



July 26, 2019

U.S. Fish and Wildlife Service
Pennsylvania Field Office
110 Radnor Rd, Suite 101
State College, PA 16801

**RE: (NEGATIVE) Phase 1 Bog Turtle Habitat Survey Conducted by a Recognized Qualified Bog Turtle Surveyor
I-80 Section 17M Reconstruction Project, 2019 Expanded Survey Area
East Stroudsburg and Stroudsburg Boroughs, and Stroud Township, Monroe County, Pennsylvania
USFWS Project # 2013-0652
PNDI # 664105**

To Whom it May Concern:

Thompson Environmental Surveys & Permitting, LLC. (TES&P) recently conducted a Phase 1 Bog Turtle (*Glyptemys muhlenbergii*) Habitat Survey (Phase 1) for AECOM at the Interstate 80 (I-80), Section 17M Reconstruction Project (Project), for the 2019 Expanded Survey Area (2019 Study Area). The Project entails the expansion and reconstruction of a 3.5-mile section of Interstate 80 in eastern Monroe County. The Project is needed to improve safety and bring the roadway up to current design criteria. Potential improvements being considered include interchange reconstructions or elimination, ramp relocations, additional travel and auxiliary lanes, and local road improvements. Stormwater facilities will also be incorporated throughout the Project area. The Project extends along Interstate 80 through Stroud Township from east of the S.R 2005 overpass bridge, through the Borough of Stroudsburg, and ends in East Stroudsburg Borough, west of the Lincoln Avenue overpass (**Figure 1**). In previous studies AECOM has performed Phase 1, and Phase 2 Bog Turtle Presence/Probable Absence Surveys (Phase 2) for the project and has received clearance from the United States Fish and Wildlife Service (USFWS) indicating the proposed project would not adversely affect threatened or endangered species. However, due to recently proposed design refinements an additional Project area is required. This report discusses the results of Phase 1 surveys conducted for this additional area.

The 2019 Study Area consists of areas including the proposed design refinements plus a 300-foot buffer. There are three areas that were previously not investigated located within 300 feet of the proposed design refinements. For the purposes of this report the areas are described as the Western Extent/Beech Street Area, the Route 209 Exchange Area, and the Bryant Street Area. The coordinates for the 2019 Study Area centers are 40.992771° and -75.253277°, 40.986513° and -75.216082°, 40.979364° and -75.192141° respectively. The Project is located on the United States Geological Survey (USGS) Stroudsburg and Saylorsburg, PA 7.5-minute topographical quadrangles (USGS, 2013). Land cover within the 2019 Expanded Study Area consists of forested,

riparian floodplain, and urban. Land use in the vicinity of the Project consists of commercial and industrial, residential, and primary roadways. The Project Site drains to Pocono Creek and McMichael Creek, which are located in the Delaware River basin.

The Phase 1 survey described herein conforms to the survey methodology outlined in the Guidelines for Bog Turtle Surveys (USFWS, Revised October 2018) pursuant to the Bog Turtle Recovery Plan (USFWS, 2001). This letter report discusses the results of the Phase 1 bog turtle habitat survey.

REGULATORY BACKGROUND

Federal law, specifically the Endangered Species Act (ESA) of 1973, mandates that all federal agencies undertaking projects that have an effect or have the potential to have an effect on threatened, endangered, or candidate species, be it through direct or indirect jurisdiction, such as a federal license or permit, must undergo Section 7 ESA Review. The Section 7 consultation process requires that federal agencies, or those entities seeking a federal license or permit, consider how their undertakings may affect endangered species and allow the USFWS or National Marine Fisheries Service (NMFS), if applicable, the opportunity to comment on such undertakings.

AECOM completed a Pennsylvania Natural Diversity Inventory (PNDI) project environmental review to determine if this Project could have potential effects on federally or state regulated threatened or endangered species. The environmental review (PNDI Project Search ID: 664105) identified a potential conflict with USFWS regulated species and requested a Phase 1 Bog Turtle Habitat Survey (**Attachment A**). Additionally, any projects in Pennsylvania which are located within the known range of bog turtles and may require a Chapter 105 Department of Environmental Protection (DEP) Individual Permit or a General Permit (GP) GP-5,6,7,8,9 or 11 must comply with the habitat screening requirements of the Pennsylvania State Programmatic General permit (PASPGP). The known range of the bog turtle in Pennsylvania includes; Adams, Berks, Bucks, Carbon, Chester, portions of Cumberland (Yellow Breeches Watershed), Delaware, portions of Dauphin (Conewago, and Spring Creek Watersheds), Franklin, Lancaster, Lebanon, Lehigh, Monroe, Montgomery, Northampton, Schuylkill (Swatara Creek Watershed), and York counties (USFWS 2018).

SURVEY METHODOLOGY

On June 06, 2019, TES&P biologist, Bridger Thompson, a USFWS and Pennsylvania Fish and Boat Commission (PFBC) Recognized Qualified Bog Turtle Surveyor (RQBTS) and AECOM biologist Joel Redding, conducted a Phase 1 survey for the above referenced Project in the 2019 Expanded Study Area to identify potential bog turtle habitat (PBTH). PBTH is recognized by three criteria: suitable hydrology (including spring seeps, shallow surface water, persistently saturated soils, subsurface flow, and rivulets); suitable soils (including a bottom substrate of soft muck, a critical criterion) and; suitable vegetative structure (including dominant vegetation of low grasses and sedges, reed canary grass, cattail, rice cut grass, phragmites, or skunk cabbage, and possibly a scrub-shrub wetland component with a relatively open canopy).

Based on Project shapefiles provided by AECOM that included the previously investigated Project Area and the 2019 proposed design refinements, the 2019 Expanded Study Area was determined. The 2019 Study Area included all wetlands identified within 300 feet of the proposed 2019 Expanded Project Area (**Figure 2**). Prior to conducting the survey, TES&P conducted a desktop



review for the Project and investigated historic aerial imagery of the 2019 Study Area. During the onsite surveys TES&P identified three wetlands and one watercourse within the 2019 Study Area. Each resource was assessed in its entirety for the conditions required to be considered PBTH. If a wetland was determined to be PBTH, the Designated Survey Area (DSA) within the wetland was determined. DSA is defined as all areas of the wetland where soft muck-like soils are present. Information recorded during the Phase 1 survey for each wetland is presented on the USFWS Phase 1 Bog Turtle Habitat Survey Field Forms for the Northern Population Range (Revised October 2018), including dominant plant species, substrate characteristics, and hydrology (**Attachment B**). Representative habitat conditions within the wetlands were photographed and are included in the attached photo log (**Attachment C**).

HABITAT ASSESSMENT RESULTS

During the onsite survey, TES&P investigated the three wetlands W-3-20, W-3-21, and W-3-22 and one watercourse WW-3-03 identified within the 2019 Study Area. The following is a brief description of the investigated resources and their potential to be considered bog turtle habitat.

Wetland W-3-20

Wetland W-3-20 is an approximately 0.12-acre palustrine unconsolidated bottom (PUB) open water/vernal pool resource situated within a natural topographic gully that extends south along a forested hillslope. The wetland is located south of I-80 and south of Beech Street in the Western Extent/Beech Street Area. The primary source of wetland hydrology is provided by an intermittent drainage and surface water runoff that flows south from the berm of Beech Street and becomes dammed by a manmade stone wall. The wetland was inundated with approximately two to twelve inches of surface water and was entirely non-vegetated at the time of the investigation. Due to the lack of any vegetative structure, no spring fed hydrology, and lack of a mucky substrate W-3-20 was not considered PBTH. The location of the wetland is depicted on **Figure 2**. Additional wetland information is provided in **Table 1**. Representative photographs are presented in **Attachment C**.

Wetland W-3-21

Wetland W-3-21 is an approximately 0.10-acre palustrine forested (PFO) vernal pool resource situated within a shallow topographic depression located on a bench on a forested hillslope. The wetland is located south of I-80 and south of Beech Street in the Western Extent/Beech Street Area. The primary source of wetland hydrology is provided by surface water runoff that collects within the depression. The wetland was inundated with approximately two to six inches of surface water and was dominated by red maple and hemlock at the time of the investigation. Due to the lack of the appropriate vegetative structure, no spring fed hydrology, and lack of a mucky substrate W-3-21 was not considered PBTH. The location of the wetland is depicted on **Figure 2**. Additional wetland information is provided in **Table 1**. Representative photographs are presented in **Attachment C**.

Wetland W-3-22

Wetland W-3-22 is an approximately 0.25-acre palustrine emergent (PEM) resource situated at the toe of a steep hillslope and within a high flow channel that extends along the floodway of Pocono Creek. The wetland is located north of I-80 and north of Pocono Creek in the Route 209 Exchange Area. The primary source of wetland hydrology is provided by a high groundwater table, and

seasonal groundwater seeps that discharge along the toe of slope. Additionally, the wetland exhibits evidence of historic scour and flood flow from Pocono Creek during flood events and historic man induced dredging or channelization. This resource may be more accurately described as a watercourse however; there were pockets within the channel that were completely vegetated and lacked a defined bed and bank. The wetland contained areas of deep standing water measured to depth greater than twelve inches. Vegetation in the wetland was spotty and consisted of skunk cabbage (*Symplocarpus foetidus*), duckweed (*Lemna minor*), and watercress (*Nasturtium officinale*). In portions of the wetland the soil substrate was mucky due to saturated conditions, accumulated organic material and leaf litter, and unseasonably high water table. However, most sections of the wetland contained a rocky cobble substrate and gravel distributed by flood flows. Portions of the wetland contained some vegetative species common to bog turtle habitat however, the vegetative structure and micro-habitat conditions were low quality. This wetland meets the minimum requirement to be considered potential bog turtle habitat. However, due to the small wetland size, the limited mucky soil conditions, the disturbed low-quality micro-habitat conditions, and the evidence of routine flooding, W-3-22 was not considered PBTH. The location of the wetland is depicted on **Figure 2**. Additional wetland information is provided in **Table 1**. Representative photographs are presented in **Attachment C**.

Watercourse WW-3-03

Resource WW-3-03 is officially delineated as a watercourse by AECOM; however, similar to wetland W-3-22, watercourse WW-3-03 contained pockets within the channel that were completely vegetated and lacked a defined bed and bank. WW-3-03 is an approximately 0.40-acre resource situated at the toe of a steep hillslope and within a high flow channel that extends along the floodway of Pocono Creek. The watercourse is located north of I-80 and south of Pocono Creek in the Route 209 Exchange Area. The primary source of wetland hydrology is provided by high groundwater and seasonal spring seeps that discharge along the toe of slope. Additionally, the channel exhibits evidence of historic scour and flood flow from Pocono Creek during flood events. The channel contained areas of flowing water measured to depths of two to sixteen inches. Vegetation in the channel was spotty and consisted of duckweed and watercress with fringes of common reed (*Phragmites australis*). In portions of the channel the soil substrate was mucky due to saturated conditions, accumulated organic material, and silt. However, most sections of the channel contained a rocky cobble substrate and gravel distributed by flood flows. Portions of the channel contained some vegetative species common to bog turtle habitat, however, the vegetative structure and micro-habitat conditions were low quality. Due to the deep surface water, the limited mucky soil conditions, the low-quality micro-habitat conditions, and the evidence of routine flooding, WW-3-03 was not considered PBTH. The location of the resource is depicted on **Figure 2**. Additional resource information is provided in **Table 1**. Representative photographs are presented in **Attachment C**.

Table 1- Resource Identification Table

Resource ID / DSA ID	Type (PEM/PFO/PSS) ² (EPH, INT, PER) ³	Latitude	Longitude	Approximate Wetland Acreage w/in Phase 1 Study Area (ac.)	Potential Bog Turtle Habitat	Approx. Acreage of DSA
					(Y / N/ UK) ⁴	(ac.)
W-3-20	PUB	40.991725	-75.253442	0.12	N	N/A
W-3-21	PFO	40.991289	-75.253550	0.10	N	N/A
W-3-22	PEM	40.986157	-75.213367	0.25	N	N/A
WW-3-03	PER	40.984406	-75.212584	0.40	N	N/A

1. PEM-Palustrine emergent, PFO-Palustrine forested PSS-Palustrine scrub-shrub, PUB-Palustrine unconsolidated bottom.
2. EPH-Ephemeral, INT-Intermittent, PER-Perennial.
3. Y-Yes, N-No, UK-unknown.

CONCLUSION

On June 06, 2019 TES&P’s Recognized Qualified Bog Turtle Surveyor Bridger Thompson conducted a Phase 1 Bog Turtle Habitat Survey for the Interstate 80, Section 17M Reconstruction Project, 2019 Expanded Survey Area. Three wetlands and one watercourse were investigated. No wetlands were determined to be PBTH.

Sincerely,
Thompson Environmental Surveys & Permitting, LLC.

Bridger Thompson
 USFWS/PFBC Qualified Bog Turtle Surveyor
 bridger@embarqmail.com
 (717) 609-3301

Enclosures (4)

- Figure 1: Location Map
- Figure 2: Phase 1 Bog Turtle Survey Study Area Map
- Attachment A: PNDI Receipt
- Attachment B: USFWS Phase 1 Bog Turtle Habitat Survey Field Forms
- Attachment C: Photo log



REFERENCES

National Geographic Society. 2013. Seamless Layer 2013 (Topo Source: Seamless Digital Raster Graphic-N.P.S. Natural Physical Map & U.S.G.S. Topographic Map i-cubed USGS Quad: Stroudsburg and Saylorsburg, PA).

USFWS. 2001. *Bog Turtle (Clemmys muhlenbergii), Northern Population Recovery Plan*. Hadley, Massachusetts.

USFWS. 2018 (revised October 2018). *Guidelines for Bog Turtle Surveys*. Accessed at https://www.fws.gov/northeast/nyfo/es/REVISED%20Phase%201%20and%202%20Protocols_10.26.18_FINAL.pdf



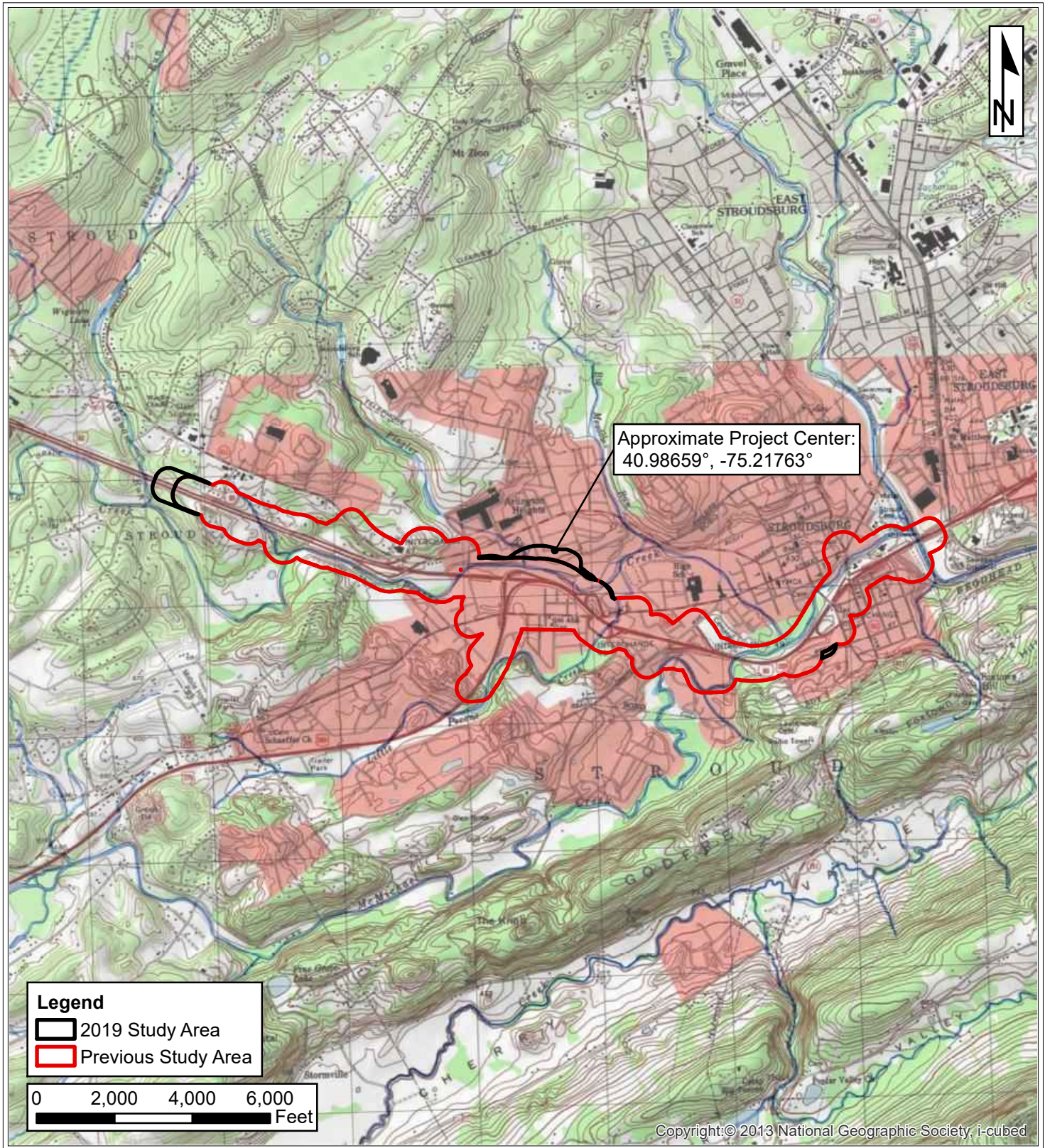
Figures

Figure 1:
Project Location Map

Figure 2:
Phase 1 Bog Turtle Habitat Survey Map

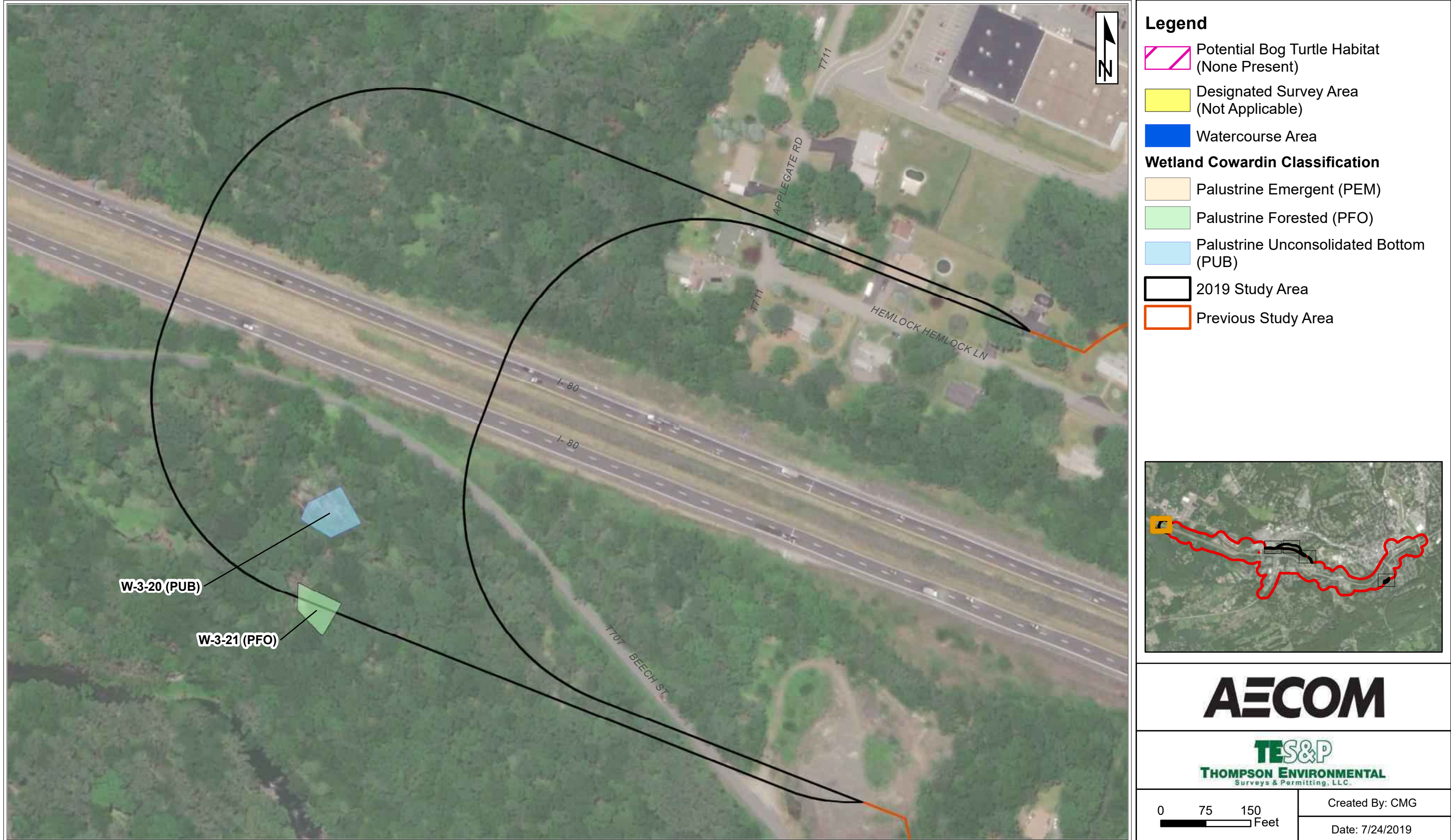
INTERSTATE 80, SECTION 17M, RECONSTRUCTION PROJECT 2019 PHASE 1 BOG TURTLE HABITAT SURVEY ADDENDUM

Figure 1: Location Map



**INTERSTATE 80, SECTION 17M, RECONSTRUCTION PROJECT, 2019 PHASE 1 BOG TURTLE HABITAT SURVEY ADDENDUM
WESTERN EXTENT/BEECH STREET AREA**

Figure 2: Phase 1 Bog Turtle Habitat Survey



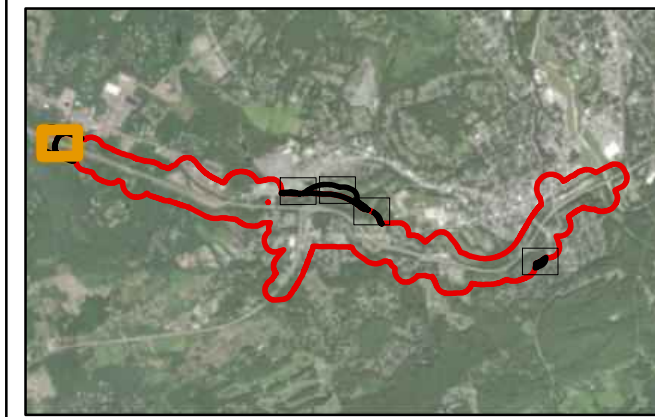
Legend

- Potential Bog Turtle Habitat (None Present)
- Designated Survey Area (Not Applicable)
- Watercourse Area

Wetland Cowardin Classification

- Palustrine Emergent (PEM)
- Palustrine Forested (PFO)
- Palustrine Unconsolidated Bottom (PUB)

- 2019 Study Area
- Previous Study Area



AECOM

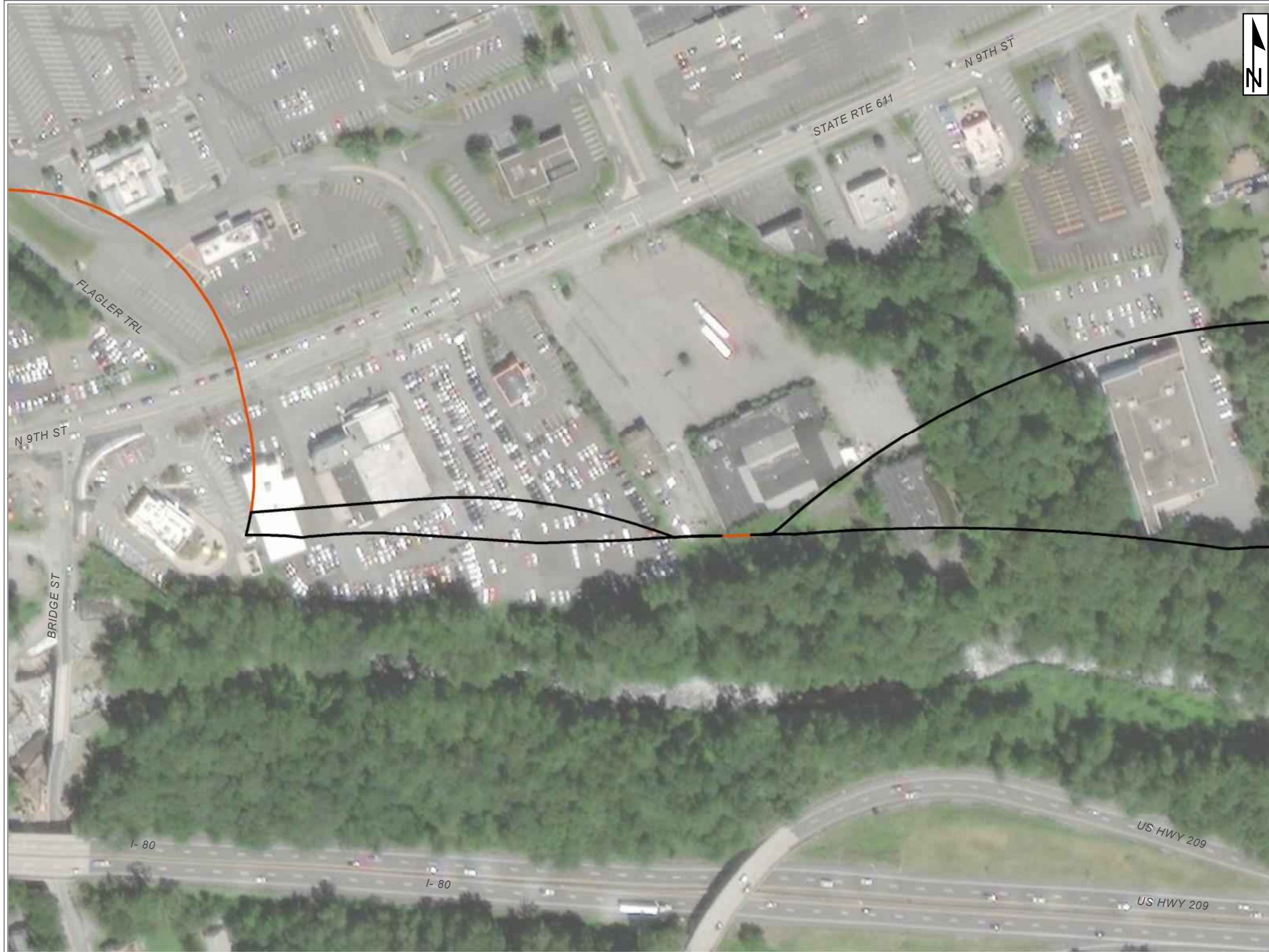
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Surveys & Permitting, LLC.

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

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**INTERSTATE 80, SECTION 17M, RECONSTRUCTION PROJECT, 2019 PHASE 1 BOG TURTLE HABITAT SURVEY ADDENDUM
ROUTE 209 EXCHANGE AREA**




Figure 2: Phase 1 Bog Turtle Habitat Survey





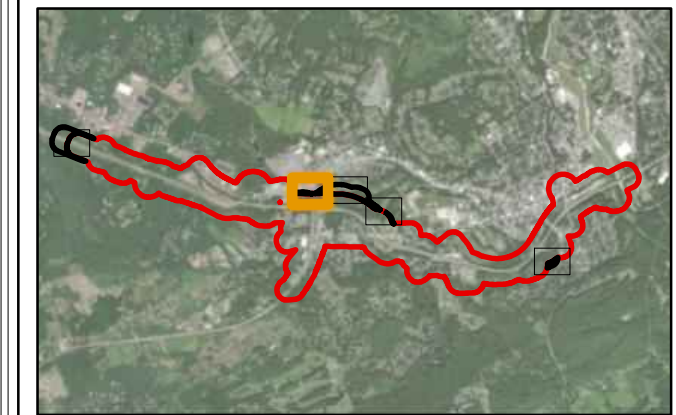
Legend

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-  Designated Survey Area (Not Applicable)
-  Watercourse Area

Wetland Cowardin Classification

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-  2019 Study Area
-  Previous Study Area



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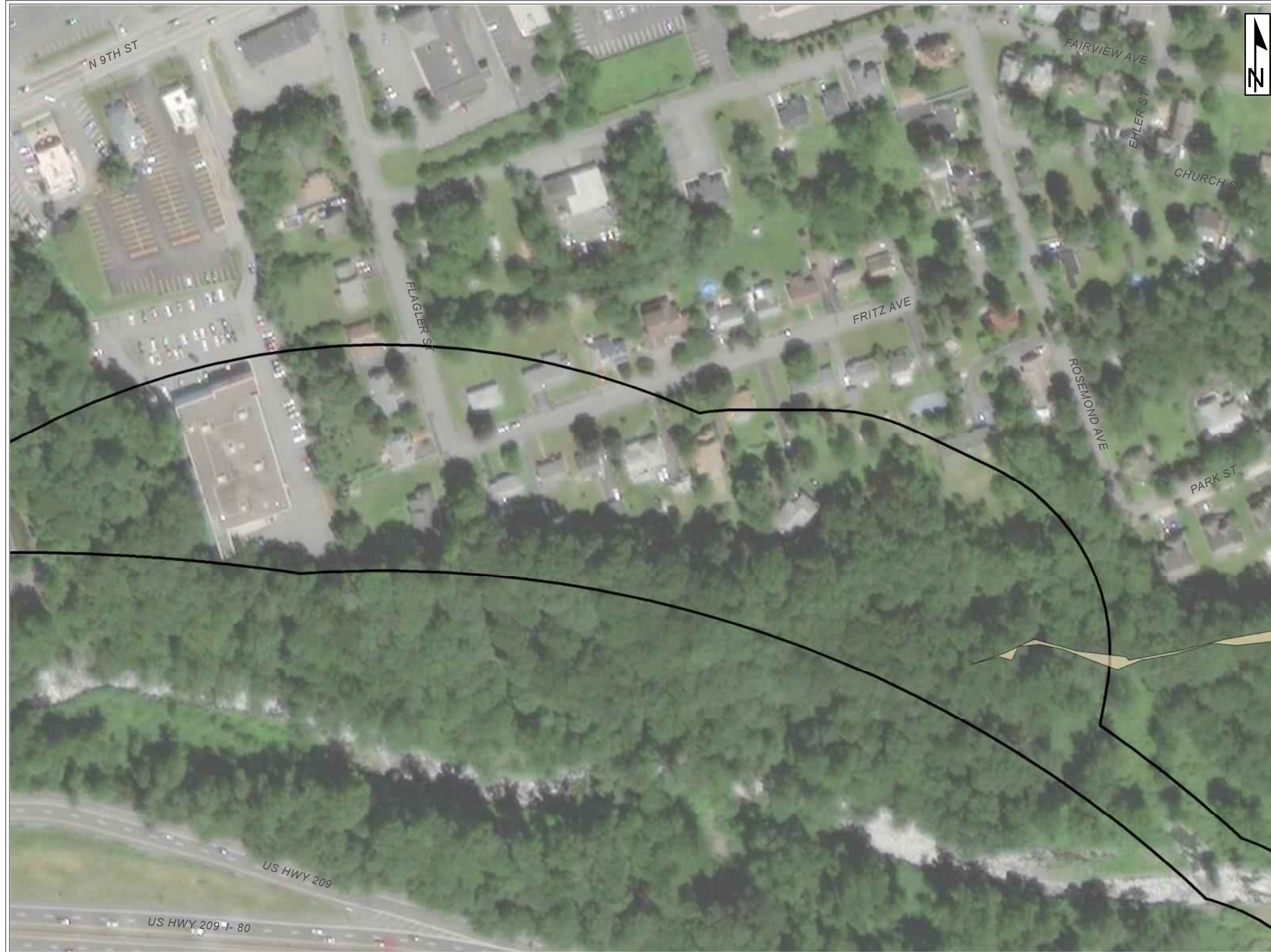
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






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**INTERSTATE 80, SECTION 17M, RECONSTRUCTION PROJECT, 2019 PHASE 1 BOG TURTLE HABITAT SURVEY ADDENDUM
ROUTE 209 EXCHANGE AREA**

Figure 2: Phase 1 Bog Turtle Habitat Survey



Legend

-  Potential Bog Turtle Habitat (None Present)
-  Designated Survey Area (Not Applicable)
-  Watercourse Area
- Wetland Cowardin Classification**
-  Palustrine Emergent (PEM)
-  Palustrine Forested (PFO)
-  Palustrine Unconsolidated Bottom (PUB)
-  2019 Study Area
-  Previous Study Area



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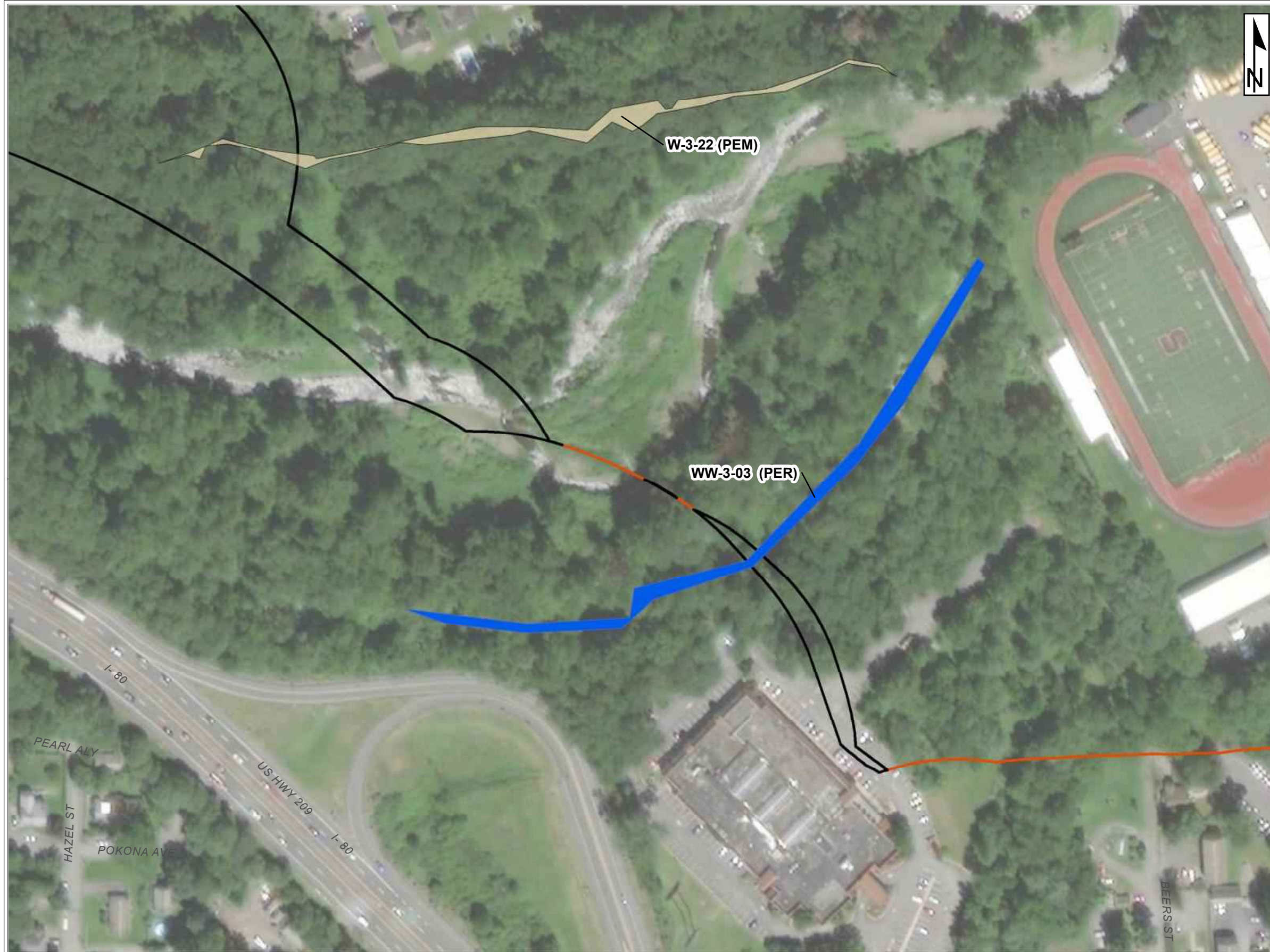
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

Date: 7/24/2019

**INTERSTATE 80, SECTION 17M, RECONSTRUCTION PROJECT, 2019 PHASE 1 BOG TURTLE HABITAT SURVEY ADDENDUM
ROUTE 209 EXCHANGE AREA**




Figure 2: Phase 1 Bog Turtle Habitat Survey





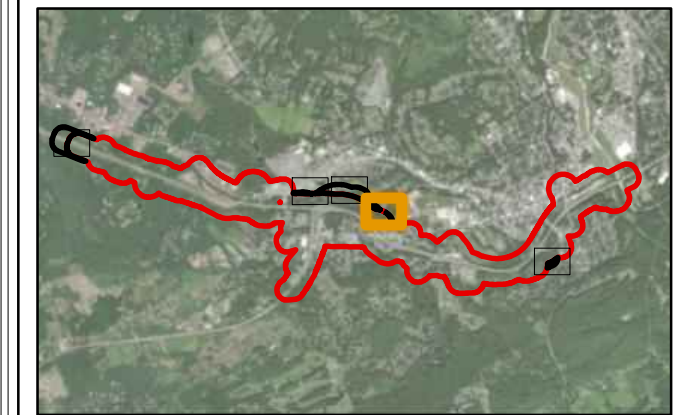
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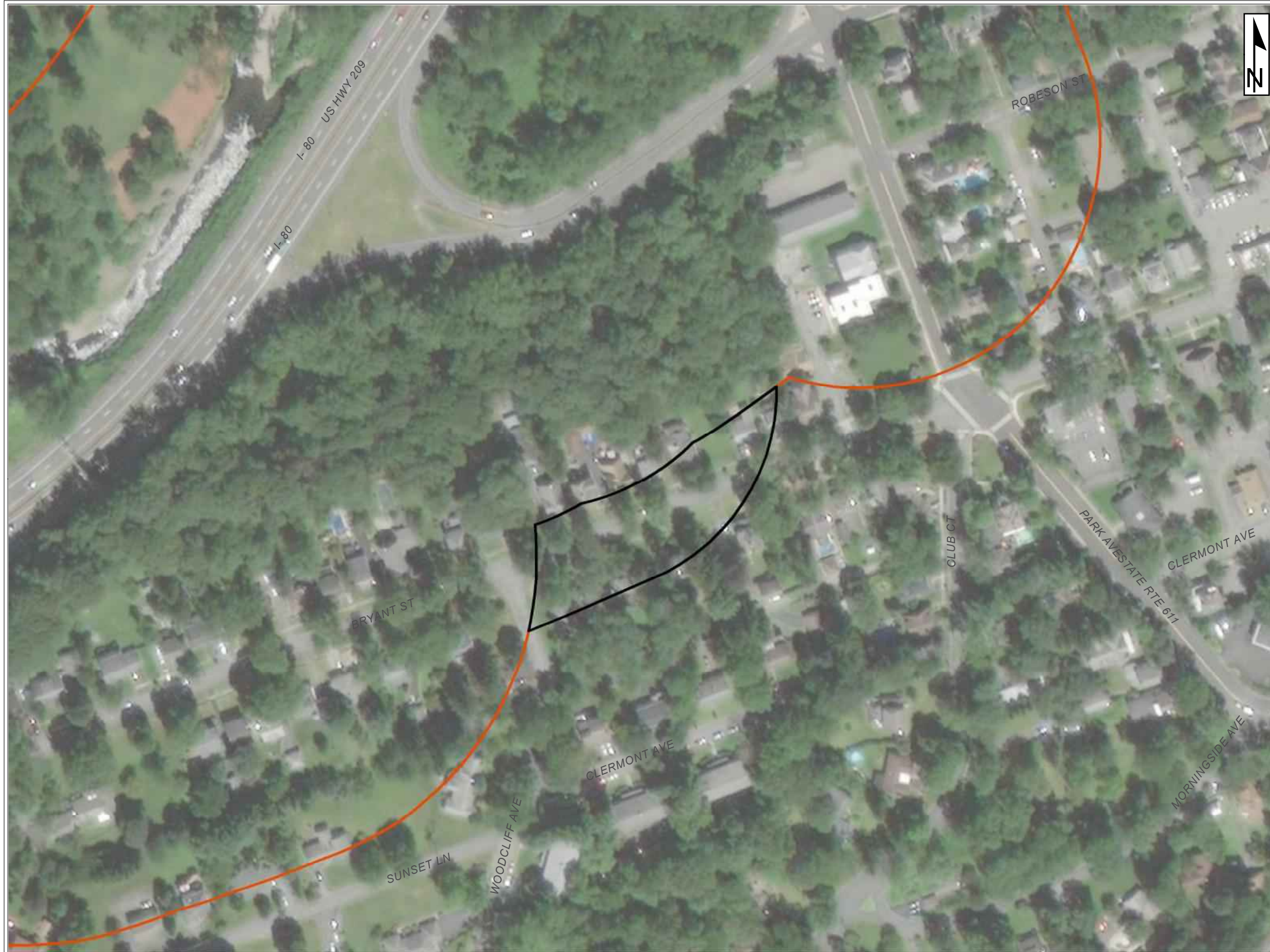
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

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**INTERSTATE 80, SECTION 17M, RECONSTRUCTION PROJECT, 2019 PHASE 1 BOG TURTLE HABITAT SURVEY ADDENDUM
BRYANT STREET AREA**




Figure 2: Phase 1 Bog Turtle Habitat Survey





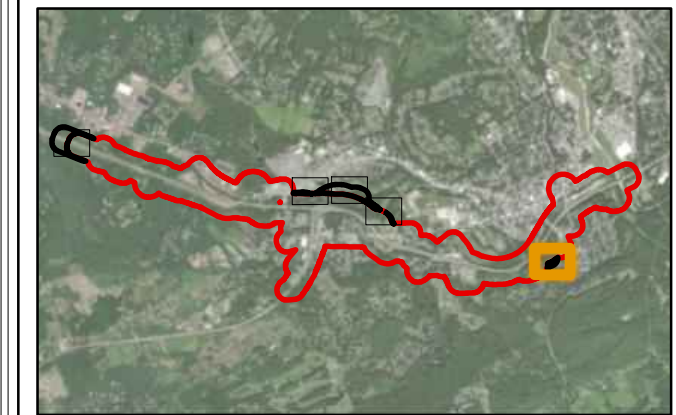
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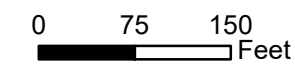
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Date: 7/24/2019

Attachment A

PNDI Receipt



1. PROJECT INFORMATION

Project Name: **I-80 Section 17M Reconstruction Project**

Date of Review: **5/1/2019 09:39:50 AM**

Project Category: **Transportation, Roads, Widening, adding lanes with disturbance beyond existing shoulders
WITH drainage pipe replacements**

Project Area: **270.77 acres**

County(s): **Monroe**

Township/Municipality(s): **EAST STROUDSBURG; STROUD; STROUDSBURG**

ZIP Code: **18301; 18360**

Quadrangle Name(s): **SAYLORSBURG; STROUDSBURG**

Watersheds HUC 8: **Middle Delaware-Mongaup-Brodhead**

Watersheds HUC 12: **Lower Broadhead Creek; Lower McMichael Creek; Lower Pocono Creek**

Decimal Degrees: **40.984385, -75.218399**

Degrees Minutes Seconds: **40° 59' 3.7854" N, 75° 13' 6.2346" W**

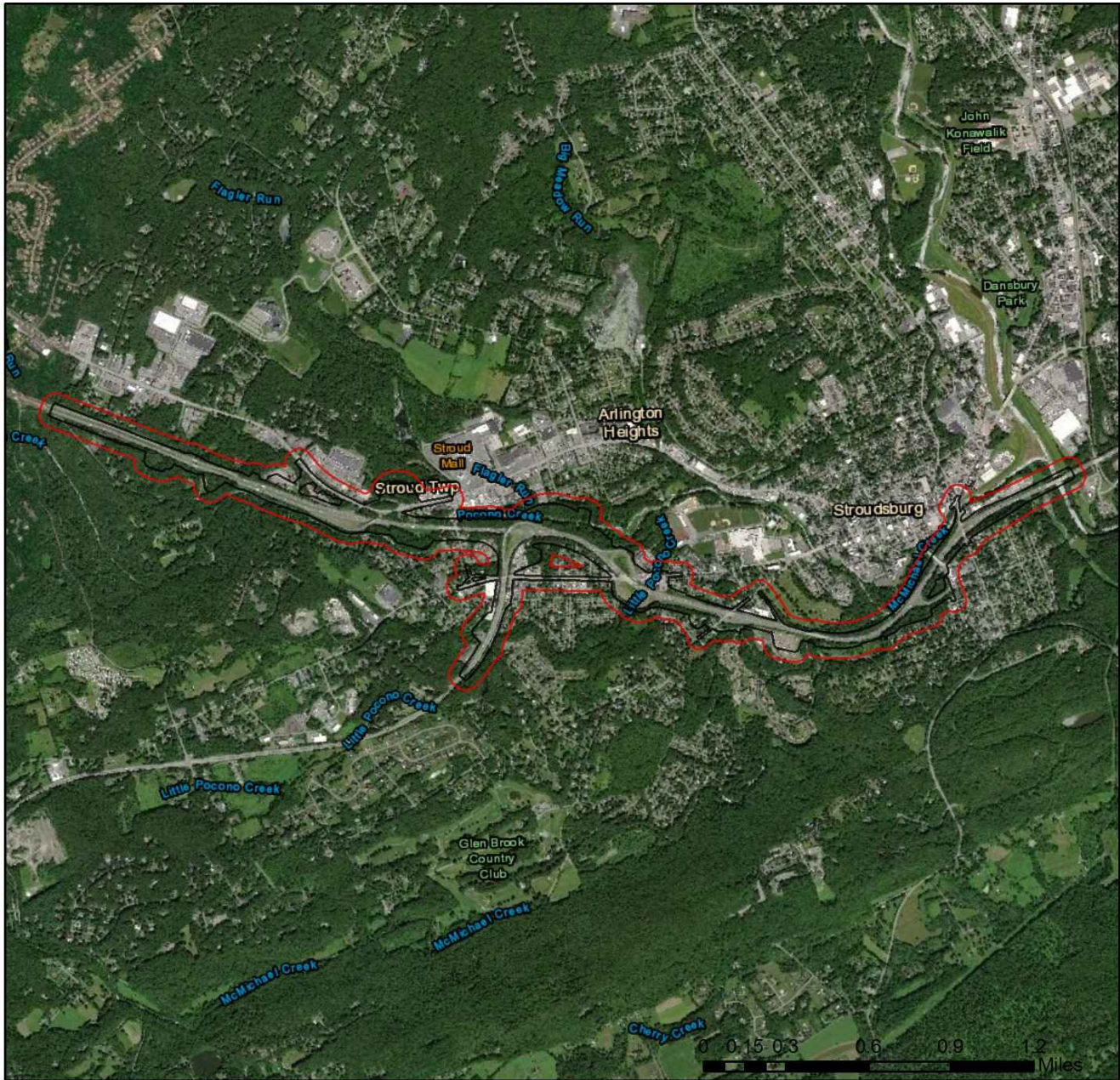
2. SEARCH RESULTS



Agency	Results	Response
PA Game Commission	Conservation Measure	No Further Review Required, See Agency Comments
PA Department of Conservation and Natural Resources	No Known Impact	No Further Review Required
PA Fish and Boat Commission	Potential Impact	FURTHER REVIEW IS REQUIRED, See Agency Response
U.S. Fish and Wildlife Service	Potential Impact	MORE INFORMATION REQUIRED, See Agency Response

As summarized above, Pennsylvania Natural Diversity Inventory (PNDI) records indicate there may be potential impacts to threatened and endangered and/or special concern species and resources within the project area. If the response above indicates "No Further Review Required" no additional communication with the respective agency is required. If the response is "Further Review Required" or "See Agency Response," refer to the appropriate agency comments below. Please see the DEP Information Section of this receipt if a PA Department of Environmental Protection Permit is required.

Note that regardless of PNDI search results, projects requiring a Chapter 105 DEP individual permit or GP 5, 6, 7, 8, 9 or 11 must comply with the bog turtle habitat screening requirements of the PASPGP.

I-80 Section 17M Reconstruction Project

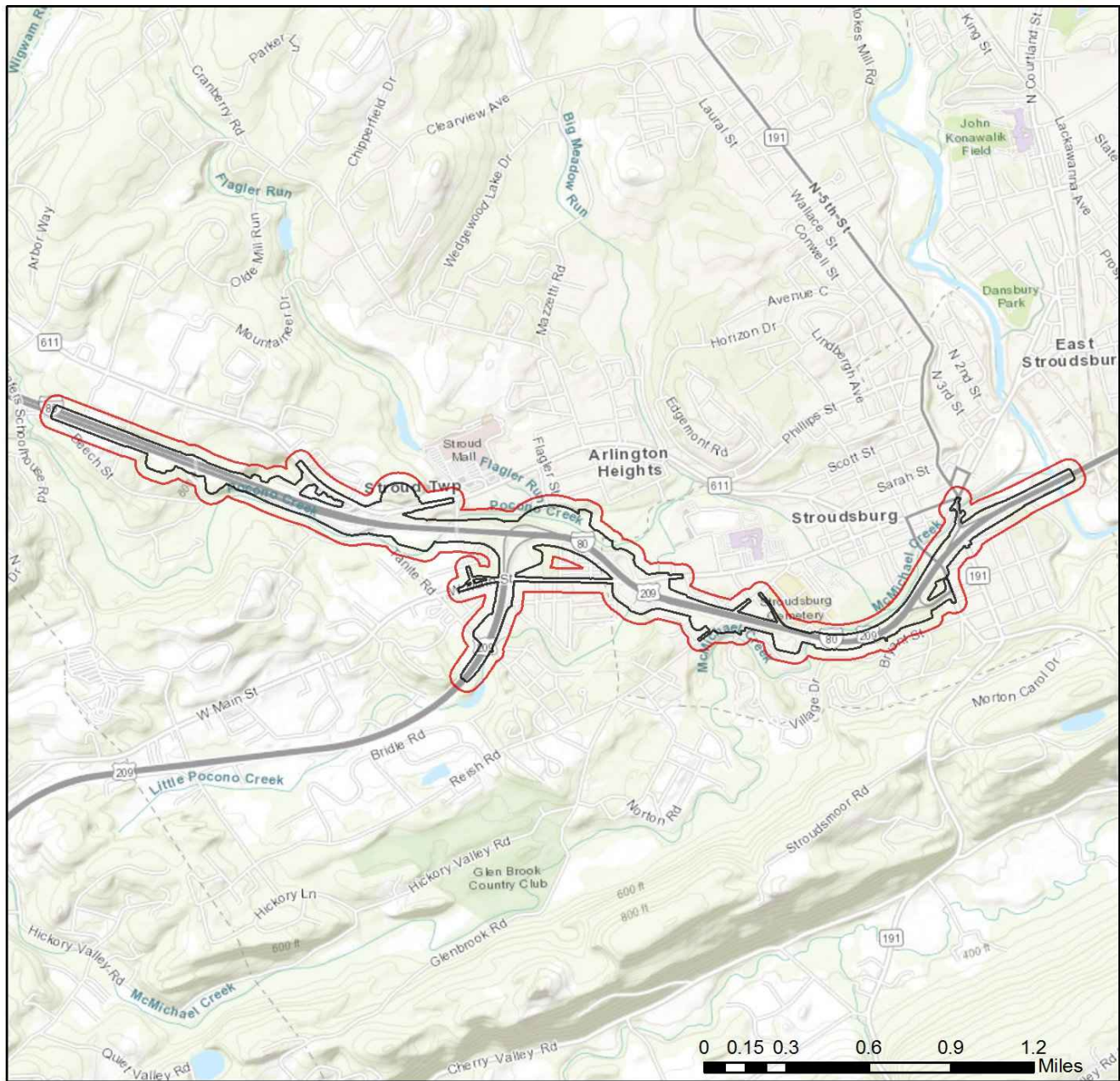


-  Project Boundary
-  Buffered Project Boundary



Service Layer Credits: Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community
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I-80 Section 17M Reconstruction Project



- Project Boundary
- Buffered Project Boundary

Service Layer Credits: Sources: Esri, HERE, DeLorme, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS, NRCAN, GeoBase, IGN, Kadaster NL, Ordnance Survey, Esri Japan, METI, Esri China (Hong Kong), swisstopo, MapmyIndia, © OpenStreetMap contributors, and the GIS User Community
Sources: Esri, HERE, Garmin, Intermap, increment P Corp., GEBCO, USGS, FAO, NPS,



RESPONSE TO QUESTION(S) ASKED

Q1: Accurately describe what is known about wetland presence in the project area or on the land parcel by selecting ONE of the following. "Project" includes all features of the project (including buildings, roads, utility lines, outfall and intake structures, wells, stormwater retention/detention basins, parking lots, driveways, lawns, etc.), as well as all associated impacts (e.g., temporary staging areas, work areas, temporary road crossings, areas subject to grading or clearing, etc.). Include all areas that will be permanently or temporarily affected -- either directly or indirectly -- by any type of disturbance (e.g., land clearing, grading, tree removal, flooding, etc.). Land parcel = the lot(s) on which some type of project(s) or activity(s) are proposed to occur.

Your answer is: Someone qualified to identify and delineate wetlands has investigated the site, and determined that wetlands ARE located in or within 300 feet of the project area. (A written report from the wetland specialist, and detailed project maps should document this.)

Q2: The proposed project is in the range of the Indiana bat. Describe how the project will affect bat habitat (forests, woodlots and trees) and indicate what measures will be taken in consideration of this. Round acreages up to the nearest acre (e.g., 0.2 acres = 1 acre).

Your answer is: The project will affect 40 to 200 acres of forests, woodlots and trees AND a seasonal restriction on tree clearing will be implemented.

Q3: Is tree removal, tree cutting or forest clearing of 40 acres or more necessary to implement all aspects of this project?

Your answer is: Yes

3. AGENCY COMMENTS

Regardless of whether a DEP permit is necessary for this proposed project, any potential impacts to threatened and endangered species and/or special concern species and resources must be resolved with the appropriate jurisdictional agency. In some cases, a permit or authorization from the jurisdictional agency may be needed if adverse impacts to these species and habitats cannot be avoided.

These agency determinations and responses are **valid for two years** (from the date of the review), and are based on the project information that was provided, including the exact project location; the project type, description, and features; and any responses to questions that were generated during this search. If any of the following change: 1) project location, 2) project size or configuration, 3) project type, or 4) responses to the questions that were asked during the online review, the results of this review are not valid, and the review must be searched again via the PNDI Environmental Review Tool and resubmitted to the jurisdictional agencies. The PNDI tool is a primary screening tool, and a desktop review may reveal more or fewer impacts than what is listed on this PNDI receipt. The jurisdictional agencies **strongly advise against** conducting surveys for the species listed on the receipt prior to consultation with the agencies.

PA Game Commission

RESPONSE:

Conservation Measure: Potential impacts to state and federally listed species which are under the jurisdiction of both the Pennsylvania Game Commission (PGC) and the U.S. Fish and Wildlife Service may occur as a result of this project. As a result, the PGC defers comments on potential impacts to federally listed species to the U.S. Fish and Wildlife Service. No further coordination with the Pennsylvania Game Commission is required at this time.

PA Department of Conservation and Natural Resources

RESPONSE:

No Impact is anticipated to threatened and endangered species and/or special concern species and resources.

PA Fish and Boat Commission

RESPONSE:

Further review of this project is necessary to resolve the potential impact(s). Please send project information to this agency for review (see WHAT TO SEND).

PFBC Species: (Note: The Pennsylvania Conservation Explorer tool is a primary screening tool, and a desktop review may reveal more or fewer species than what is listed below.)

Scientific Name	Common Name	Current Status
Sensitive Species**		Special Concern Species*

U.S. Fish and Wildlife Service

RESPONSE:

Information Request: Conduct a Bog Turtle Habitat (Phase 1) Survey in accordance with USFWS Guidelines for Bog Turtle Surveys (April 2006). Evaluate all wetlands within 300 feet of the project area, which includes all areas that will be impacted by earth disturbance or project features (e.g., roads, structures, utility lines, lawns, detention basins, staging areas, etc.). IF THE PHASE 1 SURVEY IS DONE BY A QUALIFIED BOG TURTLE SURVEYOR (see <https://www.fws.gov/northeast/pafo/endangered/surveys.html>): 1) Send positive results to USFWS for concurrence, along with a project description documenting how impacts will be avoided. OR, conduct a Phase 2 survey and send Phase 1 and 2 results to USFWS for concurrence. 2) Send a courtesy copy of negative results to USFWS (label as "Negative Phase 1 Survey Results by Qualified Bog Turtle Surveyor: USFWS Courtesy Copy"). USFWS approval of negative results is not necessary when a qualified surveyor does the survey in full accordance with USFWS guidelines. IF THE PHASE 1 SURVEY IS NOT DONE BY A QUALIFIED SURVEYOR: Send ALL Phase 1 results to USFWS for concurrence, and if potential habitat is found, also send a project description documenting how impacts will be avoided. As a qualified bog turtle surveyor, I _____ (name) certify that I conducted a Phase 1 survey of all wetlands in and within 300 feet of the project area on _____ (date) and determined that bog turtle habitat is absent.

_____ (Signature)

* Special Concern Species or Resource - Plant or animal species classified as rare, tentatively undetermined or candidate as well as other taxa of conservation concern, significant natural communities, special concern populations (plants or animals) and unique geologic features.

** Sensitive Species - Species identified by the jurisdictional agency as collectible, having economic value, or being susceptible to decline as a result of visitation.

WHAT TO SEND TO JURISDICTIONAL AGENCIES

If project information was requested by one or more of the agencies above, upload* or email* the following information to the agency(s). Instructions for uploading project materials can be found [here](#). This option provides the applicant with the convenience of sending project materials to a single location accessible to all three state agencies. Alternatively, applicants may email or mail their project materials (see AGENCY CONTACT INFORMATION).

*Note: U.S.Fish and Wildlife Service requires applicants to mail project materials to the USFWS PA field office (see AGENCY CONTACT INFORMATION). USFWS will not accept project materials submitted electronically (by upload or email).

Check-list of Minimum Materials to be submitted:

____ Project narrative with a description of the overall project, the work to be performed, current physical characteristics of the site and acreage to be impacted.

____ A map with the project boundary and/or a basic site plan (particularly showing the relationship of the project to the physical features such as wetlands, streams, ponds, rock outcrops, etc.)

In addition to the materials listed above, USFWS REQUIRES the following

____ **SIGNED** copy of a Final Project Environmental Review Receipt

The inclusion of the following information may expedite the review process.

____ Color photos keyed to the basic site plan (i.e. showing on the site plan where and in what direction each photo was taken and the date of the photos)

____ Information about the presence and location of wetlands in the project area, and how this was determined (e.g., by a qualified wetlands biologist), if wetlands are present in the project area, provide project plans showing the location of all project features, as well as wetlands and streams.

4. DEP INFORMATION

The Pa Department of Environmental Protection (DEP) requires that a signed copy of this receipt, along with any required documentation from jurisdictional agencies concerning resolution of potential impacts, be submitted with applications for permits requiring PNDI review. Two review options are available to permit applicants for handling PNDI coordination in conjunction with DEP's permit review process involving either T&E Species or species of special concern. Under sequential review, the permit applicant performs a PNDI screening and completes all coordination with the appropriate jurisdictional agencies prior to submitting the permit application. The applicant will include with its application, both a PNDI receipt and/or a clearance letter from the jurisdictional agency if the PNDI Receipt shows a Potential Impact to a species or the applicant chooses to obtain letters directly from the jurisdictional agencies. Under concurrent review, DEP, where feasible, will allow technical review of the permit to occur concurrently with the T&E species consultation with the jurisdictional agency. The applicant must still supply a copy of the PNDI Receipt with its permit application. The PNDI Receipt should also be submitted to the appropriate agency according to directions on the PNDI Receipt. The applicant and the jurisdictional agency will work together to resolve the potential impact(s). See the DEP PNDI policy at <https://conservationexplorer.dcnr.pa.gov/content/resources>.



5. ADDITIONAL INFORMATION

The PNDI environmental review website is a preliminary screening tool. There are often delays in updating species status classifications. Because the proposed status represents the best available information regarding the conservation status of the species, state jurisdictional agency staff give the proposed statuses at least the same consideration as the current legal status. If surveys or further information reveal that a threatened and endangered and/or special concern species and resources exist in your project area, contact the appropriate jurisdictional agency/agencies immediately to identify and resolve any impacts.

For a list of species known to occur in the county where your project is located, please see the species lists by county found on the PA Natural Heritage Program (PNHP) home page (www.naturalheritage.state.pa.us). Also note that the PNDI Environmental Review Tool only contains information about species occurrences that have actually been reported to the PNHP.

6. AGENCY CONTACT INFORMATION

PA Department of Conservation and Natural Resources

Bureau of Forestry, Ecological Services Section
400 Market Street, PO Box 8552
Harrisburg, PA 17105-8552
Email: RA-HeritageReview@pa.gov

U.S. Fish and Wildlife Service

Pennsylvania Field Office
Endangered Species Section
110 Radnor Rd; Suite 101
State College, PA 16801
NO Faxes Please

PA Fish and Boat Commission

Division of Environmental Services
595 E. Rolling Ridge Dr., Bellefonte, PA 16823
Email: RA-FBPACENOTIFY@pa.gov

PA Game Commission

Bureau of Wildlife Habitat Management
Division of Environmental Planning and Habitat Protection
2001 Elmerton Avenue, Harrisburg, PA 17110-9797
Email: RA-PGC_PNDI@pa.gov
NO Faxes Please

7. PROJECT CONTACT INFORMATION

Name: Christopher Salvatico, GISP
Company/Business Name: AECOM Address: 437 High Street
City, State, Zip: Burlington, NJ 08016 Phone: (609) 386-5444 ex 131 Email: christopher.salvatico@aecom.com

8. CERTIFICATION

I certify that ALL of the project information contained in this receipt (including project location, project size/configuration, project type, answers to questions) is true, accurate and complete. In addition, if the project type, location, size or configuration changes, or if the answers to any questions that were asked during this online review change, I agree to re-do the online environmental review.

Christopher Salvatico

applicant/project proponent signature

May 1, 2019

date

Attachment B

Phase 1 Bog Turtle Habitat Survey Field Forms for the Northern
Population Range



Phase 1 Bog Turtle Habitat Survey Data Form
For the Northern Population Range
(Revised October 23, 2018)

Wetland ID: W-3-20

General Info

Property/Project Name I-80 SCL-17M Reconstruction, 2019 API Updates County Monroe
Entity Requesting Phase 1 Survey (landowner, developer, agency): AECOM
Township/Municipality: Stroud Township
Lead Surveyor: Bridge Thompson Affiliation: Thompson Environmental
Other Assistants Present: Joel Redding

Date/Condition

Date of Survey: 06/05/2019 Time In: 10:00 Time Out: 10:15 Air Temp. 80 (F)°C°
Last Precipitation: < 24 hours 1-7 days > 1 week unknown Drought conditions? YES NO Unknown
Drought Index*¹ (Circle): D0 D1 D2 D3 D4 Notes (e.g., details about drought, flood, abnormally dry, seasonal conditions):
Heavy rains within the last 48 hours.

Wetland Info

Wetland ID: W-3-20 Wetland Size: 0.12 acres, if known # Wetlands w/in Project Area²: 3
If estimating wetland size: < 0.1 acre 0.1-0.5 acre 1-2 acres 2-4 acres 5+ acres 10+ acres
% Canopy Cover*³ 0% ≤ 5 6-20 21-40 41-60 > 60

Hydrology and Soils (check all that apply):

Springs/Seeps Springhouse Trib/Stream Pond Stormwater Iron Bacteria
 Rivulets (how many _____) (_____ inches deep) Subsurface Tunnel/Rivulets Tire Ruts (_____ inches deep)
 Saturated soils present? If yes, year-round? Likely Unlikely Unknown
 Yes No water visible on surface? Small Puddles/Depressions (_____ inches deep) Deep pool
 Yes No Are there any signs of disturbance to hydrology (e.g., drainage ditches, tile drainages, berms, culverts, fill material, ponds, roads, beaver impoundment, evidence of flooding)? If yes, describe (if possible, include how recent disturbance is*): surface water and intermittent channel are dammed by man made stone wall/property boundary

For ditches that may be present, is there bog turtle habitat? If yes, describe:

none

Yes No Are there any signs of disturbance to vegetation (e.g., mowing, pasturing, burning)? If yes, describe (if possible, include level of disturbance*):

Soil types present*:

WyB - Wyoming gravelly sandy loam, 3 to 8 percent slopes

¹ (*) Denotes reference to the Supplemental Information document that provides more details on this particular question.

² Each wetland must have a separate Phase 1 habitat assessment data form completed.

³ Determine percent cover of abundant species for the wetland, not by wetland type. Abundant species are those that are

PEM Portion of Wetland: Approx. Acre(s) _____ Mucky soils depth (inches) _____
 PSS Portion of Wetland: Approx. Acre(s) _____ Mucky soils depth (inches) _____
 PFO Portion of Wetland: Approx. Acre(s) _____ Mucky soils depth (inches) _____
 PO Portion of Wetland: Approx. Acre(s) 0.12

CIRCLE all vegetation* from list below that is dominant \geq 20% for each wetland type listed above. Also, CIRCLE calciphiles⁴ present even if not a dominant species.

Wetland Type/Vegetation	Sphagnum Moss	Grass-of-Parnassus	Rice Cutgrass	Tussock Sedge	Shrubby Cinquefoil	Red Maple
	Arrowhead	Japanese Stiltgrass	Rough-leaved Goldenrod	White Turtlehead	Spicebush	Viburnum Spp.
	Carpetgrass	Jewelweed	Sensitive Fern	Woolly-fruited Sedge	Swamp Rose	
	Cattail	Mile-A-Minute	Skunk Cabbage	Yellow Sedge	Alder Spp.	
	Cinnamon Fern	Porcupine Sedge	Smooth Sawgrass	Alder-leaved Buckthorn	American Elm	
	Common Boneset	Purple Loosestrife	Sweetflag	Dogwood Spp.	Eastern Red Cedar	
	Common Reed	Reed Canary Grass	Tearthumb Spp.	Multiflora Rose	Poison Sumac	

Notes on additional plant species (Are there other sedges/rushes/other species dominant that are not on the list above?):

No vegetation present.

Describe surrounding landscape (e.g., wetlands, forest, subdivision, agricultural field, fallow field, etc.):

wetland is located in shallow gully w/ in forested hill slope.

Landscape Info

How much of this wetland is located off-site (i.e., outside the property boundaries or right-of-way)?

None of it – the entire wetland is within the property boundaries
 Some of it – _____ Acres or _____% of the wetland appears to be located off-site

If part of this wetland continues off-site, how much of the off-site portion was surveyed (on foot)?

None of it All of it Part of it (_____ acres or _____% of the off-site portion)

Is there potential bog turtle habitat off-site? Yes No Unknown If yes, how did you conclude this?

Phase 1 surveys conducted w/in 300'.

Species

Were any bog turtles observed? Yes No If yes, how many? _____

*Note that you must be permitted by the state you are conducting the survey in to handle bog turtles.

Other herps observed? Yes No If yes, which ones?

*Report bog turtle observations to your local FWS Field Office and state wildlife office within 48 hrs.

Lead Surveyor Opinion

- Yes No Unsure The hydrology criterion for bog turtle habitat is met.
 Yes No Unsure The soils criterion for bog turtle habitat is met.
 Yes No Unsure The vegetation criterion for bog turtle habitat is met.
 Yes No Unsure This wetland has potential bog turtle habitat (fair to good quality).
 Yes No Unsure This wetland has potential bog turtle habitat (low to very low quality).
 Yes No Unsure This wetland does NOT have potential bog turtle habitat.

Notes (How did you reach this opinion?): *wetland is a pond, no muck substrate, no spring fed hydrology, no vegetative structure.*

Lead Surveyor – please sign below certifying to the best of your knowledge that all of the information provided herein is accurate and complete.

Signature *Babyl A. Ingers* Date 04/05/19

most prominent in the wetland and have the highest percent of coverage compared to other species.

⁴ Pertinent to bog turtle sites found in Connecticut, Massachusetts, New Jersey, New York, and Pennsylvania. See Supplemental Information – Suitable Vegetation section.

Phase 1 Bog Turtle Habitat Survey Data Form
For the Northern Population Range
(Revised October 23, 2018)

Wetland ID: W-3-21

General Info

Property/Project Name I-80 Sec 17M Reconstruction, 2019 API updates County Monroe
Entity Requesting Phase 1 Survey (landowner, developer, agency): AECOM
Township/Municipality: Stroud Township
Lead Surveyor: Bridger Thompson Affiliation: Thompson Environmental
Other Assistants Present: Joel Redding

Date/Condition

Date of Survey: 06/05/19 Time In: 1015 Time Out: 1030 Air Temp. 80 (F)°C
Last Precipitation: < 24 hours 1-7 days > 1 week unknown Drought conditions? YES NO Unknown
Drought Index*¹ (Circle): D0 D1 D2 D3 D4 Notes (e.g., details about drought, flood, abnormally dry, seasonal conditions):
Heavy rains w/in last 48 hours.

Wetland Info

Wetland ID: W-3-21 Wetland Size: 0.10 acres, if known # Wetlands w/in Project Area²: 3
If estimating wetland size: < 0.1 acre 0.1-0.5 acre 1-2 acres 2-4 acres 5+ acres 10+ acres
% Canopy Cover*³ 0% ≤ 5 6-20 21-40 41-60 > 60
Hydrology and Soils (check all that apply):
 Springs/Seeps Springhouse Trib/Stream Pond Stormwater Iron Bacteria
 Rivulets (how many _____) (_____ inches deep) Subsurface Tunnel/Rivulets Tire Ruts (_____ inches deep)
 Saturated soils present? If yes, year-round? Likely Unlikely Unknown
 Yes No water visible on surface? Small Puddles/Depressions (2 inches deep)
 Yes No Are there any signs of disturbance to hydrology (e.g., drainage ditches, tile drainages, berms, culverts, fill material, ponds, roads, beaver impoundment, evidence of flooding)? If yes, describe (if possible, include how recent disturbance is*):

For ditches that may be present, is there bog turtle habitat? If yes, describe:

None

Yes No Are there any signs of disturbance to vegetation (e.g., mowing, pasturing, burning)? If yes, describe (if possible, include level of disturbance*):

Soil types present*:

WyB- Wyoming gravelly sandy loam, 3 to 8 percent slopes

¹ (*) Denotes reference to the Supplemental Information document that provides more details on this particular question.

² Each wetland must have a separate Phase 1 habitat assessment data form completed.

³ Determine percent cover of abundant species for the wetland, not by wetland type. Abundant species are those that are

PEM Portion of Wetland: Approx. Acre(s) _____ Mucky soils depth (inches) _____
 PSS Portion of Wetland: Approx. Acre(s) _____ Mucky soils depth (inches) _____
 PFO Portion of Wetland: Approx. Acre(s) 0.10 Mucky soils depth (inches) None
 PO Portion of Wetland: Approx. Acre(s) _____

CIRCLE all vegetation* from list below that is dominant $\geq 20\%$ for each wetland type listed above. Also, CIRCLE calciphiles⁴ present even if not a dominant species.

Wetland Type/Vegetation	Sphagnum Moss	Grass-of-Parnassus	Rice Cutgrass	Tussock Sedge	Shrubby Cinquefoil	<u>Red Maple</u>
	Arrowhead	Japanese Stiltgrass	Rough-leaved Goldenrod	White Turtlehead	Spicebush	Viburnum Spp.
	Carpetgrass	Jewelweed	Sensitive Fern	Woolly-fruited Sedge	Swamp Rose	<u>Hemlock</u>
	Cattail	Mile-A-Minute	Skunk Cabbage	Yellow Sedge	Alder Spp.	
	Cinnamon Fern	Porcupine Sedge	Smooth Sawgrass	Alder-leaved Buckthorn	American Elm	
	Common Boneset	Purple Loosestrife	Sweetflag	Dogwood Spp.	Eastern Red Cedar	
	Common Reed	Reed Canary Grass	Tearthumb Spp.	Multiflora Rose	Poison Sumac	

Notes on additional plant species (Are there other sedges/rushes/other species dominant that are not on the list above?):

ponded vernal area vegetated by hemlock + red maple

Describe surrounding landscape (e.g., wetlands, forest, subdivision, agricultural field, fallow field, etc.):

wetland is a vernal pool located on a top bench in a forested area.

Landscape Info

How much of this wetland is located off-site (i.e., outside the property boundaries or right-of-way)?

None of it – the entire wetland is within the property boundaries
 Some of it – _____ Acres or _____% of the wetland appears to be located off-site

If part of this wetland continues off-site, how much of the off-site portion was surveyed (on foot)?

None of it All of it Part of it (_____ acres or _____% of the off-site portion)

Is there potential bog turtle habitat off-site? Yes No Unknown If yes, how did you conclude this?

Phase 1 survey was conducted w/in 300'

Species

Were any bog turtles observed? Yes No If yes, how many? _____

*Note that you must be permitted by the state you are conducting the survey in to handle bog turtles.

Other herps observed? Yes No If yes, which ones?

*Report bog turtle observations to your local FWS Field Office and state wildlife office within 48 hrs.

Lead Surveyor Opinion

- Yes No Unsure The hydrology criterion for bog turtle habitat is met.
- Yes No Unsure The soils criterion for bog turtle habitat is met.
- Yes No Unsure The vegetation criterion for bog turtle habitat is met.
- Yes No Unsure This wetland has potential bog turtle habitat (fair to good quality).
- Yes No Unsure This wetland has potential bog turtle habitat (low to very low quality).
- Yes No Unsure This wetland does NOT have potential bog turtle habitat.

Notes (How did you reach this opinion?): *no spring fed hydrology, no muck soils
no vegetative structure*

Lead Surveyor – please sign below certifying to the best of your knowledge that all of the information provided herein is accurate and complete.

Signature *Bobby A. Lypson* Date *06/05/19*

most prominent in the wetland and have the highest percent of coverage compared to other species.

⁴ Pertinent to bog turtle sites found in Connecticut, Massachusetts, New Jersey, New York, and Pennsylvania. See Supplemental Information – Suitable Vegetation section.

Phase 1 Bog Turtle Habitat Survey Data Form
For the Northern Population Range
(Revised October 23, 2018)

Wetland ID: W-3-22

General Info

Property/Project Name I-80 Sec. 17M Reconstruction, 2019 API Updates County Monroe
Entity Requesting Phase 1 Survey (landowner, developer, agency): AECOM
Township/Municipality: Stroud Township
Lead Surveyor: Bridge Thompson Affiliation: Thompson Environmental
Other Assistants Present: Joel Redding

Date/Condition

Date of Survey: 06/05/19 Time In: 11:30 Time Out: 12:00 Air Temp. 80 (F°/C°)
Last Precipitation: < 24 hours 1-7 days > 1 week unknown Drought conditions? YES NO Unknown
Drought Index*¹ (Circle): D0 D1 D2 D3 D4 Notes (e.g., details about drought, flood, abnormally dry, seasonal conditions):
heavy rains w/in last 48 hours

Wetland Info

Wetland ID: W-3-22 Wetland Size: 0.25 acres, if known # Wetlands w/in Project Area²: 3
If estimating wetland size: < 0.1 acre 0.1-0.5 acre 1-2 acres 2-4 acres 5+ acres 10+ acres
% Canopy Cover*³ 0% ≤ 5 6-20 21-40 41-60 > 60

Hydrology and Soils (check all that apply):

Springs/Seeps Springhouse Trib/Stream Pond Stormwater Iron Bacteria
 Rivulets (how many _____) (_____ inches deep) Subsurface Tunnel/Rivulets Tire Ruts (_____ inches deep)
 Saturated soils present? If yes, year-round? Likely Unlikely Unknown
 Yes No water visible on surface? Small Puddles/Depressions (_____ inches deep) deep pools + 12"
 Yes No Are there any signs of disturbance to hydrology (e.g., drainage ditches, tile drainages, berms, culverts, fill material, ponds, roads, beaver impoundment, evidence of flooding)? If yes, describe (if possible, include how recent disturbance is*):
Portions of the wetland appear to have been dredged and/or channeled. Portions of wetland have evidence of scour and flood flow.

For ditches that may be present, is there bog turtle habitat? If yes, describe:

NO

Yes No Are there any signs of disturbance to vegetation (e.g., mowing, pasturing, burning)? If yes, describe (if possible, include level of disturbance*):

Soil types present*:

PO - Pope silt loam, Ph - Philo silt loam

¹ (*) Denotes reference to the Supplemental Information document that provides more details on this particular question.
² Each wetland must have a separate Phase 1 habitat assessment data form completed.
³ Determine percent cover of abundant species for the wetland, not by wetland type. Abundant species are those that are

PEM Portion of Wetland: Approx. Acre(s) 0.25

Mucky soils depth (inches) 6"

PSS Portion of Wetland: Approx. Acre(s) _____

Mucky soils depth (inches) _____

PFO Portion of Wetland: Approx. Acre(s) _____

Mucky soils depth (inches) _____

PO Portion of Wetland: Approx. Acre(s) _____

CIRCLE all vegetation* from list below that is dominant \geq 20% for each wetland type listed above. Also, CIRCLE calciphiles⁴ present even if not a dominant species.

Wetland Type/Vegetation

Sphagnum Moss	Grass-of-Parnassus	Rice Cutgrass	Tussock Sedge	Shrubby Cinquefoil	Red Maple
Arrowhead	Japanese Stiltgrass	Rough-leaved Goldenrod	White Turtlehead	Spicebush	Viburnum Spp.
Carpetgrass	Jewelweed	Sensitive Fern	Woolly-fruited Sedge	Swamp Rose	<u>Water cress</u>
Cattail	Mile-A-Minute	<u>Skunk Cabbage</u>	Yellow Sedge	Alder Spp.	<u>Juckweed</u>
Cinnamon Fern	Porcupine Sedge	Smooth Sawgrass	Alder-leaved Buckthorn	American Elm	
Common Boneset	Purple Loosestrife	Sweetflag	Dogwood Spp.	Eastern Red Cedar	
Common Reed	Reed Canary Grass	Tearthumb Spp.	Multiflora Rose	Poison Sumac	

Notes on additional plant species (Are there other sedges/rushes/other species dominant that are not on the list above?):

Describe surrounding landscape (e.g., wetlands, forest, subdivision, agricultural field, fallow field, etc.):

Landscape Info

How much of this wetland is located off-site (i.e., outside the property boundaries or right-of-way)?

- None of it - the entire wetland is within the property boundaries
- Some of it - _____ Acres or _____% of the wetland appears to be located off-site

If part of this wetland continues off-site, how much of the off-site portion was surveyed (on foot)?

- None of it
- All of it
- Part of it (_____ acres or _____% of the off-site portion)

Is there potential bog turtle habitat off-site? Yes No Unknown If yes, how did you conclude this?

Phase 1 survey conducted within 300'

Species

Were any bog turtles observed? Yes No If yes, how many? _____

*Note that you must be permitted by the state you are conducting the survey in to handle bog turtles.

Other herps observed? Yes No If yes, which ones? Green frog pickerel frog

*Report bog turtle observations to your local FWS Field Office and state wildlife office within 48 hrs.

Lead Surveyor Opinion

- Yes No Unsure The hydrology criterion for bog turtle habitat is met. seasonal groundwater
- Yes No Unsure The soils criterion for bog turtle habitat is met. minimal areas of muck + silt
- Yes No Unsure The vegetation criterion for bog turtle habitat is met. no structure
- Yes No Unsure This wetland has potential bog turtle habitat (fair to good quality).
- Yes No Unsure This wetland has potential bog turtle habitat (low to very low quality).
- Yes No Unsure This wetland does NOT have potential bog turtle habitat.

Notes (How did you reach this opinion?): Wetland has been historically dredged and has evidence of scour and flood fun. wetland does not contain appropriate veg structure - micro habitats.

Lead Surveyor - please sign below certifying to the best of your knowledge that all of the information provided herein is accurate and complete.

Signature [Signature]

Date 04/05/19

most prominent in the wetland and have the highest percent of coverage compared to other species.

⁴ Pertinent to bog turtle sites found in Connecticut, Massachusetts, New Jersey, New York, and Pennsylvania. See Supplemental Information - Suitable Vegetation section.

Phase 1 Bog Turtle Habitat Survey Data Form
For the Northern Population Range
(Revised October 23, 2018)

Wetland ID: NW-3-03

General Info

Property/Project Name 1-80 Sec 17m Reconstruction, 2019 API Updates County Monroe
Entity Requesting Phase 1 Survey (landowner, developer, agency): AECOM
Township/Municipality: Stroud Township, Stroudsburg Borough
Lead Surveyor: Bridger Thompson Affiliation: Thompson Environmental
Other Assistants Present: Joel Redding

Date/Condition

Date of Survey: 06/05/19 Time In: 12:00 Time Out: 12:30 Air Temp. 80 (F) °C
Last Precipitation: < 24 hours 1-7 days > 1 week unknown Drought conditions? YES NO Unknown
Drought Index*¹ (Circle): D0 D1 D2 D3 D4 Notes (e.g., details about drought, flood, abnormally dry, seasonal conditions):
Heavy rains w/in last 48 hours

Wetland Info

Wetland ID: NW-3-03 Wetland Size: 0.40 acres, if known # Wetlands w/in Project Area²: 3
If estimating wetland size: < 0.1 acre 0.1-0.5 acre 1-2 acres 2-4 acres 5+ acres 10+ acres
% Canopy Cover*³ 0% ≤ 5 6-20 21-40 41-60 > 60

Hydrology and Soils (check all that apply):

Springs/Seeps Springhouse Trib/Stream Pond Stormwater Iron Bacteria
 Rivulets (how many _____) (_____ inches deep) Subsurface Tunnel/Rivulets Tire Ruts (_____ inches deep)
 Saturated soils present? If yes, year-round? Likely Unlikely Unknown
 Yes No water visible on surface? Small Puddles/Depressions (_____ inches deep) deep pools
 Yes No Are there any signs of disturbance to hydrology (e.g., drainage ditches, tile drainages, berms, culverts, fill material, ponds, roads, beaver impoundment, evidence of flooding)? If yes, describe (if possible, include how recent disturbance is*):
wetland is more accurately described as a channel.
channel exhibits evidence of scour and flood flow.

For ditches that may be present, is there bog turtle habitat? If yes, describe:

no

Yes No Are there any signs of disturbance to vegetation (e.g., mowing, pasturing, burning)? If yes, describe (if possible, include level of disturbance*):

Soil types present*:

Hy - Holly silt loam

¹ (*) Denotes reference to the Supplemental Information document that provides more details on this particular question.

² Each wetland must have a separate Phase 1 habitat assessment data form completed.

³ Determine percent cover of abundant species for the wetland, not by wetland type. Abundant species are those that are

PEM Portion of Wetland: Approx. Acre(s) 0.2

Mucky soils depth (inches) 3-6

PSS Portion of Wetland: Approx. Acre(s) _____

Mucky soils depth (inches) _____

PFO Portion of Wetland: Approx. Acre(s) _____

Mucky soils depth (inches) _____

PO Portion of Wetland: Approx. Acre(s) 0.20

CIRCLE all vegetation* from list below that is dominant $\geq 20\%$ for each wetland type listed above. Also, CIRCLE calciphiles⁴ present even if not a dominant species.

Wetland Type/Vegetation

Sphagnum Moss	Grass-of-Parnassus	Rice Cutgrass	Tussock Sedge	Shrubby Cinquefoil	Red Maple
Arrowhead	Japanese Stiltgrass	Rough-leaved Goldenrod	White Turtlehead	Spicebush	Viburnum Spp.
Carpetgrass	Jewelweed	Sensitive Fern	Woolly-fruited Sedge	Swamp Rose	<u>duckweed</u>
Cattail	Mile-A-Minute	<u>Skunk Cabbage</u>	Yellow Sedge	Alder Spp.	<u>Watercress</u>
Cinnamon Fern	Porcupine Sedge	Smooth Sawgrass	Alder-leaved Buckthorn	American Elm	
Common Boneset	Purple Loosestrife	Sweetflag	Dogwood Spp.	Eastern Red Cedar	
<u>Common Reed</u>	Reed Canary Grass	Tearthumb Spp.	Multiflora Rose	Poison Sumac	

Notes on additional plant species (Are there other sedges/rushes/other species dominant that are not on the list above?):

Describe surrounding landscape (e.g., wetlands, forest, subdivision, agricultural field, fallow field, etc.):

Landscape Info

How much of this wetland is located off-site (i.e., outside the property boundaries or right-of-way)?

None of it - the entire wetland is within the property boundaries
 Some of it - _____ Acres or _____ % of the wetland appears to be located off-site

If part of this wetland continues off-site, how much of the off-site portion was surveyed (on foot)?

None of it All of it Part of it (_____ acres or _____ % of the off-site portion)

Is there potential bog turtle habitat off-site? Yes No Unknown If yes, how did you conclude this?

Portions of this channel extend into resources previously investigated by AECOM

Species

Were any bog turtles observed? Yes No If yes, how many? _____

*Note that you must be permitted by the state you are conducting the survey in to handle bog turtles.

Other herps observed? Yes No If yes, which ones? Green frog

*Report bog turtle observations to your local FWS Field Office and state wildlife office within 48 hrs.

Lead Surveyor Opinion

- Yes No Unsure The hydrology criterion for bog turtle habitat is met.
- Yes No Unsure The soils criterion for bog turtle habitat is met. - minimal
- Yes No Unsure The vegetation criterion for bog turtle habitat is met. - pockets
- Yes No Unsure This wetland has potential bog turtle habitat (fair to good quality).
- Yes No Unsure This wetland has potential bog turtle habitat (low to very low quality).
- Yes No Unsure This wetland does NOT have potential bog turtle habitat.

Notes (How did you reach this opinion?): Resource is a high flow channel w/ ground water influence, minimal muck soils and vegetation lacks micro habitat and vegetative structure.

Lead Surveyor - please sign below certifying to the best of your knowledge that all of the information provided herein is accurate and complete.

Signature Bobby Taylor

Date 04/05/19


most prominent in the wetland and have the highest percent of coverage compared to other species.

⁴ Pertinent to bog turtle sites found in Connecticut, Massachusetts, New Jersey, New York, and Pennsylvania. See Supplemental Information - Suitable Vegetation section.

Attachment C

Photo Log





Photograph: 1	Date: 06/05/19	
Feature ID: Existing Conditions		
Direction: Southeast		
Description: View of the existing conditions within the forested area in the Western Extent/Beech Street Area on the south side of I-80.		


Photograph: 2	Date: 06/05/19	
Feature ID: Existing Conditions		
Direction: West		
Description: View of the existing conditions within the forested area in the Western Extent/Beech Street Area on the north side of I-80.		


Photograph: 3	Date: 06/05/19	
Feature ID: Existing Conditions		
Direction: South		
Description: View of the existing conditions within the forested area in the Route 209 Exchange Area on the north side of I-80.		


Photograph: 4	Date: 06/05/19	
Feature ID: Existing Conditions		
Direction: East		
Description: Existing urban conditions in the Bryant Street Area.		


Photograph: 5	Date: 06/05/19	
Feature ID: W-3-20 (PUB)		
Direction: Southeast		
Description: View of flooded vernal pool conditions in W-3-20.		

Photograph: 6	Date: 06/05/19	
Feature ID: W-3-20 (PUB)		
Direction: South		
Description: View of intermittent channel that provides hydrology to W-3-20. W-3-20 is depicted in the background of the photo.		

Photograph: 7	Date: 06/05/19	
Feature ID: W-3-21 (PFO)		
Direction: East		
Description: View of the PFO vernal pool identified as W-3-21.		

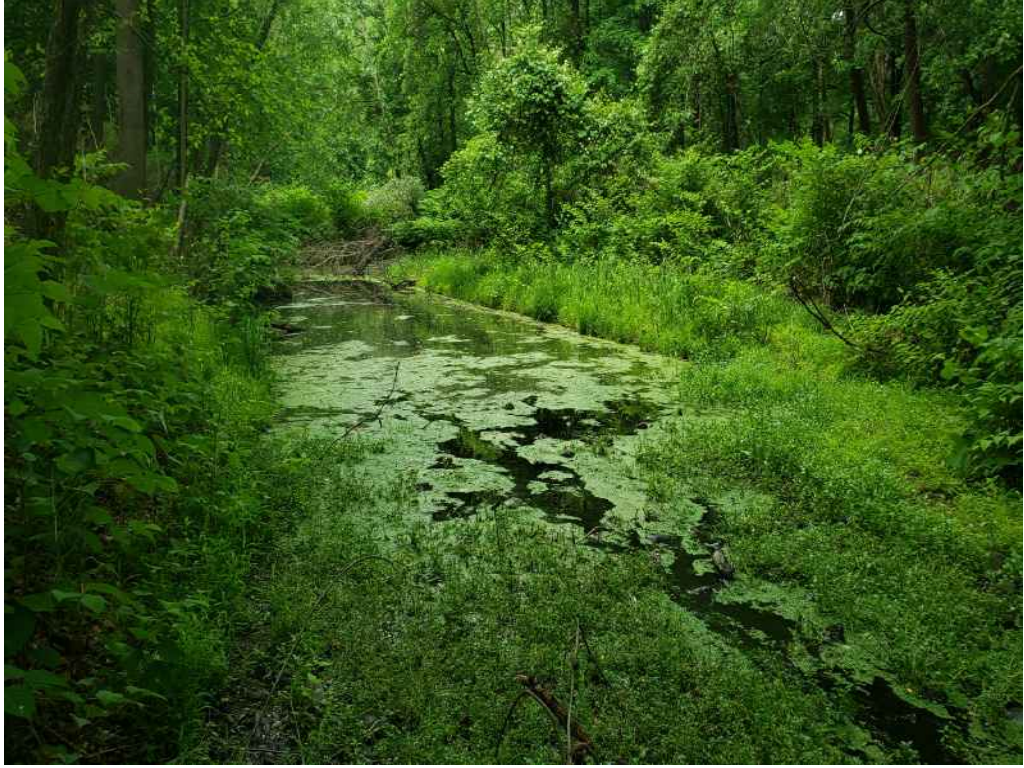
Photograph: 8	Date: 06/05/19	
Feature ID: W-3-21 (PFO)		
Direction: North		
Description: View of wetland W-3-21 facing north.		


Photograph: 9	Date: 06/05/19	
Feature ID: W-3-22 (PEM)		
Direction: East		
Description: View of wetland W-3-22 facing toward a small opening in the channel that contains shallow mucky substrate and cobble. Photo depicts a close-up view of the hydrologic and substrate conditions.		

Photograph: 10	Date: 06/05/19	
Feature ID: W-3-22 (PEM)		
Direction: West		
Description: View of wetland W-3-22. Photo depicts one of the deep pools of surface water that were observed along the wetland reach, and the typical vegetative conditions.		

Photograph: 11	Date: 06/05/19	
Feature ID: W-3-22 (PEM)		
Direction: East		
Description: View of wetland W-3-22 facing east. The photo depicts the typical channel like conditions that have evidence of man induced dredging. Photo also depicts the hydrologic and substrate conditions with deep leaf litter and silt.		

Photograph: 12	Date: 06/05/19	
Feature ID: W-3-22 (PEM)		
Direction: West		
Description: View of wetland W-3-22 facing west along a thickly vegetated portion of the wetland. Photo depicts the channel like conditions.		

Photograph: 13	Date: 06/05/19	
Feature ID: WW-3-03 (PER)		
Direction: West		
Description: View of watercourse WW-3-03 facing west. The photo depicts the atypical channel like conditions containing ponded water and vegetation.		

Photograph: 14	Date: 06/05/19	
Feature ID: WW-3-03 (PER)		
Direction: South		
Description: View of watercourse WW-3-03 facing west along a thickly vegetated portion of the channel. Photo depicts the wetland and channel like morphology.		

Photograph: 15	Date: 06/05/19	
Feature ID: WW-3-03 (PER)		
Direction: North		
Description: View of watercourse WW-3-03 facing west. The photo depicts the channel like conditions.		