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January 30, 2013

Via Electronic Filing

Ms. Barcy McNeal
Administration/Docketing
Public Utilities Commission of Ohio
180 East Broad Street, 11th Floor
Columbus, OH 43215-3793

**Re: Construction Notice for Brunstetter Connection, Village
of Lordstown, Trumbull County, Ohio High Pressure
Distribution Line, OPSB Case No. 13-203-GA-BNR**

Dear Ms. McNeal:

On January 14, 2013, Dominion East Ohio Gas Company ("DEO") filed a Construction Notice for the Brunstetter Connection, Village of Lordstown, Trumbull County, Ohio. At the request of Staff, DEO submits the following documents:

- Pre-Construction Notice to the U.S. Army Corps of Engineers
- Ohio Department of Natural Resources Response
- Notice of Intent issued by the Ohio Environmental Agency
- Village of Lordstown's Approval Letter (issued by its consultant, CT Consultants)

If you have any questions please call at the number listed above.

Sincerely,

Sally W. Bloomfield

Cc: Ed Steele (w/Enclosures)



December 20, 2012

BY UPS

Nancy Mullen
Regulatory Section Chief
U.S. Army Corps of Engineers - Pittsburgh District
1000 Liberty Avenue
Pittsburgh, Pennsylvania 15222

**RE: The East Ohio Gas Company
Nationwide Permit #12 Pre-Construction Notification
Brunstetter Connector**

Dear Ms. Mullen:

The East Ohio Gas Company (EOG) herein transmits one (1) original and one (1) copy of a Pre-Construction Notification (PCN) pursuant to the U.S. Army Corps of Engineers Nationwide Permit #12 – Utility Activities for the Brunstetter Connector project.

The components of this PCN package are attached and include:

- Complete Application Form 4345 (including additional sheets)
- Project Location and Impacts Maps (Attachment A)
- Wetlands Delineation Report (Attachment B)
- ODNR Correspondence Pertaining to Threatened and Endangered Species (Attachment C)
- Preliminary Jurisdictional Determination (JD) Form and Aquatic Resource Table (Attachment D)
- Typical Construction Drawings (Attachment E)
- Phase I Cultural Resource Study (Attachment F)

The Brunstetter Connector project has an expected start date of February 2013. Therefore, a timely review of this project is respectfully requested in order to complete the project. Additionally, EOG is requesting a Preliminary-JD be completed on this site and that all water resources on this site be considered waters of the U.S. Please review the enclosed materials for completeness and forward your response at the earliest possible convenience to the attention of:

Tara Milette
Environmental Specialist
320 Springside Drive, Suite 320
Akron, Ohio 44333
Tara.E.Milette@dom.com

If you need additional information, please contact Tara Miletti at (330) 664-2579.

Sincerely,

A handwritten signature in black ink, reading "Lisa C. Moerner". The signature is fluid and cursive, with the first name "Lisa" being the most prominent.

Lisa C. Moerner
Director, Environmental Sustainability and Gas Environmental Services

Enclosures

cc: Tara Miletti

APPLICATION FOR DEPARTMENT OF THE ARMY PERMIT (33 CFR 325)						OMB APPROVAL NO. 0710-0003 EXPIRES: 31 August 2012	
Public reporting burden for this collection of information is estimated to average 11 hours per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Department of Defense, Washington Headquarters, Executive Services and Communications Directorate, Information Management Division and to the Office of Management and Budget, Paperwork Reduction Project (0710-0003). Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. Please DO NOT RETURN your form to either of those addresses. Completed applications must be submitted to the District Engineer having jurisdiction over the location of the proposed activity.							
PRIVACY ACT STATEMENT Authorities: Rivers and Harbors Act, Section 10, 33 USC 403; Clean Water Act, Section 404, 33 USC 1344; Marine Protection, Research, and Sanctuaries Act, Section 103, 33 USC 1413; Regulatory Programs of the Corps of Engineers; Final Rule 33 CFR 320-332. Principal Purpose: Information provided on this form will be used in evaluating the application for a permit. Routine Uses: This Information may be shared with the Department of Justice and other federal, state, and local government agencies, and the public and may be made available as part of a public notice as required by Federal law. Submission of requested information is voluntary, however, if information is not provided the permit application cannot be evaluated nor can a permit be issued. One set of original drawings or good reproducible copies which show the location and character of the proposed activity must be attached to this application (see sample drawings and instructions) and be submitted to the District Engineer having jurisdiction over the location of the proposed activity. An application that is not completed in full will be returned.							
(ITEMS 1 THRU 4 TO BE FILLED BY THE CORPS)							
1. APPLICATION NO.		2. FIELD OFFICE CODE		3. DATE RECEIVED		4. DATE APPLICATION COMPLETE	
(ITEMS BELOW TO BE FILLED BY APPLICANT)							
5. APPLICANT'S NAME: First - Mike Middle - Last - Reed Company - The East Ohio Gas Company Contact: Tara Miletta E-mail Address - Tara.E.Miletta@dom.com				8. AUTHORIZED AGENT'S NAME AND TITLE (an agent is not required) First - Middle - Last - Company - E-mail Address -			
6. APPLICANT'S ADDRESS. Address - 320 Springside Drive, Suite 320 City - Akron State - Ohio Zip - 44333 Country - USA				9. AGENT'S ADDRESS Address - City - Stow State - Zip - Country -			
7. APPLICANT'S PHONE NOS. W/AREA CODE. a. Residence b. Business c. Fax 330-644-2579 330-644-2669				10. AGENT'S PHONE NOS. W/AREA CODE a. Residence b. Business c. Fax			
STATEMENT OF AUTHORIZATION							
11. I hereby authorize, _____ to act in my behalf as my agent in the processing of this application and to furnish, upon request, supplemental information in support of this permit application.							
_____ APPLICANT'S SIGNATURE				_____ DATE			
NAME, LOCATION, AND DESCRIPTION OF PROJECT OR ACTIVITY							
12. PROJECT NAME OR TITLE (see instructions) The East Ohio Gas Company (EOG) Brunstetter Connector							
13. NAME OF WATERBODY, IF KNOWN (if applicable) W-1a, W-1b, W-2, W-3, W-4, S-1, S-2a, S-2b				14. PROJECT STREET ADDRESS (if applicable) Address West of the intersection of Brunstetter Road and Highland Avenue City - Lordstown State - Ohio Zip -			
15. LOCATION OF PROJECT Latitude: °N 41.181032° Longitude: °W 81.833727°							
16. OTHER LOCATION DESCRIPTIONS, IF KNOWN (see instructions) State Tax Parcel ID Municipality Section - Township - Range -							
17. DIRECTIONS TO THE SITE From Pittsburgh, head north on I-579 and travel approximately 1 mile to I-279N. Travel approximately 12 miles then merge onto I-79N. Follow I-79N for 5.9 miles and then take exit #77 to merge onto I-76W. Follow I-76W for 51.6 miles and merge onto the Ohio Turnpike (I-80W). After 2 miles take exit #216 towards Lordstown and turn right onto Hallock Young Road. After 0.6 miles turn left onto Tod Avenue SW. In 1.5 miles turn right onto Salt Springs Road and after 1.5 miles turn left onto Highland Avenue. The project area is 1 mile down Highland Avenue.							

18. Nature of Activity (Description of project, include all features) The nature of activity is to install approximately 2,500 ft of new 12-in natural gas pipeline to connect the existing EOG Brunstetter Station to Line 264. This pipeline will be installed within a proposed easement width of 50 ft in the eastern segment and 60 ft in the western segment. Three (3) wetlands and two (2) perennial streams (three [3] crossings), will be temporarily impacted as a result of this project. In order to complete the project, a trench 6 ft wide and 5 ft deep, will be constructed through the proposed right-of-way (ROW), including through wetlands and streams. All impacts will be temporary. After the work is completed, grades will be returned to pre-construction contours. All work will be performed in accordance with the specifications and best management practices outlined in NWP #12. See additional sheets for details.

19. Project Purpose (Describe the reason or purpose of the project, see instructions)

The purpose of the project is to install approximately 2,500 ft of new natural gas pipeline within new ROW to connect the existing EOG Brunstetter Station to Line 264. This segment of pipeline will cross three (3) wetlands (W-1, W-2, and W-4) and two (2) perennial streams at three (3) crossings (S-1, S-2a, S-2b). See additional sheets for details.

USE BLOCKS 20-23 IF DREDGED AND/OR FILL MATERIAL IS TO BE DISCHARGED

20. Reason(s) for Discharge

The reason for the discharge of fill in wetlands is to allow for the construction of the new pipeline. All impacts to wetlands and streams will be temporary and no permanent losses will result. Palustrine emergent/scrub shrub (PEM/PSS) and palustrine forested (PFO) wetlands will be allowed to return to PEM wetlands. No permanent relocation of wetlands or waterbodies is planned. See additional sheets for details.

21. Type(s) of Material Being Discharged and the Amount of Each Type in Cubic Yards:

Type Wetland Silt Loam Soils

Type Stream Substrate

Type

Amount in Cubic Yards 127.7

Amount in Cubic Yards 61.1

Amount in Cubic Yards

The type of material being discharged is associated with temporary disturbance of existing substrate. Soils disturbed during trench excavation will be replaced within the trench once the work is complete. Wetland soils that would be subject to discharge include silt loams. See additional sheets for details.

22. Surface Area in Acres of Wetlands or Other Waters Filled (see instructions)

Acres Impacts include temporary disturbance of wetland soils within W-1, W-2, and W-4. A total of 0.029 acres of PEM/PSS and PFO wetlands will be temporarily disturbed. A total of 150 linear feet of perennial stream (S-1, S-2a, S-2b) will also be temporarily impacted. See additional sheets for details.
Or
Liner Feet

23. Description of Avoidance, Minimization, and Compensation (see instructions) Construction will be limited to a 50 ft disturbance width along wetlands and streams. All impacts to wetlands and streams will be temporary and after work is completed, grades will be returned to pre-construction contours. See additional sheets for details.

24. Is Any Portion of the Work Already Complete? Yes ☐ No ☒ IF YES, DESCRIBE THE COMPLETED WORK

25. Addresses of Adjoining Property Owners, Lessees, Etc., Whose Property Adjoins the Waterbody (If more than can be entered here, please attach a supplemental list).

Address – Available upon request.

City –

State –

Zip –

26. List of Other Certifications or Approvals/Denials Received from other Federal, State, or Local Agencies for Work Described in This Application.

AGENCY	TYPE APPROVAL*	IDENTIFICATION NUMBER	DATE APPLIED	DATE APPROVED	DATE DENIED
ODNR	Threatened & Endangered Species		December 17, 2012		
OEPA	Construction Stormwater OHC000003		pending		
Trumbull Co.	Project Notification / SWPPP		pending		
SWCD					

* Would include but is not restricted to zoning, building, and flood plain permits

27. Application is hereby made for a permit or permits to authorize the work described in this application. I certify that the information in this application is complete and accurate. I further certify that I possess the authority to undertake the work described herein or am acting as the duly authorized agent of the applicant.



SIGNATURE OF APPLICANT

12/19/12

DATE

SIGNATURE OF AGENT

DATE

The application must be signed by the person who desires to undertake the proposed activity (applicant) or it may be signed by a duly authorized agent if the statement in block 11 has been filled out and signed.

18 U.S.C. Section 1001 provides that: Whoever, in any manner within the jurisdiction of any department or agency of the United States knowingly and willfully falsifies, conceals, or covers up any trick, scheme, or disguises a material fact or makes any false, fictitious or fraudulent statements or representations or makes or uses any false writing or document knowing same to contain any false, fictitious or fraudulent statements or entry, shall be fined not more than \$10,000 or imprisoned not more than five years or both.

Pre-Construction Notification for Nationwide Permit #12 – Utility Line Activities
The East Ohio Gas Company
Brunstetter Connector
Trumbull County, Ohio

Application Form 4345: Additional Information

BLOCK 18 – Nature of Activity

Site location maps showing the pipeline section to be installed are provided in Attachment A. The nature of the activity is to install approximately 2,500 feet of new 12-inch natural gas pipeline within a new utility right-of-way (ROW). The new ROW is 50 feet wide in the eastern portion of the project area and 60 feet wide in the western portion of the project area. A portion of the new pipeline must be installed through three (3) wetlands (W-1, W-2, and W-4) and two (2) perennial streams, at three (3) crossings (S-1, S-2a, S-2b), to allow for the necessary pipeline installation. In order to complete the project, a trench 6 feet wide and 5 feet deep, will be constructed along the entire length of the new easement, including through W-1, W-2, W-4, S-1, S-2a, and S-2b. Temporary wetland and stream impacts will be confined to a 50 foot wide construction width. Construction will be limited to these areas and will require soil disturbance to accommodate areas for the trench excavation, side-cast spoil, temporary storage of the new pipe, and equipment/vehicular traffic. All work shall be performed within these authorized limits of disturbance.

Typically, the trench will be excavated to facilitate installation of the new pipeline and to allow 3 to 5 feet of cover over the new pipeline after installation and backfilling. After the temporary flume or diversion is placed within the streams, the trench will be excavated within the dry stream channel to install the pipeline. Separation of the topsoil from the subsoil will generally be performed at wetlands, streams, open waters, residential properties, and agricultural lands. The backfill material that will be returned to the trench will consist of the same material removed from the trench, to the extent practicable. Excess soil will be spread onsite in uplands, with the exception of agricultural land, in or near wetlands, floodplains, streams, drainage ways, or other environmentally sensitive areas. Following pipeline installation, all disturbed areas will be returned to their original slope and contour, stabilized, seeded, and revegetated to provide a permanent herbaceous cover to stabilize the soils, and temporary erosion controls would be maintained until this permanent cover is established. Wetlands will not be seeded and the original seed bank will be allowed to naturally revegetate.

New impervious surfaces will not be created. The majority of area that will be affected currently exists as forest, agricultural field, and new field and some tree and shrub clearing will be required. However, tree clearing will be minimized as much as possible and will be confined to the ROW. No permanent filling of wetlands or waterbodies will occur.

BLOCK 19 – Project Purpose

The purpose of the project is to install approximately 2,500 feet of new 12-inch diameter natural gas pipeline through three (3) wetlands (W-1, W-2, and W-4) and two (2) perennial streams at three (3) crossings (S-1, S-2a, and S-2b) to allow for the necessary project activities for the pipeline construction. The Brunstetter Connector project has an anticipated start date of February 2013.

BLOCK 20 – Reason(s) for Discharge

Installation of the pipeline cannot occur without the discharge. The primary reason for the discharge is the installation of a 2,500 foot segment of new natural gas pipeline to connect the EOG Brunstetter Station to Line 264. The project impacts are temporary and will not result in any permanent loss of wetland acreage, stream channel, or open water systems. No permanent relocation of wetlands or waterbodies is planned. Also, there will be no permanent changes in grade, ground surface material, waterway drainage, or contours, as all aquatic resource areas disturbed by the project will be restored to their pre-construction conditions. The construction activities involve the temporary placement of discharged, excavated material associated with soil disturbance within the 50 foot wide ROW in the eastern portion of the project area and the 60 foot wide ROW within the western portion of the project area (reduced to a 50 foot wide at stream and wetland crossings). The purpose of the soil placement is to conduct the trench excavation to install the new pipeline. The temporary discharge is also associated with side-casting of trench spoil. However, the side casted material will be used for backfilling after pipeline installation and is considered a temporary impact.

BLOCK 21 – Type(s) of Material Being Discharged and the Amount of Each in Cubic Yards

The type of material to be discharged is associated with temporary disturbance of the existing substrate. Soils disturbed during trench excavation will be replaced within the trench once work activities are complete. Wetland soils that would be subject to discharge include silt loam. A description of the soils within the project area is provided in the attached Wetland Delineation Report (Attachment B; see Section 3.3 and Table 4). Dataforms for each wetland, including specific soil descriptions, are included in Attachment B; Appendix C.

The amount of temporary discharge material will correspond to the excavation of the trench. Typically, the trench will be excavated to allow 3 to 5 feet of cover over the new pipeline after installation and backfilling. Separation and restoration of the topsoil from the subsoil will generally be performed at wetlands, streams, open waters, residential properties, and agricultural lands. The type of materials being discharged will be clean earthen fill/substrate as a result of excavating the 6 foot wide by 5 foot deep trench. The total length of pipe trench that will be constructed through wetland is 115 feet. Total temporary wetland impacts are 0.029 acres. The total amount of discharge that will occur as a result of temporary side casting of wetland soils is 127.7 cubic yards. The total temporary perennial stream impacts are 55 feet (bank to bank) with a total of 150 linear feet (0.063 acres) of stream within the construction corridor. The total amount of

discharge that will occur as a result of temporary side casting of stream substrate is 61.1 cubic yards. Additional disturbance may result from heavy equipment. All activity within wetlands and streams will be confined to the construction limits within the proposed ROW. Details for the wetlands and streams are included in the tables below.

BLOCK 22 – Surface Area in Acres of Wetlands or Other Waters Filled

Impacts from installation of the natural gas pipe include temporary disturbance of wetland soils and the beds and banks of perennial streams. The proposed project will cross three (3) wetlands (W-1, W-2, and W-4) and two (2) perennial streams at three (3) locations (S-1, S-2a, S-2b). The total acreage of wetland to be temporarily impacted by the project is 0.029 acres. The total temporary perennial stream impacts are 55 feet (bank to bank) with a total of 150 linear feet of stream within the construction corridor. As part of EOG's effort to avoid and minimize impacts to aquatic resources, a construction width of 50 feet will be maintained through streams and wetlands. In addition, the ROW has been reduced to avoid additional wetland located adjacent to the proposed ROW. As indicated in Table 1 below, the project area contains areas characterized as palustrine emergent/palustrine scrub shrub (PEM/PSS) and palustrine forested (PFO) wetlands.

For convenience, wetland and stream impact analysis tables are included in this document, and photographs of the existing ROW are provided within the attached Wetland Delineation Report prepared for the project (Attachment B).

Project construction activities (e.g., mowing/clearing, grading, trench excavation, spoil storage, backfilling, and restoration) will expose bare soils and increase the potential for erosion and sedimentation. Trench excavation will be done using a back-hoe tractor. Best Management Practices (BMPs) as described in the project-specific Storm Water Pollution Protection Plan (SWPPP) will be implemented throughout construction to minimize stormwater runoff, soil erosion and the transport of sediments from the construction area, and to protect surface waters and wetlands located in and adjacent to the project area.

Additionally, EOG's contractors will comply with BMPs for work in wetlands and waterbodies, including the provisions of NWP #12 and General and Ohio Conditions:

- The top 6 to 12 inches of topsoil will be segregated and kept separate from subsoil during trenching. The topsoil will be replaced on top during backfilling.
- If material from trench excavation is sidecast into waters of the United States, it will be placed so that it is not dispersed by currents or other forces and it will be backfilled or removed in less than the three-month limit imposed by 401 WQC General Limitations and conditions.
- The trench will be backfilled in such a manner as to avoid draining waters of the United States.
- Exposed slopes and stream banks will be stabilized immediately upon completion of the work at each waterbody.
- EOG will use existing access routes and the EOG ROW for access to the construction sites.

- Equipment traveling across waterbodies and saturated wetlands along the ROW access routes will use mats or bridges across the ground/resource as needed to protect the resource from unnecessary disturbance. These mats or bridges will be removed upon completion of the construction work.
- Use of access roads will be limited to the minimum width necessary.
- No filling of wetlands or waterbodies will occur for any part of the project (including access roads), and no permanent impacts will result.

Table 1. Temporary Wetland Impacts

Wetland		Cowardin Classification	ORAM Score	ORAM Category	Size within Study Area (acres)	Wetland Impacts ¹ Area within the Construction Limits (acres)	Wetland Impacts ¹ Length of Crossing within the Construction Limits (feet)	Amount of Discharge (cubic yards)
W-1	a	PEM/PSS	41	Modified 2	0.066	0.013	75	83.3
	b				0.015	0	0	0
W-2		PEM/PSS	45	2	0.025	0.014	26	28.8
W-3		PEM/PSS	44	Modified 2	0.011	0	0	0
W-4		PFO	50	2	0.002	0.002	14	15.6
Wetlands					0.119	0.029	115	127.7

¹ All impacts will be temporary and all grades will be returned to pre-construction contours.

Table 2. Temporary Stream Impacts

Stream ID		Type	OHWM (feet)	Length within Study Area (linear feet)	Acreage within Study Area (acres)	Stream Impacts ¹ Length within the Construction Limits (linear feet)	Stream Impacts ¹ Crossing Width of Proposed Impacts (feet)	Amount of Discharge (cubic yards)
S-1		Perennial	15	125	0.043	50	15	16.7
S-2	a	Perennial	20	153	0.070	50	20	22.2
	b		20	172	0.079	50	20	22.2
Total Stream				450	0.192	150	55	61.1

¹ All impacts will be temporary and all grades will be returned to pre-construction contours.

Attachment A

Project Location and Site Plan Maps

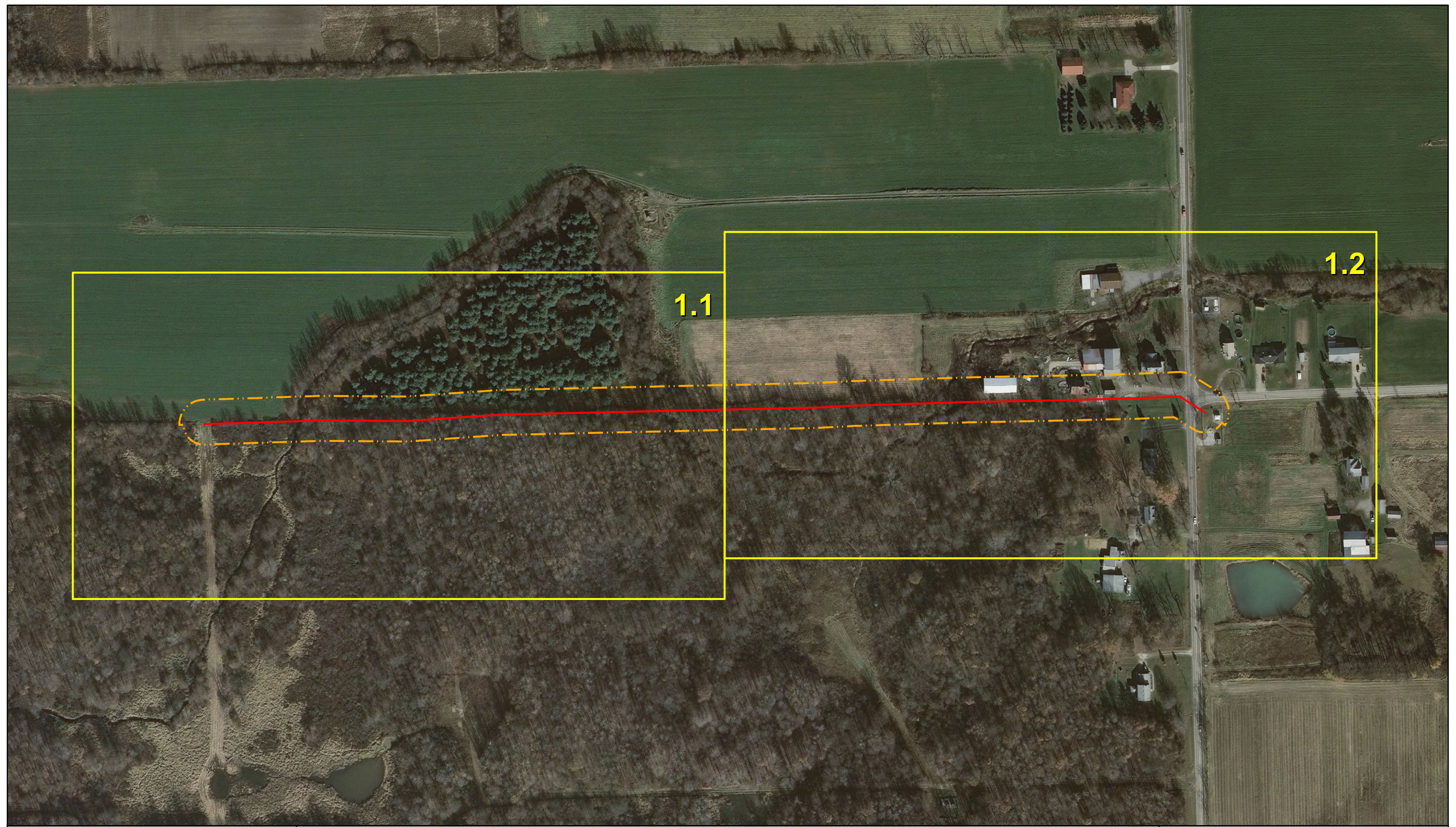


Figure 1. Site Overview Map.
Brunstetter Connector.

— Pipeline
- - - Project Area



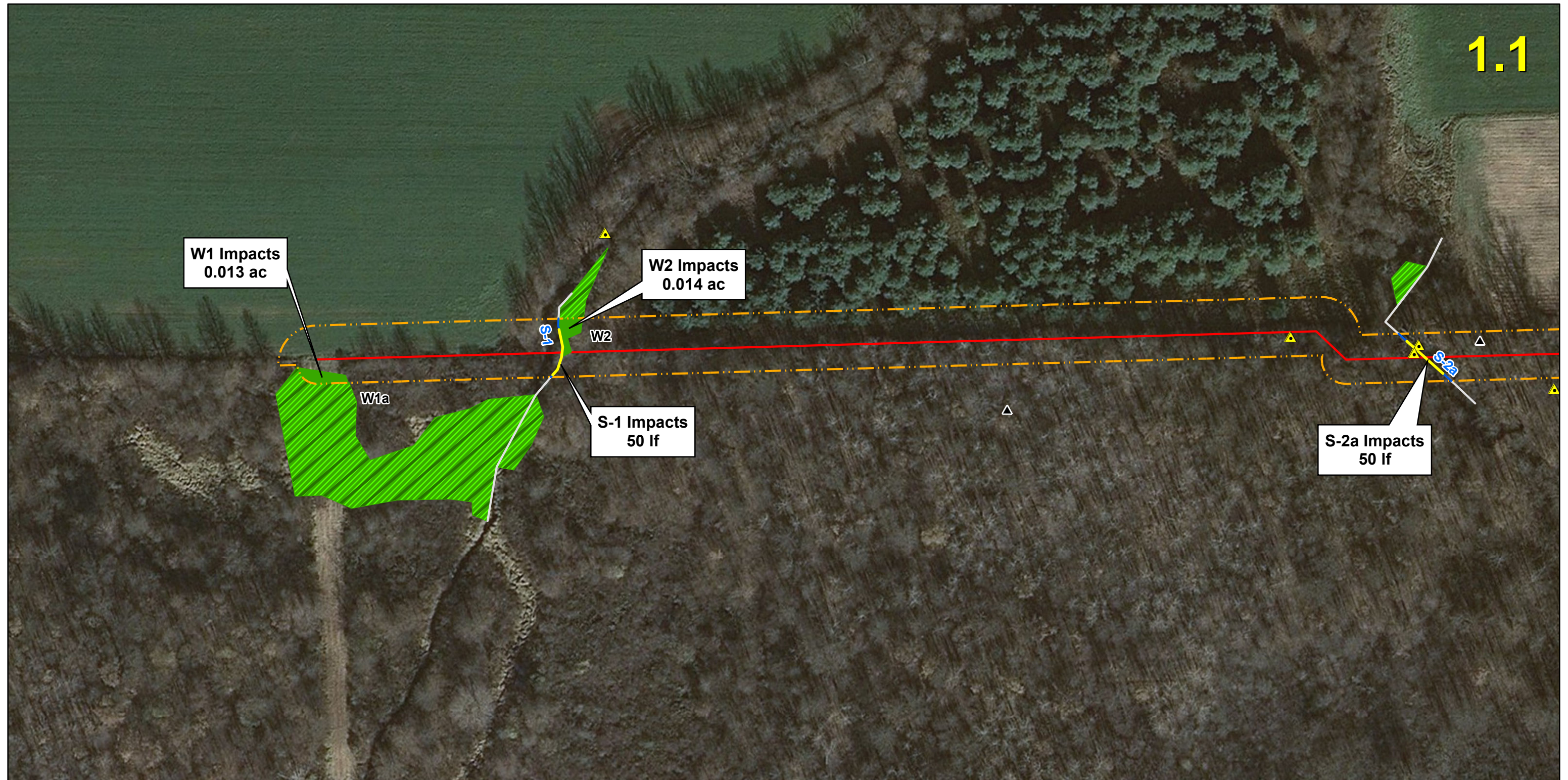


Figure 1.1. Impact Map.
Brunstetter Connector.

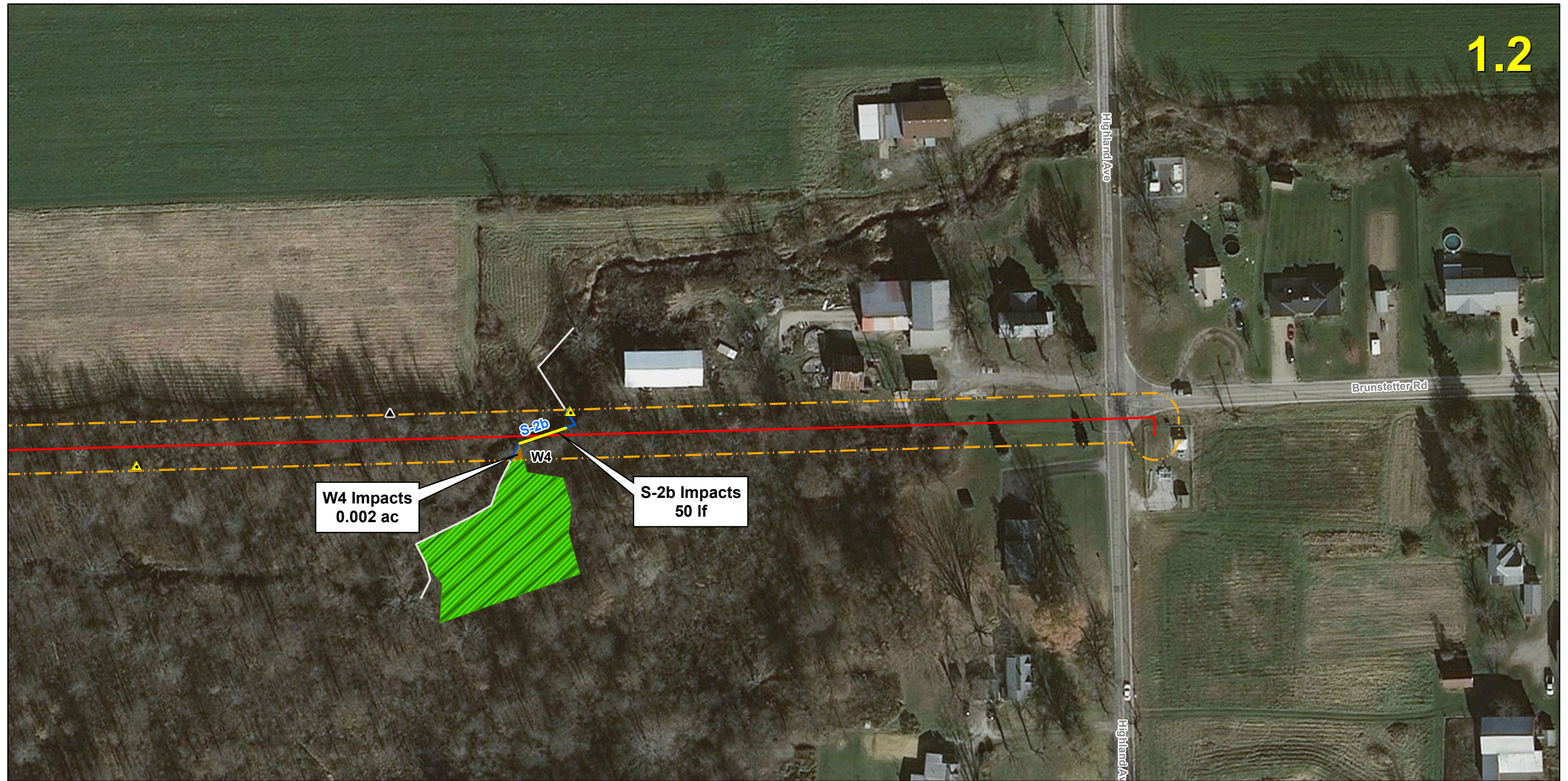


- | | | | | |
|--------|----------------------|--------------------|-------------------|---------------------|
| ▲ PMRT | — Stream Impacts | — Stream (Offsite) | ■ Wetland (PEMSS) | ■ Wetland (Offsite) |
| ▲ PRT | — Stream (Perennial) | — Pipeline | ■ Wetland (PFO) | ■ Project Area |

200 100 0 200 Feet

60 30 0 60 Meters





W4 Impacts
0.002 ac

S-2b Impacts
50 lf

Figure 1.2. Impact Map.
Brunstetter Connector.

- | | | | | |
|--------|----------------------|--------------------|-------------------|---------------------|
| ▲ PMRT | — Stream Impacts | — Stream (Offsite) | ■ Wetland (PEMSS) | ■ Wetland (Offsite) |
| ▲ PRT | — Stream (Perennial) | — Pipeline | ■ Wetland (PFO) | ■ Project Area |

200 100 0 200 Feet

60 30 0 60 Meters



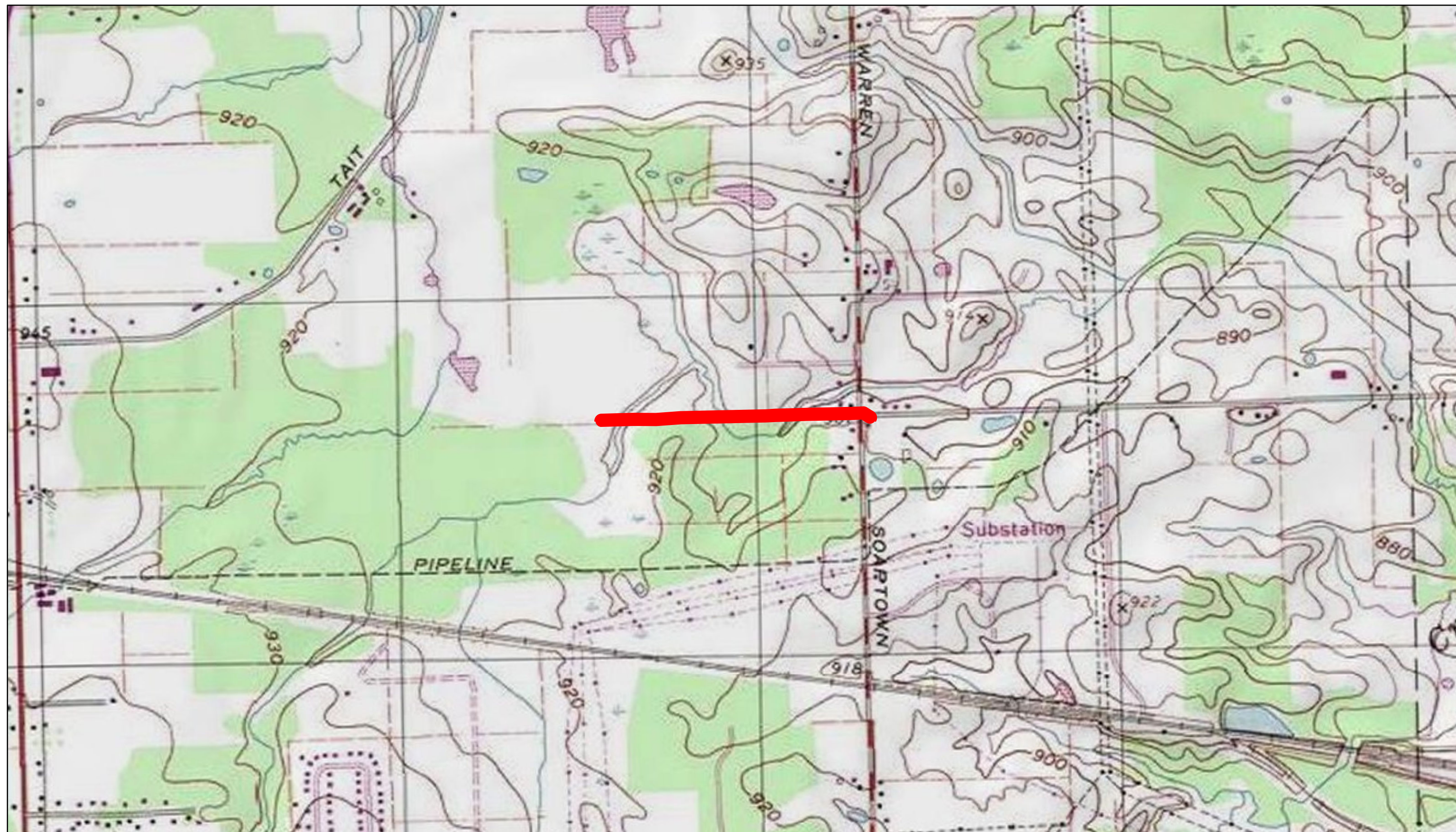


Figure 2. USGS 7.5-minute
Topographic Map of Warren Quadrangle.
Brunstetter Connector.

 Project Area



Waters Upload Sheet - Brunstetter Connector

[illegible]

Attachment B
Wetlands Delineation Report

Wetlands Delineation Report

Presented to:

The East Ohio Gas Company

**Brunstetter Connector
City of Lordstown,
Trumbull County, Ohio**
ES Project # 5579

Prepared by:



EnviroScience, Inc., 3781 Darrow Road, Stow OH 44224
(800) 940-4025 (330) 688-0111 FAX: (330)688-3858
www.enviroscienceinc.com

December 4, 2012

STATEMENT OF CERTIFICATION

The analyses, opinions and conclusions in this report are based entirely on EnviroScience's unbiased, professional judgment. EnviroScience's compensation is not in any way contingent on any action or event resulting from this study. Neither EnviroScience nor any EnviroScience employee has any vested interest in the property examined in this study.



EnviroScience, Inc.
3781 Darrow Road
Stow, Ohio 44224 1-800-940-4025

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- Figure 2. USGS 7.5-minute Topographic Map of Warren Quadrangle.
- Figure 3. NWI Map of Site (Warren Quadrangle).
- Figure 4. Soil Map of Site in Trumbull County, Ohio.
- Figure 5. Site Map of Wetlands and Other Water Resources.

Appendix B: Photographs

Appendix C: Routine Wetland Determination Data Forms

Appendix D: Ohio Rapid Assessment Method for Wetlands v 5.0 Rating Forms

Appendix E: Qualitative Habitat Evaluation Index (QHEI) Forms



EXECUTIVE SUMMARY

EnviroScience, Inc. performed a delineation of wetlands and other waters in November 2012 for the East Ohio Gas Company (EOG) at the location of the Brunstetter Connector project. The purpose of the project is to install approximately 2,500 feet of new 12-inch natural gas pipeline to connect the existing Brunstetter Station to Line 264. The Brunstetter Connector project is located directly west of the intersection of Brunstetter Road and Highland Avenue in the City of Lordstown, Trumbull County, Ohio. The project area includes an area of 60 feet to the north of the proposed pipeline and 50 feet to the south of the proposed pipeline.

The project area exists as forest, agricultural, maintained lawn, and new field vegetative communities. The surrounding land is primarily agricultural and residential with portions of forested vegetation. Six distinct vegetative communities were identified within the project area, including two wetland community types. The project area crosses two perennial streams (S-2 crosses the project area twice) and four wetlands.

Four wetlands are located within the project area and account for 0.119 acres. Two perennial streams (S-2 crosses the project area twice) with ordinary high water mark (OHWM) widths of 15 feet and 20 feet account for an additional 0.192 acres and 450 linear feet of waterway within the project area. These wetlands, deepwater aquatic habitats and other waters are under the jurisdiction of the Ohio EPA or Corps. No filling may occur within these areas without their written permission. Please contact the Ohio EPA Division of Surface Water at (614) 644-2001 or the Pittsburgh District, U.S. Army Corps of Engineers, at (412) 395-7103 before working in these areas.



1.0 INTRODUCTION AND SITE DESCRIPTION

EnviroScience, Inc. performed a delineation of wetlands and other waters in November 2012 for the East Ohio Gas Company (EOG) at the location of the Brunstetter Connector project. The purpose of the project is to install approximately 2,500 feet of new 12-inch natural gas pipeline to connect the existing Brunstetter Station to Line 264. The Brunstetter Connector project is located directly west of the intersection of Brunstetter Road and Highland Avenue in the City of Lordstown, Trumbull County, Ohio. The project area includes an area of 60 feet to the north of the proposed pipeline and 50 feet to the south of the proposed pipeline.

The project area exists as forest, agricultural, maintained lawn, and new field vegetative communities. The surrounding land is primarily agricultural and residential with portions of forested vegetation. Six distinct vegetative communities were identified within the project area, including two wetland community types. The project area crosses two perennial streams (S-2 crosses the project area twice) and four wetlands.

The site is located in the Mahoning River drainage basin (Hydrologic # 05030103) which drains approximately 1,132 square miles in eastern Ohio and western Pennsylvania. It is also within the Glaciated Allegheny Plateau phytogeographic region (Schaffner 1932) and the Erie Drift and Lake Plain ecoregion (Woods *et al.* 1998) of Ohio.

2.0 METHODS

Government agencies regulate coastal and inland waters for commerce, flood control and water quality. These water bodies provide numerous functions and values necessary to protect and sustain our quality of life. Wetlands comprise a significant portion of regulated waters. The U.S. Army Corps of Engineers (Corps) and Environmental Protection Agency (EPA) jointly define wetlands as:

“Those areas that are inundated or saturated by surface or ground water at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted for life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs, and similar areas.”

The remaining deepwater aquatic habitats (open waters) are defined by the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory, 1987) as:

“... areas that are permanently inundated at mean annual water depths >6.6 ft or permanently inundated areas <6.6 ft in depth that do not support rooted emergent or woody plant species.”

The methods used for determining and delineating wetlands and open waters strictly adhere to those found in the *Corps of Engineers Wetlands Delineation Manual* (Environmental Laboratory, 1987). Wetlands and open water boundaries were determined by the disappearance of one or more of their diagnostic characteristics.

Ordinary high water marks (OHWM) defined the outermost regulatory boundaries of



ephemeral and open waters.

Each sample plot and the perimeter of each wetland and other water was surveyed and marked in the field with plain pink flags and pink “wetland boundary” flags, respectively. A global positioning system (GPS) unit with submeter accuracy was used, in conjunction with aerial photography and topographic figures, for the survey. Computer Aided Design (CAD) software was used to determine wetland dimensions and produce a map of the project area showing wetlands and other waters.

2.1 WETLANDS

2.1.1 Determination

A review of secondary literature sources was performed to find known wetlands and other significant ecological resources and areas with high potential for wetlands in or near the proposed project area. Resources included some or all of the following:

1. U.S. Geological Survey (USGS) topographic maps;
2. National Wetlands Inventory (NWI) maps;
3. Web Soil Survey; and
4. Aerial Photographs.

A field inspection of the project area was then completed to identify major plant communities and to visually locate potential wetlands. The routine, onsite (Level 2) wetland determination was used to perform the delineation. Wetland communities were classified according to the classification scheme of Cowardin *et al.* (1979). Mature nonwetland communities that had reached a stable equilibrium were classified according to Anderson (1982) and Gordon (1966, 1969). Disturbed and successional nonwetland communities were classified as one of the categories described in Table 1.

Table 1. Nonwetland Communities.

Community		Description
Disturbed	Urban	regularly maintained land; residential; industrial
	Agricultural	land used for producing crops or raising livestock; cropland; pastureland
	Cleared	disturbed areas devoid of most vegetation from recent clearing, grading or filling
Successional	New Field	herbaceous community without woody vegetation
	Old Field	herbaceous community having woody vegetation coverage of <50%
	Scrub Shrub	community dominated by woody vegetation <6 m (20 ft) tall
	Forest	community dominated by woody vegetation >6 m (20 ft) tall

Sample plots were established within each natural community and potential wetland within the project area. Complete data for each sample plot were collected and recorded on the Corps' Routine Wetland Determination Data Forms. Vegetation, hydrology and soils were evaluated at each sample plot.

2.1.1.1 Vegetation

To detect the presence or absence of hydrophytic vegetation, four plant strata were evaluated within specific radii of the plot center. Each stratum was ranked by aerial cover in descending order of abundance. Table 2 provides information on each type of vegetative stratum.

Table 2. Vegetative Strata

Stratum	Definition	Survey Area
Tree	woody plants > or equal to 3 in. (7.6 cm) dbh	30 ft (9.1 m) radius
Sapling/shrub	woody plants <3 in. (7.6 cm) dbh and >3.28 ft (1 m) tall	15 ft (4.6 m) radius
Herbaceous	herbs and woody plants less than <3.28 ft (7.6 cm)	5 ft (1.5 m) radius
Woody vines	woody vines >3.28 ft in height (7.6 cm)	30 ft (9.1 m) radius

Percent dominance was obtained for each species and within each stratum. Dominant species are those which cumulatively totaled in order of abundance immediately exceed 50% and also include any individual species with an abundance of 20% or more (USACE 2009). Dominant taxa were identified using recognized local guides: nomenclature follows the *National List of Scientific Plant Names* (USDA 1982). Following the identification of each plant species present within the plot, all dominant species within each stratum were assigned a wetland indicator status according to Lichvar (2012). Indicators are summarized in Table 3.

Table 3. Plant Indicators

Indicator	Category	Definition
OBL	Obligate Wetland	almost exclusively (>99% of occurrences) found in wetlands
FACW	Facultative Wetland	most likely found in wetlands (67-99% of occurrences)
FAC	Facultative	equally likely found in wetlands or nonwetlands (34-66%)
FACU	Facultative Upland	most likely found in nonwetlands (1-33% occurrence in wetlands)
UPL	Obligate Upland	almost exclusively found in nonwetlands (<1% occurrence in wetlands)

An 'NI' (no indicator) designation represents species where not enough information is available to assign an indicator; an 'NL' (no listing) designation is given to species whose identification was not determined sufficiently enough to assign an indicator. Once the indicator status is assigned to each dominant species, the evaluator can perform the percent dominance test according to the protocol outlined within the *Regional Supplement* (USACE 2009) to determine if the plot meets the criterion for hydrophytic vegetation.

2.1.1.2 Hydrology

To detect presence or absence of wetland hydrology, surface and subsurface hydrologic indicators were evaluated at the sample plot and throughout the adjacent community. Sources of wetland hydrology include direct precipitation, headwater flooding, backwater flooding, ground water or any combination of these.

2.1.1.3 Soils

The upper horizons of the soil at each sample plot were examined to detect the presence or absence of hydric soils indicators. Soil matrix color and mottle characteristics for each horizon were determined by comparing a moist sample with *Munsell Soil Color Charts* (Munsell Color, 2009 Rev. ed.).

2.1.2 ORAM Categorization

Each wetland system was categorized in accordance with version 5.0 of the Ohio EPA's Ohio Rapid Assessment Method for Wetlands (ORAM) (Mack 2001). Field scoring forms are contained in Appendix D.

Ohio EPA has established three primary and three intermediate categories of wetland quality which are based on a wetland's size, its hydrologic function, the types of plant communities present, the physical structure of the wetland plant community and the wetland's level of disturbance (OAC 3745-1-54). The relationship between the various wetland categories and their respective ORAM scores is presented in Table 5. ES also evaluated the project area for the presence of state threatened and endangered species as part of the ORAM evaluation.

Category 3 wetlands have the highest quality, and are generally characterized by a high level of biological diversity and topographical variation, large numbers of native species, or a high level of functional importance to its surroundings. Category 2 wetlands have the capability to support a moderate wildlife community or maintain mid-level hydrological functions. Category 2 also includes wetlands that may be of lower quality or degraded but have reasonable potential to be restored (Modified Category 2). Category 1 wetlands are of the lowest quality, and are generally characterized by hydrological isolation, lack of plant species diversity, insufficient habitat availability, and limited potential to perform major wetland functions (OAC 3745-1-54).

Since the ORAM is a rapid assessment method, there are certain wetland scores which fail to clearly differentiate the wetland's functional category. The so-called "gray zone" wetlands fall between the definite scoring breaks between the categories. Ohio EPA requires that "gray zone" wetlands be considered as the higher category unless more detailed functional assessments such as the VIBI or AmphIBI are conducted on those wetlands. As a result of this requirement, wetlands whose scores fall between the breakpoints for Categories 1 and 2 (1 or 2 gray zone wetlands) wetlands will be considered as Category 2 wetland for purposes of this report. Wetlands whose scores

fall between the breakpoints for Categories 2 and 3 wetlands (2 or 3 gray zone wetlands) will be considered a Category 3 wetland for purposes of this report.

2.2 OTHER WATERS

Other waters include ephemeral and open waters. These waters are broken down into two categories: 1) ponds and lakes; and 2) streams and rivers.

2.2.1 Ponds and Lakes

Palustrine systems other than wetlands, and lacustrine waters are addressed as ponds and lakes, respectively. These non-linear open waters may harbor important aquatic communities such as vegetated shallows (aquatic bed) and mud flats. They are classified according to Cowardin *et al.* (1979).

2.2.2 Streams and Rivers

Riverine systems are linear flowing waters bounded by a channel. There are several types of stream classification systems, however, for the purpose of this report streams are placed into three types listed below.

Ephemeral: An ephemeral stream only conveys runoff precipitation and meltwater. It is permanently located above the water table and is most often dry.

Intermittent: An intermittent stream is located below the water table for parts of the year, but does have dry periods.

Perennial: A perennial stream typically has flowing water throughout the entire year.

The Corps and USEPA will assert jurisdiction under the Clean Water Act on Traditional Navigable Waters (TNWs) and all wetlands adjacent to them, non-navigable tributaries of TNWs that are Relatively Permanent Waters (RPW) [i.e., tributaries that typically flow year-round or have continuous flow at least seasonally]; and wetlands that directly abut such tributaries. In addition, the agencies will assert jurisdiction over every water body that is not an RPW if that water body is determined (on the basis of a fact-specific analysis) to have a significant nexus with a TNW.

“A significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or an insubstantial effect on the chemical, physical, and/or biological, integrity of a TNW. Principal considerations when evaluating significant nexus include the volume, duration, and frequency of the flow of water in the tributary and the proximity of the tributary to a TNW, plus the hydrologic, ecologic, and other functions performed by the tributary and all of its adjacent wetlands.”



3.0 LITERATURE REVIEW

3.1 USGS TOPOGRAPHIC MAP

The U.S. Geological Survey (USGS) 7.5-minute topographic series (Warren quadrangle) is shown on Figure 2 (Appendix A). Two perennial streams are shown crossing through the western and central portion of the project area. One of the perennial streams is shown crossing through the project area in two locations. These streams correspond to S-1, S-2a, and S-2b. The land is relatively flat with elevations ranging from approximately 920 feet above mean sea level (AMSL) to approximately 910 feet AMSL.

3.2 NWI MAP

The National Wetlands Inventory (NWI) map (Warren Quadrangle) of the project area is shown on Figure 3 (Appendix A). A large wetland system, a palustrine forested/shrub-shrub, broad leaved deciduous, seasonally flooded wetland (PFO1/SS1C) is shown crossing the project area in the west. This wetland corresponds to W-1. A palustrine scrub-shrub, broad leaved deciduous/emergent, persistent, temporarily flooded wetland system is shown crossing through the central portion of the project area. This wetland corresponds with the location of W-3.

3.3 COUNTY SOIL SURVEY

The project area is found on the *Soil Survey of Trumbull County, Ohio* and was accessed on the Soil Survey Geographic (SSURGO) Database (USDA Web Soil Survey, 2011) (Figure 4; Appendix A). Five soil types are depicted within the project area and are listed in Table 4. Sebring silt loam 0 to 2 percent slopes (Sb) is listed as hydric and Fitchville silt loam, 0 to 2 percent slopes (FcA) has hydric inclusions. The remaining three soil types are listed as non-hydric.

Table 4. Soil Types Found in Project Area.

Symbol	Soil Type	Status
Sb	Sebring silt loam	Hydric
FcA	Fitchville silt loam, 0 to 2 percent slopes	Hydric Inclusions
GfC	Glenford silt loam, 6 to 12 percent slopes	Non-hydric
RsB	Rittman silt loam, 2 to 6 percent slopes	Non-hydric
RsC	Rittman silt loam, 6 to 12 percent slopes	Non-hydric

3.4 U.S. FISH AND WILDLIFE SERVICE

The project area was examined for suitable habitat for federally listed species whose known ranges include Trumbull County. These species are the federally endangered Indiana bat (*Myotis sodalis*), the federally endangered clubshell (*Pleurobema clava*), the federally endangered snuffbox (*Epioblasma triquetra*), the federal candidate species eastern massasauga (*Sistrurus catenatus*), and the federal species of concern bald eagle (*Haliaeetus leucocephalus*).

Living or dead trees with shedding bark, peeling bark, or cavities may serve as roosting trees for the Indiana bat. Ten potential roosting trees (PRTs) with diameter at breast height (dbh) measurements of 6.3 to 34 inches were identified within or near the project area and are shown on Figure 5 (Attachment A). These potential roosting trees are black cherry (*Prunus serotina*), northern red oak (*Quercus rubra*), American elm (*Ulmus Americana*), black willow (*Salix nigra*), and standing dead. These trees receive 40 to 80 percent solar exposure. Because of their size and solar exposure, seven of these trees may be considered potential maternity roost trees (PMRTs) by USFWS. If any tree clearing of PRTs is proposed, coordination with USFWS is recommended.

Preferred habitat for the clubshell mussel is clean, loose sand and gravel in medium to small rivers and streams. Preferred habitat for the snuffbox mussel lives in small to medium sized creeks in areas with a swift current and some larger rivers, and Lake Erie. The project area contains some suitable habitat for the clubshell or snuffbox mussel. Coordination with the USFWS may be required prior to working within any of the onsite streams.

The eastern massasauga lives in wet areas including wet prairies, marshes, fens, and low areas along rivers and lakes. It also uses adjacent uplands during part of the year, preferring old field areas that are dominated by goldenrods and have mosaic of shrubs. The project area does not contain any suitable habitat for the eastern massasauga.

The bald eagle nests in large trees near water. No bald eagle habitat is present within the project area. However, according to the EOG Categorical Exclusion Agreement with the U.S. Fish and Wildlife Service (USFWS) dated December 19, 2011, Lordstown Township in Trumbull County has known occurrence of bald eagle nesting sites. David Henry of the USFWS was contacted via email on November 29, 2012 and confirmed that no known nesting sites are located within or near the project area. Therefore, no further coordination is required with USFWS in regards to the bald eagle.

3.5 AERIAL PHOTOGRAPHY

Recent aerial photograph of the project area is shown on Figure 5 (Appendix A). The site is depicted as forested, residential, and agricultural land. Residential development is shown along Highland Avenue and Brunstetter Road.

4.0 RESULTS

Five sample plots were established within three natural communities. One community is considered wetland. Table 5 summarizes the sample plot data.

Each sample plot, delineated wetlands, and other waters are illustrated on Figure 5 (Appendix A). The following section describes general conditions found within each plant community and summarizes relevant information from the data forms, located in Appendix C.

Table 5. Sample Plot Results.

Sample Plot	Photo*	Community**	Hydrophytic Vegetation	Wetlands Hydrology	Hydric Soil	Status	Location
1	1	PEM/SS	X	X	X	Wetland	W-1a
2	2	New Field				Non-wetland	SP 2
3	3	Agricultural Field				Non-Wetland	SP 3
4	4	PFO	X	X	X	Wetland	W-4
5	5	Forest	X			Non-Wetland	SP 5

*photos are located in Appendix B, **PEM/SS=Palustrine Emergent/Scrub Shrub, PFO=Palustrine Forested

4.1 NONWETLANDS

The upland portion of the project area is dominated by new field, agricultural field, forest, and maintained lawn. The new field area is represented by Sample Plot 2 and includes multiflora rose (*Rosa multiflora*, FACU), blackberry (*Rubus allegheniensis*, FACU), and glossy buckthorn (*Rhamnus frangula*, FAC) in the shrub layer. Growing in the herbaceous layer is orchard grass (*Dactylis glomorata*, FACU) and late goldenrod (*Solidago gigantea*, FACW).

The agricultural field is represented by Sample Plot 3 and is dominated by remnant corn (*Zea mays*, FACU), Kentucky bluegrass (*Poa pratensis*, FACU), dandelion (*Taraxacum officinale*, FACU), and ground ivy (*Glechoma hederacea*, FACU) in the herbaceous stratum.

The forested portions of the project area are represented by Sample Plot 5 and portions of Sample Plot 2. Growing in the tree stratum is sugar maple (*Acer saccharum*, FACU), pin oak (*Quercus palustris*, FACW), green ash (*Fraxinus pennsylvanica*, FACW), and Eastern white pine (*Pinus strobus*, FACU).

The mowed lawn includes Kentucky bluegrass, common dandelion, white clover (*Trifolium repens*, FACU), narrow plantain (*Plantago lanceolata*, FACU), and ground ivy (*Glechoma hederacea*, FACU).

4.2 WETLANDS

Four wetlands were identified and delineated within the project area. W-1, W-2 and W-3 consist of a mix of palustrine emergent (PEM) and palustrine scrub/shrub (PSS) vegetation. W-4 is dominated by palustrine forested (PFO) vegetation. The delineated wetlands have been categorized using the Ohio Rapid Assessment Method for Wetlands v.5.0 (ORAM); scoring forms are included in Appendix D. Wetland results are given in Table 6 and are briefly described in the following section. Wetland size has

been determined for areas within the project area. Wetlands are illustrated on Figure 5 (Appendix A).

Table 6. Wetland Results within the Project Area.

Wetland		Photo*	Cowardin Classification	ORAM Score	ORAM Category	Size within Project Area (acres)	Length of Wetland Crossing (feet)
W-1	a	6	PEM/PSS	41	Modified 2	0.066	75
	b	7				0.015	73
W-2		8	PEM/PSS	45	2	0.025	26
W-3		9	PEM/PSS	44	Modified 2	0.011	28
W-4		10	PFO	50	2	0.002	14
Total Wetlands						0.119	216

*photos are located in Appendix B

Sample Plot 1 characterizes the conditions found in onsite PEM/PSS wetlands. Typical herbaceous vegetation includes reed canary grass (*Phalaris arundinacea* FACW), stinging nettle (*Urtica dioica*, FAC), and fowl manna grass (*Glyceria striata*, OBL). Growing in the scrub/shrub layer of the wetlands is glossy buckthorn, northern arrowwood (*Viburnum recognitum*, FACW), and silky dogwood (*Cornus amomum*, FACW). Growing in the forested portion of W-4, represented by Sample Plot 4, is American elm (*Ulmus americana*, FACW) and green ash (*Fraxinus pennsylvanica*, FACW). The understory of W-4 consists of glossy buckthorn, Northern arrowwood, and wood reed grass (*Cinna arundinacea*, FACW). All of the onsite wetlands assessed within the range of Category 2 wetlands using the ORAM scoring method.

4.3 STREAMS AND RIVERS

Two perennial streams were identified and delineated within the project area. One stream (S-2) crosses the project area in two locations. The results are depicted in Table 7 and illustrated on Figure 5 (Appendix A). The perennial streams were assessed using the Qualitative Headwater Habitat Evaluation Index (QHEI); scoring forms are included in Appendix E.

Table 7. Stream and River Results within the Project Area.

Stream		Photos*	Type	OHWB Width (feet)	Depth at Time of Survey (inch)	Length Within Project Area (linear feet)	Area Within Project Area (acres)	QHEI Score
S-1		11-13	Perennial	15	24	125	0.043	38
S-2	a	14-16	Perennial	20	15	153	0.070	66
	b	17-19		20	24	172	0.079	58
Total Stream						450	0.192	

*photos are located in Appendix B

S-1 is a perennial stream that is flowing north offsite and eventually into S-2. S-2 is flowing north and east offsite into Mud Creek, a tributary of the Mahoning River. S-1 and S-2 both have drainage areas over one square mile and were assessed using the QHEI.

4.4 PONDS AND LAKES

No open water features are present within the project area.

5.0 REGULATORY JURISDICTION

The streams, wetlands and deepwater habitats described in this document are under the jurisdiction either of the U.S. Army Corps of Engineers or the Ohio EPA. No filling may occur in these areas without their written permission. Please contact the Ohio EPA Division of Surface Water at (614) 644-2001 or the Pittsburgh District, U.S. Army Corps of Engineers, at (412) 395-7103 before working in these areas.

The following information is excerpted and summarized from the 2007 *U.S. Army Corps Of Engineers Jurisdictional Determination Form Instructional Guidebook*.

“In 2001, the ... U.S. Supreme Court’s decision in the *Solid Waste Agency of Northern Cook County (SWANCC) v. Corps* held that isolated, intrastate, non-navigable waters could not be regulated under the CWA based solely on the presence of migratory birds. Following the SWANCC decision it generally was believed that a water body (including a wetland) was subject to CWA jurisdiction if the water body was part of the U.S. territorial seas, or a traditional navigable water, or any tributary to a traditional navigable water, or a wetland adjacent to any one of the above. In addition, isolated wetlands and other waters might be considered jurisdictional where they had the necessary link to either navigable waters or interstate commerce.”

In the state of Ohio, the Ohio EPA isolated wetland permitting program was legislatively created in response to the 2001 SWANCC decision. On July 17, 2001, House Bill 231

was signed into law, establishing a permanent permitting process for isolated wetlands. The provisions of House Bill 231 were incorporated in Sections 6111.021 through 6111.029 of the Ohio Revised Code.

“In 2006, the Supreme Court once again addressed the jurisdictional scope of Section 404 of the CWA, specifically the term “the waters of the U.S.,” in *Rapanos v. U.S.* and in *Carabell v. U.S.* (hereafter referred to as *Rapanos*).

The decision provides two new analytical standards for determining whether water bodies that are not traditional navigable waters (TNWs), including wetlands adjacent to those non-TNWs, are subject to CWA jurisdiction: (1) if the water body is relatively permanent, or if the water body is a wetland that directly abuts (e.g., the wetland is not separated from the tributary by uplands, a berm, dike, or similar feature) a relatively permanent water body (RPW), or (2) if a water body, in combination with all wetlands adjacent to that water body, has a significant nexus with TNWs. CWA jurisdiction over TNWs and their adjacent wetlands was not in question in this case, and, therefore, was not affected by the *Rapanos* decision. In addition, at least five of the Justices in *Rapanos* agreed that CWA jurisdiction exists over all TNWs and over all wetlands adjacent to TNWs.

The Memo states that the [Corps and USEPA] will assert jurisdiction over the following categories of water bodies: TNWs; all wetlands adjacent to TNWs; non-navigable tributaries of TNWs that are relatively permanent (i.e., tributaries that typically flow year-round or have continuous flow at least seasonally); and wetlands that directly abut such tributaries. In addition, the agencies will assert jurisdiction over every water body that is not an RPW if that water body is determined (on the basis of a fact-specific analysis) to have a significant nexus with a TNW. The classes of water body that are subject to CWA jurisdiction only if such a significant nexus is demonstrated are: non-navigable tributaries that do not typically flow year-round or have continuous flow at least seasonally; wetlands adjacent to such tributaries; and wetlands adjacent to but that do not directly abut a relatively permanent, non-navigable tributary. A significant nexus exists if the tributary, in combination with all of its adjacent wetlands, has more than a speculative or an insubstantial effect on the chemical, physical, and/or biological, integrity of a TNW. Principal considerations when evaluating significant nexus include the volume, duration, and frequency of the flow of water in the tributary and the proximity of the tributary to a TNW, plus the hydrologic, ecologic, and other functions performed by the tributary and all of its adjacent wetlands.”



6.0 ASSUMPTIONS AND DISCLAIMERS

The constant influence of human activity on the project area can result in a rapid change of ecological boundaries. Over time, natural succession and changes in hydrology can also affect their boundaries. Precision of GPS collected data is subject to variation caused by canopy cover, atmospheric interference and satellite configuration. Because slight inaccuracies are possible, all acreages and derived boundaries presented in this report are approximate.

The results and conclusions contained in this report apply to the year and date in which the data were collected. This report is not considered officially valid until it is approved by the Corps. The report is then valid for a period of five years. Refer to the Corps' Regulatory Guidance Letter # 94-1 (23 May 1994).



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Appendix A:

Figures

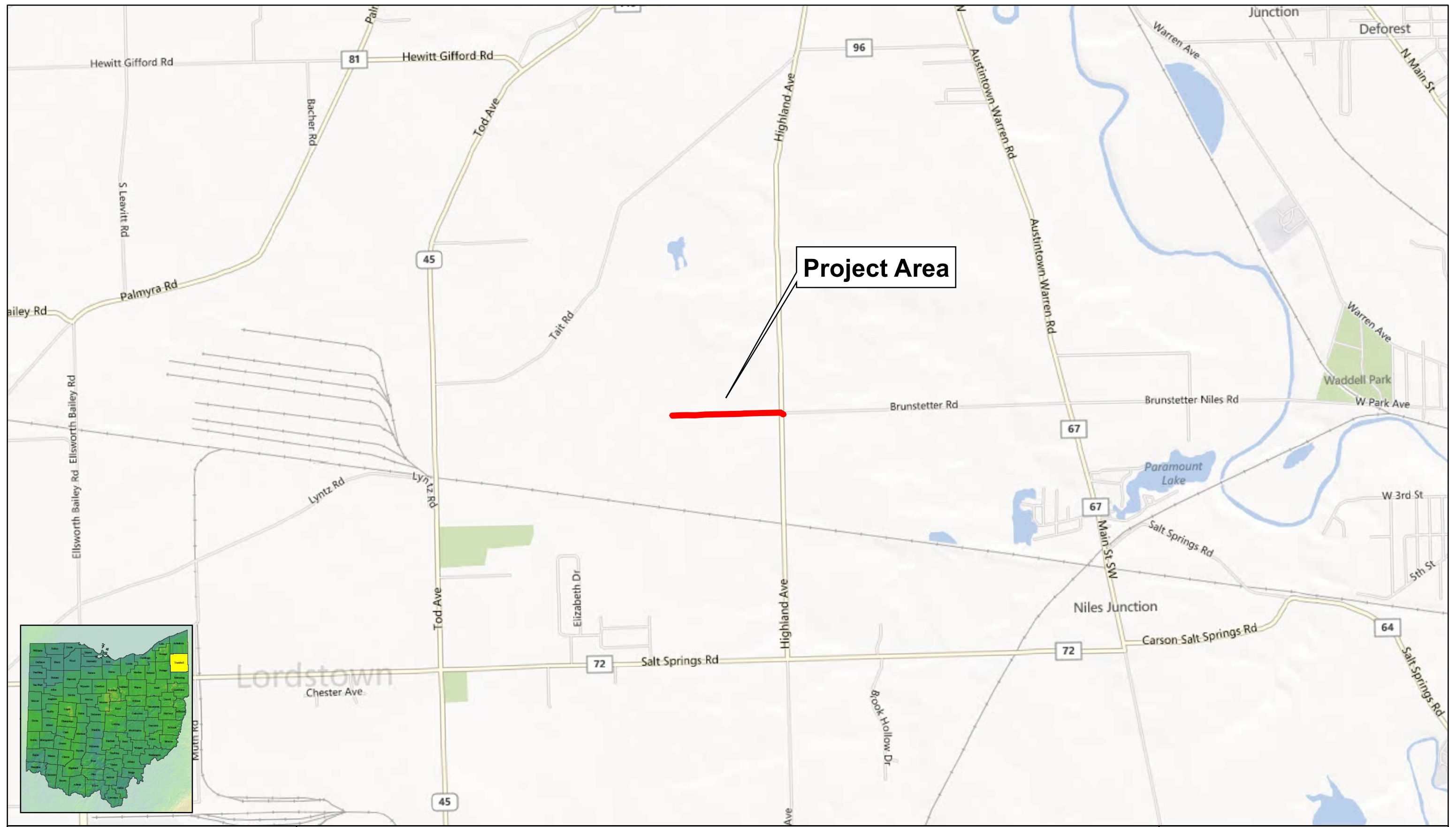
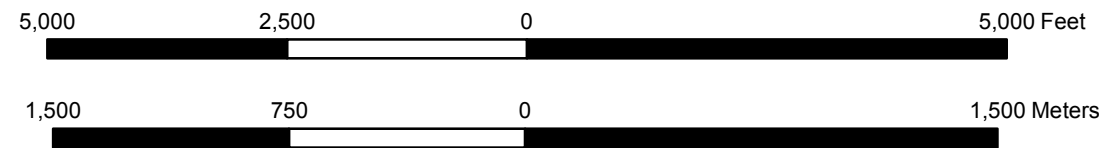


Figure 1. Location of Site
on Highway Map of Trumbull County, Ohio.
Brunstetter Connector.

 Project Area



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Summary: Correspondence Transmitting for Filing Staff Requested Documents - Part 1
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