

Natural Gas Distribution Infrastructure Safety and Modernization Grant Program City of Milton, FL Tier 2 Site Specific Environmental Assessment NGDISM-EA-2023-01

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; to (4) document applicable mitigation commitments that will avoid, minimize, or mitigate potential effects; and (5) seek comments from the public. This Tier 2 analysis informs PHMSA's determination as to whether the Project is consistent with the impacts described in the Tier 1 Nationwide Environmental Assessment for the Natural Gas Distribution Infrastructure Safety and Modernization Grant Program.¹

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-EA-2023-01 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 or mitigation measures, or prepare an Environmental Impact Statement.

I. <u>Project Description/Proposed Action</u>

Project Title	City of Milton
Project Location	City of Milton and City of Pace, Santa Rosa County, Florida

Project Description/Proposed Action:

Since 1949, Natural Gas of Milton, owned by the City of Milton, has operated the natural gas distribution system for businesses and residents of the City of Milton, East Milton and Pace, Florida. The City of Milton, located in central Santa Rosa County, is proposing to replace aging and failing cast iron and steel pipeline with polyethylene (PE) pipe, which will enhance safety, improve operations, and reduce methane emissions of natural gas of Milton's natural gas transmission system, including pipeline modernization and interim safety enhancement measures. See Appendix A, Project Maps.

The City of Milton's distribution system has an estimated 23,125 linear feet (LF) or 4.38 miles of cast iron gas mains that were installed in the early 1900s and 41,767 LF or 7.91 miles of steel natural gas mains that were installed prior to 1971 that are vulnerable to leaks. The proposed action includes the replacement of a total of 7.51 miles of pipeline (4.38 miles of cast iron pipes and 3.13 miles of unprotected steel). The vulnerable pipeline to be replaced is located within the City of Milton's existing right- of- ways (ROW) and will not require new ROW or easements. The existing ROW encompasses various roads, signage, sidewalks, and grassy areas throughout the City of Milton. The staging areas for

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

the project will include the City of Milton Utilities Department and a City owned public works department facility or within existing ROW and city-owned roadways.

The existing pipelines being replaced are between two to four inches in diameter and will be replaced with equivalent diameter pipes. Construction methods include trenching and directional boring. At most locations, the new gas lines will be located next to the existing gas lines. However, depending on the limitations in the area and the location of other utilities, the new gas line may need to be installed on the opposite side of the street. 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, the City of Milton will utilize an open trench method, which generally involves greater soil disturbance and use of heavy equipment and related impacts than the insertion method. The existing gas line will be completely removed where feasible. Where not feasible, such as sections of pipe under other utilities that cannot be removed without resulting in damage to those utilities, the gas line will remain in place and will be purged of natural gas and then sealed on each end. The replacement gas lines will be installed at a depth of 32 inches below grade.

The project has been divided into two segments. Segment 1 is located within the City of Milton, Santa Rosa County, Florida. Segment 2 is in Pace, Florida, an unincorporated community also in Santa Rosa County. The specific streets included in each segment includes the following:

Phase 1, Segment 1: 31,390 LF (5.95 Miles) of cast iron and vulnerable steel pipe on the following streets – Elva Street (1200LF); Margaret Street (735 LF); Bruner Street (1,100 LF); Martin Luther King Street (900 LF); Canal Street (1,050LF); Berryhill Street (920 LF); Madison Street (1,600 LF); Ravine Street (2,300 LF); Hunt Street (2,800 LF); Conecuh Street (2200 LF); Dixon Street (1,200 LF); Alabama Street (6,200 LF); Park Avenue (920 LF); Madison Street (120 LF); College Drive (2,600 LF); Magnolia Street (3,170 LF); Lakeshore Drive (2,375 LF)

Phase 1, Segment 2: 8,270 LF (1.56 Miles) of vulnerable steel pipe on the following streets – Hwy 90 (340 LF); Wilkes Street (3,170 LF); Live Oaks Lane (2,380 LF); Pine Lane (2,380 LF)

Additionally, the project includes equipment acquisition of a thermal camera which will aid in early detection of methane leaks. By using advanced technology, the cameras can detect methane leaks allowing the City of Milton to repair leaks effectively and efficiently, reducing potential incidents of injury and economic losses by minimizing the volume of lost gas.

No Action:

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

Need for the Project:

The City of Milton has estimated that the 7.51 miles (39,660 LF) of cast iron and steel pipelines identified for replacement for this project are vulnerable to leaks. The City of Milton will replace the leak prone natural gas mains with Polyethylene piping. The overall needs addressed by this project will include (1) improving upon the safe delivery of energy by reducing the likelihood of incidents, as well as methane leaks; (2) avoiding economic losses caused by pipeline failures; and (3) protecting our environment and reducing climate impacts by remediating aged and failing pipelines and pipe prone to leakage.

Description of the Environmental Setting of the Project Area:

The affected environment includes the City of Milton, a city in the county seat of Santa Rosa County, Florida that is located within the Pensacola Metropolitan Statistical Area and Pace, an unincorporated community in Santa Rosa County, Florida that is located to the West of the City of Milton. There has not been any development within the City of Milton. However, the Pace area has experienced growth in recent years and has developed from a smaller rural community into a thriving suburb.

II. <u>Resource Review</u>

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

² <u>https://www.epa.gov/green-book/green-book-national-area-and-county-level-multi-pollutant-information</u>

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

Will project proponent commit to reducing pressure on 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 17 pounds per square inch (PSI). Based on the size of the existing pipe, 7.5 thousand cubic feet (MCF) or 228.9 kg of methane would be vented during construction.
Estimate the current leak rate per mile based on the type of pipeline material. Based on mileage of replacement and new pipeline material, estimate the total reduction of methane.	The existing leak rate is 23,457.5 kg/year Replacement would result in a leak rate of 171.22 kg/year or a reduction of 23,286.28 kg/yr. ⁴
Constructions	

The project area is located within the Cities of Milton and Pace in Santa Rosa County, Florida which is designated by the EPA as in attainment for all National Ambient Air Quality Standards (NAAQS). The existing mains within the project area consist of leak prone bare steel natural gas mains that were installed prior to 1971 and cast-iron gas mains that were installed in the early 1900s.

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 legacy cast iron, bare steel, and other leak prone pipe material. The No Action alternative would result in the existing leak rate continuing, which is estimated at 23,457.5 kg/year, encompassing all areas of this project where pipeline would be replaced. See Appendix B, Methane Calculations for the methane leak rate calculations.

Proposed Action:

The Proposed Action alternative consists of replacing 4.38 miles of cast iron pipe and 3.13 miles of unprotected steel pipe which would result in minor air quality impacts associated with construction activities, including the intentional venting of methane contained in the existing pipelines prior to replacement. Pipeline blowdowns are typically necessary to ensure that construction and maintenance work can be conducted safely on depressurized natural gas facilities and pipelines. Venting methane is required when service is switched from the existing line to the newly constructed line, but the volume of vented gas can depend on ability to reduce pressure on the pipe segment or other mitigation actions. Therefore, some methane will be vented into the atmosphere during construction. Based on an operating pressure of 17 pounds per square inch (PSI) and an average inside pipe diameter that varies from 2 to 4 in, PHMSA estimates 7.5 MCF of methane (or 228.9 kg) would be vented into the atmosphere during construction. See Appendix B, Methane Calculations for the methane blowdown calculations.

As described in the Tier 1 EA, methane leaks from natural gas distribution pipelines increase with age and are considerably higher for cast iron and steel pipelines, as compared with plastic. Replacing leak prone pipe with newer, more durable materials would reduce leaks and methane emissions. Based on the current leak rate of the existing pipe within the project area, this project would reduce overall emissions by 23,150.5 kg in the first year (when considering the methane that will be released from blowdown that will occur during construction)

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.

and would reduce 23,286.3 kg of methane per year thereafter. The total reduction in methane emissions resulting from the conversion to plastic pipeline would be approximately 465,590.1 kg over a 20-year span post construction. See Appendix B, Methane Calculations for the methane reduction calculations. Therefore, it is PHMSA's determination that the proposed project would provide a net benefit to air quality and from the overall reduction of greenhouse gas emissions.

PHMSA considered the cumulative effects of this action with ongoing and planned transportation related construction projects and because the project does not increase services, require new ROW and is limited to pipeline replacement activities located within existing, previously disturbed ROW, there are no indirect or cumulate impacts anticipated as a result of this project.

Mitigation Measures:

The City of Milton shall implement the following mitigation measures:

- Efficient use of on-road and non-road vehicles, by minimizing speeds and vehicles
- Minimizing excavation to the greatest extent practical
- Use of cleaner, newer, non-road equipment as practicable
- Minimizing all vehicle idling and at minimum, conforming with local idling regulations
- Ensuring that all vehicles and equipment are in proper operating condition
- On-road and non-road engines must meet EPA exhaust emission standards (40 CFR Parts 85, 86, and 89)
- Covering open-bodied trucks while transporting materials
- Watering, or use of other approved dust suppressants, at construction sites and on unpaved roadways, as necessary
- Minimizing the area of soil disturbance to those necessary for construction
- Minimizing construction site traffic by the use of offsite parking and shuttle buses, as necessary

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 USFWS National Wetland Inventory (NWI), Federal Emergency Management Agency (FEMA) National Flood Hazard Layer FIRMette maps and National Resource Conservation Service (NRCS) soil survey.
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, there will be no discharge of dredge or fill material into waters of the US, as a result of the project. The project will use horizontal directional drilling (HDD) methods to bore under a tributary that may be regulated by Section 10 of the Rivers and Harbors Act and therefore, coordination with the

	U.S. Army Corps of Engineers (USACE) will be required, prior to construction.
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, construction activities are anticipated to exceed soil disturbance thresholds and a 402 permit may be required 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, the project does take place within a Special Flood Hazard Area.
Will the proposed project activities potentially occur within a coastal zone ⁵ or affect any coastal use or natural resource of the coastal zone, requiring a Consistency Determination and Certification?	Yes, the project is located within a coastal zone.

PHMSA reviewed NWI maps, as well as the FEMA National Flood Hazard Layer FIRMette map to assist in identifying aquatic features and other water resources in or near the project area. Based on the location and topography of the area, there are several water resources identified, including those near College Drive, Lakeshore Drive, Dixon Street, Berryhill Road, and Wilkes Street. College Drive is within approximately 630 feet (.12 miles) from a freshwater emergent wetland; Lakeshore Drive runs along Locklin Lake and is within approximately 100 feet of Locklin Lake, although separated by houses. Dixon Street is within approximately 200 feet of a riverine system, specifically the Blackwater River. Berryhill is within approximately 330 ft of Blackwater River. The river is on the other side of Willing Street. The replacement on Berryhill stops at Willing Street. Wilkes Street is within 860 feet (.16 miles) of a freshwater pond and freshwater shrub wetlands. Alabama Street, located between Monroe Street and Madison Street crosses a stream classified by NWI maps as P5UBH, (Palustrine, Mesohaline, Unconsolidated Bottom and Permanently flooded), which is a tributary of the Blackwater River.

FEMA's FIRMette map indicates the project includes areas located in FEMA Zones X or AE. Areas designated as Zone X are outside of any designated Special Flood Hazard Areas. Areas located within Zone AE, are identified as Special Flood Hazard Areas and correspond to the one percent annual chance of flooding (100-year floodplain). Areas with designated Zone AE, include Dixion Street east of Alabama Street, Conecuh Street south of Madison Street, Berryhill Road from Alabama Street to Willing Street, Canal Street from Berryhill Road to Margaret Street and Susan Street south to Jackson Lane east to Canal Street south to the CSX Railroad line. Additionally, the project is located in Santa Rosa County which is part of Florida's Coastal Zone. See Appendix C, Water Resources.

No Action:

Under the No Action alternative, the existing pipeline will remain in the current location and normal maintenance activities would continue without any impact anticipated to water resources. Depending on the location of the activities, the work could be in close proximity to an aquatic resource where the City of Milton 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 special flood hazard area, prior coordination with the local Floodplain Manager

may be required.

Proposed Action:

The proposed Action Alternative includes replacing 7.51 miles of existing pipelines. At most locations, the new gas lines will be located next to the existing gas lines and the existing gas line will be completely removed where feasible. However, depending on the limitations in the area and the location of other utilities, the new gas line may need to be installed on the opposite side of the street and/or some of the existing gas lines may need to remain in place. Where it is not feasible to remove old gas lines, they will remain in their current location and will be purged of natural gas and then sealed on each end. All new gas lines will be installed at a depth of 32 inches below grade and located within existing ROW.

As noted above, there are various aquatic resources identified in the project area, in close proximity to where the work will occur. However, because work is limited to the ROW, there will be no direct impact to wetlands or other waters, including Locklin Lake. Where work will be conducted on Alabama Street, where the project area crosses the unnamed tributary of the Blackwater River, the pipeline will be installed by directional boring. The contractor will set up approximately 100 feet back from the tributary on either side and no direct impacts will occur. Because this tributary may be subject to the US Army Corps of Engineers' jurisdiction under Section 10 of the Rivers and Harbors Act, authorization may be required to bore under the tributary, if the tributary is considered to be a navigable water of the United States. Therefore, the City of Milton must coordinate with the USACE to determine if a Department of the Army authorization is required. A mitigative measure will be added to ensure the city will obtain appropriate permits prior to construction. However, none of the aquatic resources identified would be permanently impacted by the project.

The pipeline placement work will be conducted within Zone AE. The National Flood Insurance Program (NFIP) requires a permit before new construction or development begins within any Special Flood Hazard Area 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 will be installed in existing, previously impacted ROW and all areas will be restored to their existing contours and condition. These activities will not affect the flood-holding capacity of the 100-year floodplain or cause any adverse impacts to the Special Flood Hazard Areas. The City of Milton coordinated directly with the Santa Rosa County Floodplain Manager who responded in a letter dated June 22, 2023, indicating that there are areas identified for pipeline replacement located within the Special Flood Hazard Area including Dixion Street east of Alabama Street, Conecuh Street south of Madison Street, Berryhill Road from Alabama Street to Willing Street, Canal Street from Berryhill Road to Margaret Street and Susan Street south to Jackson Lane east to Canal Street south to the CSX Railroad line. The floodplain manager concluded by stating that the replacement of these existing pipelines will have No Adverse Impact on the Special Flood Hazard Area. Based on PHMSA's review of the proposed work and confirmation from the Santa Rosa County Floodplain Manager, PHMA has determined that there will be no adverse impact on the Special Flood Hazard Area. See Appendix C, Water Resources for water resource related documentation. (Note: the pipeline located south of Carolina Street noted in this letter which includes Susan Street, Jackson Street, and Canal Street are not included in this project).

The project is located in Santa Rosa County, Florida. The entire State of Florida is considered a Coastal Zone and is subject to a Coastal Zone Management Act. Based on the Florida Coastal Management Program Guide (2021) there are no Coastal and Aquatic Managed Areas, or Areas of Critical State Concern on or adjacent to the project site. The Project activities consist entirely of in-kind replacement of existing infrastructure and do not constitute new development. The project was reviewed for consistency with the 24 Florida Statutes of the Florida Coastal

Management Program as described in Appendix C, Water Resources⁶.

The Florida State Clearinghouse coordinates the state's reviews to determine that projects receiving federal grant funds are consistent with the Florida Coastal Management Program. PHMSA coordinated with the Florida State Clearinghouse to determine if an individual project review would be required for this pipeline replacement project and it was determined that while the project is covered by EO 12372, the Florida State Clearinghouse does not select the project for review and the project could proceed.

Based on information provided by the City of Milton and a review of available information, PHMSA has determined that there will be no permanent impacts to water resources located within the project area and that the project is consistent with the State of Florida's Coastal Zone Management Program. 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 determination that there will be no adverse impacts to water resources.

Mitigation Measures:

The City of Milton shall coordinate with the US Army Corps of Engineers to determine and obtain, if necessary, any permits or authorizations for directional boring under streams.

The City of Milton shall avoid staging in wetlands or floodplains. All preconstruction contours shall be restored, natural areas shall be reserved, BMPs shall be used during construction to control sediment and erosion and prevent pollutants from entering waterways.

The City of Milton shall obtain a Clean Water Act, Section 402 stormwater permit, prior to commencing construction.

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, there is the potential for groundwater to be encountered during construction.	
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, dewatering, if required during construction, will be to keep the ground water below the work area so that the proposed work to be completed will not be compromised. Well pointing or other acceptable means of dewatering will be required until such time ground water, whether natural or caused by some other means.	
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.	Νο	

⁶ <u>https://floridadep.gov/rcp/fcmp/content/24-florida-statutes-florida-coastal-management-program</u>

Does the project have the potential to encounter or	No
disturb lead pipes or asbestos?	

The project area consists of two segments, one located in Milton and the other in Pace. PHMSA reviewed EPA's NEPAssist website to identify any brownfield properties, hazardous waste sites, Resource Conservation and Recovery Act (RCRA) sites, air pollution sites and superfund sites. There are a few RCRA sites identified which include businesses that are identified as handlers of generators, or other combustible materials and two locations identified as "Air Pollution (ICIS-AIR)" which included a dry cleaner and a plastic plumbing fixture manufacturing company. Although these establishments reside near the project sites, none will be impacted by the project. (See Appendix D, Hazardous Materials). There were no brownfield properties or superfund sites identified near the project area.

PHMSA obtained a custom soil report for the project area from the USDA, NRCS's web soil survey which indicates that the project area is comprised of soils classified as Bibb-Kinston association, Bonifay loamy sand, Fuquay loamy sand, Pactolus, Rutledge loamy sand, and Troup loamy sand, and Lakeland sand. The majority of these soils are well-drained soils where the depth to the water table is found somewhere greater than 80 inches with the exception of Rutledge and Pactolus soils. The water table is estimated to be between zero to six inches for Rutledge soils and between 18 to 36 inches Pactolus soils.

No Action:

Under the No Action alternative, the cast iron and steel pipes would remain in their current location and ongoing and routine maintenance activities would occur. Pipes would be replaced under failed circumstances. While there are no adverse impacts to groundwater anticipated by the No Action alternative, increased methane emissions are likely to occur if cast iron and steel pipes remain (EPA, PRO Fact Sheet No. 402⁷) and risks of failure is higher among these type pipes. Therefore, PHMSA anticipates an increased risk for the release of methane both as leaks and during a pipeline failure, which could result in greater impacts to soils and ground water under the No Action alternative.

Proposed Action:

Under the Proposed Action Alternative, the City of Milton would replace 7.51 miles of existing pipelines within the existing ROW in the City of Milton and Pace. The majority of the new gas lines will be located next to the existing gas lines. If utilities or other logistical issues arise with replacing pipeline immediately adjacent to the existing facilities, pipeline may be placed on the opposite side of the road, but entirely contained within the current ROW. The existing gas line will be completely removed where feasible. Otherwise, the existing gas line will be abandoned, in accordance with PHMSA requirements, and will be purged of natural gas and sealed on each end. The new gas lines will be installed at a depth of 32 inches below grade and will be installed by either directional drilling or cut and cover (trenching). All excavated trench materials will 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 will be backfilled with clean soils. All disturbed areas will be re-seeded or paved (as appropriate) and restored to preexisting conditions. Should groundwater be intercepted by construction activities, dewatering may be required during construction. In these cases, groundwater will be kept to just below the work area so that the proposed work to be completed will not be compromised. Well pointing or other acceptable means of

⁷ https://19january2021snapshot.epa.gov/sites/static/files/2016-06/documents/insertgasmainflexibleliners.pdf

dewatering will be required until such time groundwater subsides.

With the inclusion of mitigative measures to assist in the prevention of potential impacts, PHMSA has determined that there will be no adverse impacts to groundwater associated with the project. Trenching and/or directional drilling work is not likely to intercept groundwater but if this occurs, the City of Milton will use appropriate dewatering methods. Additionally, there are no hazardous waste or brownfield, or superfund sites identified in the area where work would occur that could be potentially impacted by the Proposed Action Alternative. PHMSA has not identified any indirect or cumulative effects to groundwater or hazardous materials.

Mitigation Measures:

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

The City of Milton shall implement a Stormwater Pollution Prevention Plan which will identify appropriate construction and restoration activities to minimize the potential impacts to groundwater. All impacted areas would 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, the contractor will utilize erosion and sediment control while trenching/ open cutting. If the bottom of the excavation is found to be unsuitable or unstable the material shall be removed at least 6 inches below the trench bottom and backfilled using suitable materials for stabilizations. All backfill and grading must ensure adequate drainage and prevent formation of depressions where water may collect.
Will the project require unique impacts related to soils?	No

Conclusion:

PHMSA obtained a custom soil report for the project area from the USDA, NRCS's web soil survey which indicates that the project area is comprised of various soils including Bibb-Kinston association, Bonifay loamy sand, Fuquay loamy sand, Pactolus, Rutledge loamy sand, and Troup loamy sand, and Lakeland sand. The majority of these soils are well-drained soils where the depth to the water table is found somewhere greater than 80 inches with the exception of Rutledge and Pactolus soils. For these soils, the water table is estimated to be between zero to six inches for Rutledge soils and between 18 - 36 inches Pactolus soils. 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. See Appendix E, Soils Report.

No Action:

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

Proposed Action:

The City of Milton will replace 7.51 miles (39,660 LF) of cast iron and steel pipelines within the existing ROW. The new gas lines will be installed at a depth of 32 inches below grade and will be installed by either directional drilling or cut and cover (trenching). All excavated trench materials will be stored on site and used as backfill, unless otherwise deemed unsuitable. In these cases, the unsuitable soils would be hauled off site and the trench will be backfilled with clean soils. All disturbed areas will be re-seeded or paved (as appropriate) and restored to pre-existing conditions. Therefore, PHMSA has determined that there will be no adverse impact to soils resulting from the Proposed Action alternative. Additionally, there are no indirect or cumulative impacts anticipated as the City of Milton will restore all areas to pre-construction conditions.

Mitigation Measures:

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

Biological Resources	
Question	Information and Justification
Based on review of IPaC and NOAA Fisheries database, are there any federally threatened or endangered species and/or critical habitat potentially occurring within the geographic range of the project area? If no, no further analysis is required.	Yes, based on review of the USFWS's Information for Planning and Consultation (IPaC) and NOAA Fisheries website. ⁸ Additionally, FL 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

Conclusion:

PHMSA requested an official species list through the USFWS's IPaC website to obtain a list of species under USFWS' jurisdiction and reviewed NOAA's fisheries website to obtain a list of potential species under NOAA Fisheries' jurisdiction. See Appendix F, Biological Resources: Threatened and Endangered Species. The following were identified as potentially occurring within the geographic area:

⁸ <u>https://ipac.ecosphere.fws.gov/</u> and <u>https://www.fisheries.noaa.gov/species-directory/threatened-endangered</u>

West Indian Manatee *Trichechus manatus* (threatened) Eastern Black Rail *Laterallus jamaicensis ssp. Jamaicensis* (threatened) Eastern Indigo Snake *Drymarchon couperi* (threatened) Reticulated Flatwoods Salamander *Ambystoma bishop* (endangered) Gulf Sturgeon *Acipenser oxyrinchus (=oxyrhynchus) desotoi* (threatened) Monarch Butterfly *Dananus plexippus* (Candidate species) Alligator Snapping Turtle *Macrohelys temminckii* (proposed threatened) Smalltooth sawfish *Pristis pectinate* (endangered) Shortnose sturgeon *Acipenser brevirostrum* (endangered) Atlantic Sturgeon *Acipenser oxyrinchus oxyrinchus* (endangered)

West Indian Manatee, Smalltooth sawfish, Shortnose sturgeon, Atlantic sturgeon, and Gulf Sturgeon can be found in open waters of the Blackwater River. There is one location in the project area where a tributary of the Blackwater River crosses the project area of Alabama Street/ Hwy 87A. Depending on the dept of water at this location, these species could potentially be present in this area. While designated critical habitat for the Gulf Sturgeon includes the Blackwater River, the tributary to the Blackwater River that crosses the project is not considered critical habitat.

Eastern Indigo snakes inhabit a variety of geographic habitats based on locations and seasonal variations. They can be found in environments consisting of pine and scrub flatwoods, hammocks, stream bottoms, riparian thickets, pine rocklands, sandhills, edges of freshwater marshes, and agricultural fields. The project area mainly consists of paved ROW where the species is not likely to be present.

Eastern Black Rail requires dense vegetative cover allowing for movement underneath canopy.⁹ They are often found in upland areas adjacent to marshes or wetlands. The project area is comprised of urban environment with little vegetative areas allowing for consistent cover for Eastern Black Rail to move.

Reticulated Flatwoods Salamander can be found in slash and longleaf pine flatwoods containing wiregrass and wetland areas. The project area does not contain this type of habitat.

Additionally, the Florida Natural Areas Inventory was reviewed to assist in identifying potential species protected by the State and under the jurisdiction of the Florida Fish and Wildlife Conservation Commission (FWC).¹⁰ A list of state protected species can be found in Appendix F, Biological Resources.

No Action:

Under the No Action alternative, existing conditions would remain, and normal maintenance activities would occur. The project area is in an urbanized environment and therefore has very limited biological resources present. Maintenance activities would not have any effect on the species identified above.

Proposed Action:

The project area is in an urbanized environment within existing ROW where the areas of disturbance are limited to areas previously impacted by utilities. Because the ROW has been previously impacted (pipeline laid in the ground in close proximity to the location where new pipes will be laid and subsequently paved), and is an active

⁹ Eastern Black Rail (Laterallus jamaicensis jamaicensis) | U.S. Fish & Wildlife Service (fws.gov)

¹⁰ <u>https://www.fnai.org/BiodiversityMatrix/index.html</u>

roadway and residential area, the immediate project area has very limited biological resources present. Additionally, the project area does not contain suitable habitat for Eastern Black Rail, Reticulated Flatwoods Salamander, Eastern Indigo Snake, Monarch Butterfly or the Alligator Snapping Turtle. There is one area where the West Indian Manatee, Smalltooth sawfish, Shortnose sturgeon, Atlantic sturgeon, and Gulf Sturgeon could potentially be found, however, pipeline at this location will be installed using HDD methods and therefore, there will be no effect to these species.

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 May 18, 2023, in the U.S. Fish and Wildlife Service's online IPaC tool to evaluate potential impacts to listed species. As a result, it was determined that the project would be unlikely to have any detrimental effects to federally- listed species or critical habitat and PHMSA determined that the project would have no effect to federally threatened or endangered species. This is documented in a letter from USFWS dated August 28, 2023, and can be found in Appendix F, Biological Resources: Threatened and Endangered Species.

There are numerous state protected species (that are also not Federally listed) which may occur within the geographic range of the project area. However, because all work is limited to previously disturbed ROW in an urbanized area, PHMSA has determined there would be no adverse impacts to state listed species. No adverse impacts to other biological resources would result from the proposed project.

Mitigation Measures:

The City of Milton shall use HDD methods to directionally bore the replacement pipeline along Alabama Street, under the unnamed tributary to the Blackwater River, to avoid potential impacts to aquatic species.

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

Cultural Resources	
Question	Information and Justification
Does the project include any ground disturbing activities, modifications to buildings or structures, or construction or installation of any new aboveground components?	Yes, the project includes ground disturbing activities. No modifications to building or structures or new aboveground components are required.
Is the project located within a previously identified local, state, or National Register historic district or adjacent to any locally or nationally recognized historic properties? This information can be gathered from the local government and/or State Historic Preservation Office. ¹¹	Yes, a portion of the project will take place within a National Register-listed historic district.
Does the project or any part of the project take place on tribal lands or land where a tribal cultural interest	Yes, Santa Rosa County has several areas where tribal cultural interest may exist.

¹¹ Many SHPOs have an <u>online system</u> at <u>https://www.nps.gov/subjects/nationalregister/state-historic-preservation-offices.htm</u> that can tell you previously identified historic properties in your project area. The <u>National Register list</u> at <u>https://www.nps.gov/subjects/nationalregister/database-research.htm</u> can also be accessed online.

may exist? ¹²	
Are there any nearby properties or resources that either appear to be or are documented to have been constructed more than 45 years ago? ¹³ Does there appear to be a group of properties of similar age, design, or method of construction? Any designed landscapes such as a park or cemetery? Please provide photographs to show the context of the project area and adjacent properties.	Yes, according to the Santa Rosa County Property Appraiser's website, there are approximately 7 structures built between 1926 and 1954 and 15 structures built between 1900 and 1925 near the designated project area.
Has the entire area and depth of construction for the project been previously disturbed by the original installation or other activities? If so, provide any documentation of prior ground disturbances.	Yes, the project includes work within the existing disturbed ROW.
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

PHMSA must consider the impact of projects for which they provide funding on historic and archeological properties¹⁴ in accordance with Section 106 of the National Historic Preservation Act (Section 106). Pursuant to 36 CFR 800.4(a)(1), the Area of Potential Effects (APE) is defined as the geographic area(s) within which the Undertaking may directly or indirectly affect historic resources. Based on the proposed scope of work, PHMSA has delineated the APE for this project to encompass the City of Milton Utilities Department, Warehouse, and existing ROW, which includes the limits of disturbance and any staging or access areas. The APE extends to the depth of proposed ground disturbance of up to 32 inches. See Appendix G, Cultural Resources, for a map of the APE.

No Action:

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

Proposed Action:

PHMSA staff identified properties based on available information on previously identified historic properties in the APE, including the National Register of Historic Places (NRHP) database and data received from the Florida Division

¹² The SHPO may have information on areas of tribal interest, or a good source is the <u>HUD TDAT website at https://egis.hud.gov/TDAT/.</u>

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

of Historical Resources. PHMSA staff also conducted research to determine if there are any previously unidentified properties within the APE that are 45 years of age or older and may be eligible for the NRHP. The Milton Historic District (District) is the only NRHP-listed historic property within the APE. There are no known archeological sites in the APE and based on the evaluation in Appendix, there is low potential for intact significant resources in the APE and no additional survey is needed. See Appendix G, Cultural Resources, for additional information about the APE and the properties identified.

PHMSA has determined the Proposed Project would not alter any of the characteristics or contributing features of the District that qualify it for inclusion in the NRHP. Project work is limited to the replacement of existing pipelines. The Undertaking will not result in lasting physical, visual, or audible effects to the District. In accordance with 36 CFR Part 800.5, PHMSA has determined the Undertaking will have No Adverse Effect on historic properties.

A letter was sent on September 25, 2023, to the Florida State Historic Preservation Officer (SHPO), federally recognized tribes with a potential interest in the project area, and all consulting parties outlining the Section 106 process, including a description of the undertaking, delineation and justification of the APE, identification of historic properties and an evaluation and proposed finding of no adverse effects. The SHPO concurred with this finding in writing on November 7, 2023. The Choctaw Nation of Oklahoma concurred with this finding on October 24, 2023. See Appendix G, Cultural Resources, for more information.

Mitigation Measures:

The City of Milton shall notify PHMSA immediately of any changes to the scope of work that may change the impacts to historic properties or the areas that may be impacted, including location of work, depth of construction, or change in construction methods.

If, during project implementation, and features or human remains are discovered or effects to historic properties occur that were not anticipated during the Section 106 process, PHMSA must be immediately notified and all construction in the area of the discovery must halt until further direction is provided.

If prehistoric or historic artifacts, such as pottery or ceramics, projectile points, dugout canoes, metal implements, historic building materials, or any other physical remains that could be associated with Native American, early European, or American settlement are encountered at any time within the project site area, the permitted project shall cease all activities involving subsurface disturbance in the vicinity of the discovery. The applicant shall contact the Florida Department of State, Division of Historical Resources, Compliance and Review Section at (850)-245-6333. Project activities shall not resume without verbal and/or written authorization. In the event that unmarked human remains are encountered during permitted activities, all work shall stop immediately and the proper authorities notified in accordance with Section 872.05, Florida Statutes.

Section 4(f)	
Question	Information and Justification
Are there Section 4(f) properties within or immediately adjacent to the project area? If yes, provide a list of properties or as an attachment.	Yes, several parks and recreational facilities are located within the project area.
Will any construction activities occur within the property boundaries of a Section 4(f) property? If so, please detail these activities and indicate if these are temporary or	No

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.	

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 potential Section 4(f) properties within the project area. Several Section 4(f) recreational parks were identified which include Sanders Street Park, Milton Ports Plex, Russell Harber Landing, Carpenters Park, River Walk Park, Jernigan's Landing, Lucielle Johnson Park, and Gill-Bass Park. These are all located a minimum of 150 feet from the project area.

The Blackwater Heritage State Trail (Trail) traverses the project area in six locations. See Appendix H, Potential 4(f) Properties. The Blackwater Heritage State Trail is designated as a National Recreational Trail and is also part of Florida's State Greenways and Trails System and is used for biking, running, walking and skating, picnicking and bird-watching. The Blackwater Heritage State Trail is a publicly-owned recreational trail and therefore subject to the protections of Section 4(f).

No Action:

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

Proposed Action:

Under the Proposed Action alternative, construction activities would not impact the resources identified above. Directional bore methods will be used in the areas where pipeline will traverse the Blackwater Heritage State Trail. In the six different locations where the trail will be crossed, entry and exit points for boring will be at least 100 feet from the trail ROW and there will be no closures or detours. Access to the facility would remain throughout the duration of construction and no physical use of the park would occur. In addition, as described in the Noise section of this Tier 2 EA, no adverse impacts associated with construction noise have been identified that could affect the use of this property. Therefore, PHMSA has determined there would be no use of any Section 4(f) resources.

Mitigation Measures:

The City of Milton shall ensure full public access to, and use of, the Blackwater Heritage State Trail is maintained

during construction.

The City of Milton shall utilize HDD methods to directionally bore the replacement pipeline under the Blackwater Heritage State Trail in all areas where the project intersects the Blackwater Heritage State Trail.

The City of Milton shall coordinate with park officials when implementing a traffic management plan to ensure access to the trail is maintained prior to construction.

Land Use and Transportation			
Question	Information and Justification		
Will the full extent of the project boundaries remain within the existing right-of-way or easements? If no, please describe any right-of-way acquisitions or additional easements needed.	Yes		
Will the project result in detours, transportation restrictions, or other impacts to normal traffic flow or to existing transportation facilities during construction? Will there be any permanent change to existing transportation facilities? If so, what are the changes, and how would changes affect the public?	Yes, temporary traffic impacts may consist of traffic congestion and minor disruptions to street parking. The project will not result in a permanent change 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		

The project is located in Pace and the City of Milton, both urbanized areas consisting of commercial and residential areas.

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 City of Milton is proposing to replace pipeline infrastructure within the existing ROW and would not include adding pipeline to serve new areas. During construction, there may be short-term impacts to adjacent residences, businesses and normal traffic patterns. Potential impacts include an increase in noise, dust, and transportation accessibility, as a result of construction and construction staging. Local and state regulations guide the transport of machinery, equipment, and automobiles around the construction areas. Temporary traffic impacts may occur on the local road network and adjacent pedestrian routes. Consideration of emergency response vehicles, travel restrictions, and other impacts to local transportation are anticipated to be temporary and would only last for the duration of construction. Minor disruptions to on street parking may occur, but access to existing residences and businesses is not anticipated. The City of Milton will coordinate with the appropriate local and state agencies regarding interruptions to traffic and detours and appropriate protocol will be used where traffic will be temporarily diverted to one-lane. All lane closures will be reopened at the end of daily construction. Any detour will be one block at a time and last less than 10 hours. For lane closures to Highway 90, a Florida Department of Transportation permit will be required. Normal traffic flow will be maintained to the extent possible and traffic control measures will be utilized to assist traffic negotiating through construction areas, as needed. The City of Milton will notify emergency services of the scheduled work and traffic implications of the work that will be conducted and will use various methods of communication to

notify any potentially impacted residents, business owners, and the general public. Therefore, because the work consists of the replacement of existing pipeline, will not convert any new areas into a different use and impacts would only occur during construction, PHMSA has determined that impacts related to land use are considered minor and temporary.

PHMSA considered the cumulative effects of this action with ongoing and planned transportation related construction projects that could cumulatively impact land use and transportation. The City of Milton has various maintenance, drainage improvement, and other projects on going within or near the project area. All municipalities and businesses must abide by the same requirements and coordinate with state and local agencies on any disruptions to normal traffic patterns. Through this coordination, the overall cumulative effects of multiple projects occurring will be minimized by planning and scheduling efforts with responsible agency oversight. Land use changes are not anticipated as the projects are occurring in an urbanized area that is built out and therefore will not change the existing residential or commercial use.

Mitigation Measures:

The City of Milton 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 Milton 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 Milton shall have a traffic control plan in place, prior to construction, and coordinate with the appropriate agency well in advance of any impacted emergency services or essential agency functions.

The City of Milton shall obtain a permit from the Florida Department of Transportation for any lane closures on Highway 90 prior to construction.

Noise and Vibration			
Question	Information and Justification		
Will the project construction occur for longer than a month at a single project location?	Νο		
Will the project location be in proximity (less than 50-ft.) to noise sensitive receivers (residences, schools, houses of worship, etc.)? If so, what measures will be taken to reduce noise and vibration impacts to sensitive receptors?	Yes, the project will adhere to state and local noise regulations, limit construction activities to normal weekday business hours, and make sure equipment mufflers have proper maintenance.		
Will the project require high-noise and vibration inducing construction methods? If so, please specify.	Yes, directional drills and trenching equipment.		
Will the project comply with state and local ordinances? If so, identify applicable ordinances and limitations on noise/vibration times or sound levels.	Yes, City of Milton Unified Development Code Part III; Article 9; Section 9.4 (A)(6)		

Will construction activities require large bulldozers, hoe	No
ram, or other vibratory equipment within 20 feet of a	
structure?	

The project is located in the urban areas of Pace and the City of Milton, FL. 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, etc.) located adjacent to the streets where work would occur.

No Action:

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

Proposed Action:

Excavators, dump trucks, skid steers, rollers, pavers, and other similar construction equipment would be used to excavate a trench, lay pipe, compact soils and re-pave the affected areas. Pipeline may be installed in some areas via directional bore methods where drill rigs, excavators, reamers, and similar equipment would be used to install pipeline by horizontal directional drilling. The City of Milton will adhere to the Unified Development Code Part III; Article 9; Section 9.4 (A)(6) states "*Construction or repair of buildings. The erection, including excavation, demolition, alteration or repair of any building other than between the hours of 7:00 a.m. and 6:00 p.m. on weekdays, except in case of urgent necessity in the interest of public health and/or safety, is prohibited. If the Planning and Development Department should determine that the public health and/or safety will not be impaired by the erection, demolition, alteration or repair of any building or the excavation of streets and highways within the hours of 6:00 p.m. and 7:00 a.m., and if the Planning and Development Department further determines that loss or inconvenience would not result to any interested party, permission may be granted for such work to be done within the hours of 6:00 p.m. and 7:00 a.m. upon application being made at the time the permit for the work is granted or during the progress of the work."*

Individual pieces of equipment may generate noise levels of 80 to 90 dBA at a distance of 50 feet. Sensitive noise receptors are likely to experience temporary noise impacts while outdoors in the vicinity of the work; 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 City of Milton. 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 will 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 Milton shall adhere to City of Milton Unified Development Code Part III; Article 9; Section 9.4 (A)(6).

Environmental Justice		
Question	Information and Justification	
Using the EPA EJScreen or census data ¹⁵ , is the project located in an area of minority and/or low-income individuals as defined by USDOT Order 5610.2(c)? If so, provide demographic data for minority and/or low- income individuals within ½ mile from the project area as a percentage of the total population.	Based on review of socioeconomic data using the EPAs EJScreen, the population residing within the general project area for Pace FL contains 32% low income and 23% minority populations and in Milton FL, 48% low income and 31% minority populations.	
Will the project displace existing residents or workers from their homes and communities? If so, what is the expected duration?	No	
Will the project require service disruptions to homes and communities? If so, what is the expected communication and outreach plan to the residents and the duration of the outages?	No, minor service disruptions may be required to connect businesses and residences to the new pipeline. These service disruptions would be of short duration lasting less than 1 hour.	
Are there populations with Limited English Proficiency located in the project area? If so, what measures will be taken to provide communications in other languages?	Yes, this area has 1% limited English-speaking households. The City will post communications in the languages of the area as well as in letter form once the language is identified.	

Conclusion:

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

PHMSA reviewed socioeconomic data using the EPAs EJScreen and found the population residing within the project area of Pace FL contains 32% low income and 23% minority populations and in Milton FL, 48% low income and 31% minority populations. The percentage of these populations is above the Santa Rosa County average of 25% low income and 19% minority populations. See Appendix I, Environmental Justice, for socioeconomic data.

No Action:

Under the No Action alternative, existing and planned pipeline activities, including construction and maintenance activities, would continue unchanged. The City of Milton 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 activities for maintenance and repairs of existing pipelines under the No Action alternative, either through planned repair or replacement efforts or unplanned, emergency repairs or replacements.

Proposed Action:

The Proposed Action alternative would result in an overall reduction in GHG emissions. Construction activities would result in minor temporary air quality impacts, including the intentional venting of existing distribution lines prior to replacement. Noise impacts associated with construction are anticipated to be minor Traffic impacts would be temporary and only minor disruptions or delays would occur. Traffic lane closures would last less than 10 hours and any detours would be limited to one block at a time. 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 has determined the project would not result in disproportionately high and adverse effects on minority or low-income populations, or other underserved and disadvantaged communities. The project would have an overall beneficial effect on environmental justice populations and would not result in indirect or cumulative impacts.

Mitigation Measures:

The City of Milton shall provide advanced notification of service disruptions and construction schedule to all affected parties including residents and businesses adjacent to the project area.

Safety			
Question	Information and Justification		
Has a risk profile been developed to describe the condition of the current infrastructure and potential safety concerns?	Yes, as described in Section 4 of the Gas Distribution Integrity Management Program (DIMP) plan. Risk prioritization and threat assessments have been conducted.		
Has a public awareness program been developed and implemented that follows the guidance provided by the American Petroleum Institute (API) Recommended Practice (RP) 1162?	Yes, The Natural Gas of Milton Public Awareness Program (revision March 2023) has been developed in general conformance with the American Petroleum Institute (API) Recommended Practice 1162, "Public Awareness Programs for Pipeline Operators".		
Does the project area include pipes prone to leakage?	Yes. Milton Natural Gas has a Leak Management Program and has identified several miles of cast iron and steel pipe that are vulnerable to leaks.		
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	Yes		

and reference appropriate safety plans.	
Has an assessment of the project been performed to analyze the risk and benefits of implementation?	Yes, In 2002, the City of Milton conducted a five-year capital improvement plan which identifies replacement of leak prone pipeline.

The existing pipeline identified and assessed includes 4.38 miles of cast iron pipe and 1.57 miles of unprotected steel pipe. There are many types of natural gas pipelines that are known to leak based on their materials. Some of these leak prone pipes consist of 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 City of Milton'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 cast iron and steel pipes would remain in their current location, state, and condition. Normal maintenance activities would occur, and pipes would be replaced under failed circumstances. Safety risks resulting from existing leak prone pipes remaining in place would persist until the existing cast iron and steel pipes are replaced.

Proposed Action:

Under the Proposed Action, the City of Milton would replace 4.38 miles of cast iron pipe installed in the early 1900's and 1.57 miles of unprotected bare steel pipes installed in the 1970s. This replacement is in alignment with the recommendation generated in Natural Gas of Milton's Distribution Integrity Management Program which is in place to ensure the integrity of the natural gas pipeline system. The City of Milton's August 2021 DIMP has identified 17 threats to the system and ranked them accordingly. The following are the ranking results for replacement of steel and cast-iron pipes identified as threats to the system due to corrosion and resultant leaks. The DIMP plan notes the following:

Cathodic Protected, Bare Steel - Confirmed corrosion leaks have occurred on this section of natural gas pipeline. These natural gas lines are ranked as priority 7 in the current (August 2021) DIMP plan.

Unprotected, Bare Steel – Confirmed corrosion leaks have occurred and are ranked as priority 10 in the current DIMP Plan.

Unprotected, Coated Steel – Repaired leaks per service are increasing and confirmed corrosion leaks have occurred. These are ranked as priority 8 in the current DIMP Plan.

Cast Iron – Exposed pipe inspections indicate that graphitization is occurring, and the cast iron mains have steel laterals connected with no electrical isolation. These natural gas lines are ranked as priority 6 in the current

DIMP Plan.

The project would reduce the risk profile of existing pipeline systems prone to methane leakage and would also benefit disadvantaged rural and urban 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.

If abandonment of pipeline is required, as removal is determined to be necessary, 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 has determined this replacement project would improve the overall safety of Milton's infrastructure.

Mitigation Measures:

The City of Milton 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.

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-2022-0123¹⁶. PHMSA reviewed the comment letter and determined the comments were not substantial and did not warrant further analysis. One comment provided by the APGA indicated that the majority of construction methods used for pipe replacements would be replacement by open trenching and that some may want to abandon the existing pipe rather than removing it for replacement. Any departures from methods described in the Tier 1 EA will require additional documentation from the project proponent, as solicited in this Tier 2.

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-EA-2023-01 in your response.

¹⁶ https://www.regulations.gov/document/PHMSA-2022-0123-0002/comment

Appendix A

Project Maps





Appendix B

Methane Calculations

Methane Blowdown Estimate

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

The following equation should be used to estimate blowdown emissions in metric cubic feet (MCF), using the length of pipeline being replaced, the existing pipeline diameter (d), and pressure (P).

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

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

$$V = \pi \times \frac{d^2}{4} \times L \tag{2}$$

Table 1. Proposed Action - Methane Blowdown

	Segment	1 Segment 2	
Inside Diameter = in		4 4	
Blowdown Pressure	1	7 17	
Length of Blowdown = ft	3139	0 8270	
Volume	5.90074746	5 1.5546092	
Blowdown MCF	0.49792	4 0.042236	
Total	7.5 MCF (228.9	7.5 MCF (228.9 kg/yr)	

Methane Leak Rate pre/post Construction

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

Segment 1: Cast iron: (4.3797348 miles) x (2,877.35 kg/mile) = 12602.0 kg Unprotected Steel: (1.565341 miles) x (1,491.8 kg/mile = 2335.2 kg

Segment 2: Cast iron: (0 miles) x (2,877.35 kg/mile) = 0 kg Unprotected Steel: (1.566288 miles) x (1,491.8 kg/mile) = 2336.6 kg

Current Overall Leak Rate for Segment 1= 17273.8 kg

Table 2. No Action Leak Rate

Pipeline Material Type	Average Rate	Miles	Annual Current Methane
	(kg/mile)		Leak Rate (kg/yr)
Cast Iron	4,597.40	4.3797348	20135.39
Unprotected steel	2,122.30	3.131629	3322.12
Protected steel			
Total Methane Leak Rate		23,457.5	

Table 3. Proposed Action Leak Rate

Pipeline Material Type	Average Rate (kg/mile)	Miles	New Annual Methane Leak Rate (kg/yr)
Plastic	28.8	7.5113638	171.22
Total Annual Methane Leak Rate			171.22

Reduction in Emissions per year: 23,457.5 kg - 171.22kg = 23,457.5 kg

Reductions in emissions in the first year: 23286.3 kg/year- 228.9 kg= 23150.5kg

20-year reduction rate = (23286.3 kg X 19) + 23150.5= 465590.1kg

Appendix C

Water Resources










Legend

87°2'45"W 30°37'42"N SEE FIS REPORT FOR DETAILED LEGEND AND INDEX MAP FOR FIRM PANEL LAYOUT AREA OF MINIMAL FLOOD HAZARD Without Base Flood Elevation (BFE) Zone A. V. A9 With BFE or Depth Zone AE, AO, AH, VE, AR SPECIAL FLOOD HAZARD AREAS **Regulatory Floodway** 0.2% Annual Chance Flood Hazard, Areas of 1% annual chance flood with average depth less than one foot or with drainage one AE areas of less than one square mile Zone X Future Conditions 1% Annual Chance Flood Hazard Zone X Area with Reduced Flood Risk due to Levee. See Notes. Zone X OTHER AREAS OF FLOOD HAZARD Area with Flood Risk due to Levee Zone D 12113C0320H FLOODWAY EEE eff. 11/19/2021 one AF NO SCREEN Area of Minimal Flood Hazard Zone X Zone AE Effective LOMRs 3 OTHER AREAS Area of Undetermined Flood Hazard Zone D - - - - Channel, Culvert, or Storm Sewer GENERAL STRUCTURES LIIII Levee, Dike, or Floodwall 20.2 Cross Sections with 1% Annual Chance 17.5 Water Surface Elevation CITY OF MILTON **Coastal Transect** Base Flood Elevation Line (BFE) 120276 Limit of Study T01N R28W, S03 Jurisdiction Boundary 13:1FEE --- Coastal Transect Baseline OTHER **Profile Baseline** FEATURES 0.2 PCT ANNUAL CHANCE FLOOD HAZARD Hydrographic Feature **Digital Data Available** No Digital Data Available MAP PANELS Unmapped The pin displayed on the map is an approximate point selected by the user and does not represent an authoritative property location. This map complies with FEMA's standards for the use of digital flood maps if it is not void as described below. The basemap shown complies with FEMA's basemap accuracy standards The flood hazard information is derived directly from the authoritative NFHL web services provided by FEMA. This map was exported on 7/13/2023 at 10:55 AM and does not reflect changes or amendments subsequent to this date and time. The NFHL and effective information may change or become superseded by new data over time. This map image is void if the one or more of the following map elements do not appear: basemap imagery, flood zone labels, legend, scale bar, map creation date, community identifiers, FIRM panel number, and FIRM effective date. Map images for 87°2'7"W 30°37'11"N Feet 1:6.000 unmapped and unmodernized areas cannot be used for

250

500

1,000

1.500

2.000

Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020

regulatory purposes.



Legend





Legend



Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020



Legend



Basemap: USGS National Map: Orthoimagery: Data refreshed October, 2020



Basic FIRM Information Map Series MI 1

Legend MI-1

City of Milton Boundary Static Base Flood Elevations FIRM Panels FIRM 051911 Flood Zone AE (SFHA) X - 500 yr. X City of Milton Parcels Main Roads Santa Rosa County 2,000 Feet

Map Notes:		
Community Number:	1202	76
Panel Number and Suffix:	0314	ł G
	0320) G 7 G
	0431	G
	0435	ታዊ
FIRMS's Index Effective Date:	12/19/	2006
Elevation Datum:	NAVI	88

** Please call the City of Milton Planning Department at: (850) 983 - 5440 or the Santa Rosa County Flood plain Manager at (850) 981 - 7000 for additional information or for property specific flood hazard information. 0426









SANTA ROSA COUNTY DEVELOPMENT SERVICES

6051 Old Bagdad Highway, Suite 202| Milton, Florida 32583

June 22, 2023

Sandra Woodberry City of Milton 6738 Dixon St Milton, FL 32570

Re: Replacement of Gas pipelines

Ms. Woodberry:

Please be advised that upon review of the map indicating the locations of the proposed replacement of natural gas pipelines within the City of Milton utilities service area. The following locations are within the Special Flood Hazard Area.

Dixon Street east of Alabama Street

Conecuh Street south of Madison Street

Berryhill Road from Alabama Street to Willing Street

Canal Street from Berryhill Road to Margaret Street

Susan Street south to Jackson Lane east to Canal Street south to the CSX Railroad line

I have determined that replacement of these existing pipelines will have No Adverse Impact on the Special Flood Hazard Area.

Should you have any questions or concerns, please contact me.

Sincerel Karen Thornhill, CFIV

Floodplain Manager

Cc: File



Florida Statues of the Florida Coastal Management Program and Project Applicability

- *Chapter 161, Beach and Shore Preservation* is not applicable as the project does not occur on land classified as beaches, shores, or dunes.
- Chapter 163, Part II, Intergovernmental Programs: Growth Policy, County and Municipal Planning: Land Development Regulation is not applicable as the project does not involve county or municipal planning and is not a development project.
- *Chapter 186, State and Regional Planning* is not applicable as the project does not include a comprehensive planning process.
- *Chapter 252, Emergency Management*: The proposed project activities are intended to replace and improve the existing infrastructure, upgrading the system to be more sustainable in emergency situations.
- *Chapter 253, State Lands:* The project is entirely within current ROW and does not involve the use of State lands.
- *Chapter 258, State Parks and Preserves:* The project is entirely within current ROW and does not involve State Parks or Preserves. The Blackwater Heritage State trail will remain open and accessible as the area where pipeline crosses the trail will be directional bored to avoid any impacts to the trail.
- *Chapters 259, Land Acquisition for Conservation or Recreation:* The project is entirely within current ROW and does not involve acquisition of any new right-of-way.
- *Chapter 267, Historical Resources:* The Cultural Resources section of this EA addresses the project's potential to affect cultural resources. There will be no adverse impacts to cultural resources.
- Chapter 288, Commercial Development and Capital Improvements: The project involves replacement of existing infrastructure within existing right-of-way and will improve upon the City of Milton's safe delivery of energy by reducing incidents and fatalities, as well as methane leaks and assist in protecting the environment by reducing climate impacts by remediating aged and failing pipelines prone to leakage.
- *Chapter 339, Transportation Finance and Planning:* The project involves replacement of existing infrastructure within existing right-of-way and does not involve transportation planning.
- *Chapter 373, Water Resources*: At locations along the project where pipeline replacement activities will occur, HDD methods will be employed to avoid impacts. Additionally, the City of Milton will 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 will be restored to pre-construction conditions. (See *Soils* section of this EA).
- *Chapter 375, Outdoor Recreation and Conservation Lands* is not applicable as the project does not involve the acquisition of lands for recreation or conservation.
- *Chapter 376, Pollutant Discharge Prevention and Removal*: The City of Milton will utilize a Stormwater Pollution Prevention Plan which will identify appropriate construction and restoration activities to minimize the potential impacts. All impacted areas would be restored to pre-construction conditions.
- *Chapter 377, Energy Resources*: The project involves replacement of existing infrastructure within existing right-of-way and will improve upon the City of Milton's safe delivery of energy by reducing incidents and fatalities, as well as methane leaks and assist in protecting the environment by reducing climate impacts by remediating aged and failing pipelines prone to leakage.

- *Chapter 379, Fish and Wildlife Conservation*: The potential impacts to biological resources resulting from the implementation of the project is discussed in this document. There will be no impacts to threatened or endangered species. Further, the project will occur completely within existing right-of-way where there is little biological activity.
- *Chapter 380, Land and Water Management:* The project involves replacement of existing infrastructure within existing right-of-way and will not induce or promote growth and development.
- <u>Chapter 381</u> Public Health: General Provisions: The project involves replacement of existing infrastructure within existing right-of-way and will improve upon the City of Milton's safe delivery of energy by reducing incidents and fatalities, as well as methane leaks and assist in protecting the environment by reducing climate impacts by remediating aged and failing pipelines prone to leakage.
- *Chapter 388, Mosquito Control:* The project involves replacement of existing infrastructure within existing right-of-way and will not include activities affecting mosquito populations.
- *Chapter 403 Environmental Control:* The project involves replacement of existing infrastructure within existing right-of-way and will improve upon the City of Milton's safe delivery of energy. It will not expand upon existing services or require any additional right-of-way.
- *Chapter 553 Building Construction Standards.* The project involves replacement of existing infrastructure within existing right-of-way and does not involve new building construction.
- Chapter 582 Soil and Water Conservation. The project involves replacement of existing infrastructure within existing right-of-way. The City of Milton will 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 will be restored to pre-construction conditions. (See *Soils* section of this EA.
- *Chapter 597 Aquaculture* is not applicable as the project does not involve any aquaculture activities.

Appendix D

Hazardous Materials



Milton

FDEP, CONANP, Esri, HERE, Garmin, SafeGraph, GeoTechnologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA



Pace

Hazardous Waste (RCRAInfo)

Appendix E

Soils Report



United States Department of Agriculture



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 Santa Rosa County, Florida

City of Milton (Pace)



Preface

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

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

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

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

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

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

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

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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.



MAP LEGEND			MAP INFORMATION		
Area of In	terest (AOI) Area of Interest (AOI)	8	Spoil Area Stony Spot	The soil surveys that comprise your AOI were mapped at 1:24,000.	
Soils	Soil Map Unit Polygons Soil Map Unit Lines	© ♥	Very Stony Spot Wet Spot	Please rely on the bar scale on each map sheet for map measurements.	
Special	Soil Map Unit Points Point Features	۵ ••	Other Special Line Features	Source of Map: Natural Resources Conservation Service Web Soil Survey URL: Coordinate System: Web Mercator (EPSG:3857)	
9 2 *	Blowout Borrow Pit Clay Spot	Water Feat Transporta	tures Streams and Canals ation Rails	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	
ہ *	Closed Depression Gravel Pit Gravelly Spot	~	Interstate Highways US Routes Maior Roads	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.	
0 1	Landfill Lava Flow	Backgrour	Local Roads	Soil Survey Area: Santa Rosa County, Florida Survey Area Data: Version 19, Sep 2, 2022	
*	Marsh or swamp Mine or Quarry Miscellaneous Water	Aerial Photography		Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.	
Ő	Perennial Water Rock Outcrop			Date(s) aerial images were photographed: Mar 25, 2022—Mar 26, 2022	
+	Saline Spot Sandy Spot	t t		The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be ovident	
⊕ ♦	Severely Eroded Spot Sinkhole			shining of map unit boundaries may be evident.	
ی ک	Slide or Slip Sodic Spot				

Map Unit Legend

Man Unit Cumhal	Man Unit Nama		
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
1	Albany loamy sand, 0 to 5 percent slopes	24.4	1.6%
3	Bibb-Kinston association	54.3	3.6%
5	Bonifay loamy sand, 0 to 5 percent slopes	197.4	13.1%
8	Dothan fine sandy loam, 0 to 2 percent slopes	8.3	0.6%
9	Dothan fine sandy loam, 2 to 5 percent slopes	56.1	3.7%
14	Fuquay loamy sand, 0 to 5 percent slopes	50.5	3.3%
15	Fuquay loamy sand, 5 to 8 percent slopes	3.5	0.2%
21	Lakeland sand, 0 to 5 percent slopes	64.8	4.3%
25	Lucy loamy sand, 0 to 5 percent slopes	13.9	0.9%
34	Pactolus loamy sand, 0 to 5 percent slopes	79.3	5.3%
36	Pits	6.2	0.4%
44	Troup loamy sand, 0 to 5 percent slopes	827.7	54.8%
47	Troup-Orangeburg-Cowarts complex, 5 to 12 percent slopes	3.3	0.2%
54	Foxworth sand, 0 to 5 percent slopes	118.5	7.8%
99	Water	2.1	0.1%
Totals for Area of Interest		1,510.5	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.

Santa Rosa County, Florida

1—Albany loamy sand, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: 2ttkx Elevation: 20 to 200 feet Mean annual precipitation: 60 to 68 inches Mean annual air temperature: 63 to 70 degrees F Frost-free period: 209 to 239 days Farmland classification: Not prime farmland

Map Unit Composition

Albany and similar soils: 87 percent Minor components: 13 percent Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Albany

Setting

Landform: Ridges on marine terraces, knolls on marine terraces Landform position (two-dimensional): Summit Landform position (three-dimensional): Interfluve, talf Down-slope shape: Convex Across-slope shape: Linear Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 8 inches: loamy sand E - 8 to 61 inches: loamy sand Btg - 61 to 80 inches: sandy clay loam

Properties and qualities

Slope: 0 to 5 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 (0.20 to 5.95 in/hr)
Depth to water table: About 18 to 42 inches
Frequency of flooding: NoneRare
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 4.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3w
Hydrologic Soil Group: A/D
Forage suitability group: Sandy soils on rises and knolls of mesic uplands (G133AA131FL)
Other vegetative classification: Sandy soils on rises and knolls of mesic uplands (G133AA131FL)
Hydric soil rating: No

Minor Components

Fuquay

Percent of map unit: 5 percent Landform: Hillslopes Landform position (two-dimensional): Shoulder Landform position (three-dimensional): Interfluve Down-slope shape: Convex Across-slope shape: Linear Other vegetative classification: Sandy soils on rises, knolls, and ridges of mesic uplands (G133AA121FL) Hydric soil rating: No

Troup

Percent of map unit: 5 percent Landform: Hillslopes on marine terraces, ridges on marine terraces Landform position (two-dimensional): Summit Landform position (three-dimensional): Base slope, riser Down-slope shape: Convex Across-slope shape: Linear Other vegetative classification: Longleaf Pine-Turkey Oak Hills (R133AY002FL), Sandy soils on ridges and dunes of xeric uplands (G133AA111FL) Hydric soil rating: No

Plummer

Percent of map unit: 3 percent Landform: Flats on marine terraces Landform position (three-dimensional): Talf Down-slope shape: Linear, concave Across-slope shape: Linear Other vegetative classification: sandy soils on flats of mesic or hydric lowlands (G133AA141FL) Hydric soil rating: No

3—Bibb-Kinston association

Map Unit Setting

National map unit symbol: wn5l Elevation: 0 to 450 feet Mean annual precipitation: 65 to 73 inches Mean annual air temperature: 63 to 70 degrees F Frost-free period: 242 to 272 days Farmland classification: Not prime farmland

Map Unit Composition

Bibb and similar soils: 50 percent Kinston and similar soils: 25 percent Minor components: 25 percent Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Bibb

Setting

Landform: Flood plains on marine terraces Landform position (three-dimensional): Talf Down-slope shape: Linear Across-slope shape: Linear Parent material: Loamy and sandy alluvium

Typical profile

A - 0 to 17 inches: silt loam Cg1 - 17 to 42 inches: silt loam Cg2 - 42 to 65 inches: fine sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very 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: About 6 to 18 inches
Frequency of flooding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Moderate (about 8.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 5w Hydrologic Soil Group: B/D Forage suitability group: Loamy and clayey soils on stream terraces, flood plains, or in depressions (G133AA345FL)

Other vegetative classification: Loamy and clayey soils on stream terraces, flood plains, or in depressions (G133AA345FL)

Hydric soil rating: Yes

Description of Kinston

Setting

Landform: Flood plains on marine terraces Landform position (three-dimensional): Talf Down-slope shape: Linear Across-slope shape: Linear Parent material: Loamy alluvium

Typical profile

A - 0 to 9 inches: silt loam E - 9 to 18 inches: silt loam 2Bg - 18 to 50 inches: sandy clay loam 2Cg - 50 to 65 inches: sand

Properties and qualities

Slope: 0 to 2 percent *Depth to restrictive feature:* More than 80 inches *Drainage class:* Poorly 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: About 0 to 12 inches
Frequency of flooding: NoneFrequent
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Moderate (about 8.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: B/D
Forage suitability group: Loamy and clayey soils on stream terraces, flood plains, or in depressions (G133AA345FL)
Other vegetative classification: Loamy and clayey soils on stream terraces, flood plains, or in depressions (G133AA345FL)

Hydric soil rating: Yes

Minor Components

Rutlege

Percent of map unit: 10 percent Landform: Depressions on marine terraces Landform position (three-dimensional): Dip Down-slope shape: Concave Across-slope shape: Concave Other vegetative classification: Sandy soils on stream terraces, flood plains, or in depressions (G133AA145FL) Hydric soil rating: Yes

Pamlico

Percent of map unit: 5 percent Landform: Depressions on marine terraces, flood plains on marine terraces Landform position (three-dimensional): Flat Down-slope shape: Linear Across-slope shape: Concave Other vegetative classification: Organic soils in depressions and on flood plains (G133AA645FL) Hydric soil rating: Yes

Johns

Percent of map unit: 4 percent Landform: Stream terraces on marine terraces Landform position (three-dimensional): Tread Down-slope shape: Convex Across-slope shape: Linear Other vegetative classification: Loamy and clayey soils on flats of hydric or mesic lowlands (G133AA331FL) Hydric soil rating: No

Escambia

Percent of map unit: 3 percent Landform: Rises on marine terraces Landform position (three-dimensional): Interfluve, talf Down-slope shape: Convex Across-slope shape: Linear
 Other vegetative classification: Loamy and clayey soils on flats of hydric or mesic lowlands (G133AA331FL)
 Hydric soil rating: No

Pactolus

Percent of map unit: 3 percent Landform: Rises on marine terraces Landform position (three-dimensional): Interfluve Down-slope shape: Convex Across-slope shape: Linear Other vegetative classification: Sandy soils on rises and knolls of mesic uplands (G133AA131FL) Hydric soil rating: No

5—Bonifay loamy sand, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: 2tsyc Elevation: 50 to 390 feet Mean annual precipitation: 45 to 73 inches Mean annual air temperature: 52 to 72 degrees F Frost-free period: 246 to 306 days Farmland classification: Farmland of local importance

Map Unit Composition

Bonifay and similar soils: 80 percent Minor components: 20 percent Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Bonifay

Setting

Landform: Knolls on marine terraces, ridges on marine terraces Landform position (two-dimensional): Summit Landform position (three-dimensional): Interfluve, tread Down-slope shape: Convex Across-slope shape: Linear Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 3 inches: loamy sand E - 3 to 54 inches: loamy sand Btv - 54 to 80 inches: sandy clay loam

Properties and qualities

Slope: 0 to 5 percent Depth to restrictive feature: More than 80 inches Drainage class: Well drained Runoff class: Negligible

Custom Soil Resource Report

Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.58 in/hr) Depth to water table: About 42 to 60 inches Frequency of flooding: None Frequency of ponding: None Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm) Sodium adsorption ratio, maximum: 4.0 Available water supply, 0 to 60 inches: Low (about 5.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: A
Forage suitability group: Sandy soils on rises, knolls, and ridges of mesic uplands (G133AA121FL)
Other vegetative classification: Sandy soils on rises, knolls, and ridges of mesic uplands (G133AA121FL)
Hydric soil rating: No

Minor Components

Blanton

Percent of map unit: 4 percent Landform: Knolls on marine terraces, ridges on marine terraces Landform position (two-dimensional): Footslope Landform position (three-dimensional): Interfluve, base slope, tread Down-slope shape: Convex Across-slope shape: Linear Other vegetative classification: Sandy soils on rises, knolls, and ridges of mesic uplands (G133AA121FL) Hydric soil rating: No

Fuquay

Percent of map unit: 4 percent Landform: Ridges on marine terraces Landform position (two-dimensional): Footslope Landform position (three-dimensional): Interfluve, riser Down-slope shape: Convex Across-slope shape: Linear Other vegetative classification: Sandy over loamy soils on rises, knolls, and ridges of mesic uplands (G133AA221FL) Hydric soil rating: No

Lakeland

Percent of map unit: 4 percent Landform: Hills on marine terraces, ridges on marine terraces Landform position (two-dimensional): Summit Landform position (three-dimensional): Interfluve, riser Down-slope shape: Convex Across-slope shape: Linear Other vegetative classification: Sandy soils on ridges and dunes of xeric uplands (G133AA111FL) Hydric soil rating: No

Troup

Percent of map unit: 4 percent

Landform: Knolls on marine terraces, ridges on marine terraces

Custom Soil Resource Report

Landform position (two-dimensional): Summit Landform position (three-dimensional): Interfluve Down-slope shape: Convex Across-slope shape: Linear Other vegetative classification: Sandy soils on ridges and dunes of xeric uplands (G133AA111FL) Hydric soil rating: No

Albany

Percent of map unit: 4 percent Landform: Knolls on marine terraces, ridges on marine terraces Landform position (two-dimensional): Footslope Landform position (three-dimensional): Interfluve, talf Down-slope shape: Convex Across-slope shape: Linear Other vegetative classification: Sandy soils on rises and knolls of mesic uplands (G133AA131FL) Hydric soil rating: No

8—Dothan fine sandy loam, 0 to 2 percent slopes

Map Unit Setting

National map unit symbol: wn5r Elevation: 0 to 500 feet Mean annual precipitation: 65 to 73 inches Mean annual air temperature: 63 to 70 degrees F Frost-free period: 242 to 272 days Farmland classification: All areas are prime farmland

Map Unit Composition

Dothan and similar soils: 85 percent Minor components: 15 percent Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Dothan

Setting

Landform: Ridges on marine terraces Landform position (three-dimensional): Interfluve Down-slope shape: Convex Across-slope shape: Linear Parent material: Loamy and clayey marine deposits

Typical profile

A - 0 to 9 inches: fine sandy loam BE - 9 to 13 inches: fine sandy loam Bt - 13 to 43 inches: sandy clay loam Btv - 43 to 63 inches: sandy clay

Properties and qualities

Slope: 0 to 2 percent

Custom Soil Resource Report

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 (0.20 to 0.57 in/hr)
Depth to water table: About 36 to 60 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Moderate (about 7.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 1
Hydrologic Soil Group: B
Forage suitability group: Loamy and clayey soils on rises and knolls of mesic uplands (G133AA321FL)
Other vegetative classification: Loamy and clayey soils on rises and knolls of mesic uplands (G133AA321FL)

Hydric soil rating: No

Minor Components

Orangeburg

Percent of map unit: 8 percent Landform: Rises on marine terraces Landform position (three-dimensional): Interfluve Down-slope shape: Convex Across-slope shape: Linear Other vegetative classification: Loamy and clayey soils on knolls and ridges of mesic uplands (G133AA311FL) Hydric soil rating: No

Fuquay

Percent of map unit: 7 percent Landform: Ridges on marine terraces Landform position (three-dimensional): Interfluve Down-slope shape: Convex Across-slope shape: Linear Other vegetative classification: Sandy over loamy soils on rises, knolls, and ridges of mesic uplands (G133AA221FL) Hydric soil rating: No

9—Dothan fine sandy loam, 2 to 5 percent slopes

Map Unit Setting

National map unit symbol: 2ttkd Elevation: 100 to 500 feet Mean annual precipitation: 65 to 73 inches *Mean annual air temperature:* 63 to 70 degrees F *Frost-free period:* 190 to 310 days *Farmland classification:* All areas are prime farmland

Map Unit Composition

Dothan and similar soils: 83 percent Minor components: 17 percent Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Dothan

Setting

Landform: Ridges on marine terraces Landform position (two-dimensional): Summit Landform position (three-dimensional): Interfluve Down-slope shape: Convex Across-slope shape: Linear Parent material: Loamy and clayey marine deposits

Typical profile

A - 0 to 6 inches: fine sandy loam BE - 6 to 14 inches: fine sandy loam Bt - 14 to 30 inches: sandy clay loam Btv - 30 to 79 inches: sandy clay

Properties and qualities

Slope: 2 to 5 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 (0.20 to 0.57 in/hr)
Depth to water table: About 39 to 60 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Moderate (about 6.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 2e Hydrologic Soil Group: C Forage suitability group: Loamy and clayey soils on rises and knolls of mesic uplands (G133AA321FL) Other vegetative classification: Longleaf Pine-Turkey Oak Hills (R133AY002FL),

Loamy and clayey soils on rises and knolls of mesic uplands (G133AA321FL) Hydric soil rating: No

Minor Components

Orangeburg

Percent of map unit: 7 percent Landform: Ridges on marine terraces Landform position (two-dimensional): Summit Landform position (three-dimensional): Interfluve Down-slope shape: Convex
Across-slope shape: Linear

Other vegetative classification: Longleaf Pine-Turkey Oak Hills (R133AY002FL), Loamy and clayey soils on knolls and ridges of mesic uplands (G133AA311FL)

Hydric soil rating: No

Esto

Percent of map unit: 5 percent Landform: Ridges on marine terraces Landform position (two-dimensional): Summit Landform position (three-dimensional): Interfluve Down-slope shape: Convex Across-slope shape: Linear Other vegetative classification: Longleaf Pine-Turkey Oak Hills (R133AY002FL), Loamy and clayey soils on knolls and ridges of mesic uplands (G133AA311FL) Hydric soil rating: No

Fuquay

Percent of map unit: 5 percent Landform: Ridges on marine terraces Landform position (two-dimensional): Summit Landform position (three-dimensional): Interfluve Down-slope shape: Convex Across-slope shape: Linear Other vegetative classification: Longleaf Pine-Turkey Oak Hills (R133AY002FL), Sandy over loamy soils on rises, knolls, and ridges of mesic uplands (G133AA221FL) Hydric soil rating: No

14—Fuquay loamy sand, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: 2tbyt Elevation: 50 to 400 feet Mean annual precipitation: 40 to 73 inches Mean annual air temperature: 52 to 72 degrees F Frost-free period: 190 to 310 days Farmland classification: Farmland of local importance

Map Unit Composition

Fuquay and similar soils: 80 percent *Minor components:* 20 percent *Estimates are based on observations, descriptions, and transects of the mapunit.*

Description of Fuquay

Setting

Landform: Interfluves Landform position (two-dimensional): Shoulder Landform position (three-dimensional): Interfluve Down-slope shape: Convex Across-slope shape: Linear Parent material: Sandy marine deposits over loamy marine deposits

Typical profile

Ap - 0 to 10 inches: loamy sand E1 - 10 to 22 inches: loamy sand E2 - 22 to 28 inches: loamy sand Bt1 - 28 to 36 inches: sandy loam Bt2 - 36 to 43 inches: sandy clay loam Btv - 43 to 65 inches: sandy clay loam

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 40 to 61 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 5.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: B
Forage suitability group: Sandy over loamy soils on rises, knolls, and ridges of mesic uplands (G133AA221FL)
Other vegetative classification: Sandy over loamy soils on rises, knolls, and ridges of mesic uplands (G133AA221FL)
Hydric soil rating: No

Minor Components

Cowarts

Percent of map unit: 4 percent Landform: Interfluves Landform position (two-dimensional): Summit, shoulder, backslope Landform position (three-dimensional): Interfluve, side slope Down-slope shape: Convex Across-slope shape: Convex Hydric soil rating: No

Nankin

Percent of map unit: 4 percent Landform: Broad interstream divides Landform position (two-dimensional): Summit, shoulder, backslope Landform position (three-dimensional): Interfluve, side slope Down-slope shape: Convex Across-slope shape: Linear Hydric soil rating: No

Ailey

Percent of map unit: 3 percent

Landform: Interfluves Landform position (two-dimensional): Backslope Landform position (three-dimensional): Nose slope Down-slope shape: Convex Across-slope shape: Linear Hydric soil rating: No

Bonneau

Percent of map unit: 3 percent Landform: Broad interstream divides Down-slope shape: Convex Across-slope shape: Linear Hydric soil rating: No

Dothan

Percent of map unit: 2 percent Landform: Interfluves Landform position (two-dimensional): Summit Landform position (three-dimensional): Interfluve Down-slope shape: Convex Across-slope shape: Linear Other vegetative classification: Loamy and clayey soils on rises and knolls of mesic uplands (G133AA321FL) Hydric soil rating: No

Blanton

Percent of map unit: 2 percent Landform: Interfluves Landform position (two-dimensional): Backslope Landform position (three-dimensional): Nose slope, base slope Down-slope shape: Convex Across-slope shape: Linear Hydric soil rating: No

Bonifay

Percent of map unit: 1 percent Landform: Knolls on marine terraces, ridges on marine terraces Landform position (two-dimensional): Summit Landform position (three-dimensional): Interfluve, tread Down-slope shape: Convex Across-slope shape: Linear Other vegetative classification: Sandy soils on rises, knolls, and ridges of mesic uplands (G133AA121FL) Hydric soil rating: No

Troup

Percent of map unit: 1 percent Landform: Hillslopes on marine terraces, ridges on marine terraces Landform position (two-dimensional): Summit Landform position (three-dimensional): Base slope, riser Down-slope shape: Convex Across-slope shape: Linear Other vegetative classification: Longleaf Pine-Turkey Oak Hills (R133AY002FL), Sandy soils on ridges and dunes of xeric uplands (G133AA111FL) Hydric soil rating: No

15—Fuquay loamy sand, 5 to 8 percent slopes

Map Unit Setting

National map unit symbol: 2tbyk Elevation: 100 to 450 feet Mean annual precipitation: 40 to 69 inches Mean annual air temperature: 55 to 70 degrees F Frost-free period: 190 to 310 days Farmland classification: Farmland of local importance

Map Unit Composition

Fuquay and similar soils: 80 percent *Minor components:* 20 percent *Estimates are based on observations, descriptions, and transects of the mapunit.*

Description of Fuquay

Setting

Landform: Hillslopes Landform position (two-dimensional): Shoulder Landform position (three-dimensional): Interfluve Down-slope shape: Convex Across-slope shape: Linear Parent material: Sandy marine deposits over loamy marine deposits

Typical profile

Ap - 0 to 10 inches: loamy sand E1 - 10 to 22 inches: loamy sand E2 - 22 to 28 inches: loamy sand Bt1 - 28 to 36 inches: sandy loam Bt2 - 36 to 43 inches: sandy clay loam Btv - 43 to 65 inches: sandy clay loam

Properties and qualities

Slope: 5 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 40 to 61 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Moderate (about 6.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 3s

Hydrologic Soil Group: B Hydric soil rating: No

Minor Components

Cowarts

Percent of map unit: 4 percent Landform: Interfluves Landform position (two-dimensional): Summit, shoulder, backslope Landform position (three-dimensional): Side slope, interfluve Down-slope shape: Convex Across-slope shape: Convex Hydric soil rating: No

Nankin

Percent of map unit: 4 percent Landform: Broad interstream divides Landform position (two-dimensional): Summit, shoulder, backslope Landform position (three-dimensional): Side slope, interfluve Down-slope shape: Convex Across-slope shape: Linear Hydric soil rating: No

Bonneau

Percent of map unit: 3 percent Landform: Broad interstream divides Down-slope shape: Convex Across-slope shape: Linear Hydric soil rating: No

Ailey

Percent of map unit: 3 percent Landform: Interfluves Landform position (two-dimensional): Backslope Landform position (three-dimensional): Nose slope Down-slope shape: Convex Across-slope shape: Linear Hydric soil rating: No

Troup

Percent of map unit: 2 percent Landform: Hillslopes on marine terraces, ridges on marine terraces Landform position (two-dimensional): Summit Landform position (three-dimensional): Base slope, riser, tread Down-slope shape: Convex Across-slope shape: Linear Other vegetative classification: Longleaf Pine-Turkey Oak Hills (R133AY002FL), Sandy soils on ridges and dunes of xeric uplands (G133AA111FL), Unnamed (G133AP141FL) Hydric soil rating: No

Blanton

Percent of map unit: 2 percent Landform: Interfluves Landform position (two-dimensional): Backslope Landform position (three-dimensional): Nose slope, base slope Down-slope shape: Convex Across-slope shape: Linear Hydric soil rating: No

Dothan

Percent of map unit: 2 percent Landform: Interfluves Landform position (two-dimensional): Summit Landform position (three-dimensional): Interfluve *Down-slope shape:* Convex Across-slope shape: Linear Other vegetative classification: Loamy and clayey soils on stream terraces and flood plains (G152AA321FL), Unnamed (G152AT140FL), Loamy and clayey soils on rises and knolls of mesic uplands (G133AA321FL) Hydric soil rating: No

21—Lakeland sand, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: 2rz0n Elevation: 100 to 400 feet Mean annual precipitation: 40 to 69 inches Mean annual air temperature: 63 to 70 degrees F Frost-free period: 190 to 310 days Farmland classification: Not prime farmland

Map Unit Composition

Lakeland and similar soils: 80 percent Minor components: 20 percent Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lakeland

Setting

Landform: Hills on marine terraces Landform position (two-dimensional): Summit. shoulder Landform position (three-dimensional): Interfluve *Down-slope shape:* Convex Across-slope shape: Linear Parent material: Sandy marine deposits

Typical profile

A - 0 to 7 inches: sand C - 7 to 80 inches: sand

Properties and gualities

Slope: 0 to 5 percent Depth to restrictive feature: More than 80 inches Drainage class: Excessively drained Runoff class: Very low Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)

Depth to water table: More than 80 inches Frequency of flooding: None Frequency of ponding: None Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm) Available water supply, 0 to 60 inches: Low (about 3.1 inches)

Interpretive groups

Land capability classification (irrigated): 4s Land capability classification (nonirrigated): 3s Hydrologic Soil Group: A Other vegetative classification: Longleaf Pine-Turkey Oak Hills (R133AY002FL) Hydric soil rating: No

Minor Components

Troup

Percent of map unit: 6 percent Landform: Knolls, ridges Landform position (two-dimensional): Summit Landform position (three-dimensional): Interfluve Down-slope shape: Convex Across-slope shape: Linear Other vegetative classification: Sandy soils on ridges and dunes of xeric uplands (G133AA111FL) Hydric soil rating: No

Foxworth

Percent of map unit: 5 percent Landform: Ridges on marine terraces Landform position (two-dimensional): Summit Landform position (three-dimensional): Interfluve Down-slope shape: Convex Across-slope shape: Linear Other vegetative classification: Sandy soils on rises, knolls, and ridges of mesic uplands (G133AA121FL) Hydric soil rating: No

Bonifay

Percent of map unit: 5 percent Landform: Hills on marine terraces Landform position (two-dimensional): Summit Landform position (three-dimensional): Interfluve Down-slope shape: Convex, linear Across-slope shape: Linear, convex Other vegetative classification: Longleaf Pine-Turkey Oak Hills (R133AY002FL), Sandy soils on rises, knolls, and ridges of mesic uplands (G133AA121FL) Hydric soil rating: No

Albany

Percent of map unit: 2 percent

Landform: Interfluves on marine terraces, knolls on marine terraces, ridges on marine terraces

Landform position (two-dimensional): Shoulder, summit

Landform position (three-dimensional): Side slope, interfluve, tread

Down-slope shape: Convex

Across-slope shape: Convex, linear

Other vegetative classification: Forage suitability group not assigned (G133AA999FL) *Hydric soil rating:* No

Chipley

Percent of map unit: 2 percent Landform: Ridges on marine terraces Landform position (two-dimensional): Summit Landform position (three-dimensional): Interfluve Down-slope shape: Convex Across-slope shape: Linear Other vegetative classification: Sandy soils on rises and knolls of mesic uplands (G133AA131FL) Hydric soil rating: No

25—Lucy loamy sand, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: 2tdq2 Elevation: 100 to 400 feet Mean annual precipitation: 40 to 69 inches Mean annual air temperature: 55 to 70 degrees F Frost-free period: 190 to 310 days Farmland classification: Farmland of local importance

Map Unit Composition

Lucy and similar soils: 85 percent *Minor components:* 15 percent *Estimates are based on observations, descriptions, and transects of the mapunit.*

Description of Lucy

Setting

Landform: Interfluves Landform position (two-dimensional): Summit, shoulder, backslope Landform position (three-dimensional): Interfluve, rise Down-slope shape: Convex Across-slope shape: Convex Parent material: Sandy and loamy marine deposits

Typical profile

Ap - 0 to 8 inches:loamy sandE - 8 to 24 inches:loamy sandBt1 - 24 to 35 inches:sandy loamBt2 - 35 to 70 inches:sandy clay loam

Properties and qualities

Slope: 0 to 5 percent Depth to restrictive feature: More than 80 inches Drainage class: Well drained Runoff class: Low

Custom Soil Resource Report

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

Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm) *Available water supply, 0 to 60 inches:* Moderate (about 6.4 inches)

Interpretive groups

Land capability classification (irrigated): 2s Land capability classification (nonirrigated): 2s Hydrologic Soil Group: B Forage suitability group: Sandy over loamy soils on knolls and ridges of mesic uplands (G133AA211FL) Other vegetative classification: Sandy over loamy soils on knolls and ridges of

mesic uplands (G133AA211FL)

Hydric soil rating: No

Minor Components

Troup

Percent of map unit: 4 percent Landform: Hillslopes on marine terraces, ridges on marine terraces Landform position (two-dimensional): Summit Landform position (three-dimensional): Base slope, riser Down-slope shape: Convex Across-slope shape: Linear Other vegetative classification: Longleaf Pine-Turkey Oak Hills (R133AY002FL), Sandy soils on ridges and dunes of xeric uplands (G133AA111FL) Hydric soil rating: No

Orangeburg

Percent of map unit: 4 percent Landform: Broad interstream divides Landform position (two-dimensional): Shoulder Landform position (three-dimensional): Interfluve, rise Down-slope shape: Convex Across-slope shape: Convex Other vegetative classification: Loamy and clayey soils on knolls and ridges of mesic uplands (G133AA311FL) Hydric soil rating: No

Bonneau

Percent of map unit: 3 percent Landform: Marine terraces Landform position (two-dimensional): Summit, shoulder, backslope Landform position (three-dimensional): Interfluve, side slope, riser, tread Down-slope shape: Convex Across-slope shape: Linear Hydric soil rating: No

Fuquay

Percent of map unit: 2 percent Landform: Hillslopes Landform position (two-dimensional): Shoulder Landform position (three-dimensional): Interfluve Down-slope shape: Convex Across-slope shape: Linear Hydric soil rating: No

Rattlesnake forks

Percent of map unit: 2 percent Landform: Interfluves Landform position (two-dimensional): Backslope Landform position (three-dimensional): Side slope Down-slope shape: Convex Across-slope shape: Linear Hydric soil rating: No

34—Pactolus loamy sand, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: wn6l Elevation: 0 to 350 feet Mean annual precipitation: 65 to 73 inches Mean annual air temperature: 63 to 70 degrees F Frost-free period: 242 to 272 days Farmland classification: Not prime farmland

Map Unit Composition

Pactolus and similar soils: 85 percent *Minor components:* 15 percent *Estimates are based on observations, descriptions, and transects of the mapunit.*

Description of Pactolus

Setting

Landform: Rises on marine terraces Landform position (three-dimensional): Interfluve Down-slope shape: Convex Across-slope shape: Linear Parent material: Sandy marine and fluvial deposits

Typical profile

A - 0 to 8 inches: loamy sand *C - 8 to 80 inches:* sand

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)

Sodium adsorption ratio, maximum: 4.0 Available water supply, 0 to 60 inches: Low (about 3.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: A/D
Ecological site: F152AY305FL - East Central Sandy Ridges, Rises, and Knolls
Forage suitability group: Sandy soils on rises and knolls of mesic uplands (G133AA131FL)
Other vegetative classification: Sandy soils on rises and knolls of mesic uplands (G133AA131FL)
Hydric soil rating: No

Minor Components

Albany

Percent of map unit: 5 percent Landform: Knolls on marine terraces, ridges on marine terraces Landform position (three-dimensional): Interfluve, talf Down-slope shape: Convex Across-slope shape: Linear Ecological site: F152AY320FL - East Central Sandy Flat Other vegetative classification: Sandy soils on rises and knolls of mesic uplands (G133AA131FL) Hydric soil rating: No

Leon

Percent of map unit: 3 percent Landform: Flatwoods on marine terraces Landform position (three-dimensional): Talf Down-slope shape: Convex Across-slope shape: Linear Ecological site: F152AY320FL - East Central Sandy Flat Other vegetative classification: sandy soils on flats of mesic or hydric lowlands (G133AA141FL) Hydric soil rating: No

Lakeland

Percent of map unit: 2 percent Landform: Ridges on marine terraces, hills on marine terraces Landform position (three-dimensional): Interfluve Down-slope shape: Convex Across-slope shape: Linear Other vegetative classification: Sandy soils on ridges and dunes of xeric uplands (G133AA111FL) Hydric soil rating: No

Rutlege

Percent of map unit: 2 percent Landform: Depressions on marine terraces Landform position (three-dimensional): Dip Down-slope shape: Concave Across-slope shape: Concave Ecological site: F152AY345FL - East Central Sandy Flooded Lowland Other vegetative classification: Sandy soils on stream terraces, flood plains, or in depressions (G133AA145FL) Hydric soil rating: Yes

Bonifay

Percent of map unit: 2 percent Landform: Knolls on marine terraces, ridges on marine terraces Landform position (three-dimensional): Interfluve Down-slope shape: Convex Across-slope shape: Linear Other vegetative classification: Sandy soils on rises, knolls, and ridges of mesic uplands (G133AA121FL) Hydric soil rating: No

Troup

Percent of map unit: 1 percent Landform: Knolls on marine terraces, ridges on marine terraces Landform position (three-dimensional): Interfluve Down-slope shape: Convex Across-slope shape: Linear Other vegetative classification: Sandy soils on ridges and dunes of xeric uplands (G133AA111FL) Hydric soil rating: No

36—Pits

Map Unit Composition

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

Description of Pits

Setting

Landform: Marine terraces Landform position (three-dimensional): Interfluve, dip Down-slope shape: Linear Across-slope shape: Linear

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 8 Forage suitability group: Forage suitability group not assigned (G133AA999FL) Other vegetative classification: Forage suitability group not assigned (G133AA999FL) Hydric soil rating: Unranked

44—Troup loamy sand, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: 2rypy

Elevation: 30 to 490 feet *Mean annual precipitation:* 40 to 69 inches *Mean annual air temperature:* 55 to 70 degrees F *Frost-free period:* 190 to 310 days *Farmland classification:* Farmland of local importance

Map Unit Composition

Troup and similar soils: 85 percent *Minor components:* 15 percent *Estimates are based on observations, descriptions, and transects of the mapunit.*

Description of Troup

Setting

Landform: Hillslopes on marine terraces, ridges on marine terraces Landform position (two-dimensional): Summit Landform position (three-dimensional): Base slope, riser, tread Down-slope shape: Convex Across-slope shape: Linear Parent material: Unconsolidated sandy and loamy marine deposits

Typical profile

A - 0 to 3 inches: loamy sand E - 3 to 55 inches: loamy sand Bt - 55 to 80 inches: sandy loam

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively 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: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 6.1 inches)

Interpretive groups

Land capability classification (irrigated): 3s
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: A
Forage suitability group: Sandy soils on ridges and dunes of xeric uplands (G133AA111FL), Unnamed (G133AP141FL)
Other vegetative classification: Longleaf Pine-Turkey Oak Hills (R133AY002FL), Sandy soils on ridges and dunes of xeric uplands (G133AA111FL), Unnamed (G133AP141FL)
Hydric soil rating: No

Minor Components

Bonifay

Percent of map unit: 4 percent Landform: Knolls on marine terraces, ridges on marine terraces Landform position (three-dimensional): Interfluve Down-slope shape: Linear, convex Across-slope shape: Linear

Other vegetative classification: Longleaf Pine-Turkey Oak Hills (R133AY002FL), Sandy soils on rises, knolls, and ridges of mesic uplands (G133AA121FL) *Hydric soil rating:* No

Fuquay

Percent of map unit: 3 percent Landform: Hillslopes Landform position (two-dimensional): Shoulder Landform position (three-dimensional): Interfluve Down-slope shape: Convex Across-slope shape: Linear Hydric soil rating: No

Lakeland

Percent of map unit: 3 percent Landform: Hills on marine terraces Landform position (two-dimensional): Summit Landform position (three-dimensional): Interfluve Down-slope shape: Convex Across-slope shape: Linear Other vegetative classification: Longleaf Pine-Turkey Oak Hills (R133AY002FL) Hydric soil rating: No

Lucy

Percent of map unit: 3 percent Landform: Broad interstream divides Landform position (two-dimensional): Summit, shoulder, backslope Landform position (three-dimensional): Interfluve, rise Down-slope shape: Convex Across-slope shape: Convex Other vegetative classification: Sandy over loamy soils on knolls and ridges of mesic uplands (G133AA211FL) Hydric soil rating: No

Orangeburg

Percent of map unit: 2 percent Landform: Broad interstream divides Landform position (two-dimensional): Shoulder Landform position (three-dimensional): Interfluve, rise Down-slope shape: Convex Across-slope shape: Convex Other vegetative classification: Loamy and clayey soils on knolls and ridges of mesic uplands (G133AA311FL) Hydric soil rating: No

47—Troup-Orangeburg-Cowarts complex, 5 to 12 percent slopes

Map Unit Setting

National map unit symbol: wn70 *Elevation:* 0 to 700 feet

Mean annual precipitation: 65 to 73 inches Mean annual air temperature: 63 to 70 degrees F Frost-free period: 242 to 272 days Farmland classification: Not prime farmland

Map Unit Composition

Troup and similar soils: 39 percent *Orangeburg and similar soils:* 20 percent *Cowarts and similar soils:* 15 percent *Minor components:* 26 percent *Estimates are based on observations, descriptions, and transects of the mapunit.*

Description of Troup

Setting

Landform: Knolls on marine terraces, ridges on marine terraces Landform position (three-dimensional): Side slope, interfluve Down-slope shape: Convex Across-slope shape: Linear Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 2 inches: loamy sand E - 2 to 52 inches: loamy sand Bt - 52 to 80 inches: sandy loam

Properties and qualities

Slope: 5 to 12 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Runoff class: Very 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
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Moderate (about 6.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: A
Forage suitability group: Sandy soils on strongly sloping to steep side slopes of xeric uplands (G133AA113FL)
Other vegetative classification: Sandy soils on strongly sloping to steep side

slopes of xeric uplands (G133AA113FL)

Hydric soil rating: No

Description of Orangeburg

Setting

Landform: Hills on marine terraces, ridges on marine terraces Landform position (three-dimensional): Side slope, interfluve Down-slope shape: Convex Across-slope shape: Linear Parent material: Loamy and clayey marine deposits

Typical profile

A - 0 to 6 inches: sandy loam Bt - 6 to 80 inches: sandy clay loam

Properties and qualities

Slope: 5 to 12 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
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Moderate (about 7.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: B
Forage suitability group: Loamy and clayey soils on strongly sloping to steep side slopes of mesic uplands (G133AA313FL)
Other vegetative classification: Loamy and clayey soils on strongly sloping to

steep side slopes of mesic uplands (G133AA313FL)

Hydric soil rating: No

Description of Cowarts

Setting

Landform: Ridges on marine terraces Landform position (three-dimensional): Side slope, interfluve Down-slope shape: Convex Across-slope shape: Linear Parent material: Loamy marine deposits

Typical profile

A - 0 to 6 inches: loamy fine sand Bt1 - 6 to 9 inches: fine sandy loam Bt2 - 9 to 23 inches: sandy clay loam C - 23 to 80 inches: sandy clay loam

Properties and qualities

Slope: 5 to 12 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 low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0

Available water supply, 0 to 60 inches: Moderate (about 7.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: C
Forage suitability group: Loamy and clayey soils on strongly sloping to steep side slopes of mesic uplands (G133AA313FL)
Other vegetative classification: Loamy and clayey soils on strongly sloping to steep side slopes of mesic uplands (G133AA313FL)
Hydric soil rating: No

Minor Components

Dothan

Percent of map unit: 10 percent Landform: Ridges on marine terraces Landform position (three-dimensional): Side slope, interfluve Down-slope shape: Convex Across-slope shape: Linear Other vegetative classification: Loamy and clayey soils on rises, knolls, and ridges of mesic uplands (G133AA322FL) Hydric soil rating: No

Troup

Percent of map unit: 5 percent Landform: Knolls on marine terraces, ridges on marine terraces Landform position (three-dimensional): Side slope, interfluve Down-slope shape: Convex Across-slope shape: Linear Other vegetative classification: Sandy soils on strongly sloping to steep side slopes of xeric uplands (G133AA113FL) Hydric soil rating: No

Lakeland

Percent of map unit: 3 percent Landform: Ridges on marine terraces, hills on marine terraces Landform position (three-dimensional): Side slope, interfluve Down-slope shape: Convex Across-slope shape: Linear Other vegetative classification: Sandy soils on strongly sloping to steep side slopes of xeric uplands (G133AA113FL) Hydric soil rating: No

Lucy

Percent of map unit: 3 percent
Landform: Hills on marine terraces, ridges on marine terraces
Landform position (three-dimensional): Side slope, interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy over loamy soils on knolls and ridges of mesic uplands (G133AA211FL)
Hydric soil rating: No

Fuquay

Percent of map unit: 3 percent *Landform:* Ridges on marine terraces

Custom Soil Resource Report

Landform position (three-dimensional): Side slope, interfluve Down-slope shape: Convex Across-slope shape: Linear Other vegetative classification: Sandy over loamy soils on rises, knolls, and ridges of mesic uplands (G133AA221FL) Hydric soil rating: No

Albany

Percent of map unit: 2 percent Landform: Knolls on marine terraces, ridges on marine terraces Landform position (three-dimensional): Interfluve, talf Down-slope shape: Convex Across-slope shape: Linear Other vegetative classification: Sandy soils on rises and knolls of mesic uplands (G133AA131FL) Hydric soil rating: No

54—Foxworth sand, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: 2ttkk Elevation: 100 to 430 feet Mean annual precipitation: 40 to 69 inches Mean annual air temperature: 55 to 72 degrees F Frost-free period: 190 to 310 days Farmland classification: Not prime farmland

Map Unit Composition

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

Description of Foxworth

Setting

Landform: Ridges on marine terraces Landform position (two-dimensional): Summit Landform position (three-dimensional): Interfluve Down-slope shape: Convex Across-slope shape: Linear Parent material: Sandy marine deposits

Typical profile

A - 0 to 6 inches: sand C - 6 to 67 inches: sand Cg - 67 to 80 inches: sand

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: About 42 to 72 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 4.8 inches)

Interpretive groups

Land capability classification (irrigated): 4s
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: A
Ecological site: F152AY305FL - East Central Sandy Ridges, Rises, and Knolls
Forage suitability group: Sandy soils on rises, knolls, and ridges of mesic uplands (G133AA121FL)
Other vegetative classification: Longleaf Pine-Turkey Oak Hills (R133AY002FL), Sandy soils on rises, knolls, and ridges of mesic uplands (G133AA121FL)
Hydrologic Soil Group: No.

Hydric soil rating: No

Minor Components

Lakeland

Percent of map unit: 4 percent Landform: Hills on marine terraces Landform position (two-dimensional): Summit Landform position (three-dimensional): Interfluve Down-slope shape: Convex Across-slope shape: Linear Other vegetative classification: Longleaf Pine-Turkey Oak Hills (R133AY002FL) Hydric soil rating: No

Chipley

Percent of map unit: 1 percent Landform: Ridges on marine terraces Landform position (two-dimensional): Summit Landform position (three-dimensional): Interfluve Down-slope shape: Convex Across-slope shape: Linear Ecological site: F152AY320FL - East Central Sandy Flat Other vegetative classification: Sandy soils on rises and knolls of mesic uplands (G133AA131FL) Hydric soil rating: No

99—Water

Map Unit Composition

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

Description of Water

Interpretive groups

Land capability classification (irrigated): None specified Forage suitability group: Forage suitability group not assigned (G133AA999FL) Other vegetative classification: Forage suitability group not assigned (G133AA999FL) Hydric soil rating: Unranked

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United States Department of Agriculture



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Custom Soil Resource Report for Santa Rosa County, Florida

City of Milton



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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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				MAP INFORMATION	
Area of In	terest (AOI) Area of Interest (AOI)	8	Spoil Area Stony Spot	The soil surveys that comprise your AOI were mapped at 1:24,000.	
Soils	Soil Map Unit Polygons Soil Map Unit Lines	© ♥	Very Stony Spot Wet Spot	Please rely on the bar scale on each map sheet for map measurements.	
C Special	Soil Map Unit Points Point Features	۵ ••	Other Special Line Features	Source of Map: Natural Resources Conservation Service Web Soil Survey URL: Coordinate System: Web Mercator (EPSG:3857)	
9 2 *	Blowout Water Feat		tures Streams and Canals ation Rails	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	
ہ *	Closed Depression Gravel Pit Gravelly Spot	~	Interstate Highways US Routes Maior Roads	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.	
0 1	Landfill Lava Flow	Backgrour	Local Roads	Soil Survey Area: Santa Rosa County, Florida Survey Area Data: Version 19, Sep 2, 2022	
*	Marsh or swamp Mine or Quarry Miscellaneous Water	Aerial Photography		Soil map units are labeled (as space allows) for map scales 1:50,000 or larger.	
Ő	Perennial Water Rock Outcrop			Date(s) aerial images were photographed: Mar 25, 2022—Mar 26, 2022	
+	Saline Spot Sandy Spot			The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident	
⊕ ♦	Severely Eroded Spot Sinkhole			shining of map unit boundaries may be evident.	
اھ ھ	Slide or Slip Sodic Spot				

Map Unit Legend

Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI				
3	Bibb-Kinston association	100.5	5.5%				
5	Bonifay loamy sand, 0 to 5 percent slopes	54.1	3.0%				
7	Dorovan-Pamlico association	6.8	0.4%				
14	Fuquay loamy sand, 0 to 5 percent slopes	52.1	2.9%				
21	Lakeland sand, 0 to 5 percent slopes	970.2	53.4%				
22	Lakeland sand, 5 to 12 percent slopes	32.9	1.8%				
34	Pactolus loamy sand, 0 to 5 percent slopes	268.3	14.8%				
36	Pits	3.2	0.2%				
40	Rutlege loamy sand	82.3	4.5%				
44	Troup loamy sand, 0 to 5 percent slopes	93.5	5.1%				
45	Troup loamy sand, 5 to 8 percent slopes	87.0	4.8%				
47	Troup-Orangeburg-Cowarts complex, 5 to 12 percent slopes	17.7	1.0%				
99	Water	49.4	2.7%				
Totals for Area of Interest		1,818.0	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.

Santa Rosa County, Florida

3—Bibb-Kinston association

Map Unit Setting

National map unit symbol: wn5l Elevation: 0 to 450 feet Mean annual precipitation: 65 to 73 inches Mean annual air temperature: 63 to 70 degrees F Frost-free period: 242 to 272 days Farmland classification: Not prime farmland

Map Unit Composition

Bibb and similar soils: 50 percent Kinston and similar soils: 25 percent Minor components: 25 percent Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Bibb

Setting

Landform: Flood plains on marine terraces Landform position (three-dimensional): Talf Down-slope shape: Linear Across-slope shape: Linear Parent material: Loamy and sandy alluvium

Typical profile

A - 0 to 17 inches: silt loam Cg1 - 17 to 42 inches: silt loam Cg2 - 42 to 65 inches: fine sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly drained
Runoff class: Very 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: About 6 to 18 inches
Frequency of flooding: NoneFrequent
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Moderate (about 8.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: B/D
Forage suitability group: Loamy and clayey soils on stream terraces, flood plains, or in depressions (G133AA345FL)
Other vegetative classification: Loamy and clayey soils on stream terraces, flood plains, or in depressions (G133AA345FL)
Hydric soil rating: Yes
Description of Kinston

Setting

Landform: Flood plains on marine terraces Landform position (three-dimensional): Talf Down-slope shape: Linear Across-slope shape: Linear Parent material: Loamy alluvium

Typical profile

A - 0 to 9 inches: silt loam E - 9 to 18 inches: silt loam 2Bg - 18 to 50 inches: sandy clay loam 2Cg - 50 to 65 inches: sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Poorly 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: About 0 to 12 inches
Frequency of flooding: NoneFrequent
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Moderate (about 8.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 5w
Hydrologic Soil Group: B/D
Forage suitability group: Loamy and clayey soils on stream terraces, flood plains, or in depressions (G133AA345FL)
Other vegetative classification: Loamy and clayey soils on stream terraces, flood plains, or in depressions (G133AA345FL)
Hydric soil rating: Yes

Minor Components

Rutlege

Percent of map unit: 10 percent Landform: Depressions on marine terraces Landform position (three-dimensional): Dip Down-slope shape: Concave Across-slope shape: Concave Other vegetative classification: Sandy soils on stream terraces, flood plains, or in depressions (G133AA145FL) Hydric soil rating: Yes

Pamlico

Percent of map unit: 5 percent Landform: Depressions on marine terraces, flood plains on marine terraces Landform position (three-dimensional): Flat Down-slope shape: Linear Across-slope shape: Concave

Other vegetative classification: Organic soils in depressions and on flood plains (G133AA645FL)

Hydric soil rating: Yes

Johns

Percent of map unit: 4 percent
Landform: Stream terraces on marine terraces
Landform position (three-dimensional): Tread
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Loamy and clayey soils on flats of hydric or mesic lowlands (G133AA331FL)
Hydric soil rating: No

Escambia

Percent of map unit: 3 percent
Landform: Rises on marine terraces
Landform position (three-dimensional): Interfluve, talf
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Loamy and clayey soils on flats of hydric or mesic lowlands (G133AA331FL)
Hydric soil rating: No

Pactolus

Percent of map unit: 3 percent Landform: Rises on marine terraces Landform position (three-dimensional): Interfluve Down-slope shape: Convex Across-slope shape: Linear Other vegetative classification: Sandy soils on rises and knolls of mesic uplands (G133AA131FL) Hydric soil rating: No

5—Bonifay loamy sand, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: 2tsyc Elevation: 50 to 390 feet Mean annual precipitation: 45 to 73 inches Mean annual air temperature: 52 to 72 degrees F Frost-free period: 246 to 306 days Farmland classification: Farmland of local importance

Map Unit Composition

Bonifay and similar soils: 80 percent Minor components: 20 percent Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Bonifay

Setting

Landform: Knolls on marine terraces, ridges on marine terraces Landform position (two-dimensional): Summit Landform position (three-dimensional): Interfluve, tread Down-slope shape: Convex Across-slope shape: Linear Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 3 inches: loamy sand

E - 3 to 54 inches: loamy sand

Btv - 54 to 80 inches: sandy clay loam

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.58 in/hr)
Depth to water table: About 42 to 60 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 5.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: A
Forage suitability group: Sandy soils on rises, knolls, and ridges of mesic uplands (G133AA121FL)
Other vegetative classification: Sandy soils on rises, knolls, and ridges of mesic uplands (G133AA121FL)
Hydric soil rating: No

Minor Components

Blanton

Percent of map unit: 4 percent Landform: Knolls on marine terraces, ridges on marine terraces Landform position (two-dimensional): Footslope Landform position (three-dimensional): Interfluve, base slope, tread Down-slope shape: Convex Across-slope shape: Linear Other vegetative classification: Sandy soils on rises, knolls, and ridges of mesic uplands (G133AA121FL) Hydric soil rating: No

Fuquay

Percent of map unit: 4 percent Landform: Ridges on marine terraces Landform position (two-dimensional): Footslope Landform position (three-dimensional): Interfluve, riser Down-slope shape: Convex Across-slope shape: Linear Other vegetative classification: Sandy over loamy soils on rises, knolls, and ridges of mesic uplands (G133AA221FL) Hydric soil rating: No

Lakeland

Percent of map unit: 4 percent Landform: Hills on marine terraces, ridges on marine terraces Landform position (two-dimensional): Summit Landform position (three-dimensional): Interfluve, riser Down-slope shape: Convex Across-slope shape: Linear Other vegetative classification: Sandy soils on ridges and dunes of xeric uplands (G133AA111FL) Hydric soil rating: No

Troup

Percent of map unit: 4 percent Landform: Knolls on marine terraces, ridges on marine terraces Landform position (two-dimensional): Summit Landform position (three-dimensional): Interfluve Down-slope shape: Convex Across-slope shape: Linear Other vegetative classification: Sandy soils on ridges and dunes of xeric uplands (G133AA111FL) Hydric soil rating: No

Albany

Percent of map unit: 4 percent Landform: Knolls on marine terraces, ridges on marine terraces Landform position (two-dimensional): Footslope Landform position (three-dimensional): Interfluve, talf Down-slope shape: Convex Across-slope shape: Linear Other vegetative classification: Sandy soils on rises and knolls of mesic uplands (G133AA131FL) Hydric soil rating: No

7—Dorovan-Pamlico association

Map Unit Setting

National map unit symbol: wn5q Elevation: 0 to 450 feet Mean annual precipitation: 65 to 73 inches Mean annual air temperature: 63 to 70 degrees F Frost-free period: 242 to 272 days Farmland classification: Not prime farmland

Map Unit Composition

Dorovan and similar soils: 50 percent Pamlico and similar soils: 30 percent Minor components: 20 percent Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Dorovan

Setting

Landform: Swamps on marine terraces Landform position (three-dimensional): Interfluve, talf Down-slope shape: Concave Across-slope shape: Concave Parent material: Organic material over sandy marine deposits

Typical profile

Oa - 0 to 63 inches: muck

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very 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 inches
Frequency of flooding: Frequent
Frequency of ponding: Frequent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Very high (about 13.8 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 7w Hydrologic Soil Group: B/D Ecological site: F152AY345FL - East Central Sandy Flooded Lowland Forage suitability group: Organic soils in depressions and on flood plains (G133AA645FL) Other vegetative classification: Organic soils in depressions and on flood plains (G133AA645FL)

Hydric soil rating: Yes

Description of Pamlico

Setting

Landform: Depressions on marine terraces, flood plains on marine terraces Landform position (three-dimensional): Flat Down-slope shape: Linear Across-slope shape: Concave Parent material: Herbaceous organic material over sandy marine deposits

Typical profile

Oa - 0 to 37 inches: muck *Cg - 37 to 60 inches:* sand

Properties and qualities

Slope: 0 to 1 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible
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: About 0 inches
Frequency of flooding: NoneFrequent
Frequency of ponding: Frequent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Very high (about 15.3 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 7w Hydrologic Soil Group: A/D Ecological site: F152AY345FL - East Central Sandy Flooded Lowland Forage suitability group: Organic soils in depressions and on flood plains (G133AA645FL) Other vegetative classification: Organic soils in depressions and on flood plains (G133AA645FL) Hydric soil rating: Yes

Minor Components

Rutlege

Percent of map unit: 5 percent Landform: Depressions on marine terraces Landform position (three-dimensional): Dip Down-slope shape: Concave Across-slope shape: Concave Ecological site: F152AY345FL - East Central Sandy Flooded Lowland Other vegetative classification: Sandy soils on stream terraces, flood plains, or in depressions (G133AA145FL) Hydric soil rating: Yes

Pickney

Percent of map unit: 5 percent Landform: Depressions on marine terraces Landform position (three-dimensional): Dip Down-slope shape: Concave Across-slope shape: Concave Ecological site: F152AY350FL - East Central Sandy Lowland Other vegetative classification: Sandy soils on stream terraces, flood plains, or in depressions (G133AA145FL) Hydric soil rating: Yes

Bibb

Percent of map unit: 5 percent Landform: Flood plains on marine terraces Landform position (three-dimensional): Talf Down-slope shape: Linear Across-slope shape: Linear Ecological site: F152AY335FL - East Central Sandy Flooded Flat *Other vegetative classification:* Loamy and clayey soils on stream terraces, flood plains, or in depressions (G133AA345FL) *Hydric soil rating:* Yes

Leon

Percent of map unit: 3 percent Landform: Flats on marine terraces Landform position (three-dimensional): Talf Down-slope shape: Convex Across-slope shape: Linear Ecological site: F152AY320FL - East Central Sandy Flat Other vegetative classification: sandy soils on flats of mesic or hydric lowlands (G133AA141FL) Hydric soil rating: No

Pactolus

Percent of map unit: 2 percent Landform: Rises on marine terraces Landform position (three-dimensional): Interfluve Down-slope shape: Convex Across-slope shape: Linear Ecological site: F152AY305FL - East Central Sandy Ridges, Rises, and Knolls Other vegetative classification: Sandy soils on rises and knolls of mesic uplands (G133AA131FL) Hydric soil rating: No

14—Fuquay loamy sand, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: 2tbyt Elevation: 50 to 400 feet Mean annual precipitation: 40 to 73 inches Mean annual air temperature: 52 to 72 degrees F Frost-free period: 190 to 310 days Farmland classification: Farmland of local importance

Map Unit Composition

Fuquay and similar soils: 80 percent *Minor components:* 20 percent *Estimates are based on observations, descriptions, and transects of the mapunit.*

Description of Fuquay

Setting

Landform: Interfluves Landform position (two-dimensional): Shoulder Landform position (three-dimensional): Interfluve Down-slope shape: Convex Across-slope shape: Linear Parent material: Sandy marine deposits over loamy marine deposits

Typical profile

Ap - 0 to 10 inches: loamy sand E1 - 10 to 22 inches: loamy sand E2 - 22 to 28 inches: loamy sand Bt1 - 28 to 36 inches: sandy loam Bt2 - 36 to 43 inches: sandy clay loam Btv - 43 to 65 inches: sandy clay loam

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Well drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): Moderately high (0.20 to 0.57 in/hr)
Depth to water table: About 40 to 61 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 5.9 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 2s
Hydrologic Soil Group: B
Forage suitability group: Sandy over loamy soils on rises, knolls, and ridges of mesic uplands (G133AA221FL)
Other vegetative classification: Sandy over loamy soils on rises, knolls, and ridges of mesic uplands (G133AA221FL)

Hydric soil rating: No

Minor Components

Cowarts

Percent of map unit: 4 percent Landform: Interfluves Landform position (two-dimensional): Summit, shoulder, backslope Landform position (three-dimensional): Interfluve, side slope Down-slope shape: Convex Across-slope shape: Convex Hydric soil rating: No

Nankin

Percent of map unit: 4 percent Landform: Broad interstream divides Landform position (two-dimensional): Summit, shoulder, backslope Landform position (three-dimensional): Interfluve, side slope Down-slope shape: Convex Across-slope shape: Linear Hydric soil rating: No

Ailey

Percent of map unit: 3 percent Landform: Interfluves Landform position (two-dimensional): Backslope Landform position (three-dimensional): Nose slope Down-slope shape: Convex Across-slope shape: Linear Hydric soil rating: No

Bonneau

Percent of map unit: 3 percent Landform: Broad interstream divides Down-slope shape: Convex Across-slope shape: Linear Hydric soil rating: No

Dothan

Percent of map unit: 2 percent Landform: Interfluves Landform position (two-dimensional): Summit Landform position (three-dimensional): Interfluve Down-slope shape: Convex Across-slope shape: Linear Other vegetative classification: Loamy and clayey soils on rises and knolls of mesic uplands (G133AA321FL) Hydric soil rating: No

Blanton

Percent of map unit: 2 percent Landform: Interfluves Landform position (two-dimensional): Backslope Landform position (three-dimensional): Nose slope, base slope Down-slope shape: Convex Across-slope shape: Linear Hydric soil rating: No

Bonifay

Percent of map unit: 1 percent Landform: Knolls on marine terraces, ridges on marine terraces Landform position (two-dimensional): Summit Landform position (three-dimensional): Interfluve, tread Down-slope shape: Convex Across-slope shape: Linear Other vegetative classification: Sandy soils on rises, knolls, and ridges of mesic uplands (G133AA121FL) Hydric soil rating: No

Troup

Percent of map unit: 1 percent Landform: Hillslopes on marine terraces, ridges on marine terraces Landform position (two-dimensional): Summit Landform position (three-dimensional): Base slope, riser Down-slope shape: Convex Across-slope shape: Linear Other vegetative classification: Longleaf Pine-Turkey Oak Hills (R133AY002FL), Sandy soils on ridges and dunes of xeric uplands (G133AA111FL) Hydric soil rating: No

21—Lakeland sand, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: 2rz0n Elevation: 100 to 400 feet Mean annual precipitation: 40 to 69 inches Mean annual air temperature: 63 to 70 degrees F Frost-free period: 190 to 310 days Farmland classification: Not prime farmland

Map Unit Composition

Lakeland and similar soils: 80 percent Minor components: 20 percent Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Lakeland

Setting

Landform: Hills on marine terraces Landform position (two-dimensional): Summit, shoulder Landform position (three-dimensional): Interfluve Down-slope shape: Convex Across-slope shape: Linear Parent material: Sandy marine deposits

Typical profile

A - 0 to 7 inches: sand *C - 7 to 80 inches:* sand

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.1 inches)

Interpretive groups

Land capability classification (irrigated): 4s Land capability classification (nonirrigated): 3s Hydrologic Soil Group: A Other vegetative classification: Longleaf Pine-Turkey Oak Hills (R133AY002FL) Hydric soil rating: No

Minor Components

Troup

Percent of map unit: 6 percent Landform: Knolls, ridges Landform position (two-dimensional): Summit Landform position (three-dimensional): Interfluve Down-slope shape: Convex Across-slope shape: Linear Other vegetative classification: Sandy soils on ridges and dunes of xeric uplands (G133AA111FL) Hydric soil rating: No

Foxworth

Percent of map unit: 5 percent Landform: Ridges on marine terraces Landform position (two-dimensional): Summit Landform position (three-dimensional): Interfluve Down-slope shape: Convex Across-slope shape: Linear Other vegetative classification: Sandy soils on rises, knolls, and ridges of mesic uplands (G133AA121FL) Hydric soil rating: No

Bonifay

Percent of map unit: 5 percent Landform: Hills on marine terraces Landform position (two-dimensional): Summit Landform position (three-dimensional): Interfluve Down-slope shape: Convex, linear Across-slope shape: Linear, convex Other vegetative classification: Longleaf Pine-Turkey Oak Hills (R133AY002FL), Sandy soils on rises, knolls, and ridges of mesic uplands (G133AA121FL) Hydric soil rating: No

Albany

Percent of map unit: 2 percent
Landform: Interfluves on marine terraces, knolls on marine terraces, ridges on marine terraces
Landform position (two-dimensional): Shoulder, summit
Landform position (three-dimensional): Side slope, interfluve, tread
Down-slope shape: Convex
Across-slope shape: Convex, linear
Other vegetative classification: Forage suitability group not assigned (G133AA999FL)
Hydric soil rating: No

Chipley

Percent of map unit: 2 percent Landform: Ridges on marine terraces Landform position (two-dimensional): Summit Landform position (three-dimensional): Interfluve Down-slope shape: Convex Across-slope shape: Linear Other vegetative classification: Sandy soils on rises and knolls of mesic uplands (G133AA131FL) Hydric soil rating: No

22—Lakeland sand, 5 to 12 percent slopes

Map Unit Setting

National map unit symbol: 2ttkg Elevation: 20 to 450 feet Mean annual precipitation: 40 to 73 inches Mean annual air temperature: 55 to 70 degrees F Frost-free period: 190 to 310 days Farmland classification: Not prime farmland

Map Unit Composition

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

Description of Lakeland

Setting

Landform: Hills, marine terraces, ridges Landform position (two-dimensional): Backslope Landform position (three-dimensional): Side slope, interfluve, riser Down-slope shape: Convex Across-slope shape: Linear Parent material: Eolian or sandy marine deposits

Typical profile

A - 0 to 6 inches: sand

C - 6 to 80 inches: sand

Properties and qualities

Slope: 5 to 12 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Excessively drained
Runoff class: Very low
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Low (about 3.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 6s Hydrologic Soil Group: A Forage suitability group: Sandy soils on strongly sloping to steep side slopes of xeric uplands (G133AA113FL) *Other vegetative classification:* Longleaf Pine-Turkey Oak Hills (R133AY002FL), Sandy soils on strongly sloping to steep side slopes of xeric uplands (G133AA113FL) *Hydric soil rating:* No

Minor Components

Troup

Percent of map unit: 5 percent Landform: Ridges on marine terraces, hills on marine terraces Landform position (two-dimensional): Backslope Landform position (three-dimensional): Side slope, interfluve, riser Down-slope shape: Convex Across-slope shape: Linear Other vegetative classification: Longleaf Pine-Turkey Oak Hills (R133AY002FL), Sandy soils on strongly sloping to steep side slopes of xeric uplands (G133AA113FL) Hydric soil rating: No

Fuquay

Percent of map unit: 3 percent Landform: Ridges on marine terraces, hills on marine terraces Landform position (two-dimensional): Backslope Landform position (three-dimensional): Side slope, interfluve, riser Down-slope shape: Convex Across-slope shape: Linear Other vegetative classification: Longleaf Pine-Turkey Oak Hills (R133AY002FL), Sandy over loamy soils on rises, knolls, and ridges of mesic uplands (G133AA221FL) Hydric soil rating: No vorth Percent of map unit: 2 percent

Foxworth

Percent of map unit: 2 percent Landform: Ridges on marine terraces, hills on marine terraces Landform position (two-dimensional): Backslope Landform position (three-dimensional): Side slope, interfluve, riser Down-slope shape: Convex Across-slope shape: Linear Other vegetative classification: Longleaf Pine-Turkey Oak Hills (R133AY002FL), Sandy soils on rises, knolls, and ridges of mesic uplands (G133AA121FL) Hydric soil rating: No

34—Pactolus loamy sand, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: wn6l Elevation: 0 to 350 feet Mean annual precipitation: 65 to 73 inches Mean annual air temperature: 63 to 70 degrees F Frost-free period: 242 to 272 days Farmland classification: Not prime farmland

Map Unit Composition

Pactolus and similar soils: 85 percent *Minor components:* 15 percent *Estimates are based on observations, descriptions, and transects of the mapunit.*

Description of Pactolus

Setting

Landform: Rises on marine terraces Landform position (three-dimensional): Interfluve Down-slope shape: Convex Across-slope shape: Linear Parent material: Sandy marine and fluvial deposits

Typical profile

A - 0 to 8 inches: loamy sand

C - 8 to 80 inches: sand

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Moderately well drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: About 18 to 36 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 3.2 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 3s
Hydrologic Soil Group: A/D
Ecological site: F152AY305FL - East Central Sandy Ridges, Rises, and Knolls
Forage suitability group: Sandy soils on rises and knolls of mesic uplands (G133AA131FL)
Other vegetative classification: Sandy soils on rises and knolls of mesic uplands

(G133AA131FL) Hydric soil rating: No

Minor Components

Albany

Percent of map unit: 5 percent
Landform: Knolls on marine terraces, ridges on marine terraces
Landform position (three-dimensional): Interfluve, talf
Down-slope shape: Convex
Across-slope shape: Linear
Ecological site: F152AY320FL - East Central Sandy Flat
Other vegetative classification: Sandy soils on rises and knolls of mesic uplands (G133AA131FL)
Hydric soil rating: No

Leon

Percent of map unit: 3 percent Landform: Flatwoods on marine terraces Landform position (three-dimensional): Talf Down-slope shape: Convex Across-slope shape: Linear Ecological site: F152AY320FL - East Central Sandy Flat Other vegetative classification: sandy soils on flats of mesic or hydric lowlands (G133AA141FL) Hydric soil rating: No

Lakeland

Percent of map unit: 2 percent Landform: Ridges on marine terraces, hills on marine terraces Landform position (three-dimensional): Interfluve Down-slope shape: Convex Across-slope shape: Linear Other vegetative classification: Sandy soils on ridges and dunes of xeric uplands (G133AA111FL) Hydric soil rating: No

Rutlege

Percent of map unit: 2 percent
Landform: Depressions on marine terraces
Landform position (three-dimensional): Dip
Down-slope shape: Concave
Across-slope shape: Concave
Ecological site: F152AY345FL - East Central Sandy Flooded Lowland
Other vegetative classification: Sandy soils on stream terraces, flood plains, or in depressions (G133AA145FL)
Hydric soil rating: Yes

Bonifay

Percent of map unit: 2 percent Landform: Knolls on marine terraces, ridges on marine terraces Landform position (three-dimensional): Interfluve Down-slope shape: Convex Across-slope shape: Linear Other vegetative classification: Sandy soils on rises, knolls, and ridges of mesic uplands (G133AA121FL) Hydric soil rating: No

Troup

Percent of map unit: 1 percent Landform: Knolls on marine terraces, ridges on marine terraces Landform position (three-dimensional): Interfluve Down-slope shape: Convex Across-slope shape: Linear Other vegetative classification: Sandy soils on ridges and dunes of xeric uplands (G133AA111FL) Hydric soil rating: No

36—Pits

Map Unit Composition

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

Description of Pits

Setting

Landform: Marine terraces Landform position (three-dimensional): Interfluve, dip Down-slope shape: Linear Across-slope shape: Linear

Interpretive groups

Land capability classification (irrigated): None specified Land capability classification (nonirrigated): 8 Forage suitability group: Forage suitability group not assigned (G133AA999FL) Other vegetative classification: Forage suitability group not assigned (G133AA999FL) Hydric soil rating: Unranked

40—Rutlege loamy sand

Map Unit Setting

National map unit symbol: wn6s Elevation: 0 to 300 feet Mean annual precipitation: 65 to 73 inches Mean annual air temperature: 63 to 70 degrees F Frost-free period: 242 to 272 days Farmland classification: Not prime farmland

Map Unit Composition

Rutlege and similar soils: 82 percent Minor components: 18 percent Estimates are based on observations, descriptions, and transects of the mapunit.

Description of Rutlege

Setting

Landform: Depressions on marine terraces Landform position (three-dimensional): Dip Down-slope shape: Concave Across-slope shape: Concave Parent material: Sandy marine deposits and/or fluviomarine deposits

Typical profile

A1 - 0 to 12 inches: loamy sand A2 - 12 to 21 inches: loamy sand Cg - 21 to 61 inches: sand

Properties and qualities

Slope: 0 to 2 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Very poorly drained
Runoff class: Negligible
Capacity of the most limiting layer to transmit water (Ksat): High to very high (5.95 to 19.98 in/hr)
Depth to water table: About 0 to 6 inches
Frequency of flooding: NoneFrequent
Frequency of ponding: Frequent
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 5.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6w
Hydrologic Soil Group: A/D
Ecological site: F152AY345FL - East Central Sandy Flooded Lowland
Forage suitability group: Sandy soils on stream terraces, flood plains, or in depressions (G133AA145FL)
Other vegetative classification: Sandy soils on stream terraces, flood plains, or in depressions (G133AA145FL)
Hydric soil rating: Yes

Minor Components

Pickney

Percent of map unit: 5 percent Landform: Depressions on marine terraces Landform position (three-dimensional): Dip Down-slope shape: Concave Across-slope shape: Concave Ecological site: F152AY350FL - East Central Sandy Lowland Other vegetative classification: Sandy soils on stream terraces, flood plains, or in depressions (G133AA145FL) Hydric soil rating: Yes

Pamlico

Percent of map unit: 4 percent Landform: Depressions on marine terraces, flood plains on marine terraces Landform position (three-dimensional): Flat Down-slope shape: Linear Across-slope shape: Concave Ecological site: F152AY345FL - East Central Sandy Flooded Lowland Other vegetative classification: Organic soils in depressions and on flood plains (G133AA645FL) Hydric soil rating: Yes

Dorovan

Percent of map unit: 4 percent

Landform: Swamps on marine terraces Landform position (three-dimensional): Interfluve, talf Down-slope shape: Concave Across-slope shape: Concave Ecological site: F152AY345FL - East Central Sandy Flooded Lowland Other vegetative classification: Organic soils in depressions and on flood plains (G133AA645FL) Hydric soil rating: Yes

Leon

Percent of map unit: 3 percent Landform: Flatwoods on marine terraces Landform position (three-dimensional): Talf Down-slope shape: Convex Across-slope shape: Linear Ecological site: F152AY320FL - East Central Sandy Flat Other vegetative classification: sandy soils on flats of mesic or hydric lowlands (G133AA141FL) Hydric soil rating: No

Pactolus

Percent of map unit: 2 percent Landform: Rises on marine terraces Landform position (three-dimensional): Interfluve Down-slope shape: Convex Across-slope shape: Linear Ecological site: F152AY305FL - East Central Sandy Ridges, Rises, and Knolls Other vegetative classification: Sandy soils on rises and knolls of mesic uplands (G133AA131FL) Hydric soil rating: No

44—Troup loamy sand, 0 to 5 percent slopes

Map Unit Setting

National map unit symbol: 2rypy Elevation: 30 to 490 feet Mean annual precipitation: 40 to 69 inches Mean annual air temperature: 55 to 70 degrees F Frost-free period: 190 to 310 days Farmland classification: Farmland of local importance

Map Unit Composition

Troup and similar soils: 85 percent *Minor components:* 15 percent *Estimates are based on observations, descriptions, and transects of the mapunit.*

Description of Troup

Setting

Landform: Hillslopes on marine terraces, ridges on marine terraces

Landform position (two-dimensional): Summit Landform position (three-dimensional): Base slope, riser, tread Down-slope shape: Convex Across-slope shape: Linear Parent material: Unconsolidated sandy and loamy marine deposits

Typical profile

A - 0 to 3 inches: loamy sand

E - 3 to 55 inches: loamy sand

Bt - 55 to 80 inches: sandy loam

Properties and qualities

Slope: 0 to 5 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively 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: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Available water supply, 0 to 60 inches: Moderate (about 6.1 inches)

Interpretive groups

Land capability classification (irrigated): 3s

Land capability classification (nonirrigated): 3s

Hydrologic Soil Group: A

Forage suitability group: Sandy soils on ridges and dunes of xeric uplands (G133AA111FL), Unnamed (G133AP141FL)

Other vegetative classification: Longleaf Pine-Turkey Oak Hills (R133AY002FL), Sandy soils on ridges and dunes of xeric uplands (G133AA111FL), Unnamed (G133AP141FL)

Hydric soil rating: No

Minor Components

Bonifay

Percent of map unit: 4 percent

Landform: Knolls on marine terraces, ridges on marine terraces

Landform position (three-dimensional): Interfluve

Down-slope shape: Linear, convex

Across-slope shape: Linear

Other vegetative classification: Longleaf Pine-Turkey Oak Hills (R133AY002FL),

Sandy soils on rises, knolls, and ridges of mesic uplands (G133AA121FL) *Hydric soil rating:* No

Fuquay

Percent of map unit: 3 percent Landform: Hillslopes Landform position (two-dimensional): Shoulder Landform position (three-dimensional): Interfluve Down-slope shape: Convex Across-slope shape: Linear Hydric soil rating: No

Lakeland

Percent of map unit: 3 percent Landform: Hills on marine terraces Landform position (two-dimensional): Summit Landform position (three-dimensional): Interfluve Down-slope shape: Convex Across-slope shape: Linear Other vegetative classification: Longleaf Pine-Turkey Oak Hills (R133AY002FL) Hydric soil rating: No

Lucy

Percent of map unit: 3 percent Landform: Broad interstream divides Landform position (two-dimensional): Summit, shoulder, backslope Landform position (three-dimensional): Interfluve, rise Down-slope shape: Convex Across-slope shape: Convex Other vegetative classification: Sandy over loamy soils on knolls and ridges of mesic uplands (G133AA211FL) Hydric soil rating: No

Orangeburg

Percent of map unit: 2 percent
Landform: Broad interstream divides
Landform position (two-dimensional): Shoulder
Landform position (three-dimensional): Interfluve, rise
Down-slope shape: Convex
Across-slope shape: Convex
Other vegetative classification: Loamy and clayey soils on knolls and ridges of mesic uplands (G133AA311FL)
Hydric soil rating: No

45—Troup loamy sand, 5 to 8 percent slopes

Map Unit Setting

National map unit symbol: wn6y Elevation: 0 to 500 feet Mean annual precipitation: 65 to 73 inches Mean annual air temperature: 63 to 70 degrees F Frost-free period: 242 to 272 days Farmland classification: Not prime farmland

Map Unit Composition

Troup and similar soils: 85 percent *Minor components:* 15 percent *Estimates are based on observations, descriptions, and transects of the mapunit.*

Description of Troup

Setting

Landform: Knolls on marine terraces, ridges on marine terraces Landform position (three-dimensional): Interfluve, side slope Down-slope shape: Convex Across-slope shape: Linear Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 4 inches: loamy sand E - 4 to 60 inches: loamy sand Bt - 60 to 80 inches: sandy loam

Properties and qualities

Slope: 5 to 8 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Runoff class: Very 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
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Low (about 6.0 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 4s
Hydrologic Soil Group: A
Forage suitability group: Sandy soils on ridges and dunes of xeric uplands (G133AA111FL)
Other vegetative classification: Sandy soils on ridges and dunes of xeric uplands (G133AA111FL)
Hydric soil rating: No

Minor Components

Lucy

Percent of map unit: 5 percent Landform: Ridges on marine terraces Landform position (three-dimensional): Interfluve Down-slope shape: Convex Across-slope shape: Linear Other vegetative classification: Sandy over loamy soils on knolls and ridges of mesic uplands (G133AA211FL) Hydric soil rating: No

Lakeland

Percent of map unit: 3 percent Landform: Ridges on marine terraces, hills on marine terraces Landform position (three-dimensional): Interfluve Down-slope shape: Convex Across-slope shape: Linear *Other vegetative classification:* Sandy soils on ridges and dunes of xeric uplands (G133AA111FL) *Hydric soil rating:* No

Orangeburg

Percent of map unit: 3 percent Landform: Hills on marine terraces, ridges on marine terraces Landform position (three-dimensional): Interfluve, side slope Down-slope shape: Convex Across-slope shape: Linear Other vegetative classification: Loamy and clayey soils on ridges and side slopes of mesic uplands (G133AA312FL) Hydric soil rating: No

Fuquay

Percent of map unit: 2 percent Landform: Ridges on marine terraces Landform position (three-dimensional): Interfluve Down-slope shape: Convex Across-slope shape: Linear Other vegetative classification: Sandy over loamy soils on rises, knolls, and ridges of mesic uplands (G133AA221FL) Hydric soil rating: No

Bonifay

Percent of map unit: 2 percent Landform: Knolls on marine terraces, ridges on marine terraces Landform position (three-dimensional): Interfluve Down-slope shape: Convex Across-slope shape: Linear Other vegetative classification: Sandy soils on rises, knolls, and ridges of mesic uplands (G133AA121FL) Hydric soil rating: No

47—Troup-Orangeburg-Cowarts complex, 5 to 12 percent slopes

Map Unit Setting

National map unit symbol: wn70 Elevation: 0 to 700 feet Mean annual precipitation: 65 to 73 inches Mean annual air temperature: 63 to 70 degrees F Frost-free period: 242 to 272 days Farmland classification: Not prime farmland

Map Unit Composition

Troup and similar soils: 39 percent *Orangeburg and similar soils:* 20 percent *Cowarts and similar soils:* 15 percent *Minor components:* 26 percent *Estimates are based on observations, descriptions, and transects of the mapunit.*

Description of Troup

Setting

Landform: Knolls on marine terraces, ridges on marine terraces Landform position (three-dimensional): Side slope, interfluve Down-slope shape: Convex Across-slope shape: Linear Parent material: Sandy and loamy marine deposits

Typical profile

A - 0 to 2 inches: loamy sand E - 2 to 52 inches: loamy sand Bt - 52 to 80 inches: sandy loam

Properties and qualities

Slope: 5 to 12 percent
Depth to restrictive feature: More than 80 inches
Drainage class: Somewhat excessively drained
Runoff class: Very 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
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Moderate (about 6.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: A
Forage suitability group: Sandy soils on strongly sloping to steep side slopes of xeric uplands (G133AA113FL)
Other vegetative classification: Sandy soils on strongly sloping to steep side

slopes of xeric uplands (G133AA113FL) Hydric soil rating: No

Description of Orangeburg

Setting

Landform: Hills on marine terraces, ridges on marine terraces Landform position (three-dimensional): Side slope, interfluve Down-slope shape: Convex Across-slope shape: Linear Parent material: Loamy and clayey marine deposits

Typical profile

A - 0 to 6 inches: sandy loam Bt - 6 to 80 inches: sandy clay loam

Properties and qualities

Slope: 5 to 12 percent Depth to restrictive feature: More than 80 inches Drainage class: Well drained Runoff class: Medium

Custom Soil Resource Report

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 Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm) Sodium adsorption ratio, maximum: 4.0 Available water supply, 0 to 60 inches: Moderate (about 7.5 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: B
Forage suitability group: Loamy and clayey soils on strongly sloping to steep side slopes of mesic uplands (G133AA313FL)
Other vegetative classification: Loamy and clayey soils on strongly sloping to steep side slopes of mesic uplands (G133AA313FL)

Hydric soil rating: No

Description of Cowarts

Setting

Landform: Ridges on marine terraces Landform position (three-dimensional): Side slope, interfluve Down-slope shape: Convex Across-slope shape: Linear Parent material: Loamy marine deposits

Typical profile

A - 0 to 6 inches: loamy fine sand Bt1 - 6 to 9 inches: fine sandy loam Bt2 - 9 to 23 inches: sandy clay loam C - 23 to 80 inches: sandy clay loam

Properties and qualities

Slope: 5 to 12 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 low to moderately high (0.06 to 0.57 in/hr)
Depth to water table: More than 80 inches
Frequency of flooding: None
Frequency of ponding: None
Maximum salinity: Nonsaline to very slightly saline (0.0 to 2.0 mmhos/cm)
Sodium adsorption ratio, maximum: 4.0
Available water supply, 0 to 60 inches: Moderate (about 7.1 inches)

Interpretive groups

Land capability classification (irrigated): None specified
Land capability classification (nonirrigated): 6s
Hydrologic Soil Group: C
Forage suitability group: Loamy and clayey soils on strongly sloping to steep side slopes of mesic uplands (G133AA313FL)
Other vegetative classification: Loamy and clayey soils on strongly sloping to steep side slopes of mesic uplands (G133AA313FL)

Hydric soil rating: No

Minor Components

Dothan

Percent of map unit: 10 percent Landform: Ridges on marine terraces Landform position (three-dimensional): Side slope, interfluve Down-slope shape: Convex Across-slope shape: Linear Other vegetative classification: Loamy and clayey soils on rises, knolls, and ridges of mesic uplands (G133AA322FL) Hydric soil rating: No

Troup

Percent of map unit: 5 percent
Landform: Knolls on marine terraces, ridges on marine terraces
Landform position (three-dimensional): Side slope, interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy soils on strongly sloping to steep side slopes of xeric uplands (G133AA113FL)
Hydric soil rating: No

Lakeland

Percent of map unit: 3 percent
Landform: Ridges on marine terraces, hills on marine terraces
Landform position (three-dimensional): Side slope, interfluve
Down-slope shape: Convex
Across-slope shape: Linear
Other vegetative classification: Sandy soils on strongly sloping to steep side slopes of xeric uplands (G133AA113FL)
Hydric soil rating: No

Lucy

Percent of map unit: 3 percent Landform: Hills on marine terraces, ridges on marine terraces Landform position (three-dimensional): Side slope, interfluve Down-slope shape: Convex Across-slope shape: Linear Other vegetative classification: Sandy over loamy soils on knolls and ridges of mesic uplands (G133AA211FL) Hydric soil rating: No

Fuquay

Percent of map unit: 3 percent Landform: Ridges on marine terraces Landform position (three-dimensional): Side slope, interfluve Down-slope shape: Convex Across-slope shape: Linear Other vegetative classification: Sandy over loamy soils on rises, knolls, and ridges of mesic uplands (G133AA221FL) Hydric soil rating: No

Albany

Percent of map unit: 2 percent *Landform:* Knolls on marine terraces, ridges on marine terraces *Landform position (three-dimensional):* Interfluve, talf

Custom Soil Resource Report

Down-slope shape: Convex Across-slope shape: Linear Other vegetative classification: Sandy soils on rises and knolls of mesic uplands (G133AA131FL) Hydric soil rating: No

99—Water

Map Unit Composition

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

Description of Water

Interpretive groups

Land capability classification (irrigated): None specified Forage suitability group: Forage suitability group not assigned (G133AA999FL) Other vegetative classification: Forage suitability group not assigned (G133AA999FL) Hydric soil rating: Unranked

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Appendix F

Biological Resources: Threatened and Endangered Species



United States Department of the Interior

FISH AND WILDLIFE SERVICE

Florida Ecological Services Field Office 1339 20th Street Vero Beach, FL 32960-3559 Phone: (772) 562-3909 Fax: (772) 562-4288 Email Address: <u>fw4flesregs@fws.gov</u> https://www.fws.gov/office/florida-ecological-services



In Reply Refer To: Project Code: 2023-0121832 Project Name: City of Milton (Pace) August 25, 2023

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:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. 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 include your Project Code, listed at the top of this letter, in all subsequent correspondence regarding this project.** 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. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see https://www.fws.gov/program/migratory-bird-permit/whatwe-do.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- 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:

Florida Ecological Services Field Office

1339 20th Street Vero Beach, FL 32960-3559 (772) 562-3909

PROJECT SUMMARY

Project Code:2023-0121832Project Name:City of Milton (Pace)Project Type:Distribution Line - Maintenance/Modification - Below GroundProject Description:Natural Gas Pipeline ReplacementProject Location:Value of the second of the second

The approximate location of the project can be viewed in Google Maps: <u>https://www.google.com/maps/@30.6026606,-87.15037044943091,14z</u>



Counties: Santa Rosa County, Florida

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 Fisheries¹, 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.

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

BIRDS

NAME	STATUS
Eastern Black Rail <i>Laterallus jamaicensis ssp. jamaicensis</i> No critical habitat has been designated for this species. Species profile: <u>https://ecos.fws.gov/ecp/species/10477</u>	Threatened
REPTILES	
NAME	STATUS
Alligator Snapping Turtle <i>Macrochelys temminckii</i> No critical habitat has been designated for this species. Species profile: <u>https://ecos.fws.gov/ecp/species/4658</u>	Proposed Threatened
Eastern Indigo Snake Drymarchon couperi No critical habitat has been designated for this species. Species profile: <u>https://ecos.fws.gov/ecp/species/646</u>	Threatened
FISHES NAME	STATUS
Gulf Sturgeon <i>Acipenser oxyrinchus</i> (= <i>oxyrhynchus</i>) <i>desotoi</i> There is final critical habitat for this species. Your location does not overlap the critical habitat.	Threatened

Species profile: <u>https://ecos.fws.gov/ecp/species/651</u>

INSECTS

NAME

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

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.

USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

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

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

MIGRATORY BIRDS

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

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

- 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)

MIGRATORY BIRD INFORMATION WAS NOT AVAILABLE WHEN THIS SPECIES LIST WAS GENERATED. PLEASE CONTACT THE FIELD OFFICE FOR FURTHER INFORMATION.

MIGRATORY BIRDS FAQ

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

<u>Nationwide Conservation Measures</u> describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very

STATUS Candidate helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. <u>Additional measures</u> or <u>permits</u> may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

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

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

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

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

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

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

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

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

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

What are the levels of concern for migratory birds?
Migratory birds delivered through IPaC fall into the following distinct categories of concern:

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

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

Details about birds that are potentially affected by offshore projects

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

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

What if I have eagles on my list?

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

Proper Interpretation and Use of Your Migratory Bird Report

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

certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ "Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds" at the bottom of your migratory bird trust resources page.

WETLANDS

Impacts to <u>NWI wetlands</u> 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>U.S. Army Corps of</u> <u>Engineers District</u>.

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.

FRESHWATER EMERGENT WETLAND

- <u>PEM1/FO2F</u>
- <u>PEM1C</u>

RIVERINE

- <u>R5UBH</u>
- <u>R4SBC</u>

FRESHWATER FORESTED/SHRUB WETLAND

- <u>PFO1/4B</u>
- <u>PSS1F</u>
- PSS1Fh
- <u>PFO4/1B</u>

FRESHWATER POND

• <u>PUBHx</u>

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

Florida Ecological Services Field Office 1339 20th Street Vero Beach, FL 32960-3559 Phone: (772) 562-3909 Fax: (772) 562-4288 Email Address: <u>fw4flesregs@fws.gov</u> https://www.fws.gov/office/florida-ecological-services



In Reply Refer To: Project Code: 2023-0121822 Project Name: City of Milton August 25, 2023

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:

The enclosed species list identifies threatened, endangered, proposed and candidate species, as well as proposed and final designated critical habitat, that may occur within the boundary of your proposed project and/or may be affected by your proposed project. The species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under section 7(c) of the Endangered Species Act (Act) of 1973, as amended (16 U.S.C. 1531 *et seq.*).

New information based on updated surveys, changes in the abundance and distribution of species, changed habitat conditions, or other factors could change this list. 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 include your Project Code, listed at the top of this letter, in all subsequent correspondence regarding this project.** 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. The Service recommends that verification be completed by visiting the IPaC website at regular intervals during project planning and implementation for updates to species lists and information. An updated list may be requested through the IPaC system by completing the same process used to receive the enclosed list.

The purpose of the Act is to provide a means whereby threatened and endangered species and the ecosystems upon which they depend may be conserved. Under sections 7(a)(1) and 7(a)(2) of the Act and its implementing regulations (50 CFR 402 *et seq.*), Federal agencies are required to utilize their authorities to carry out programs for the conservation of threatened and endangered species and to determine whether projects may affect threatened and endangered species and/or designated critical habitat.

A Biological Assessment is required for construction projects (or other undertakings having similar physical impacts) that are major Federal actions significantly affecting the quality of the human environment as defined in the National Environmental Policy Act (42 U.S.C. 4332(2) (c)). For projects other than major construction activities, the Service suggests that a biological evaluation similar to a Biological Assessment be prepared to determine whether the project may affect listed or proposed species and/or designated or proposed critical habitat. Recommended contents of a Biological Assessment are described at 50 CFR 402.12.

If a Federal agency determines, based on the Biological Assessment or biological evaluation, that listed species and/or designated critical habitat may be affected by the proposed project, the agency is required to consult with the Service pursuant to 50 CFR 402. In addition, the Service recommends that candidate species, proposed species and proposed critical habitat be addressed within the consultation. More information on the regulations and procedures for section 7 consultation, including the role of permit or license applicants, can be found in the "Endangered Species Consultation Handbook" at:

https://www.fws.gov/sites/default/files/documents/endangered-species-consultation-handbook.pdf

Migratory Birds: In addition to responsibilities to protect threatened and endangered species under the Endangered Species Act (ESA), there are additional responsibilities under the Migratory Bird Treaty Act (MBTA) and the Bald and Golden Eagle Protection Act (BGEPA) to protect native birds from project-related impacts. Any activity, intentional or unintentional, resulting in take of migratory birds, including eagles, is prohibited unless otherwise permitted by the U.S. Fish and Wildlife Service (50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)). For more information regarding these Acts see https://www.fws.gov/program/migratory-bird-permit/whatwe-do.

The MBTA has no provision for allowing take of migratory birds that may be unintentionally killed or injured by otherwise lawful activities. It is the responsibility of the project proponent to comply with these Acts by identifying potential impacts to migratory birds and eagles within applicable NEPA documents (when there is a federal nexus) or a Bird/Eagle Conservation Plan (when there is no federal nexus). Proponents should implement conservation measures to avoid or minimize the production of project-related stressors or minimize the exposure of birds and their resources to the project-related stressors. For more information on avian stressors and recommended conservation measures see https://www.fws.gov/library/collections/threats-birds.

In addition to MBTA and BGEPA, Executive Order 13186: *Responsibilities of Federal Agencies to Protect Migratory Birds*, obligates all Federal agencies that engage in or authorize activities that might affect migratory birds, to minimize those effects and encourage conservation measures that will improve bird populations. Executive Order 13186 provides for the protection of both migratory birds and migratory bird habitat. For information regarding the implementation of Executive Order 13186, please visit https://www.fws.gov/partner/council-conservation-migratory-birds.

We appreciate your concern for threatened and endangered species. The Service encourages Federal agencies to include conservation of threatened and endangered species into their project planning to further the purposes of the Act. Please include the Consultation Code in the header of this letter with any request for consultation or correspondence about your project that you submit to our office.

Attachment(s):

- Official Species List
- USFWS National Wildlife Refuges and Fish Hatcheries
- Migratory Birds
- Marine Mammals
- 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:

Florida Ecological Services Field Office

1339 20th Street Vero Beach, FL 32960-3559 (772) 562-3909

PROJECT SUMMARY

Project Code:2023-0121822Project Name:City of MiltonProject Type:Distribution Line - Maintenance/Modification - Below GroundProject Description:Natural Gas Pipeline ReplacementProject Location:Value of the second of the

The approximate location of the project can be viewed in Google Maps: <u>https://www.google.com/maps/@30.627977,-87.04538980558763,14z</u>



Counties: Santa Rosa County, Florida

ENDANGERED SPECIES ACT SPECIES

There is a total of 7 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 Fisheries¹, 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.

1. <u>NOAA Fisheries</u>, 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
 West Indian Manatee <i>Trichechus manatus</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. <i>This species is also protected by the Marine Mammal Protection Act, and may have additional consultation requirements.</i> Species profile: <u>https://ecos.fws.gov/ecp/species/4469</u> 	Threatened
BIRDS NAME	STATUS
Eastern Black Rail <i>Laterallus jamaicensis ssp. jamaicensis</i> No critical habitat has been designated for this species. Species profile: <u>https://ecos.fws.gov/ecp/species/10477</u>	Threatened
REPTILES NAME	STATUS
Alligator Snapping Turtle Macrochelys temminckii No critical habitat has been designated for this species. Species profile: <u>https://ecos.fws.gov/ecp/species/4658</u>	Proposed Threatened
Eastern Indigo Snake Drymarchon couperi No critical habitat has been designated for this species. Species profile: <u>https://ecos.fws.gov/ecp/species/646</u>	Threatened

AMPHIBIANS

NAME	STATUS
Reticulated Flatwoods Salamander <i>Ambystoma bishopi</i> There is final critical habitat for this species. Your location does not overlap the critical habitat. Species profile: <u>https://ecos.fws.gov/ecp/species/8939</u>	Endangered
FISHES	
NAME	STATUS
Gulf Sturgeon Acipenser oxyrinchus (=oxyrhynchus) desotoi There is final critical habitat for this species. Your location overlaps the critical habitat. Species profile: <u>https://ecos.fws.gov/ecp/species/651</u>	Threatened
INSECTS NAME	STATUS
Monarch Butterfly <i>Danaus plexippus</i> No critical habitat has been designated for this species. Species profile: <u>https://ecos.fws.gov/ecp/species/9743</u>	Candidate
CRITICAL HABITATS There is 1 critical habitat wholly or partially within your project area under this of jurisdiction.	ffice's
NAME	STATUS
Gulf Sturgeon Acipenser oxyrinchus (=oxyrhynchus) desotoi	Final

USFWS NATIONAL WILDLIFE REFUGE LANDS AND FISH HATCHERIES

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

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

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 should follow appropriate regulations and consider implementing appropriate conservation measures, as described <u>below</u>.

- 1. The <u>Migratory Birds Treaty Act</u> 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)

MIGRATORY BIRD INFORMATION WAS NOT AVAILABLE WHEN THIS SPECIES LIST WAS GENERATED. PLEASE CONTACT THE FIELD OFFICE FOR FURTHER INFORMATION.

MIGRATORY BIRDS FAQ

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

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

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

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

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

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

What are the levels of concern for migratory birds?

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

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

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

Details about birds that are potentially affected by offshore projects

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

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

What if I have eagles on my list?

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

Proper Interpretation and Use of Your Migratory Bird Report

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

MARINE MAMMALS

Marine mammals are protected under the <u>Marine Mammal Protection Act</u>. Some are also protected under the Endangered Species Act¹ and the Convention on International Trade in Endangered Species of Wild Fauna and Flora².

The responsibilities for the protection, conservation, and management of marine mammals are shared by the U.S. Fish and Wildlife Service [responsible for otters, walruses, polar bears, manatees, and dugongs] and NOAA Fisheries³ [responsible for seals, sea lions, whales, dolphins, and porpoises]. Marine mammals under the responsibility of NOAA Fisheries are **not** shown on this list; for additional information on those species please visit the <u>Marine Mammals</u> page of the NOAA Fisheries website.

The Marine Mammal Protection Act prohibits the take of marine mammals and further coordination may be necessary for project evaluation. Please contact the U.S. Fish and Wildlife Service Field Office shown.

- 1. The Endangered Species Act (ESA) of 1973.
- 2. The <u>Convention on International Trade in Endangered Species of Wild Fauna and Flora</u> (CITES) is a treaty to ensure that international trade in plants and animals does not threaten their survival in the wild.
- 3. <u>NOAA Fisheries</u>, also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

NAME

West Indian Manatee *Trichechus manatus* Species profile: <u>https://ecos.fws.gov/ecp/species/4469</u>

WETLANDS

Impacts to <u>NWI wetlands</u> 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>U.S. Army Corps of</u> <u>Engineers District</u>.

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

- <u>R4SBC</u>
- <u>R5UBFx</u>
- <u>R1UBV</u>
- <u>R5UBH</u>

FRESHWATER FORESTED/SHRUB WETLAND

- <u>PSS1C</u>
- <u>PFO4/EM1R</u>
- PFO4/SS3B
- <u>PFO1/4R</u>
- PFO1Ch
- <u>PSS3/EM1B</u>
- <u>PFO2F</u>
- PFO1/3R
- <u>PSS3/FO4B</u>
- <u>PSS1R</u>
- PFO4/1R
- <u>PFO4/1B</u>
- <u>PFO1C</u>

FRESHWATER POND

- <u>PUBHh</u>
- PUBHx

FRESHWATER EMERGENT WETLAND

<u>PEM1F</u>

• <u>PEM1C</u>

ESTUARINE AND MARINE DEEPWATER

<u>E1UBL</u>

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 Florida Ecological Services Field Office 1339 20th Street Vero Beach, FL 32960-3559 Phone: (772) 562-3909 Fax: (772) 562-4288 Email Address: <u>fw4flesregs@fws.gov</u> https://www.fws.gov/office/florida-ecological-services



August 28, 2023

In Reply Refer To: Project code: 2023-0122136 Project Name: City Of Milton (Milton) Please provide this document to the Federal agency or their designee with your loan/grant application.

Subject: Consistency letter for the project named 'City Of Milton (Milton)' 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 August 28, 2023, Elizabeth Williams used the IPaC determination key 'Clearance to Proceed with Federally-Insured Loan and Grant Project Requests'; dated May 18, 2023, in the U.S. Fish and Wildlife Service's online IPaC tool to evaluate potential impacts to listed species from a project named 'City Of Milton (Milton)' in Santa Rosa County, Florida (shown below):

The approximate location of the project can be viewed in Google Maps: <u>https://</u> www.google.com/maps/@30.63089485,-87.04701871839731,14z



The following description was provided for the project 'City Of Milton (Milton)':

Natural Gas Pipeline Replacement

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 City Of Milton (Milton) 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.

AMPHIBIANS

• Reticulated Flatwoods Salamander Ambystoma bishopi Endangered

BIRDS

• Eastern Black Rail Laterallus jamaicensis ssp. jamaicensis Threatened

FISHES

• Gulf Sturgeon Acipenser oxyrinchus (=oxyrhynchus) desotoi Threatened

INSECTS

Monarch Butterfly Danaus plexippus Candidate

MAMMALS

• West Indian Manatee Trichechus manatus Threatened

REPTILES

- Alligator Snapping Turtle Macrochelys temminckii Proposed Threatened
- Eastern Indigo Snake Drymarchon couperi Threatened

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?

$\label{eq:automatically answered} \ensuremath{\textit{Automatically answered}} No$

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.

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:

- 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? *110000*
- 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 May 18, 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 <u>Endangered Species Act of 1973</u>, as amended (Act) (87 Stat. 884; 16 U.S.C. 1531 et seq.), the <u>Bald and Golden Eagle Protection Act</u>, (16 U.S.C. 668-668d) (Eagle Act), and the <u>Migratory Bird Treaty Act</u> (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, which may be managed by Florida's Department of Economic Opportunity;
- 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>U.S. Fish and Wildlife Service Clearance to Proceed with Federally-Insured Loan and Grant</u> <u>Project Requests</u> in Florida.

<u>U.S. Fish and Wildlife Service Clearance to Proceed with Federally-Insured Loan and Grant</u> <u>Project Requests</u> in Alabama, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee.

IPAC USER CONTACT INFORMATION

Agency:Department of TransportationName:Elizabeth WilliamsAddress:55 BroadwayCity:CambridgeState:MAZip:02142Emailelizabeth.williams1@dot.gov

Phone: 8572599218



United States Department of the Interior

FISH AND WILDLIFE SERVICE Florida Ecological Services Field Office 1339 20th Street Vero Beach, FL 32960-3559 Phone: (772) 562-3909 Fax: (772) 562-4288 Email Address: <u>fw4flesregs@fws.gov</u> https://www.fws.gov/office/florida-ecological-services



August 28, 2023

In Reply Refer To: Project code: 2023-0121832 Project Name: City of Milton (Pace) Please provide this document to the Federal agency or their designee with your loan/grant application.

Subject: Consistency letter for the project named 'City of Milton (Pace)' 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 August 28, 2023, Elizabeth Williams used the IPaC determination key 'Clearance to Proceed with Federally-Insured Loan and Grant Project Requests'; dated May 18, 2023, in the U.S. Fish and Wildlife Service's online IPaC tool to evaluate potential impacts to listed species from a project named 'City of Milton (Pace)' in Santa Rosa County, Florida (shown below):

The approximate location of the project can be viewed in Google Maps: <u>https://</u> www.google.com/maps/@30.6026606,-87.15037044943091,14z



The following description was provided for the project 'City of Milton (Pace)':

Natural Gas Pipeline Replacement

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 City of Milton (Pace) 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

• Eastern Black Rail Laterallus jamaicensis ssp. jamaicensis Threatened

FISHES

• Gulf Sturgeon Acipenser oxyrinchus (=oxyrhynchus) desotoi Threatened

INSECTS

Monarch Butterfly Danaus plexippus Candidate

REPTILES

- Alligator Snapping Turtle Macrochelys temminckii Proposed Threatened
- Eastern Indigo Snake Drymarchon couperi Threatened

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.

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 *NGDISM*
- 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? *115000*
- 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 May 18, 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.

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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, which may be managed by Florida's Department of Economic Opportunity;
- 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>U.S. Fish and Wildlife Service Clearance to Proceed with Federally-Insured Loan and Grant</u> <u>Project Requests</u> in Florida.

<u>U.S. Fish and Wildlife Service Clearance to Proceed with Federally-Insured Loan and Grant</u> <u>Project Requests</u> in Alabama, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, and Tennessee.

IPAC USER CONTACT INFORMATION

Agency:Department of TransportationName:Elizabeth WilliamsAddress:55 BroadwayCity:CambridgeState:MAZip:02142Emailelizabeth.williams1@dot.gov

Phone: 8572599218

Appendix G

Cultural Resources



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

1200 New Jersey Avenue, SE Washington, DC 20590

September 25, 2023

Alissa Slade Lotane Director Florida Division of Historical Resources R.A. Gray Building 500 South Bronough Street Tallahassee, Florida 32399-0250

Section 106 Consultation: PHMSA Pipeline Replacement Project in Milton, Florida Grant Recipient: City of Milton Project Location: City of Milton and Community of Pace, Santa Rosa County, Florida

Dear Alissa Slade Lotane:

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

Project Description/Background

Since 1949, Natural Gas of Milton, owned by the City of Milton, has operated the natural gas distribution system for businesses and residents of the City of Milton and the unincorporated communities of East Milton and Pace. The City is proposing to replace aging and failing cast iron and steel pipeline, which will enhance safety and improve operations of Natural Gas of Milton's natural gas transmission system, including pipeline modernization and interim safety enhancement measures.

The City of Milton's distribution system has an estimated 23,125 linear feet or 4.38 miles of cast iron gas mains that were installed in the early 1900s and 41,767 linear feet or 7.91 miles of steel natural gas mains that were installed prior to 1971 that are vulnerable to leaks.

The Undertaking will replace 7.51 miles of pipeline (4.38 miles of cast iron pipes and 3.13 miles of unprotected steel pipes) with polyethylene piping by means of directional drilling and cut and cover (trenching). All work will take place within the existing right-of-way (ROW). The staging areas for the project will include the City of Milton Utilities Department, City Warehouse, or other areas within existing ROWs and City-owned roadways. Project location maps are enclosed in **Attachment A**. Photographs showing the overall character of the project areas are included in **Attachment B**.

The existing pipelines being replaced are between 2 to 4 inches in diameter and will be replaced with equivalent diameters. At most locations, the replacement gas lines will be located next to the existing gas lines. However, depending on the limitations in the area and the location of other utilities, the replacement

gas line may need to be installed on the opposite side of the street. The existing gas line will be completely removed where feasible. Where not feasible, such as sections of pipe under other utilities that cannot be removed without resulting in damage to those utilities, the gas line will remain in place and will be purged of natural gas and then sealed on each end. The replacement gas lines will be installed at a depth of 32 inches below grade.

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, PHMSA has delineated the APE for this Undertaking to encompass the existing ROW, the City of Milton Utilities Department, and City Warehouse, which include the limits of disturbance, staging and access areas. The APE extends to the depth of proposed ground disturbance of up to 32 inches 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 Milton. The APE is shown on the maps in **Attachment A**.

Identification and Evaluation

To identify historic properties in the APE, U.S. Department of Transportation (U.S. DOT) staff who meet the Secretary of the Interior's (SOI) Professional Qualification Standards reviewed available information on previously identified historic properties in the APE, including the National Register of Historic Places (NRHP) database and data received from the Florida Division of Historical Resources. U.S. DOT staff also conducted research to determine if there are any previously unidentified properties within the APE that are 45 years of age or older and may be eligible for the NRHP.

Historic Architecture

The Milton Historic District (District) is the only NRHP-listed historic property within the APE. The District encompasses 117 contributing and 45 non-contributing resources and is listed under Criterion A for its association with the residential and commercial growth of Milton between the mid-nineteenth and mid-twentieth centuries, and Criterion C for its excellent examples of Renaissance Revival-style commercial buildings and high-style residences with a variety of vernacular styles. Approximately 2,705 linear feet of pipeline, adjacent to 21 parcels along Berryhill Road, Margaret Street, and Canal Street, will be replaced within the District. The location of the District is shown on the APE map in **Attachment A**.

A review of the APE found no additional above-ground resources that have the potential to be affected by the Undertaking.

Archaeology

There are no known archaeological sites within the APE. Eight known archaeological sites are located within ¹/₄ mile of the APE; none of the eight sites are listed or have been determined eligible for listing in the NRHP. Three sites are unevaluated or require additional information to determine if they are eligible for the NRHP, and the remaining five sites are not eligible. A list of the known sites within ¹/₄ mile of the APE and their eligibility status are included in Table 1 below.

Site Number	NRHP Eligibility Status
SR01230 – Ware's Mill	Unevaluated (19th century sawmill)
SR00792	Not eligible (20 th century site)

Table 1. Archaeological Sites within ¹/₄ mile of the APE.

Site Number	NRHP Eligibility Status
SR01486 – Quinn Basin Barge	Unevaluated (20 th century shipwreck)
SR00805 – Milton Sewerline – Chaffin-Milligan Mill	Not eligible (19 th and 20 th century mill site)
SR00806 – Milton Opera	Not eligible (19 th and 20 th century site)
SR00804	Not eligible (20 th century site)
SR00930 – Collin's Mill	Unevaluated (19 th century mill); significant at a local level
SR01667 – Whiting Pines 1	Not eligible (20 th century site)

The three unevaluated sites within ¹/₄ of a mile of the APE include two mills and one shipwreck located within or immediately adjacent to a water source. The APE is unlikely to contain similar sites as there are no water sources located within the APE.

The soil types within the APE include:

- Albany loamy sand, 0 to 5 percent slopes;
- Bibb-Kinston association;
- Bonifay loamy sand, 0 to 5 percent slopes;
- Dothan fine sandy loam, 0 to 2 percent slopes;
- Fuquay loamy sand, 0 to 5 percent slopes;
- Lakeland sand, 0 to 5 percent slopes;
- Lakeland sand, 5 to 12 percent slopes;
- Pactolus loamy sand, 0 to 5 percent slopes;
- Rutlege loamy sand;
- Troup loamy sand, 0 to 5 percent slopes; and
- Troup loamy sand, 5 to 8 percent slopes.

The Blackwater River and Blackwater Bay are located outside of, but within the vicinity of, the APE. The APE consists of loamy sand, sand, and fine sandy loam. Soils within the APE mostly range from somewhat poorly drained to very poorly drained. Poor soil drainage typically coincides with the presence of lakes, swamps, and wetlands. Prehistoric sites tend to be situated in areas of well drained to somewhat poorly drained soils in close proximity to wetlands, ponds, and creeks. These variables indicate a higher cultural resource potential. However, no prehistoric archaeological sites have been recorded here previously. Furthermore, topographic maps from the 1920s indicate that the area within the APE has been heavily developed since then. Aerial photographs from the 1950s also show heavy development within the APE from the 1950s to the present.

The APE is limited to the existing ROW, some of which has been previously disturbed up to the proposed ground disturbance depth of 32 inches due to prior pipeline installation. Due to the lack of significant archaeological sites in the vicinity of the APE and the previous ground disturbance that has occurred through the years, there is low probability for intact significant archaeological resources to be present in the APE, and no archaeological survey is recommended at this time.

Determination of Effect

Based on the aforementioned identification and evaluation, PHMSA has determined that there is one historic property as defined in 36 CFR 800.16(l) within the APE: the NRHP-listed Milton Historic District.

While the Undertaking is partially located within the District, it will not alter any of the characteristics or contributing features of the District that qualify it for inclusion in the NRHP under Criteria A or C in a manner that would diminish its integrity. Project work is limited to the replacement of existing pipelines in areas that demonstrate a low probability for intact significant archaeological resources. The Undertaking will not result in lasting physical, visual, or audible effects to the District. The Undertaking also does not include land acquisition, nor would it limit access to or change the use of the District.

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

Consulting Party Outreach

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

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

- Alabama-Coushatta Tribe of Texas
- Choctaw Nation of Oklahoma
- Coushatta Tribe of Louisiana
- Miccosukee Tribe of Indians
- Mississippi Band of Choctaw Indians
- Muscogee (Creek) Nation

Request for Section 106 Concurrence

Based on the information presented above, PHMSA has determined that the Undertaking will result in No Adverse Effect to properties that are either in, or eligible for inclusion in, the NRHP. PHMSA is submitting this Undertaking to your office for your review and comment. PHMSA requests your concurrence with this determination of effect within 30 calendar days of the date of this letter. Should you need additional information please contact Amy Hootman, Section 106 specialist, at <u>PHMSASection106@dot.gov</u> or 857-998-9981.

Sincerely,

Mart Tult

Matt Fuller Senior Environmental Protection Specialist

MF/ah
cc: Elizabeth Williams, Environmental Protection Specialist, USDOT Volpe Center Damond Smith, PHMSA Grant Specialist Sandra Woodbery, Grants Manager, City of Milton Tim Milstead, Planning Director, City of Milton Richard Baldwin, President, Santa Rosa 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: Milton Florida Gas Line Replacement Scale: 56,278 Acreage: 54.479 USGS Basemap: Milton North Milton, FL, Santa Rosa County Service Layer Credits: USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed April, 2023.





Name: Milton Florida Gas Line Replacement Scale: 24,000 Acreage: 54.479 USGS Basemap: Milton North Milton, FL, Santa Rosa County Area 2 Service Layer Credits: USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures Dataset, and National Transportation Dataset; USGS Global Ecosystems; U.S. Census Bureau TIGER/Line data; USFS Road Data; Natural Earth Data; U.S. Department of State Humanitarian Information Unit; and NOAA National Centers for Environmental Information, U.S. Coastal Relief Model. Data refreshed April, 2023.





Name: Milton Florida Gas Line Replacement Scale: 6,564 Acreage: 54.479 Milton, FL, Santa Rosa County Area 1



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



Name: Milton Florida Gas Line Replacement Scale: 12,493 Acreage: 54.479 Milton, FL, Santa Rosa County Area 2



Service Layer Credits: State of Florida, Maxar, Esri Community Maps Contributors, FDEP, CONANP, Esri, HERE, Garmin, SafeGraph, Geo Technologies, Inc, METI/NASA, USGS, EPA, NPS, US Census Bureau, USDA



Milton, FL, Santa Rosa County Area 1

ATTACHMENT B

Project Area Photographs



Photo 1. Alabama Street near Berryhill Road intersection, view looking south.



Photo 2. Berryhill Road near Conecuh Street intersection, view looking east.



Photo 3. Canal Street near Yew Street intersection, view looking south.



Photo 4. Canal Street near Margaret Street intersection, view looking north.



Photo 5. Margaret Street near Canal Street intersection, view looking west.

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 55 Broadway Cambridge, MA E-mail: PHMSASection106@dot.gov



RON DESANTIS

Governor

CORD BYRD Secretary of State

Amy Hootman US DOT: Pipeline and Hazardous Materials Safety Administration 1200 New Jersey Ave, SE Washington, DC 20590 November 7, 2023

RE: DHR Project File No.: 2023-6365, Received by DHR: October 17, 2023 Project: Section 106 Consultation: PHMSA Pipeline Replacement Project in Milton, Florida County: Santa Rosa

Dear Amy Hootman:

The Florida State Historic Preservation Officer reviewed the referenced project for possible effects on historic properties listed, or eligible for listing, on the *National Register of Historic Places*. The review was conducted in accordance with Section 106 of the *National Historic Preservation Act of 1966*, as amended, and its implementing regulations in *36 CFR Part 800: Protection of Historic Properties*.

It is the opinion of this office that the proposed project is unlikely to affect historic properties and have an adverse effect on the NRHP-listed historic district of Milton. However, the permit, if issued, should include the following special condition regarding unexpected discoveries:

• If prehistoric or historic artifacts, such as pottery or ceramics, projectile points, dugout canoes, metal implements, historic building materials, or any other physical remains that could be associated with Native American, early European, or American settlement are encountered at any time within the project site area, the permitted project shall cease all activities involving subsurface disturbance in the vicinity of the discovery. The applicant shall contact the Florida Department of State, Division of Historical Resources, Compliance and Review Section at (850)-245-6333. Project activities shall not resume without verbal and/or written authorization. In the event that unmarked human remains are encountered during permitted activities, all work shall stop immediately and the proper authorities notified in accordance with Section 872.05, *Florida Statutes*.

If you have any questions, please contact Benjamin Stewart, Historic Preservationist, by email at *Benjamin.Stewart@dos.myflorida.com*, or by telephone at 850.245.6307 or 800.847.7278.

Sincerely,

Killy L Chase

Alissa S. Lotane Director, Division of Historical Resources & State Historic Preservation Officer

Division of Historical Resources R.A. Gray Building • 500 South Bronough Street • Tallahassee, Florida 32399 850.245.6300 • 850.245.6436 (Fax) • FLHeritage.com



From:	Madison D. Currie
To:	PHMSASection106
Cc:	Lindsey Bilyeu
Subject:	PHMSA - Section 106 - Finding of No Adverse Effect - Choctaw Nation of Oklahoma
Date:	Tuesday, October 24, 2023 12:37:28 PM
Attachments:	image001.png

CAUTION: This email originated from outside of the Department of Transportation (DOT). Do not click on links or open attachments unless you recognize the sender and know the content is safe.

Halito Amy Hootman,

The Choctaw Nation of Oklahoma thanks you for the correspondence regarding the above referenced project. Santa Rosa County, Florida lies within our area of historic interest. The Choctaw Nation Historic Preservation Department concurs with the finding of "no effect". However, we ask that work be stopped and our office contacted immediately in the event that Native American artifacts or human remains are encountered.

If you have any questions, please contact me.

Yakoke,

Maddie Danielle Currie NHPA Compliance Review Specialist Historic Preservation Department Choctaw Nation of Oklahoma P.O. Box 1210 Durant, OK 74702 Office: 580-642-8467 Cell: 580-740-9537



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Appendix I

Environmental Justice

EJScreen Community Report

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

Milton, FL

0.5 miles Ring around the Area Population: 7,926 Area in square miles: 5.57



LANGUAGES SPOKEN AT HOME

LANGUAGE	PERCENT
English	90%
Spanish	7%
French, Haitian, or Cajun	1%
Tagalog (including Filipino)	1%
Total Non-English	10%





From Ages 1 to 4
From Ages 1 to 18
From Ages 18 and up
From Ages 65 and up

LIMITED ENGLISH SPEAKING BREAKDOWN

Speak Spanish	0%
Speak Other Indo-European Languages	9%
Speak Asian-Paci c Island Languages	91%
Speak Other Languages	0%

Notes: Numbers may not sum to totals due to rounding. Hispanic popultion 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.

www.epa.gov/ejscreen

19% 81% 19%

EJScreen Community Report

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

Pace, FL

0.5 miles Ring around the Area Population: 7,835 Area in square miles: 4.27

COMMUNITY INFORMATION



FDEP, CONAMP, Ewi, HERE, Garrein, SafeOrigel, GeoTechnol, Inn MPTUNASA, USOS, PD, MPS, US, Carnes Ruman, USDA

LANGUAGES SPOKEN AT HOME

LANGUAGE	PERCENT
English	93%
Spanish	4%
Other Indo-European	1%
Tagalog (including Filipino)	1%
Total Non-English	7%





LIMITED ENGLISH SPEAKING BREAKDOWN

From Ages 18 and up

From Ages 65 and up

Speak Spanish	69 %
Speak Other Indo-European L	anguages 0%
Speak Asian-Paci c Island La	anguages 31%
Speak Other Languages	0%

Notes: Numbers may not sum to totals due to rounding. Hispanic popultion 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.

www.epa.gov/ejscreen

74%

14%

EJScreen Community Report

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

Santa Rosa County, FL

County: Santa Rosa Population: 184,345 Area in square miles: 1222.16



COMMUNITY INFORMATION Limited English Less than high Low income: People of color: school education: households: **19** percent 25 percent 8 percent 1 percent Persons with Male: **Unemployment:** Female: disabilities: 5 percent 51 percent **49 percent** 15 percent 80 years \$35,253 Owner iber of **Average life** Per capita ouseholds: occupied: expectancy income 67,534 78 percent **BREAKDOWN BY RACE**

LANGUAGES SPOKEN AT HOME

LANGUAGE	PERCENT
English	93%
Spanish	3%
German or other West Germanic	1%
Other and Unspeci ed	1%
Total Non-English	7%



LIMITED ENGLISH SPEAKING BREAKDOWN

From Ages 18 and up

From Ages 65 and up

Speak Spanis	n	27%
Speak Other I	ndo-European Languages	31%
Speak Asian-F	Paci c Island Languages	42%
Speak Other L	anguages	0%

Notes: Numbers may not sum to totals due to rounding. Hispanic popultion 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.

78%

16%