AECOM

March 28, 2018

Ms. Jennifer Kagel
United States Fish and Wildlife Service
Pennsylvania Field Office
110 Radnor Road, Suite 101
State College, PA 16801

RE: Interstate 80 Section 17M Reconstruction Project
Phase 1 Bog Turtle Survey Addendum
USFWS Project #2013-0652

Dear Ms. Kagel:

AECOM is providing this addendum to the Phase 1 Bog Turtle (G*lyptemys muhlenbergii*) Habitat Assessment that was conducted between September 2013 and January 2014 for the Interstate 80 Section 17M Reconstruction Project (Project). The original Phase 1 investigations were performed by AECOM biologists Chris Howsare and Chris Salvatico and documented as United States Fish and Wildlife Service (USFWS) project number (#2013-0652). Phase 2 surveys determined to be needed by the original study were completed by Autumn Thomas (RQBTS) in the spring of 2014. A concurrence letter was received from USFWS in April 2015.

On September 21 and 22, 2017 AECOM conducted additional Phase 1 bog turtle (G*lyptemys muhlenbergii*) habitat investigations to assess all wetlands that were identified within the 2017 Expanded Bog Turtle Survey Study Area **(Figure 1)** I-80 Reconstruction Project 2017 Expanded Wetlands & Bog Turtle Study Area Map. This report discusses the results of the September 2017 Phase 1 bog turtle habitat assessment.

PROJECT DESCRIPTION

The I-80 Section 17M Project includes the 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 just east of the S.R

AECOM
4505 North Front Street, Suite 200
Harrisburg, PA 17110
717-635-7901 (Tel)
717-635-7902 (Fax)

2005 overpass bridge, through the borough of Stroudsburg, and ends in East Stroudsburg Borough, just west of the Lincoln Avenue overpass.

The I-80 Section 17M project is located within the range of the federally listed (threatened) bog turtle therefore Phase 1 bog turtle habitat surveys were performed in 2013 and 2014. Phase 2 presence probable absence surveys were performed in 2014. These survey efforts concluded the probable absence of bog turtles in the survey area. This determination was confirmed in a letter dated April 3, 2015, a copy of which has been included in (**Attachment A**).

SURVEY METHODOLOGY

Due to an expansion of the Project corridor, eight additional wetlands were identified within the Project's 2017 Expanded Phase 1 Bog Turtle Survey Study Area. These additional wetlands were delineated and surveyed by AECOM on September 21 and 22, 2017. Additionally on these dates, AECOM's USFWS and Pennsylvania Fish and Boat Commission (PFBC) Recognized Qualified Bog Turtle Surveyor (RQBTS), Bridger Thompson, conducted a Phase 1 bog turtle habitat survey for the Project. The Phase I bog turtle habitat survey study area included all wetlands identified within the 2017 Expanded Phase 1 Bog Turtle Survey Study Area. These wetlands are highlighted green on (**Figure 2**) Interstate 80, Section 17M Phase 1 Bog Turtle Habitat Assessment Map. The habitat assessment that was conducted conformed to the survey methodology outlined in the United States Fish and Wildlife Service (USFWS) guidelines for conducting Phase I Bog Turtle Habitat Surveys pursuant to the *Bog Turtle Recovery Plan* (USFWS, 2001) and *Guidelines for Bog Turtle Surveys* (USFWS, Revised 2006).

Information observed during the habitat assessment for each wetland was recorded on USFWS/PFBC Bog Turtle Habitat Assessment Field Forms and includes dominant plant species, substrate characteristics, and hydrology (**Attachment B**). Representative habitat conditions within the wetlands were photographed and included in the attached photographic log (**Attachment C**).

HABITAT ASSESSMENT RESULTS

AECOM identified eight wetlands within the Project's 2017 Expanded Phase 1 Bog Turtle Survey Study Area. This section discusses the results of the Phase 1 bog turtle habitat assessment and provides brief descriptions of the wetlands surveyed. Table 1 summarizes the results of the surveys.

Table 1 Resource Identification Table

2016 Phase 1 Bog Turtle Surveys

Resource ID	Classification	Latitude	Longitude	Approximate Total Wetland Acreage (ac)	Potential Bog Turtle Habitat (Y, N)	Approximate Acreage DSA (ac)
WETLANDS						
W-3-14A	PFO	40.990756	-75.245220	0.07	N	N/A
W-3-15	PEM	40.987447	-75.242916	0.28	N	N/A
W-3-16	PSS	40.987222	-75.243733	0.70	N	N/A
W-3-17	PEM	40.990815	-75.247149	0.02	N	N/A
W-3-18	PEM/PSS	40.987611	-75.243572	0.16	Y	0.09
W-3-19	PEM/ POW	40.987066	-75.242861	0.36	Y	0.05
W-3-20	POW	40.977269	-75.223825	2.65	N	N/A
W-1-02	PEM	40.986233	-75.183946	0.17	N	N/A

DSA- Designated survey areas are those areas of the wetland that meet the soil, vegetation, and hydrology criteria to be considered potential bog turtle habitat.

Wetland W-3-14A

Wetland W-3-14A was 0.07 acre in size and was located north of I-80 and west of White Stone Corner Road. The wetland consisted of a small palustrine forested (PFO) resource located at the discharge point of a perennial groundwater seep within the headwater of stream WW-3-19, an unnamed tributary (UNT) to Pocono Creek. The primary sources of hydrology included seasonally high groundwater and flood flow from WW-3-19. The vegetation in W-3-14 was dominated by red maple (*Acer rubrum*), spice bush (*Lindera benzoin*), multiflora rose (*Rosa multiflora*), and skunk cabbage (*Symplocarpus foetidus*). The wetland did contain spring seep hydrology but did not contain a mucky substrate associated with the spring seep hydrology or

vegetative structure typical of bog turtle habitat. Due to the limited herbaceous vegetative structure, lack of mucky soils, and absence of microtopography containing rivulets and subsurface spring flows, W-3-14 was not considered potential habitat for bog turtles. The location of the wetland is depicted on (Figure 2, Sheets 1-2). Additional wetland information is provided in Table 1.

Wetland W-3-15

Wetland W-3-15 was 0.28 acre in size and was located south of I-80 and east of White Stone Corner Road. The wetland consisted of a small palustrine emergent (PEM) resource located along the floodplain of a perennial watercourse WW-3-13, an unnamed tributary (UNT) to Pocono Creek. The wetland also contained a perennial spring seep that originated at the outfall of a hillslope spring house. The primary sources of hydrology included a spring seep, seasonally high groundwater and flood flow from WW-3-13. The vegetation in W-3-15 was dominated by jewelweed (*Impatiens capensis*), soft rush (*Juncus effusus*), fringed sedge (*carex crinita*), and skunk cabbage (*Symplocarpus foetidus*). The wetland did contain spring seep hydrology but did not contain a mucky substrate associated with the spring seep hydrology or vegetative structure typical of bog turtle habitat. Due to the limited herbaceous vegetative structure, lack of mucky soils, and absence of microtopography containing rivulets and subsurface spring flows, W-3-15 was not considered potential habitat for bog turtles. The location of the wetland is depicted on (Figure 2, Sheet 2). Additional wetland information is provided in Table 1.

Wetland W-3-16

Wetland W-3-16 is a 0.70-acre palustrine scrub shrub (PSS) wetland located south of I-80 and south of Beech Street/White Stone Corner Road. The wetland consisted of a large topographic depression that drained to a culvert located in the eastern extent of the wetland. The primary sources of hydrology included seasonal high groundwater and surface water runoff collection. The vegetation in the wetland was dominated by silky dogwood, black willow (*Salix nigra*), jewelweed, multiflora rose, and reed canarygrass (*Phalaris arundinacea*). The wetland did not contain a mucky substrate, spring seep hydrology or vegetative structure typical of bog turtle habitat. Due to the limited herbaceous vegetative structure, lack of mucky soils, and the absence of microtopography containing rivulets and subsurface spring flows, W-3-16 was not

considered potential habitat for bog turtles. The location of the wetland is depicted on (Figure 2, Sheet 2). Additional wetland information is provided in Table 1.

Wetland W-3-17

Wetland W-3-17 was a 0.02-acre PEM wetland located along the westbound berm of I-80, west of the White Stone Corner Road overpass. The wetland consisted of a roadside ditch at the toe of a steep cut slope. The primary sources of hydrology included seasonal groundwater seep that was associated with the cut slope and stormwater runoff collection from the adjacent roadway. The vegetation in the wetland was dominated by cattail (*Typha latifolia*), fox sedge (*Carex vulpinoidea*), soft rush (*Juncus effuses*), and Pennsylvania smartweed (*Polygonum pensylvanicum*). The wetland did not contain a mucky substrate associated with spring seep hydrology or vegetative structure typical of bog turtle habitat. Due to the lack of mucky soils, limited herbaceous vegetative structure, and the absence of microtopography containing rivulets and subsurface spring flows, W-3-17 was not considered potential habitat for bog turtles. The location of the wetland is depicted on (Figure 2, Sheet 1-2). Additional wetland information is provided in Table 1.

Wetland W-3-18

Wetland W-3-18 was a 0.16-acre PEM wetland located south of I-80, and northwest of the intersection of White Stone Corner Road and Kirkwood Road. The wetland consisted of a small depression located at a toe of slope that contains multiple spring seep discharges. The spring seeps flow throughout the wetland to their confluence with a small perennial channel WW-3-13. The primary sources of hydrology included a spring seeps, and a seasonally high groundwater table. The vegetation in the wetland was dominated by jewelweed, fringed sedge, purple loosestrife (*Lythrum salicaria*), bittersweet nightshade (*Solanum dulcamara*), watercress (*Nasturtium officinale*), and sweetflag (*Acorus calamus*). The wetland was small in size however it contained a deep mucky substrate associated with the spring seep hydrology and the vegetative structure was typical of bog turtle habitat. **Due to the presence of appropriate vegetative structure, sufficient depth of muck soils, and spring fed hydrology with surface flows and subsurface piping Wetland W-3-18 was considered potential bog turtle habitat. The location of the wetland is depicted on (Figure 2, Sheet 2). Additional wetland information is provided in Table 1.**

Wetland W-3-19

Wetland W-3-19 was a 0.36-acre PEM and palustrine open water (POW) wetland located south of I-80 and east of Kirkwood Road. The wetland consisted of a topographic depression located at the toe of a road fill slope in wooded riparian corridor. The primary sources of hydrology included seasonal high groundwater perennial ground water seeps and surface water runoff collection. The wetland contained a large area of surface water with water depths up to twelve inches. The vegetation in the wetland was dominated by skunk cabbage, jewelweed, watercress, and silky dogwood (*Cornus amomum)*. The wetland contained a mucky substrate associated with the seep hydrology and the fringes of the surface water area. The wetland did not exhibit the vegetative structure typical of bog turtle habitat. **However, due to the presence of a sufficient depth of muck soils, and spring fed hydrology with surface flows and the presence of adjacent wetlands identified as potential bog turtle habitat, Wetland W-3-19 was considered potential bog turtle habitat. The location of the wetland is depicted on (Figure 2, Sheet 2). Additional wetland information is provided in Table 1.**

Wetland W-3-20

Wetland W-3-20 was a 2.65-acre POW wetland located south of I-80, and east of S.R. 209. The wetland consisted of a large pond associated with a dammed portion of Little Pocono Creek. Due to the limited herbaceous vegetative structure, lack of mucky soils, and the absence of microtopography containing rivulets and subsurface spring flows, W-3-20 was not considered potential habitat for bog turtles. The location of the wetland is depicted on (Figure 2, Sheet 4). Additional wetland information is provided in Table 1.

Wetland W-1-02

Wetland W-1-02 is a 0.17-acre PEM wetland located south of I-80 and west of Broadhead. The wetland is situated in a low lying area within the floodplain of Broadhead Creek and within a municipal refuse storage area. The wetland consisted of a large topographic depression that collects surface water runoff in depressed and compacted soils. The primary source of hydrology was surface water runoff collection. The vegetation in the wetland was dominated by barnyard grass (*Echinochloa crus-galli*), Japanese Knotweed (*Fallopia japonica*), and Pennsylvanian smartweed. The wetland did not contain a mucky substrate, spring seep hydrology or vegetative structure typical of bog turtle habitat. Due to the limited herbaceous

vegetative structure, lack of mucky soils, and the absence of microtopography containing rivulets and subsurface spring flows, W-1-02 was not considered potential habitat for bog turtles. The location of the wetland is depicted on (Figure 2, Sheet 8). Additional wetland information is provided in Table 1.

CONCLUSION

The Phase I bog turtle habitat investigation performed on September 21 and 22, 2017 for the Interstate 80 Section 17M Reconstruction Project 2017 Expanded Phase 1 Bog Turtle Survey Study Area reviewed eight wetlands that were added to the to the survey corridor as a result of Project expansion. Two wetlands (W-3-18, and W-3-19) were identified as potential bog turtle habitat. No additional wetlands were identified as potential bog turtle habitat within 300 feet of the proposed Project.

SIGNATURES

This report was prepared by:

AECOM

Bridger Thompson
Senior Biologist, RQBTS

And reviewed by:

AECOM

Deborah Poppel
Senior Ecologist/ Project Manager

REFERENCES

U.S. Fish and Wildlife Service (USFWS). 2001. Bog Turtle (Clemmys muhlenbergii), Northern Population Recovery Plan. Hadley, Massachusetts.

USFWS. 2006 (revised). Guidelines for Bog Turtle Surveys. Accessed at www.fws.gov/northeast/nyfo/es/btsurvey.pdf

USFWS. Draft Bog Turtle Trapping Survey Protocol. Accessed at https://www.fws.gov/northeast/pafo/pdf/Trapping%20protocol.pdf

Figure 1
Project Location Map

I-80 RECONSTRUCTION PROJECT

Wetlands & Bog Turtle Study Areas:
Original (2014*, Alternatives 2A, 2B, & 2D) and Expanded (2017, Alternatives 2B & 2D)

**Minor revisions to the 2014 Wetlands & Waterways Study Area occurred in 2015.*

Expanded Wetlands & Waterways Study Area
Original Wetlands & Waterways Study Area
Expanded Bog Turtle Study Area
Original Bog Turtle Study Area

N

0 300 600 Feet

AECOM

5/26/2017

I-80 RECONSTRUCTION PROJECT

Wetlands & Bog Turtle Study Areas:
Original (2014*, Alternatives 2A, 2B, & 2D) and Expanded (2017, Alternatives 2B & 2D)

**Minor revisions to the 2014 Wetlands & Waterways Study Area occurred in 2015.*

Expanded Wetlands & Waterways Study Area
Original Wetlands & Waterways Study Area
Expanded Bog Turtle Study Area
Original Bog Turtle Study Area

N

0 300 600 Feet

AECOM

5/26/2017

Figure 2

Expanded Phase 1 Bog Turtle Survey Wetlands

AECOM

N

0 125 250 500

Feet

- Previously Investigated Phase I Bog Turtle Study Area (2015)
- Expanded Phase I Bog Turtle Survey Study Area (2017)
- Delineated Waterway
- Previously Identified as Potential Bog Turtle Habitat/ Phase 2 Survey Completed
- Delineated Wetland
- 2017 Potential Bog Turtle Habitat Wetlands

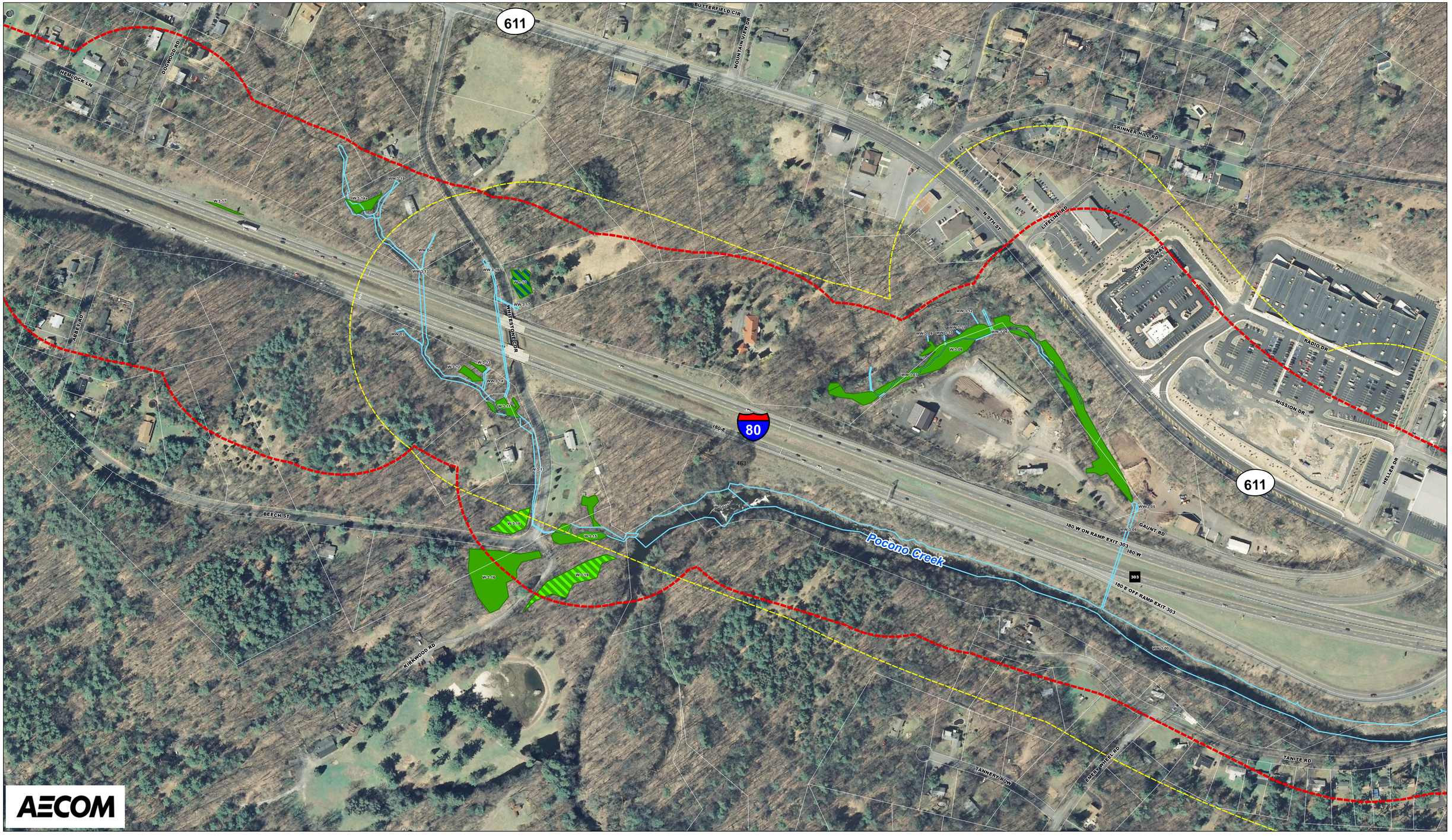
Interstate 80, Section 17M

Phase 1 - Bog Turtle Habitat Assessment

Figure 2: Wetlands and Waterways

Sheet 1 (1 of 8)

Source: PASDA, Monroe Co. (Aerial: PAMAP 2008).



N

0 125 250 500

Feet

Previously Investigated Phase I Bog Turtle Study Area (2015)

Expanded Phase I Bog Turtle Survey Study Area (2017)

Delineated Waterway

Previously Identified as Potential Bog Turtle Habitat/ Phase 2 Survey Completed

Delineated Wetland

2017 Potential Bog Turtle Habitat Wetlands

Interstate 80, Section 17M
Phase 1 - Bog Turtle Habitat Assessment
Figure 2: Wetlands and Waterways

Sheet 2 (2 of 8)

Source: PASDA, Monroe Co. (Aerial: PAMAP 2008).

N

0 125 250 500

Feet

Previously Investigated Phase I Bog Turtle Study Area (2015)

Expanded Phase I Bog Turtle Survey Study Area (2017)

Delineated Waterway

Previously Identified as Potential Bog Turtle Habitat/ Phase 2 Survey Completed

Delineated Wetland

2017 Potential Bog Turtle Habitat Wetlands

Interstate 80, Section 17M

Phase 1 - Bog Turtle Habitat Assessment

Figure 2: Wetlands and Waterways

Sheet 3 (3 of 8)

Source: PASDA, Monroe Co. (Aerial: PAMAP 2008).

N

0 125 250 500

Feet

Previously Investigated Phase I Bog Turtle Study Area (2015)

Expanded Phase I Bog Turtle Survey Study Area (2017)

Delineated Waterway

Previously Identified as Potential Bog Turtle Habitat/ Phase 2 Survey Completed

Delineated Wetland

2017 Potential Bog Turtle Habitat Wetlands

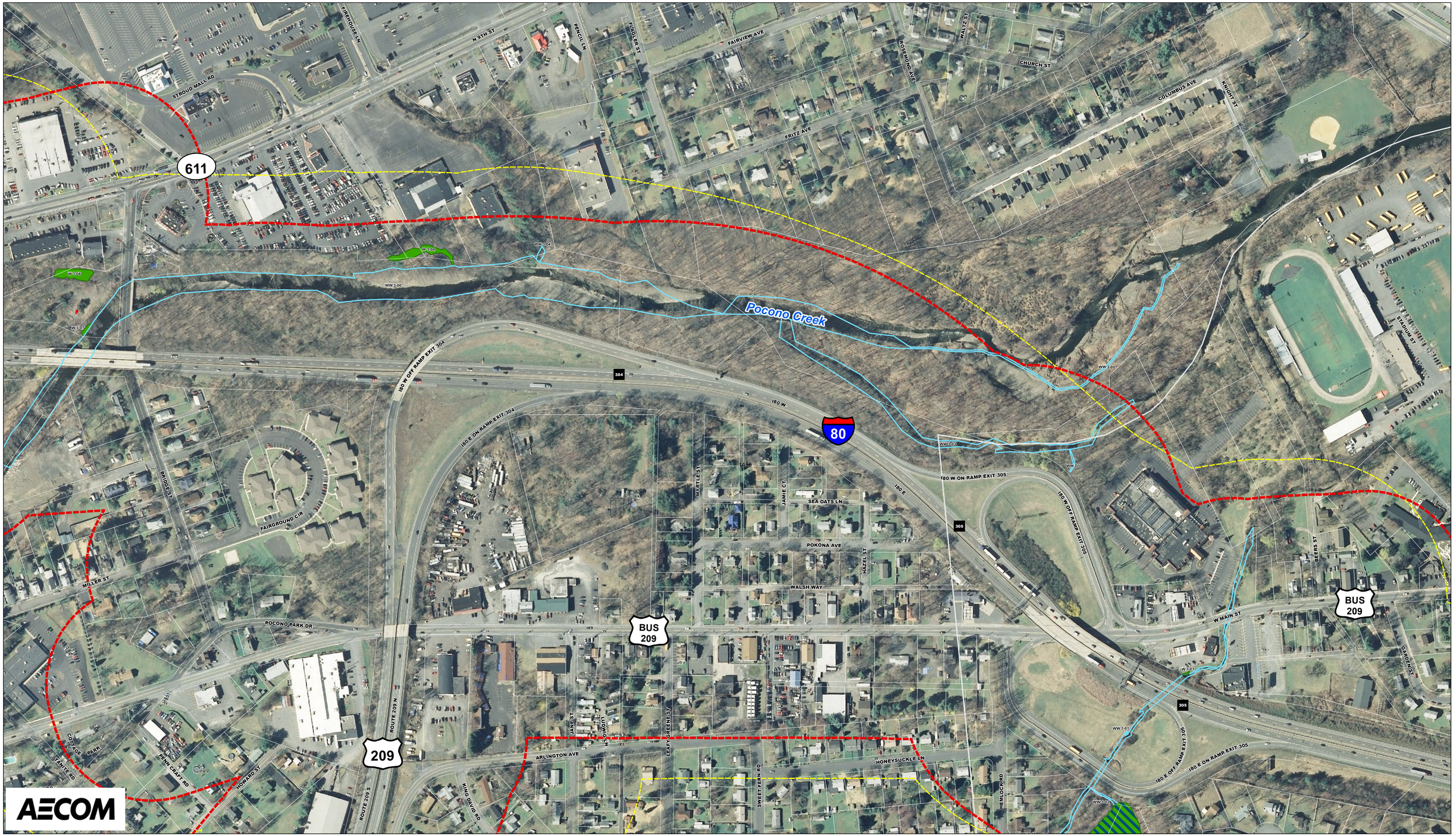
Interstate 80, Section 17M

Phase 1 - Bog Turtle Habitat Assessment

Figure 2: Wetlands and Waterways

Sheet 4 (4 of 8)

Source: PASDA, Monroe Co. (Aerial: PAMAP 2008).



N

0 125 250 500

Feet

Previously Investigated Phase I Bog Turtle Study Area (2015)

Expanded Phase I Bog Turtle Survey Study Area (2017)

Delineated Waterway

Previously Identified as Potential Bog Turtle Habitat/ Phase 2 Survey Completed

Delineated Wetland

2017 Potential Bog Turtle Habitat Wetlands

Interstate 80, Section 17M

Phase 1 - Bog Turtle Habitat Assessment

Figure 2: Wetlands and Waterways

Sheet 5 (5 of 8)

Source: PASDA, Monroe Co. (Aerial: PAMAP 2008).

N

0 125 250 500

Feet

Previously Investigated Phase I Bog Turtle Study Area (2015)

Expanded Phase I Bog Turtle Survey Study Area (2017)

Delineated Waterway

Previously Identified as Potential Bog Turtle Habitat/ Phase 2 Survey Completed

Delineated Wetland

2017 Potential Bog Turtle Habitat Wetlands

Interstate 80, Section 17M

Phase 1 - Bog Turtle Habitat Assessment

Figure 2: Wetlands and Waterways

Sheet 6 (6 of 8)

Source: PASDA, Monroe Co. (Aerial: PAMAP 2008).

N

0 125 250 500

Feet

Previously Investigated Phase I Bog Turtle Study Area (2015)

Expanded Phase I Bog Turtle Survey Study Area (2017)

Delineated Waterway

Previously Identified as Potential Bog Turtle Habitat/ Phase 2 Survey Completed

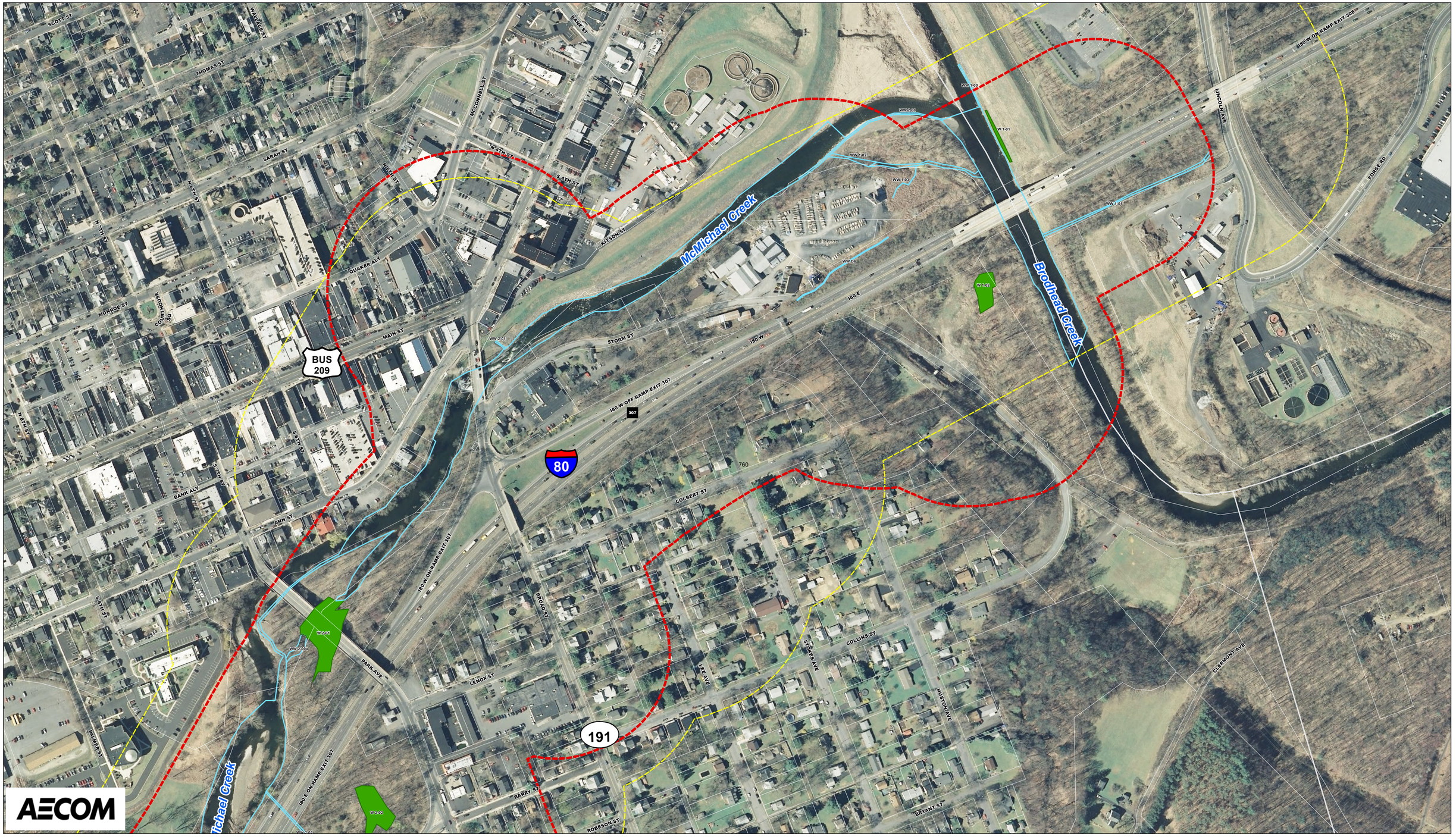
Delineated Wetland

2017 Potential Bog Turtle Habitat Wetlands

Interstate 80, Section 17M
Phase 1 - Bog Turtle Habitat Assessment
Figure 2: Wetlands and Waterways

Sheet 7 (7 of 8)

Source: PASDA, Monroe Co. (Aerial: PAMAP 2008).



AECOM

N

0 125 250 500

Feet

- Previously Investigated Phase I Bog Turtle Study Area (2015)
- Expanded Phase I Bog Turtle Survey Study Area (2017)
- Delineated Waterway
- Previously Identified as Potential Bog Turtle Habitat/ Phase 2 Survey Completed
- Delineated Wetland
- 2017 Potential Bog Turtle Habitat Wetlands

Interstate 80, Section 17M

Phase 1 - Bog Turtle Habitat Assessment

Figure 2: Wetlands and Waterways

Sheet 8 (8 of 8)

Source: PASDA, Monroe Co. (Aerial: PAMAP 2008).

Attachment A

USFWS Project 2013-0652 Clearance Letter (April 3, 2015)

United States Department of the Interior

FISH AND WILDLIFE SERVICE

Pennsylvania Field Office
110 Radnor Road, Suite 101
State College, Pennsylvania 16801-4850

April 3, 2015

J. Thomas Cushman, Jr.
AECOM
1700 Market Street, Suite 1600
Philadelphia, PA 19103

RE: USFWS Project #2013-0652
PNDI Receipt #20130327397134

Dear Mr. Cushman:

This responds to your letter dated March 3, 2015, which provided the Fish and Wildlife Service (Service) with updated information regarding the S.R. 0080, Section 17M, reconstruction project located in Stroud Township, Stroudsburg Borough, and East Stroudsburg Borough, Monroe County, Pennsylvania. The proposed project is within the range of the bog turtle (*Clemmys muhlenbergii*), a species that is federally listed as threatened. The following comments are provided pursuant to the Endangered Species Act of 1973 (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*) to ensure the protection of endangered and threatened species.

Autumn Thomas of AECOM conducted a Phase 2 survey on four wetlands, which included wetlands identified as 2-05, 2-06, 3-02, and 3-10 in the project area. According to your October 2014 survey report, habitat conditions within these four wetlands are suitable for the support of bog turtle; however, no bog turtles were located within the identified wetlands habitat areas during the surveys on May 20, May 22, May 29, May 30, 2014 and June 3, June 4, June 11, and June 12, 2014. Based on our review of this information, we conclude that construction of this project will not affect the bog turtle.

If this project is implemented as proposed, construction will not affect any federally listed or proposed species or their habitat. This response relates only to endangered or threatened species under our jurisdiction. Consequently, this letter is not to be construed as addressing potential Service concerns under the Fish and Wildlife Coordination Act or other authorities.

This determination is valid for two years from the date of this letter. If the proposed project has not been fully implemented prior to this, an additional review by this office is necessary. Should project plans change, or if additional information on listed or proposed species becomes available, this determination may be reconsidered.

If the Phase 2 survey did not include all potential habitat in all areas that will be directly or indirectly affected by the proposed project and project-associated features (*e.g.*, roads, water and sewer lines, utility lines, stormwater and sedimentation basins, buildings and other structures, driveways, parking lots, yards/lawns, wells), expand the scope of the Phase 2 survey to include these areas. Submit the results of the expanded Phase 2 investigation to our office for review so that we can confirm whether the above determination is still valid.

To avoid potential delays in reviewing your project, please use the above-referenced USFWS project tracking number in any future correspondence regarding this project.

If you have any further questions regarding this matter, please contact Kayla Easler of this office at (814) 234-4090.

Sincerely,

Lora L. Zimmerman
Field Office Supervisor

cc:
PennDOT - Neal

Attachment B

USFWS/PFBC Bog Turtle Habitat Evaluation Field Forms

USFWS / PFBC Bog Turtle Habitat Evaluation Field Form[1]

(revised 06/01/2006)

Project/Property Name: I-80 Section 17M Reconstruction

Project type: Highway / Roadway reconstruction and improvements

Applicant/Landowner Name: Penn DOT District 5

County: Monroe Quad: Stroudsburg Township/Municipality: Stroud

~~PNDI~~ USFWS # 2013-0652 Potential conflict with USFWS species? ☒ Y ☐ N

ACTION AREA[2] 300 feet from proposed limits of disturbance
Action area size: _____ **Does the Phase 1 survey include all wetlands in the action area?** ☒ **Y** ☐ **N**[3]

WETLAND ID: W-3-14A **PHOTOS TAKEN:** ☒ Yes ☐ No **WETLAND SIZE:** 0.07 acres
Wetland size estimation – If actual acreage is not known at time of investigation, check one:
☐ < 0.1 acre ☐ 0.1-0.5 acre ☐ >0.5 to <1 acre ☐ 1-2 acres ☐ 2-4 acres ☐ 5+ acres ☐ 10+ acres

WETLAND LOCATION: Lat 40.990756 Long -75.245220
(approximate center of wetland) GPS Datum (check one): ☐ NAD 27 ☒ NAD 83 ☐ WGS 84

SURVEY CONDITIONS & LIMITATIONS

Date of survey: 05/21/17 Time In: 13:00 Time Out: 13:15
Last precipitation: ☐ < 24 hours ☐ 1-7 days ☐ > 1 week ☒ unknown Drought conditions? ☐ Y ☒ N ☐ Unknown

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 (skip next 2 questions)
☐ 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 (_____% or _____ acres of the off-site portion)

How much of the *off-site portion* of this wetland is visible (*e.g.*, from the subject property or from a public road)?
☐ all of it ☐ part of it (at least _____ acres) ☐ none of it

Are there any wetlands located off-site and close enough to be affected by this project? ☐ Y ☒ N ☐ Unknown
If yes, *could* they be potential bog turtle habitat? ☐ Y ☐ N ☐ Unknown

Describe surrounding landscape (wetlands, forest, subdivision, agricultural field, fallow field, etc.):
Highway right of way, wooded hillslope, maintained lawn

WETLAND CHARACTERISTICS

Wetland type(s) present and % cover: ☐ PEM _____ ☐ PSS _____ ☒ PFO 100 ☐ POW _____

☐ Y ☒ N Are there any signs of disturbance to *hydrology* (ditching, filling, ponds, roads, etc.)? If yes, describe
_____

☐ Y ☒ N Are there any signs of disturbance to *vegetation* (mowing, pasturing, burning, etc.)? If yes, describe
_____

Project Name I-80 sect 17 M Reconstruction *Wetland* _____ *(con't)*

Hydrology

☒ Y ☐ N Springs or seeps ☒ visible or ☐ likely ? Watercress present? ☐ Yes ☒ No
☐ Y ☒ N Spring houses in or adjacent to wetland?
☒ Y ☐ N Saturated soils present? If yes, year-round? ☒ Likely ☐ Unlikely ☐ Unknown
☒ Y ☐ N Water visible on surface? Check all that apply: ☐ small puddles/depressions (___" deep)
☒ rivulets (2" deep) ☐ larger pools/ponds (___" deep)
☐ Y ☒ N Evidence of flooding? If yes, describe indicators _____

Soils Mapping Unit (optional): CnB, Chippewa an Norwich
Field observations confirm mapped type? ☐ YES ☐ NO ☒ Unknown

Soils – PEM Portion of Wetland			
Mucky[4]*?* ☐ YES ☒ NO	How much of it (PEM) is **mucky**? ☐ <10% ☐ 10-29% ☐ 30-49% ☐ 50-70% ☐ >70%	**Mucky** soils range in depth from: _____ to _____"	**Most** of the **mucky part(s)** of the wetland can be probed[5]: ☐ 3-5" ☐ 6-8" ☐ 9-11" ☐ ≥12"
Non-mucky[6]*?* ☐ YES ☐ NO	How much of it (PEM) is **non-mucky**? ☐ <10% ☐ 10-29% ☐ 30-49% ☐ 50-70% ☐ >70%		

Soils – PSS and PFO Portions of Wetland			
Mucky[4]*?* ☐ YES ☒ NO	How much of it is **mucky**? ☐ <10% ☐ 10-29% ☐ 30-49% ☐ 50-70% ☐ >70%	**Mucky** soils range in depth from: _____ to _____"	**Most** of the **mucky part(s)** of the wetland can be probed[5]: ☐ 3-5" ☐ 6-8" ☐ 9-11" ☐ ≥12"

Wetland Vegetation (characterize the wetland as a whole)
Check (X) if present (≥ 5% areal coverage), and also circle if dominant (≥ 20% coverage).

☐ sedges ☐ rushes ☒ skunk cabbage ☐ cattail ☐ sweet flag ☐ jewelweed ☐ sphagnum moss
☐ sensitive fern ☐ rice cutgrass ☐ tearthumb ☐ reed canary grass ☐ *Phragmites* ☐ purple loosestrife
☐ alder ☐ dogwood ☒ red maple ☐ willow ☐ poison sumac ☒ multiflora rose ☐ _____
Additional dominant species: _____

Herptiles
Were any bog turtles observed? ☐ YES[7] ☒ NO If yes, how many? _____
Other herptiles ☐ observed ☐ previously observed: None

Additional Comments/Observations: (use additional sheets if necessary)
wetland is situated at a hillslope groundwater seep w/in the headwaters of an intermittent watercourse. no muck no veg. structure

INVESTIGATOR'S OPINION

☐ YES ☒ NO ☐ UNSURE The hydrology criterion[8] for bog turtle habitat is met.
☐ YES ☒ NO ☐ UNSURE The soils criterion[8] for bog turtle habitat is met.
☐ YES ☒ NO ☐ UNSURE The vegetation criterion[8] for bog turtle habitat is met.
☐ YES ☒ NO ☐ UNSURE This wetland is potential bog turtle habitat.

I certify that to the best of my knowledge, all of the information provided herein is accurate and complete.

Bridger Thompson — Investigator's Name (print)
Bridger Thompson — Investigator's Signature
05/21/17 — Date

bridger.thompson@aecom.com 717-609-3301

USFWS / PFBC Bog Turtle Habitat Evaluation Field Form[1]

(revised 06/01/2006)

Project/Property Name: I-80 Section 17M Reconstruction

Project type: Highway/roadway reconstruction and improvements

Applicant/Landowner Name: Penn DOT District 5

County: Monroe Quad: Stroudsburg Township/Municipality: Stroud

USFWS ~~PNDI~~ # 2013-0652 Potential conflict with USFWS species? ☒ Y ☐ N

ACTION AREA[2] 300 feet from proposed limit of disturbance.
Action area size: _____ **Does the Phase 1 survey include all wetlands in the action area?** ☒ Y ☐ N[3]

WETLAND ID: W-3-15 **PHOTOS TAKEN:** ☒ Yes ☐ No **WETLAND SIZE:** 0.28 **acres**
Wetland size estimation – If actual acreage is not known at time of investigation, check one:
☐ < 0.1 acre ☐ 0.1-0.5 acre ☐ >0.5 to <1 acre ☐ 1-2 acres ☐ 2-4 acres ☐ 5+ acres ☐ 10+ acres

WETLAND LOCATION: Lat 40.987447 Long -75.242916
(approximate center of wetland) GPS Datum (check one): ☐ NAD 27 ☒ NAD 83 ☐ WGS 84

SURVEY CONDITIONS & LIMITATIONS

Date of survey: 05/21/17 Time In: 14:00 Time Out: 14:30
Last precipitation: ☐ < 24 hours ☐ 1-7 days ☐ > 1 week ☒ unknown Drought conditions? ☐ Y ☒ N ☐ Unknown

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 (skip next 2 questions)
☐ 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 (_____% or _____ acres of the off-site portion)

How much of the *off-site portion* of this wetland is visible (*e.g.*, from the subject property or from a public road)?
☐ all of it ☐ part of it (at least _____ acres) ☐ none of it

Are there any wetlands located off-site and close enough to be affected by this project? ☐ Y ☒ N ☐ Unknown
If yes, *could* they be potential bog turtle habitat? ☐ Y ☐ N ☐ Unknown

Describe surrounding landscape (wetlands, forest, subdivision, agricultural field, fallow field, etc.):
wooded hillslope, wooded riparian corridor, roadside row.

WETLAND CHARACTERISTICS

Wetland type(s) present and % cover: ☒ PEM 100 ☐ PSS _____ ☐ PFO _____ ☐ POW _____

☒ Y ☐ N Are there any signs of disturbance to *hydrology* (ditching, filling, ponds, roads, etc.)? If yes, describe
hydrology associated w/ spring house outfall and culvert outfall
☐ Y ☒ N Are there any signs of disturbance to *vegetation* (mowing, pasturing, burning, etc.)? If yes, describe
_____

W-3-15

Project Name I-80 Sect 17M Reconstruction *Wetland* _____ *(con't)*

Hydrology

☒Y ☐N Springs or seeps ☒ visible or ☐ likely ? Watercress present? ☐ Yes ☒ No

☒Y ☐N Spring houses in or adjacent to wetland?

☒Y ☐N Saturated soils present? If yes, year-round? ☒Likely ☐ Unlikely ☐ Unknown

☒Y ☐N Water visible on surface? Check all that apply: ☐ small puddles/depressions (___" deep)
☒ rivulets (0.5" deep) ☐ larger pools/ponds (___" deep)

☒Y ☐N Evidence of flooding? If yes, describe indicators gravel bars, debris lines

Soils Mapping Unit (optional): ReB, Rexford gravelly silt loam
Field observations confirm mapped type? ☐ YES ☐ NO ☒ Unknown

Soils – PEM Portion of Wetland			
Mucky[4]*?* ☐ YES ☒NO	How much of it (PEM) is **mucky**? ☐ <10% ☐10-29% ☐ 30-49% ☐ 50-70% ☐ >70%	**Mucky** soils range in depth from: _____ to _____"	**Most** of the **mucky part(s)** of the wetland can be probed[5]: ☐ 3-5" ☐ 6-8" ☐ 9-11" ☐ ≥12"
Non-mucky[6]*?* ☒ YES ☐ NO	How much of it (PEM) is **non-mucky**? ☐ <10% ☐10-29% ☐ 30-49% ☐ 50-70% ☒ >70%		

Soils – PSS and PFO Portions of Wetland			
Mucky[4]*?* ☐ YES ☐ NO	How much of it is **mucky**? ☐ <10% ☐10-29% ☐ 30-49% ☐ 50-70% ☐ >70%	**Mucky** soils range in depth from: _____ to _____"	**Most** of the **mucky part(s)** of the wetland can be probed[5]: ☐ 3-5" ☐ 6-8" ☐ 9-11" ☐ ≥12"

Wetland Vegetation (characterize the wetland as a whole)
Check (X) if present (≥ 5% areal coverage), and also circle if dominant (≥ 20% coverage).

☐ sedges (☒ rushes) ☐ skunk cabbage ☒ cattail ☐ sweet flag (☒ jewelweed) ☐ sphagnum moss
☒ sensitive fern ☐ rice cutgrass ☐ tearthumb ☐ reed canary grass ☐ *Phragmites* ☐ purple loosestrife
☐ alder ☒ dogwood ☐ red maple ☐ willow ☐ poison sumac ☐ multiflora rose ☐_____
Additional dominant species: _____

Herptiles
Were any bog turtles observed? ☐ YES[7] ☒ NO If yes, how many? _____
Other herptiles ☐ observed ☐ previously observed: None

Additional Comments/Observations: (use additional sheets if necessary)
Wetland hydrology associated w/ seasonal groundwater and spring house outfall on wooded hill slope. no muck, no vegetative structure

INVESTIGATOR'S OPINION

☐ YES ☒ NO ☐ UNSURE The hydrology criterion[8] for bog turtle habitat is met.
☐ YES ☒ NO ☐ UNSURE The soils criterion[8] for bog turtle habitat is met.
☐ YES ☒ NO ☐ UNSURE The vegetation criterion[8] for bog turtle habitat is met.
☐ YES ☒ NO ☐ UNSURE This wetland is potential bog turtle habitat.

I certify that to the best of my knowledge, all of the information provided herein is accurate and complete.

Bridger Thompson — Investigator's Name (print)
Bridger Thompson — Investigator's Signature
05/21/17 — Date

bridger.thompson@aecom.com 717-609-3301

USFWS / PFBC Bog Turtle Habitat Evaluation Field Form[1]

(revised 06/01/2006)

Project/Property Name: I-80 Section 17M Reconstruction

Project type: highway/roadway reconstruction and improvements

Applicant/Landowner Name: Penn DOT District 5

County: Monroe Quad: Stroudsburg Township/Municipality: Stroud

USFWS ~~PNDI~~ # 2013-0652 Potential conflict with USFWS species? ☒ Y ☐ N

ACTION AREA[2] 300 feet from proposed limit of disturbance

Action area size: _____ **Does the Phase 1 survey include all wetlands in the action area?** ☒ Y ☐ N[3]

WETLAND ID: W-3-16 **PHOTOS TAKEN:** ☐ Yes ☒ No **WETLAND SIZE:** 0.70 **acres**

Wetland size estimation – If actual acreage is not known at time of investigation, check one:

☐ < 0.1 acre ☐ 0.1-0.5 acre ☐ >0.5 to <1 acre ☐ 1-2 acres ☐ 2-4 acres ☐ 5+ acres ☐ 10+ acres

WETLAND LOCATION: Lat 40.987222 Long -75.243733

(approximate center of wetland) GPS Datum (check one): ☐ NAD 27 ☒ NAD 83 ☐ WGS 84

SURVEY CONDITIONS & LIMITATIONS

Date of survey: 05/21/17 Time In: 14:30 Time Out: 14:45

Last precipitation: ☐ < 24 hours ☐ 1-7 days ☐ > 1 week ☒ unknown Drought conditions? ☐ Y ☒ N ☐ Unknown

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 (skip next 2 questions)

☐ 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 (_____% or _____ acres of the off-site portion)

How much of the *off-site portion* of this wetland is visible (*e.g.*, from the subject property or from a public road)?

☐ all of it ☐ part of it (at least _____ acres) ☐ none of it

Are there any wetlands located off-site and close enough to be affected by this project? ☐ Y ☒ N ☐ Unknown

If yes, *could* they be potential bog turtle habitat? ☐ Y ☐ N ☐ Unknown

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

wooded shrubby low land area, portions w/in roadside row

WETLAND CHARACTERISTICS

Wetland type(s) present and % cover: ☐ PEM _____ ☒ PSS 100 ☐ PFO _____ ☐ POW _____

☒ Y ☐ N Are there any signs of disturbance to *hydrology* (ditching, filling, ponds, roads, etc.)? If yes, describe historic roadway crossing may have separated this wetland from adj. wetlands

☐ Y ☒ N Are there any signs of disturbance to *vegetation* (mowing, pasturing, burning, etc.)? If yes, describe

_____

W-3-16

Project Name I-80 Section 17M Reconstruction *Wetland* _____ *(con't)*

Hydrology

☐ Y ☒ N Springs or seeps ☐ visible or ☐ likely ? Watercress present? ☐ Yes ☒ No
☐ Y ☒ N Spring houses in or adjacent to wetland?
☐ Y ☒ N Saturated soils present? If yes, year-round? ☐ Likely ☐ Unlikely ☐ Unknown
☐ Y ☒ N Water visible on surface? Check all that apply: ☐ small puddles/depressions (___" deep)
☐ rivulets (___" deep) ☐ larger pools/ponds (___" deep)
☐ Y ☒ N Evidence of flooding? If yes, describe indicators_____

Soils Mapping Unit (optional): BbB, Bath channery silt loam
Field observations confirm mapped type? ☐ YES ☐ NO ☒ Unknown

Soils – PEM Portion of Wetland			
Mucky[4]*?* ☐ YES ☐ NO	How much of it (PEM) is **mucky**? ☐ <10% ☐10-29% ☐ 30-49% ☐ 50-70% ☐ >70%	**Mucky** soils range in depth from: _____ to _____"	**Most** of the **mucky part(s)** of the wetland can be probed[5]: ☐ 3-5" ☐ 6-8" ☐ 9-11" ☐ ≥12"
Non-mucky[6]*?* ☐ YES ☐ NO	How much of it (PEM) is **non-mucky**? ☐ <10% ☐10-29% ☐ 30-49% ☐ 50-70% ☐ >70%		

Soils – PSS and PFO Portions of Wetland			
Mucky[4]*?* ☐ YES ☒ NO	How much of it is **mucky**? ☐ <10% ☐10-29% ☐ 30-49% ☐ 50-70% ☐ >70%	**Mucky** soils range in depth from: _____ to _____"	**Most** of the **mucky part(s)** of the wetland can be probed[5]: ☐ 3-5" ☐ 6-8" ☐ 9-11" ☐ ≥12"

Wetland Vegetation (characterize the wetland as a whole)
Check (X) if present (≥ 5% areal coverage), and also circle if dominant (≥ 20% coverage).

☐ sedges ☐ rushes ☒ skunk cabbage ☐ cattail ☐ sweet flag ☒ jewelweed ☐ sphagnum moss
☐ sensitive fern ☐ rice cutgrass ☐ tearthumb ☒ reed canary grass ☐ *Phragmites* ☐ purple loosestrife
☐ alder ☒ dogwood ☒ red maple ☒ willow ☐ poison sumac ☐ multiflora rose ☐_____
Additional dominant species: _____

Herptiles
Were any bog turtles observed? ☐ YES[7] ☒ NO If yes, how many? _____
Other herptiles ☐ observed ☐ previously observed: None

Additional Comments/Observations: (use additional sheets if necessary)
Wetland is located in topographic low area that collects surface run off no spring fed hydrology, no muck, no veg. structure

INVESTIGATOR'S OPINION

☐ YES ☒ NO ☐ UNSURE The hydrology criterion[8] for bog turtle habitat is met.
☐ YES ☒ NO ☐ UNSURE The soils criterion[8] for bog turtle habitat is met.
☐ YES ☒ NO ☐ UNSURE The vegetation criterion[8] for bog turtle habitat is met.
☐ YES ☒ NO ☐ UNSURE This wetland is potential bog turtle habitat.

I certify that to the best of my knowledge, all of the information provided herein is accurate and complete.

Bridger Thompson — Investigator's Name (print)
Bridger Thompson — Investigator's Signature
05/21/17 — Date

bridger.thompson@aecom.com 717-609-3301

USFWS / PFBC Bog Turtle Habitat Evaluation Field Form[1]

(revised 06/01/2006)

Project/Property Name: I-80 Section 17M Reconstruction

Project type: highway/roadway reconstruction and improvements

Applicant/Landowner Name: PennDOT District 5

County: Monroe Quad: Stroudsburg Township/Municipality: Stroud

USFWS ~~PNDI#~~ 2013-0652 Potential conflict with USFWS species? ☒ Y ☐ N

ACTION AREA[2] 300 feet from proposed limit of disturbance

Action area size: _____ **Does the Phase 1 survey include all wetlands in the action area?** ☒ Y ☐ N[3]

WETLAND ID: W-3-17 **PHOTOS TAKEN:** ☒ Yes ☐ No **WETLAND SIZE:** 0.02 **acres**

Wetland size estimation – If actual acreage is not known at time of investigation, check one:

☐ < 0.1 acre ☐ 0.1-0.5 acre ☐ >0.5 to <1 acre ☐ 1-2 acres ☐ 2-4 acres ☐ 5+ acres ☐ 10+ acres

WETLAND LOCATION: Lat 40.990815 Long -75.247149

(approximate center of wetland) GPS Datum (check one): ☐ NAD 27 ☒ NAD 83 ☐ WGS 84

SURVEY CONDITIONS & LIMITATIONS

Date of survey: 05/21/17 Time In: 12:00 Time Out: 12:15

Last precipitation: ☐ < 24 hours ☐ 1-7 days ☐ > 1 week ☒ unknown Drought conditions? ☐ Y ☒ N ☐ Unknown

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 (skip next 2 questions)

☐ 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 (_____% or _____ acres of the off-site portion)

How much of the *off-site portion* of this wetland is visible (*e.g.*, from the subject property or from a public road)?

☐ all of it ☐ part of it (at least _____ acres) ☐ none of it

Are there any wetlands located off-site and close enough to be affected by this project? ☐ Y ☒ N ☐ Unknown

If yes, *could* they be potential bog turtle habitat? ☐ Y ☐ N ☐ Unknown

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

highway right of way w/ steep rocky cut slope.

WETLAND CHARACTERISTICS

Wetland type(s) present and % cover: ☒ PEM 100 ☐ PSS _____ ☐ PFO _____ ☐ POW _____

☒ Y ☐ N Are there any signs of disturbance to *hydrology* (ditching, filling, ponds, roads, etc.)? If yes, describe

wetland is associated w/ ground water that was exposed by road cut.

☒ Y ☐ N Are there any signs of disturbance to *vegetation* (mowing, pasturing, burning, etc.)? If yes, describe

periodic mowing

W-3-17

Project Name I-80 Section 17M Reconstruction *Wetland* _____ *(con't)*

Hydrology

☐ Y ☒ N Springs or seeps ☐ visible or ☐ likely ? Watercress present? ☐ Yes ☒ No

☐ Y ☒ N Spring houses in or adjacent to wetland?

☒ Y ☐ N Saturated soils present? If yes, year-round? ☐ Likely ☒ Unlikely ☐ Unknown

☒ Y ☐ N Water visible on surface? Check all that apply: ☒ small puddles/depressions (1 " deep)
☒ rivulets (1 " deep) ☐ larger pools/ponds (___ " deep)

☐ Y ☒ N Evidence of flooding? If yes, describe indicators _____

Soils Mapping Unit (optional): BbB, Bath channery silt loam
Field observations confirm mapped type? ☐ YES ☐ NO ☒ Unknown

Soils – PEM Portion of Wetland			
Mucky[4]*?* ☐ YES ☒ NO	How much of it (PEM) is **mucky**? ☐ <10% ☐ 10-29% ☐ 30-49% ☐ 50-70% ☐ >70%	**Mucky** soils range in depth from: _____ to _____"	**Most** of the **mucky part(s)** of the wetland can be probed[5]: ☐ 3-5" ☐ 6-8" ☐ 9-11" ☐ ≥12"
Non-mucky[6]*?* ☒ YES ☐ NO	How much of it (PEM) is **non-mucky**? ☐ <10% ☐ 10-29% ☐ 30-49% ☐ 50-70% ☒ >70%		

Soils – PSS and PFO Portions of Wetland			
Mucky[4]*?* ☐ YES ☐ NO	How much of it is **mucky**? ☐ <10% ☐ 10-29% ☐ 30-49% ☐ 50-70% ☐ >70%	**Mucky** soils range in depth from: _____ to _____"	**Most** of the **mucky part(s)** of the wetland can be probed[5]: ☐ 3-5" ☐ 6-8" ☐ 9-11" ☐ ≥12"

Wetland Vegetation (characterize the wetland as a whole)
Check (X) if present (≥ 5% areal coverage), and also circle if dominant (≥ 20% coverage).

☒ sedges ☒ rushes ☐ skunk cabbage ☒ cattail ☐ sweet flag ☒ jewelweed ☐ sphagnum moss
☐ sensitive fern ☐ rice cutgrass ☐ tearthumb ☒ reed canary grass ☐ *Phragmites* ☐ purple loosestrife
☐ alder ☐ dogwood ☐ red maple ☐ willow ☐ poison sumac ☐ multiflora rose ☐ _____
Additional dominant species: _____

Herptiles
Were any bog turtles observed? ☐ YES[7] ☒ NO If yes, how many? _____
Other herptiles ☐ observed ☐ previously observed: None

Additional Comments/Observations: (use additional sheets if necessary)
Wetland is located entirely w/in the roadside row. Hydrology is associated w/ roadway cut and run off.

INVESTIGATOR'S OPINION

☐ YES ☒ NO ☐ UNSURE The hydrology criterion[8] for bog turtle habitat is met.
☐ YES ☒ NO ☐ UNSURE The soils criterion[8] for bog turtle habitat is met.
☐ YES ☒ NO ☐ UNSURE The vegetation criterion[8] for bog turtle habitat is met.
☐ YES ☒ NO ☐ UNSURE This wetland is potential bog turtle habitat.

I certify that to the best of my knowledge, all of the information provided herein is accurate and complete.

Bridger Thompson — Investigator's Name (print)
Bridger Thompson — Investigator's Signature
05/21/17 — Date

bridger.thompson@aecom.com 717-609-3301

USFWS / PFBC Bog Turtle Habitat Evaluation Field Form[1]

(revised 06/01/2006)

Project/Property Name: I-80 Section 17M Reconstruction

Project type: highway/roadway reconstruction and improvements

Applicant/Landowner Name: PennDOT District 5

County: Monroe Quad: Stroudsburg Township/Municipality: Stroud

USFWS ~~PNDI~~ # 2013-0652 Potential conflict with USFWS species? ☒ Y ☐ N

ACTION AREA[2] 300 feet from proposed limit of disturbance
Action area size: _____ **Does the Phase 1 survey include all wetlands in the action area?** ☒ Y ☐ N[3]

WETLAND ID: W-3-18 **PHOTOS TAKEN:** ☒ Yes ☐ No **WETLAND SIZE:** 0.16 **acres**
Wetland size estimation – If actual acreage is not known at time of investigation, check one:
☐ < 0.1 acre ☐ 0.1-0.5 acre ☐ >0.5 to <1 acre ☐ 1-2 acres ☐ 2-4 acres ☐ 5+ acres ☐ 10+ acres

WETLAND LOCATION: Lat 40.987611 Long -75.243572
(approximate center of wetland) GPS Datum (check one): ☐ NAD 27 ☒ NAD 83 ☐ WGS 84

SURVEY CONDITIONS & LIMITATIONS

Date of survey: 05/21/17 Time In: 14:45 Time Out: 15:00
Last precipitation: ☐ < 24 hours ☐ 1-7 days ☐ > 1 week ☒ unknown Drought conditions? ☐ Y ☒ N ☐ Unknown

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 (skip next 2 questions)
☐ 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 (_____% or _____ acres of the off-site portion)

How much of the *off-site portion* of this wetland is visible (*e.g.*, from the subject property or from a public road)?
☐ all of it ☐ part of it (at least _____ acres) ☐ none of it

Are there any wetlands located off-site and close enough to be affected by this project? ☐ Y ☒ N ☐ Unknown
If yes, *could* they be potential bog turtle habitat? ☐ Y ☐ N ☐ Unknown

Describe surrounding landscape (wetlands, forest, subdivision, agricultural field, fallow field, etc.):
lowland riparian corridor, wooded shrubby hillslope, roadside row

WETLAND CHARACTERISTICS

Wetland type(s) present and % cover: ☒ PEM 75 ☒ PSS 25 ☐ PFO _____ ☐ POW _____

☐ Y ☒ N Are there any signs of disturbance to *hydrology* (ditching, filling, ponds, roads, etc.)? If yes, describe
_____

☐ Y ☒ N Are there any signs of disturbance to *vegetation* (mowing, pasturing, burning, etc.)? If yes, describe
_____

Project Name I-80 Section 17M Reconstruction *Wetland* W-3-18 *(con't)*

Hydrology

- [X] Y [ ] N Springs or seeps [X] visible or [ ] likely? Watercress present? [X] Yes [ ] No
- [ ] Y [X] N Spring houses in or adjacent to wetland?
- [X] Y [ ] N Saturated soils present? If yes, year-round? [X] Likely [ ] Unlikely [ ] Unknown
- [X] Y [ ] N Water visible on surface? Check all that apply: [X] small puddles/depressions (1" deep)
  [X] rivulets (2" deep) [ ] larger pools/ponds (___" deep)
- [ ] Y [X] N Evidence of flooding? If yes, describe indicators ___

Soils Mapping Unit (optional): ReB, Rexford gravelly silt loam
Field observations confirm mapped type? [ ] YES [ ] NO [X] Unknown

Soils – PEM Portion of Wetland			
Mucky[4]? [X] YES [ ] NO	How much of it (PEM) is **mucky**? [ ] <10% [ ] 10-29% [ ] 30-49% [X] 50-70% [ ] >70%	**Mucky** soils range in depth from: 3 to 12"	**Most** of the **mucky part(s)** of the wetland can be probed[5]: [ ] 3-5" [ ] 6-8" [X] 9-11" [ ] ≥12"
Non-mucky[6]? [ ] YES [X] NO	How much of it (PEM) is **non-mucky**? [ ] <10% [ ] 10-29% [ ] 30-49% [ ] 50-70% [ ] >70%		

Soils – PSS and PFO Portions of Wetland			
Mucky[4]? [X] YES [ ] NO	How much of it is **mucky**? [ ] <10% [ ] 10-29% [X] 30-49% [ ] 50-70% [ ] >70%	**Mucky** soils range in depth from: 3 to 10"	**Most** of the **mucky part(s)** of the wetland can be probed[5]: [ ] 3-5" [X] 6-8" [ ] 9-11" [ ] ≥12"

Wetland Vegetation **(characterize the wetland as a whole)**
Check (X) if present (≥ 5% areal coverage), and also circle if dominant (≥ 20% coverage).

[X] sedges [X] rushes [X] skunk cabbage [X] cattail [X] sweet flag [X] jewelweed [ ] sphagnum moss
[ ] sensitive fern [ ] rice cutgrass [ ] tearthumb [ ] reed canary grass [ ] *Phragmites* [ ] purple loosestrife
[X] alder [X] dogwood [ ] red maple [X] willow [ ] poison sumac [ ] multiflora rose [ ] ___
Additional dominant species: nightshade, (watercress)

Herptiles
Were any bog turtles observed? [ ] YES[7] [X] NO If yes, how many? ___
Other herptiles [X] observed [ ] previously observed: green frog

Additional Comments/Observations: (use additional sheets if necessary)
Wetland hydrology is associated w/ spring seeps that originate at the toe of slope. deep mucky areas present.

INVESTIGATOR'S OPINION

- [X] YES [ ] NO [ ] UNSURE The hydrology criterion[8] for bog turtle habitat is met.
- [X] YES [ ] NO [ ] UNSURE The soils criterion[8] for bog turtle habitat is met.
- [X] YES [ ] NO [ ] UNSURE The vegetation criterion[8] for bog turtle habitat is met.
- [X] YES [ ] NO [ ] UNSURE This wetland is potential bog turtle habitat.

I certify that to the best of my knowledge, all of the information provided herein is accurate and complete.

Bridger Thompson (Investigator's Name (print)) | Bridger Thompson (Investigator's Signature) | 05/21/17 (Date)

bridger.thompson@aecom.com 717-609-3301

USFWS / PFBC Bog Turtle Habitat Evaluation Field Form[1]

(revised 06/01/2006)

Project/Property Name: I-80 Section 17M Reconstruction

Project type: highway/roadway reconstruction and improvements

Applicant/Landowner Name: PennDOT District 5

County: Monroe Quad: Stroudsburg Township/Municipality: Stroud

USFWS ~~PNDI~~ # 2013-0652 Potential conflict with USFWS species? ☒ Y ☐ N

ACTION AREA[2] 300 feet from proposed limits of disturbance

Action area size: _____ **Does the Phase 1 survey include all wetlands in the action area?** ☒ Y ☐ N[3]

WETLAND ID: W-3-19 **PHOTOS TAKEN:** ☒ Yes ☐ No **WETLAND SIZE:** 0.36 **acres**

Wetland size estimation – If actual acreage is not known at time of investigation, check one:

☐ < 0.1 acre ☐ 0.1-0.5 acre ☐ >0.5 to <1 acre ☐ 1-2 acres ☐ 2-4 acres ☐ 5+ acres ☐ 10+ acres

WETLAND LOCATION: Lat 40.987066 Long -75.242861

(approximate center of wetland) GPS Datum (check one): ☐ NAD 27 ☒ NAD 83 ☐ WGS 84

SURVEY CONDITIONS & LIMITATIONS

Date of survey: 05/21/17 Time In: 15:00 Time Out: 15:15

Last precipitation: ☐ < 24 hours ☐ 1-7 days ☐ > 1 week ☒ unknown Drought conditions? ☐ Y ☒ N ☐ Unknown

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 (skip next 2 questions)

☐ 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 (_____% or _____ acres of the off-site portion)

How much of the *off-site portion* of this wetland is visible (*e.g.*, from the subject property or from a public road)?

☐ all of it ☐ part of it (at least _____ acres) ☐ none of it

Are there any wetlands located off-site and close enough to be affected by this project? ☐ Y ☐ N ☐ Unknown

If yes, *could* they be potential bog turtle habitat? ☐ Y ☐ N ☐ Unknown

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

wooded shrubby riparian corridor, wooded shrubby hillslope road side row.

WETLAND CHARACTERISTICS

Wetland type(s) present and % cover: ☒ PEM 50 ☐ PSS _____ ☐ PFO _____ ☒ POW 50

☒ Y ☐ N Are there any signs of disturbance to *hydrology* (ditching, filling, ponds, roads, etc.)? If yes, describe

roadway / driveway cuts,

☐ Y ☒ N Are there any signs of disturbance to *vegetation* (mowing, pasturing, burning, etc.)? If yes, describe

_____

W-3-19

Project Name I-80 Section 17M Reconstruction *Wetland* _____ *(con't)*

Hydrology

- [X] Y [ ] N Springs or seeps [X] visible or [ ] likely? Watercress present? [ ] Yes [X] No
- [ ] Y [X] N Spring houses in or adjacent to wetland?
- [X] Y [ ] N Saturated soils present? If yes, year-round? [X] Likely [ ] Unlikely [ ] Unknown
- [X] Y [ ] N Water visible on surface? Check all that apply: [X] small puddles/depressions (___" deep) [X] rivulets (5" deep) [X] larger pools/ponds (10" deep)
- [ ] Y [X] N Evidence of flooding? If yes, describe indicators _____

Soils Mapping Unit (optional): ReB, Rexford gravelly silt loam - Hy, Holly silt loam
Field observations confirm mapped type? [ ] YES [ ] NO [X] Unknown

Soils – PEM Portion of Wetland			
Mucky[4]? [X] YES [ ] NO	How much of it (PEM) is **mucky**? [ ] <10% [ ] 10-29% [X] 30-49% [ ] 50-70% [ ] >70%	**Mucky** soils range in depth from: 3 to 10"	**Most** of the **mucky part(s)** of the wetland can be probed[5]: [ ] 3-5" [X] 6-8" [ ] 9-11" [ ] ≥12"
Non-mucky[6]? [ ] YES [X] NO	How much of it (PEM) is **non-mucky**? [ ] <10% [ ] 10-29% [ ] 30-49% [ ] 50-70% [ ] >70%		

Soils – PSS and PFO Portions of Wetland			
Mucky[4]? [ ] YES [ ] NO	How much of it is **mucky**? [ ] <10% [ ] 10-29% [ ] 30-49% [ ] 50-70% [ ] >70%	**Mucky** soils range in depth from: ____ to ____"	**Most** of the **mucky part(s)** of the wetland can be probed[5]: [ ] 3-5" [ ] 6-8" [ ] 9-11" [ ] ≥12"

Wetland Vegetation (characterize the wetland as a whole)
Check (X) if present (≥ 5% areal coverage), and also circle if dominant (≥ 20% coverage).

- [X] sedges [X] rushes [X] skunk cabbage [ ] cattail [ ] sweet flag [X] jewelweed [ ] sphagnum moss
- [ ] sensitive fern [ ] rice cutgrass [ ] tearthumb [ ] reed canary grass [ ] *Phragmites* [ ] purple loosestrife
- [X] alder [X] dogwood [ ] red maple [ ] willow [ ] poison sumac [ ] multiflora rose [ ] _____

Additional dominant species: _____

Herptiles
Were any bog turtles observed? [ ] YES[7] [X] NO If yes, how many? _____
Other herptiles [X] observed [ ] previously observed: green frog

Additional Comments/Observations: (use additional sheets if necessary)
Wetland is associated w/ spring seep and intermittent swale way that expands into a large pool of open water / silt and muck.

INVESTIGATOR'S OPINION

- [X] YES [ ] NO [ ] UNSURE The hydrology criterion[8] for bog turtle habitat is met.
- [X] YES [ ] NO [ ] UNSURE The soils criterion[8] for bog turtle habitat is met.
- [X] YES [ ] NO [ ] UNSURE The vegetation criterion[8] for bog turtle habitat is met.
- [X] YES [ ] NO [ ] UNSURE This wetland is potential bog turtle habitat.

I certify that to the best of my knowledge, all of the information provided herein is accurate and complete.

Bridger Thompson — Investigator's Name (print)
Bridger Thompson — Investigator's Signature
05/21/17 — Date

bridger.thompson@aecom.com 717-609-3301

USFWS / PFBC Bog Turtle Habitat Evaluation Field Form[1]

(revised 06/01/2006)

Project/Property Name: I-80 Section 17M Reconstruction

Project type: highway / roadway reconstruction and improvements

Applicant/Landowner Name: Penn DOT District 5

County: Monroe Quad: Stroudsburg Township/Municipality: Stroud

USFWS ~~PNDI~~ # 2013-0057 Potential conflict with USFWS species? ☒ Y ☐ N

ACTION AREA[2] 300 feet from proposed limits of disturbance

Action area size: _____ **Does the Phase 1 survey include all wetlands in the action area?** ☒ **Y** ☐ **N**[3]

WETLAND ID: W-3-20 **PHOTOS TAKEN:** ☒ **Yes** ☐ **No** **WETLAND SIZE:** 2.65 **acres**

Wetland size estimation – If actual acreage is not known at time of investigation, check one:

☐ < 0.1 acre ☐ 0.1-0.5 acre ☐ >0.5 to <1 acre ☐ 1-2 acres ☐ 2-4 acres ☐ 5+ acres ☐ 10+ acres

WETLAND LOCATION: Lat 40.977269 Long -75.223825

(approximate center of wetland) GPS Datum (check one): ☐ NAD 27 ☒ NAD 83 ☐ WGS 84

SURVEY CONDITIONS & LIMITATIONS

Date of survey: 05/22/17 Time In: 11:00 Time Out: 11:30

Last precipitation: ☐ < 24 hours ☐ 1-7 days ☐ > 1 week ☒ unknown Drought conditions? ☐ Y ☒ N ☐ Unknown

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 (skip next 2 questions)

☒ some of it – _____ acres or 50 % 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 (_____% or _____ acres of the off-site portion)

How much of the *off-site portion* of this wetland is visible (*e.g.*, from the subject property or from a public road)?

☒ all of it ☐ part of it (at least _____ acres) ☐ none of it

Are there any wetlands located off-site and close enough to be affected by this project? ☐ Y ☒ N ☐ Unknown

If yes, *could* they be potential bog turtle habitat? ☐ Y ☐ N ☐ Unknown

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

wooded shrubby lowland area, pond, recreation / camp area

WETLAND CHARACTERISTICS

Wetland type(s) present and % cover: ☐ PEM _____ ☐ PSS _____ ☐ PFO _____ ☒ POW 100

☒ Y ☐ N Are there any signs of disturbance to *hydrology* (ditching, filling, ponds, roads, etc.)? If yes, describe

man made dam on Little Pocono creek

☐ Y ☒ N Are there any signs of disturbance to *vegetation* (mowing, pasturing, burning, etc.)? If yes, describe

_____

W-3-20

Project Name I-80 Section 17M Reconstruction *Wetland* _____ *(con't)*

Hydrology

☐ Y ☒ N Springs or seeps ☐ visible or ☐ likely ? Watercress present? ☐ Yes ☒ No

☐ Y ☒ N Spring houses in or adjacent to wetland?

☒ Y ☐ N Saturated soils present? If yes, year-round? ☐ Likely ☐ Unlikely ☐ Unknown

☒ Y ☐ N Water visible on surface? Check all that apply: ☐ small puddles/depressions (___" deep)
☐ rivulets (___" deep) ☒ larger pools/ponds (+20" deep)

☐ Y ☒ N Evidence of flooding? If yes, describe indicators _____

Soils Mapping Unit (optional): W, Water

Field observations confirm mapped type? ☒ YES ☐ NO ☐ Unknown

Soils – PEM Portion of Wetland			
Mucky[4]*?* ☐ YES ☒ NO	How much of it (PEM) is **mucky**? ☐ <10% ☐ 10-29% ☐ 30-49% ☐ 50-70% ☐ >70%	**Mucky** soils range in depth from: _____ to _____"	**Most** of the **mucky part(s)** of the wetland can be probed[5]: ☐ 3-5" ☐ 6-8" ☐ 9-11" ☐ ≥12"
Non-mucky[6]*?* ☐ YES ☐ NO	How much of it (PEM) is **non-mucky**? ☐ <10% ☐ 10-29% ☐ 30-49% ☐ 50-70% ☐ >70%		

Soils – PSS and PFO Portions of Wetland			
Mucky[4]*?* ☐ YES ☐ NO	How much of it is **mucky**? ☐ <10% ☐ 10-29% ☐ 30-49% ☐ 50-70% ☐ >70%	**Mucky** soils range in depth from: _____ to _____"	**Most** of the **mucky part(s)** of the wetland can be probed[5]: ☐ 3-5" ☐ 6-8" ☐ 9-11" ☐ ≥12"

Wetland Vegetation (characterize the wetland as a whole)

Check (X) if present (≥ 5% areal coverage), and also circle if dominant (≥ 20% coverage).

☐ sedges ☐ rushes ☐ skunk cabbage ☒ cattail ☐ sweet flag ☐ jewelweed ☐ sphagnum moss
☐ sensitive fern ☐ rice cutgrass ☐ tearthumb ☐ reed canary grass ☐ *Phragmites* ☐ purple loosestrife
☐ alder ☐ dogwood ☐ red maple ☐ willow ☐ poison sumac ☐ multiflora rose ☐_____

Additional dominant species: _____

Herptiles

Were any bog turtles observed? ☐ YES[7] ☒ NO If yes, how many? _____

Other herptiles ☐ observed ☐ previously observed: None

Additional Comments/Observations: (use additional sheets if necessary)

area is a large man made pond.

INVESTIGATOR'S OPINION

☐ YES ☒ NO ☐ UNSURE The hydrology criterion[8] for bog turtle habitat is met.

☐ YES ☒ NO ☐ UNSURE The soils criterion[8] for bog turtle habitat is met.

☐ YES ☒ NO ☐ UNSURE The vegetation criterion[8] for bog turtle habitat is met.

☐ YES ☒ NO ☐ UNSURE This wetland is potential bog turtle habitat.

I certify that to the best of my knowledge, all of the information provided herein is accurate and complete.

Bridger Thompson — Investigator's Name (print)

Bridger A. Thompson — Investigator's Signature

05/22/17 — Date

bridger.thompson@aecom.com 717-609-3301

USFWS / PFBC Bog Turtle Habitat Evaluation Field Form[1]

(revised 06/01/2006)

Project/Property Name: I-80 Section 17M Reconstruction

Project type: highway / roadway reconstruction and improvements

Applicant/Landowner Name: PennDOT District 5

County: Monroe Quad: Stroudsburg Township/Municipality: Stroudsburg Boro

USFWS ~~PNDI~~ # 2013-0652 Potential conflict with USFWS species? ☒ Y ☐ N

ACTION AREA[2] 300 feet from proposed disturbance

Action area size: _____ **Does the Phase 1 survey include all wetlands in the action area?** ☒ Y ☐ N[3]

WETLAND ID: W-1-02 **PHOTOS TAKEN:** ☒ Yes ☐ No **WETLAND SIZE:** 0.17 **acres**

Wetland size estimation – If actual acreage is not known at time of investigation, check one:

☐ < 0.1 acre ☐ 0.1-0.5 acre ☐ >0.5 to <1 acre ☐ 1-2 acres ☐ 2-4 acres ☐ 5+ acres ☐ 10+ acres

WETLAND LOCATION: Lat 40.986233 Long -75.183949

(approximate center of wetland) GPS Datum (check one): ☐ NAD 27 ☒ NAD 83 ☐ WGS 84

SURVEY CONDITIONS & LIMITATIONS

Date of survey: 05/22/17 Time In: 12:00 Time Out: 12:15

Last precipitation: ☐ < 24 hours ☐ 1-7 days ☐ > 1 week ☒ unknown Drought conditions? ☐ Y ☒ N ☐ Unknown

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 (skip next 2 questions)

☐ 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 (_____% or _____ acres of the off-site portion)

How much of the *off-site portion* of this wetland is visible (*e.g.*, from the subject property or from a public road)?

☐ all of it ☐ part of it (at least _____ acres) ☐ none of it

Are there any wetlands located off-site and close enough to be affected by this project? ☐ Y ☐ N ☐ Unknown

If yes, *could* they be potential bog turtle habitat? ☐ Y ☐ N ☐ Unknown

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

Wooded floodplain, waste storage area

WETLAND CHARACTERISTICS

Wetland type(s) present and % cover: ☒ PEM 100 ☐ PSS _____ ☐ PFO _____ ☐ POW _____

☒ Y ☐ N Are there any signs of disturbance to *hydrology* (ditching, filling, ponds, roads, etc.)? If yes, describe area is used for debris storage hydrology is associated w/ runoff.

☐ Y ☒ N Are there any signs of disturbance to *vegetation* (mowing, pasturing, burning, etc.)? If yes, describe

_____

W-1-02

Project Name I-80 Section 17M Reconstruction *Wetland* _____ *(con't)*

Hydrology

☐ Y ☒ N Springs or seeps ☐ visible or ☐ likely ? Watercress present? ☐ Yes ☒ No
☐ Y ☒ N Spring houses in or adjacent to wetland?
☒ Y ☐ N Saturated soils present? If yes, year-round? ☐ Likely ☒ Unlikely ☐ Unknown
☒ Y ☐ N Water visible on surface? Check all that apply: ☐ small puddles/depressions (___" deep)
☐ rivulets (___" deep) ☒ larger pools/ponds (4" deep)
☐ Y ☒ N Evidence of flooding? If yes, describe indicators_____

Soils Mapping Unit (optional): As, Alluvial land
Field observations confirm mapped type? ☐ YES ☐ NO ☒ Unknown

Soils – PEM Portion of Wetland			
Mucky[4]*?* ☐ YES ☒ NO	How much of it (PEM) is **mucky**? ☐ <10% ☐ 10-29% ☐ 30-49% ☐ 50-70% ☐ >70%	**Mucky** soils range in depth from: _____ to _____"	**Most** of the **mucky part(s)** of the wetland can be probed[5]: ☐ 3-5" ☐ 6-8" ☐ 9-11" ☐ ≥12"
Non-mucky[6]*?* ☒ YES ☐ NO	How much of it (PEM) is **non-mucky**? ☐ <10% ☐ 10-29% ☐ 30-49% ☐ 50-70% ☒ >70%		

Soils – PSS and PFO Portions of Wetland			
Mucky[4]*?* ☐ YES ☐ NO	How much of it is **mucky**? ☐ <10% ☐ 10-29% ☐ 30-49% ☐ 50-70% ☐ >70%	**Mucky** soils range in depth from: _____ to _____"	**Most** of the **mucky part(s)** of the wetland can be probed[5]: ☐ 3-5" ☐ 6-8" ☐ 9-11" ☐ ≥12"

Wetland Vegetation (characterize the wetland as a whole)
Check (X) if present (≥ 5% areal coverage), and also circle if dominant (≥ 20% coverage).

☐ sedges ☐ rushes ☐ skunk cabbage ☐ cattail ☐ sweet flag ☐ jewelweed ☐ sphagnum moss
☐ sensitive fern ☐ rice cutgrass ☐ tearthumb ☐ reed canary grass ☐ *Phragmites* ☐ purple loosestrife
☐ alder ☐ dogwood ☐ red maple ☐ willow ☐ poison sumac ☐ multiflora rose ☐ _____
Additional dominant species: barnyard grass, Japanese Knotweed

Herptiles
Were any bog turtles observed? ☐ YES[7] ☒ NO If yes, how many? _____
Other herptiles ☐ observed ☐ previously observed: None

Additional Comments/Observations: (use additional sheets if necessary)
area is a depression that collects surface runoff, and is also used for debris storage area.

INVESTIGATOR'S OPINION

☐ YES ☒ NO ☐ UNSURE The hydrology criterion[8] for bog turtle habitat is met.
☐ YES ☒ NO ☐ UNSURE The soils criterion[8] for bog turtle habitat is met.
☐ YES ☒ NO ☐ UNSURE The vegetation criterion[8] for bog turtle habitat is met.
☐ YES ☒ NO ☐ UNSURE This wetland is potential bog turtle habitat.

I certify that to the best of my knowledge, all of the information provided herein is accurate and complete.

Bridger Thompson — Investigator's Name (print)
Bridger Thompson — Investigator's Signature
05/22/17 — Date

bridger.thompson@aecom.com 717-609-3301

Attachment C

Photo Log

Photograph:	Date:
1	09/21/17
Feature ID: Wetland W-3-14a	
Direction: East	
Description: View of wetland W-3-14a facing east from the wetland data point.	

Photograph:	Date:
2	09/21/17
Feature ID: Wetland W-3-14	
Direction: N/A	
Description: View of the typical substrate and hydrology associated with the seep located in wetland W-3-14.	

Photograph:	Date:
3	09/21/17
Feature ID: Wetland W-3-15	
Direction: North	
Description: View of wetland W-3-15 facing north from the wetland data point.	

Photograph:	Date:
4	09/21/17
Feature ID: Wetland W-3-15	
Direction: North	
Description: View of the spring house in the upslope portion of wetland W-3-15.	

Photograph: 5	Date: 09/21/17	No photo available.
Feature ID: Wetland W-3-16		
Direction: N/A		
Description: N/A		

Photograph: 6	Date: 09/21/17	No photo available.
Feature ID: Wetland W-3-16		
Direction: N/A		
Description: N/A		

Photograph:	Date:
7	09/21/17
Feature ID: Wetland W-3-17	
Direction: East	
Description: View of wetland W-3-17 facing east from the wetland data point.	

Photograph:	Date:
8	09/21/17
Feature ID: Wetland W-3-17	
Direction: Southwest	
Description: View of wetland W-3-17 facing southwest from the wetland data point.	

Photograph:	Date:
9	09/21/17
Feature ID: Wetland W-3-18	
Direction: Northeast	
Description: View of wetland W-3-18 facing northeast from the wetland limits. **This wetland is PBTH.**	

Photograph:	Date:
10	09/21/17
Feature ID: Wetland W-3-18	
Direction: N/A	
Description: View of the hydrology and substrate associated with wetland W-3-18. **This wetland is PBTH.**	

Photograph:	Date:
11	09/21/17

Feature ID:

Wetland W-3-19

Direction:

Northwest

Description:

View of wetland W-3-19 facing northwest from the wetland limits. This photo depicts the ponded water with mucky substrate and vegetative condition on its fringes.

This wetland is PBTH.

Photograph:	Date:
12	09/21/17

Feature ID:

Wetland W-3-19

Direction:

Southwest

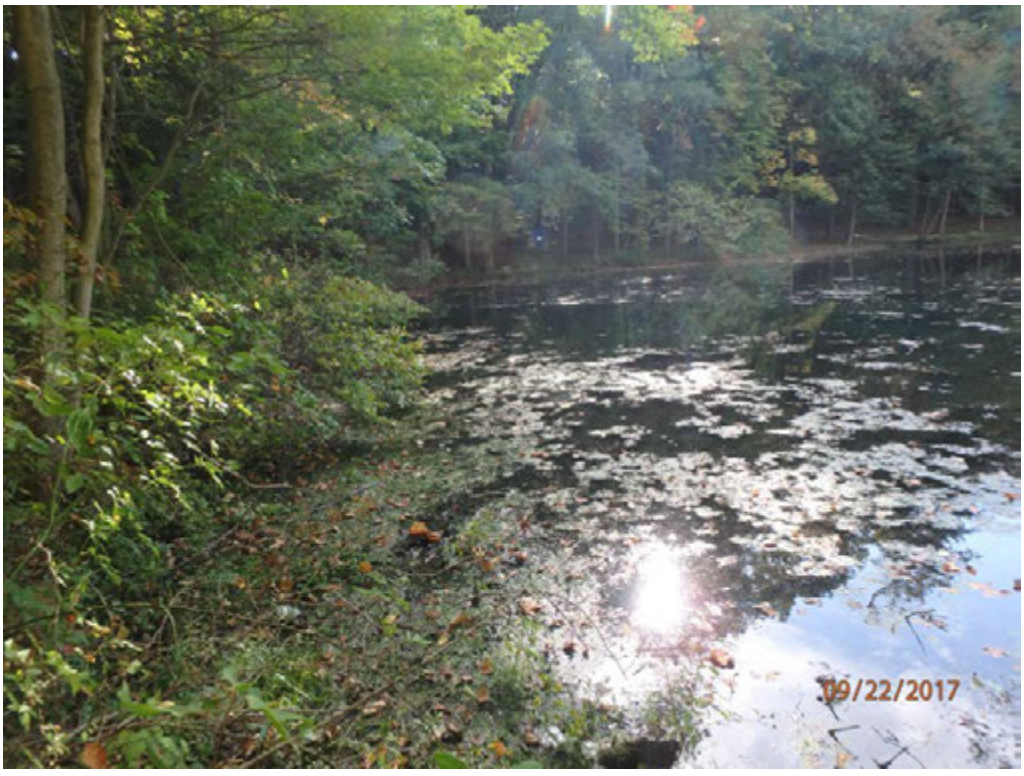
Description:

View of wetland W-3-19 facing southwest from the wetland limits. This photo depicts the ponded water with mucky substrate and vegetative condition in the southern extent of the wetland.

This wetland is PBTH.

Photograph:	Date:
13	09/22/17
Feature ID: Wetland W-3-20	
Direction: Southwest	
Description: View of wetland W-3-20 a large pond located along a dammed portion of little pocono creek.	

Photograph:	Date:
14	09/22/17
Feature ID: Wetland W-3-20	
Direction: East	
Description: View of wetland W-3-20 a large pond located along a dammed portion of little pocono creek.	



Photograph:	Date:
15	09/22/17
Feature ID: Wetland W-1-02	
Direction: South	
Description: View of the substrate and vegetative conditions in wetland W-1-02.	

Photograph:	Date:
16	09/21/17
Feature ID: Wetland W-1-02	
Direction: West	
Description: View of wetland W-1-02 facing west from the wetland data point.