 - 15 to 33 inches: sandy clay loam
R - 33 to 43 inches: unweathered bedrock

Properties and qualities

Slope: 2 to 10 percent
Depth to restrictive feature: 20 to 40 inches to lithic bedrock
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 5.95 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Very low (about 2.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: B
Ecological site: F136XY830NC - Acidic upland forest, depth restriction, dry-moist
Hydric soil rating: No

Description of Rion

Setting

Landform: Hills
Landform position (two-dimensional): Summit, shoulder, backslope
Landform position (three-dimensional): Interfluve, side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Residuum weathered from granite and gneiss

Typical profile

H1 - 0 to 5 inches: sandy loam
H2 - 5 to 30 inches: sandy clay loam
H3 - 30 to 60 inches: sandy loam

Properties and qualities

Slope: 2 to 10 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 6.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Ecological site: F136XY820GA - Acidic upland forest, moist
Hydric soil rating: No

RNF—Rion and Bethlehem soils, 15 to 45 percent slopes, stony

Map Unit Setting

National map unit symbol: pgz9
Elevation: 200 to 1,400 feet
Mean annual precipitation: 44 to 60 inches
Mean annual air temperature: 59 to 64 degrees F
Frost-free period: 190 to 230 days
Farmland classification: Not prime farmland

Map Unit Composition

Rion and similar soils: 45 percent
Bethlehem and similar soils: 35 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Rion

Setting

Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Residuum weathered from granite and gneiss

Typical profile

H1 - 0 to 5 inches: sandy loam
H2 - 5 to 30 inches: sandy clay loam
H3 - 30 to 60 inches: sandy loam

Properties and qualities

Slope: 15 to 45 percent
Surface area covered with cobbles, stones or boulders: 0.1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 6.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: B
Ecological site: F136XY820GA - Acidic upland forest, moist
Hydric soil rating: No

Description of Bethlehem

Setting

Landform: Hills
Landform position (two-dimensional): Backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Residuum weathered from mica schist and/or residuum weathered from schist

Typical profile

H1 - 0 to 8 inches: gravelly sandy loam
H2 - 8 to 12 inches: sandy clay loam
H3 - 12 to 25 inches: clay
H4 - 25 to 31 inches: gravelly sandy clay loam
Cr - 31 to 60 inches: weathered bedrock

Properties and qualities

Slope: 15 to 45 percent
Surface area covered with cobbles, stones or boulders: 0.1 percent
Depth to restrictive feature: 20 to 40 inches to paralithic bedrock
Drainage class: Well drained

Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.4 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: C
Ecological site: F136XY830NC - Acidic upland forest, depth restriction, dry-moist
Hydric soil rating: No

ToA—Toccoa fine sandy loam, 0 to 4 percent slopes, frequently flooded

Map Unit Setting
National map unit symbol: sc4w
Elevation: 470 to 1,500 feet
Mean annual precipitation: 44 to 60 inches
Mean annual air temperature: 59 to 64 degrees F
Frost-free period: 190 to 230 days
Farmland classification: Farmland of statewide importance

Map Unit Composition
Toccoa and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Toccoa

Setting
Landform: Flood plains
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium

Typical profile
H1 - 0 to 10 inches: fine sandy loam
H2 - 10 to 60 inches: sandy loam

Properties and qualities
Slope: 0 to 4 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): High (1.98 to 5.95 in/hr)
Depth to water table: About 30 to 60 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 6.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: A
Ecological site: F136XY620GA - Flood plain forest, moist
Hydric soil rating: No

Ub—Urban land-Udorthents complex

Map Unit Setting

National map unit symbol: pnfw
Elevation: 560 to 1,210 feet
Mean annual precipitation: 52 to 53 inches
Mean annual air temperature: 61 degrees F
Frost-free period: 225 to 230 days
Farmland classification: Not prime farmland

Map Unit Composition

Urban land: 45 percent
Udorthents and similar soils: 35 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Udorthents

Properties and qualities

Slope: 2 to 15 percent
Depth to restrictive feature: More than 80 inches
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None

W—Water

Map Unit Composition

Water: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Wed—Wehadkee soils, 0 to 2 percent slopes, frequently flooded

Map Unit Setting

National map unit symbol: 2wq9k
Elevation: 340 to 610 feet
Mean annual precipitation: 35 to 55 inches
Mean annual air temperature: 50 to 70 degrees F

Frost-free period: 175 to 250 days
Farmland classification: Not prime farmland

Map Unit Composition
Wehadkee, frequently flooded, and similar soils: 95 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Wehadkee, Frequently Flooded

Setting
Landform: Flood plains
Landform position (three-dimensional): Dip
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Loamy alluvium

Typical profile
A - 0 to 8 inches: silt loam
Bg1 - 8 to 14 inches: loam
Bg2 - 14 to 35 inches: clay loam
Cg - 35 to 80 inches: sandy clay loam

Properties and qualities
Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: Frequent
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 8.3 inches)

Interpretive groups
Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6w
Hydrologic Soil Group: B/D
Ecological site: F136XY600NC - Flood plain forest, very wet
Hydric soil rating: Yes

WgB2—Wickham sandy loam, 2 to 6 percent slopes

Map Unit Setting
National map unit symbol: 2tffp
Elevation: 20 to 1,030 feet
Mean annual precipitation: 44 to 60 inches
Mean annual air temperature: 59 to 64 degrees F
Frost-free period: 190 to 230 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Wickham and similar soils: 95 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Wickham

Setting

Landform: Stream terraces
Landform position (three-dimensional): Tread
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Alluvium

Typical profile

Ap - 0 to 7 inches: sandy loam
Bt - 7 to 40 inches: sandy clay loam
C - 40 to 60 inches: gravelly sandy loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 8.7 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Ecological site: F136XY820GA - Acidic upland forest, moist
Hydric soil rating: No

WkB—Worsham sandy loam, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: pgyq
Elevation: 790 to 1,210 feet
Mean annual precipitation: 44 to 60 inches
Mean annual air temperature: 59 to 64 degrees F
Frost-free period: 190 to 230 days
Farmland classification: Not prime farmland

Map Unit Composition

Worsham and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Worsham

Setting

Landform: Drainageways
Down-slope shape: Linear
Across-slope shape: Concave
Parent material: Alluvium

Typical profile

H1 - 0 to 8 inches: sandy loam
H2 - 8 to 50 inches: sandy clay
H3 - 50 to 70 inches: sandy loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Capacity of the most limiting layer to transmit water (Ksat): Very low to moderately low (0.00 to 0.06 in/hr)
Depth to water table: About 0 to 12 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4w
Hydrologic Soil Group: D
Ecological site: F136XY800VA - Acidic upland depressions and heads of drains, wet
Hydric soil rating: Yes

WrE2—Wedowee sandy loam, 10 to 25 percent slopes, eroded

Map Unit Setting

National map unit symbol: pgyr
Elevation: 300 to 1,200 feet
Mean annual precipitation: 44 to 60 inches
Mean annual air temperature: 59 to 64 degrees F
Frost-free period: 190 to 230 days
Farmland classification: Not prime farmland

Map Unit Composition

Wedowee and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Wedowee

Setting

Landform: Hills
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Side slope

Down-slope shape: Linear
Across-slope shape: Linear

Typical profile

H1 - 0 to 10 inches: sandy loam
H2 - 10 to 14 inches: loam
H3 - 14 to 32 inches: sandy clay
H4 - 32 to 60 inches: sandy clay loam

Properties and qualities

Slope: 10 to 25 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 8.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 7e
Hydrologic Soil Group: B
Ecological site: F136XY820GA - Acidic upland forest, moist
Hydric soil rating: No

Walton County, Georgia

AxB2—Appling coarse sandy loam, 2 to 6 percent slopes, eroded

Map Unit Setting

National map unit symbol: 462g
Elevation: 300 to 1,200 feet
Mean annual precipitation: 44 to 60 inches
Mean annual air temperature: 59 to 64 degrees F
Frost-free period: 190 to 230 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Appling and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Appling

Setting

Landform: Hills
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Residuum weathered from granite and gneiss and/or residuum weathered from schist

Typical profile

H1 - 0 to 10 inches: sandy loam
H2 - 10 to 14 inches: loam
H3 - 14 to 32 inches: sandy clay
H4 - 32 to 60 inches: sandy clay loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 8.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Ecological site: F136XY820GA - Acidic upland forest, moist
Hydric soil rating: No

AxC2—Appling coarse sandy loam, 6 to 10 percent slopes, eroded

Map Unit Setting

National map unit symbol: 462h
Elevation: 300 to 1,200 feet
Mean annual precipitation: 44 to 60 inches
Mean annual air temperature: 59 to 64 degrees F
Frost-free period: 190 to 230 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Appling and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Appling

Setting

Landform: Hills
Landform position (two-dimensional): Shoulder, backslope
Landform position (three-dimensional): Side slope
Down-slope shape: Linear
Across-slope shape: Linear
Parent material: Residuum weathered from granite and gneiss and/or residuum weathered from schist

Typical profile

H1 - 0 to 10 inches: sandy loam
H2 - 10 to 14 inches: loam
H3 - 14 to 32 inches: sandy clay
H4 - 32 to 60 inches: sandy clay loam

Properties and qualities

Slope: 6 to 10 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 8.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3e
Hydrologic Soil Group: B
Ecological site: F136XY820GA - Acidic upland forest, moist
Hydric soil rating: No

CdB2—Cecil coarse sandy loam, 2 to 6 percent slopes, eroded

Map Unit Setting

National map unit symbol: 462s
Elevation: 200 to 1,400 feet
Mean annual precipitation: 44 to 60 inches
Mean annual air temperature: 59 to 64 degrees F
Frost-free period: 190 to 230 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Cecil and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Cecil

Setting

Landform: Hills
Landform position (two-dimensional): Summit
Landform position (three-dimensional): Interfluve
Down-slope shape: Convex
Across-slope shape: Convex
Parent material: Residuum weathered from granite and gneiss and/or residuum weathered from schist

Typical profile

H1 - 0 to 3 inches: sandy loam
H2 - 3 to 29 inches: clay
H3 - 29 to 52 inches: sandy clay loam
H4 - 52 to 70 inches: sandy loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 7.6 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Ecological site: F136XY820GA - Acidic upland forest, moist
Hydric soil rating: No

CiB—Colfax sandy loam, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 462x
Elevation: 670 to 970 feet
Mean annual precipitation: 44 to 60 inches
Mean annual air temperature: 59 to 64 degrees F
Frost-free period: 190 to 230 days
Farmland classification: Farmland of statewide importance

Map Unit Composition

Colfax and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Colfax

Setting

Landform: Hills
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear

Typical profile

H1 - 0 to 12 inches: sandy loam
H2 - 12 to 19 inches: sandy clay loam
H3 - 19 to 43 inches: clay
H3 - 43 to 60 inches: coarse sandy loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: 16 to 35 inches to fragipan
Drainage class: Moderately well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately low to moderately high (0.06 to 0.20 in/hr)
Depth to water table: About 18 to 30 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Low (about 3.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: D
Ecological site: F136XY810SC - Acidic upland forest, seasonally wet
Hydric soil rating: No

DjA—Durham loamy coarse sand, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: 4632
Elevation: 720 to 950 feet
Mean annual precipitation: 44 to 60 inches
Mean annual air temperature: 59 to 64 degrees F
Frost-free period: 190 to 230 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Durham and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Durham

Setting

Landform: Hills
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear

Typical profile

H1 - 0 to 9 inches: loamy sand
H2 - 9 to 35 inches: clay
H3 - 35 to 46 inches: clay loam
H4 - 46 to 65 inches: sandy clay loam

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 8.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 1
Hydrologic Soil Group: B
Ecological site: F136XY820GA - Acidic upland forest, moist
Hydric soil rating: No

DjB—Durham loamy coarse sand, 2 to 6 percent slopes

Map Unit Setting

National map unit symbol: 4633
Elevation: 670 to 980 feet
Mean annual precipitation: 44 to 60 inches
Mean annual air temperature: 59 to 64 degrees F
Frost-free period: 190 to 230 days
Farmland classification: All areas are prime farmland

Map Unit Composition

Durham and similar soils: 100 percent
Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Durham

Setting

Landform: Hills
Landform position (two-dimensional): Footslope
Landform position (three-dimensional): Base slope
Down-slope shape: Concave
Across-slope shape: Linear

Typical profile

H1 - 0 to 9 inches: loamy sand
H2 - 9 to 35 inches: clay
H3 - 35 to 46 inches: clay loam
H4 - 46 to 65 inches: sandy clay loam

Properties and qualities

Slope: 2 to 6 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Capacity of the most limiting layer to transmit water (Ksat): Moderately high to high (0.57 to 1.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Available water supply, 0 to 60 inches: Moderate (about 8.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2e
Hydrologic Soil Group: B
Ecological site: F136XY820GA - Acidic upland forest, moist
Hydric soil rating: No

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Appendix F

Biological Resources

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Georgia Ecological Services Field Office
355 East Hancock Avenue
Room 320
Athens, GA 30601-2523
Phone: (706) 613-9493 Fax: (706) 613-6059

In Reply Refer To: January 11, 2024
Project code: 2024-0035175
Project Name: Lawrenceville Natural Gas Pipeline Replacement
Please provide this document to the Federal agency or their designee with your loan/grant application.

Subject: Consistency letter for the project named 'Lawrenceville Natural Gas Pipeline Replacement' for specified threatened and endangered species that may occur in your proposed project location, pursuant to the IPaC determination key titled 'Clearance to Proceed with Federally-Insured Loan and Grant Project Requests'.

To whom it may concern:

On January 11, 2024, Elizabeth Williams used the IPaC determination key 'Clearance to Proceed with Federally-Insured Loan and Grant Project Requests'; dated November 15, 2023, in the U.S. Fish and Wildlife Service's online IPaC tool to evaluate potential impacts to listed species from a project named 'Lawrenceville Natural Gas Pipeline Replacement' in Gwinnett and Walton counties, Georgia (shown below):

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@33.9823213,-83.99114861033058,14z

The following description was provided for the project 'Lawrenceville Natural Gas Pipeline Replacement':

> Lawrenceville Natural Gas Pipeline Replacement, PHMSA NGDISM

Based on your answers provided, the proposed project is unlikely to have any detrimental effects to federally-listed species or critical habitat. Therefore, per this guidance, Elizabeth Williams has determined that Lawrenceville Natural Gas Pipeline Replacement will have No Effect on the species listed below.

This letter serves as documentation of your consideration of endangered species, bald eagles, and migratory birds. No further coordination with the Service is necessary.

Please be advised that, if later modifications are made to the project that do not meet the criteria described above, if additional information involving potential effects to listed species becomes available, or if a new species is listed, reinitiation of consultation may be necessary.

BIRDS

- Whooping Crane *Grus americana* Experimental Population, Non-Essential

FERNS AND ALLIES

- Black Spored Quillwort *Isoetes melanospora* Endangered

FLOWERING PLANTS

- Little Amphianthus *Amphianthus pusillus* Threatened

INSECTS

- Monarch Butterfly *Danaus plexippus* Candidate

MAMMALS

- Tricolored Bat *Perimyotis subflavus* Proposed Endangered

ADDITIONAL CONSIDERATIONS FOR NON-FEDERALLY LISTED SPECIES

- **Bald Eagle Nest Issues.** If any of the above-referenced activities (rehabilitation, demolition, or rebuilding) are proposed to occur **within 660 feet** of an active or alternate bald eagle (*Haliaeetus leucocephalus*) nest during the nesting season (October 1 through May 15), we recommend the applicant or their designated agent coordinate with the agency responsible for managing wildlife in their state. For additional information, please visit the Service's regional web page: https://www.fws.gov/service/3-200-71-eagle-take-associated-not-purpose-activity-incidental-take.
- **Migratory Bird Issues.** If any native birds are using the structures for nesting then actions should be taken so as not to disturb the adults, nests, eggs, or chicks as this could lead to a potential violation of the Migratory Bird Treaty Act. If nests are present or any birds are using the structures regularly for roosting purposes, we recommend the applicant or their designated agent coordinate with the appropriate Service’s Field Office and visit the Service’s Migratory Bird Program website at https://www.fws.gov/library/collections/

avoiding-and-minimizing-incidental-take-migratory-birds for recommendations on how impacts can be avoided and minimized.

Elizabeth Williams answered the determination key questions for this project as follows:

1. Does the project intersect Monroe County, FL?

   Automatically answered
   No

2. Is the project exclusively a Federal loan transfer, where the original lending or mortgage institutions for existing project are no longer holding the loan and the property is being transferred via a federally-backed loan?

   *No, this is **not** a Federal loan transfer as described above, or includes activities in addition to a Federal loan transfer.*

3. Does the project include a federally-insured loan or federal grant funding?

   Yes, the project includes a federally-insured loan or federal grant funding.

4. Is the entire site currently developed/hard-surfaced (i.e., the site consists entirely of existing roads, sidewalks, buildings, driveways, etc., and does not contain any undeveloped and/or vegetated areas)?

   No, the site contains some undeveloped and/or vegetated areas.

5. Does the project site overlap designated or proposed critical habitat for any federally listed species?

   Automatically answered
   No

6. Will completion of this project require clearing of **undisturbed** habitat (*e.g.*, native habitat, agricultural areas, pasture, etc.) beyond the original footprint of the existing project?

   *No, this project will **not** require clearing of any undisturbed habitat.*

7. Is the federally-insured loan or federal grant funding being used for demolition, rehabilitation, renovation, and/or rebuilding of one or more existing facilities (*e.g.*, residential, commercial and industrial sites, or utilities)?

   Yes, the project includes Federal funding for work on existing facilities.

8. Will the project significantly alter the present capacity of an existing structure?

   No, this project will not alter the present capacity of any existing structure.

9. Does your project involve structures that are being used by any federally endangered or threatened species (*e.g.*, roosting bonneted bats, denning indigo snakes, etc.) or are there known reports of species using the site?

   *No, the site and/or structure(s) are **not** being used by any federally listed species.*

10. Is the project authorized, funded, or being carried out by the Farm Service Agency (FSA)?

    No

11. Is there highly suitable eastern indigo snake habitat in the project area?

    No

Attachments:

- Project questionnaire
- Standard manatee construction conditions
- Determination key description: Clearance to Proceed with Federally-Insured Loan and Grant Project Requests
- U.S. Fish & Wildlife Service contact list

PROJECT INFORMATIONAL QUESTIONNAIRE

As part of completing the determination key, Elizabeth Williams provided the following information about their project:

1. Please describe the loan/grant program you are using

   Natural Gas Distribution Infrastructure Safety and Modernization (NGDISM) Grant Program

2. Which Federal Agency is the lead agency providing the funding?

   PHMSA

3. Which types of activities you will be conducting:

   Utilities

4. Which types of structures this funding will address:

   natural gas pipeline

5. Please describe the activity you will be conducting:

   Natural gas pipeline replacement

6. How many square feet of facilities will be affected by this project?

   2230000

7. Are there bald eagles within 660 feet of the site, or migratory birds or bats using structures on the site?

   None of the above

DETERMINATION KEY DESCRIPTION: CLEARANCE TO PROCEED WITH FEDERALLY-INSURED LOAN AND GRANT PROJECT REQUESTS

This key was last updated in IPaC on November 15, 2023. Keys are subject to periodic revision.

This determination key is for all Federally-insured loans, loan transfers, or grant requests for projects that may be completed without requiring additional clearing of undisturbed habitat beyond the original footprint of the existing project. For the purposes of this key, Federal loan transfers are those transfers where the original lending or mortgage institutions for existing projects are no longer holding the loans and the properties are being transferred via federally backed loans. Projects may include demolition, rehabilitation, renovations, and/or rebuilding of existing structures (*e.g.*, commercial buildings, multi-family housing, single-family housing), and various utilities projects such as water and wastewater treatment facilities, sewer or power line repair, etc.

The U.S. Fish and Wildlife Service is the lead Federal agency charged with the protection and conservation of Federal Trust Resources, such as threatened and endangered species and migratory birds, in accordance with section 7 of the Endangered Species Act of 1973, as amended (Act) (87 Stat. 884; 16 U.S.C. 1531 et seq.), the Bald and Golden Eagle Protection Act, (16 U.S.C. 668-668d) (Eagle Act), and the Migratory Bird Treaty Act (40 Stat. 755; 16 U.S.C. 701 et seq.).

Recently, many Federal agencies have activated programs that have resulted in an increased consumer demand to initiate projects through federally-backed loans and grants, all of which require those same Federal agencies to comply with Section 7 of the Act. Consequently, we have experienced an increase in the number of requests for review of these government-backed loan and grant projects. These include, but are not limited to:

1. U.S. Department of Housing and Urban Development’s (HUD) Neighborhood Stabilization and Community Development Block Grant programs;

2. U.S. Department of Energy’s (DOE) Energy Efficiency and Renewable Energy program;

3. U.S. Department of Agriculture’s (USDA) Housing Assistance and Rural Development Loan and Grant Assistance programs;

4. U.S. Federal Aviation Administration (FAA) regulatory airport and runway modifications;

5. U.S. Federal Emergency Management Agency’s (FEMA) Hazard Mitigation Assistance program; and

6. U.S. Environmental Protection Agency’s (EPA) Clean Water State Revolving Fund.

In order to fulfill the Act's statutory obligations in a timely and consistent manner, and to assist Federal agencies, State and local governments, and consultants in addressing Section 7 and National Environmental Policy Act (NEPA) environmental impact review requirements, we provide the following guidance and clearance relative to the criteria stated below for Federally-insured loan and grant project requests.

This guidance is based on the signed letters:
U.S. Fish and Wildlife Service Clearance to Proceed with Federally-Insured Loan and Grant Project Requests in Florida.
U.S. Fish and Wildlife Service Clearance to Proceed with Federally-Insured Loan and Grant Project Requests in Alabama, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee.

IPAC USER CONTACT INFORMATION

Agency: Department of Transportation
Name: Elizabeth Williams
Address: 55 Broadway
City: Cambridge
State: MA
Zip: 02142
Email elizabeth.williams1@dot.gov
Phone: 8572599218

United States Department of the Interior

FISH AND WILDLIFE SERVICE
Georgia Ecological Services Field Office
355 East Hancock Avenue
Room 320
Athens, GA 30601-2523
Phone: (706) 613-9493 Fax: (706) 613-6059

In Reply Refer To: January 11, 2024
Project Code: 2024-0035175
Project Name: Lawrenceville Natural Gas Pipeline Replacement

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

To Whom It May Concern:

Thank you for your request for information on federally listed species and important wildlife habitats that may occur in your project area. The U.S. Fish and Wildlife Service (Service) has responsibility for certain species of wildlife under the Endangered Species Act (ESA) of 1973 as amended (16 USC 1531 et seq.), the Migratory Bird Treaty Act (MBTA) as amended (16 USC 701-715), Fish and Wildlife Coordination Act (FWCA) (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.) and the Bald and Golden Eagle Protection Act (BGEPA) as amended (16 USC 668-668c). We are providing the following guidance to assist you in determining which federally imperiled species may or may not occur within your project area and to recommend some conservation measures that can be included in your project design if you determine those species or designated critical habitat may be affected by your proposed project.

FEDERALLY-LISTED SPECIES AND DESIGNATED CRITICAL HABITAT

Attached is a list of endangered, threatened, and proposed species that may occur in your project area. Your project area may not necessarily include all or any of these species. Under the ESA, it is the responsibility of the Federal action agency, project proponent, or their designated representative to determine if a proposed action "may affect" endangered, threatened, or proposed species, or designated critical habitat, and if so, to consult with the Service further. Similarly, it is the responsibility of the Federal action agency or project proponent, not the Service, to make “no effect” determinations. If you determine that your proposed action will have “no effect” on threatened or endangered species or their respective critical habitat, you do not need to seek concurrence with the Service. Nevertheless, it is a violation of Federal law to harm or harass any federally listed threatened or endangered fish or wildlife species without the appropriate permit. If you need additional information to assist in your effect determination, please contact the Service.

If you determine that your proposed action may affect federally listed species, please consult with the Service. Through the consultation process, we will analyze information contained in a biological assessment or equivalent document that you provide. If your proposed action is associated with Federal funding or permitting, consultation will occur with the Federal agency under section 7(a)(2) of the ESA. Otherwise, an incidental take permit pursuant to section 10(a)(1)(B) of the ESA (also known as a Habitat Conservation Plan) may be necessary to exempt harm or harass federally listed threatened or endangered fish or wildlife species. For more information regarding formal consultation and HCPs, please see the Service's Section 7 Consultation Library and Habitat Conservation Plans Library Collections.

Action Area. The scope of federally listed species compliance not only includes direct effects, but also any indirect effects of project activities (e.g., equipment staging areas, offsite borrow material areas, or utility relocations). The action area is the spatial extent of an action's direct and indirect modifications or impacts to the land, water, or air (50 CFR 402.02). Large projects may have effects to land, water, or air outside the immediate footprint of the project, and these areas should be included as part of the action area. Effects to land, water, or air outside of a project footprint could include things like lighting, dust, smoke, and noise. To obtain a complete list of species, the action area should be uploaded or drawn in IPaC rather than just the project footprint.

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. Please feel free to contact us if you need more current information or assistance regarding the potential impacts to federally proposed, listed, and candidate species and federally designated and proposed critical habitat. Please note that under 50 CFR 402.12(e) of the regulations implementing section 7 of the Act, the accuracy of this species list should be verified after 90 days. This verification can be completed formally or informally as desired. An updated list may be requested through IPaC.

ESA Section 7 consultation (and related tools such as the EDGES and/or DKeys) apply to projects being permitted or funded by a Federal agency. However, please note that a lead federal agency may consider an action area that excludes portions of the project footprint. In these cases, further coordination with our office may be required to ensure compliance with the ESA. It is the responsibility of the project proponent to coordinate with the lead federal agency to understand the action and action area being reviewed as part of ESA Section 7 consultation.

How to Submit a Project Review Package. If you determine that your action may affect any federally listed species and would like technical assistance from our office, please send us a complete project review package. A step by step guide is available at the Georgia Ecological Services Project Planning and Review page (https://www.fws.gov/office/georgia-ecological-services/project-planning-review).

Beginning April 1, 2023, requests for threatened and endangered species project reviews must be submitted to our office using the process described below. (If you are not emailing us to submit a project for review, your email will be forwarded to the appropriate staff.) This is a three-step process. All steps must be completed to ensure your project is reviewed by a biologist in our office and you receive a timely response. In brief the steps are:

Step 1. Request an official species list for your project through IPaC (Done!)
Step 2. Complete applicable Determination Keys
Step 3. Send your complete project project review package to **GAES_Assistance@FWS.gov** for review if no DKey is applicable or all aspects of the project are not addressed by DKeys, i.e. a species returned by IPaC does not have a DKey to address impacts to it. A complete project review package should include:

1. A description of the proposed action, including any measures intended to avoid, minimize, or offset effects of the action. The description shall provide sufficient detail to assess the effects of the action on listed species and critical habitat, such as the purpose of the action; duration and timing of the action; location (latitude and longitude); specific activities involving disturbance to land, water, and air, and how they will be carried out; current description of areas to be affected directly or indirectly by the action; and maps, drawings, or similar schematics of the action.
2. An updated Official Species List and DKey results
3. Biological Assessments (may include habitat assessments and information on the presence of listed species in the action area);
4. Description of effects of the action on species in the action area and, if relevant, effect determinations for species and critical habitat;
5. Conservation measures and any other available information related to the nature and scope of the proposed action relevant to its effects on listed species or designated critical habitat (e.g., management plans related to stormwater, vegetation, erosion and sediment plans). Visit the Georgia Conservation Planning Toolbox (https://www.fws.gov/story/conservation-tools-georgia) for information about conservation measures.
6. In the email subject line, use the following format to include the Project Code from your IPaC species list and the county in which the project is located (Example: Project Code: 2023-0049730 Gwinnett Co.). For Georgia Department of Transportation related projects, please work with the Office of Environmental Services ecologist to determine the appropriate USFWS transportation liaison.

The Georgia Ecological Services Field Office will send a response email within approximately 30 days of receipt with technical assistance or further recommendations for specific species.

WETLANDS AND FLOODPLAINS

Under Executive Orders 11988 and 11990, Federal agencies are required to minimize the destruction, loss, or degradation of wetlands and floodplains, and preserve and enhance their natural and beneficial values. These habitats should be conserved through avoidance, or mitigated to ensure that there would be no net loss of wetlands function and value. We encourage you to use the National Wetland Inventory (NWI) maps in conjunction with ground-truthing to identify wetlands occurring in your project area. The Service's NWI program website (https://www.fws.gov/program/national-wetlands-inventory) integrates digital map data with other resource information. We also recommend you contact the U.S. Army Corps of Engineers for

permitting requirements under section 404 of the Clean Water Act if your proposed action could impact floodplains or wetlands.

MIGRATORY BIRDS

The MBTA prohibits the taking of migratory birds, nests, and eggs, except as permitted by the Service's Migratory Birds Program (https://fws.gov/program/migratory-birds). To minimize the likelihood of adverse impacts to migratory birds, we recommend construction activities occur outside the general bird nesting season from March through August, or that areas proposed for construction during the nesting season be surveyed, and when occupied, avoided until the young have fledged.

We recommend review of Birds of Conservation Concern to fully evaluate the effects to the birds at your site. This list identifies birds that are potentially threatened by disturbance and construction. It can be found at the Service's Migratory Birds Conservation Library Collection (https://fws.gov/library/collections/migratory-bird-conservation-documents).

Information related to best practices and migratory birds can be found at the Service's Avoiding and Minimizing Incidental Take of Migratory Birds Library Collection (https://fws.gov/library/collections/avoiding-and-minimizing-incidental-take-migratory-birds).

BALD AND GOLDEN EAGLES

The bald eagle (*Haliaeetus leucocephalus*) was delisted under the ESA on August 9, 2007. Both the bald eagle and golden eagle (*Aquila chrysaetos*) are still protected under the MBTA and BGEPA. The BGEPA affords both eagles protection in addition to that provided by the MBTA, in particular, by making it unlawful to "disturb" eagles. Under the BGEPA, the Service may issue limited permits to incidentally "take" eagles (e.g., injury, interfering with normal breeding, feeding, or sheltering behavior nest abandonment). For information on bald and golden eagle management guidelines, we recommend you review information provided at the Service's Bald and Golden Eagle Management Library Collection (https://fws.gov/library/collections/bald-and-golden-eagle-management).

NATIVE BATS

If your species list includes Indiana bat (*Myotis sodalis*) or northern long-eared bat (*M. septentrionalis*) and the project is expected to impact forested habitat that is appropriate for maternity colonies of these species, forest clearing should occur outside of the period when bats may be present. Federally listed bats could be actively present in forested landscapes from April 1 to October 15 of any year and have non-volant pups from May 15 to July 31 in any year. Non-volant pups are incapable of flight and are vulnerable to disturbance during that time.

Indiana, northern long-eared, and gray (*M. grisescens*) bats are all known to utilize bridges and culverts in Georgia. If your project includes maintenance, construction, or any other modification or demolition to transportation structures, a qualified individual should complete a survey of these structures for bats and submit your findings via the Georgia Bats in Bridges cell phone application, free on Apple and Android devices. Please include these findings in any biological

assessment(s) or other documentation that is submitted to our office for technical assistance or consultation.

Additional information can be found at Georgia Ecological Services' Conservation Planning Toolbox and Bat Conservation in Georgia pages.

MONARCH BUTTERFLY

On December 20, 2020, the Service determined that listing the Monarch butterfly (*Danaus plexippus*) under the Endangered Species Act is warranted but precluded at this time by higher priority listing actions. With this finding, the monarch butterfly becomes a candidate for listing. The Service will review its status each year until we are able to begin developing a proposal to list the monarch.

As it is a candidate for listing, the Service welcomes conservation measures for this species. Recommended, and voluntary, conservation measures for projects in Georgia can be found at our Monarch Conservation in Georgia (https://www.fws.gov/project/monarch-conservation-georgia) page.

EASTERN INDIGO SNAKE

Our office has published guidance documents to assist project proponents in avoiding and minimizing potential impact to the eastern indigo snake. The Visual Encounter Survey Protocol for the Eastern Indigo Snake (*Drymarchon couperi*) in Georgia is recommended for project proponents or their designees to evaluate the possible presence of the Eastern indigo snake at a proposed project site. The Standard Protection Measures for the Eastern Indigo Snake (*Drymarchon couperi*) include educational materials and training that can help protect the species by making staff working on a project site aware of their presence and traits. In Georgia, indigo snakes are closely associated with the state-listed gopher tortoise (*Gopherus polyphemus*), a reptile that excavates extensive underground burrows that provide the snake shelter from winter cold and summer desiccation.

SOLAR ENERGY DEVELOPMENT

The Recommended Practices for the Responsible Siting and Design of Solar Development in Georgia were published in September 2023 and are intended to provide voluntary guidance to support consideration of natural resources during the development of photovoltaic solar in Georgia. Furthermore, the Georgia Low Impact Solar Siting Tool (LISST) is available as a web application and as a map layer in IPaC (Find it in the “Layers” Box > “Environmental Data”) to provide project managers with the data to identify areas that may be preferred for low-impact development. The tool seeks to support the acceleration of large-scale solar development in areas with less impact to the environment.

STATE AGENCY COORDINATION

Additional information that addresses at-risk or high priority natural resources can be found in the State Wildlife Action Plan (https://georgiawildlife.com/WildlifeActionPlan), at Georgia Department of Natural Resources, Wildlife Resources Division Biodiversity Portal (https://georgiawildlife.com/conservation/species-of-concern), Georgia's Natural, Archaeological, and

Historic Resources GIS portal (https://www.gnahrgis.org/gnahrgis/index.do), and the Georgia Ecological Services HUC10 Watershed Guidance page.

Thank you for your concern for endangered and threatened species. We appreciate your efforts to identify and avoid impacts to listed and sensitive species in your project area. For further consultation on your proposed activity, please email gaes_assistance@fws.gov and reference the project county and your Service Project Tracking Number.

This letter constitutes Georgia Ecological Services' general comments under the authority of the Endangered Species Act.

Attachment(s):

- Official Species List
- Bald & Golden Eagles
- Migratory Birds
- Wetlands

OFFICIAL SPECIES LIST

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

This species list is provided by:

Georgia Ecological Services Field Office
355 East Hancock Avenue
Room 320
Athens, GA 30601-2523
(706) 613-9493

PROJECT SUMMARY

Project Code: 2024-0035175
Project Name: Lawrenceville Natural Gas Pipeline Replacement
Project Type: Distribution Line - Maintenance/Modification - Below Ground
Project Description: Lawrenceville Natural Gas Pipeline Replacement, PHMSA NGDISM
Project Location:

The approximate location of the project can be viewed in Google Maps: https://www.google.com/maps/@33.9823213,-83.99114861033058,14z

Counties: Gwinnett and Walton counties, Georgia

ENDANGERED SPECIES ACT SPECIES

There is a total of 5 threatened, endangered, or candidate species on this species list.

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

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

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

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

MAMMALS

NAME	STATUS
Tricolored Bat *Perimyotis subflavus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/10515	Proposed Endangered

BIRDS

NAME	STATUS
Whooping Crane *Grus americana* Population: U.S.A. (AL, AR, CO, FL, GA, ID, IL, IN, IA, KY, LA, MI, MN, MS, MO, NC, NM, OH, SC, TN, UT, VA, WI, WV, western half of WY) No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/758	Experimental Population, Non-Essential

INSECTS

NAME	STATUS
Monarch Butterfly *Danaus plexippus* No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9743	Candidate

FLOWERING PLANTS

NAME	STATUS
Little Amphianthus *Amphianthus pusillus*	Threatened

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/6445

FERNS AND ALLIES

NAME	STATUS
Black Spored Quillwort *Isoetes melanospora*	Endangered

No critical habitat has been designated for this species.
Species profile: https://ecos.fws.gov/ecp/species/6315

CRITICAL HABITATS

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

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

BALD & GOLDEN EAGLES

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

Any person or organization who plans or conducts activities that may result in impacts to bald or golden eagles, or their habitats[3], should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. Specifically, please review the "Supplemental Information on Migratory Birds and Eagles".

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1. The Bald and Golden Eagle Protection Act of 1940.
2. The Migratory Birds Treaty Act of 1918.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

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

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

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Sep 1 to Jul 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.

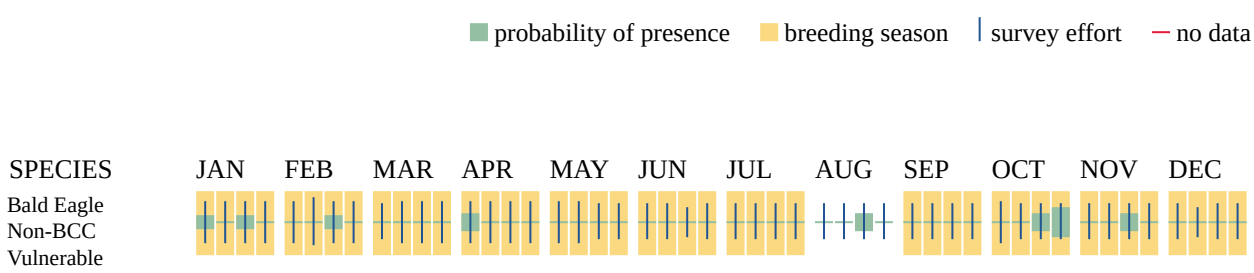
Probability of Presence (■)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (■)
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)
Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

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



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

MIGRATORY BIRDS

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

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats[3] should follow appropriate regulations and consider implementing appropriate conservation measures, as described in the links below. 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.
3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

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

NAME	BREEDING SEASON
Bald Eagle *Haliaeetus leucocephalus* This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Sep 1 to Jul 31
Cerulean Warbler *Dendroica cerulea* 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 28 to Jul 20
Chimney Swift *Chaetura pelagica* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9406	Breeds Mar 15 to Aug 25
Eastern Whip-poor-will *Antrostomus vociferus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/10678	Breeds May 1 to Aug 20

NAME	BREEDING SEASON
Kentucky Warbler *Oporornis formosus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9443	Breeds Apr 20 to Aug 20
Prairie Warbler *Dendroica discolor* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9513	Breeds May 1 to Jul 31
Prothonotary Warbler *Protonotaria citrea* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9439	Breeds Apr 1 to Jul 31
Red-headed Woodpecker *Melanerpes erythrocephalus* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9398	Breeds May 10 to Sep 10
Rusty Blackbird *Euphagus carolinus* This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA https://ecos.fws.gov/ecp/species/9478	Breeds elsewhere
Wood Thrush *Hylocichla mustelina* This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/9431	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 (■)

Green bars; the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during that week of the year.

Breeding Season (■)
Yellow bars; liberal estimate of the timeframe inside which the bird breeds across its entire range.

Survey Effort (|)

Vertical black lines; the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps.

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

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

WETLANDS

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.

RIVERINE

- R4SBC
- R5UBH

FRESHWATER FORESTED/SHRUB WETLAND

- PFO1A
- PSS1A

FRESHWATER POND

- PUBHh

IPAC USER CONTACT INFORMATION

Agency: Department of Transportation
Name: Elizabeth Williams
Address: 55 Broadway
City: Cambridge
State: MA
Zip: 02142
Email elizabeth.williams1@dot.gov
Phone: 8572599218

Georgia Department of Natural Resources- State Protected Species*

Scientific Name	Common Name	GA Prot	US Prot	GRank	SRank
GWINNETT COUNTY					
Amphianthus pusillus	Pool Sprite, Snorkelwort	T	LT	G2	S2
Cambarus howardi	Chattahoochee Crayfish	T	null	G3	S2
Cyprinella xaenura	Altamaha Shiner	T	null	G3	S2S3
Cypripedium acaule	Pink Ladyslipper	U	null	G5	S4
Cypripedium parviflorum	Yellow Ladyslipper	R	null	G5	S3
Eriocaulon koernickianum	Dwarf Hatpins	E	null	G2	S1
Hydrastis canadensis	Goldenseal	E	null	G3G4	S2
Isoetes melanospora	Black-spored Quillwort	E	LE	G1?	S1
Schisandra glabra	Bay Star-vine	T	null	G3	S2
Sedum pusillum	Granite Stonecrop, Puck's	T	null	G3	S3
Symphyotrichum georgianum	Georgia Aster	T	null	G3	S3
Veratrum woodii	Ozark Bunchflower	R	null	G5	S2
Waldsteinia lobata	Piedmont Barren	R	null	G3	S2
WALTON COUNTY					
Allium speculae	Flatrock Onion	T	null	G2	S2
Amphianthus pusillus	Pool Sprite, Snorkelwort	T	LT	G2	S2
Cyprinella xaenura	Altamaha Shiner	T	null	G3	S2S3
Draba aprica	Sun-loving Draba	E	null	G3	S1S2
Eriocaulon koernickianum	Dwarf Hatpins	E	null	G2	S1
Haliaeetus leucocephalus	Bald Eagle	T	null	G5	S3
Nestronia umbellula	Indian Olive	R	null	G4	S3
Sedum pusillum	Granite Stonecrop, Puck's	T	null	G3	S3

*Source: https://georgiabiodiversity.org/portal/natural_locations/ga_protected
accessed 1/11/24

Appendix G

Cultural Resources

Georgia® Department of Community Affairs
HISTORIC PRESERVATION DIVISION

Environmental Review Form

At a minimum, the Historic Preservation Division (HPD) requires the following information in order to review projects in accordance with applicable federal or state laws. Please note that the responsibility for preparing documentation, including items listed below, rests with the federal or state agency or its designated applicant. *HPD's ability to complete a timely project review largely depends on the quality and detail of the material submitted. If insufficient information is provided, HPD may need to request additional materials, which will prolong the review process. For complex projects, some applicants may find it advantageous to hire a preservation professional with expertise in history, architectural history, and/or archaeology, who would have access to the Georgia Archaeological Site Files and an understanding of HPD's publicly available files.*

THERE IS A 30-DAY REVIEW PERIOD FROM THE DATE HPD RECEIVES THE SUBMITTAL.
SHOULD ADDITIONAL INFORMATION BE REQUESTED, PLEASE NOTE THE 30-DAY PERIOD RESTARTS.

I. General Information

A. Project Name: PHMSA Pipeline Replacement Project in City of Lawrenceville

Project Address: Various

City: Lawrenceville and Loganville County: Gwinnett and Walton

B. Federal Agency Involved: Pipeline and Hazardous Materials Safety Administration (PHMSA)

State Agency Involved *(if applicable)*: _____

C. Agency's Involvement *(check all that are applicable)***:**

- ■ Funding (grant, loan, etc.)
- ☐ License/Permit
- ☐ Direct/Agency is performing the action
- ☐ Unknown
- ☐ Other, please explain: _____

D. Type of Review Requested:

- ■ Section 106 of the National Historic Preservation Act (Federal agency involvement)
- ☐ Section 110 of the National Historic Preservation Act (Federally owned properties)
- ☐ Georgia Environmental Policy Act (GEPA; State agency involvement)
- ☐ State Agency Historic Property Stewardship Program/State Stewardship (State owned properties)
- ☐ Unknown

E. Contact Information: ☐ **Applicant** ☐ **Consultant**

Name/Title/Company: Kathering Giraldo

Address: 220 Binney Street

City/State/Zip: Cambridge, MA 02142

Phone: 857-320-1359 Email: k.giraldo@dot.gov

Agency Contact Info *(either State or Federal, according to review type)*:

Name/Title/Agency: Same as above

Address: _____

City/State/Zip: _____

Phone: _____ Email: _____

II. Project Information

A. Project Type:

- ☐ Road/Highway Construction or Improvements
- ☐ Demolition
- ☐ Rehabilitation
- ☐ Addition to Existing Building/Structure
- ☐ New Construction
- ☐ Relicensing
- ■ Utilities/Infrastructure
- ☐ Unknown
- ☐ Other: _____

B. Project Description and Plans This should include a *detailed* **scope of work**, including *any* actions to be taken in relation to the project, such as all aspects of new construction, replacement/repair, demolition, ground disturbance, and all ancillary work (temporary roads, etc.), as applicable. Attach additional pages if necessary. If a detailed scope of work is not available yet, please explain and include all preliminary information:

See attached letter. The Undertaking will take place at various locations within the City of Lawrenceville in Georgia. The undertaking will replace a total of approximately 111,500 linear feet (LF) or 21 miles of 50 to 70-year-old coated steel (77,700 LF) and vintage plastic pipes (33,800

C. Land Disturbing Activity This should include a detailed description of all horizontal and vertical ground disturbance, such as haul roads, cut or fill areas, excavations, landscaping activities, ditching, utility burial, grading, water tower construction, etc., as applicable:

~~See attached letter. The maximum depth of ground disturbance is 5 feet, and the expected width is 2 feet by 2 feet to set the bore for horizontal directional drilling at locations where service tie ins will be made.~~

D. Has this identical project or a related project been previously submitted to HPD for review? YES ◯ NO ◉
If yes, please enclose a copy of HPD's previous response

E. Is this project also being reviewed under a tax incentive program administered through HPD? YES ◯ NO ◉

F. Is this review request in order to satisfy an application requirement, such as for a grant? YES ◉ NO ◯
***If yes, are project plans/scope of work available yet?** YES ◉ NO ◯
If yes, please enclose a copy of the project plans/scope of work as outlined in II.B and II.C above

III. Site Information

A. In the past this property has been used for (select all that apply):

Mining
Timbering
Road Construction
Housing
Landfill
Commercial
Industrial

Other (explain): Road Right-of-Way

A. Describe what currently exists on the property today and give approximate construction dates for existing buildings along with any known history (i.e. buildings, parking lot, outbuildings, woods, grass, garden, etc.):

Roads, homes. No historic buildings.

IV. Cultural Resources

Background research for previously identified properties within the project area may be undertaken at HPD, including National Register of Historic Places files, county and city surveys, and identified sites files. Additionally, research at the Georgia Archaeological Site Files (GASF) in Athens may be undertaken by a qualified archaeologist or site file staff. To make a research appointment or find contact information for GASF, please visit our website. **Please note that as part of the review process, HPD may request an archaeological survey or resource identification.**

A. To your knowledge, has a cultural resources assessment or a historic resources survey been conducted in the project area? YES (●) NO ( ) DO NOT KNOW ( ) (see: http://www. https://georgiashpo.org/surveys)

If yes, provide the title, author, and date of the report:

See attached letter.

B. Area of Potential Effect (APE)

The APE is the geographic area or areas within which a project may cause changes (or effects). These changes can be direct (physical) or indirect (visual, noise, vibrations) effects. The APE varies with the project type and should factor in topography, vegetation, existing development, physical siting of the project, and existing/planned development. For example:

If your project includes...	*Then your APE would be...*
Rehabilitation, renovation, and/or demolition of a building or structure, or new construction	the building or property itself and the surrounding properties/setting with a view of the project
Road/Highway construction or improvements, streetscapes, pedestrian or bicycle facilities	the length of the project corridor and the surrounding properties/setting with a view of the project
Above ground utilities, such as siren/radio towers, water towers, pump stations, retention ponds, etc.	the area of ground disturbance and the surrounding properties/setting with a view of the project
Underground utilities	the area of ground disturbance

Based on this information, **identify the APE for your project, similar to above AND describe what exists within it.** Please provide approximate construction dates for existing buildings within the APE (ie. is it modern or historic residential or commercial development, undeveloped, etc.):

See attached letter. Existing ROW in the areas proposed for main replacement and the adjacent parcels to include service line replacements.

C. Is the project located within or adjacent to a National Register of Historic Places (NRHP) listed or eligible historic property or district or a locally designated property or district?

YES ( ) NO (●) DO NOT KNOW ( )

If yes, please provide names: _____

D. Within the project APE as identified in IV.B, are there any other buildings or structures that are 50 years old or older?

YES ( ) NO (●) DO NOT KNOW ( )

If yes, provide current photographs of each building or structure and key the photos to a site map.

E. Are any of the buildings or structures identified in IV.D listed or eligible for listing in the NRHP?

YES ( ) NO (●) DO NOT KNOW ( )

If yes, please identify the properties (by name or photo #).

F. Effects Information

1. Does the project involve the rehabilitation, renovation, relocation, demolition or addition to any building or structure that is 50 years old or older? YES ( ) NO (●)

2. Will the project take away or change anything within the apparent or existing boundary of any of these historic properties? YES ( ) NO (●)

If yes, please explain: _____

3. Will the project change the view from or of any of these properties? YES ◯ NO ◉
**If yes, please explain:* _____

4. Will the project introduce any audible or atmospheric elements to the setting of any of these historic properties (such as light, noise, or vibration pollution)? YES ◯ NO ◉
**If yes, please explain:* _____

5. Will the project result in a change of ownership for any historic properties? YES ◯ NO ◉
**If yes, please explain:* _____

V. Required Materials (Submittal Checklist)

- ☐ Complete Environmental Review Form
  - Include all contact information as HPD will respond via email to the submitter.
- ☐ Map indicating:
  - Precise location of the project (USGS topographic map preferred: http://www.digital-topo-maps.com/ [1]).
  - In urban areas, please also include a city map that shows more detail
  - Boundaries of the APE as noted in section II above
  - Location of resources indicated in section IV.C through E
- ☐ Detailed project plans to supplement section I.F, including (if applicable and available):
  - Detailed scope of work
  - Site plans (before and after)
  - Project plans
  - Elevations
- ☐ High-resolution current color photographs (max 2 photos per page) illustrating:
  - The project area, the entire APE as defined in section IV, and resources indicated in section IV.C through E
  - Any adjacent properties that are within the APE, with clear views of buildings or structures, if applicable
  - If the project entails the alteration of existing historic structures, please provide ***detail*** photographs of existing conditions of sites, buildings, and interior areas/materials to be impacted
  - *****Google Street view and publicly available Tax Assessor images will not be accepted***
- ☐ Photography key (map or project plans can be used) indicating:
  - Location of all photographs by photo number
  - Direction of view for all photographs
- ☐ Any available information concerning known or suspected archaeological resources in the APE.

Please submit this project for review electronically via HPD's External User Portal.

Answers to Frequently Asked Questions, including details related to HPD's External User Portal, can be found on our website:
https://www.dca.ga.gov/georgia-historic-preservation-division/review-compliance

Specific questions regarding this form may be directed to HPD's Environmental Review Program at ER@dca.ga.gov.

Limited email submission of project materials may be available if technical issues prevent applicant use of HPD/ER's external user portal. Contact ER program staff at ER@dca.ga.gov for further details.

HPD no longer accepts project materials for review via mail, with the exception of archival mitigation documentation, as applicable.

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[1] *Please note, this is not a complete list of websites with topographic map information. This website is not controlled by HPD and HPD bears no responsibility for its content.*

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

1200 New Jersey Avenue, SE
Washington, DC 20590

January 25, 2024

Christopher Nunn
State Historic Preservation Officer
Georgia Historic Preservation Division
Georgia Department of Community Affairs
60 Executive Park South, NE
Atlanta, GA 30329

Section 106 Consultation: PHMSA Pipeline Replacement Project in City of Lawrenceville
Grant Recipient: City of Lawrenceville Gas Department (COL)
Project Location: City of Lawrenceville, Gwinnett County, and City of Loganville, Walton County, Georgia

Dear Christopher Nunn:

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 City of Lawrenceville Gas Department (COL) 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 Undertaking will take place at various locations within the City of Lawrenceville in Georgia. The undertaking will replace a total of approximately 111,500 linear feet (LF) or 21 miles of 50 to 70-year-old coated steel (77,700 LF) and vintage plastic pipes (33,800 LF) by means of cut and cover (trenching) and directional boring. Approximately 20% of service lines in the project area will be replaced by means of directional drilling. A 2x2 foot excavation will be made at the main to tie in the new service line and a 1x1 foot excavation will be made at the service connection next to buildings. The Undertaking does not involve any modification to existing buildings or structures. All work will take place within existing right-of-way (ROW) and utility easements. COL will install the new pipes adjacent to the existing pipes and abandon the existing pipes in place after utility services have been moved to the new pipeline. Abandonment of the existing pipeline (versus excavation and removal) will minimize ground disturbance.

All natural gas main replacements proposed are within highly to moderately developed urban areas. These areas have a mix of residential, commercial, and industrial use. These urban areas have older utility infrastructure (communication, electric, water, and sewer lines) that are frequently being repaired or replaced. Replacement gas lines will be located within 4 to 5 feet of the existing pipeline within the utility easement. The new pipeline will be installed on the house side of the existing pipe (further away from the road in relation to the existing pipe). The maximum depth of ground disturbance is 5 feet, and the expected

width is 2 feet by 2 feet to set the bore for horizontal directional drilling at locations where service tie ins will be made.

The staging areas for the project have not been identified. 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 utility easements, PHMSA has delineated the APE for this Undertaking to encompass the existing ROW in the areas proposed for main replacement and the adjacent parcels to include service line replacements, which includes the limits of disturbance. The APE is comprised of numerous discontinuous segments of ROW in Lawrenceville in addition to one small segment in Loganville. The APE extends to the depth of proposed ground disturbance of up to 5 feet below grade. The Undertaking does not have the potential to cause visual or audible effects after the completion of construction. The existing ROW encompasses various roads, signage, sidewalks, and grassy areas throughout the City of Lawrenceville. The APE is shown on the maps in **Attachment A**.

Identification and Evaluation

To identify historic properties in the APE, individuals who meet the Secretary of the Interior's (SOI) Professional Qualification Standards reviewed available information on previously identified historic properties in the APE, including the National Register of Historic Places (NRHP) database and data gathered from Georgia's Natural, Archaeological, and Historic Resources Geographic Information System database (GNAHRGIS). SOI-qualified individuals also conducted research to determine if there are any previously unidentified properties within the APE that are 45 years of age or older and may be eligible for the NRHP.

Historic Architecture

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

Archaeology

GNAHRGIS was examined to identify the presence of previously recorded archaeological sites and previously conducted archaeological surveys within one quarter of a mile of the APE. As a result of the site file search, six archaeological sites and 14 archaeological surveys were located within one quarter of a mile (Tables 1 and 2).

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

Site Number	Type	NRHP Eligibility	Citation
*9GW179 **	*Precontact lithic scatter*	*Recommended Not Eligible*	*Hart 1983 (Site Form)*
9GW269	Historic house site	Recommended Not Eligible	Wheaton 1991 (Site Form)

Site Number	Type	NRHP Eligibility	Citation
9GW307	Historic house site	Recommended Not Eligible	Wheaton 1994
9GW630	Precontact lithic scatter	Recommended Not Eligible	Gresham 2008
9GW661	Historic artifact scatter	Recommended Not Eligible	McQuinn 2017
9GW711	Historic artifact scatter; unspecified dump	Recommended Not Eligible	Cook 2021

**Italicized entry is within the APE*

Of the six archaeological sites identified within one quarter of a mile, two are precontact sites and four are historic-age sites. Site 9GW179 is a precontact lithic scatter containing two quartz projectile point fragments and is the only site located within the APE. The 1983 site form for 9GW179 describes the site as not being eligible for listing in the NRHP and notes considerable disturbance from road construction and landscaping. No known archaeological report is associated with the site. All other sites identified within one quarter of a mile are also recommended not eligible.

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

Report Title	Citation	Report Number
An Archaeological and Historical Survey of Tribble Mill Creek Drainage Area Road Project, Gwinnett County, Georgia	Caldwell and Kelly 1976	426
Phase I Archaeological Survey of the 88.5 Acre Highway 29 Site, Lawrenceville, Gwinnett County, Georgia	Wheaton 1994	None
Archaeological Assessment of Project MLP-20 (100), Gwinnett County	*Higginbotham 1995*	*6431*
A Phase I Cultural Resource Survey for the Proposed Cumberland Gas Pipeline Loops A and B and Replacements, Bartow, Cherokee, Forsyth, Gwinnett, Walton, and Whitfield Counties, Georgia	*Wilson et al. 1998*	*1848*
Archaeological Assessment of Project STP-0002-00(019), Walton County	*Lotti 2001*	*13128*
Phase I Archaeological Survey of the Athens-Atlanta Rail Corridor	Hamby and Matternes 2002	2289
Phase I Archaeological Survey for SR 124 ITS Project Area, Gwinnett County, Georgia	Pietak 2003	2898
Addendum to Phase I Archaeological Survey of Intersection Improvement of SR 81 at CR 88/Tom and Claude Brewer Roads, Walton County, Georgia	Pietak 2004	2792
Archeological Survey of Proposed Improvements to a Portion of SR 316, Gwinnett County, Georgia	Gresham 2005	3389
Phase I Archaeological Survey of the SR 8 Road Widening Project, Lawrenceville, Gwinnett County, Georgia	*Tankersley 2006*	*3875*

Report Title	Citation	Report Number
Addendum to Archeological Survey of Proposed Improvements To a Portion of SR 316, Gwinnett County, Georgia	Gresham 2008	4600
Phase I Archaeological Survey of Fourteen Intersections, Gwinnett County, Georgia. TO # 18 PI. No. 0013230	*McQuinn 2017*	*9696*
A Phase I Archaeological Survey of the Lawrenceville Area Park and Ride, Gwinnett County, Georgia *(Survey area not provided in GNAHRGIS)*	Cook 2021	None
Phase I Archaeological Survey in Advance of Proposed Improvements to SR 316, East of Collins Hill Road to West of Cedars Road, Gwinnett County, Georgia	Hinson 2022	14741

**Italicized entry intersects the APE*

Fourteen archaeological surveys were identified within one quarter of a mile of the APE. Several other surveys were noted in GNAHRGIS but further research found these documents did not include archaeological or reconnaissance survey. As such, these surveys are not included in this review. Five archaeological surveys intersect the APE. Four of them were conducted ahead of proposed transportation projects and the fifth was performed for a proposed gas pipeline. Among these five surveys, only one identified an archaeological site within one quarter of a mile, 9GW661, outside the APE.

An examination of Web Soil Survey data within the APE reveals 29 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 92 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 40 percent slope. Only seven soil types within the APE (Ashlar, Rion, and Wateree; Gwinnett clay loam and Gwinnett loam; Madison sandy clay loam; Rion and Bethlehem; Wedowee sandy loam) contain slopes greater than 15 percent, including the Rion and Bethlehem soils, which exceed the 15 percent threshold entirely but only make up one percent of the APE. Additionally, topographic maps reveal that much of the Lawrenceville area APE is surrounded by perennial streams including Big Flat Creek, Wildcat Creek, Cedar Creek, Redland Creek, Shoal Creek, Pew Creek, and the Yellow River. Only Shoal Creek intersects the APE. 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
GWINNETT COUNTY			
Appling sandy loam	Well drained	6-10	22.8
Appling sandy clay loam	Well drained	6-10	1.7
Appling-Hard Labor complex	Well drained	2-6	17.4
Ashlar, Rion, and Wateree soils	Well drained	10-25	1.7
Bethlehem and Cecil soils	Well drained	6-15	1.4
Chewacla silt loam	Somewhat poorly drained	0-2	2.8
Cecil sandy loam	Well drained	2-10	11.6
Gwinnett clay loam	Well drained	2-25	7.6
Gwinnett loam	Well drained	2-25	3.9

Soil Type	Drainage Class	Slope	Percent of APE
Hard Labor sandy loam	Moderately well drained	2-6	<1
Helena sandy loam	Moderately well drained	2-6	<1
Lloyd loam	Well drained	2-6	<1
Musella cobbly loam	Well drained	6-15	1.5
Madison gravelly sandy loam	Well drained	6-10	1
Madison sandy clay loam	Well drained	6-45	1.5
Pacolet sandy loam	Well drained	2-10	7.9
Pacolet sandy clay loam	Well drained	2-25	6.8
Rawlings and Rion soils	Well drained	2-10	<1
Rion and Bethlehem soils	Well drained	15-45	1
Toccoa fine sandy loam	Moderately well drained	0-4	<1
Urban land-Udorthents complex	-	-	<1
Wehadkee soils	Poorly drained	0-2	<1
Wickham sandy loam	Well drained	2-6	2.2
Worsham sandy loam	Poorly drained	2-6	<1
Wedowee sandy loam	Well drained	10-25	1.3
Water	-	-	<1
WALTON COUNTY			
Appling coarse sandy loam	Well drained	2-10	<1
Cecil coarse sandy loam	Well drained	2-6	<1
Colfax sandy loam	Moderately well drained	2-6	<1
Durham loamy coarse sand	Well drained	0-6	<1

Historic topographic maps, the Find a Grave online database, and GDOT's Georgia Cemetery Locator data were examined to identify the presence of any historic-age cemeteries within the APE. While several cemeteries were found in the area, only the Gwinnett Memorial Park Cemetery is located adjacent to the APE. The cemetery contains more than 4,600 burials with the earliest known interment taking place in 1934. The cemetery is still active. The APE appears to overlap several marked burials located nearest Lawrenceville Highway. However, no ground disturbing activities will take place within the Gwinnett Memorial Park Cemetery and the road ROW is separated from the main cemetery area by a hedgerow. Replacement pipeline will not disturb any landscapes or cemetery property. At this location, the pipeline will be bored upstream or downstream from this location so no excavation will occur along the ROW in front of the cemetery.

The NRHP Gallery database, National Park Service Cultural Resource GIS database, and Atlanta Regional Commission geospatial data were examined to identify any NRHP-eligible or NRHP-listed properties within one quarter of a mile of the APE. Two properties, the Baggett Residential Historic District and the William Terrell Homeplace, were identified. The Baggett Residential Historic District is located west of downtown Lawrenceville along West Crogan Street and is less than 200 feet from the APE. This district is recommended eligible for listing in the NRHP, but no associated report is available or accessible to determine if the district is eligible for archaeological potential. The other NRHP property is the William Terrell Homeplace, which is listed in the NRHP under Criteria A, B, C, and D and is only 45 feet from a portion of the APE. The property is listed under Criterion D for potential historic archaeological significance associated with the plantation outbuildings and possible subsurface deposits.

Historic topographic maps and historic aerials were examined for archeological resource sensitivity within the APE. The presence of structures on historic maps and aerial photography may indicate the likelihood of historic period archeological deposits associated with the occupation of these structures. The APE is comprised of heavily developed urban and residential areas mostly centered around Lawrenceville, the

county seat, and a small segment of APE located in rural Loganville. The 1896 Monroe topographic map shows Lawrenceville as a major town at this time, having been established in 1821 and a courthouse erected the same year. The same 1896 map shows the Loganville APE segment as sparsely populated. Hog Mountain and Lawrenceville topographic maps from 1964 show dense residential development, along with commercial and municipal developments along the main roads following the APE. Several churches, schools, businesses, and radio towers are located near the APE in Lawrenceville. The 1964 Between topographic map shows the Loganville APE section as residential with less dense development than Lawrenceville.

Aerial photography from 1955 shows the Lawrenceville area as mostly agricultural or wooded except for the downtown area and portions of Highway 124 north of Lawrenceville. The William Terrell Homeplace is shown on the 1955 aerial as containing several buildings, multiple driveways, and a terraced agricultural field. By 2002, aerial photography shows that much of the tract containing the William Terrell Homeplace had been clearcut and leveled for construction of a subdivision. Aerial photography from 1955 shows the Loganville APE as being surrounded by large tracts of cleared agricultural fields. A small handful of houses and outbuildings are shown along Atkinson Road, at the APE. Imagery from 1978 shows nearly half of the APE corridor being converted back to woodland. By 1993, much of the area surrounding the Loganville APE was cleared for residential development.

Background research revealed only one archaeological site within the APE, 9GW179, which is not eligible for listing in the NRHP. Proposed pipeline installation near 9GW179 will not extend outside of the previously disturbed ROW. One NRHP-listed property, the William Terrell Homeplace is located within 50 feet of the APE and is listed under all four criteria including D for historical archaeological potential. However, proposed pipeline installation will occur only within the ROW of Village Way SE, southwest of the NRHP boundary of the William Terrell Homeplace, and will not affect the NRHP-listed property. Examination of soil types within the APE indicates suitable conditions for human habitation. However, most of the APE is comprised of highly disturbed ROW along heavily developed road corridors. Several creeks and the Yellow River are located near the APE within one quarter of a mile, but portions of the APE closest to the waterways contain residential or commercial development or are located in areas of severe slope. Five archaeological surveys intersect or align with the APE, and among those surveys, no archaeological sites were identified within the APE. Additionally, all six archaeological sites are recommended as not eligible for listing in the NRHP. The scope of work entails replacing approximately 21 miles of existing gas pipeline entirely within previously disturbed areas containing other buried utilities.

Due to the heavily disturbed or urban nature of the APE, limited scope of work along previously installed underground utility corridors, and low to moderate potential for encountering archaeological deposits containing integrity and significance, an archaeological survey is not recommended at this time. Furthermore, Gwinnett Memorial Park Cemetery will be completely avoided.

Determination of Effect

Based on the aforementioned identification and evaluation, PHMSA finds that there are no historic properties as defined in 36 CFR 800.16(l) within the APE. Therefore, in accordance with 36 CFR Part 800.4(d)(1), PHMSA has determined the Undertaking will result in No Historic Properties Affected. While the exact staging areas for the Undertaking are currently unknown, staging should be confined to paved areas; if staging cannot be confined to paved areas, geotextile fabric or other similar protective measures (such as pressure distributing mats) must be laid in any affected unpaved area to minimize ground disturbance, prevent soil compaction, and protect potential archaeological features and artifacts.

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 C**) within 30 calendar days from the date on this letter. Note that a non-response is considered to be a declination to participate; however, interested parties can request to join consultation at any time in the process. If any invited party expresses concern about the 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:

- Alabama-Quassarte Tribal Town
- Cherokee Nation
- Coushatta Tribe of Louisiana
- Eastern Band of Cherokee Indians
- Eastern Shawnee Tribe of Oklahoma
- Muscogee (Creek) Nation

Request for Section 106 Concurrence

Based on the information presented above, PHMSA has determined that the Undertaking will result in No Historic Properties Affected. PHMSA is submitting this Undertaking to your office for your review and comment. PHMSA requests your concurrence with this determination of effect within 30 calendar days of the date of this letter. Should you need additional information please contact Kat Giraldo, Section 106 specialist, at PHMSASection106@dot.gov or 857-320-1359.

Sincerely,

Matt Fuller
Senior Environmental Protection Specialist

MF/kg

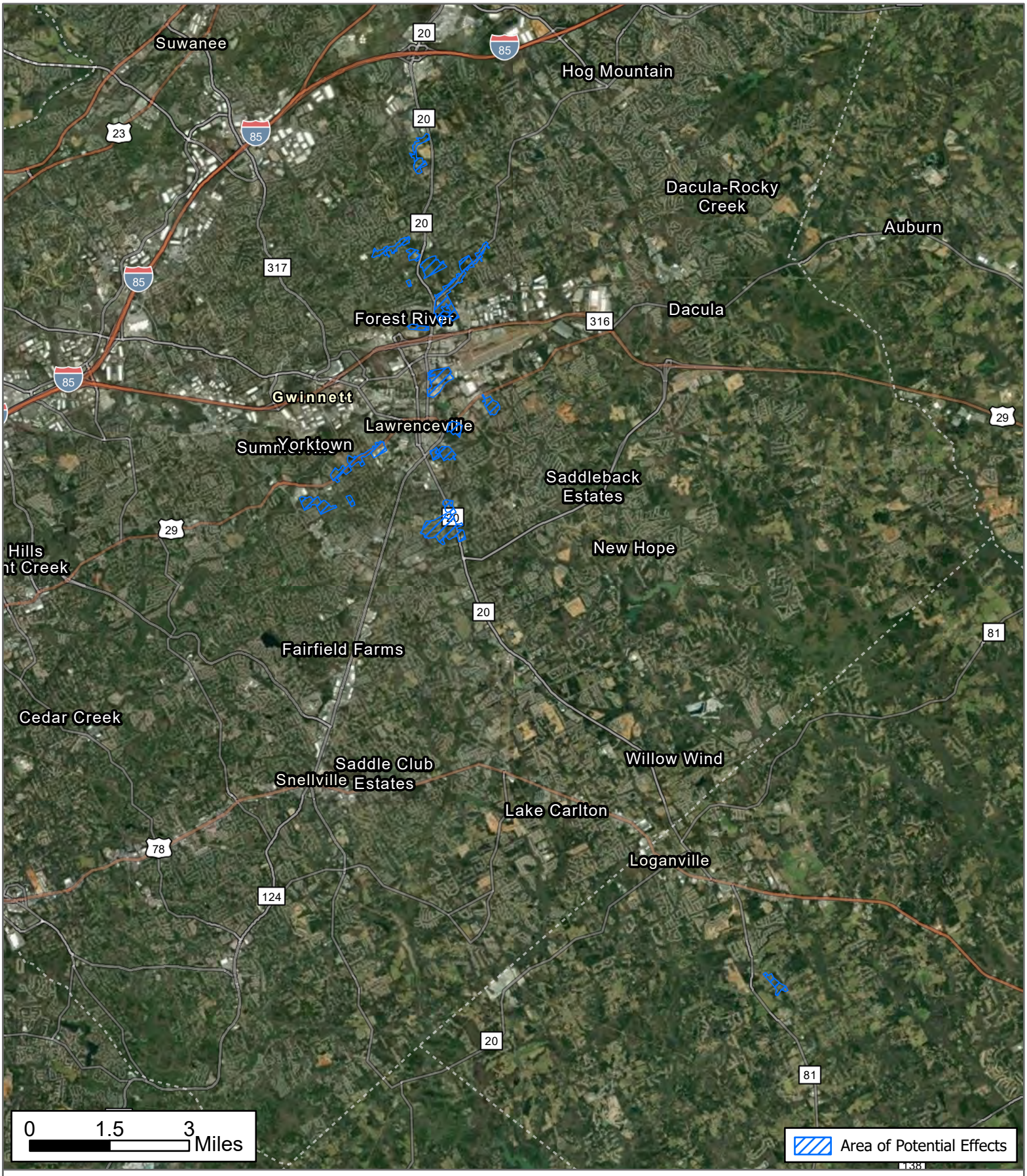
cc: Elizabeth Williams, Environmental Protection Specialist, USDOT Volpe Center
Damond Smith, PHMSA Grant Specialist
Todd Hardigree, City of Lawrenceville
Josh Morris, City of Lawrenceville
Gwinnett Historical Society

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

ATTACHMENT A

Project Location and APE Maps

Area of Potential Effects Map

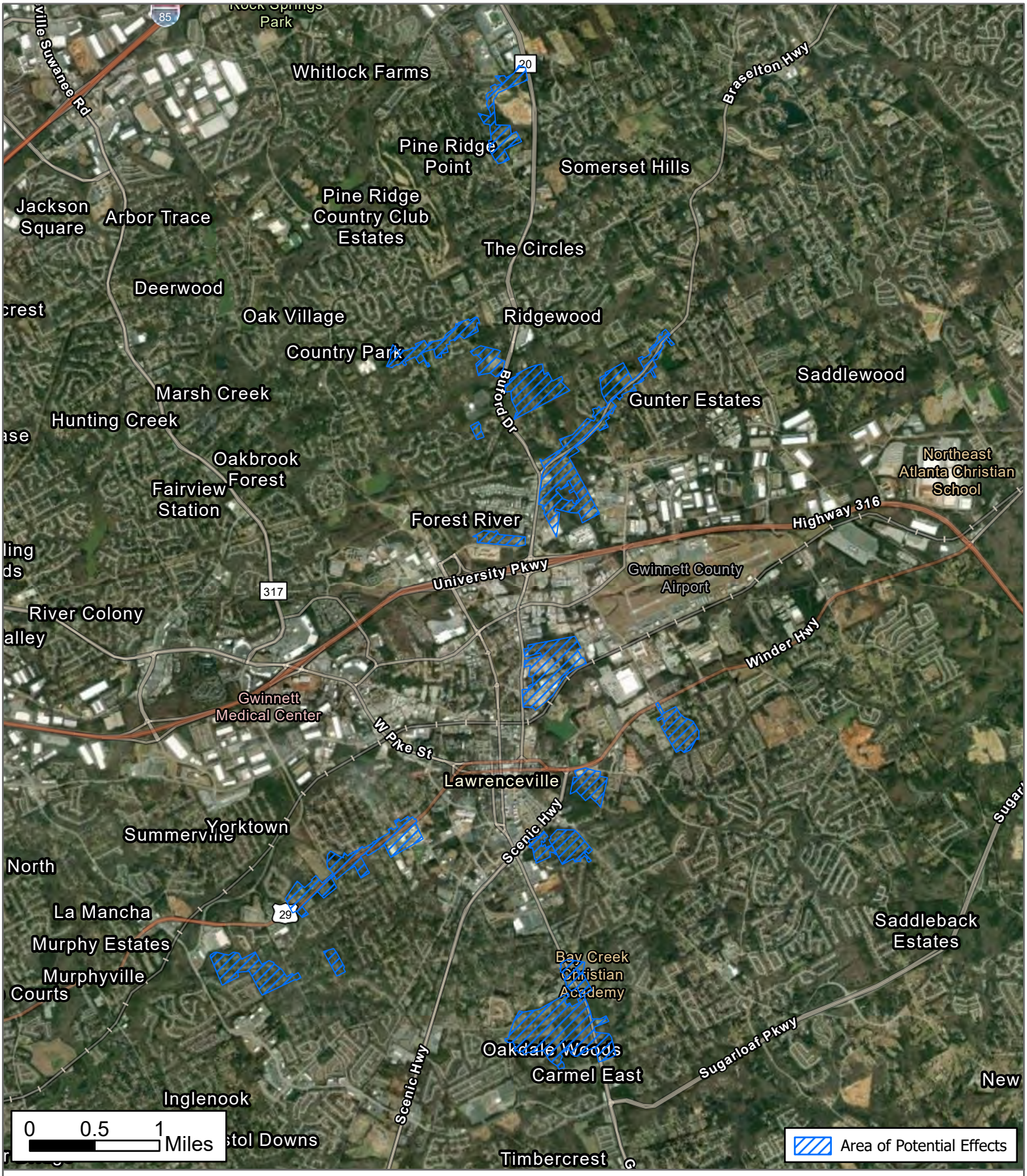


Name: Lawrenceville, GA Pipeline Replacement
Scale: 150,000
Total Acreage: 1,065
Gwinnett County, Georgia

N

Service Layer Credits: Earthstar Geographics, Esri, TomTom, Garmin, SafeGraph, METI/NASA, USGS, EPA, NPS, USDA, USFWS

Area of Potential Effects Map

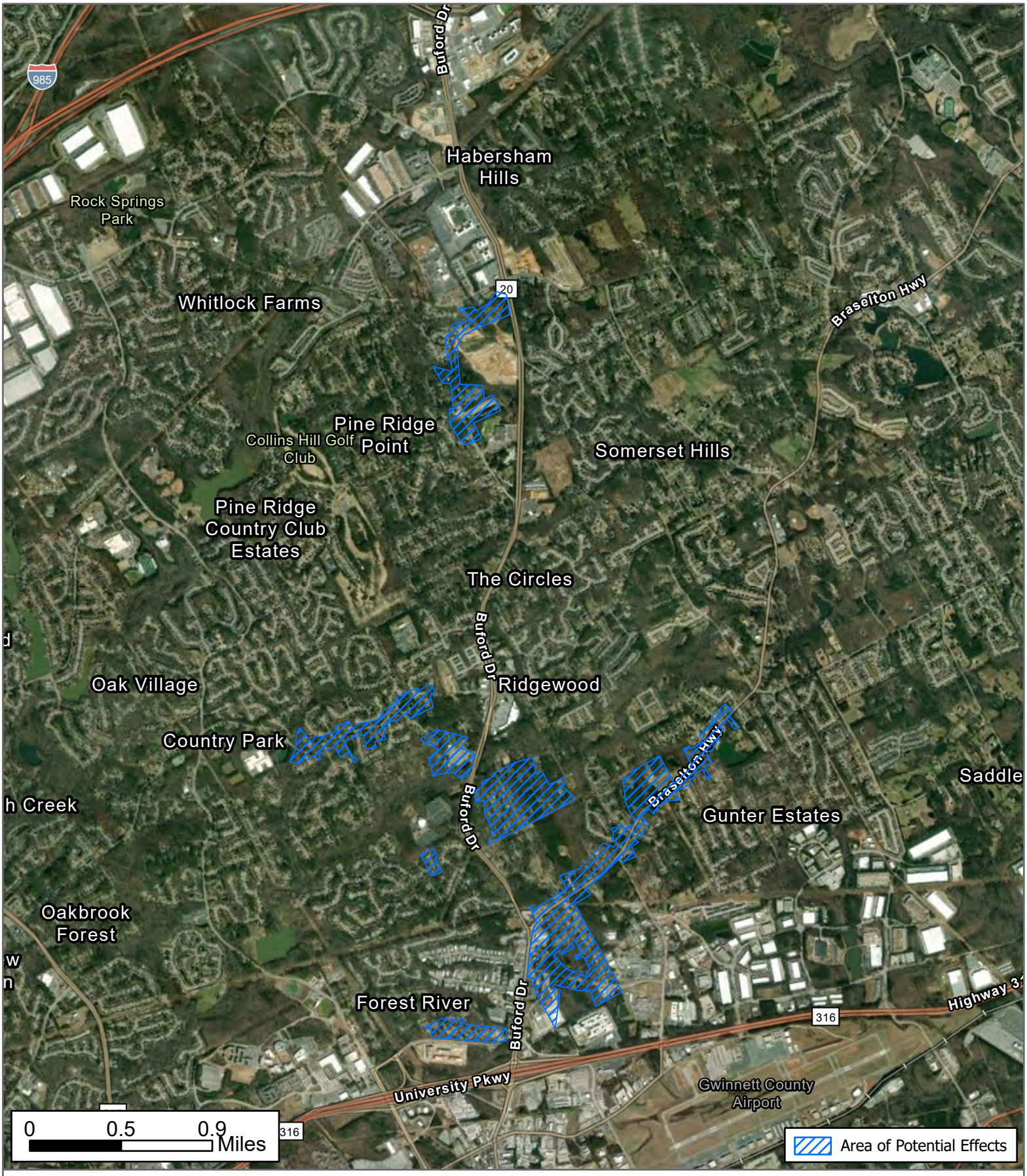


Name: Lawrenceville, GA Pipeline Replacement
Scale: 60,000
Total Acreage: 1,065
Gwinnett County, Georgia

N

Service Layer Credits: Earthstar Geographics, Esri, TomTom, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, USDA, USFWS

Area of Potential Effects Map

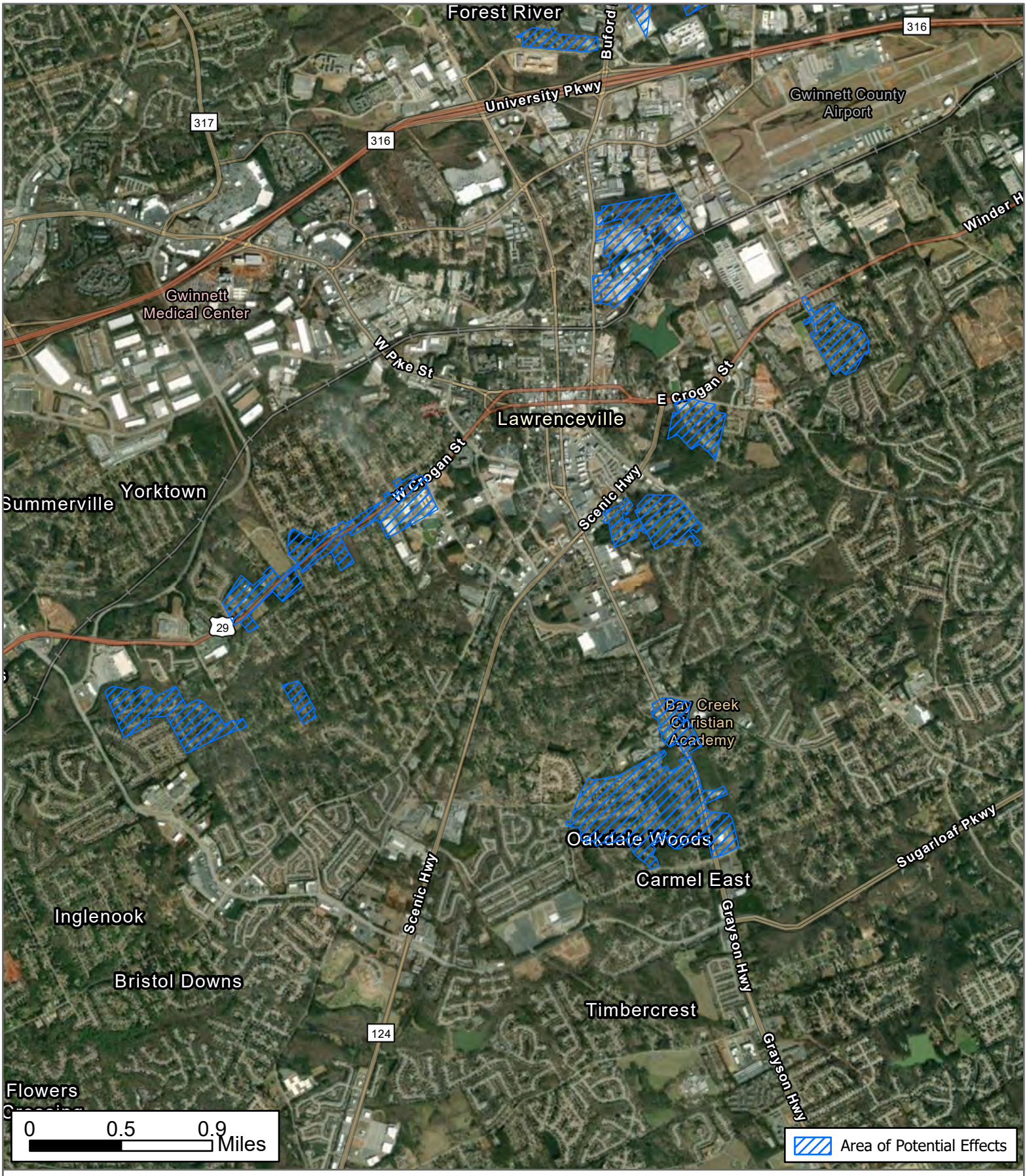


Name: Lawrenceville, GA Pipeline Replacement
Scale: 40,000
Total Acreage: 1,065
Gwinnett County, Georgia

N

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

Area of Potential Effects Map



Name: Lawrenceville, GA Pipeline Replacement
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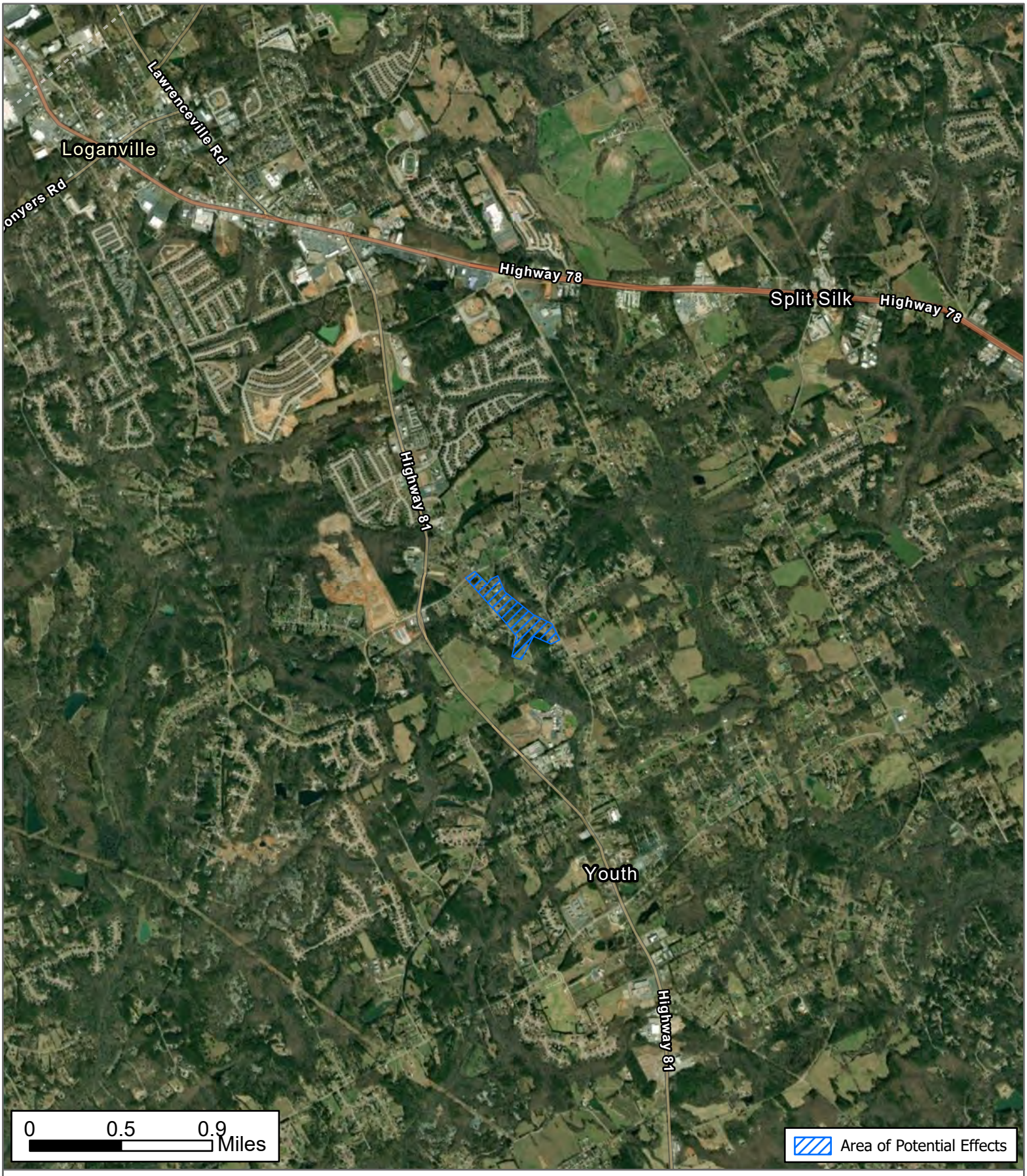
Total Acreage: 1,065
Gwinnett County, Georgia

N

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

Area of Potential Effects Map



Name: Lawrenceville, GA Pipeline Replacement
Scale: 40,000
Total Acreage: 1,065
Gwinnett County, Georgia

N

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

ATTACHMENT B

Project Area Photographs

Project Right-of-Way

Project Right-of-Way

Project Right-of-Way

Service Line

Right-of-Way near Gwinnett Memorial Park

ATTACHMENT C

Consulting Party Response Form

Section 106 Consulting Party Response Form

Pipeline and Hazardous Materials Safety Administration (PHMSA)

Natural Gas Distribution Infrastructure Safety and Modernization Grant Program

Project Name/Location:

Date: _____

Organization: _____

Name: _____

Affiliation: _____

Address: _____

_____

_____

Phone Number: _____

E-mail: _____

Please check one of the following:

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

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

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

_____

_____

_____

Comments: _____

_____

_____

_____

Please return by:

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

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

1200 New Jersey Avenue, SE
Washington, DC 20590

January 25, 2024

Wilson Yargee
Chief
Alabama-Quassarte Tribal Town
PO Box 187
Wetumka, OK 74883

Section 106 Consultation: PHMSA Pipeline Replacement Project in City of Lawrenceville
Grant Recipient: City of Lawrenceville Gas Department (COL)
Project Location: City of Lawrenceville, Gwinnett County, and City of Loganville, Walton County, Georgia

Dear Chief Yargee:

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 City of Lawrenceville Gas Department (COL) 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 Nation that may be affected by the Undertaking, to determine if you want to be a consulting party, and to notify your Nation of PHMSA's intention to make a finding of No Historic Properties Affected. PHMSA is also available for Government-to-Government consultation on this Program.

Project Description/Background

The Undertaking will take place at various locations within the City of Lawrenceville in Georgia. The undertaking will replace a total of approximately 111,500 linear feet (LF) or 21 miles of 50 to 70-year-old coated steel (77,700 LF) and vintage plastic pipes (33,800 LF) by means of cut and cover (trenching) and directional boring. Approximately 20% of service lines in the project area will be replaced by means of directional drilling. A 2x2 foot excavation will be made at the main to tie in the new service line and a 1x1 foot excavation will be made at the service connection next to buildings. The Undertaking does not involve any modification to existing buildings or structures. All work will take place within existing right-of-way (ROW) and utility easements. COL will install the new pipes adjacent to the existing pipes and abandon the existing pipes in place after utility services have been moved to the new pipeline. Abandonment of the existing pipeline (versus excavation and removal) will minimize ground disturbance.

All natural gas main replacements proposed are within highly to moderately developed urban areas. These areas have a mix of residential, commercial, and industrial use. These urban areas have older utility infrastructure (communication, electric, water, and sewer lines) that are frequently being repaired or

replaced. Replacement gas lines will be located within 4 to 5 feet of the existing pipeline within the utility easement. The new pipeline will be installed on the house side of the existing pipe (further away from the road in relation to the existing pipe). The maximum depth of ground disturbance is 5 feet, and the expected width is 2 feet by 2 feet to set the bore for horizontal directional drilling at locations where service tie ins will be made.

The staging areas for the project have not been identified. 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 utility easements, PHMSA has delineated the APE for this Undertaking to encompass the existing ROW in the areas proposed for main replacement and the adjacent parcels to include service line replacements, which includes the limits of disturbance. The APE is comprised of numerous discontinuous segments of ROW in Lawrenceville in addition to one small segment in Loganville. The APE extends to the depth of proposed ground disturbance of up to 5 feet below grade. The Undertaking does not have the potential to cause visual or audible effects after the completion of construction. The existing ROW encompasses various roads, signage, sidewalks, and grassy areas throughout the City of Lawrenceville. The APE is shown on the maps in **Attachment A**.

Identification and Evaluation

To identify historic properties in the APE, individuals who meet the Secretary of the Interior's (SOI) Professional Qualification Standards reviewed available information on previously identified historic properties in the APE, including the National Register of Historic Places (NRHP) database and data gathered from Georgia's Natural, Archaeological, and Historic Resources Geographic Information System database (GNAHRGIS). SOI-qualified individuals also conducted research to determine if there are any previously unidentified properties within the APE that are 45 years of age or older and may be eligible for the NRHP.

Historic Architecture

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

Archaeology

GNAHRGIS was examined to identify the presence of previously recorded archaeological sites and previously conducted archaeological surveys within one quarter of a mile of the APE. As a result of the site file search, six archaeological sites and 14 archaeological surveys were located within one quarter of a mile (Tables 1 and 2).

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

Site Number	Type	NRHP Eligibility	Citation
*9GW179 **	*Precontact lithic scatter*	*Recommended Not Eligible*	*Hart 1983 (Site Form)*
9GW269	Historic house site	Recommended Not Eligible	Wheaton 1991 (Site Form)
9GW307	Historic house site	Recommended Not Eligible	Wheaton 1994
9GW630	Precontact lithic scatter	Recommended Not Eligible	Gresham 2008
9GW661	Historic artifact scatter	Recommended Not Eligible	McQuinn 2017
9GW711	Historic artifact scatter; unspecified dump	Recommended Not Eligible	Cook 2021

**Italicized entry is within the APE*

Of the six archaeological sites identified within one quarter of a mile, two are precontact sites and four are historic-age sites. Site 9GW179 is a precontact lithic scatter containing two quartz projectile point fragments and is the only site located within the APE. The 1983 site form for 9GW179 describes the site as not being eligible for listing in the NRHP and notes considerable disturbance from road construction and landscaping. No known archaeological report is associated with the site. All other sites identified within one quarter of a mile are also recommended not eligible.

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

Report Title	Citation	Report Number
An Archaeological and Historical Survey of Tribble Mill Creek Drainage Area Road Project, Gwinnett County, Georgia	Caldwell and Kelly 1976	426
Phase I Archaeological Survey of the 88.5 Acre Highway 29 Site, Lawrenceville, Gwinnett County, Georgia	Wheaton 1994	None
Archaeological Assessment of Project MLP-20 (100), Gwinnett County	*Higginbotham 1995*	*6431*
A Phase I Cultural Resource Survey for the Proposed Cumberland Gas Pipeline Loops A and B and Replacements, Bartow, Cherokee, Forsyth, Gwinnett, Walton, and Whitfield Counties, Georgia	*Wilson et al. 1998*	*1848*
Archaeological Assessment of Project STP-0002-00(019), Walton County	*Lotti 2001*	*13128*
Phase I Archaeological Survey of the Athens-Atlanta Rail Corridor	Hamby and Matternes 2002	2289
Phase I Archaeological Survey for SR 124 ITS Project Area, Gwinnett County, Georgia	Pietak 2003	2898
Addendum to Phase I Archaeological Survey of Intersection Improvement of SR 81 at CR 88/Tom and Claude Brewer Roads, Walton County, Georgia	Pietak 2004	2792

Report Title	Citation	Report Number
Archeological Survey of Proposed Improvements to a Portion of SR 316, Gwinnett County, Georgia	Gresham 2005	3389
Phase I Archaeological Survey of the SR 8 Road Widening Project, Lawrenceville, Gwinnett County, Georgia	*Tankersley 2006*	*3875*
Addendum to Archeological Survey of Proposed Improvements To a Portion of SR 316, Gwinnett County, Georgia	Gresham 2008	4600
Phase I Archaeological Survey of Fourteen Intersections, Gwinnett County, Georgia. TO # 18 PI. No. 0013230	*McQuinn 2017*	*9696*
A Phase I Archaeological Survey of the Lawrenceville Area Park and Ride, Gwinnett County, Georgia *(Survey area not provided in GNAHRGIS)*	Cook 2021	None
Phase I Archaeological Survey in Advance of Proposed Improvements to SR 316, East of Collins Hill Road to West of Cedars Road, Gwinnett County, Georgia	Hinson 2022	14741

**Italicized entry intersects the APE*

Fourteen archaeological surveys were identified within one quarter of a mile of the APE. Several other surveys were noted in GNAHRGIS but further research found these documents did not include archaeological or reconnaissance survey. As such, these surveys are not included in this review. Five archaeological surveys intersect the APE. Four of them were conducted ahead of proposed transportation projects and the fifth was performed for a proposed gas pipeline. Among these five surveys, only one identified an archaeological site within one quarter of a mile, 9GW661, outside the APE.

An examination of Web Soil Survey data within the APE reveals 29 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 92 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 40 percent slope. Only seven soil types within the APE (Ashlar, Rion, and Wateree; Gwinnett clay loam and Gwinnett loam; Madison sandy clay loam; Rion and Bethlehem; Wedowee sandy loam) contain slopes greater than 15 percent, including the Rion and Bethlehem soils, which exceed the 15 percent threshold entirely but only make up one percent of the APE. Additionally, topographic maps reveal that much of the Lawrenceville area APE is surrounded by perennial streams including Big Flat Creek, Wildcat Creek, Cedar Creek, Redland Creek, Shoal Creek, Pew Creek, and the Yellow River. Only Shoal Creek intersects the APE. 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
GWINNETT COUNTY			
Appling sandy loam	Well drained	6-10	22.8
Appling sandy clay loam	Well drained	6-10	1.7
Appling-Hard Labor complex	Well drained	2-6	17.4
Ashlar, Rion, and Wateree soils	Well drained	10-25	1.7

Soil Type	Drainage Class	Slope	Percent of APE
Bethlehem and Cecil soils	Well drained	6-15	1.4
Chewacla silt loam	Somewhat poorly drained	0-2	2.8
Cecil sandy loam	Well drained	2-10	11.6
Gwinnett clay loam	Well drained	2-25	7.6
Gwinnett loam	Well drained	2-25	3.9
Hard Labor sandy loam	Moderately well drained	2-6	<1
Helena sandy loam	Moderately well drained	2-6	<1
Lloyd loam	Well drained	2-6	<1
Musella cobbly loam	Well drained	6-15	1.5
Madison gravelly sandy loam	Well drained	6-10	1
Madison sandy clay loam	Well drained	6-45	1.5
Pacolet sandy loam	Well drained	2-10	7.9
Pacolet sandy clay loam	Well drained	2-25	6.8
Rawlings and Rion soils	Well drained	2-10	<1
Rion and Bethlehem soils	Well drained	15-45	1
Toccoa fine sandy loam	Moderately well drained	0-4	<1
Urban land-Udorthents complex	-	-	<1
Wehadkee soils	Poorly drained	0-2	<1
Wickham sandy loam	Well drained	2-6	2.2
Worsham sandy loam	Poorly drained	2-6	<1
Wedowee sandy loam	Well drained	10-25	1.3
Water	-	-	<1
WALTON COUNTY			
Appling coarse sandy loam	Well drained	2-10	<1
Cecil coarse sandy loam	Well drained	2-6	<1
Colfax sandy loam	Moderately well drained	2-6	<1
Durham loamy coarse sand	Well drained	0-6	<1

Historic topographic maps, the Find a Grave online database, and GDOT's Georgia Cemetery Locator data were examined to identify the presence of any historic-age cemeteries within the APE. While several cemeteries were found in the area, only the Gwinnett Memorial Park Cemetery is located adjacent to the APE. The cemetery contains more than 4,600 burials with the earliest known interment taking place in 1934. The cemetery is still active. The APE appears to overlap several marked burials located nearest Lawrenceville Highway. However, no ground disturbing activities will take place within the Gwinnett Memorial Park Cemetery and the road ROW is separated from the main cemetery area by a hedgerow. Replacement pipeline will not disturb any landscapes or cemetery property. At this location, the pipeline will be bored upstream or downstream from this location so no excavation will occur along the ROW in front of the cemetery.

The NRHP Gallery database, National Park Service Cultural Resource GIS database, and Atlanta Regional Commission geospatial data were examined to identify any NRHP-eligible or NRHP-listed properties within one quarter of a mile of the APE. Two properties, the Baggett Residential Historic District and the William Terrell Homeplace, were identified. The Baggett Residential Historic District is located west of downtown Lawrenceville along West Crogan Street and is less than 200 feet from the APE. This district is recommended eligible for listing in the NRHP, but no associated report is available or accessible to determine if the district is eligible for archaeological potential. The other NRHP property is the William Terrell Homeplace, which is listed in the NRHP under Criteria A, B, C, and D and is only 45 feet from a

portion of the APE. The property is listed under Criterion D for potential historic archaeological significance associated with the plantation outbuildings and possible subsurface deposits.

Historic topographic maps and historic aerials were examined for archeological resource sensitivity within the APE. The presence of structures on historic maps and aerial photography may indicate the likelihood of historic period archeological deposits associated with the occupation of these structures. The APE is comprised of heavily developed urban and residential areas mostly centered around Lawrenceville, the county seat, and a small segment of APE located in rural Loganville. The 1896 Monroe topographic map shows Lawrenceville as a major town at this time, having been established in 1821 and a courthouse erected the same year. The same 1896 map shows the Loganville APE segment as sparsely populated. Hog Mountain and Lawrenceville topographic maps from 1964 show dense residential development, along with commercial and municipal developments along the main roads following the APE. Several churches, schools, businesses, and radio towers are located near the APE in Lawrenceville. The 1964 Between topographic map shows the Loganville APE section as residential with less dense development than Lawrenceville.

Aerial photography from 1955 shows the Lawrenceville area as mostly agricultural or wooded except for the downtown area and portions of Highway 124 north of Lawrenceville. The William Terrell Homeplace is shown on the 1955 aerial as containing several buildings, multiple driveways, and a terraced agricultural field. By 2002, aerial photography shows that much of the tract containing the William Terrell Homeplace had been clearcut and leveled for construction of a subdivision. Aerial photography from 1955 shows the Loganville APE as being surrounded by large tracts of cleared agricultural fields. A small handful of houses and outbuildings are shown along Atkinson Road, at the APE. Imagery from 1978 shows nearly half of the APE corridor being converted back to woodland. By 1993, much of the area surrounding the Loganville APE was cleared for residential development.

Background research revealed only one archaeological site within the APE, 9GW179, which is not eligible for listing in the NRHP. Proposed pipeline installation near 9GW179 will not extend outside of the previously disturbed ROW. One NRHP-listed property, the William Terrell Homeplace is located within 50 feet of the APE and is listed under all four criteria including D for historical archaeological potential. However, proposed pipeline installation will occur only within the ROW of Village Way SE, southwest of the NRHP boundary of the William Terrell Homeplace, and will not affect the NRHP-listed property. Examination of soil types within the APE indicates suitable conditions for human habitation. However, most of the APE is comprised of highly disturbed ROW along heavily developed road corridors. Several creeks and the Yellow River are located near the APE within one quarter of a mile, but portions of the APE closest to the waterways contain residential or commercial development or are located in areas of severe slope. Five archaeological surveys intersect or align with the APE, and among those surveys, no archaeological sites were identified within the APE. Additionally, all six archaeological sites are recommended as not eligible for listing in the NRHP. The scope of work entails replacing approximately 21 miles of existing gas pipeline entirely within previously disturbed areas containing other buried utilities.

Due to the heavily disturbed or urban nature of the APE, limited scope of work along previously installed underground utility corridors, and low to moderate potential for encountering archaeological deposits containing integrity and significance, an archaeological survey is not recommended at this time. Furthermore, Gwinnett Memorial Park Cemetery will be completely avoided.

Determination of Effect

Based on the aforementioned identification and evaluation, PHMSA finds that there are no historic properties as defined in 36 CFR 800.16(l) within the APE. Therefore, in accordance with 36 CFR Part 800.4(d)(1), PHMSA has determined the Undertaking will result in No Historic Properties Affected. While the exact staging areas for the Undertaking are currently unknown, staging should be confined to paved

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

Request for Section 106 Concurrence

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

Sincerely,

Matt Fuller
Senior Environmental Protection Specialist

MF/kg

cc: Elizabeth Williams, Environmental Protection Specialist, USDOT Volpe Center
Damond Smith, PHMSA Grant Specialist
Ben Yahola, Tribal Historic Preservation Officer

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

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

1200 New Jersey Avenue, SE
Washington, DC 20590

January 25, 2024

Elizabeth Toomb
Tribal Historic Preservation Officer
Cherokee Nation
PO Box 948
Tahlequah, OK 74465

Section 106 Consultation: PHMSA Pipeline Replacement Project in City of Lawrenceville
Grant Recipient: City of Lawrenceville Gas Department (COL)
Project Location: City of Lawrenceville, Gwinnett County, and City of Loganville, Walton County, Georgia

Dear THPO Toobs:

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 City of Lawrenceville Gas Department (COL) 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 Nation that may be affected by the Undertaking, to determine if you want to be a consulting party, and to notify your Nation of PHMSA's intention to make a finding of No Historic Properties Affected. PHMSA is also available for Government-to-Government consultation on this Program.

Project Description/Background

The Undertaking will take place at various locations within the City of Lawrenceville in Georgia. The undertaking will replace a total of approximately 111,500 linear feet (LF) or 21 miles of 50 to 70-year-old coated steel (77,700 LF) and vintage plastic pipes (33,800 LF) by means of cut and cover (trenching) and directional boring. Approximately 20% of service lines in the project area will be replaced by means of directional drilling. A 2x2 foot excavation will be made at the main to tie in the new service line and a 1x1 foot excavation will be made at the service connection next to buildings. The Undertaking does not involve any modification to existing buildings or structures. All work will take place within existing right-of-way (ROW) and utility easements. COL will install the new pipes adjacent to the existing pipes and abandon the existing pipes in place after utility services have been moved to the new pipeline. Abandonment of the existing pipeline (versus excavation and removal) will minimize ground disturbance.

All natural gas main replacements proposed are within highly to moderately developed urban areas. These areas have a mix of residential, commercial, and industrial use. These urban areas have older utility infrastructure (communication, electric, water, and sewer lines) that are frequently being repaired or

replaced. Replacement gas lines will be located within 4 to 5 feet of the existing pipeline within the utility easement. The new pipeline will be installed on the house side of the existing pipe (further away from the road in relation to the existing pipe). The maximum depth of ground disturbance is 5 feet, and the expected width is 2 feet by 2 feet to set the bore for horizontal directional drilling at locations where service tie ins will be made.

The staging areas for the project have not been identified. 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 utility easements, PHMSA has delineated the APE for this Undertaking to encompass the existing ROW in the areas proposed for main replacement and the adjacent parcels to include service line replacements, which includes the limits of disturbance. The APE is comprised of numerous discontinuous segments of ROW in Lawrenceville in addition to one small segment in Loganville. The APE extends to the depth of proposed ground disturbance of up to 5 feet below grade. The Undertaking does not have the potential to cause visual or audible effects after the completion of construction. The existing ROW encompasses various roads, signage, sidewalks, and grassy areas throughout the City of Lawrenceville. The APE is shown on the maps in **Attachment A**.

Identification and Evaluation

To identify historic properties in the APE, individuals who meet the Secretary of the Interior's (SOI) Professional Qualification Standards reviewed available information on previously identified historic properties in the APE, including the National Register of Historic Places (NRHP) database and data gathered from Georgia's Natural, Archaeological, and Historic Resources Geographic Information System database (GNAHRGIS). SOI-qualified individuals also conducted research to determine if there are any previously unidentified properties within the APE that are 45 years of age or older and may be eligible for the NRHP.

Historic Architecture

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

Archaeology

GNAHRGIS was examined to identify the presence of previously recorded archaeological sites and previously conducted archaeological surveys within one quarter of a mile of the APE. As a result of the site file search, six archaeological sites and 14 archaeological surveys were located within one quarter of a mile (Tables 1 and 2).

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

Site Number	Type	NRHP Eligibility	Citation
*9GW179 **	*Precontact lithic scatter*	*Recommended Not Eligible*	*Hart 1983 (Site Form)*
9GW269	Historic house site	Recommended Not Eligible	Wheaton 1991 (Site Form)
9GW307	Historic house site	Recommended Not Eligible	Wheaton 1994
9GW630	Precontact lithic scatter	Recommended Not Eligible	Gresham 2008
9GW661	Historic artifact scatter	Recommended Not Eligible	McQuinn 2017
9GW711	Historic artifact scatter; unspecified dump	Recommended Not Eligible	Cook 2021

**Italicized entry is within the APE*

Of the six archaeological sites identified within one quarter of a mile, two are precontact sites and four are historic-age sites. Site 9GW179 is a precontact lithic scatter containing two quartz projectile point fragments and is the only site located within the APE. The 1983 site form for 9GW179 describes the site as not being eligible for listing in the NRHP and notes considerable disturbance from road construction and landscaping. No known archaeological report is associated with the site. All other sites identified within one quarter of a mile are also recommended not eligible.

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

Report Title	Citation	Report Number
An Archaeological and Historical Survey of Tribble Mill Creek Drainage Area Road Project, Gwinnett County, Georgia	Caldwell and Kelly 1976	426
Phase I Archaeological Survey of the 88.5 Acre Highway 29 Site, Lawrenceville, Gwinnett County, Georgia	Wheaton 1994	None
Archaeological Assessment of Project MLP-20 (100), Gwinnett County	*Higginbotham 1995*	*6431*
A Phase I Cultural Resource Survey for the Proposed Cumberland Gas Pipeline Loops A and B and Replacements, Bartow, Cherokee, Forsyth, Gwinnett, Walton, and Whitfield Counties, Georgia	*Wilson et al. 1998*	*1848*
Archaeological Assessment of Project STP-0002-00(019), Walton County	*Lotti 2001*	*13128*
Phase I Archaeological Survey of the Athens-Atlanta Rail Corridor	Hamby and Matternes 2002	2289
Phase I Archaeological Survey for SR 124 ITS Project Area, Gwinnett County, Georgia	Pietak 2003	2898
Addendum to Phase I Archaeological Survey of Intersection Improvement of SR 81 at CR 88/Tom and Claude Brewer Roads, Walton County, Georgia	Pietak 2004	2792

Report Title	Citation	Report Number
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Phase I Archaeological Survey of the SR 8 Road Widening Project, Lawrenceville, Gwinnett County, Georgia	*Tankersley 2006*	*3875*
Addendum to Archeological Survey of Proposed Improvements To a Portion of SR 316, Gwinnett County, Georgia	Gresham 2008	4600
Phase I Archaeological Survey of Fourteen Intersections, Gwinnett County, Georgia. TO # 18 PI. No. 0013230	*McQuinn 2017*	*9696*
A Phase I Archaeological Survey of the Lawrenceville Area Park and Ride, Gwinnett County, Georgia *(Survey area not provided in GNAHRGIS)*	Cook 2021	None
Phase I Archaeological Survey in Advance of Proposed Improvements to SR 316, East of Collins Hill Road to West of Cedars Road, Gwinnett County, Georgia	Hinson 2022	14741

**Italicized entry intersects the APE*

Fourteen archaeological surveys were identified within one quarter of a mile of the APE. Several other surveys were noted in GNAHRGIS but further research found these documents did not include archaeological or reconnaissance survey. As such, these surveys are not included in this review. Five archaeological surveys intersect the APE. Four of them were conducted ahead of proposed transportation projects and the fifth was performed for a proposed gas pipeline. Among these five surveys, only one identified an archaeological site within one quarter of a mile, 9GW661, outside the APE.

An examination of Web Soil Survey data within the APE reveals 29 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 92 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 40 percent slope. Only seven soil types within the APE (Ashlar, Rion, and Wateree; Gwinnett clay loam and Gwinnett loam; Madison sandy clay loam; Rion and Bethlehem; Wedowee sandy loam) contain slopes greater than 15 percent, including the Rion and Bethlehem soils, which exceed the 15 percent threshold entirely but only make up one percent of the APE. Additionally, topographic maps reveal that much of the Lawrenceville area APE is surrounded by perennial streams including Big Flat Creek, Wildcat Creek, Cedar Creek, Redland Creek, Shoal Creek, Pew Creek, and the Yellow River. Only Shoal Creek intersects the APE. 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
GWINNETT COUNTY			
Appling sandy loam	Well drained	6-10	22.8
Appling sandy clay loam	Well drained	6-10	1.7
Appling-Hard Labor complex	Well drained	2-6	17.4
Ashlar, Rion, and Wateree soils	Well drained	10-25	1.7

Soil Type	Drainage Class	Slope	Percent of APE
Bethlehem and Cecil soils	Well drained	6-15	1.4
Chewacla silt loam	Somewhat poorly drained	0-2	2.8
Cecil sandy loam	Well drained	2-10	11.6
Gwinnett clay loam	Well drained	2-25	7.6
Gwinnett loam	Well drained	2-25	3.9
Hard Labor sandy loam	Moderately well drained	2-6	<1
Helena sandy loam	Moderately well drained	2-6	<1
Lloyd loam	Well drained	2-6	<1
Musella cobbly loam	Well drained	6-15	1.5
Madison gravelly sandy loam	Well drained	6-10	1
Madison sandy clay loam	Well drained	6-45	1.5
Pacolet sandy loam	Well drained	2-10	7.9
Pacolet sandy clay loam	Well drained	2-25	6.8
Rawlings and Rion soils	Well drained	2-10	<1
Rion and Bethlehem soils	Well drained	15-45	1
Toccoa fine sandy loam	Moderately well drained	0-4	<1
Urban land-Udorthents complex	-	-	<1
Wehadkee soils	Poorly drained	0-2	<1
Wickham sandy loam	Well drained	2-6	2.2
Worsham sandy loam	Poorly drained	2-6	<1
Wedowee sandy loam	Well drained	10-25	1.3
Water	-	-	<1
WALTON COUNTY			
Appling coarse sandy loam	Well drained	2-10	<1
Cecil coarse sandy loam	Well drained	2-6	<1
Colfax sandy loam	Moderately well drained	2-6	<1
Durham loamy coarse sand	Well drained	0-6	<1

Historic topographic maps, the Find a Grave online database, and GDOT's Georgia Cemetery Locator data were examined to identify the presence of any historic-age cemeteries within the APE. While several cemeteries were found in the area, only the Gwinnett Memorial Park Cemetery is located adjacent to the APE. The cemetery contains more than 4,600 burials with the earliest known interment taking place in 1934. The cemetery is still active. The APE appears to overlap several marked burials located nearest Lawrenceville Highway. However, no ground disturbing activities will take place within the Gwinnett Memorial Park Cemetery and the road ROW is separated from the main cemetery area by a hedgerow. Replacement pipeline will not disturb any landscapes or cemetery property. At this location, the pipeline will be bored upstream or downstream from this location so no excavation will occur along the ROW in front of the cemetery.

The NRHP Gallery database, National Park Service Cultural Resource GIS database, and Atlanta Regional Commission geospatial data were examined to identify any NRHP-eligible or NRHP-listed properties within one quarter of a mile of the APE. Two properties, the Baggett Residential Historic District and the William Terrell Homeplace, were identified. The Baggett Residential Historic District is located west of downtown Lawrenceville along West Crogan Street and is less than 200 feet from the APE. This district is recommended eligible for listing in the NRHP, but no associated report is available or accessible to determine if the district is eligible for archaeological potential. The other NRHP property is the William Terrell Homeplace, which is listed in the NRHP under Criteria A, B, C, and D and is only 45 feet from a

portion of the APE. The property is listed under Criterion D for potential historic archaeological significance associated with the plantation outbuildings and possible subsurface deposits.

Historic topographic maps and historic aerials were examined for archeological resource sensitivity within the APE. The presence of structures on historic maps and aerial photography may indicate the likelihood of historic period archeological deposits associated with the occupation of these structures. The APE is comprised of heavily developed urban and residential areas mostly centered around Lawrenceville, the county seat, and a small segment of APE located in rural Loganville. The 1896 Monroe topographic map shows Lawrenceville as a major town at this time, having been established in 1821 and a courthouse erected the same year. The same 1896 map shows the Loganville APE segment as sparsely populated. Hog Mountain and Lawrenceville topographic maps from 1964 show dense residential development, along with commercial and municipal developments along the main roads following the APE. Several churches, schools, businesses, and radio towers are located near the APE in Lawrenceville. The 1964 Between topographic map shows the Loganville APE section as residential with less dense development than Lawrenceville.

Aerial photography from 1955 shows the Lawrenceville area as mostly agricultural or wooded except for the downtown area and portions of Highway 124 north of Lawrenceville. The William Terrell Homeplace is shown on the 1955 aerial as containing several buildings, multiple driveways, and a terraced agricultural field. By 2002, aerial photography shows that much of the tract containing the William Terrell Homeplace had been clearcut and leveled for construction of a subdivision. Aerial photography from 1955 shows the Loganville APE as being surrounded by large tracts of cleared agricultural fields. A small handful of houses and outbuildings are shown along Atkinson Road, at the APE. Imagery from 1978 shows nearly half of the APE corridor being converted back to woodland. By 1993, much of the area surrounding the Loganville APE was cleared for residential development.

Background research revealed only one archaeological site within the APE, 9GW179, which is not eligible for listing in the NRHP. Proposed pipeline installation near 9GW179 will not extend outside of the previously disturbed ROW. One NRHP-listed property, the William Terrell Homeplace is located within 50 feet of the APE and is listed under all four criteria including D for historical archaeological potential. However, proposed pipeline installation will occur only within the ROW of Village Way SE, southwest of the NRHP boundary of the William Terrell Homeplace, and will not affect the NRHP-listed property. Examination of soil types within the APE indicates suitable conditions for human habitation. However, most of the APE is comprised of highly disturbed ROW along heavily developed road corridors. Several creeks and the Yellow River are located near the APE within one quarter of a mile, but portions of the APE closest to the waterways contain residential or commercial development or are located in areas of severe slope. Five archaeological surveys intersect or align with the APE, and among those surveys, no archaeological sites were identified within the APE. Additionally, all six archaeological sites are recommended as not eligible for listing in the NRHP. The scope of work entails replacing approximately 21 miles of existing gas pipeline entirely within previously disturbed areas containing other buried utilities.

Due to the heavily disturbed or urban nature of the APE, limited scope of work along previously installed underground utility corridors, and low to moderate potential for encountering archaeological deposits containing integrity and significance, an archaeological survey is not recommended at this time. Furthermore, Gwinnett Memorial Park Cemetery will be completely avoided.

Determination of Effect

Based on the aforementioned identification and evaluation, PHMSA finds that there are no historic properties as defined in 36 CFR 800.16(l) within the APE. Therefore, in accordance with 36 CFR Part 800.4(d)(1), PHMSA has determined the Undertaking will result in No Historic Properties Affected. While the exact staging areas for the Undertaking are currently unknown, staging should be confined to paved

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

Request for Section 106 Concurrence

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

Sincerely,

Matt Fuller
Senior Environmental Protection Specialist

MF/kg

cc: Elizabeth Williams, Environmental Protection Specialist, USDOT Volpe Center
Damond Smith, PHMSA Grant Specialist

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

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

1200 New Jersey Avenue, SE
Washington, DC 20590

January 25, 2024

Jonathan Cernek
Chairman
Coushatta Tribe of Louisiana
1940 C.C. Bel Road
Elton, LA 70532

Section 106 Consultation: PHMSA Pipeline Replacement Project in City of Lawrenceville
Grant Recipient: City of Lawrenceville Gas Department (COL)
Project Location: City of Lawrenceville, Gwinnett County, and City of Loganville, Walton County, Georgia

Dear Chairman Cernek:

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 City of Lawrenceville Gas Department (COL) 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 Nation that may be affected by the Undertaking, to determine if you want to be a consulting party, and to notify your Nation of PHMSA's intention to make a finding of No Historic Properties Affected. PHMSA is also available for Government-to-Government consultation on this Program.

Project Description/Background

The Undertaking will take place at various locations within the City of Lawrenceville in Georgia. The undertaking will replace a total of approximately 111,500 linear feet (LF) or 21 miles of 50 to 70-year-old coated steel (77,700 LF) and vintage plastic pipes (33,800 LF) by means of cut and cover (trenching) and directional boring. Approximately 20% of service lines in the project area will be replaced by means of directional drilling. A 2x2 foot excavation will be made at the main to tie in the new service line and a 1x1 foot excavation will be made at the service connection next to buildings. The Undertaking does not involve any modification to existing buildings or structures. All work will take place within existing right-of-way (ROW) and utility easements. COL will install the new pipes adjacent to the existing pipes and abandon the existing pipes in place after utility services have been moved to the new pipeline. Abandonment of the existing pipeline (versus excavation and removal) will minimize ground disturbance.

All natural gas main replacements proposed are within highly to moderately developed urban areas. These areas have a mix of residential, commercial, and industrial use. These urban areas have older utility infrastructure (communication, electric, water, and sewer lines) that are frequently being repaired or

replaced. Replacement gas lines will be located within 4 to 5 feet of the existing pipeline within the utility easement. The new pipeline will be installed on the house side of the existing pipe (further away from the road in relation to the existing pipe). The maximum depth of ground disturbance is 5 feet, and the expected width is 2 feet by 2 feet to set the bore for horizontal directional drilling at locations where service tie ins will be made.

The staging areas for the project have not been identified. 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 utility easements, PHMSA has delineated the APE for this Undertaking to encompass the existing ROW in the areas proposed for main replacement and the adjacent parcels to include service line replacements, which includes the limits of disturbance. The APE is comprised of numerous discontinuous segments of ROW in Lawrenceville in addition to one small segment in Loganville. The APE extends to the depth of proposed ground disturbance of up to 5 feet below grade. The Undertaking does not have the potential to cause visual or audible effects after the completion of construction. The existing ROW encompasses various roads, signage, sidewalks, and grassy areas throughout the City of Lawrenceville. The APE is shown on the maps in **Attachment A**.

Identification and Evaluation

To identify historic properties in the APE, individuals who meet the Secretary of the Interior's (SOI) Professional Qualification Standards reviewed available information on previously identified historic properties in the APE, including the National Register of Historic Places (NRHP) database and data gathered from Georgia's Natural, Archaeological, and Historic Resources Geographic Information System database (GNAHRGIS). SOI-qualified individuals also conducted research to determine if there are any previously unidentified properties within the APE that are 45 years of age or older and may be eligible for the NRHP.

Historic Architecture

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

Archaeology

GNAHRGIS was examined to identify the presence of previously recorded archaeological sites and previously conducted archaeological surveys within one quarter of a mile of the APE. As a result of the site file search, six archaeological sites and 14 archaeological surveys were located within one quarter of a mile (Tables 1 and 2).

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

Site Number	Type	NRHP Eligibility	Citation
*9GW179 **	*Precontact lithic scatter*	*Recommended Not Eligible*	*Hart 1983 (Site Form)*
9GW269	Historic house site	Recommended Not Eligible	Wheaton 1991 (Site Form)
9GW307	Historic house site	Recommended Not Eligible	Wheaton 1994
9GW630	Precontact lithic scatter	Recommended Not Eligible	Gresham 2008
9GW661	Historic artifact scatter	Recommended Not Eligible	McQuinn 2017
9GW711	Historic artifact scatter; unspecified dump	Recommended Not Eligible	Cook 2021

**Italicized entry is within the APE*

Of the six archaeological sites identified within one quarter of a mile, two are precontact sites and four are historic-age sites. Site 9GW179 is a precontact lithic scatter containing two quartz projectile point fragments and is the only site located within the APE. The 1983 site form for 9GW179 describes the site as not being eligible for listing in the NRHP and notes considerable disturbance from road construction and landscaping. No known archaeological report is associated with the site. All other sites identified within one quarter of a mile are also recommended not eligible.

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

Report Title	Citation	Report Number
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Phase I Archaeological Survey of the 88.5 Acre Highway 29 Site, Lawrenceville, Gwinnett County, Georgia	Wheaton 1994	None
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Report Title	Citation	Report Number
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A Phase I Archaeological Survey of the Lawrenceville Area Park and Ride, Gwinnett County, Georgia *(Survey area not provided in GNAHRGIS)*	Cook 2021	None
Phase I Archaeological Survey in Advance of Proposed Improvements to SR 316, East of Collins Hill Road to West of Cedars Road, Gwinnett County, Georgia	Hinson 2022	14741

**Italicized entry intersects the APE*

Fourteen archaeological surveys were identified within one quarter of a mile of the APE. Several other surveys were noted in GNAHRGIS but further research found these documents did not include archaeological or reconnaissance survey. As such, these surveys are not included in this review. Five archaeological surveys intersect the APE. Four of them were conducted ahead of proposed transportation projects and the fifth was performed for a proposed gas pipeline. Among these five surveys, only one identified an archaeological site within one quarter of a mile, 9GW661, outside the APE.

An examination of Web Soil Survey data within the APE reveals 29 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 92 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 40 percent slope. Only seven soil types within the APE (Ashlar, Rion, and Wateree; Gwinnett clay loam and Gwinnett loam; Madison sandy clay loam; Rion and Bethlehem; Wedowee sandy loam) contain slopes greater than 15 percent, including the Rion and Bethlehem soils, which exceed the 15 percent threshold entirely but only make up one percent of the APE. Additionally, topographic maps reveal that much of the Lawrenceville area APE is surrounded by perennial streams including Big Flat Creek, Wildcat Creek, Cedar Creek, Redland Creek, Shoal Creek, Pew Creek, and the Yellow River. Only Shoal Creek intersects the APE. 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
GWINNETT COUNTY			
Appling sandy loam	Well drained	6-10	22.8
Appling sandy clay loam	Well drained	6-10	1.7
Appling-Hard Labor complex	Well drained	2-6	17.4
Ashlar, Rion, and Wateree soils	Well drained	10-25	1.7

Soil Type	Drainage Class	Slope	Percent of APE
Bethlehem and Cecil soils	Well drained	6-15	1.4
Chewacla silt loam	Somewhat poorly drained	0-2	2.8
Cecil sandy loam	Well drained	2-10	11.6
Gwinnett clay loam	Well drained	2-25	7.6
Gwinnett loam	Well drained	2-25	3.9
Hard Labor sandy loam	Moderately well drained	2-6	<1
Helena sandy loam	Moderately well drained	2-6	<1
Lloyd loam	Well drained	2-6	<1
Musella cobbly loam	Well drained	6-15	1.5
Madison gravelly sandy loam	Well drained	6-10	1
Madison sandy clay loam	Well drained	6-45	1.5
Pacolet sandy loam	Well drained	2-10	7.9
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Rawlings and Rion soils	Well drained	2-10	<1
Rion and Bethlehem soils	Well drained	15-45	1
Toccoa fine sandy loam	Moderately well drained	0-4	<1
Urban land-Udorthents complex	-	-	<1
Wehadkee soils	Poorly drained	0-2	<1
Wickham sandy loam	Well drained	2-6	2.2
Worsham sandy loam	Poorly drained	2-6	<1
Wedowee sandy loam	Well drained	10-25	1.3
Water	-	-	<1
WALTON COUNTY			
Appling coarse sandy loam	Well drained	2-10	<1
Cecil coarse sandy loam	Well drained	2-6	<1
Colfax sandy loam	Moderately well drained	2-6	<1
Durham loamy coarse sand	Well drained	0-6	<1

Historic topographic maps, the Find a Grave online database, and GDOT's Georgia Cemetery Locator data were examined to identify the presence of any historic-age cemeteries within the APE. While several cemeteries were found in the area, only the Gwinnett Memorial Park Cemetery is located adjacent to the APE. The cemetery contains more than 4,600 burials with the earliest known interment taking place in 1934. The cemetery is still active. The APE appears to overlap several marked burials located nearest Lawrenceville Highway. However, no ground disturbing activities will take place within the Gwinnett Memorial Park Cemetery and the road ROW is separated from the main cemetery area by a hedgerow. Replacement pipeline will not disturb any landscapes or cemetery property. At this location, the pipeline will be bored upstream or downstream from this location so no excavation will occur along the ROW in front of the cemetery.

The NRHP Gallery database, National Park Service Cultural Resource GIS database, and Atlanta Regional Commission geospatial data were examined to identify any NRHP-eligible or NRHP-listed properties within one quarter of a mile of the APE. Two properties, the Baggett Residential Historic District and the William Terrell Homeplace, were identified. The Baggett Residential Historic District is located west of downtown Lawrenceville along West Crogan Street and is less than 200 feet from the APE. This district is recommended eligible for listing in the NRHP, but no associated report is available or accessible to determine if the district is eligible for archaeological potential. The other NRHP property is the William Terrell Homeplace, which is listed in the NRHP under Criteria A, B, C, and D and is only 45 feet from a

portion of the APE. The property is listed under Criterion D for potential historic archaeological significance associated with the plantation outbuildings and possible subsurface deposits.

Historic topographic maps and historic aerials were examined for archeological resource sensitivity within the APE. The presence of structures on historic maps and aerial photography may indicate the likelihood of historic period archeological deposits associated with the occupation of these structures. The APE is comprised of heavily developed urban and residential areas mostly centered around Lawrenceville, the county seat, and a small segment of APE located in rural Loganville. The 1896 Monroe topographic map shows Lawrenceville as a major town at this time, having been established in 1821 and a courthouse erected the same year. The same 1896 map shows the Loganville APE segment as sparsely populated. Hog Mountain and Lawrenceville topographic maps from 1964 show dense residential development, along with commercial and municipal developments along the main roads following the APE. Several churches, schools, businesses, and radio towers are located near the APE in Lawrenceville. The 1964 Between topographic map shows the Loganville APE section as residential with less dense development than Lawrenceville.

Aerial photography from 1955 shows the Lawrenceville area as mostly agricultural or wooded except for the downtown area and portions of Highway 124 north of Lawrenceville. The William Terrell Homeplace is shown on the 1955 aerial as containing several buildings, multiple driveways, and a terraced agricultural field. By 2002, aerial photography shows that much of the tract containing the William Terrell Homeplace had been clearcut and leveled for construction of a subdivision. Aerial photography from 1955 shows the Loganville APE as being surrounded by large tracts of cleared agricultural fields. A small handful of houses and outbuildings are shown along Atkinson Road, at the APE. Imagery from 1978 shows nearly half of the APE corridor being converted back to woodland. By 1993, much of the area surrounding the Loganville APE was cleared for residential development.

Background research revealed only one archaeological site within the APE, 9GW179, which is not eligible for listing in the NRHP. Proposed pipeline installation near 9GW179 will not extend outside of the previously disturbed ROW. One NRHP-listed property, the William Terrell Homeplace is located within 50 feet of the APE and is listed under all four criteria including D for historical archaeological potential. However, proposed pipeline installation will occur only within the ROW of Village Way SE, southwest of the NRHP boundary of the William Terrell Homeplace, and will not affect the NRHP-listed property. Examination of soil types within the APE indicates suitable conditions for human habitation. However, most of the APE is comprised of highly disturbed ROW along heavily developed road corridors. Several creeks and the Yellow River are located near the APE within one quarter of a mile, but portions of the APE closest to the waterways contain residential or commercial development or are located in areas of severe slope. Five archaeological surveys intersect or align with the APE, and among those surveys, no archaeological sites were identified within the APE. Additionally, all six archaeological sites are recommended as not eligible for listing in the NRHP. The scope of work entails replacing approximately 21 miles of existing gas pipeline entirely within previously disturbed areas containing other buried utilities.

Due to the heavily disturbed or urban nature of the APE, limited scope of work along previously installed underground utility corridors, and low to moderate potential for encountering archaeological deposits containing integrity and significance, an archaeological survey is not recommended at this time. Furthermore, Gwinnett Memorial Park Cemetery will be completely avoided.

Determination of Effect

Based on the aforementioned identification and evaluation, PHMSA finds that there are no historic properties as defined in 36 CFR 800.16(l) within the APE. Therefore, in accordance with 36 CFR Part 800.4(d)(1), PHMSA has determined the Undertaking will result in No Historic Properties Affected. While the exact staging areas for the Undertaking are currently unknown, staging should be confined to paved

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

Request for Section 106 Concurrence

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

Sincerely,

Matt Fuller
Senior Environmental Protection Specialist

MF/kg

cc: Elizabeth Williams, Environmental Protection Specialist, USDOT Volpe Center
Damond Smith, PHMSA Grant Specialist
Kristian Poncho, Tribal Historic Preservation Officer

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

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

1200 New Jersey Avenue, SE
Washington, DC 20590

January 25, 2024

Richard Sneed
Principal Chief
Eastern Band of Cherokee Indians
88 Council House Loop Road
Cherokee, NC 28719

Section 106 Consultation: PHMSA Pipeline Replacement Project in City of Lawrenceville
Grant Recipient: City of Lawrenceville Gas Department (COL)
Project Location: City of Lawrenceville, Gwinnett County, and City of Loganville, Walton County, Georgia

Dear Principal Chief Sneed:

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 City of Lawrenceville Gas Department (COL) 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 Nation that may be affected by the Undertaking, to determine if you want to be a consulting party, and to notify your Nation of PHMSA's intention to make a finding of No Historic Properties Affected. PHMSA is also available for Government-to-Government consultation on this Program.

Project Description/Background

The Undertaking will take place at various locations within the City of Lawrenceville in Georgia. The undertaking will replace a total of approximately 111,500 linear feet (LF) or 21 miles of 50 to 70-year-old coated steel (77,700 LF) and vintage plastic pipes (33,800 LF) by means of cut and cover (trenching) and directional boring. Approximately 20% of service lines in the project area will be replaced by means of directional drilling. A 2x2 foot excavation will be made at the main to tie in the new service line and a 1x1 foot excavation will be made at the service connection next to buildings. The Undertaking does not involve any modification to existing buildings or structures. All work will take place within existing right-of-way (ROW) and utility easements. COL will install the new pipes adjacent to the existing pipes and abandon the existing pipes in place after utility services have been moved to the new pipeline. Abandonment of the existing pipeline (versus excavation and removal) will minimize ground disturbance.

All natural gas main replacements proposed are within highly to moderately developed urban areas. These areas have a mix of residential, commercial, and industrial use. These urban areas have older utility infrastructure (communication, electric, water, and sewer lines) that are frequently being repaired or

replaced. Replacement gas lines will be located within 4 to 5 feet of the existing pipeline within the utility easement. The new pipeline will be installed on the house side of the existing pipe (further away from the road in relation to the existing pipe). The maximum depth of ground disturbance is 5 feet, and the expected width is 2 feet by 2 feet to set the bore for horizontal directional drilling at locations where service tie ins will be made.

The staging areas for the project have not been identified. 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 utility easements, PHMSA has delineated the APE for this Undertaking to encompass the existing ROW in the areas proposed for main replacement and the adjacent parcels to include service line replacements, which includes the limits of disturbance. The APE is comprised of numerous discontinuous segments of ROW in Lawrenceville in addition to one small segment in Loganville. The APE extends to the depth of proposed ground disturbance of up to 5 feet below grade. The Undertaking does not have the potential to cause visual or audible effects after the completion of construction. The existing ROW encompasses various roads, signage, sidewalks, and grassy areas throughout the City of Lawrenceville. The APE is shown on the maps in **Attachment A**.

Identification and Evaluation

To identify historic properties in the APE, individuals who meet the Secretary of the Interior's (SOI) Professional Qualification Standards reviewed available information on previously identified historic properties in the APE, including the National Register of Historic Places (NRHP) database and data gathered from Georgia's Natural, Archaeological, and Historic Resources Geographic Information System database (GNAHRGIS). SOI-qualified individuals also conducted research to determine if there are any previously unidentified properties within the APE that are 45 years of age or older and may be eligible for the NRHP.

Historic Architecture

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

Archaeology

GNAHRGIS was examined to identify the presence of previously recorded archaeological sites and previously conducted archaeological surveys within one quarter of a mile of the APE. As a result of the site file search, six archaeological sites and 14 archaeological surveys were located within one quarter of a mile (Tables 1 and 2).

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

Site Number	Type	NRHP Eligibility	Citation
*9GW179 **	*Precontact lithic scatter*	*Recommended Not Eligible*	*Hart 1983 (Site Form)*
9GW269	Historic house site	Recommended Not Eligible	Wheaton 1991 (Site Form)
9GW307	Historic house site	Recommended Not Eligible	Wheaton 1994
9GW630	Precontact lithic scatter	Recommended Not Eligible	Gresham 2008
9GW661	Historic artifact scatter	Recommended Not Eligible	McQuinn 2017
9GW711	Historic artifact scatter; unspecified dump	Recommended Not Eligible	Cook 2021

**Italicized entry is within the APE*

Of the six archaeological sites identified within one quarter of a mile, two are precontact sites and four are historic-age sites. Site 9GW179 is a precontact lithic scatter containing two quartz projectile point fragments and is the only site located within the APE. The 1983 site form for 9GW179 describes the site as not being eligible for listing in the NRHP and notes considerable disturbance from road construction and landscaping. No known archaeological report is associated with the site. All other sites identified within one quarter of a mile are also recommended not eligible.

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

Report Title	Citation	Report Number
An Archaeological and Historical Survey of Tribble Mill Creek Drainage Area Road Project, Gwinnett County, Georgia	Caldwell and Kelly 1976	426
Phase I Archaeological Survey of the 88.5 Acre Highway 29 Site, Lawrenceville, Gwinnett County, Georgia	Wheaton 1994	None
Archaeological Assessment of Project MLP-20 (100), Gwinnett County	*Higginbotham 1995*	*6431*
A Phase I Cultural Resource Survey for the Proposed Cumberland Gas Pipeline Loops A and B and Replacements, Bartow, Cherokee, Forsyth, Gwinnett, Walton, and Whitfield Counties, Georgia	*Wilson et al. 1998*	*1848*
Archaeological Assessment of Project STP-0002-00(019), Walton County	*Lotti 2001*	*13128*
Phase I Archaeological Survey of the Athens-Atlanta Rail Corridor	Hamby and Matternes 2002	2289
Phase I Archaeological Survey for SR 124 ITS Project Area, Gwinnett County, Georgia	Pietak 2003	2898
Addendum to Phase I Archaeological Survey of Intersection Improvement of SR 81 at CR 88/Tom and Claude Brewer Roads, Walton County, Georgia	Pietak 2004	2792

Report Title	Citation	Report Number
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Phase I Archaeological Survey of the SR 8 Road Widening Project, Lawrenceville, Gwinnett County, Georgia	*Tankersley 2006*	*3875*
Addendum to Archeological Survey of Proposed Improvements To a Portion of SR 316, Gwinnett County, Georgia	Gresham 2008	4600
Phase I Archaeological Survey of Fourteen Intersections, Gwinnett County, Georgia. TO # 18 PI. No. 0013230	*McQuinn 2017*	*9696*
A Phase I Archaeological Survey of the Lawrenceville Area Park and Ride, Gwinnett County, Georgia *(Survey area not provided in GNAHRGIS)*	Cook 2021	None
Phase I Archaeological Survey in Advance of Proposed Improvements to SR 316, East of Collins Hill Road to West of Cedars Road, Gwinnett County, Georgia	Hinson 2022	14741

**Italicized entry intersects the APE*

Fourteen archaeological surveys were identified within one quarter of a mile of the APE. Several other surveys were noted in GNAHRGIS but further research found these documents did not include archaeological or reconnaissance survey. As such, these surveys are not included in this review. Five archaeological surveys intersect the APE. Four of them were conducted ahead of proposed transportation projects and the fifth was performed for a proposed gas pipeline. Among these five surveys, only one identified an archaeological site within one quarter of a mile, 9GW661, outside the APE.

An examination of Web Soil Survey data within the APE reveals 29 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 92 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 40 percent slope. Only seven soil types within the APE (Ashlar, Rion, and Wateree; Gwinnett clay loam and Gwinnett loam; Madison sandy clay loam; Rion and Bethlehem; Wedowee sandy loam) contain slopes greater than 15 percent, including the Rion and Bethlehem soils, which exceed the 15 percent threshold entirely but only make up one percent of the APE. Additionally, topographic maps reveal that much of the Lawrenceville area APE is surrounded by perennial streams including Big Flat Creek, Wildcat Creek, Cedar Creek, Redland Creek, Shoal Creek, Pew Creek, and the Yellow River. Only Shoal Creek intersects the APE. 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
GWINNETT COUNTY			
Appling sandy loam	Well drained	6-10	22.8
Appling sandy clay loam	Well drained	6-10	1.7
Appling-Hard Labor complex	Well drained	2-6	17.4
Ashlar, Rion, and Wateree soils	Well drained	10-25	1.7

Soil Type	Drainage Class	Slope	Percent of APE
Bethlehem and Cecil soils	Well drained	6-15	1.4
Chewacla silt loam	Somewhat poorly drained	0-2	2.8
Cecil sandy loam	Well drained	2-10	11.6
Gwinnett clay loam	Well drained	2-25	7.6
Gwinnett loam	Well drained	2-25	3.9
Hard Labor sandy loam	Moderately well drained	2-6	<1
Helena sandy loam	Moderately well drained	2-6	<1
Lloyd loam	Well drained	2-6	<1
Musella cobbly loam	Well drained	6-15	1.5
Madison gravelly sandy loam	Well drained	6-10	1
Madison sandy clay loam	Well drained	6-45	1.5
Pacolet sandy loam	Well drained	2-10	7.9
Pacolet sandy clay loam	Well drained	2-25	6.8
Rawlings and Rion soils	Well drained	2-10	<1
Rion and Bethlehem soils	Well drained	15-45	1
Toccoa fine sandy loam	Moderately well drained	0-4	<1
Urban land-Udorthents complex	-	-	<1
Wehadkee soils	Poorly drained	0-2	<1
Wickham sandy loam	Well drained	2-6	2.2
Worsham sandy loam	Poorly drained	2-6	<1
Wedowee sandy loam	Well drained	10-25	1.3
Water	-	-	<1
WALTON COUNTY			
Appling coarse sandy loam	Well drained	2-10	<1
Cecil coarse sandy loam	Well drained	2-6	<1
Colfax sandy loam	Moderately well drained	2-6	<1
Durham loamy coarse sand	Well drained	0-6	<1

Historic topographic maps, the Find a Grave online database, and GDOT's Georgia Cemetery Locator data were examined to identify the presence of any historic-age cemeteries within the APE. While several cemeteries were found in the area, only the Gwinnett Memorial Park Cemetery is located adjacent to the APE. The cemetery contains more than 4,600 burials with the earliest known interment taking place in 1934. The cemetery is still active. The APE appears to overlap several marked burials located nearest Lawrenceville Highway. However, no ground disturbing activities will take place within the Gwinnett Memorial Park Cemetery and the road ROW is separated from the main cemetery area by a hedgerow. Replacement pipeline will not disturb any landscapes or cemetery property. At this location, the pipeline will be bored upstream or downstream from this location so no excavation will occur along the ROW in front of the cemetery.

The NRHP Gallery database, National Park Service Cultural Resource GIS database, and Atlanta Regional Commission geospatial data were examined to identify any NRHP-eligible or NRHP-listed properties within one quarter of a mile of the APE. Two properties, the Baggett Residential Historic District and the William Terrell Homeplace, were identified. The Baggett Residential Historic District is located west of downtown Lawrenceville along West Crogan Street and is less than 200 feet from the APE. This district is recommended eligible for listing in the NRHP, but no associated report is available or accessible to determine if the district is eligible for archaeological potential. The other NRHP property is the William Terrell Homeplace, which is listed in the NRHP under Criteria A, B, C, and D and is only 45 feet from a

portion of the APE. The property is listed under Criterion D for potential historic archaeological significance associated with the plantation outbuildings and possible subsurface deposits.

Historic topographic maps and historic aerials were examined for archeological resource sensitivity within the APE. The presence of structures on historic maps and aerial photography may indicate the likelihood of historic period archeological deposits associated with the occupation of these structures. The APE is comprised of heavily developed urban and residential areas mostly centered around Lawrenceville, the county seat, and a small segment of APE located in rural Loganville. The 1896 Monroe topographic map shows Lawrenceville as a major town at this time, having been established in 1821 and a courthouse erected the same year. The same 1896 map shows the Loganville APE segment as sparsely populated. Hog Mountain and Lawrenceville topographic maps from 1964 show dense residential development, along with commercial and municipal developments along the main roads following the APE. Several churches, schools, businesses, and radio towers are located near the APE in Lawrenceville. The 1964 Between topographic map shows the Loganville APE section as residential with less dense development than Lawrenceville.

Aerial photography from 1955 shows the Lawrenceville area as mostly agricultural or wooded except for the downtown area and portions of Highway 124 north of Lawrenceville. The William Terrell Homeplace is shown on the 1955 aerial as containing several buildings, multiple driveways, and a terraced agricultural field. By 2002, aerial photography shows that much of the tract containing the William Terrell Homeplace had been clearcut and leveled for construction of a subdivision. Aerial photography from 1955 shows the Loganville APE as being surrounded by large tracts of cleared agricultural fields. A small handful of houses and outbuildings are shown along Atkinson Road, at the APE. Imagery from 1978 shows nearly half of the APE corridor being converted back to woodland. By 1993, much of the area surrounding the Loganville APE was cleared for residential development.

Background research revealed only one archaeological site within the APE, 9GW179, which is not eligible for listing in the NRHP. Proposed pipeline installation near 9GW179 will not extend outside of the previously disturbed ROW. One NRHP-listed property, the William Terrell Homeplace is located within 50 feet of the APE and is listed under all four criteria including D for historical archaeological potential. However, proposed pipeline installation will occur only within the ROW of Village Way SE, southwest of the NRHP boundary of the William Terrell Homeplace, and will not affect the NRHP-listed property. Examination of soil types within the APE indicates suitable conditions for human habitation. However, most of the APE is comprised of highly disturbed ROW along heavily developed road corridors. Several creeks and the Yellow River are located near the APE within one quarter of a mile, but portions of the APE closest to the waterways contain residential or commercial development or are located in areas of severe slope. Five archaeological surveys intersect or align with the APE, and among those surveys, no archaeological sites were identified within the APE. Additionally, all six archaeological sites are recommended as not eligible for listing in the NRHP. The scope of work entails replacing approximately 21 miles of existing gas pipeline entirely within previously disturbed areas containing other buried utilities.

Due to the heavily disturbed or urban nature of the APE, limited scope of work along previously installed underground utility corridors, and low to moderate potential for encountering archaeological deposits containing integrity and significance, an archaeological survey is not recommended at this time. Furthermore, Gwinnett Memorial Park Cemetery will be completely avoided.

Determination of Effect

Based on the aforementioned identification and evaluation, PHMSA finds that there are no historic properties as defined in 36 CFR 800.16(l) within the APE. Therefore, in accordance with 36 CFR Part 800.4(d)(1), PHMSA has determined the Undertaking will result in No Historic Properties Affected. While the exact staging areas for the Undertaking are currently unknown, staging should be confined to paved

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

Request for Section 106 Concurrence

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Sincerely,

Matt Fuller
Senior Environmental Protection Specialist

MF/kg

cc: Elizabeth Williams, Environmental Protection Specialist, USDOT Volpe Center
Damond Smith, PHMSA Grant Specialist
Russell Townsend, Tribal Historic Preservation Specialist

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

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

1200 New Jersey Avenue, SE
Washington, DC 20590

January 25, 2024

Glenna Wallace
Chief
Eastern Shawnee Tribe of Oklahoma
127 West Oneida
Seneca, MO 64865

Section 106 Consultation: PHMSA Pipeline Replacement Project in City of Lawrenceville
Grant Recipient: City of Lawrenceville Gas Department (COL)
Project Location: City of Lawrenceville, Gwinnett County, and City of Loganville, Walton County, Georgia

Dear Chief Wallace:

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 City of Lawrenceville Gas Department (COL) 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 Nation that may be affected by the Undertaking, to determine if you want to be a consulting party, and to notify your Nation of PHMSA's intention to make a finding of No Historic Properties Affected. PHMSA is also available for Government-to-Government consultation on this Program.

Project Description/Background

The Undertaking will take place at various locations within the City of Lawrenceville in Georgia. The undertaking will replace a total of approximately 111,500 linear feet (LF) or 21 miles of 50 to 70-year-old coated steel (77,700 LF) and vintage plastic pipes (33,800 LF) by means of cut and cover (trenching) and directional boring. Approximately 20% of service lines in the project area will be replaced by means of directional drilling. A 2x2 foot excavation will be made at the main to tie in the new service line and a 1x1 foot excavation will be made at the service connection next to buildings. The Undertaking does not involve any modification to existing buildings or structures. All work will take place within existing right-of-way (ROW) and utility easements. COL will install the new pipes adjacent to the existing pipes and abandon the existing pipes in place after utility services have been moved to the new pipeline. Abandonment of the existing pipeline (versus excavation and removal) will minimize ground disturbance.

All natural gas main replacements proposed are within highly to moderately developed urban areas. These areas have a mix of residential, commercial, and industrial use. These urban areas have older utility infrastructure (communication, electric, water, and sewer lines) that are frequently being repaired or

replaced. Replacement gas lines will be located within 4 to 5 feet of the existing pipeline within the utility easement. The new pipeline will be installed on the house side of the existing pipe (further away from the road in relation to the existing pipe). The maximum depth of ground disturbance is 5 feet, and the expected width is 2 feet by 2 feet to set the bore for horizontal directional drilling at locations where service tie ins will be made.

The staging areas for the project have not been identified. 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 utility easements, PHMSA has delineated the APE for this Undertaking to encompass the existing ROW in the areas proposed for main replacement and the adjacent parcels to include service line replacements, which includes the limits of disturbance. The APE is comprised of numerous discontinuous segments of ROW in Lawrenceville in addition to one small segment in Loganville. The APE extends to the depth of proposed ground disturbance of up to 5 feet below grade. The Undertaking does not have the potential to cause visual or audible effects after the completion of construction. The existing ROW encompasses various roads, signage, sidewalks, and grassy areas throughout the City of Lawrenceville. The APE is shown on the maps in **Attachment A**.

Identification and Evaluation

To identify historic properties in the APE, individuals who meet the Secretary of the Interior's (SOI) Professional Qualification Standards reviewed available information on previously identified historic properties in the APE, including the National Register of Historic Places (NRHP) database and data gathered from Georgia's Natural, Archaeological, and Historic Resources Geographic Information System database (GNAHRGIS). SOI-qualified individuals also conducted research to determine if there are any previously unidentified properties within the APE that are 45 years of age or older and may be eligible for the NRHP.

Historic Architecture

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

Archaeology

GNAHRGIS was examined to identify the presence of previously recorded archaeological sites and previously conducted archaeological surveys within one quarter of a mile of the APE. As a result of the site file search, six archaeological sites and 14 archaeological surveys were located within one quarter of a mile (Tables 1 and 2).

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

Site Number	Type	NRHP Eligibility	Citation
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9GW711	Historic artifact scatter; unspecified dump	Recommended Not Eligible	Cook 2021

**Italicized entry is within the APE*

Of the six archaeological sites identified within one quarter of a mile, two are precontact sites and four are historic-age sites. Site 9GW179 is a precontact lithic scatter containing two quartz projectile point fragments and is the only site located within the APE. The 1983 site form for 9GW179 describes the site as not being eligible for listing in the NRHP and notes considerable disturbance from road construction and landscaping. No known archaeological report is associated with the site. All other sites identified within one quarter of a mile are also recommended not eligible.

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

Report Title	Citation	Report Number
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A Phase I Archaeological Survey of the Lawrenceville Area Park and Ride, Gwinnett County, Georgia *(Survey area not provided in GNAHRGIS)*	Cook 2021	None
Phase I Archaeological Survey in Advance of Proposed Improvements to SR 316, East of Collins Hill Road to West of Cedars Road, Gwinnett County, Georgia	Hinson 2022	14741

**Italicized entry intersects the APE*

Fourteen archaeological surveys were identified within one quarter of a mile of the APE. Several other surveys were noted in GNAHRGIS but further research found these documents did not include archaeological or reconnaissance survey. As such, these surveys are not included in this review. Five archaeological surveys intersect the APE. Four of them were conducted ahead of proposed transportation projects and the fifth was performed for a proposed gas pipeline. Among these five surveys, only one identified an archaeological site within one quarter of a mile, 9GW661, outside the APE.

An examination of Web Soil Survey data within the APE reveals 29 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 92 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 40 percent slope. Only seven soil types within the APE (Ashlar, Rion, and Wateree; Gwinnett clay loam and Gwinnett loam; Madison sandy clay loam; Rion and Bethlehem; Wedowee sandy loam) contain slopes greater than 15 percent, including the Rion and Bethlehem soils, which exceed the 15 percent threshold entirely but only make up one percent of the APE. Additionally, topographic maps reveal that much of the Lawrenceville area APE is surrounded by perennial streams including Big Flat Creek, Wildcat Creek, Cedar Creek, Redland Creek, Shoal Creek, Pew Creek, and the Yellow River. Only Shoal Creek intersects the APE. 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
GWINNETT COUNTY			
Appling sandy loam	Well drained	6-10	22.8
Appling sandy clay loam	Well drained	6-10	1.7
Appling-Hard Labor complex	Well drained	2-6	17.4
Ashlar, Rion, and Wateree soils	Well drained	10-25	1.7

Soil Type	Drainage Class	Slope	Percent of APE
Bethlehem and Cecil soils	Well drained	6-15	1.4
Chewacla silt loam	Somewhat poorly drained	0-2	2.8
Cecil sandy loam	Well drained	2-10	11.6
Gwinnett clay loam	Well drained	2-25	7.6
Gwinnett loam	Well drained	2-25	3.9
Hard Labor sandy loam	Moderately well drained	2-6	<1
Helena sandy loam	Moderately well drained	2-6	<1
Lloyd loam	Well drained	2-6	<1
Musella cobbly loam	Well drained	6-15	1.5
Madison gravelly sandy loam	Well drained	6-10	1
Madison sandy clay loam	Well drained	6-45	1.5
Pacolet sandy loam	Well drained	2-10	7.9
Pacolet sandy clay loam	Well drained	2-25	6.8
Rawlings and Rion soils	Well drained	2-10	<1
Rion and Bethlehem soils	Well drained	15-45	1
Toccoa fine sandy loam	Moderately well drained	0-4	<1
Urban land-Udorthents complex	-	-	<1
Wehadkee soils	Poorly drained	0-2	<1
Wickham sandy loam	Well drained	2-6	2.2
Worsham sandy loam	Poorly drained	2-6	<1
Wedowee sandy loam	Well drained	10-25	1.3
Water	-	-	<1
WALTON COUNTY			
Appling coarse sandy loam	Well drained	2-10	<1
Cecil coarse sandy loam	Well drained	2-6	<1
Colfax sandy loam	Moderately well drained	2-6	<1
Durham loamy coarse sand	Well drained	0-6	<1

Historic topographic maps, the Find a Grave online database, and GDOT's Georgia Cemetery Locator data were examined to identify the presence of any historic-age cemeteries within the APE. While several cemeteries were found in the area, only the Gwinnett Memorial Park Cemetery is located adjacent to the APE. The cemetery contains more than 4,600 burials with the earliest known interment taking place in 1934. The cemetery is still active. The APE appears to overlap several marked burials located nearest Lawrenceville Highway. However, no ground disturbing activities will take place within the Gwinnett Memorial Park Cemetery and the road ROW is separated from the main cemetery area by a hedgerow. Replacement pipeline will not disturb any landscapes or cemetery property. At this location, the pipeline will be bored upstream or downstream from this location so no excavation will occur along the ROW in front of the cemetery.

The NRHP Gallery database, National Park Service Cultural Resource GIS database, and Atlanta Regional Commission geospatial data were examined to identify any NRHP-eligible or NRHP-listed properties within one quarter of a mile of the APE. Two properties, the Baggett Residential Historic District and the William Terrell Homeplace, were identified. The Baggett Residential Historic District is located west of downtown Lawrenceville along West Crogan Street and is less than 200 feet from the APE. This district is recommended eligible for listing in the NRHP, but no associated report is available or accessible to determine if the district is eligible for archaeological potential. The other NRHP property is the William Terrell Homeplace, which is listed in the NRHP under Criteria A, B, C, and D and is only 45 feet from a

portion of the APE. The property is listed under Criterion D for potential historic archaeological significance associated with the plantation outbuildings and possible subsurface deposits.

Historic topographic maps and historic aerials were examined for archeological resource sensitivity within the APE. The presence of structures on historic maps and aerial photography may indicate the likelihood of historic period archeological deposits associated with the occupation of these structures. The APE is comprised of heavily developed urban and residential areas mostly centered around Lawrenceville, the county seat, and a small segment of APE located in rural Loganville. The 1896 Monroe topographic map shows Lawrenceville as a major town at this time, having been established in 1821 and a courthouse erected the same year. The same 1896 map shows the Loganville APE segment as sparsely populated. Hog Mountain and Lawrenceville topographic maps from 1964 show dense residential development, along with commercial and municipal developments along the main roads following the APE. Several churches, schools, businesses, and radio towers are located near the APE in Lawrenceville. The 1964 Between topographic map shows the Loganville APE section as residential with less dense development than Lawrenceville.

Aerial photography from 1955 shows the Lawrenceville area as mostly agricultural or wooded except for the downtown area and portions of Highway 124 north of Lawrenceville. The William Terrell Homeplace is shown on the 1955 aerial as containing several buildings, multiple driveways, and a terraced agricultural field. By 2002, aerial photography shows that much of the tract containing the William Terrell Homeplace had been clearcut and leveled for construction of a subdivision. Aerial photography from 1955 shows the Loganville APE as being surrounded by large tracts of cleared agricultural fields. A small handful of houses and outbuildings are shown along Atkinson Road, at the APE. Imagery from 1978 shows nearly half of the APE corridor being converted back to woodland. By 1993, much of the area surrounding the Loganville APE was cleared for residential development.

Background research revealed only one archaeological site within the APE, 9GW179, which is not eligible for listing in the NRHP. Proposed pipeline installation near 9GW179 will not extend outside of the previously disturbed ROW. One NRHP-listed property, the William Terrell Homeplace is located within 50 feet of the APE and is listed under all four criteria including D for historical archaeological potential. However, proposed pipeline installation will occur only within the ROW of Village Way SE, southwest of the NRHP boundary of the William Terrell Homeplace, and will not affect the NRHP-listed property. Examination of soil types within the APE indicates suitable conditions for human habitation. However, most of the APE is comprised of highly disturbed ROW along heavily developed road corridors. Several creeks and the Yellow River are located near the APE within one quarter of a mile, but portions of the APE closest to the waterways contain residential or commercial development or are located in areas of severe slope. Five archaeological surveys intersect or align with the APE, and among those surveys, no archaeological sites were identified within the APE. Additionally, all six archaeological sites are recommended as not eligible for listing in the NRHP. The scope of work entails replacing approximately 21 miles of existing gas pipeline entirely within previously disturbed areas containing other buried utilities.

Due to the heavily disturbed or urban nature of the APE, limited scope of work along previously installed underground utility corridors, and low to moderate potential for encountering archaeological deposits containing integrity and significance, an archaeological survey is not recommended at this time. Furthermore, Gwinnett Memorial Park Cemetery will be completely avoided.

Determination of Effect

Based on the aforementioned identification and evaluation, PHMSA finds that there are no historic properties as defined in 36 CFR 800.16(l) within the APE. Therefore, in accordance with 36 CFR Part 800.4(d)(1), PHMSA has determined the Undertaking will result in No Historic Properties Affected. While the exact staging areas for the Undertaking are currently unknown, staging should be confined to paved

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

Request for Section 106 Concurrence

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

Sincerely,

Matt Fuller
Senior Environmental Protection Specialist

MF/kg

cc: Elizabeth Williams, Environmental Protection Specialist, USDOT Volpe Center
Damond Smith, PHMSA Grant Specialist
Paul Barton, Tribal Historic Preservation Officer

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

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

1200 New Jersey Avenue, SE
Washington, DC 20590

January 25, 2024

David Hill
Principal Chief
Muscogee (Creek) Nation
1007 East Eufaula Street
Okmulgee, OK 74447

Section 106 Consultation: PHMSA Pipeline Replacement Project in City of Lawrenceville
Grant Recipient: City of Lawrenceville Gas Department (COL)
Project Location: City of Lawrenceville, Gwinnett County, and City of Loganville, Walton County, Georgia

Dear Principal Chief Hill:

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 City of Lawrenceville Gas Department (COL) 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 Nation that may be affected by the Undertaking, to determine if you want to be a consulting party, and to notify your Nation of PHMSA's intention to make a finding of No Historic Properties Affected. PHMSA is also available for Government-to-Government consultation on this Program.

Project Description/Background

The Undertaking will take place at various locations within the City of Lawrenceville in Georgia. The undertaking will replace a total of approximately 111,500 linear feet (LF) or 21 miles of 50 to 70-year-old coated steel (77,700 LF) and vintage plastic pipes (33,800 LF) by means of cut and cover (trenching) and directional boring. Approximately 20% of service lines in the project area will be replaced by means of directional drilling. A 2x2 foot excavation will be made at the main to tie in the new service line and a 1x1 foot excavation will be made at the service connection next to buildings. The Undertaking does not involve any modification to existing buildings or structures. All work will take place within existing right-of-way (ROW) and utility easements. COL will install the new pipes adjacent to the existing pipes and abandon the existing pipes in place after utility services have been moved to the new pipeline. Abandonment of the existing pipeline (versus excavation and removal) will minimize ground disturbance.

All natural gas main replacements proposed are within highly to moderately developed urban areas. These areas have a mix of residential, commercial, and industrial use. These urban areas have older utility infrastructure (communication, electric, water, and sewer lines) that are frequently being repaired or

replaced. Replacement gas lines will be located within 4 to 5 feet of the existing pipeline within the utility easement. The new pipeline will be installed on the house side of the existing pipe (further away from the road in relation to the existing pipe). The maximum depth of ground disturbance is 5 feet, and the expected width is 2 feet by 2 feet to set the bore for horizontal directional drilling at locations where service tie ins will be made.

The staging areas for the project have not been identified. 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 utility easements, PHMSA has delineated the APE for this Undertaking to encompass the existing ROW in the areas proposed for main replacement and the adjacent parcels to include service line replacements, which includes the limits of disturbance. The APE is comprised of numerous discontinuous segments of ROW in Lawrenceville in addition to one small segment in Loganville. The APE extends to the depth of proposed ground disturbance of up to 5 feet below grade. The Undertaking does not have the potential to cause visual or audible effects after the completion of construction. The existing ROW encompasses various roads, signage, sidewalks, and grassy areas throughout the City of Lawrenceville. The APE is shown on the maps in **Attachment A**.

Identification and Evaluation

To identify historic properties in the APE, individuals who meet the Secretary of the Interior's (SOI) Professional Qualification Standards reviewed available information on previously identified historic properties in the APE, including the National Register of Historic Places (NRHP) database and data gathered from Georgia's Natural, Archaeological, and Historic Resources Geographic Information System database (GNAHRGIS). SOI-qualified individuals also conducted research to determine if there are any previously unidentified properties within the APE that are 45 years of age or older and may be eligible for the NRHP.

Historic Architecture

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

Archaeology

GNAHRGIS was examined to identify the presence of previously recorded archaeological sites and previously conducted archaeological surveys within one quarter of a mile of the APE. As a result of the site file search, six archaeological sites and 14 archaeological surveys were located within one quarter of a mile (Tables 1 and 2).

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

Site Number	Type	NRHP Eligibility	Citation
*9GW179 **	*Precontact lithic scatter*	*Recommended Not Eligible*	*Hart 1983 (Site Form)*
9GW269	Historic house site	Recommended Not Eligible	Wheaton 1991 (Site Form)
9GW307	Historic house site	Recommended Not Eligible	Wheaton 1994
9GW630	Precontact lithic scatter	Recommended Not Eligible	Gresham 2008
9GW661	Historic artifact scatter	Recommended Not Eligible	McQuinn 2017
9GW711	Historic artifact scatter; unspecified dump	Recommended Not Eligible	Cook 2021

**Italicized entry is within the APE*

Of the six archaeological sites identified within one quarter of a mile, two are precontact sites and four are historic-age sites. Site 9GW179 is a precontact lithic scatter containing two quartz projectile point fragments and is the only site located within the APE. The 1983 site form for 9GW179 describes the site as not being eligible for listing in the NRHP and notes considerable disturbance from road construction and landscaping. No known archaeological report is associated with the site. All other sites identified within one quarter of a mile are also recommended not eligible.

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

Report Title	Citation	Report Number
An Archaeological and Historical Survey of Tribble Mill Creek Drainage Area Road Project, Gwinnett County, Georgia	Caldwell and Kelly 1976	426
Phase I Archaeological Survey of the 88.5 Acre Highway 29 Site, Lawrenceville, Gwinnett County, Georgia	Wheaton 1994	None
Archaeological Assessment of Project MLP-20 (100), Gwinnett County	*Higginbotham 1995*	*6431*
A Phase I Cultural Resource Survey for the Proposed Cumberland Gas Pipeline Loops A and B and Replacements, Bartow, Cherokee, Forsyth, Gwinnett, Walton, and Whitfield Counties, Georgia	*Wilson et al. 1998*	*1848*
Archaeological Assessment of Project STP-0002-00(019), Walton County	*Lotti 2001*	*13128*
Phase I Archaeological Survey of the Athens-Atlanta Rail Corridor	Hamby and Matternes 2002	2289
Phase I Archaeological Survey for SR 124 ITS Project Area, Gwinnett County, Georgia	Pietak 2003	2898
Addendum to Phase I Archaeological Survey of Intersection Improvement of SR 81 at CR 88/Tom and Claude Brewer Roads, Walton County, Georgia	Pietak 2004	2792

Report Title	Citation	Report Number
Archeological Survey of Proposed Improvements to a Portion of SR 316, Gwinnett County, Georgia	Gresham 2005	3389
Phase I Archaeological Survey of the SR 8 Road Widening Project, Lawrenceville, Gwinnett County, Georgia	*Tankersley 2006*	*3875*
Addendum to Archeological Survey of Proposed Improvements To a Portion of SR 316, Gwinnett County, Georgia	Gresham 2008	4600
Phase I Archaeological Survey of Fourteen Intersections, Gwinnett County, Georgia. TO # 18 PI. No. 0013230	*McQuinn 2017*	*9696*
A Phase I Archaeological Survey of the Lawrenceville Area Park and Ride, Gwinnett County, Georgia *(Survey area not provided in GNAHRGIS)*	Cook 2021	None
Phase I Archaeological Survey in Advance of Proposed Improvements to SR 316, East of Collins Hill Road to West of Cedars Road, Gwinnett County, Georgia	Hinson 2022	14741

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Fourteen archaeological surveys were identified within one quarter of a mile of the APE. Several other surveys were noted in GNAHRGIS but further research found these documents did not include archaeological or reconnaissance survey. As such, these surveys are not included in this review. Five archaeological surveys intersect the APE. Four of them were conducted ahead of proposed transportation projects and the fifth was performed for a proposed gas pipeline. Among these five surveys, only one identified an archaeological site within one quarter of a mile, 9GW661, outside the APE.

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Urban land-Udorthents complex	-	-	<1
Wehadkee soils	Poorly drained	0-2	<1
Wickham sandy loam	Well drained	2-6	2.2
Worsham sandy loam	Poorly drained	2-6	<1
Wedowee sandy loam	Well drained	10-25	1.3
Water	-	-	<1
WALTON COUNTY			
Appling coarse sandy loam	Well drained	2-10	<1
Cecil coarse sandy loam	Well drained	2-6	<1
Colfax sandy loam	Moderately well drained	2-6	<1
Durham loamy coarse sand	Well drained	0-6	<1

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Due to the heavily disturbed or urban nature of the APE, limited scope of work along previously installed underground utility corridors, and low to moderate potential for encountering archaeological deposits containing integrity and significance, an archaeological survey is not recommended at this time. Furthermore, Gwinnett Memorial Park Cemetery will be completely avoided.

Determination of Effect

Based on the aforementioned identification and evaluation, PHMSA finds that there are no historic properties as defined in 36 CFR 800.16(l) within the APE. Therefore, in accordance with 36 CFR Part 800.4(d)(1), PHMSA has determined the Undertaking will result in No Historic Properties Affected. While the exact staging areas for the Undertaking are currently unknown, staging should be confined to paved

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

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Sincerely,

Matt Fuller
Senior Environmental Protection Specialist

MF/kg

cc: Elizabeth Williams, Environmental Protection Specialist, USDOT Volpe Center
Damond Smith, PHMSA Grant Specialist
Turner Hunt, Tribal Historic Preservation Officer

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

Appendix H

Environmental Justice

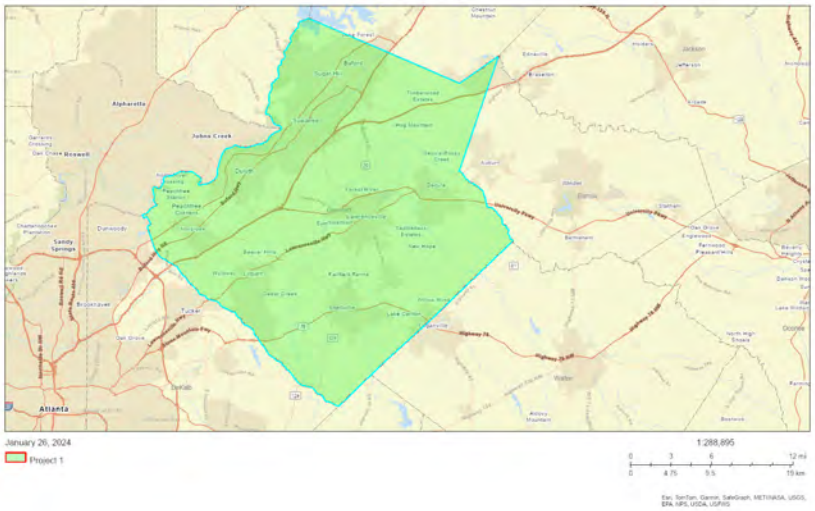
EJ creen Communit Repor E

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

Gwinnett County, E GA

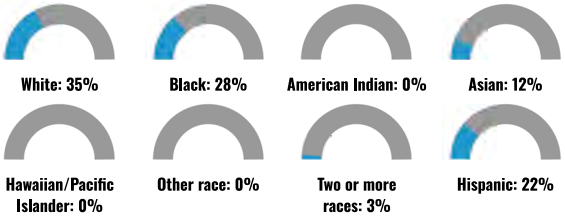
County: Gwinnett
Population: 948,505
Area in square miles: 436.78

A3 Landscape



COMMUNITY INDICATORS

BREAKDOWN BY RACE



BREAKDOWN BY AGE E

LANGUAGES SPOKEN AT H E E

LANGUAGE	PERCENT
English	65%
Spanish	19%
French, Haitian, or Cajun	1%
Russian, Polish, or Other Slavic	1%
Other Indo-European	4%
Korean	3%
Chinese (including Mandarin, Cantonese)	1%
Vietnamese	2%
Other Asian and Pacific Island	1%
Other and Unspecified	2%
Total Non-English	35%

LIMITED ENGLISH SPEAKING BREAKD N E

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

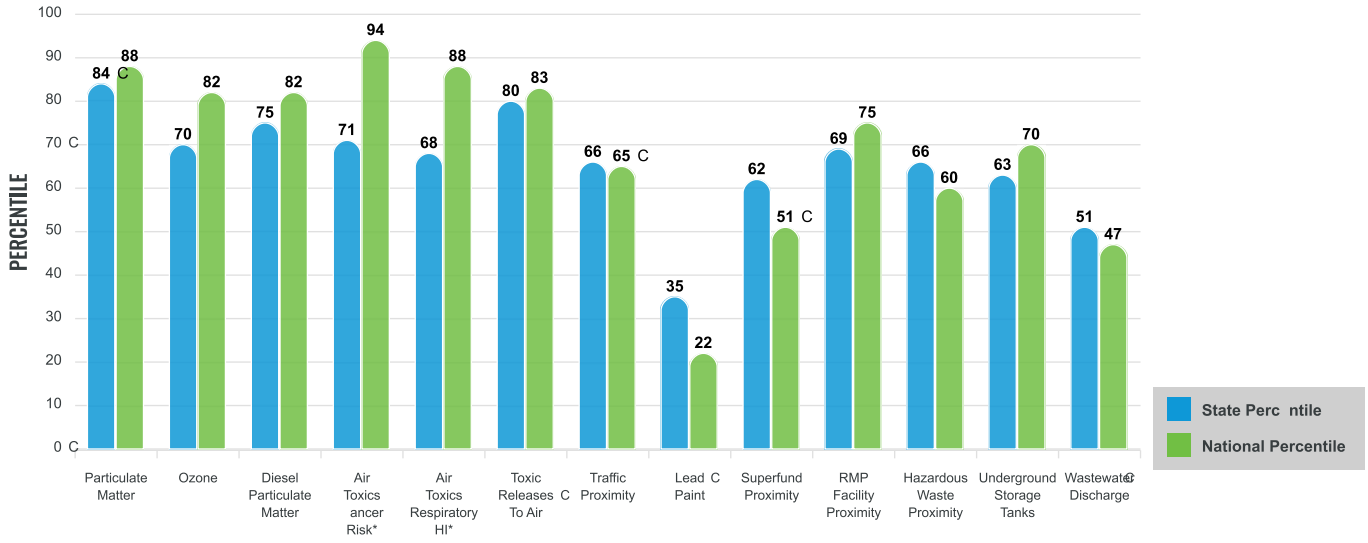
Environment l Justice & Supplement l ndexes C

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 NDE ES C

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.

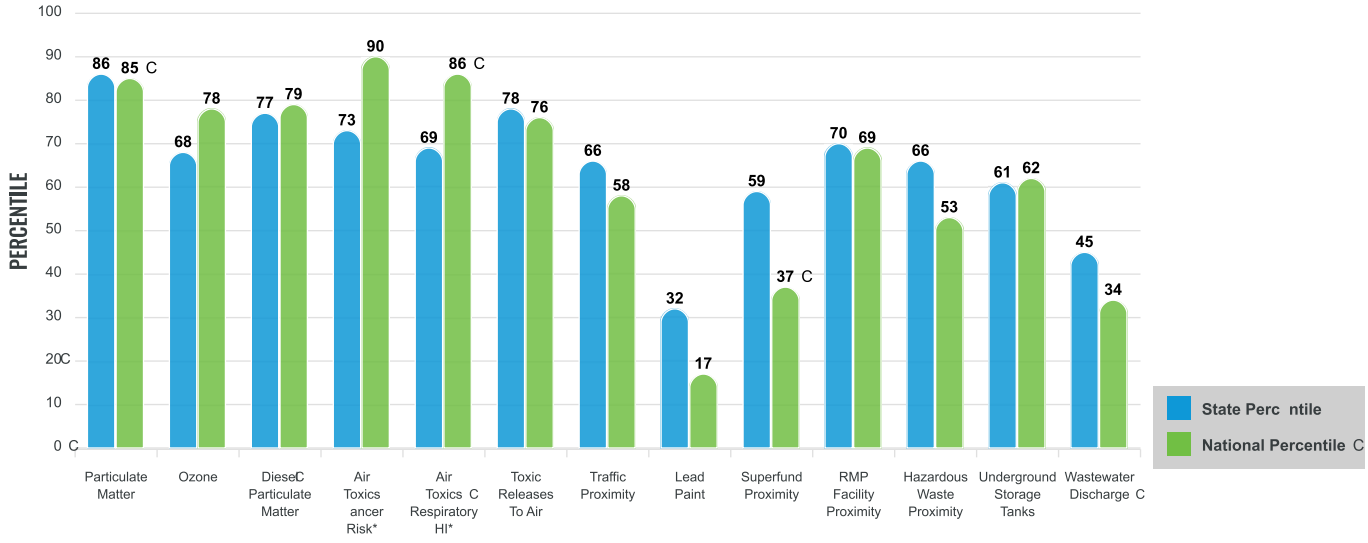
EJ INDEXES FOR THE SELECTED LOCATION C



SUPPLEMENTAL NDE ES

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 C



These perce es pr v de perspec ve h w he se ec ed b ck gr up r buffer area c mpares he e re s a e r a . C

Report for ounty: Gwinnett

EJScreen Environmental and Socioeconomic Indicators Data w

SELECTED VARIABLES	VALUE	STATE AVERAGE	PERCENTILE IN STATE	USA AVERAGE	PERCENTILE IN USA
POLLUTION AND SOURCES					
Particulate Matter (µg/m^3)	10.3	9.61	86	8.08	95
Ozone (ppb)	64.6	64	55	61.6	73
Diesel Particulate Matter (µg/m^3)	0.368	0.277	73	0.261	79
Air Toxics Cancer Risk* (lifetime risk per million)	38	35	2	25	52
Air Toxics Respiratory HI*	0.44	0.44	6	0.31	70
Toxic Releases to Air	2,000	1,600	85	4,600	73
Traffic Proximity (daily traffic count/distance to road)	90	110	71	210	54
Lead Paint (% Pre-1960 Housing)	0.019	0.14	35	0.3	18
Superfund Proximity (site count/km distance)	0.027	0.066	48	0.13	25
RMP Facility Proximity (facility count/km distance)	0.51	0.38	79	0.43	77
Hazardous Waste Proximity (facility count/km distance)	0.37	0.45	70	1.9	45
Underground Storage Tanks (count/km^2)	2.1	2.3	64	3.9	60
Wastewater Discharge (toxicity-weighted concentration/m distance)	0.00096	0.18	69	22	48
SOCIOECONOMIC INDICATORS					
Demographic Index	47%	41%	60	35%	71
Supplemental Demographic Index	14%	15%	51	14%	58
People of Color	65%	48%	66	39%	75
Low Income	28%	34%	44	31%	52
Unemployment Rate	4%	6%	53	6%	51
Limited English Speaking Households	9%	3%	90	5%	83
Less Than High School Education	12%	12%	58	12%	64
Under Age 5	6%	6%	62	6%	64
Over Age 64	10%	15%	35	17%	27
Low Life Expectancy	17%	21%	9	20%	23

*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 9
Water Dischargers 10465
Air Pollution 326
Brownfields 2
Toxic Release Inventory 103

Other community features within defined area:

Schools 148
Hospitals 4
Places of Worship 189

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

HEALTH INDICATORS					
INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Low Life Expectancy	17%	21%	9	20%	23
Heart Disease	4.5	6.1	20	6.1	17
Asthma	8.9	10	24	10	22
Cancer	4.5	5.5	22	6.1	18
Persons with Disabilities	7.4%	13.1%	18	13.4%	15

CLIMATE INDICATORS					
INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Flood Risk	7%	9%	58	12%	54
Wildfire Risk	0%	4%	0	14%	0

CRITICAL SERVICE GAPS					
INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Broadband Internet	9%	15%	43	14%	42
Lack of Health Insurance	16%	13%	67	9%	86
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

Re o f C un y: Gwinne

E Scree Commu i y Repor

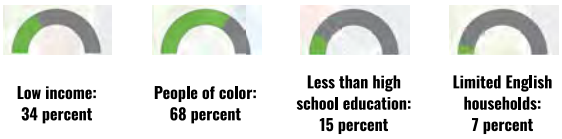
This report provides environmental and socioeconomic information for user-defined areas, and combines that data into environmental justice and supplemental indexes.

Lawrenceville, GAW

the User Specified Area
Population: 72,415
Area in square miles: 28.31

A3 Landscape

COMMUNITY INDICATORS



Low income: 34 percent
People of color: 68 percent
Less than high school education: 15 percent
Limited English households: 7 percent

Unemployment: 5 percent
Persons with disabilities: 9 percent
Male: 49 percent
Female: 51 percent

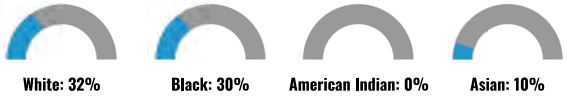
72 years
Average life expectancy

$31,190
Per capita income

Number of households: 23,353

Owner occupied: 64 percent

BREAKDOWN BY RACE



White: 32%
Black: 30%
American Indian: 0%
Asian: 10%
Hawaiian/Pacific Islander: 0%
Other race: 1%
Two or more races: 4%
Hispanic: 23%

BREAKDOWN BY AGE

From Ages 1 to 4: 7%
From Ages 1 to 18: 26%
From Ages 18 and up: 74%
From Ages 65 and up: 10%

LIMITED ENGLISH SPEAKING BREAKDOWN

Speak Spanish: 66%
Speak Other Indo-European Languages: 13%
Speak Asian-Pacific Island Languages: 15%
Speak Other Languages: 6%

LANGUAGES SPOKEN AT HOME

LANGUAGE	PERCENT
English	61%
Spanish	21%
French, Haitian, or Cajun	1%
Russian, Polish, or Other Slavic	1%
Other Indo-European	4%
Korean	1%
Chinese (including Mandarin, Cantonese)	1%
Vietnamese	3%
Other Asian and Pacific Island	1%
Arabic	1%
Other and Unspecified	3%
Total Non-English	39%

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

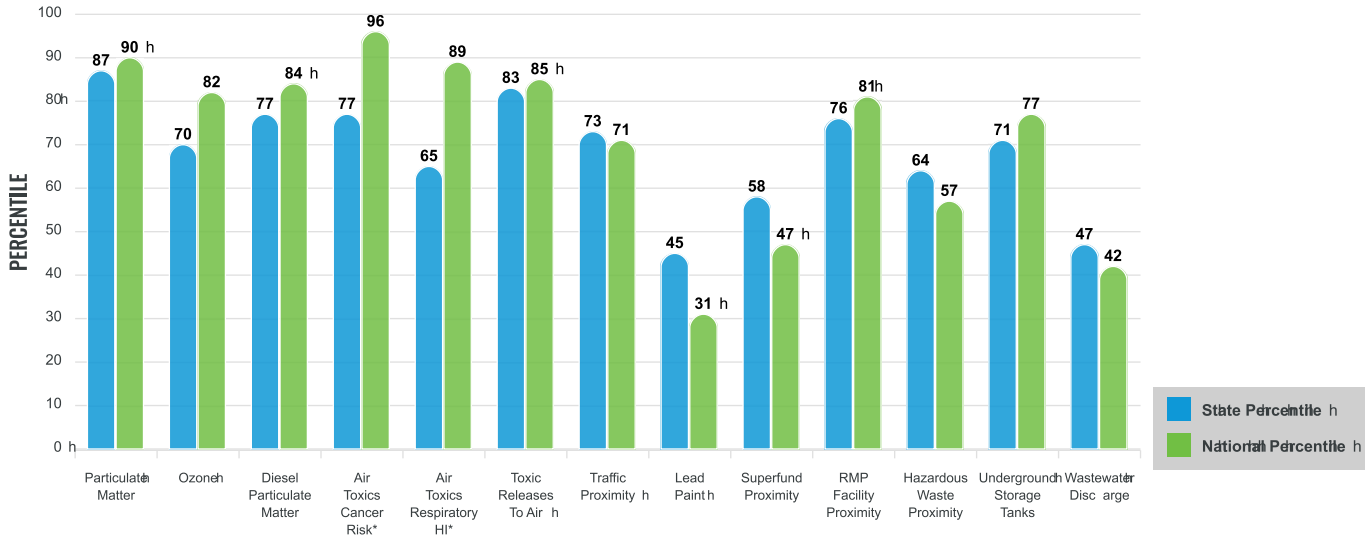
Environmental Justice & Supplemental Indexes

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

EJ INDEXES

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

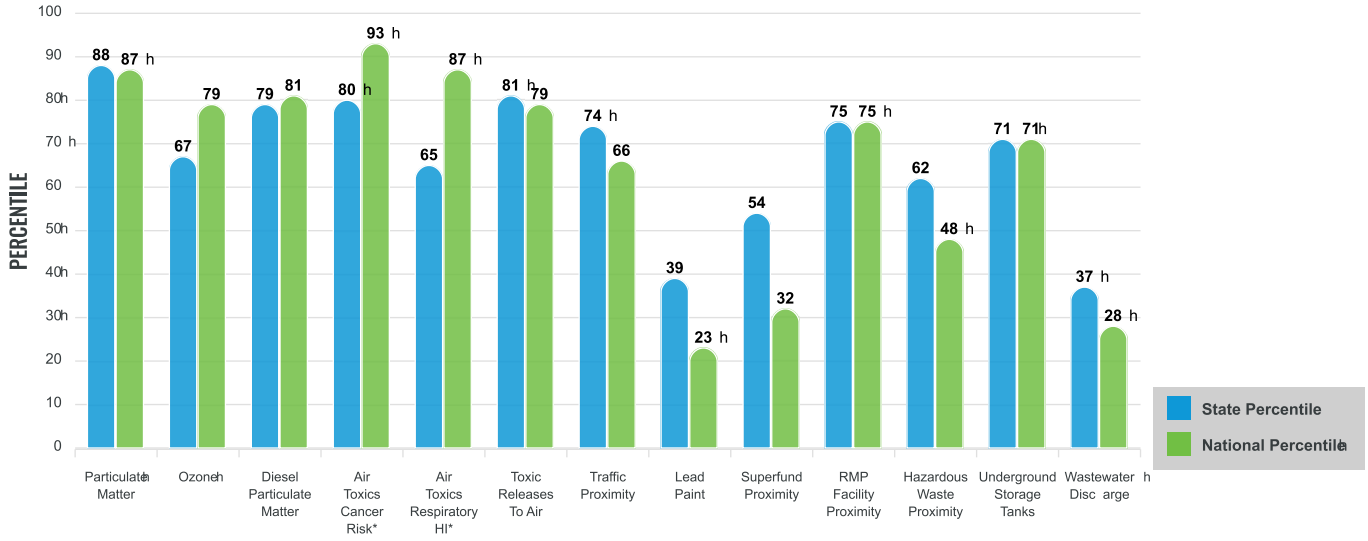
EJ INDEXES FOR THE SELECTED LOCATION



SUPPLEMENTAL INDEXES

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

SUPPLEMENTAL INDEXES FOR THE SELECTED LOCATION



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

Report for the User Specified Area

EJScreen Environmental and Socioeconomic Indicators Data w

SELECTED VARIABLES	VALUE	STATE AVERAGE	PERCENTILE IN STATE	USA AVERAGE	PERCENTILE IN USA
POLLUTION AND SOURCES					
Particulate Matter (µg/m^3)	10.4	9.61	87	8.08	95
Ozone (ppb)	64	64	51	61.6	70
Diesel Particulate Matter (µg/m^3)	0.358	0.277	72	0.261	78
Air Toxics Cancer Risk* (lifetime risk per million)	40	35	2	25	52
Air Toxics Respiratory HI*	0.43	0.44	6	0.31	70
Toxic Releases to Air	1,900	1,600	83	4,600	71
Traffic Proximity (daily traffic count/distance to road)	97	110	73	210	56
Lead Paint (% Pre-1960 Housing)	0.033	0.14	40	0.3	22
Superfund Proximity (site count/km distance)	0.023	0.066	39	0.13	21
RMP Facility Proximity (facility count/km distance)	0.55	0.38	80	0.43	78
Hazardous Waste Proximity (facility count/km distance)	0.19	0.45	53	1.9	34
Underground Storage Tanks (count/km^2)	3.3	2.3	75	3.9	69
Wastewater Discharge (toxicity-weighted concentration/m distance)	0.00013	0.18	46	22	32
SOCIOECONOMIC INDICATORS					
Demographic Index	51%	41%	65	35%	75
Supplemental Demographic Index	16%	15%	57	14%	64
People of Color	68%	48%	68	39%	76
Low Income	34%	34%	53	31%	61
Unemployment Rate	5%	6%	56	6%	55
Limited English Speaking Households	7%	3%	88	5%	80
Less Than High School Education	15%	12%	66	12%	72
Under Age 5	7%	6%	64	6%	67
Over Age 64	10%	15%	33	17%	26
Low Life Expectancy	17%	21%	11	20%	26

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

Sites reporting to EPA within defined area:

Superfund	0
Hazardous Waste, Treatment, Storage, and Disposal Facilities	0
Water Dischargers	777
Air Pollution	36
Brownfields	0
Toxic Release Inventory	16

Other community features within defined area:

Schools	16
Hospitals	1
Places of Worship	16

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

HEALTH INDICATORS					
INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Low Life Expectancy	17%	21%	11	20%	26
Heart Disease	5	6.1	33	6.1	28
Asthma	9.4	10	34	10	33
Cancer	4.7	5.5	26	6.1	21
Persons with Disabilities	8.9%	13.1%	27	13.4%	24

CLIMATE INDICATORS					
INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Flood Risk	7%	9%	59	12%	54
Wildfire Risk	0%	4%	0	14%	0

CRITICAL SERVICE GAPS					
INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Broadband Internet	9%	15%	43	14%	43
Lack of Health Insurance	16%	13%	65	9%	85
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 i

Re f he Use S ecified A ea i

EJS reen Commun ty Rep rt

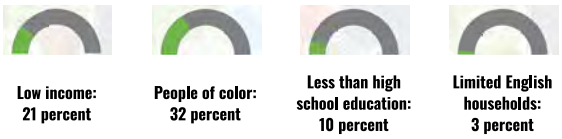
This report provides environmental and socioeconomic information for user-defined areas, and combines that data into environmental justice and supplemental indexes.

Walton County, GAJ

0.5 miles Ring around the Area
Population: 409
Area in square miles: 1.34

A3 Landscape

COMMUNITY INFO N JMATI



Low income: 21 percent
People of color: 32 percent
Less than high school education: 10 percent
Limited English households: 3 percent

Unemployment: 5 percent
Persons with disabilities: 16 percent
Male: 48 percent
Female: 52 percent

82 years
Average life expectancy

$37,362
Per capita income

Number of households: 153

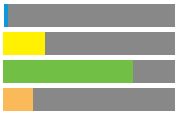
Owner occupied: 81 percent

GRAKD N BY RACE

White: 68%
Black: 23%
American Indian: 0%
Asian: 2%

Hawaiian/Pacific Islander: 0%
Other race: 0%
Two or more races: 0%
Hispanic: 7%

GRAKD N BY AGEJ



From Ages 1 to 4 — 2%
From Ages 1 to 18 — 24%
From Ages 18 and up — 76%
From Ages 65 and up — 17%

LIMITED ENGLISH SPEAKING GRAKD N J

Speak Spanish — 0%
Speak Other Indo-European Languages — 0%
Speak Asian-Pacific Island Languages — 100%
Speak Other Languages — 0%

LANGUAGES SPOKEN AT H E J

LANGUAGE	PERCENT
English	93%
Spanish	5%
German or other West Germanic	1%
Other Asian and Pacific Island	1%
Total Non-English	7%

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

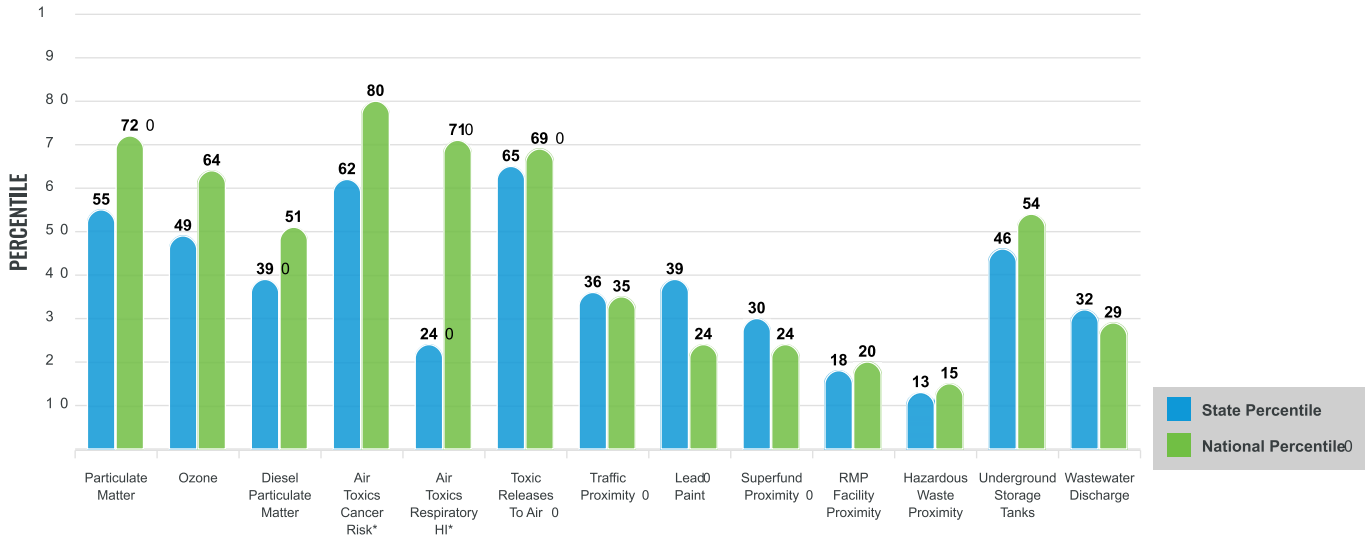
Env ronmental Just ce & Supplemental Indexes 0

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 0

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.

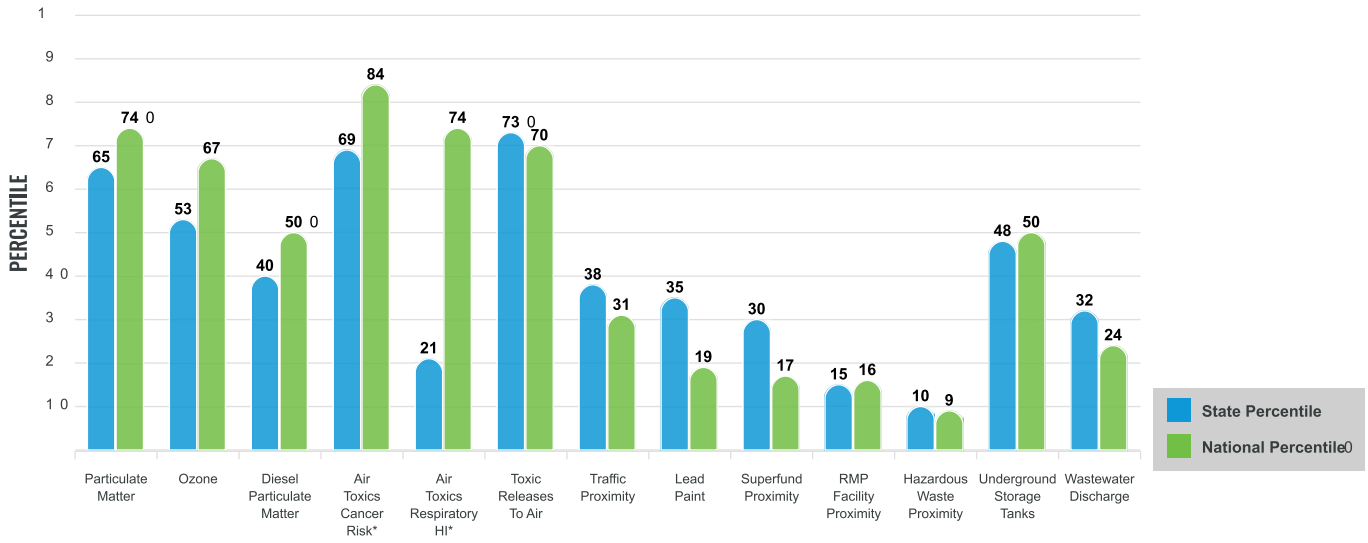
EJ INDEXES FOR THE SELECTED LOCATION 0



SUPPLEMENTAL INDEXES 0

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

SUPPLEMENTAL INDEXES FOR THE SELECTED LOCATION 0



These perce es pr v de perspec ve h w he se ec ed b ck gr up r buffer area c mpares he e re s a e r a . 0

Report for .5 miles Ring around the Area

EJScreen Environmental and Socioeconomic Indicators Data w

SELECTED VARIABLES	VALUE	STATE AVERAGE	PERCENTILE IN STATE	USA AVERAGE	PERCENTILE IN USA
POLLUTION AND SOURCES					
Particulate Matter (µg/m^3)	10.1	9.61	71	8.08	92
Ozone (ppb)	64.4	64	54	61.6	72
Diesel Particulate Matter (µg/m^3)	0.206	0.277	40	0.261	47
Air Toxics Cancer Risk* (lifetime risk per million)	40	35	50	25	94
Air Toxics Respiratory HI*	0.4	0.44	6	0.31	70
Toxic Releases to Air	3,500	1,600	94	4,600	81
Traffic Proximity (daily traffic count/distance to road)	25	110	37	210	27
Lead Paint (% Pre-1960 Housing)	0.018	0.14	34	0.3	18
Superfund Proximity (site count/km distance)	0.02	0.066	30	0.13	17
RMP Facility Proximity (facility count/km distance)	0.059	0.38	14	0.43	14
Hazardous Waste Proximity (facility count/km distance)	0.048	0.45	11	1.9	9
Underground Storage Tanks (count/km^2)	1.1	2.3	50	3.9	49
Wastewater Discharge (toxicity-weighted concentration/m distance)	2.7E-05	0.18	32	22	22
SOCIOECONOMIC INDICATORS					
Demographic Index	26%	41%	31	35%	45
Supplemental Demographic Index	11%	15%	33	14%	40
People of Color	32%	48%	37	39%	51
Low Income	21%	34%	33	31%	38
Unemployment Rate	5%	6%	61	6%	60
Limited English Speaking Households	2%	3%	76	5%	66
Less Than High School Education	10%	12%	52	12%	59
Under Age 5	2%	6%	27	6%	26
Over Age 64	17%	15%	64	17%	56
Low Life Expectancy	16%	21%	6	20%	15

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

Sites reporting to EPA within defined area:

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

Other community features within defined area:

Schools 0
Hospitals 0
Places of Worship 0

Other environmental data:

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

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 ..... No

Report for 0.5 miles Ring around the Area w

HEALTH INDICATORS					
NDICATOR	VALUE	STATE AVERAGE	STATE PERCENT LE	US AVERAGE	US PERCENT LE
Low Life Expectancy	16%	21%	6	20%	15
Heart Disease	6.5	6.1	59	6.1	60
Asthma	9.4	10	37	10	36
Cancer	6.5	5.5	78	6.1	57
Persons with Disabilities	13.8%	13.1%	58	13.4%	58

CLIMATE INDICATORS					
INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Flood Risk	4%	9%	31	12%	38
Wildfire Risk	0%	4%	0	14%	0

CRITICAL SERVICE GAPS					
INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Broadband Internet	11%	15%	50	14%	51
Lack of Health Insurance	11%	13%	38	9%	70
Housing Burden	No	N/A	N/A	N/A	N/A
Transportation Access	Yes	N/A	N/A	N/A	N/A
Food Desert	No	N/A	N/A	N/A	N/A

Footnotes

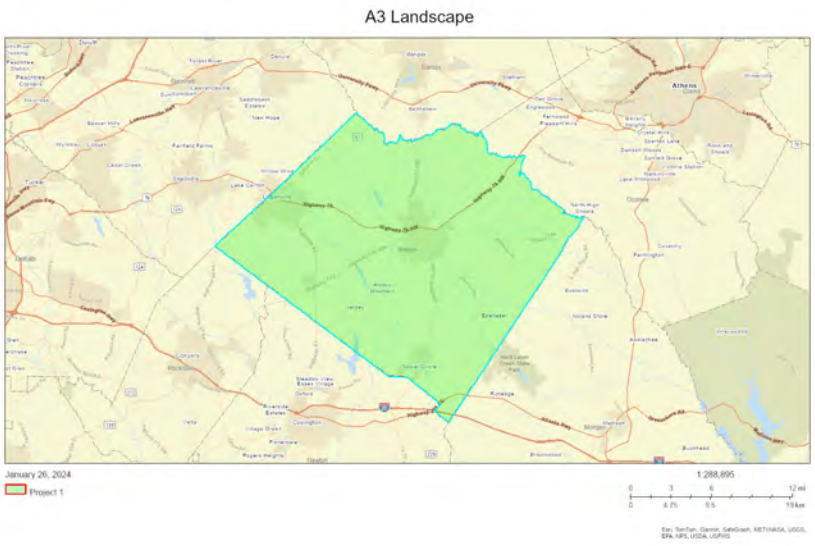
Re f 0.5 miles Ring a und he A ea **c**

EJS reen Commun ty Rep rt

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

Walton County, GAJ

County: Walton
Population: 95,453
Area in square miles: 330.00



COMMUNITY INFORMATION

Low income: 29 percent	People of color: 27 percent	Less than high school education: 12 percent	Limited English households: 1 percent
Unemployment: 5 percent	Persons with disabilities: 14 percent	Male: 49 percent	Female: 51 percent
78 years Average life expectancy	$30,719 Per capita income	Number of households: 33,009	Owner occupied: 76 percent

BREAKDOWN BY RACE

White: 73%	Black: 18%	American Indian: 0%	Asian: 1%
Hawaiian/Pacific Islander: 0%	Other race: 1%	Two or more races: 2%	Hispanic: 5%

LANGUAGES SPOKEN AT HOME

LANGUAGE	PERCENT
English	95%
Spanish	3%
Other Indo-European	1%
Total Non-English	5%

BREAKDOWN BY AGE

From Ages 1 to 4	6%
From Ages 1 to 18	25%
From Ages 18 and up	75%
From Ages 65 and up	16%

LIMITED ENGLISH SPEAKING BREAKDOWN

Speak Spanish	45%
Speak Other Indo-European Languages	40%
Speak Asian-Pacific Island Languages	14%
Speak Other Languages	0%

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

Environment l Justice & Supplement l ndexes C

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 NDE ES C

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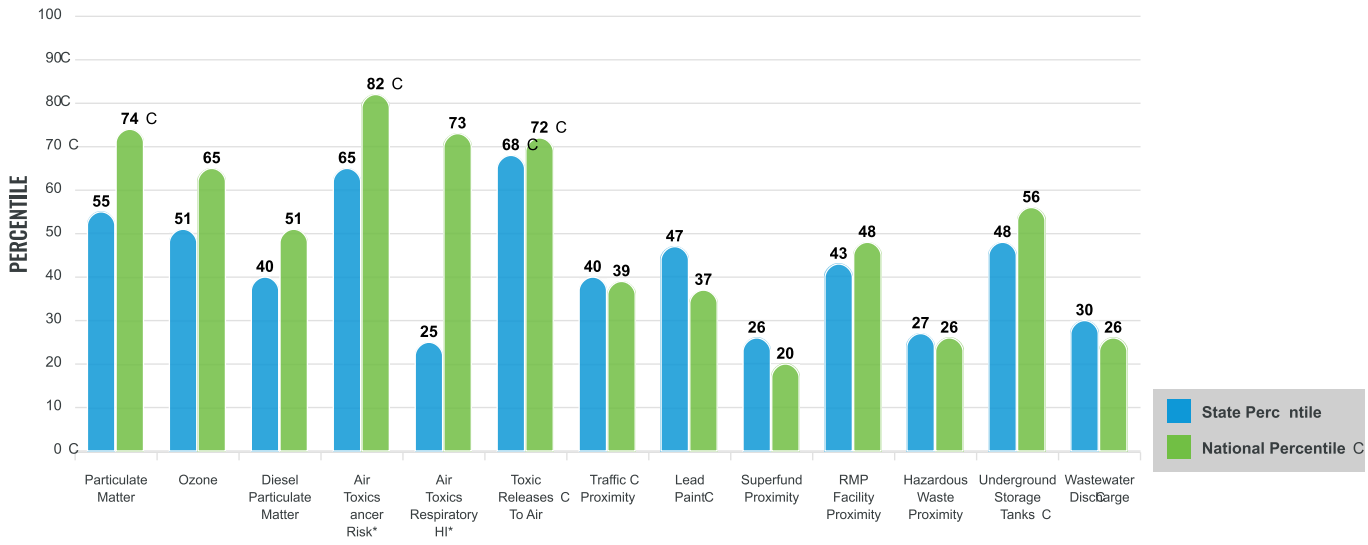
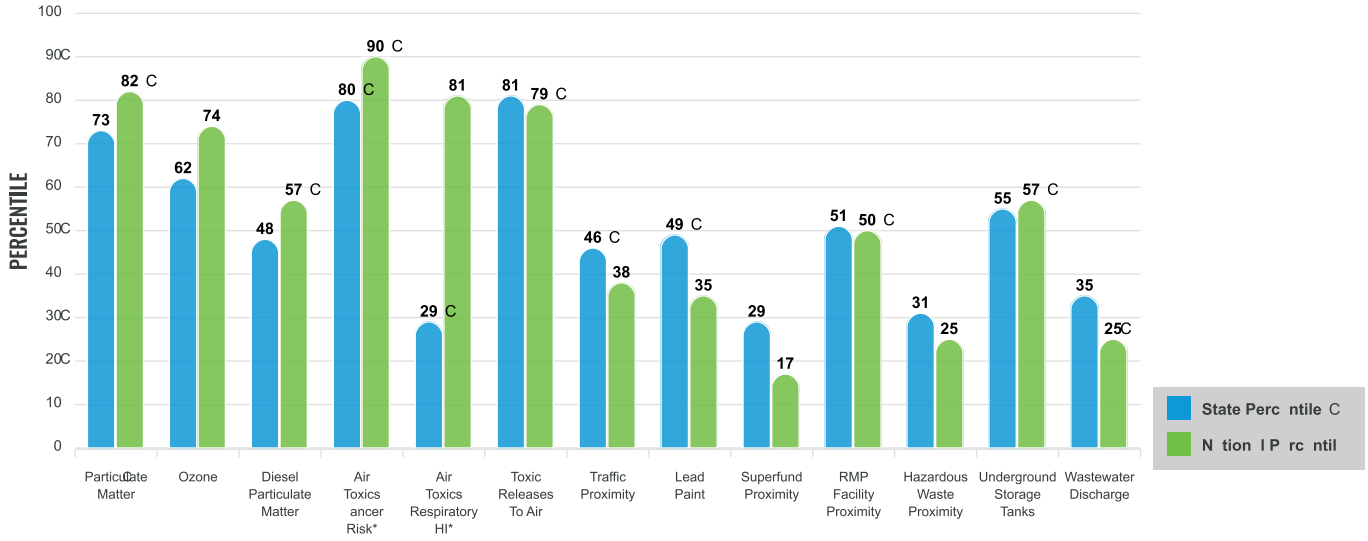
EJ INDEXES FOR THE SELECTED LOCATIONC



SUPPLEMENTAL NDE ES

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 perce es pr v de perspec ve h w he se ec ed b ck gr up r buffer area c mpares he e re s a e r a .

Report for ounty: Walton C

EJScreen Environmental and Socioeconomic Indicators Data w

SELECTED VARIABLES	VALUE	STATE AVERAGE	PERCENTILE IN STATE	USA AVERAGE	PERCENTILE IN USA
POLLUTION AND SOURCES					
Particulate Matter (µg/m^3)	10	9.61	67	8.08	91
Ozone (ppb)	64.3	64	53	61.6	71
Diesel Particulate Matter (µg/m^3)	0.198	0.277	39	0.261	45
Air Toxics Cancer Risk* (lifetime risk per million)	41	35	50	25	94
Air Toxics Respiratory HI*	0.4	0.44	6	0.31	70
Toxic Releases to Air	4,200	1,600	95	4,600	84
Traffic Proximity (daily traffic count/distance to road)	28	110	40	210	29
Lead Paint (% Pre-1960 Housing)	0.076	0.14	53	0.3	31
Superfund Proximity (site count/km distance)	0.018	0.066	24	0.13	14
RMP Facility Proximity (facility count/km distance)	0.14	0.38	45	0.43	42
Hazardous Waste Proximity (facility count/km distance)	0.16	0.45	46	1.9	30
Underground Storage Tanks (count/km^2)	1.1	2.3	51	3.9	49
Wastewater Discharge (toxicity-weighted concentration/m distance)	0.00048	0.18	62	22	42
SOCIOECONOMIC INDICATORS					
Demographic Index	28%	41%	34	35%	47
Supplemental Demographic Index	14%	15%	47	14%	55
People of Color	27%	48%	32	39%	46
Low Income	29%	34%	45	31%	53
Unemployment Rate	5%	6%	59	6%	58
Limited English Speaking Households	1%	3%	70	5%	57
Less Than High School Education	12%	12%	58	12%	65
Under Age 5	6%	6%	58	6%	59
Over Age 64	16%	15%	58	17%	50
Low Life Expectancy	21%	21%	54	20%	70

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

Sites reporting to EPA within defined area:

Superfund	0
Hazardous Waste, Treatment, Storage, and Disposal Facilities	2
Water Dischargers	1452
Air Pollution	49
Brownfields	1
Toxic Release Inventory	14

Other community features within defined area:

Schools	19
Hospitals	1
Places of Worship	71

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

HEALTH INDICATORS					
NDICATOR	VALUE	STATE AVERAGE	STATE PERCENT LE	US AVERAGE	US PERCENT LE
Low Life Expectancy	21%	21%	54	20%	70
Heart Disease	6.6	6.1	59	6.1	60
Asthma	9.8	10	45	10	46
Cancer	6.1	5.5	65	6.1	48
Persons with Disabilities	12.8%	13.1%	52	13.4%	52

CLIMATE INDICATORS					
INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Flood Risk	3%	9%	20	12%	31
Wildfire Risk	0%	4%	0	14%	0

CRITICAL SERVICE GAPS					
INDICATOR	VALUE	STATE AVERAGE	STATE PERCENTILE	US AVERAGE	US PERCENTILE
Broadband Internet	12%	15%	52	14%	53
Lack of Health Insurance	12%	13%	47	9%	75
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

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