



**US Army Corps  
of Engineers®**

Pittsburgh District

Planning and Environmental Branch  
William S. Moorhead Federal Building  
1000 Liberty Avenue  
Pittsburgh, Pennsylvania 15222

Public Notice Date: **13 May 2019**  
Expiration Date: **27 May 2019**

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## **NOTICE OF AVAILABILITY**

### **Draft Environmental Assessment**

#### **Village of New Amsterdam Sanitary Sewer Project in Jefferson County, OH**

The U.S. Army Corps of Engineers, Pittsburgh District (USACE) is evaluating a Federal funding request for a proposed sanitary sewer project in the Village of New Amsterdam, Jefferson County, Ohio.

The USACE invites submission of comments on the environmental impact of the approval of the request. The USACE will consider all submissions received before the expiration date of the public comment period. The nature or scope of the proposal may be changed upon consideration of the comments received.

The **draft** Environmental Assessment and **draft** Finding of No Significant Impact are available electronically at:

<http://www.lrp.usace.army.mil/Missions/Planning-Programs-Project-Management/>

**Comments can be submitted to the address posted at the top of this notice or to Erin.Stuart@usace.army.mil. Comments must be received by 27 May 2019 to ensure consideration.**

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**JEFFERSON COUNTY**  
**VILLAGE OF AMSTERDAM SANITARY SEWER PROJECT**  
**ENVIRONMENTAL ASSESSMENT**

**May 9, 2019**

**Prepared By: Ohio Rural Community Assistance Program (RCAP) for US Army Corps of Engineers**

**1. Name of Project:** Village of Amsterdam Sanitary Sewer Project

**2. Project Authority:** Water Resources Development Act (WRDA) of 1999 (Public Law 106-53), Section 594 provides design and construction assistance to non-Federal interests for carrying out water-related environmental infrastructure in the State of Ohio. The Section 594 program is a reimbursement program, whereby 75% of the total project costs are borne by the government and 25% of the costs are borne by the Non-Federal sponsor, the Jefferson County Water and Sewer District Authority.

**3. Project Location** – Village of Amsterdam, Jefferson County, Ohio (40.471814 N, -80.921194 W)

**4. Project Purpose and Need:**

The Village of Amsterdam and immediate contiguous areas of Springfield Township in Jefferson County and Loudon Township in Carroll County are currently served by failing on-site septic systems which are discharging untreated waste to Yellow Creek. The Jefferson County and Carroll County Health Departments have indicated that soils in the project area are typically rated as not conducive for use as septic tank absorption or leach fields. In 2009, the Ohio EPA cited the Village of Amsterdam for high fecal coliform count in Yellow Creek.

The proposed action will consist of the construction of approximately 39,236 linear feet of 8-inch gravity sewer; 136 manholes; 1,315 linear feet of 2-inch force main; 1,577 linear feet of 4-inch force main; 376 linear feet of 2-inch pressure sewer; 2,871 linear feet of 1.5-inch pressure sewer; 292 linear feet of stream crossing; 404 gravity sewer services; 9 grinder pumps; 1,482 linear feet of 16-inch steel casing; 2,371 pavement replacement, two 100 gallon per minute lift stations and a 50,000 gallon per day (gpd) activated sludge package treatment plant (Proposed Action). The Jefferson County Water and Sewer District will assume responsibility for operating and maintaining the sewer system.

**5. Alternatives Dismissed from Further Consideration**

**Treatment System Alternatives Considered:**

According to a Preliminary Engineering Report dated July 2015 prepared by ARCADIS, the following alternatives were considered to correct the current situation:

**Modify existing on-site septic systems** – this alternative was eliminated from consideration due to several negative effects; including the lack of adequate soils which is a major cause of the existing failures, high groundwater levels, severe slopes or lack of space for treatment and on-site disposal systems, lack of adequate of receiving stream for surface discharge, operation and maintenance difficulties for scattered systems, the need for extensive time in locating, identifying, repair and/or replacing the existing on-site systems. Upon completion of the needed repairs and/or replacements, the ability to maintain such a large number of scattered systems would be unrealistic and cost prohibitive.

**On-site or Cluster Systems** – consists of collection, treatment and disposal of the wastewater generated by each EDU. These types of systems are typically regulated under either the local health department or the state regulatory agency. On-site and cluster systems create a local utility which provides a customized solution that addresses disposal need of each wastewater generator and manages the operation and maintenance of these facilities. It is necessary for this utility to obtain easements which enables access to the property to operate, maintain, repair and replace the on-site facilities as required. These systems are classified by the method of effluent disposal; subsurface disposal or as a surface discharge. These disposal systems were eliminated from consideration due to some lot sizes not having sufficient space for the increased footprint of the system; the “mound” required restricts the usefulness of the area and is generally visually unappealing; public perception as this system being a temporary fix and historical history of failing on-site systems; requires a local power supply for use of mechanical processes; use of hazardous chemicals or ultraviolet equipment for biological treatment of effluent; treatment processes are sensitive to under loading or overloading;

**Septic Tank with Leach Field** – consists of an underground concrete or fiberglass settling tank (septic tank) complete with baffling and effluent filter. A multi-branch distribution zone (leach field) using perforated pipes surrounded by clean aggregate or pre-engineered arch distribution chambers to disburse the effluent evenly across the surrounding soil. It is necessary to remove the accumulated solids and dispose of this material at a treatment facility periodically. This alternative was eliminated from consideration due to the existing septic tanks with leach fields have historically not provided adequate wastewater disposal due to inadequate soils, steep slopes, insufficient space of combination of these factors.

**Septic Tanks with Mound Distribution Zones** – this system utilizes a septic tank, but replaces the conventional leach field with an engineered distribution zone designed to address problems associated with percolation into the adjacent soils. The engineered distribution zone utilizes imported soils to raise the distribution zone (mound) above existing soils and groundwater levels, increases the distribution zone void volume and increases the interface area with underlying soils to reduce the required percolation rates. The size of the mound is based on anticipated wastewater flows and absorption rates of the soils. This alternative was eliminated from consideration, again, due to the failure of existing on-site systems due to poor soil conditions and inadequate lot sizes.

**Home Aeration Units (HAUs) with Disinfection and Surface Discharge** – A typical HAU is similar in size to a septic tank with a similar design capacity. The unit is typically a precast concrete or fiberglass tank with various chambers and baffles. It is designed to utilize the extended aeration wastewater treatment process for nutrient reduction with ultraviolet disinfection of the treated effluent prior to discharge. It is periodically necessary to remove accumulated solids from the HAU and hauled to a treatment facility. Sizing generally provides an average 24 hours of wastewater detention in the aeration chamber and volumes required for influent trash capture, solids storage and clarification of effluent. This alternative

was eliminated from consideration due to the need for monitoring numerous individual effluent outfalls for compliance, acquiring easements to allow isolated HAUs to discharge to an adequate stream and installing electric power at each EDU.

**Collection System Alternatives Considered:**

**Gravity Sewers** – This alternative produces low operating costs and dependable service and has historically been the preferred method of collecting and transporting wastewater for treatment and disposal. This alternative will require both a temporary construction easement to construct the sewer and a permanent easement to provide access to the sewer line for operation and maintenance in the future. Gravity sewers do have topographic constraints which require deep construction and multiple lift stations. Lift stations will typically require land purchase for the structure. Pipes are laid to grade between manholes which are located at each change in horizontal or vertical direction. Pipe laterals are provided for service connections. Advantages to gravity sewers are no mechanical aspects as sewage flows down the pipe to a central collection location; minimal operation and maintenance is required for collection lines. Disadvantages include need for deep excavation and large amounts of dirt removal; line construction in streets prevents the removed material being placed in the trench; imported stone material must be used to reduce future settlement issues; nearby structures can be damaged due to undermining of them by deep lines. This alternative is considered in the evaluation of potential wastewater collection alternatives.

**Low Pressure Sewers with Individual Grinder Pumps** – provides a grinder type sewage pump at each customer location which grinds the waste to slurry which is pumped through small diameter pipelines to the treatment facility. The pipelines would be laid with a minimum of 3-feet of cover, generally following the topography. The system would include isolation valves and cleanouts for maintenance and air releases to release accumulated air. This alternative involves more shallow installation than gravity systems, smaller pipe size and ability to serve areas of rolling topography. This alternative will require a temporary easement for construction and a permanent easement for operating and maintaining the system. If lift stations are required, land purchase would be needed for the structure. Advantages include minimal construction issues due to more shallow depths of pipeline, groundwater is typically not an issue and it is easy to tie-in new users. Disadvantages include the need for a grinder pump at each home which requires monitoring and maintenance; requires a 30-amp service at each home. This alternative typically has higher operating and maintenance costs due to numerous grinder pumps. This alternative is considered in the evaluation of potential wastewater alternatives.

**Septic Tanks with Effluent Pumping or Variable Grade Gravity Sewers** – This alternative utilizes a septic tank to provide preliminary treatment (settling) at each customer location; transporting the liquid portion of the waste from this tank to the treatment location and then disposal utilizing either variable grade gravity sewers or pressure sewers and effluent pumps. An advantage of this system is that only the liquid portion of the wastewater is transported for treatment/disposal. The shortcomings are that this system requires a septic tank at each service connection; tanks require periodic collection, treatment and disposal of accumulated waste, typically completed by a contract hauler; improper maintenance and disposal of waste affects operations of the system; septic effluent generated from this system is very corrosive and odorous when agitated or aerated. Costs associated with installation of the new tanks, operating, maintenance, repair and replacement makes this alternative unattractive. This alternative was eliminated from further consideration.

**Vacuum Sewers** – utilizes a vacuum source to move wastewater from each service connection to a central location where it can be pumped to a treatment and disposal location. Atmospheric air enters the collection system to fill the vacuum providing the energy to move the wastewater. The merits of this system include the requirements that the collection system receives only wastewater (no excessive infiltration/inflow to be transported, treated or disposed) and the ability to move wastewater upgrade along mildly rolling terrain reducing pipeline depth and need for multiple lift stations. The downsides to the system include the need to identify and eliminate all potential sources of inflow/infiltration., capital and operating costs can become quite substantial, the loss of system vacuum from a pipeline break or an interface valve failure to close. If this loss of vacuum is left unchecked, the progression will disable entire branches and even the entire collection system. For these reasons this alternative was removed from consideration.

### **Wastewater Treatment Alternatives**

Lagoon Plant – this alternative includes several different lagoon configurations; (a) facultative (stabilization) lagoon, (b) completed mixed aerated lagoon, (c) aerated facultative lagoon and (d) controlled release aerated lagoon. The controlled release aerated lagoon is the Ohio EPA's current recommended lagoon configuration for a discharging lagoon. This lagoon type requires storage of wastewater for the warm weather season (at least 180 days) and allows release of effluent during wet weather season when the receiving stream flows are relatively high. Aeration is employed to maintain the upper reaches aerobic with sludge settling to the bottom to undergo anaerobic decomposition. The lagoon effluent is typically discharge at a rate that is a percentage of the flowing stream using a stream gauging station. The principle is that the effluent quality does not have to be as high quality as a conventional treatment plant. This alternative was not selected due to the large amount of acreage needed to accommodate this system. The plant site and land application areas are calculated to require about 50 acres. This alternative was removed from consideration due to the large size of wastewater containment required resulting in a large earthen impoundment; lack of site availability near the village; lagoon plant performance cannot be controlled by adjusting return sludge rates and aeration cycles to obtain better performance; the plant will discharge high levels of total suspended solids periodically which may exceed permit limits, the soils in the project area are limited for percolation.

For a non-discharging lagoon option, an aerated facultative lagoon followed by irrigation would appear to be the most feasible for the project area. This alternative would consist of two aerated cells with a depth of 10 feet followed by storage lagoon. Land requirement for this alternative is calculated to be 50 acres. Advantages of a non-discharging lagoon includes no required any operational knowledge and the plant has no discharge. Disadvantages include the system requiring a fair amount of full-time management during the irrigation season (April-November) and high expense of land purchase for the lagoon.

**Oxidation Ditch Plant** – this type of plant is typically configured as a circular oxidation ditch wrapped around an internal circular clarifier. The process is an activated sludge process that operates in the extended aeration mode. The tank around a tank design uses a common wall between the ditch and the clarifier. An oxidation ditch is aerated usually by a rotor (with paddles) that extends across the ditch. These paddles induce oxygen into the bulk liquid of the ditch and cause the liquid to move rapidly around the circular tank to keep solids from settling to the tank floor. Waste sludge is collected in a separate tank where it is aerated continuously. Once a sludge cake has been fanned on the beds, the cake is usually removed with disposal methods. Advantages of an oxidation ditch plant are the extended aeration process

is very stable and it can somewhat optimize electricity usage by adjusting rotor submergence based on basin dissolved oxygen (DO) levels. Disadvantages are there will be several relatively costly mechanical items to replace when they wear out; including the clarifier drive unit, rotor bearings and drive unit, clarifier skirting and clarifier rake assemblies.

**Alternative WWTP Sites:**

Sites B and C are located along State Route 164 north of the Village of Amsterdam and Site A. Both of these sites are located between State Route 164 and the railroad embankment and are not located within the floodplain of Yellow Creek. Both sites are vacant and are utilized as cropland or no use.

**6: Proposed Action and Alternatives:**

**No-Action Alternative:** NEPA’s implementing regulations require consideration of a no-action alternative 40 CFR 1502.14(d), which is proposed and considered below. Under the no-action alternative, federal funding would not be provided and the proposed action would not be conducted. The Village of New Amsterdam received a notice of violation (NOV) from the Ohio EPA, dated 29 June 2009 identifying discharges of untreated or poorly treated wastewater to Yellow Creek. The NOV requested a response identifying a plan of action to correct sewage disposal problems in the village. To address the violation, the Village of New Amsterdam proposes to construct a public sewer system to eliminate health risks associated with failing on-site septic systems due to the inability of the soils to support septic tank absorption or leach fields.

<b>Environmental Parameter</b>	<b>Effect Determination</b>	<b>Explanation</b>
Aesthetics	No effect	The no action alternative will maintain the status quo.
Air Quality	No effect	The no action alternative will maintain the status quo.
Aquatic resources/wetlands	Minor effect	The no action alternative will result in continued discharge of raw sewage into local streams and environment which may pose a threat to wetland areas and habitat in these areas.
Invasive species	No effect	The no action alternative will maintain the status quo.
Fish and wildlife habitat	Significant effect	The no action alternative will result in continued discharge of raw sewage to local streams and the environment producing a threat to fish and wildlife habitat in the project area and downstream.
Threatened/endangered species	No effect	The no action alternative will maintain the status quo.
Historic properties	No effect	The no action alternative will maintain the status quo.
Other cultural resources	No effect	The no action alternative will maintain the status quo.
Floodplains	No effect	The no action alternative will maintain the status quo.

Hazardous, toxic & radioactive waste	No effect	The no action alternative will maintain the status quo.
Hydrology	No effect	The no action alternative will maintain the status quo.
Land use	No effect	The no action alternative will maintain the status quo.
Navigation	No effect	The no action alternative will maintain the status quo.
Noise levels	No effect	The no action alternative will maintain the status quo.
Public Infrastructure	No effect	The no action alternative will maintain the status quo.
Socio-economics	Significant effect	The no action alternative will result in continued use of failing septic systems which are contaminating the local environment and posing a health risk to residents in the immediate project area as well as areas downstream.
Environmental justice	Significant effect	The no action alternative has the potential for significant effect on environmental justice as the project area is considered low to moderate income. Failure to provide access to public sewer to an area under served will result in human health risks and continued contamination of the local environment.
Soils	No effect	The no action alternative will maintain the status quo.
Tribal Trust Resources	No effect	The no action alternative will maintain the status quo.
Water Quality	Significant effect	The no action alternative will result in continued discharge of raw sewage into local streams and may adversely impact water quality.
Climate change	No effect	The no action alternative will maintain the status quo.
State threatened and endangered species	Significant effect	The no action alternative has the potential for significant adverse effect on the state threatened mussel species; the black sandshell and the threehorn wartyback; state threatened fish such as the river darter, the paddlefish, the channel darter and the Tippecanoe darter and the eastern hellbender a state endangered species and federal species of concern.
Traffic and Public Safety	No Effect	The no action alternative will maintain the status quo.
Cumulative Effects	Significant Effects	The cumulative effects of the no action alternative includes potential for health risks to humans, decrease in home values, moratorium on home sales, loss of jobs, moratorium on new home and business construction

		and continued discharge of raw sewage to streams which pose adverse impacts on aquatic species, wetlands and communities downstream.
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**Preferred Alternative:**

**Hybrid Collection System** – includes low-pressure sewers with grinder pumps collecting wastewater in combination with gravity sewers. While the low pressure grinder pump alternative would be the least cost alternative for a single collection system serving the entire planning area, the gravity sewer alternative would be the least cost alternative for the central portions of the Village of Amsterdam, which is laid out in typical village fashion with relatively small, closely spaced residential and commercial lots. The engineer’s examination indicated that a wastewater collection system which utilizes each service area’s least cost collection alternative (low-pressure sewers with grinder pumps or gravity collectors) would result in an additional cost benefit compared to other collection system alternatives. Advantages of a hybrid sewer (gravity and pressure) collection system include reduced mechanical aspects for collection lines; reduced operation and maintenance; the gravity sewer line to be constructed is the easier portion of line compared to all gravity option and the more difficult gravity is to construct is replaced with shallower pressure sewers. Disadvantages of a hybrid sewer (gravity and pressure) collections system include maintenance of the grinder pumps; need for a competent operator and keeping good history on the grinders pumps to troubleshoot problems.

The cost of the various on-site and cluster system was compared to the present worth cost of the least cost centralized collection treatment alternatives. This comparison identifies individual service areas where on-site or cluster alternatives are the least cost alternative compared to centralized collection.

A combination of the least-cost collection system alternatives (whether on-site, cluster or centralized) for each service area becomes the least cost Hybrid Collection System Alternative.

An analysis indicated that there are two service areas where the on-site system is the least cost collection option. However these types of systems are not selected for this alternative for the following non-monetary reasons: public perception that this type of system is sub-standard; requires a higher level of management to operate and maintain.

**Package Plant** – is an activated sludge process that operates in the extended aeration mode similar to the oxidation ditch. The process is an activated sludge process that operates in the extended aeration mode. The plants are pre-built in the factory as concrete wall panel sections and concrete top slabs. The package treatment plant does not utilize mechanical equipment in the aeration and clarification processes, except for positive displacement blowers. Air supplied by these blowers returns and wastes sludge instead of mechanical devices. The plant size would require about 1 to 1.3 acres. Advantages of a package plant area the aeration process is very stable; can somewhat optimize electricity usage by adjusting blower cycle timers based on basin DO levels; there are no moving mechanical assemblies immersed in sewage and sludge return and sludge wasting is achieved by blower air. Disadvantages are these plants are not as electrically cost effective to operate due to the relative crudeness of the positive displacement blower operation used for aeration and sludge return.

The preferred wastewater treatment plant site (Site A) is located north of Rogers Park, just north of the Village of Amsterdam.

The hybrid collection system was chosen as the preferred alternative due to the layout of homes and topography of the service area. The package treatment plant alternative was selected for treatment due to the ease of operation and maintenance. The proposed site is located between the railroad embankment and Yellow Creek. Access to the site is by a driveway off State Route 164 which travels over the railroad tracks to Rogers Park. According to the project engineer, Site A is preferred due to being easy to acquire, access to the site currently exists, floodplain areas can be avoided and no wetlands exist at this site.

### **7. Environmental Setting:**

Land use in the project area is typical of a small village. The terrain ranges from low-lying areas to steep hillsides. The area contains underground utilities and a railroad. The area has a history of coal mining activities. Water resources in the project area include Yellow Creek, Goose Creek and Bear Run.

The preferred wastewater treatment plant site (Site A) is located north of Rogers Park, just north of the Village of Amsterdam. The proposed site is located between the railroad embankment and Yellow Creek. Access to the site is by a driveway off State Route 164 which travels over the railroad tracks to Rogers Park. The area chosen for the WWTP has been disturbed by bulldozing of the site and construction of an embankment. The site is vacant and has no structures. Information provided in an engineering report indicated this site was used as a shooting range, however investigation during a Phase 1 Environmental Site Assessment found no evidence of this prior use. A portion of the site is located within the 100 year floodplain of Yellow Creek. According to the project engineer, ARCADIS, there is ample room on the site to construct a 50,000 gallon per day package plant and remain out of the 100 year floodplain area. According to a Wetland Delineation Report, a small wetland exists outside the boundary of Site A and will not be impacted by construction activities. According to correspondence from ARCADIS, Site A is preferred due to being easy to acquire and access across the railroad tracks currently exists. In addition, the outfall pipe is easy construction directly to the creek.

Construction of the collection system will occur in the rights of way of streets and alleys throughout the project area. These areas have been previously disturbed by prior utilities and roadway construction activities. Jefferson County will obtain temporary easements to construct the proposed sanitary sewers and a permanent easement to provide access to the sewer line for future operation and maintenance activities.

### **Wetland Delineation at alternative WWTP sites:**

A Wetland Delineation Report was completed in February and March 2016 on three sites under consideration for location of the proposed wastewater treatment plant. Five wetlands were observed and recorded during the investigation.

SP WET-1 – is located in a slight depression in a mowed field leading to a drainage ditch adjacent to the railroad. The drainage ditch that flows along the SE border of Site C is identified on topo mapping as an unnamed tributary to Yellow Creek. Overland flow from SR 164 and northwest collects in the depression. Due to the small size and disturbed quality of the wetland and surrounding area, this wetland received a quantitative score of 27 and was categorized as a Category 1 wetland.

SP WET-2 – A sampling station was established in the study area on 2/23/16. This station was designated as SP WET-2 and was located in the floodplain of Yellow Creek between the stream and railroad tracks in a slight depression. It was determined that this wetland is outside of the Site A boundary. Due to the small size of the wetland and little vegetation species diversity, this wetland received a quantitative score of 28 and was categorized as a Category 1 wetland.

SP WET-3 – is located between SR 164 and the railroad tracks in a low lying area. A portion of Wetland No. 3 is located within an NWI wetland classified as a palustrine scrub-shrub broad-leaved deciduous/persistent palustrine emergent seasonally flooded (PSS1/EM/1C) wetland. This study area is approximately 0.342 acres. The wetland continues wet outside of the approximate site boundary originally received for field investigation and is outside of the Site B boundary.

SP WET-3, SP WET-4 and SP WET-5 were evaluated and categorized together as WET-3/4/5. These wetlands form a patchwork in a low-lying area in between SR 164 (to the north) and the railroad (to the south) with residential areas to the west and east. With a final quantitative score of 46, this wetland was categorized as a Category 2 wetland.

SP WET-4 – is located adjacent to and following the north side of the railroad tracks. This study area is approximately 0.040 acres. Wetland No. 4 was evaluated and categorized with SP WET-3 and SP WET 5, as mentioned above.

SP WET-5 – is located in a depression leading to a drainage ditch adjacent to the railroad. Groundwater and overland flow from the surrounding area and forested area to the northwest contribute to the hydrology as well as a high water table. This study area is approximately 0.132 acres. Wetland No. 5 was evaluated and categorized together with WET-3 and WET-4 as mentioned above

Areas of designated wetlands along the force main route will be avoided by re-alignment of the pipeline or by utilizing horizontal bore construction techniques. Stream crossings will occur utilizing the horizontal bore method of construction to minimize impacts. Open-cut stream crossings will temporarily impact streams but areas will be restored after pipeline is installed and no permanent impacts to streams are anticipated.

Site A is the preferred construction site for the WWTP and the wetland identified in this area is outside the site boundary and will therefore receive no impact from construction activities.

#### **Cultural Resources Survey at alternative WWTP sites:**

A Phase I archaeological survey was conducted at the alternative WWTP sites. No cultural resources were discovered in Area B. The survey revealed one prehistoric isolated find (33JE269) in Area C. This isolated find will be recorded on the Ohio Archaeological Inventory; however, no further survey is recommended for Area C.

**8. Environmental Effects of the Proposed Action:** Determine how the project would affect the environmental parameters noted in the table below. Check the appropriate box and provide, in the last column, a reason or basis for your selection. Significant effects may require mitigation unless the effects are clearly temporary.

Environmental Parameter	Effect determination	Explanation
Aesthetics	Minor effect	The proposed treatment system will be located immediately adjacent to Rogers Park however no permanent adverse visual impacts are anticipated. The site will be landscaped and fenced to be aesthetically compatible with the surrounding area. Temporary effects to aesthetics may occur during construction activities, but these are not expected to be significant.
Air Quality	Minor effect	Construction equipment exhausts have the potential to cause minor increase in emissions during construction activities. These impacts are anticipated to be short-term.
Aquatic resources/wetlands	Minor effect	<p>Nationwide Permit authorizations from the U.S. Army Corps of Engineers will be required for discharges of fill in Waters of the United States, which include 11 open cut stream crossings and one outfall structure on Yellow Creek. Permit applications are currently under review.</p> <p>No wetland impacts are expected from the proposed action.</p>
Invasive species	No effect	No effect to invasive species is expected from the proposed action.
Fish and wildlife habitat	No effect	<p>Consultation with the Ohio Department of Natural Resources (ODNR) and the U.S. Fish and Wildlife Service (USFWS) indicate the location of the project elements will have no adverse effect on fish or wildlife nor habitat. The proposed sanitary sewers will be located within the right of way of streets or on private easements. Aquatic life will not be adversely impacted as in-water work is temporary. The ODNR advises that the Ohio Natural Heritage Database indicates there are no records of state endangered or threatened plants or animals within the project area. There are also no records of state potentially threatened plants, special interest or species of concern animals or federally listed species. In addition, the agency is unaware of any unique ecological sites, geologic features, animal</p>

		<p>assemblages, scenic rivers, state wildlife areas, state nature preserves, state or national parks, state or national forests, national wildlife refuges or other protected natural areas within the project area. The USFWS advised there are no federal wilderness areas, wildlife refuges or designated critical habitat within the vicinity of the project area.</p>
Threatened/endangered species	May affect not likely to adversely affect	<p>The U.S. Fish and Wildlife Service (USFWS) and Ohio Department of Natural Resources (ODNR) advise the proposed action is located within the range of the federally endangered Indiana bat (<i>Myotis sodalis</i>) and the federally threatened northern-long eared bat (<i>Myotis septentrionalis</i>). Summer habitat for these species consist of a wide variety of forested/wooded habitats where they roost, forage and travel and may also include some adjacent and interspersed non-forested habitats such as emergent wetlands and adjacent edges of agricultural fields, old fields and pastures. This includes forests and woodlots containing potential roosts such as live trees and/or snags, greater than 3 inches in diameter that have exfoliating bark, cracks, crevices, hollows and/or cavities. According to USFWS, if tree removal is necessary trees should only be cut between October 1 and March 31. If implementation of the seasonal tree cutting recommendation is not possible, summer surveys may be conducted to document the presence or probable absence of Indiana bats. Surveyors must have a valid federal permit and surveys should be conducted between June 1 and August 15.</p> <p>The Corps requested concurrence from the USFWS for a may affect, not likely to adversely affect determination for both bat species, based upon implementation of the tree cutting restriction. The USFWS concurred with this determination via email dated 1 March 2019 (see Appendix A).</p>
Historic properties and other cultural resources	No effect	<p>An on-line search of the Ohio Historic Preservation Office (OHPO) records indicates 16 Historic Buildings within the project area.</p> <p>A Phase 1 Archaeological Survey revealed the following: Site A revealed artifacts; however according to the Survey, and after consultation with Brent Eberhard of the Archaeological Survey and Data Manager at the Ohio Historic Preservation Office, it was determined that</p>

		<p>the artifacts would not be recorded as an historic archaeological site. No further work is recommended in Area A. Based on the results of the Survey, construction of the proposed wastewater treatment plant will not affect historic properties.</p> <p>According to the Phase 1 Cultural Resource and Geomorphological Survey (revised September 2016), nine properties over 50 years of age were identified within the Area of Potential Effect (APE) for visual effects. An Ohio Historic Inventory (OHI) form was prepared for each property. Each property was recommended as not eligible for the National Register of Historic Places (NRHP) due to lack of integrity.</p> <p>The Ohio Historic Preservation Office concurred, by letter dated 10/27/16, that the undertaking, will not affect properties listed in or eligible for listing in the National Register of Historic Places (see Appendix A). No further coordination is required with OHPO unless the project changes or additional archaeological remains are discovered during the course of the project. Any excavation by the contractor that uncovers an historical or archaeological artifact shall be immediately reported to the Owner, Indian Tribes and funding agencies. Construction shall be temporarily halted pending the notification process and further directions issued by the agencies after consultation with the State Historic Preservation Ohio (SHPO).</p>
Floodplains	Minor effect	<p>Based on Flood Insurance Rate Map Numbers 39081C0106D and 39081C0019D, the floodplain of Yellow Creek is located within the project area.</p> <p>Construction of the gravity sewer, pressure sewer and force main are not expected to adversely impact the floodplain areas as horizontal boring will occur to avoid in-water or open cut construction activities in areas of Yellow Creek, Goose Creek and Cox Creek. The pipeline will be designed as to not obstruct flood flow. Conversion of the floodplain will not occur for pipeline installation.</p> <p>According to the Project Engineer, there is ample room on the site to construct a 50,000 gallon per day (gpd) package plant and remain out of the 100-year floodplain.</p>

		<p>Construction of discharge line and outfall at Yellow Creek will occur within the floodplain. These impacts are anticipated to be temporary in nature and will be constructed as to not impede flood flow.</p> <p>The proposed action will include boring beneath a US Army Corps of Engineers Flood Protection Project (Amsterdam Flood Protection Project) and the proposed outfall is in close proximity to the Amsterdam Flood Protection Project. The County will be responsible for ensuring the Amsterdam Flood Protection Project infrastructure is not disturbed by construction activities. The proposed work requires permission from the Corps under Section 408. The Corps is currently reviewing the Section 408 request. Permission must be granted before work can be done within the Amsterdam Flood Protection Project area.</p> <p>The County will be responsible for obtaining appropriate floodplain permits prior to start of construction. This program is administered by the Jefferson County Regional Planning Commission.</p>
Hazardous, toxic & radioactive waste	No effect	<p>A Phase 1 Environmental Site Assessment Report (Phase I ESA) was prepared by Collective Efforts, LLC in 2016, updated October 2018 and finalized in March 2019. The Phase I ESA concludes that based upon the environmental database findings, historical mapping, interviews and the site reconnaissance conducted, no conditions identified are considered Recognized Environmental Conditions (RECs). The Phase I ESA report recommends that care should be taken during the construction phase of this project when excavating in areas that previously contained or currently contain gas stations. Current and former gas stations may contain USTs or residual petroleum products. Should odors or petroleum products be observed during excavation, the contractor should follow state and federal regulations regarding potentially contaminated soil.</p>
Hydrology	No effect	<p>No effect to hydrology is expected from the proposed action.</p>
Land use	Minor effect	<p>Land use in the service area is typical of a small village and rural area, with residential and commercial uses. Terrain ranges from low-lying areas to steep hillsides. There are no open land areas within the village boundaries. All project areas within the service area been previously disturbed by prior construction activities including those of the existing water systems, other public utilities, roadways and construction of homes and businesses.</p>

		<p>Construction of the collection system will require both a temporary construction easement to construct the new sewer and a permanent easement to provide access to the sewer line for operation and maintenance in the future. Typically, a 15 foot permanent easement and a 30 foot temporary construction easement are obtained on a new pressure sewer line while a 20 foot permanent easement and a 40 foot temporary construction easement are obtained on a new gravity sewer line.</p> <p>The proposed lift stations will require a property purchase for the physical structure. The site will be fenced. According to the Preliminary Engineering Report, a site of approximately 25 feet square should be sufficient for a station of the size required for this project.</p> <p>The Loudon Township (Carroll County) service area consists of similar terrain as the Village of Amsterdam. Lots are larger in size and scattered. Discharge of sewage from this area drains to Yellow Creek, Goose Creek and unnamed tributaries. According to the Carroll County Comprehensive Plan (2014) <a href="http://carrollcountyohio.us/regionalplanning.html">http://carrollcountyohio.us/regionalplanning.html</a>, Loudon Township is not facing urban expansion issues for residential development, but is still one of the more populated Townships in Carroll County.</p> <p>Based on information in the Jefferson County Land Use Plan (2013), <a href="http://rpc.jeffersoncountyoh.com/">http://rpc.jeffersoncountyoh.com/</a> there are no proposed or anticipated development plans for the Village of Amsterdam area. According to US Census data, the population trends in the project area have been on decline in recent years and there is no indication this trend will reverse.</p> <p>The treatment capacity has been designed to serve the Village of Amsterdam and contiguous areas of Springfield Township in Jefferson County and Loudon Township in Carroll County. Future expansion of the treatment plant is possible if needed in the future. Minor effects to land use may occur in the future. The construction of the proposed action may lead to increased development in the future.</p> <p>There is no prime forestland or rangeland in Ohio.</p>
--	--	---

		<p>There are no formally classified lands within the project area.</p> <p>There is no important farmland within the project area. The preferred site (Site A) and alternate treatment plant sites (Sites B &amp; C) are located on prime farmland soils and conversion will occur. However, Land Evaluation and Site Assessment (LESA) scoring for the proposed and alternate treatment plant sites indicate no impact to farmland will occur. Steve Baker of the Natural Resources Conservation Service (NRCS)-Columbus advises that the sanitary sewers will occur within the right of way and are exempt from the Farmland Protection Policy Act (FPPA); therefore no adverse impacts to farmland will occur as a result of the proposed action.</p> <p>No adverse impacts to land use or soils is anticipated as a result of the proposed action.</p>
Navigation	No effect	No effect to navigation is expected as a result of the proposed action.
Noise levels	Minor effect	Construction activities will produce noise but this will be short-term in nature. Construction will occur during normal daylight working hours to minimize disturbance. Mufflers and other noise abatement devices will be used on large equipment, when practical. Upon completion, the wastewater system will produce no adverse noise impacts.
Public Infrastructure	Minor effect	The construction of new sewer lines should improve public infrastructure in the area.
Socio-economics	Minor effect	According to the American Community Statistics, the Village of Amsterdam has a total population of 511. There is a 99% white population and approximately 204 households. The median household income for the village is \$31,179. According to the Jefferson County Land Use Plan (2013), the County has lost population since 1960 when its population peaked at 99,201. By 1980, that population has just around 91,500, by 1990 it dropped by over 10,000 to 80,298 and in the 2000 Census it was 73,894. New population projections by the Ohio Development Services Agency indicate a modest population loss over the following 20 years to 65,330 by 2030, followed by an increase to 65,820 in 2035 and 67,410 in 2040.

		<p>According to the Carroll County Comprehensive Plan (2014), Carroll County is one of the few counties experiencing an increase in population. Loudon Township however is not facing the same population increase but is still one of the more populated townships in the County.</p> <p>The proposed action should reduce health risk to residents by eliminating failing septic systems.</p>
Environmental justice	No effect	<p>The proposed action is designed to improve the environment and health conditions of all residents in the service area, which is shown in the Jefferson County Amsterdam Sanitary Sewer Map (see Appendix A). Elimination of failing on-site septic systems will improve the quality of living in the area and will eliminate raw sewage draining to local streams. All residents of the service area will benefit from access to public sewers. According to the U.S. EPA's EJSCREEN report tool<sup>1</sup>, approximately 46% of the population in the proposed action area is considered a low income population. Approximately 1% of the population is considered a minority population. No minority or low income areas will incur adverse effects as a result of the proposed action. There are no adverse Environmental Justice effects anticipated as a result of the proposed action.</p>
Soils	Minor effect	<p>Temporary effects to soils will occur during project construction. Disturbed areas will be restored upon completion of the project and no permanent nor significant effects to soils are expected as a result of the proposed action.</p>
Tribal Trust Resources	No effect	<p>No effect to tribal trust resources is expected as a result of the proposed action.</p>
Water Quality	Minor effect	<p>Water quality or fisheries are not anticipated to experience adverse impacts from the proposed construction activities. Horizontal boring will occur at stream crossings to avoid impact to water resources and aquatic life where possible. Open-cut stream crossing impacts will be temporary and will be restored after pipeline is installed. No permanent impacts to streams are expected. Nationwide Permit authorizations from the U.S. Army</p>

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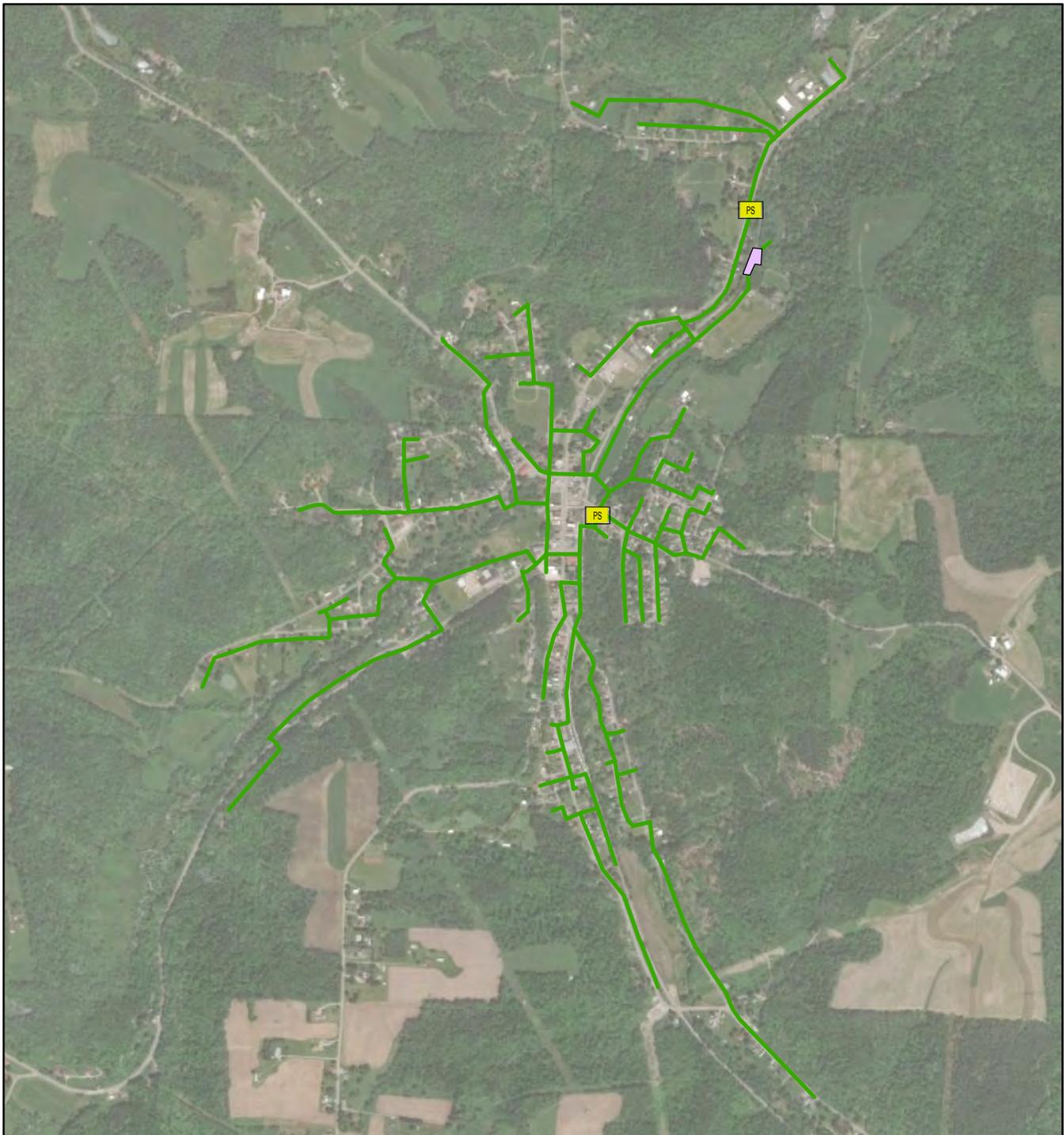
<sup>1</sup> U.S. Environmental Protection Agency. Environmental Justice Screening and Mapping Tool (EJSCREEN). Online at: <https://www.epa.gov/ejscreen> Accessed 8 May 2019.

		<p>Corps of Engineers will be required for discharges of fill in Waters of the United States to comply with Section 404 and Section 401 of the Clean Water Act. Permit applications have been submitted to the Corps and are currently under review. Erosion and run-off best management practices will be implemented to protect water quality of streams. It is not anticipated water quality in the area will be adversely affected by the proposed action.</p> <p>Water quality is expected to improve upon elimination of failing on-site septic systems which have been shown to be a source of contamination of the waterways in the project area.</p> <p>Discharge of treated water will occur to Yellow Creek under an Ohio EPA issued National Pollutant Discharge Permit (NPDES).</p> <p>An individual 401 Water Quality Certification is required from the Ohio EPA. Information has been submitted to the Ohio EPA and is currently under review.</p>
Climate change	No effect	No effect to climate change is expected as a result of the proposed action.
State threatened and endangered species	No effect	<p>ODNR also advises the project lies within the range of the following state threatened mussel: the black sandshell (<i>Ligumia recta</i>) and the threehorn wartyback (<i>Obliquaria reflexa</i>). ODNR advises that due to the location and that there is no in-water work proposed in a perennial stream, this project is not likely to impact these species.</p> <p>ODNR advises the project lies in the range of following state threatened fish: the river darter (<i>Percina shumardi</i>) the paddlefish (<i>Polyodon spathula</i>), the channel darter (<i>Percina copelandi</i>) and the Tippecanoe darter (<i>Etheostoma tippecanoe</i>). The Department of Wildlife recommends no in-water work in perennial streams from April 15 through June 30 to reduce impacts to indigenous aquatic species and their habitat. If no in-water work is proposed in a perennial stream, this project is not likely to impact these or other aquatic species.</p> <p>ODNR advises the project is within the range of the eastern hellbender (<i>Cryptobranchus alleganiensis</i>) a state endangered species and a federal species of concern. The agency also advises that due to the location and that there is no in-water work proposed in a</p>

		perennial stream of sufficient size to provide suitable habitat, this project is not likely to impact this species. The project also lies within the range of the black bear ( <i>Ursus americanus</i> ) a state endangered species. ODNR advises due to the mobility of this species, this project is not likely to impact this species.
Traffic and Public Safety	Minor effect	The proposed action will have no long-term adverse effect on transportation. It is not anticipated long-term modifications to transportation routes will be necessary. Temporary street or alley closures may be required during construction however appropriate public notification of effected routes will be required and detour routes marked, as needed. The proposed action may result in increased traffic flow as a result of construction vehicles. Any increase in traffic flow is expected to be within the capacity of the existing highway and traffic control systems. No new traffic patterns are expected to develop as a result of the proposed action. All ODOT requirements for traffic control will be implemented during construction activities. Public safety services are not anticipated to be effected by the proposed action.
Cumulative Effects	Minor effect	No significant cumulative long-term adverse effects are anticipated as a result of the proposed action. Construction activities, noise disturbance and environmental impacts are minimal and short-term in nature. The proposed action will have a favorable cumulative effect by the elimination of failing on-site septic systems which are causing contamination of Yellow Creek, Bear Run and the local environment. Minor cumulative effects may occur in the future if development increases as a result of the proposed action. These effects are not expected to be significant.

# APPENDIX A

# Jefferson County - Amsterdam Sanitary Sewer Project



Pump Stations



Wastewater Treatment Plant



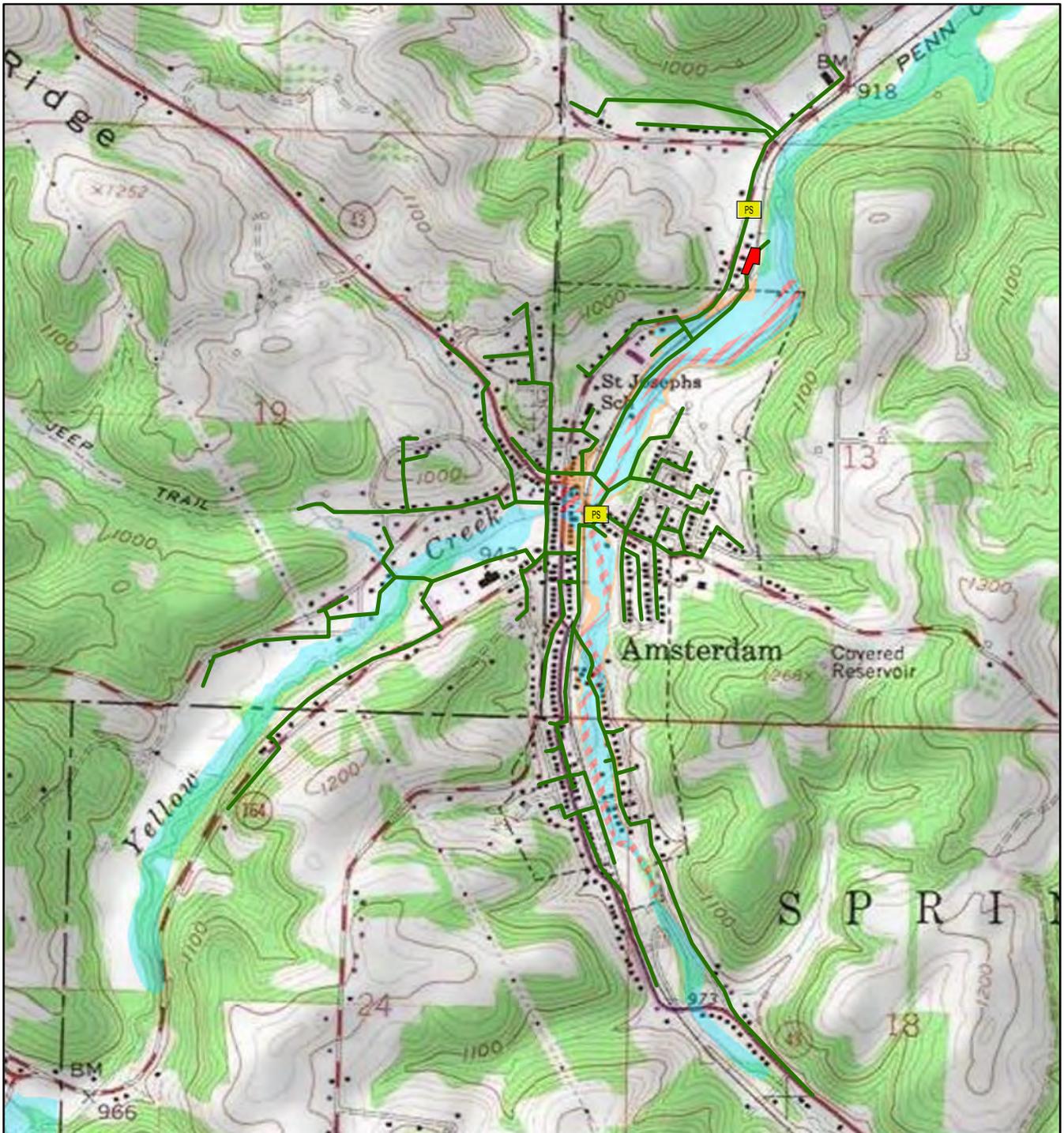
Sanitary Sewer Lines



Data Sources: USGS, GLRCAP. Date: 3/4/2019

Service Layer Credits: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community. This map is not intended for design, engineering, surveying, or construction purposes. Information and data contained or accessed within this map emanates from various public and private sources and may contain errors and omissions. All data, information and documentation within this map are provided "as is" without warranty of any kind, either expressed or implied. GLCAP does not warrant the accuracy, completeness, non-infringement, merchantability or fitness of any information contained within this map. All questions and comments should be directed to Great Lakes RCAP by phone at 800-775-9767 or by email at [bdbeyleer@glcap.org](mailto:bdbeyleer@glcap.org). Projection: Web Mercator Auxiliary Sphere

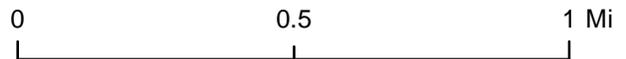
# Jefferson County - Amsterdam Sanitary Sewer Project



 Pump Stations Wastewater

 Treatment Plant Sanitary

 Sewer Lines



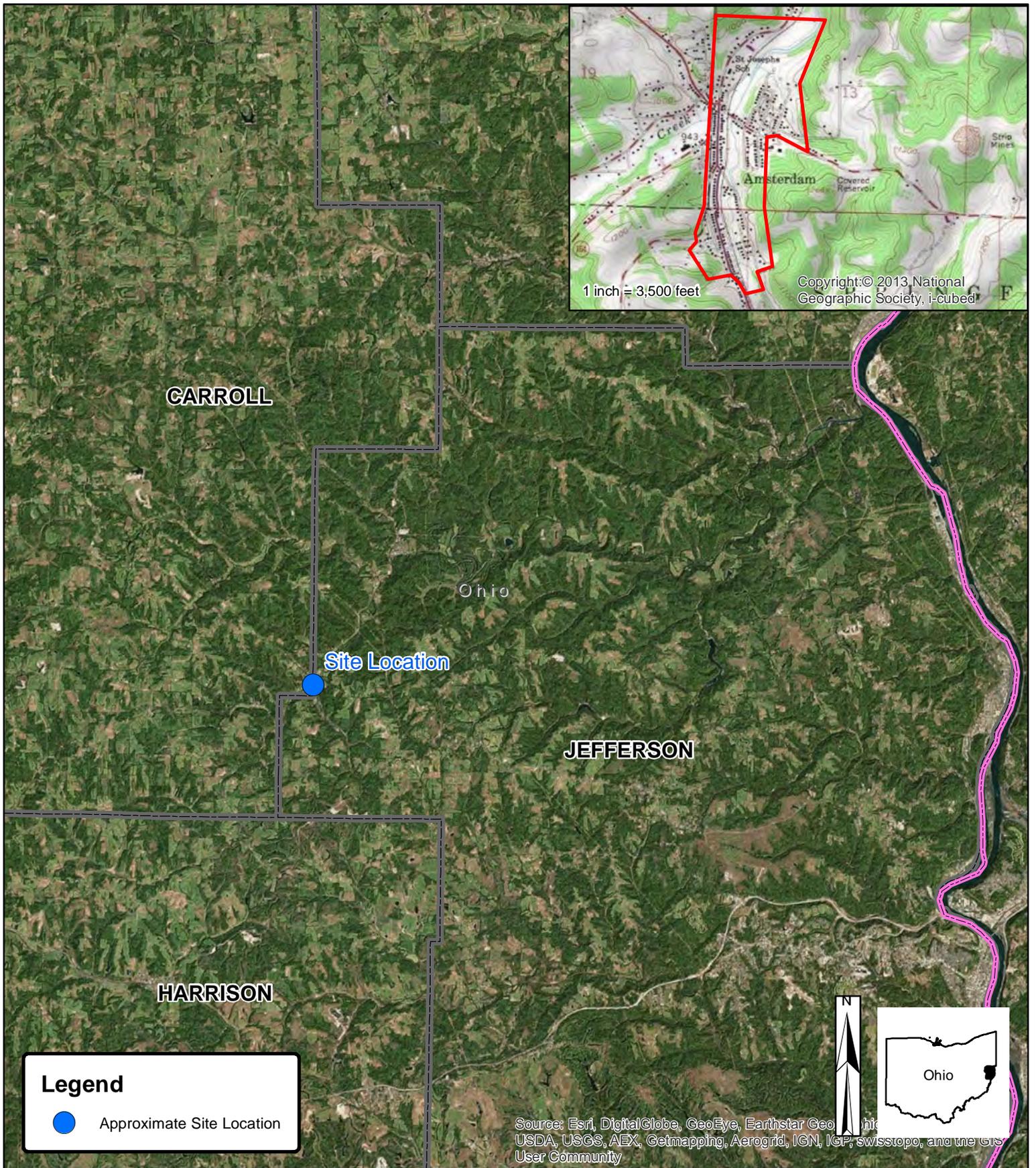
**FEMA Flood Map Areas**

-  Without Base Flood Elevation (BFE)  
Zone A, V, AE
-  With BFE or Depth  
Regulatory Floodway Zone AE, AO, AH, VE, AR
-  0.2% Annual Chance Flood Hazard. Areas of 1% annual chance flood with average depth less than one foot or with drainage areas of less than one square mile. Zone X

Data Sources: USGS, GLRCAP. Date: 3/4/19



Service Layer Credits: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community. This map is not intended for design, engineering, surveying, or construction purposes. Information and data contained or accessed within this map emanates from various public and private sources and may contain errors and omissions. All data, information and documentation within this map are provided "as is" without warranty of any kind, either expressed or implied. GLCAP does not warrant the accuracy, completeness, non-infringement, merchantability or fitness of any information contained within this map. All questions and comments should be directed to Great Lakes RCAP by phone at 800-775-9767 or by email at [bdbeyleer@glcap.org](mailto:bdbeyleer@glcap.org). Projection: Web Mercator Auxiliary Sphere



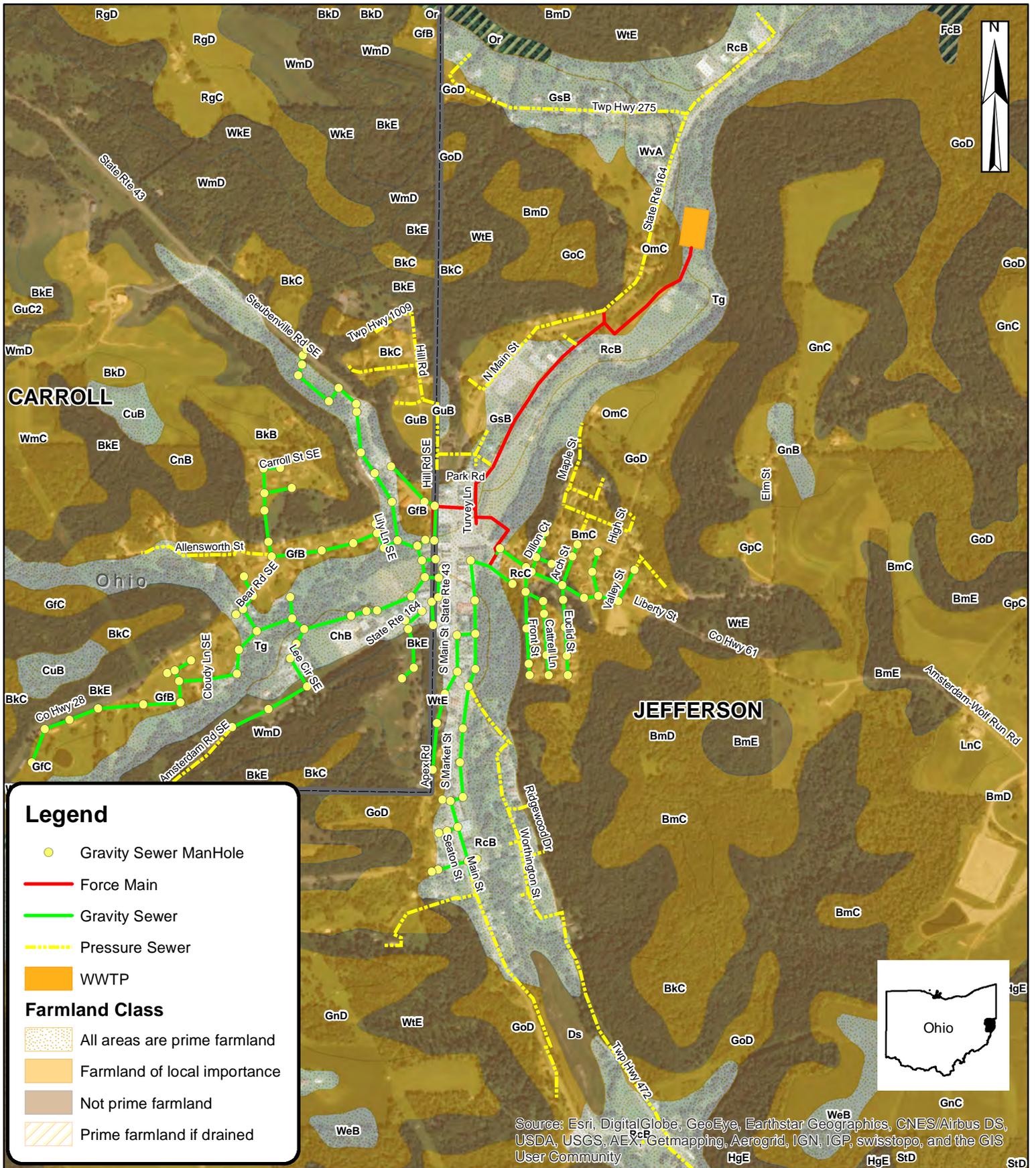
**Legend**

- Approximate Site Location

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNR/Airphoto, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community



Ohio RCAP GIS Team Suite 112 4030 SR 43 Kent, OH 44240	Village of Amsterdam, Sanitary Sewer System  Aerial 200,000  Village of Amsterdam, Jefferson County, Ohio	Date: <b>2015</b>
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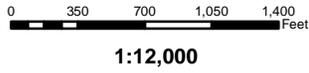
**Legend**

- Gravity Sewer ManHole
- Force Main
- Gravity Sewer
- - - Pressure Sewer
- WWTP

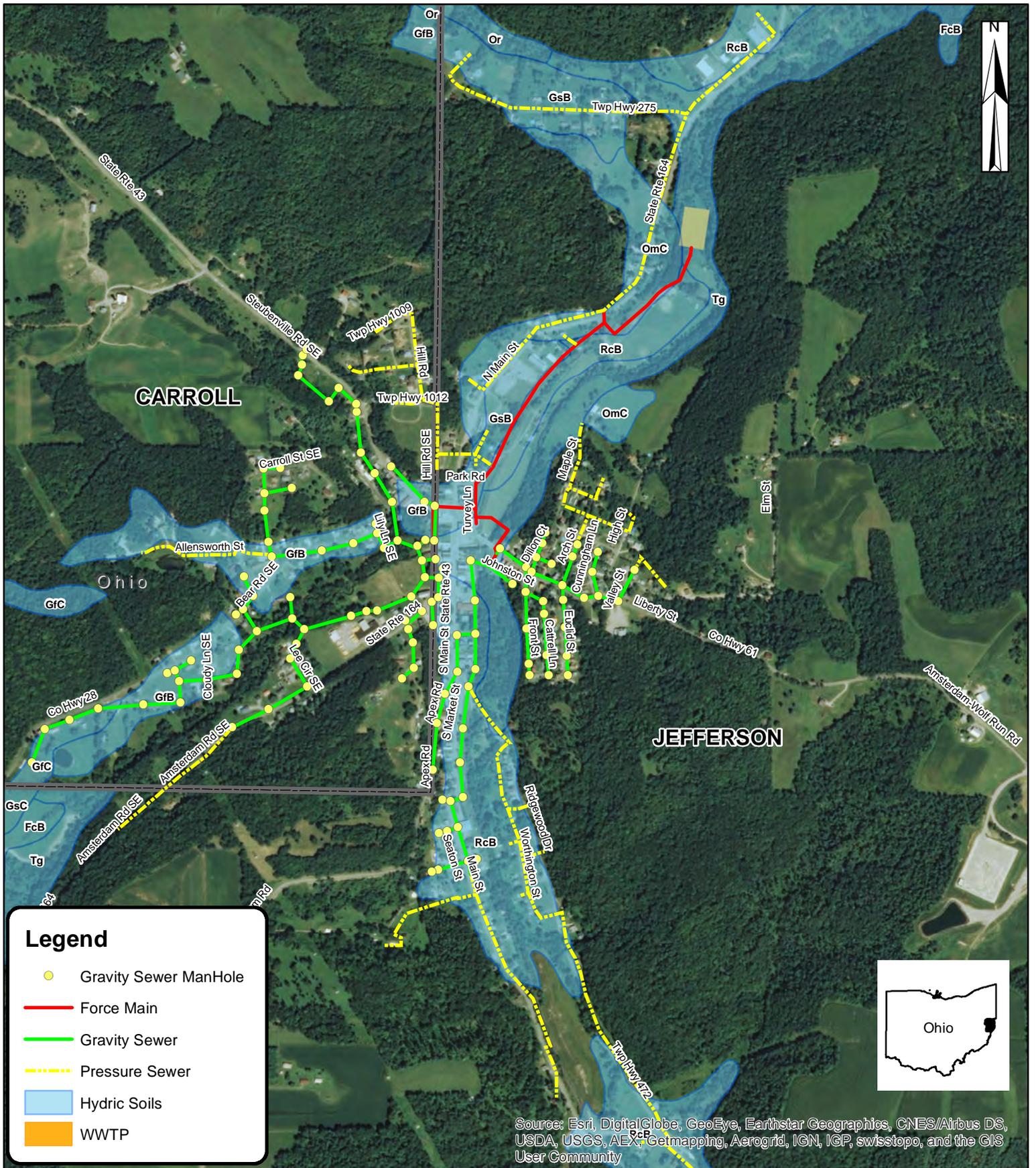
**Farmland Class**

- All areas are prime farmland
- Farmland of local importance
- Not prime farmland
- Prime farmland if drained

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community



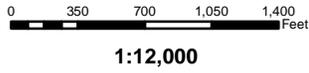
Ohio RCAP GIS Team Suite 112 4030 SR 43 Kent, OH 44240	Village of Amsterdam, Sanitary Sewer System  <b>Farmland Classification</b>  Village of Amsterdam, Jefferson County, Ohio	Date: <b>2015</b>
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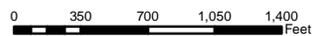
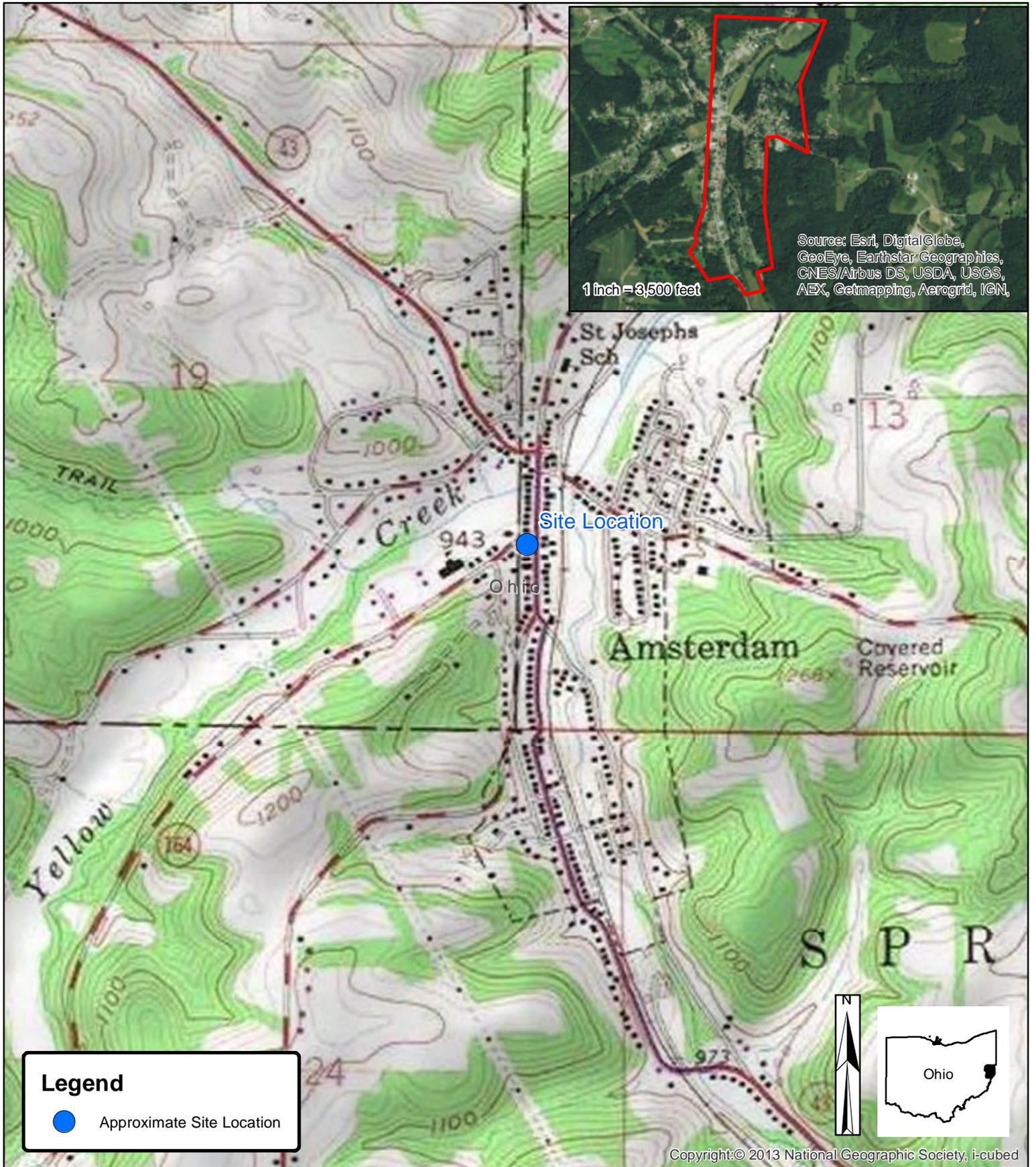
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

**Legend**

- Gravity Sewer ManHole
- Force Main
- Gravity Sewer
- - - Pressure Sewer
- Hydric Soils
- WWTP

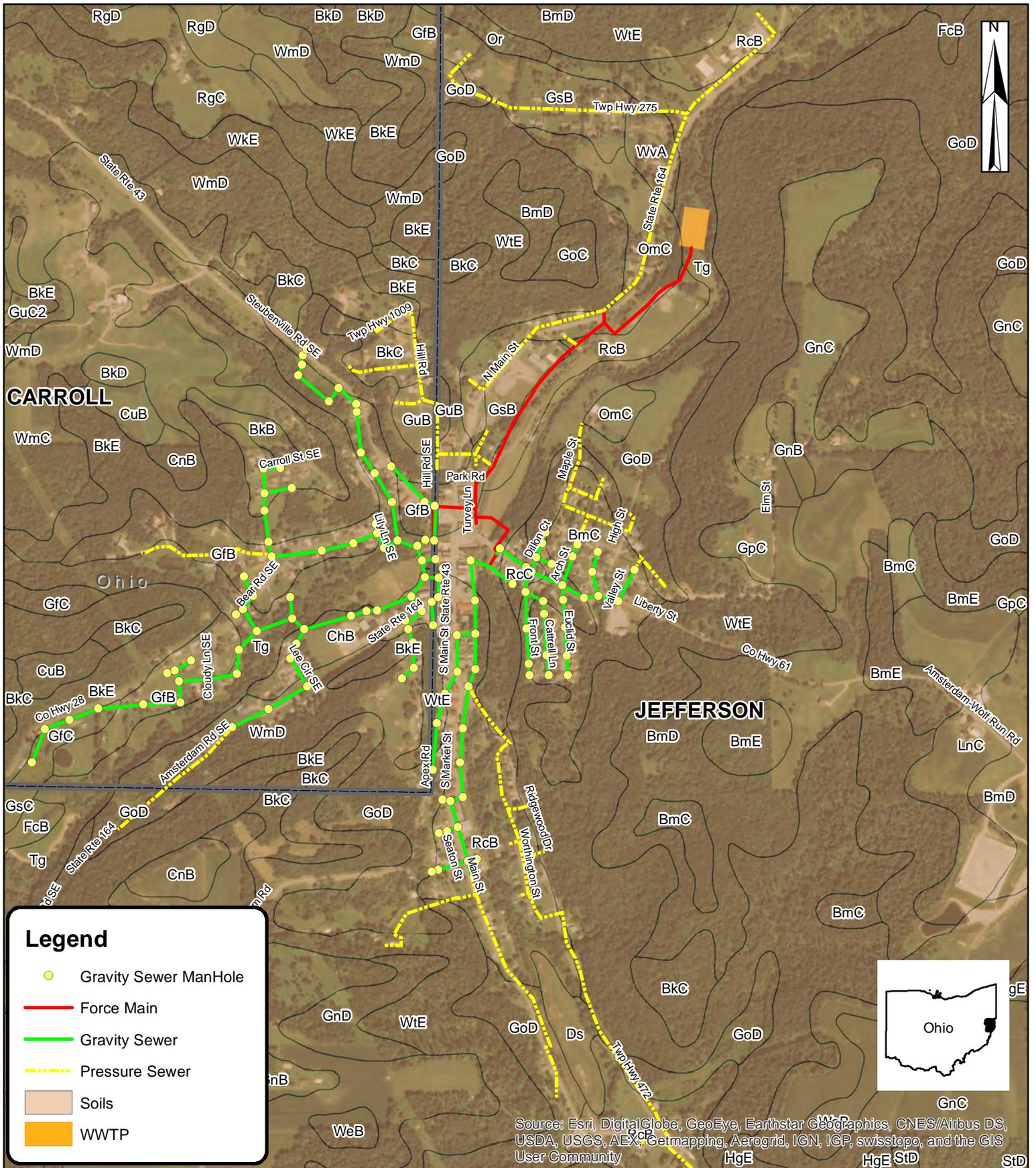


Ohio RCAP GIS Team Suite 112 4030 SR 43 Kent, OH 44240	Village of Amsterdam, Sanitary Sewer System  <b>Hydric Soils</b>  Village of Amsterdam, Jefferson County, Ohio	Date: <b>2015</b>
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1:12,000

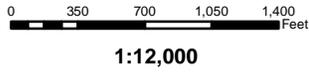
Ohio RCAP GIS Team Suite 112 4030 SR 43 Kent, OH 44240	Village of Amsterdam, Sanitary Sewer System  Site Location  Village of Amsterdam, Jefferson County, Ohio	Date: <b>2015</b>
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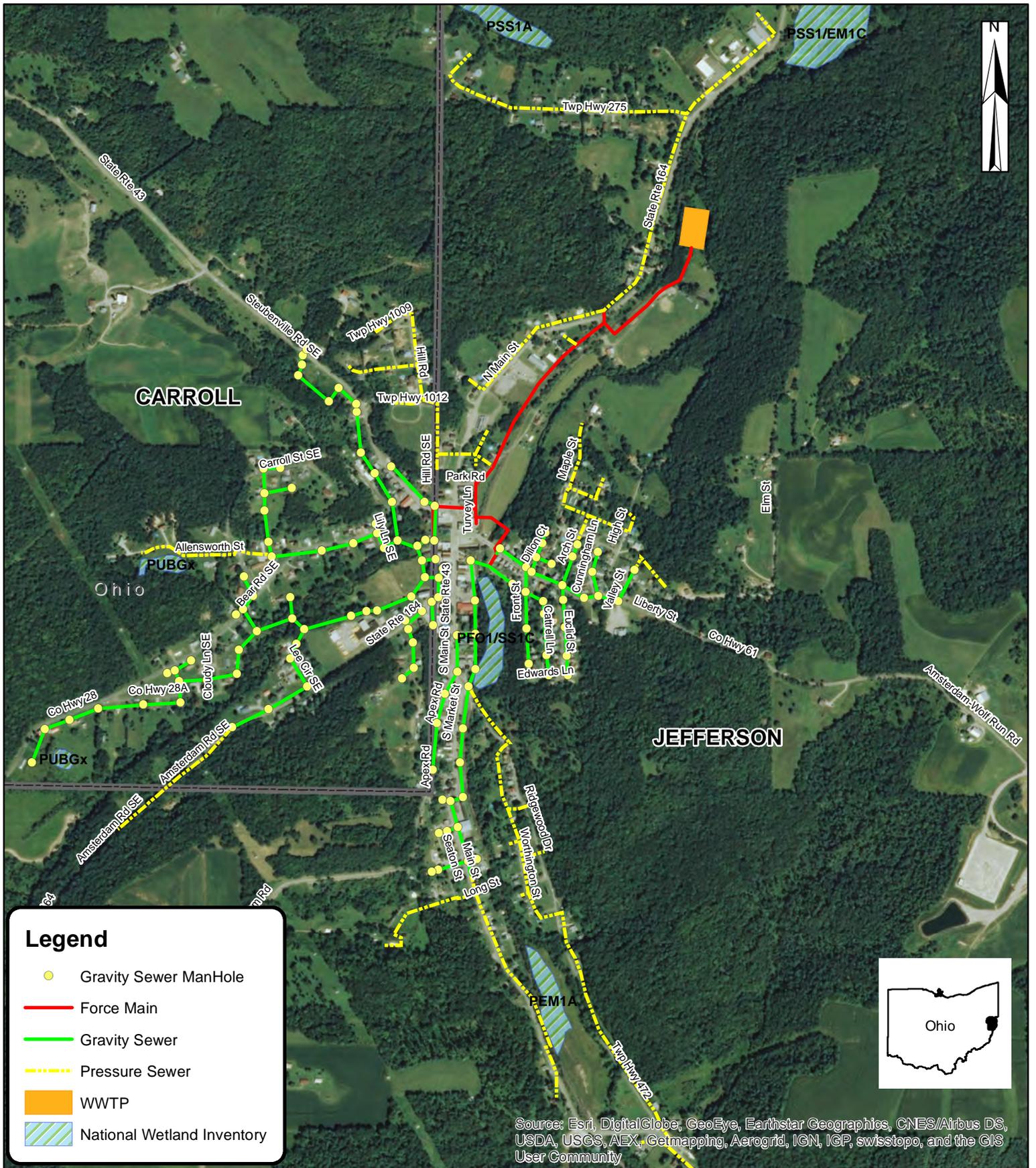
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

**Legend**

- Gravity Sewer ManHole
- Force Main
- Gravity Sewer
- - - Pressure Sewer
- Soils
- WWTP



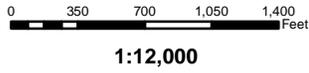
Ohio RCAP GIS Team Suite 112 4030 SR 43 Kent, OH 44240	Village of Amsterdam, Sanitary Sewer System  <b>Soils</b>  Village of Amsterdam, Jefferson County, Ohio	Date: <b>2015</b>
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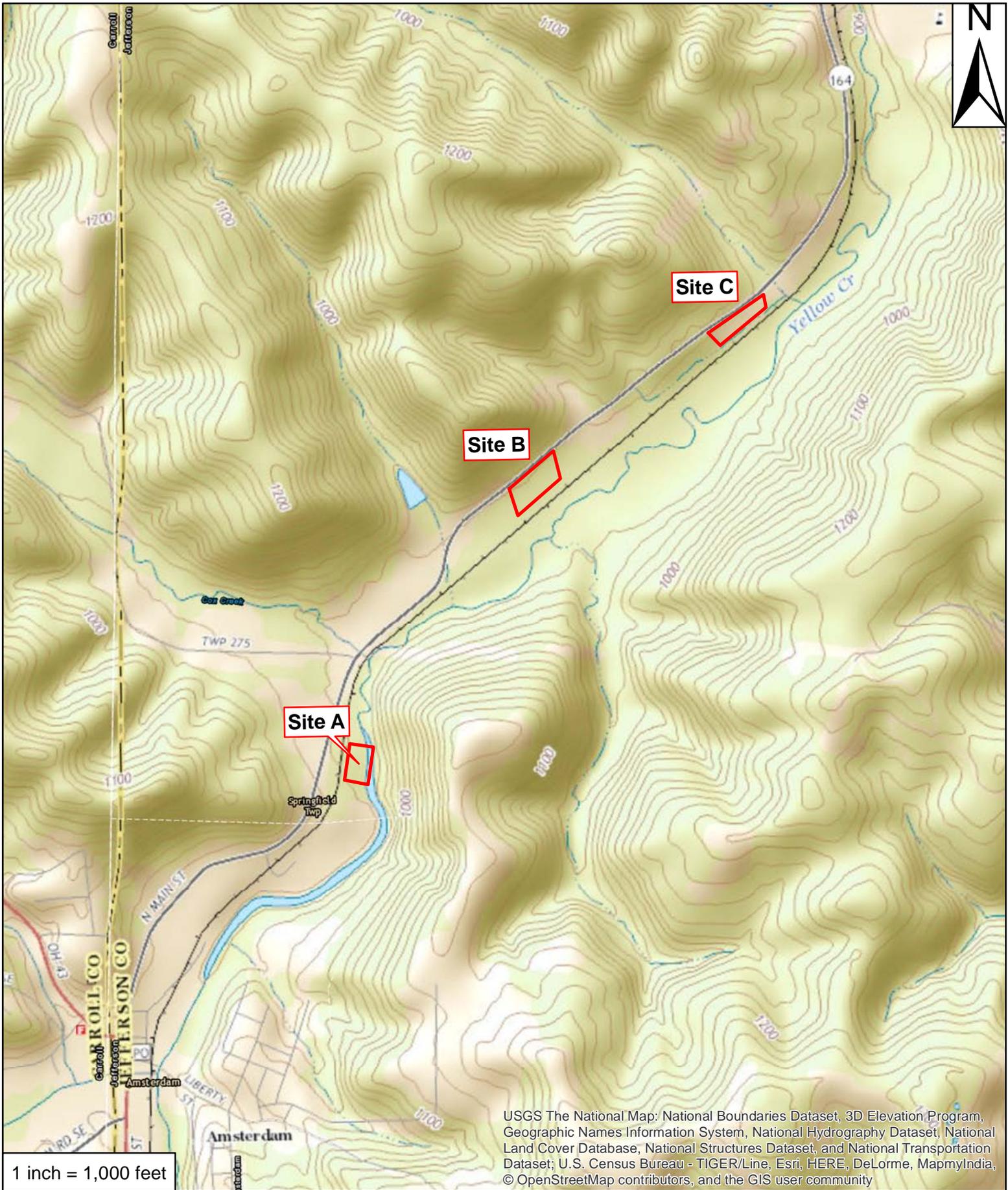
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community

**Legend**

- Gravity Sewer ManHole
- Force Main
- Gravity Sewer
- - - Pressure Sewer
- WWTP
- National Wetland Inventory



Ohio RCAP GIS Team Suite 112 4030 SR 43 Kent, OH 44240	Village of Amsterdam, Sanitary Sewer System  <b>National Wetland Inventory</b>  Village of Amsterdam, Jefferson County, Ohio	Date: <b>2015</b>
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1 inch = 1,000 feet



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Civil and Environmental Engineers

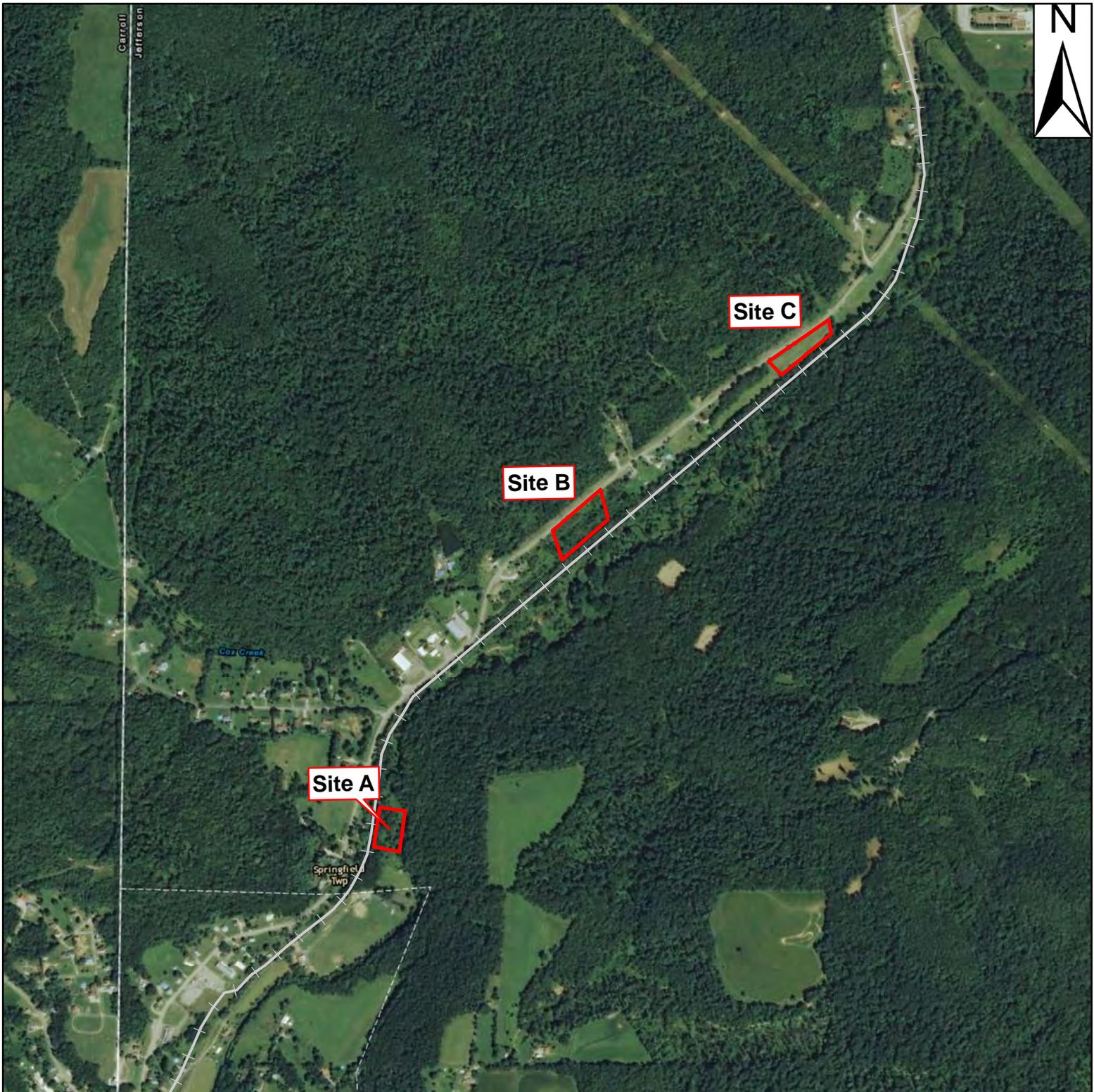
USGS Location Map  
Wetland Delineation and Categorization Report  
Village of Amsterdam Potential Wastewater Treatment Plant Sites

Drawn By:  
EVT

Chkd By:  
CMC

Date: March 2016  
Project No. 16-37701

Figure 1



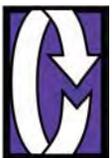
Legend

 **WWTP Site Alternative**

 **Railroad**

1 inch = 1,000 feet

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community, Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS user community



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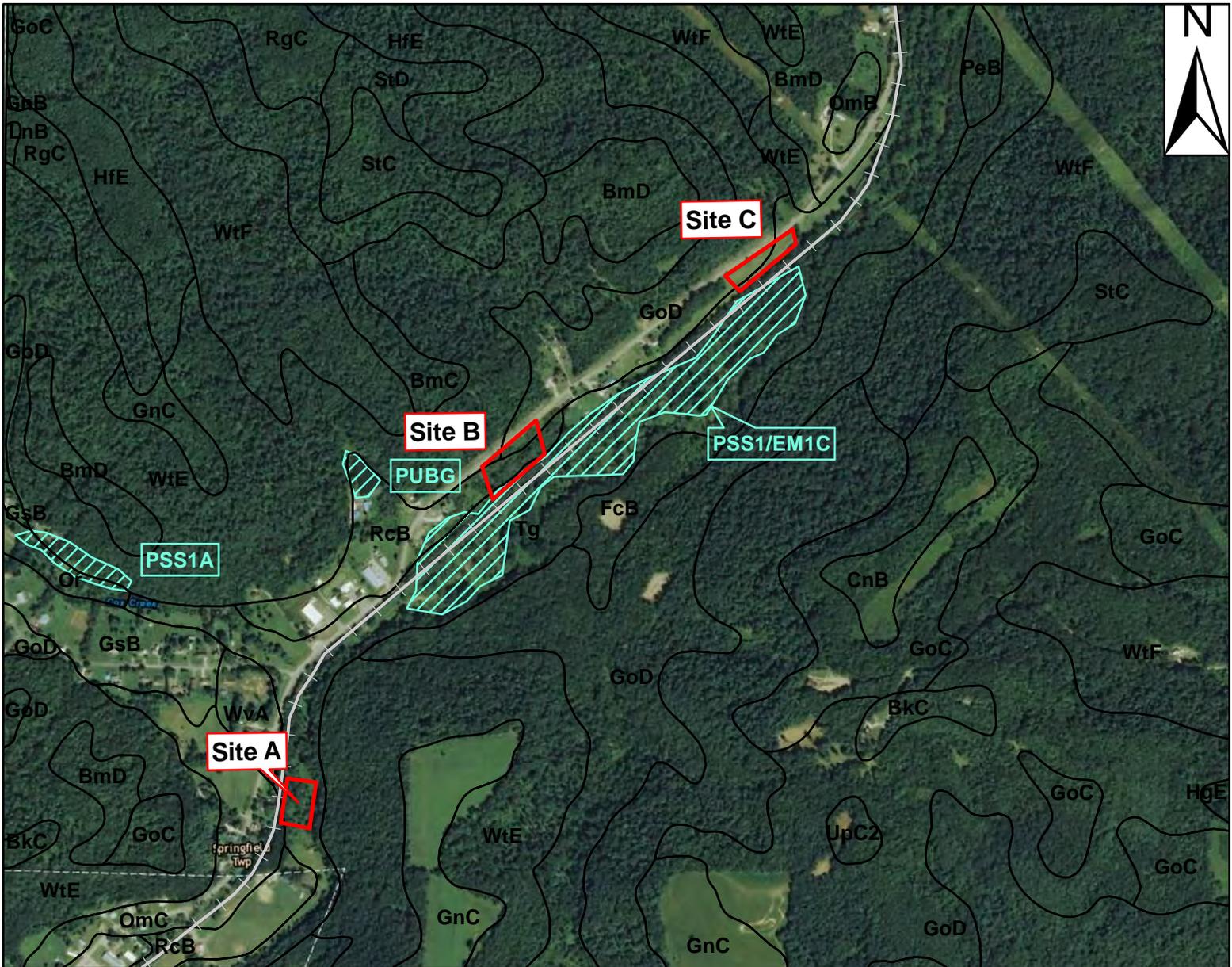
General Site Vicinity Map  
Wetland Delineation and Categorization Report  
Village of Amsterdam Potential Wastewater Treatment Plant Sites

Drawn By:  
EVT

Chkd By:  
CMC

Date: March 2016  
Project No. 16-37701

Figure 2



**Legend**

 **NWI-IDENTIFIED WETLAND**  
 PUBG - PALUSTRINE UNCONSOLIDATED BOTTOM  
 Intermittently Exposed  
 PSS1A - PALUSTRINE SCRUB SHRUB  
 Broad-Leaved Deciduous Temporarily Flooded  
 PSS1/EM1C - PALUSTRINE SCRUB-SHRUB  
 Broad-Leaved Deciduous/  
 PALUSTRINE EMERGENT Persistent Seasonally Flooded

 **Soil Type**  
 (Refer to Table 2 for abbreviations)

 **WWTP Site Alternative**

 **Railroad**

1 inch = 1,000 feet

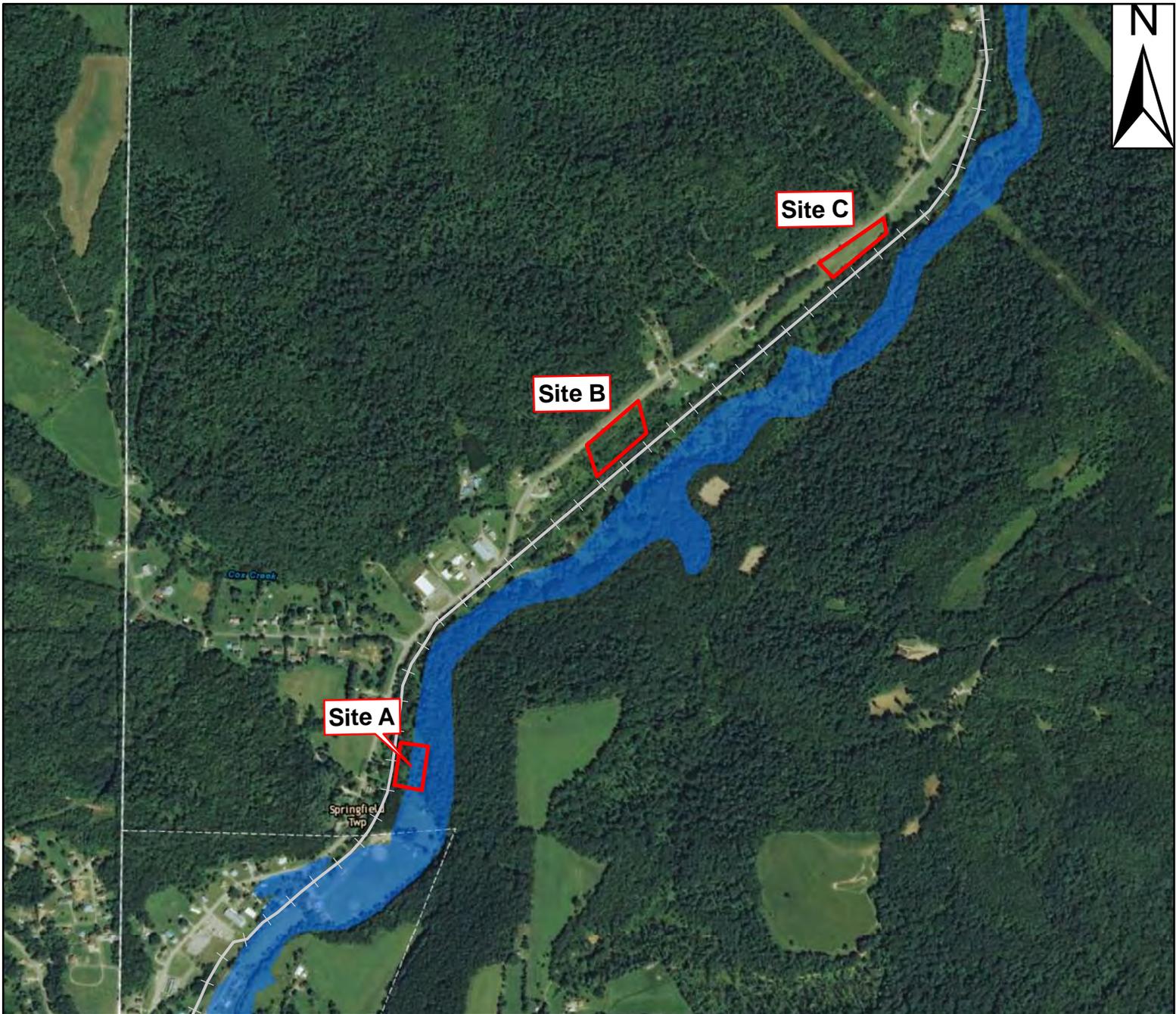
Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community, Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS user community



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 Civil and Environmental Engineers

NWI and Soils Map  
 Wetland Delineation and Categorization Report  
 Village of Amsterdam Potential Wastewater Treatment Plant Sites

Drawn By: EVT	Chkd By: CMC	Date: March 2016 Project No. 16-37701	Figure 3
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Legend

 ZONE A - SPECIAL FLOOD HAZARD AREAS (SFHAs) SUBJECT TO INUNDATION BY THE 1% ANNUAL CHANCE FLOOD  
No Base Flood Elevations Determined  
(FEMA Map Nos. 39081C0106D and 39081C0107D)

 **WWTP Site Alternative**

 **Railroad**

1 inch = 1,000 feet

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community, Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS user community



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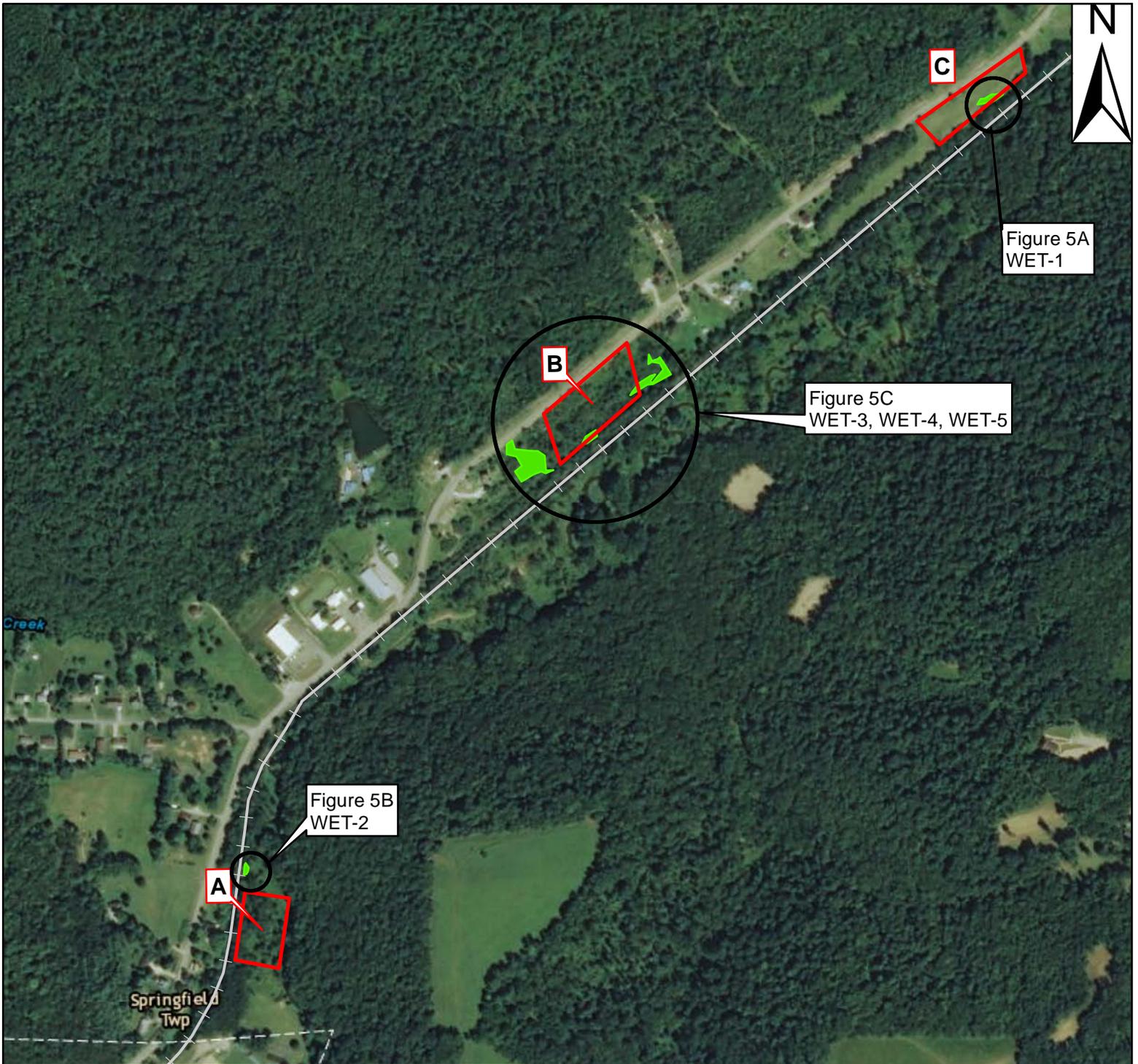
FEMA Floodplain Map  
Wetland Delineation and Categorization Report  
Village of Amsterdam Potential Wastewater Treatment Plant Sites

Drawn By:  
EVT

Chkd By:  
CMC

Date: March 2016  
Project No. 16-37701

Figure 4



Legend

-  Approximate Location of Wetland Areas
-  WWTP Site Alternative
-  Railroad

1 inch = 600 feet

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community, Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS user community



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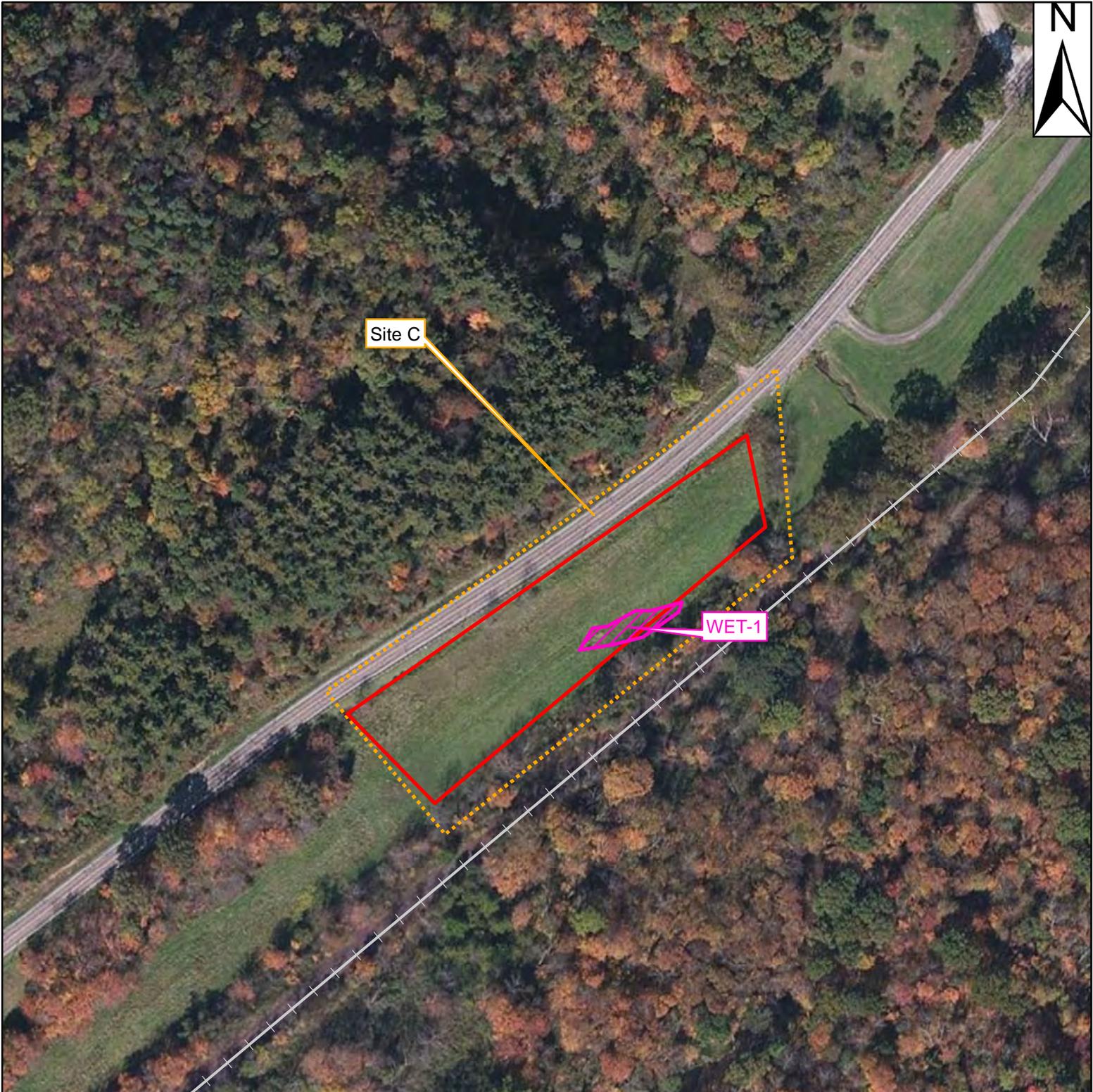
Overall Wetland Location Map  
Wetland Delineation and Categorization Report  
Village of Amsterdam Potential Wastewater Treatment Plant Sites

Drawn By:  
EVT

Chkd By:  
CMC

Date: March 2016  
Project No. 16-37701

Figure 5

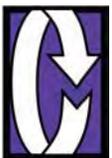


**Legend**

-  WWTP Site Alternatives
-  Original Approximate Site Locations Received from ARCADIS
-  Approximate Location of Wetland Areas

1 inch = 150 feet

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community, Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS user community



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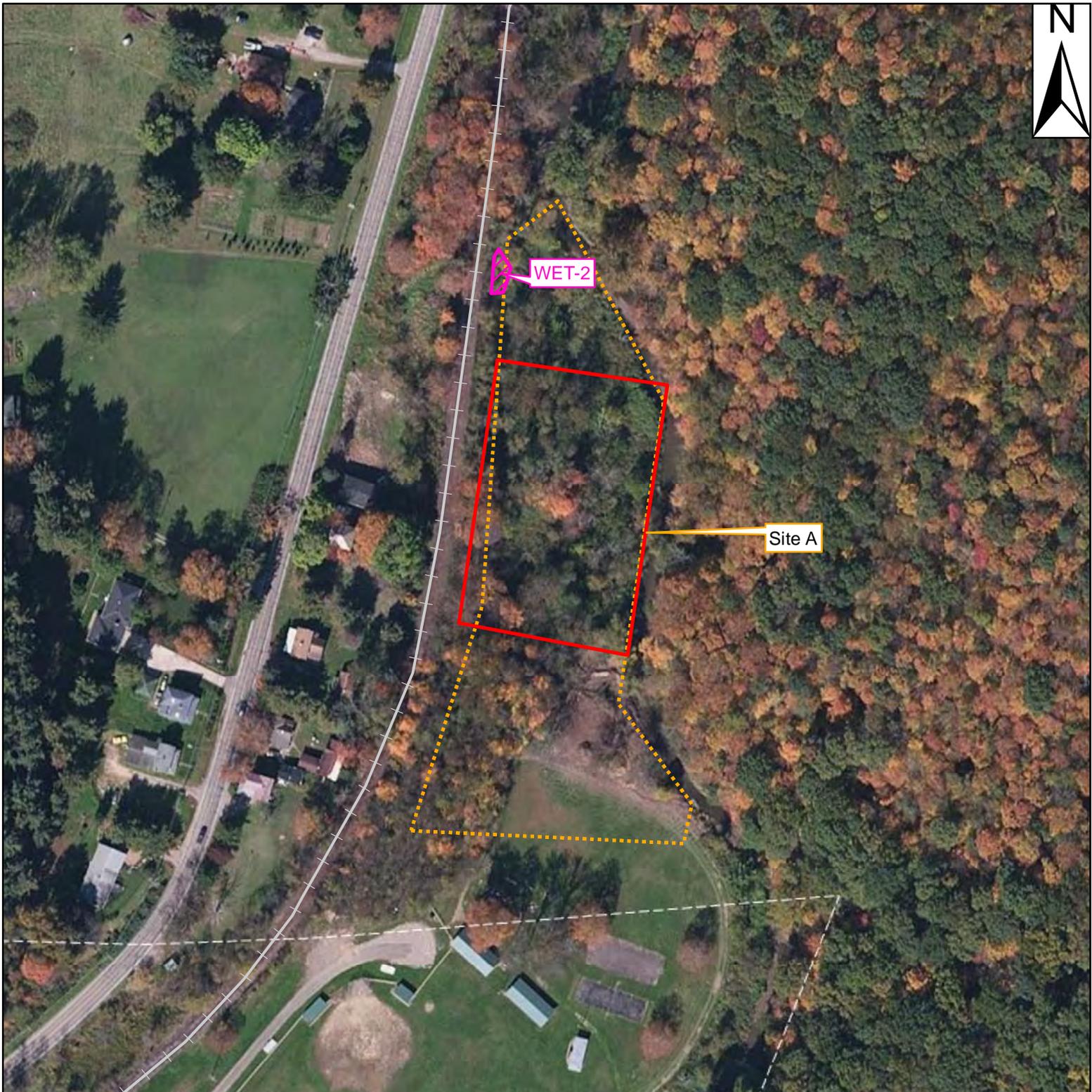
Wetland Location Map - WET-1  
Wetland Delineation and Categorization Report  
Village of Amsterdam Potential Wastewater Treatment Plant Sites

Drawn By:  
EVT

Chkd By:  
CMC

Date: March 2016  
Project No. 16-37701

Figure 5A



**Legend**

-  WWTP Site Alternatives
-  Original Approximate Site Locations Received from ARCADIS
-  Approximate Location of Wetland Areas

1 inch = 150 feet

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community, Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS user community



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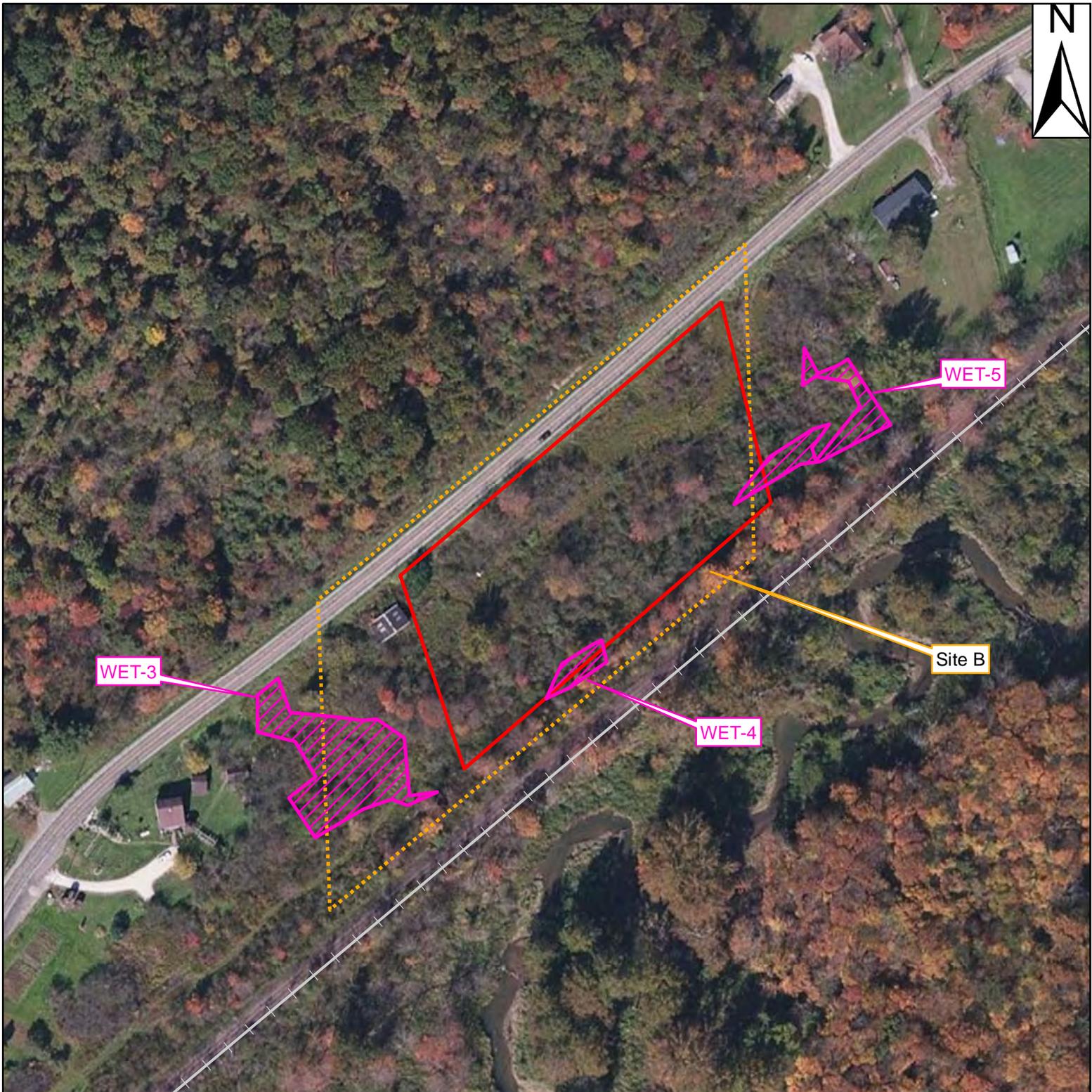
Wetland Location Map - WET-2  
Wetland Delineation and Categorization Report  
Village of Amsterdam Potential Wastewater Treatment Plant Sites

Drawn By:  
EVT

Chkd By:  
CMC

Date: March 2016  
Project No. 16-37701

Figure 5B



**Legend**

-  WWTP Site Alternatives
-  Original Approximate Site Locations Received from ARCADIS
-  Approximate Location of Wetland Areas

1 inch = 150 feet

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AEX, Getmapping, Aerogrid, IGN, IGP, swisstopo, and the GIS User Community, Esri, HERE, DeLorme, MapmyIndia, © OpenStreetMap contributors, and the GIS user community



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Civil and Environmental Engineers

Wetland Location Map - WET-3, WET-4, WET-5  
Wetland Delineation and Categorization Report  
Village of Amsterdam Potential Wastewater Treatment Plant Sites

Drawn By:  
EVT

Chkd By:  
CMC

Date: March 2016  
Project No. 16-37701

Figure 5C



# Ohio Department of Natural Resources

JOHN R. KASICH, GOVERNOR

JAMES ZEHRINGER, DIRECTOR

**Office of Real Estate**  
*Paul R. Baldrige, Chief*  
2045 Morse Road – Bldg. E-2  
Columbus, OH 43229  
*Phone: (614) 265-6649*  
*Fax: (614) 267-4764*

July 19, 2018

Pam Ewing  
Ohio RCAP  
1817 St. Rt. 83, Unit 423  
Millersburg, Ohio 44654

**Re:** 18-673; Jefferson County - Amsterdam Sanitary Sewer

**Project:** The proposed project involves the construction of a sanitary sewer system which will serve the Village of Amsterdam, a portion of Springfield Township, and areas of Carroll County that are contiguous to the Village of Amsterdam.

**Location:** The proposed project is in the Village of Amsterdam, Jefferson County, Ohio.

The Ohio Department of Natural Resources (ODNR) has completed a review of the above referenced project. These comments were generated by an inter-disciplinary review within the Department. These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), the National Environmental Policy Act, the Coastal Zone Management Act, Ohio Revised Code and other applicable laws and regulations. These comments are also based on ODNR's experience as the state natural resource management agency and do not supersede or replace the regulatory authority of any local, state or federal agency nor relieve the applicant of the obligation to comply with any local, state or federal laws or regulations.

**Natural Heritage Database:** The Natural Heritage Database has no records at or within a one-mile radius of the project area.

A review of the Ohio Natural Heritage Database indicates there are no other records of state endangered or threatened plants or animals within the project area. There are also no records of state potentially threatened plants, special interest or species of concern animals, or any federally listed species. In addition, we are unaware of any unique ecological sites, geologic features, animal assemblages, scenic rivers, state wildlife areas, state nature preserves, state or national parks, state or national forests, national wildlife refuges, or other protected natural areas within the project area. The review was performed on the project area you specified in your request as well as an additional one-mile radius. Records searched date from 1980.

Please note that Ohio has not been completely surveyed and we rely on receiving information from many sources. Therefore, a lack of records for any particular area is not a statement that rare species or unique features are absent from that area. Although all types of plant communities have been surveyed, we only maintain records on the highest quality areas.

**Fish and Wildlife:** The Division of Wildlife (DOW) has the following comments.

The DOW recommends that impacts to streams, wetlands and other water resources be avoided and minimized to the fullest extent possible, and that best management practices be utilized to minimize erosion and sedimentation.

The project is within the range of the Indiana bat (*Myotis sodalis*), a state endangered and federally endangered species. The following species of trees have relatively high value as potential Indiana bat roost trees to include: shagbark hickory (*Carya ovata*), shellbark hickory (*Carya laciniosa*), bitternut hickory (*Carya cordiformis*), black ash (*Fraxinus nigra*), green ash (*Fraxinus pennsylvanica*), white ash (*Fraxinus americana*), shingle oak (*Quercus imbricaria*), northern red oak (*Quercus rubra*), slippery elm (*Ulmus rubra*), American elm (*Ulmus americana*), eastern cottonwood (*Populus deltoides*), silver maple (*Acer saccharinum*), sassafras (*Sassafras albidum*), post oak (*Quercus stellata*), and white oak (*Quercus alba*). Indiana bat roost trees consists of trees that include dead and dying trees with exfoliating bark, crevices, or cavities in upland areas or riparian corridors and living trees with exfoliating bark, cavities, or hollow areas formed from broken branches or tops. However, Indiana bats are also dependent on the forest structure surrounding roost trees. If suitable habitat occurs within the project area, the DOW recommends trees be conserved. If suitable habitat occurs within the project area and trees must be cut, the DOW recommends cutting occur between October 1 and March 31. If suitable trees must be cut during the summer months, the DOW recommends a net survey be conducted between June 1 and August 15, prior to any cutting. Net surveys should incorporate either nine net nights per square 0.5 kilometer of project area, or four net nights per kilometer for linear projects. If no tree removal is proposed, this project is not likely to impact this species.

The project is within the range of the black sandshell (*Ligumia recta*), a state threatened mussel, and the threehorn wartyback (*Obliquaria reflexa*), a state threatened mussel. Due to the location, and that there is no in-water work proposed in a perennial stream of sufficient size, this project is not likely to impact these species.

The project is within the range of the river darter (*Percina shumardi*) a state threatened fish, the paddlefish (*Polyodon spathula*) a state threatened fish, the channel darter (*Percina copelandi*), a state threatened fish, and the Tippecanoe darter (*Etheostoma tippecanoe*), a state threatened fish. The DOW recommends no in-water work in perennial streams from April 15 through June 30 to reduce impacts to indigenous aquatic species and their habitat. If no in-water work is proposed a perennial stream, this project is not likely to impact these or other aquatic species.

The project is within the range of the eastern hellbender (*Cryptobranchus alleganiensis alleganiensis*), a state endangered species and a federal species of concern. Due to the location, and that there is no in-water work proposed in a perennial stream of sufficient size to provide suitable habitat, this project is not likely to impact this species.

The project is within the range of the black bear (*Ursus americanus*), a state endangered species. Due to the mobility of this species, this project is not likely to impact this species.

Due to the potential of impacts to federally listed species, as well as to state listed species, we recommend that this project be coordinated with the U.S. Fish & Wildlife Service.

**Water Resources:** The Division of Water Resources has the following comment.

The local floodplain administrator should be contacted concerning the possible need for any floodplain permits or approvals for this project. Your local floodplain administrator contact information can be found at the website below.

[http://water.ohiodnr.gov/portals/soilwater/pdf/floodplain/Floodplain%20Manager%20Community%20Contact%20List\\_8\\_16.pdf](http://water.ohiodnr.gov/portals/soilwater/pdf/floodplain/Floodplain%20Manager%20Community%20Contact%20List_8_16.pdf)

ODNR appreciates the opportunity to provide these comments. Please contact John Kessler at (614) 265-6621 if you have questions about these comments or need additional information.

John Kessler  
ODNR Office of Real Estate  
2045 Morse Road, Building E-2  
Columbus, Ohio 43229-6693  
John.Kessler@dnr.state.oh.us



## Christine Davis Consultants

Archaeology and History  
www.christinedavisconsultants.com

Cider Mill of Pittsburgh • 560 Penn Street • Verona, Pennsylvania 15147 • 412.826.0443 • Fax 412.826-0458



July 27, 2018

Ms. Christina Sporer  
Arcadis  
6041 Wallace Road Extension, Suite 300  
Wexford, PA 15090



RE: Sanitary Sewer Collection and Treatment System, Village of  
Amsterdam  
Springfield Township, Jefferson County, Ohio

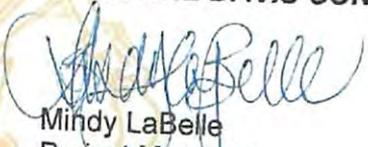
Dear Ms. Sporer:



In 2016, CDC conducted cultural resource surveys, including archaeological resources and above ground properties over 50 years of age, for the referenced project. In a letter dated October 27, 2016, the Ohio History Connection (OHC) concurred with our findings that the referenced project would not affect properties listed in or eligible for the National Register of Historic Places (see attached). No further coordination with their office is required unless the project changes or archaeological resources are encountered during construction.

Sincerely,

**CHRISTINE DAVIS CONSULTANTS, INC.**



Mindy LaBelle  
Project Manager





In reply refer to  
2015-JEF-32847-3

October 27, 2016

Christine Davis  
Christine Davis Consultants  
Cider Mill of Pittsburg  
560 Penn Street  
Verona, PA 15147

Dear Ms. Davis:

RE: Sanitary Sewer Collection and Treatment System, Village of Amsterdam, Springfield Township, Jefferson County, Ohio

This is in response to the receipt, on September 30, 2016, of *A Phase I Cultural Resource and Geomorphological Survey for the Village of Amsterdam Sanitary Sewer Collection and Treatment System, Springfield Township, Jefferson County, Ohio*. The comments of the State Historic Preservation Office are submitted in accordance with the provisions of Section 106 of the National Historic Preservation Act of 1966, as amended.

Subsurface testing, and intensive visual inspection of the project area resulted in the identification of one previously unrecorded archaeological site. This site, 33 JE 269, is an isolated find spot typical of short term occupations. This site is not likely to yield additional information about Ohio prehistory. Additionally, the structures documented in the Area of Potential Effects (JEF-1021-01 through JEF-1029-01) are not considered eligible for the National Register of Historic Places. Based on the information provided, I concur with the opinion that the undertaking will not affect properties listed in or eligible for listing in the National Register of Historic Places. No further coordination is required unless the project changes or additional archaeological remains are discovered during the course of the project. In such a situation, this office should be contacted as per 36 CFR 800.13.

If you have any questions, please contact me at (614) 298-2000, or by email at [nyoung@ohiohistory.org](mailto:nyoung@ohiohistory.org).

Sincerely,

A handwritten signature in black ink that reads "Nathan J. Young".

Nathan J. Young, Project Reviews Manager  
Resource Protection and Review

**PAM EWING - Amsterdam Sanitary Sewer System, Jefferson County Ohio**

**From:** "Ohio, FW3" <ohio@fws.gov>  
**To:** Pam Ewing <psewing@wsos.org>  
**Date:** 6/7/2018 8:29 AM  
**Subject:** Amsterdam Sanitary Sewer System, Jefferson County Ohio



UNITED STATES DEPARTMENT OF THE INTERIOR  
 U.S. Fish and Wildlife Service  
 Ecological Services Office  
 4625 Morse Road, Suite 104  
 Columbus, Ohio 43230  
 (614) 416-8993 / Fax (614) 416-8994



TAILS# 03E15000-2018-TA-1341

Dear Ms. Ewing,

We have received your recent correspondence regarding potential impacts to federally listed species in the vicinity of the above referenced project. There are no federal wilderness areas, wildlife refuges or designated critical habitat within the vicinity of the project area. We recommend that proposed activities minimize water quality impacts, including fill in streams and wetlands. Best management practices should be utilized to minimize erosion and sedimentation.

**FEDERALLY LISTED, PROPOSED, AND CANDIDATE SPECIES COMMENTS:** Due to the project type, size, location, and the proposed implementation of seasonal tree cutting (clearing of trees  $\geq 3$  inches diameter at breast height between October 1 and March 31) to avoid impacts to Indiana bats and northern long-eared bats, we do not anticipate adverse effects to any federally endangered, threatened, proposed or candidate species. Should the project design change, or during the term of this action, additional information on listed or proposed species or their critical habitat become available, or if new information reveals effects of the action that were not previously considered, consultation with the U.S. Fish and Wildlife Service (Service) should be initiated to assess any potential impacts.

If there is a federal nexus for the project (e.g., federal funding provided, federal permits required to construct), no tree clearing should occur on any portion of the project area until consultation under section 7 of the Endangered Species Act (ESA), between the Service and the federal action agency, is completed. We recommend that the federal action agency submit a determination of effects to this office, relative to the Indiana bat and northern long-eared bat, for our review and concurrence.

These comments have been prepared under the authority of the Fish and Wildlife Coordination Act (48 Stat. 401, as amended; 16 U.S.C. 661 et seq.), ESA, and are consistent with the intent of the National Environmental Policy Act of 1969 and the Service's Mitigation Policy. This letter provides technical assistance only and does not serve as a completed section 7 consultation document. We recommend that the project be coordinated with the Ohio Department of Natural Resources due to the potential for the project to affect state listed species and/or state lands. Contact John Kessler, Environmental Services Administrator, at [\(614\) 265-6621](tel:6142656621) or at [john.kessler@dnr.state.oh.us](mailto:john.kessler@dnr.state.oh.us).

If you have questions, or if we can be of further assistance in this matter, please contact our office at [\(614\) 416-8993](tel:6144168993) or [ohio@fws.gov](mailto:ohio@fws.gov).

Sincerely,

Scott Pruitt  
 Acting Field Office Supervisor

**From:** [Zimmermann, Susan](#)  
**To:** [Stuart, Erin E CIV USARMY CELRP \(US\)](#)  
**Subject:** [Non-DoD Source] Jefferson County - Amsterdam Sanitary Sewer System (Revised Letter)  
**Date:** Friday, March 1, 2019 2:27:59 PM

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TAILS# 03E15000-2018-I-1341

Dear Ms. Stuart,

We have received your recent correspondence regarding the above-referenced project. You have requested concurrence with your determination of effects to federally listed species, pursuant to section 7(a)(2) of the Endangered Species Act of 1973, as amended (ESA).

The U.S. Fish and Wildlife Service (Service) has reviewed your project description and concurs with your determination that the project, as proposed, is not likely to adversely affect any federally listed species. This is based on the commitment to cut all trees =3 inches dbh only between October 1 and March 31 to avoid adverse effects to the federally listed endangered Indiana bat (*Myotis sodalis*) and threatened northern long-eared bat (*Myotis septentrionalis*).

This concludes consultation on this action as required by section 7(a)(2) of the ESA. Should, during the term of this action, additional information on listed or proposed species or their critical habitat become available, or if new information reveals effects of the action that were not previously considered, consultation with the Service should be reinitiated to assess whether the determinations are still valid.

If you have questions, or if we can be of further assistance in this matter, please contact our office at (614) 416-8993 or [ohio@fws.gov](mailto:ohio@fws.gov) <<mailto:ohio@fws.gov>> .

Sincerely,

Patrice M. Ashfield

Field Office Supervisor

**From:** [Stuart, Erin E CIV USARMY CELRP \(US\)](#)  
**To:** [ohio@fws.gov](mailto:ohio@fws.gov)  
**Cc:** [Stuart, Erin E CIV USARMY CELRP \(US\)](#)  
**Subject:** Section 7(a)(2) informal consultation request: TAILS# 03E15000-2018-TA-1341  
**Date:** Wednesday, February 27, 2019 9:15:00 AM  
**Attachments:** [USFWS-Amsterdam\\_reducedsize.pdf](#)

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Good morning,

The USACE Pittsburgh District is evaluating a request for federal funding under the Water Resources Development Act (WRDA) of 1999, Section 594 for a sanitary sewer line project for the Village of New Amsterdam, Jefferson County, Ohio. Pam Ewing of the Rural Community Assistance Program submitted the attached information to your office and received a letter in return (also attached) dated 7 June 2018 (TAILS# 03E15000 -2018-TA-1341).

The Corps has reviewed the information submitted, along with a draft EA prepared by Pam Ewing on behalf of the Village of New Amsterdam. Temporary stream impacts are proposed for open cut sewer line installation at several tributaries.

The Corps is requesting concurrence with a May Affect Not Likely to Adversely Affect determination for the Indiana bat and the Northern Long-Eared bat with the implementation of a seasonal tree cutting restriction (all clearing of trees  $\geq$  3 inches dbh will only occur between 1 October and 31 March). No effect to any other federally listed species is anticipated.

If you need any other information to complete your review, please let me know.

Thank you!

Erin

Erin Stuart  
Biologist  
Environmental and Cultural Resources Section  
USACE Planning & Environmental Branch  
1000 Liberty Ave, Suite 2200  
Pittsburgh, PA 15222-4186

## **DRAFT FINDING OF NO SIGNIFICANT IMPACT**

### **Village of Amsterdam Sanitary Sewer Project Village of New Amsterdam, Jefferson County, Ohio**

The U.S. Army Corps of Engineers, Pittsburgh District (Corps) has prepared an environmental assessment (EA) in accordance with the National Environmental Policy Act of 1969, as amended. The **DRAFT** EA, dated 9 May 2019, for the Village of Amsterdam Sanitary Sewer Project evaluates potential environmental impacts associated with a sanitary sewer line project proposed for federal funding under the Section 594 program in the Village of New Amsterdam, Jefferson County, Ohio. The Water Resources Development Act (WRDA) of 1999 (Public Law 106-53), Section 594, allows the Corps to consider reimbursement for design and/or construction of environmental infrastructure in Ohio.

The **DRAFT** EA, considered various proposed sanitary sewer collection and treatment system alternatives to correct failing on-site septic systems discharging untreated waste into Yellow Creek. The preferred alternative, ultimately the Proposed Action, includes federal funding for a hybrid sanitary sewer collection system with a package wastewater treatment plant:

- The construction of approximately 39,236 linear feet of 8-inch gravity sewer, 136 manholes, 1,315 linear feet of 2-inch force main, 1,577 linear feet of 4-inch force main, 376 linear feet of 2-inch pressure sewer, 2,871 linear feet of 1.5-inch pressure sewer, 292 linear feet of stream crossing, 404 gravity sewer services, 9 grinder pumps, 1,482 linear feet of 16-inch steel casing, 2,371 pavement replacement, two 100 gallon per minute lift stations and a 50,000 gallon per day (gpd) activated sludge package treatment plant.

In addition to the preferred alternative, a “no action” alternative was evaluated. For all alternatives, the potential effects to the following resources were evaluated:

<b>Environmental Resource</b>	<b>Minor effect</b>	<b>No effect</b>
Aesthetics	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Air quality	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Aquatic resources/wetlands	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Invasive species	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Fish and wildlife habitat	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Threatened/Endangered species	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Historic properties	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Other cultural resources	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Floodplains	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Hazardous, toxic & radioactive waste	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Hydrology	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Land use	<input checked="" type="checkbox"/>	<input type="checkbox"/>

Navigation	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Noise levels	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Public infrastructure	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Socio-economics	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Environmental justice	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Soils	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Tribal trust resources	<input type="checkbox"/>	<input checked="" type="checkbox"/>
Water quality	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Climate change	<input type="checkbox"/>	<input checked="" type="checkbox"/>

Best management practices as detailed in the EA will be implemented to minimize impacts. Temporary stream impacts will occur under the appropriate state and federal permits and all affected streams will be restored upon completion of the sewer line installation. No wetland impacts are proposed. No compensatory mitigation is required.

Pursuant to section 7 of the Endangered Species Act of 1973, as amended, the Corps determined that the recommended plan may affect but is not likely to adversely affect the following federally listed species or their designated critical habitat: Indiana bat and Northern Long-Eared bat. The U.S. Fish and Wildlife Service (FWS) concurred with the Corps' determination on 1 March 2019, and imposed a seasonal tree clearing restriction where all tree cutting must occur between 1 October and 31 March.

In a letter dated 27 October 2016, the Ohio State Historic Preservation Office (SHPO) responded to the local sponsor's inquiry regarding cultural resources and concluded that the proposed undertaking will not affect historic properties, and that no further coordination was required. Pursuant to section 106 of the National Historic Preservation Act of 1966, as amended, the Corps subsequently determined that the Proposed Action has no effect on historic properties. A no effect determination letter from the Corps was submitted to the Ohio SHPO on 20 December 2018 to fulfill consultation responsibilities under the National Historic Preservation Act. No response from the Ohio SHPO was received and consultation responsibilities are considered complete as per 36 CFR Part 800.3(c)(4).

Pursuant to the Clean Water Act of 1972, as amended, the discharge of dredged or fill material associated with the Proposed Action qualifies for authorization under Nationwide Permits 7 and 12 and will be conducted in compliance with those permits.

A water quality certification pursuant to section 401 of the Clean Water Act will be obtained from the Ohio Environmental Protection Agency prior to construction. The Nationwide Permit authorization requires that all conditions of the water quality certification will be implemented in order to minimize adverse impacts to water quality.

A 15-day public comment period will occur from 13 May 2019 to 27 May 2019. The Corps will consider all submissions received before the expiration date of the public comment period. The nature or scope of the proposal may change upon consideration of the comments received. If significant effects on the quality of the human environment

are identified during public comment which cannot be mitigated, the Corps will initiate an Environmental Impact Statement (EIS), and afford all of the appropriate public participation opportunities attendant to an EIS.

After having carefully evaluated all aspects of the Proposed Action and based on the draft EA, I have reasonably concluded that the Proposed Action does not constitute a major federal action significantly affecting the quality of the human environment. Therefore, an environmental impact statement is not required and will not be prepared.

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Date

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ANDREW J. SHORT  
COLONEL, Corps of Engineers  
District Commander