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Submitted by:  
AECOM  
Philadelphia, PA  
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# Interstate 80 Reconstruction Project SR0080, Section 17M Monroe County, Pennsylvania

## Phase II Bog Turtle Survey Report

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## 1.0 Introduction

This report has been prepared to document the results of a Phase II survey conducted for bog turtles (*Clemmys muhlenbergii*) within wetlands located in and adjacent to the proposed project action area of a 3.5 mile roadway reconstruction traversing parts of three municipalities (Stroud Township, Stroudsburg Borough and East Stroudsburg Borough) in Monroe County, Pennsylvania (Figure 1), which is associated with the proposed Interstate 80 (I-80), Section 17M Reconstruction project. Figure 1 depicts the project location on a USGS Topographic Map (Stroudsburg, PA). Figure 2 shows the project action area on an aerial map.

Initial wetland field investigations identified 23 wetlands within 300 feet of the worst-case potential limit of disturbance (Figure 2). As such, a Phase I Bog Turtle Habitat Evaluation was conducted for these wetlands between September 2013 and January 2014 in order to determine their bog turtle habitat potential. Results of the *Phase I Bog Turtle Habitat Assessment Report* (AECOM, 03/2014) found that potential bog turtle habitat existed within four of the wetland systems and Phase II surveys were recommended.

Phase II surveys were performed during the months of May and June of 2014. These surveys were conducted to provide information regarding the presence or absence of bog turtles within the four wetlands identified as potential bog turtle habitat within the project action area.

### 1.1 Bog turtle natural history

The bog turtle (*Clemmys muhlenbergii*) was listed as federally-threatened by the U.S. Fish and Wildlife Service (USFWS) in 1997 pursuant to the Endangered Species Act of 1973 (87 Stat. 884 as amended; 16 U.S.C. 1531 et seq.) and state-endangered within Pennsylvania (58 PA Code Chapters 73 & 75). Its listing status is based on significant population declines due to factors including habitat loss, habitat degradation, and poaching. The bog turtle is the smallest native North American freshwater turtle, with average sizes (adult carapace length) ranging from 82-99 millimeters (Carr 1952). The carapace ranges in color from light brown to black, which sometimes exhibits a "tortoiseshell" pattern, and the hinge-less plastron is brown or black with contrasting light yellow areas. The bog turtle's skin is generally brown and may be flecked with red-orange. The most distinguishing characteristic is the large orange patch on both sides of the head and neck (Behler 1989, Ernst et. al. 1994).

The bog turtle is an omnivore, eating a variety of food sources including insects, berries, seeds, insect larvae, snails, frogs, slugs, salamanders, earthworms, and small mammals (Ernst et. al. 1994). Bog turtles inhabit open, generally spring-fed wet meadows and sphagnum bogs with standing or slow-moving shallow water over a mucky substrate (Bourg 1992). Bog turtles prefer areas with good sunlight, high evaporation rates, high humidity in the near-ground microclimate, and perennial saturation of portions of the ground.

Bog turtles emerge from hibernation as early as March and are most active in the spring (Ernst 1977, Ernst et. al. 1994). Bog turtles mate in the spring (May to June), and lay a single clutch of three to four eggs. The nesting season lasts from June to July, approximately 21-31 days after copulation (Ernst et. al. 1994). Nests are placed in the top of hummocks of sedge or on top of sphagnum in open, sunny areas. After an incubation period of 42 to 56 days, hatchlings emerge in August or September, or may overwinter in nests in northern localities and emerge in April or May. As temperatures increase in the summer months bog turtles may aestivate for a short period of time or become subterranean, congregating in wetter areas and inhabiting tunnels and burrows. Bog turtles return to winter hibernation sites during the months of October to November (Ernst et. al. 1994).

### 1.2 Project description

The I-80 Section 17M project includes 3.5 miles of full roadway reconstruction, widening, and interchange reconfiguration within eastern Monroe County, Pennsylvania. Originally constructed in the 1960s, the roadway has suffered significant deterioration in recent years, and no longer meets multiple current design criteria. The

purpose of the project is to provide a safe and efficient transportation system on both local and regional connections in the area by reducing future congestion, improving safety, and bringing I-80 up to current standards.

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.

### **1.3 Purpose and need for survey**

Thirty-eight watercourses and 23 wetlands were identified within the project area (Figure 2). The main watercourses are Pocono Creek, Little Pocono Creek, McMichael Creek, and Brodhead Creek. These creeks are part of the Middle Delaware River Watershed. The remaining watercourses are unnamed tributaries (UNT) to these streams. Many of the wetland systems located in or adjacent to the streams and floodplains, and most have been altered by past development found throughout the project area, including the original construction of I-80.

It is assumed that a full Section 404 / Chapter 105 Joint Permit Application (JPA) will be required. There are four major waterway crossings which will be replaced as part of the project, as well as smaller stream crossings and wetland impacts. The specific impacts are to be determined upon the identification of a Preferred Alternative, at the conclusion of the Environmental Assessment process.

A Pennsylvania Natural Diversity Inventory (PNDI) database search (PNDI Search ID No. 20130424401156) for the project impact area was completed in March 2013 by AECOM. The database search did indicate potential conflicts with species administered by the U.S. Fish and Wildlife Service (USFWS) and the PA Fish and Boat Commission (PFBC) in addition to the PA Game Commission (PGC) and PA Department of Conservation and Natural Resources.

A Phase I habitat assessment for bog turtles was conducted by AECOM biologists on the wetlands identified in the Project area between September 2013 and January 2014. The Phase I Bog Turtle Habitat Assessment Report was submitted to USFWS on April 23, 2014. Because the Phase I results were not submitted to USFWS with enough advance of the 2014 survey season for comment, the Pennsylvania Department of Transportation (PennDOT) chose to proceed with a Phase II (visual) survey at risk in order to meet their construction schedule for the project. USFWS did acknowledge receipt of the Phase 1 results on June 30, 2014, and requested to know which wetlands were planned for a Phase II survey. A Phase II survey was performed by a recognized, qualified bog turtle surveyor to determine presence or absence of bog turtles. This report discusses the results of those surveys, completed in May and June 2014.

## 2.0 Methods

### 2.1 Habitat assessment

Prior to the Phase II presence/absence surveys, a search for suitable bog turtle habitat (Phase I Survey per USFWS Guidelines) was conducted by AECOM. In the AECOM biologist's opinion, four wetlands within the action area did meet typical criteria for potential bog turtle habitat based on the presence of some mucky soils, suitable hydrology and vegetation. Two wetlands (Wetlands 2-05 & 2-06) with an even mix of forested, scrub-shrub, and emergent cover types are located on LaBar Village property between the toe-of-slope of I-80 and Village Drive. A third wetland (Wetland 3-02) is made up of a large pond along with forested, scrub-shrub, and emergent cover types and is located south of I-80 exit 305. Wetland 3-02 is associated with two watercourses including Little Pocono Creek and is bounded by a steep incline leading to a residential development, open space, and the toe-of-slope of the I-80 interchange. The fourth wetland (Wetland 3-10) is located north of I-80 and east of Whitestone Corner Road. It is part of the maintained yard of a residential property including a man-made pond and spring well.

Potential bog turtle habitat is recognized by three criteria: suitable hydrology, including springs, shallow surface water, persistently saturated soils, subsurface flow, and rivulets; suitable soils, including a bottom substrate of soft muck (a critical criterion); and suitable vegetation, including dominant vegetation of low grasses and sedges, possibly a scrub-shrub wetland component, and a relatively open canopy. A detailed description of the habitat on-site is included in the *Phase I Bog Turtle Habitat Assessment Report*.

### 2.2 Survey methodology

Phase II survey methodology followed the "Guidelines for Bog Turtle Surveys" (Guidelines) authored by the USFWS and found within the *Bog Turtle Northern Population Recovery Plan* (May 2001). As required by the state of Pennsylvania, these activities were covered under a PADEP Scientific Collector's Permit (Number 421, Type 3).

Pursuant to the Guidelines, a Designated Survey Area (DSA) consisting of potential habitat and/or mucky areas was identified for the Phase II surveys. The wetlands consisted of scrub-shrub, forested, and emergent, riparian and wet meadow features. There were areas of mucky soils within the four wetlands sufficient to warrant being considered potential habitat, particularly due to streams they were adjacent to or side-slope seeps. Overall, the four wetlands totaled approximately 6.52 acres in size, the DSA was determined to encompass portions of the four wetlands totaling approximately 3.77 acres.

The survey Guidelines require a "minimum of 4 to 6 man-hours per acre" be spent surveying the DSA. For this survey, 5-6 man-hours were spent for each day's survey in order to ensure sufficient effort to locate turtles.

All surveys discussed in this report were conducted and overseen by Autumn Thomas of AECOM. Ms. Thomas is a qualified bog turtle surveyor recognized in Pennsylvania by the aforementioned agencies. Ms. Thomas was assisted by two field technicians (Valerie Double and Angela Hathaway). Ms. Double and Ms. Hathaway both have prior experience conducting surveys for bog turtles.

The wetlands were visited four times between April 15th and June 15th, 2014. Surveys were conducted at least three days apart. Surveys were not conducted when the air and water temperatures were below 55° Fahrenheit.

Survey techniques included searching visually for exposed individuals and probing/searching by hand, or with sticks, in mud, tunnels, subterranean rivulets, springs, under vegetation, in pockets of standing water, and other microhabitats likely to support bog turtles. Other herpetofauna observed were also documented.

## 3.0 Results

### 3.1 Site description

The proposed project action area is a 3.5 mile roadway reconstruction traversing parts of three municipalities which is associated with the proposed I-80, Section 17M Reconstruction project. Approximately 9.20 acres of the project action area is wetland with the remainder consisting of existing upland forest and open field, residential lawn, and highway ROW. A total of 23 palustrine wetland systems were delineated within the project study corridor. Four of these wetlands totaling approximately 6.52 acres were included in the Phase II survey.

### 3.2 Wetland descriptions

The four wetlands fringe perennial, intermittent, and/or ephemeral streams. The four wetlands are open and emergent, although three have scrub-shrub and forested components. Three wetlands are influenced by surface water due to shallow bedrock exhibited in this region, and have mucky soils which could be probed over three inches in several areas. The three wetlands were mapped as approximately 6.52 acres in size, with a DSA of approximately 3.77 acres.

Wetland 2-05 is an evenly mixed palustrine emergent (PEM), palustrine scrub-shrub (PSS), and palustrine forested (PFO) wetland located on LaBar Village property between the toe-of-slope of I-80 and Village Drive. The entire complex is approximately 2.61 of an acre in size and located entirely within the project study area. Dominant vegetation consisted of narrow-leaved cattail (*Typha angustifolia*), sedges (*Carex trichocarpa*, *C. atlantica*, *C. stipata*, *C. scoparia*, and *C. crinita*), black willow (*Salix nigra*), Japanese stiltgrass (*Microstegium vimineum*), red maple (*Acer rubrum*), tufted hairgrass (*Deschampsia cespitosa*), fowl bluegrass (*Poa palustris*), and skunk cabbage (*Symplocarpus foetidus*). Hydrology is mainly supported by numerous stormwater culverts under the interstate and Village Drive which support multiple, seasonal waterways. Mucky soils able to be probed greater than three inches deep were primarily limited to the PEM portions of the wetland. The DSA of wetland 2-05 was determined to be approximately 1.11 acres.

Wetland 2-06 is also an even mix of PEM, PSS, and PFO located on LaBar Village property between the toe-of-slope of I-80 and Village Drive. The wetland is approximately 0.79 of an acre and is located entirely within the project study area. Dominant vegetation consisted of narrow-leaved cattail, skunk cabbage, Japanese stiltgrass, red maple, fowl bluegrass, sedges (*C. vulpinodea*, *C. lurida*, *C. atlantica*, *C. stipata*, and *C. scoparia*), three-way sedge (*Dulichium arundinaceum*), speckled alder (*Alnus incana*), rice cutgrass (*Leersia oryzoides*), and false nettle (*Boehmeria cylindrica*). Hydrology is mainly supported by numerous stormwater culverts under the interstate and Village Drive which support multiple, seasonal waterways. It is also hydrologically connected to wetland 2-05 via an unnamed tributary to McMichael Creek. Mucky soils were distributed throughout most of the wetland. The DSA of wetland 2-06 was determined to be approximately 0.79 of an acre.

Wetland 3-02 is a large pond along with PEM, PSS, and PFO cover types associated with two watercourses including Little Pocono Creek and located south of the I-80 Exit 305 ramp. The wetland is approximately 6.40 acres and is located entirely within the project action area. Dominant vegetation consisted of rice cutgrass, red maple, skunk cabbage, speckled alder, sedges (*C. lurida*, *C. atlantica*, *C. stricta*), marsh St. Johns-wort (*Triadenum virginicum*), buttonbush (*Cephalanthus occidentalis*), sphagnum moss (*Sphagnum* sp.), duckweed (*Lemna minor*), highbush blueberry (*Vaccinium corymbosum*), poison sumac (*Toxicodendron vernix*), sweet pepperbush (*Clethra alnifolia*), spicebush (*Lindera benzoin*), swamp white oak (*Quercus bicolor*), ostrich fern (*Matteuccia struthiopteris*), marsh marigold (*Caltha palustris*), and clearweed (*Pilea pumila*). The hydrologic regime of this wetland is in the form of several visible seeps from along the eastern boundary as well as the adjacent waterways.

Mucky soils able to be probed over five inches deep cover over 50% of the PEM and PSS portions of the wetland. The PFO portions of the wetland contain less than 30% mucky soils able to be probed greater than 3" deep and are mostly limited to the immediate areas of visible seeps along the eastern wetland boundary. The DSA of wetland 3-02 was determined to be approximately 1.75 acres.

Wetland 3-10 is a groundwater seep out of a steep, wooded slope located in a maintained, residential yard. It is associated with an open, artesian well over four feet deep. The wetland is approximately 0.12 of an acre and is located entirely within the project action area. Dominant vegetation consisted of fowl bluegrass, Japanese stiltgrass, jewelweed (*Impatiens capensis*), multiflora rose (*Rosa multiflora*), and goldenrod (*Solidago* sp.). The area is mowed regularly. Hydrology is supported by spring discharge. No rivulets or shallow puddles are visible. Mucky soils are limited to less than 30% of the entire wetland system and are confined to the mowed portions of the wetland. The DSA of wetland 3-10 was determined to be approximately 0.12 of an acre.

### **3.3 Survey data and results**

With a couple of exceptions due to extreme weather events, five to six man-hours were spent for each day's survey in order to ensure sufficient effort to locate turtles. Data on weather, dates, times, and personnel for each survey conducted are presented in Table 2 and 3 below. No bog turtles were found during the surveys. Very few other herpetofaunal species were observed or heard on-site during any of the surveys. Table 4 presents a list of all herpetofauna observed during the surveys.

## 4.0 Summary and conclusions

Presence-absence surveys for bog turtle, in compliance with guidelines established by the USFWS, were conducted on the I-80 Section 17M Reconstruction Project area, which is located along Interstate 80 in Stroud Township, Stroudsburg Borough and East Stroudsburg Borough in Monroe County, Pennsylvania, in May and June 2014. It was determined that the four wetlands, Wetland 2-05, 2-06, 3-02, and 3-10, were of good to marginal quality but each did exhibit potential habitat for bog turtles.

Following completion of Phase II surveys pursuant to USFWS protocol, no bog turtles were found to inhabit any of the four wetlands identified to have potential habitat for bog turtles. Each of the four survey visits at each wetland involved two biologists. The total survey search effort for four wetlands was 89 man-hours. The majority of the search effort was spent where bog turtles would most likely be encountered – in open patches of muck with sufficient saturation and depth of substrate. Other herpetofaunal species observed at the wetlands included green frogs, pickerel frogs, bull frogs, and painted turtles.

Due to the lack of finding any bog turtles or their signs (ie. tracks, forms, tunnels, scat, carcasses, etc.), it is determined that the likelihood of the presence of bog turtles in any of these four wetlands is highly improbable. The habitats at these wetlands are highly degraded and most are artificially constructed due to the adjacent residential areas and interstate highway. cursory review of adjacent properties beyond these wetland limits did not reveal any areas of potential bog turtle habitat. Therefore, it is concluded that proposed Project activities are not likely to adversely affect bog turtles or their habitat.



**Table 1: Complete List of Plant Species Observed in Survey Wetlands**

Scientific Name	Common Name	Scientific Name	Common Name
<i>Acer rubrum</i>	red maple	<i>Nuphar lutea</i>	yellow pond-lily
<i>Alnus rugosa</i>	speckled alder	<i>Parthenocissus quinquefolia</i>	Virginia creeper
<i>Amphicarpaea bracteata</i>	American hogpeanut	<i>Persicaria arifolium</i>	halberdleaf tearthumb
<i>Berberis thunbergii</i>	Japanese barberry	<i>Persicaria sagittata</i>	arrowleaf tearthumb
<i>Betula alleghaniensis</i>	yellow birch	<i>Phalaris arundinacea</i>	reed canarygrass
<i>Bidens cernua</i>	nodding beggartick	<i>Pilea pumila</i>	Canadian clearweed
<i>Boehmeria cylindrical</i>	false nettle	<i>Platanus occidentalis</i>	American sycamore
<i>Caltha palustris</i>	yellow marsh marigold	<i>Primula laurentiana</i>	birdeye primrose
<i>Carex atlantica</i>	prickly bog sedge	<i>Symphotrichum puniceum</i>	purplestem aster
<i>Carex crinita</i>	fringed sedge	<i>Onoclea sensibilis</i>	sensitive fern
<i>Carex intumescens</i>	greater bladder sedge	<i>Rhododendron canadense</i>	rhodora
<i>Carex lurida</i>	shallow sedge	<i>Rosa multiflora</i>	multiflora rose
<i>Carex stricta</i>	tussock or upright sedge	<i>Quercus bicolor</i>	swamp white oak
<i>Carex vulpinoidea</i>	fox sedge	<i>Sagittaria latifolia</i>	broadleaf arrowhead
<i>Carya glabra</i>	pignut hickory	<i>Salix nigra</i>	black willow
<i>Clethra alnifolia</i>	coastal sweetpepperbush	<i>Scirpus cyperinus</i>	woolgrass
<i>Cephalanthus occidentalis</i>	buttonbush	<i>Solidago</i> sp.	goldenrod
<i>Dulichium arundinaceum</i>	three-way sedge	<i>Sphagnum</i> sp.	sphagnum moss
<i>Eleagnus angustifolia</i>	Russian olive	<i>Spiraea alba</i>	white meadowsweet
<i>Elymus virginicus</i>	Virginia wildrye	<i>Symplocarpus foetidus</i>	skunk cabbage
<i>Equisetum hyemale</i>	scouringrush horsetail	<i>Toxicodendron radicans</i>	poison ivy
<i>Impatiens capensis</i>	jewelweed	<i>Toxicodendron vernix</i>	poison sumac
<i>Galium asprellum</i>	rough bedstraw	<i>Triadenum virginicum</i>	marsh St. John's-wort
<i>Glyceria grandis</i>	American mannagrass	<i>Trillium cernuum</i>	nodding trillium
<i>Juncus effusus</i>	soft rush	<i>Typha latifolia</i>	broadleaf cattail
<i>Iris versicolor</i>	harlequin blueflag	<i>Ulmus pumila</i>	Siberian elm
<i>Leersia oryzoides</i>	rice cutgrass	<i>Ulmus rubra</i>	slippery elm
<i>Lemna minor</i>	common duckweed	<i>Urtica dioica</i>	stinging nettle
<i>Ligustrum vugare</i>	European privet	<i>Vaccinium corymbosum</i>	highbush blueberry
<i>Lindera benzoin</i>	northern spicebush	<i>Veratrum viride</i>	green false hellebore
<i>Lonicera mackii</i>	Amur honeysuckle	<i>Verbena bonariensis</i>	purpletop vervain
<i>Lysimachia nummularia</i>	creeping jenny	<i>Viburnum dentatum</i>	southern arrowwood
<i>Matteuccia struthiopteris</i>	ostrich fern	<i>Viburnum sieboldii</i>	Siebold's arrowwood
<i>Microstegium vimineum</i>	Japanese stiltgrass	<i>Vinca minor</i>	common periwinkle
<i>Mimulus alatus</i>	sharpwing monkeyflower	<i>Viola</i> spp.	violets
<i>Myosotis scorpioides</i>	true forget-me-not	<i>Vitis rotundifolia</i>	muscadine
<i>Nasturtium officinale</i>	watercress		

**Table 2: Summary of Phase II Bog Turtle Surveys**

Wetland 2-05			
Survey 1	Survey 2	Survey 3	Survey 4
05/22/14 12:00-14:20 2hrs 20min*	05/29/14 08:45-12:25 3hrs 40min	06/03/14 12:25-14:25,15:00-15:50 2hrs 50min	06/11/14 08:15-11:37 3hrs 20min
Wetland 2-06			
Survey 1	Survey 2	Survey 3	Survey 4
05/22/14 09:26-11:50 2hrs 34min	05/29/14 12:55-15:15 2hrs 25min	06/03/24 09:05-11:20 2hrs 15min*	06/11/14 12:50-15:10 2hrs 20min
Wetland 3-02			
Survey 1	Survey 2	Survey 3	Survey 4
05/20/14 09:20-12:00,13:20-16:00 5hrs 20min	05/30/14 09:00-14:30 5hrs 30min	06/04/14 08:00-12:00,13:30-14:45 5hrs 15min	06/12/14 07:05-12:20 5hrs 15min
Wetland 3-10			
Survey 1	Survey 2	Survey 3	Survey 4
05/22/14 08:40-09:10 30min	05/30/15 14:40-14:58 18min	06/04/14 13:00-13:18 18min	06/12/14 12:35-12:55 20min

\*: Due to extreme weather front approaching area, survey was limited to 4-person hours on this survey.

**Table 3: Details of Phase II Bog Turtle Surveys**

Survey Date	Wetland	Weather	Team	Man-hours per acre
05/20/14	3-02	Air-66° Cloud Cover-35% Wind Speed- 15mph NW Rain- none	A. Thomas V. Double	5.3 hrs x 2 persons = 10.6 man-hours/1.75 acres = <b>6</b>
05/22/14	2-05	Air- 63° Cloud Cover- 94% Wind Speed- 11mph W Rain- light	A. Thomas V. Double	2.3 hrs x 2 persons = 4.6 man-hours/1.1 acres = <b>4*</b>
	2-06			2.6 hrs x 2 persons = 5.2 man-hours/0.79 acres = <b>7</b>
	3-10	Air- 67° Cloud Cover- 76% Wind Speed- 5mph NW Rain- none		0.5 hrs x 2 persons = 1 man-hour/0.12 acres = <b>8</b>
05/29/14	2-05	Air- 54° Clouds- 85% Wind Speed- 5mph ESE Rain- none	A. Thomas, V. Double	3.6 hours x 2 persons = 7.2 man- hours / 1.1 acres = <b>6</b>
	2-06	Air- 63° Clouds- 75% Wind Speed- 6mph ESE Rain- haze		2.4 hours x 2 persons = 4.8 man- hours /0.79 acres = <b>6</b>
05/30/14	3-02	Air- 62° Clouds- 75% Wind Speed- 3mph NNW Rain- none	A. Thomas, V. Double	5.5 hours x 2 persons = 11 man-hours / 1.75 acres = <b>6</b>

	3-10	Air- 73° Clouds- 60% Wind Speed- 6mph N Rain- none		0.3 hours x 2 persons = 0.6 man-hours / 0.12 acres = <b>5</b>
06/03/14	2-05	Air- 66° Clouds- 28% Wind Speed-3mph W Rain- none	A. Thomas, A. Hathaway	2.8 hours x 2 persons = 5.6 man- hours / 1.1 acres = <b>5</b>
	2-06	Air- 80° Clouds- 35% Wind Speed- 11mph SSW Rain- scattered showers		2.3 hours x 2 persons = 4.6 man- hours /0.79 acres = <b>4*</b>
06/04/14	3-02	Air- 64° Clouds- 86% Wind Speed- 4mph NNW Rain- none	A. Thomas, A. Hathaway	5.3 hours x 2 persons = 10.6 man-hours / 1.75 acres = <b>6</b>
	3-10	Air- 75° Clouds- 25% Wind Speed- 6mph NNW Rain- none		0.3 hours x 2 persons = 0.6 man-hours / 0.12 acres = <b>5</b>
06/11/14	2-05	Air- 66° Clouds- 94% Wind Speed- 9mph NNW Rain- none	A. Thomas, A. Hathaway	3.3 hours x 2 persons = 6.6 man- hours / 1.1 acres = <b>6</b>
	2-06	Air- 66° Clouds- 94% Wind Speed- 9mph NNW Rain- none		2.3 hours x 2 persons = 4.6 man- hours /0.79 acres = <b>4*</b>
06/12/14	3-02	Air- 63° Clouds- 97% Wind Speed- 6mph E Rain- none	A. Thomas, A. Hathaway	5.3 hours x 2 persons = 10.6 man-hours / 1.75 acres = <b>6</b>
	3-10	Air- 63° Clouds- 97% Wind Speed- 10mph SE Rain- none		0.3 hours x 2 persons = 0.6 man-hours / 0.12 acres = <b>5</b>

\*: Due to extreme weather front approaching area, survey was limited to 4-person hours on this survey.

**Table 4: Summary of Other Herpetofauna Observed during Phase II Bog Turtle Surveys**

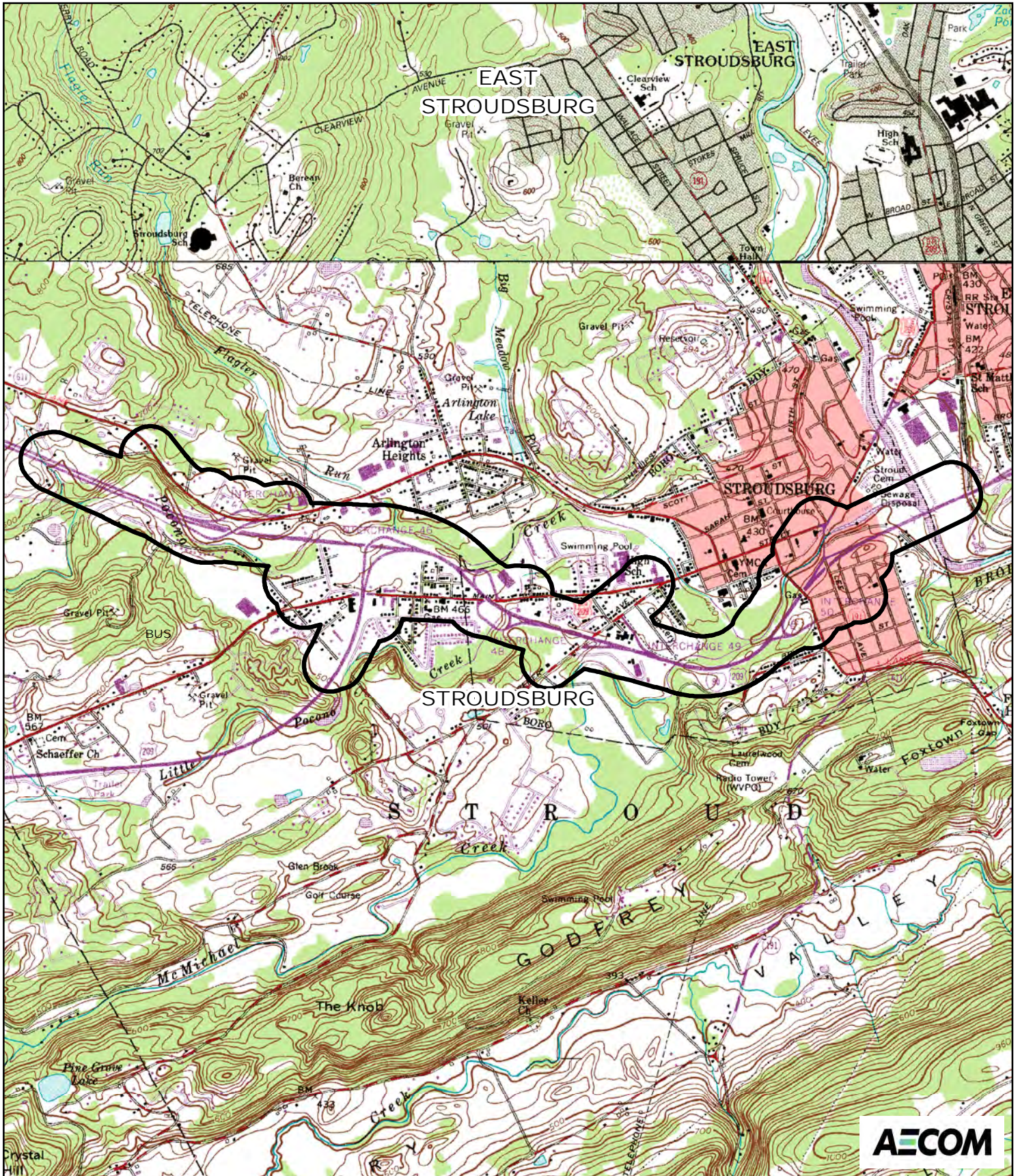
Wetland 2-05		Wetland 2-06	
Scientific Name	Common Name	Scientific Name	Common Name
<i>Lithobates clamitans</i>	green frog	<i>Lithobates clamitans</i> <i>Lithobates palustris</i> <i>Lithobates catesbeianus</i>	green frog pickerel frog bull frog
Wetland 3-02		Wetland 3-10	
Scientific Name	Common Name	Scientific Name	Common Name
<i>Chrysemys picta</i> <i>Lithobates clamitans</i> <i>Lithobates palustris</i> <i>Thamnophis sirtalis sirtalis</i>	painted turtle green frog pickerel frog Eastern garter snake	none	none

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[http://acwc.sdp.sirsi.net/client/search/asset:asset?t:ac=\\$N/1012381](http://acwc.sdp.sirsi.net/client/search/asset:asset?t:ac=$N/1012381)
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- United States Fish and Wildlife Service (USFWS). 1997. Final Rule to List the Northern Population of the Bog Turtle as Threatened and the Southern Population as Threatened due to Similarity of Appearance. 50 CFR, Part 17. Federal Register, Vol. 62, No. 213, pp. 59605-59623.
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## Figures





Interstate 80 Reconstruction Project

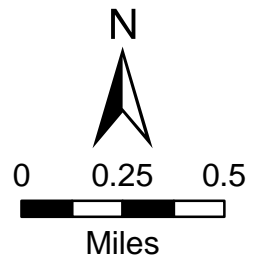
SR0080, Section 17M

Monroe County, Pennsylvania

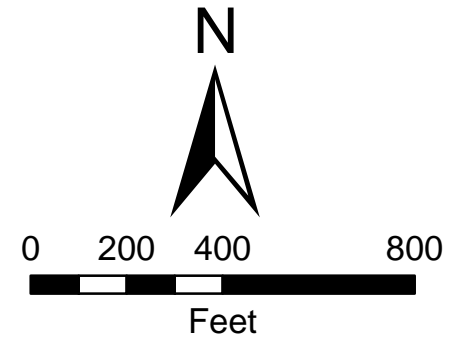
FIGURE 1:

USGS Topographic Location Map

 Action Area



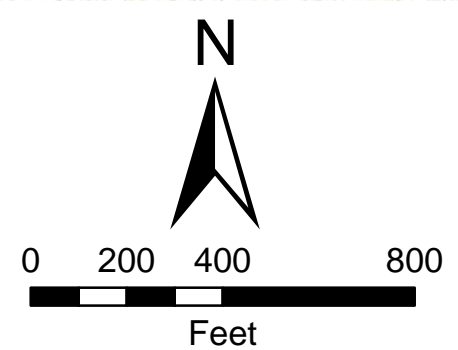
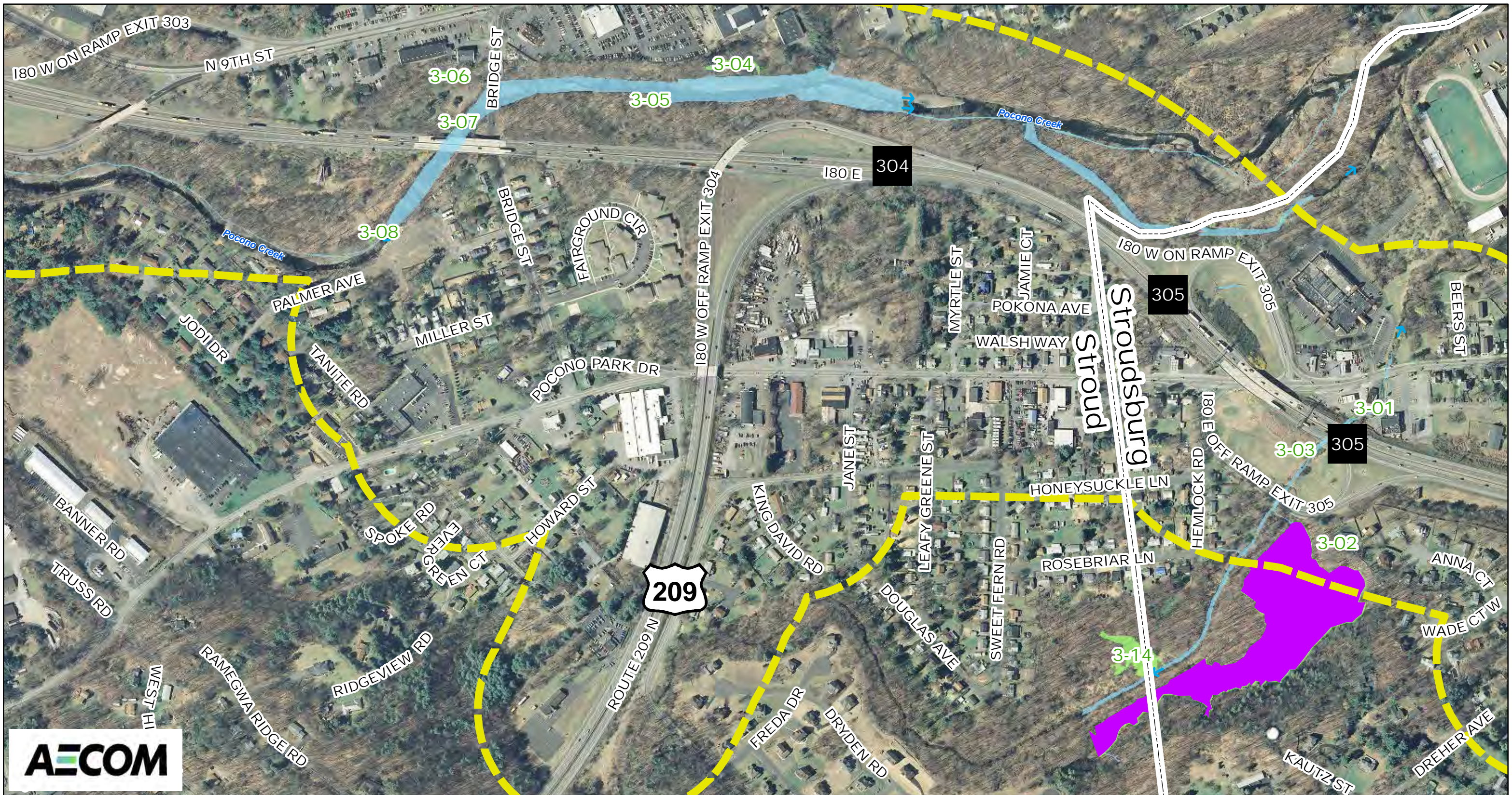




- Action Area
- Delineated Waterway
- Phase II Survey
- 3-02 Delineated Wetland

Interstate 80 Reconstruction Project  
 SR0080, Section 17M  
 Monroe County, Pennsylvania  
 FIGURE 2:  
 Project Action Area  
 Sheet 1 of 4  
 Source: PAMAP, 2008, NWI.

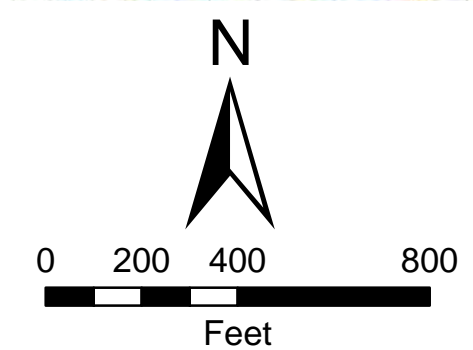
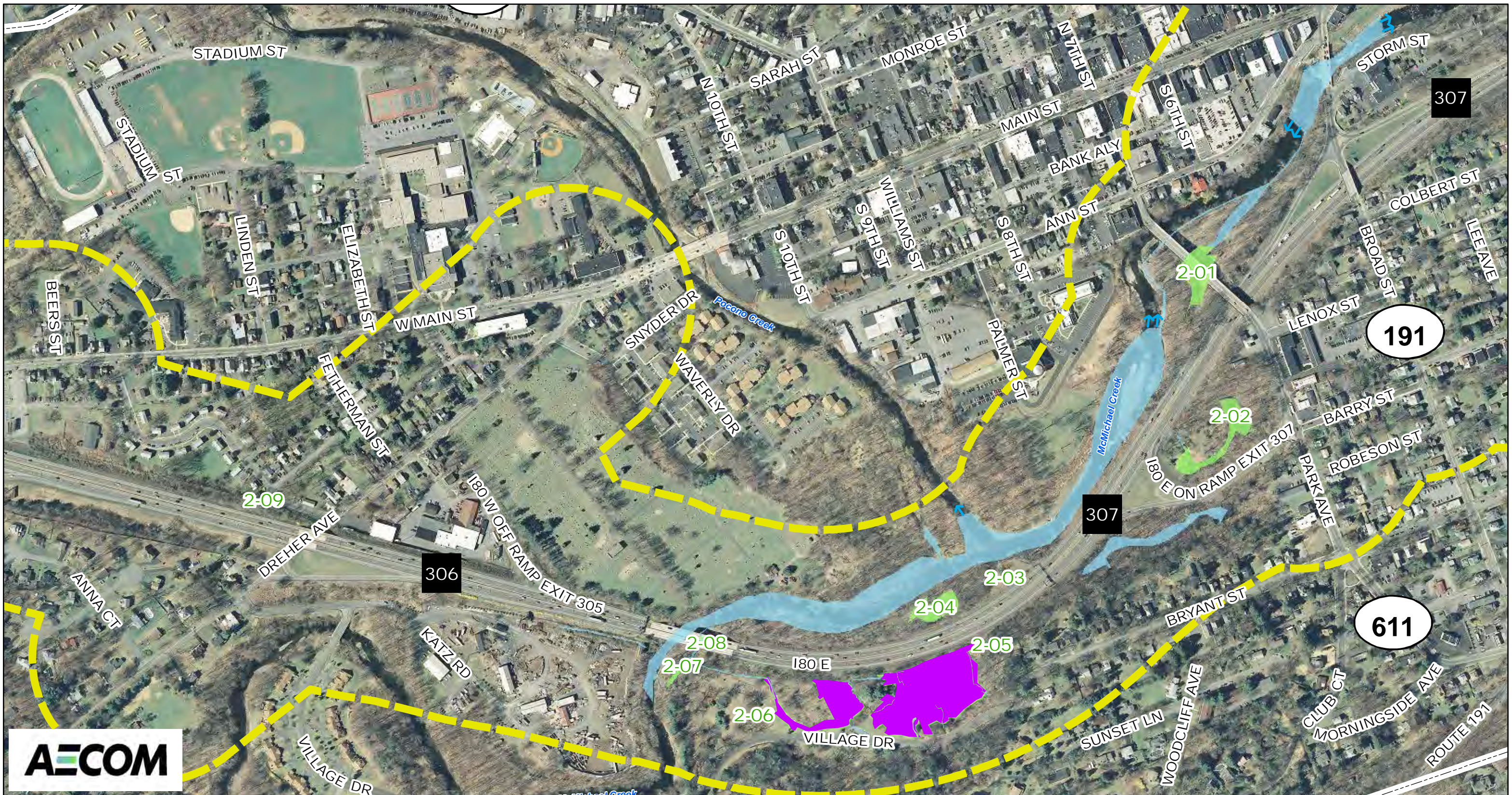




- Action Area
- Delineated Waterway
- Phase II Survey
- Delineated Wetland

Interstate 80 Reconstruction Project  
 SR0080, Section 17M  
 Monroe County, Pennsylvania  
**FIGURE 2:**  
 Project Action Area  
*Sheet 2 of 4*  
 Source: PAMAP, 2008, NWI.

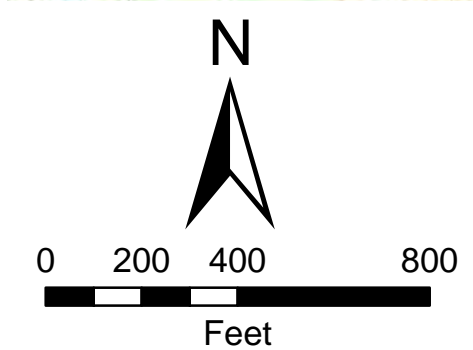




- Action Area
- Delineated Waterway
- Phase II Survey
- Delineated Wetland

Interstate 80 Reconstruction Project  
 SR0080, Section 17M  
 Monroe County, Pennsylvania  
**FIGURE 2:**  
 Project Action Area  
*Sheet 3 of 4*  
 Source: PAMAP, 2008, NWI.





- Action Area
- Delineated Waterway
- Phase II Survey
- Delineated Wetland

Interstate 80 Reconstruction Project  
 SR0080, Section 17M  
 Monroe County, Pennsylvania  
**FIGURE 2:**  
 Project Action Area  
*Sheet 4 of 4*  
 Source: PAMAP, 2008, NWI.



**Appendix A**  
**Agency**  
**Correspondence**

# 1. PROJECT INFORMATION

Project Name: **Interstate 80**

Date of review: **3/27/2013 2:10:17 PM**

Project Category: **Transportation,Road -- construction/alignment (New Roads, Interchanges(including ramps) staging areas)**

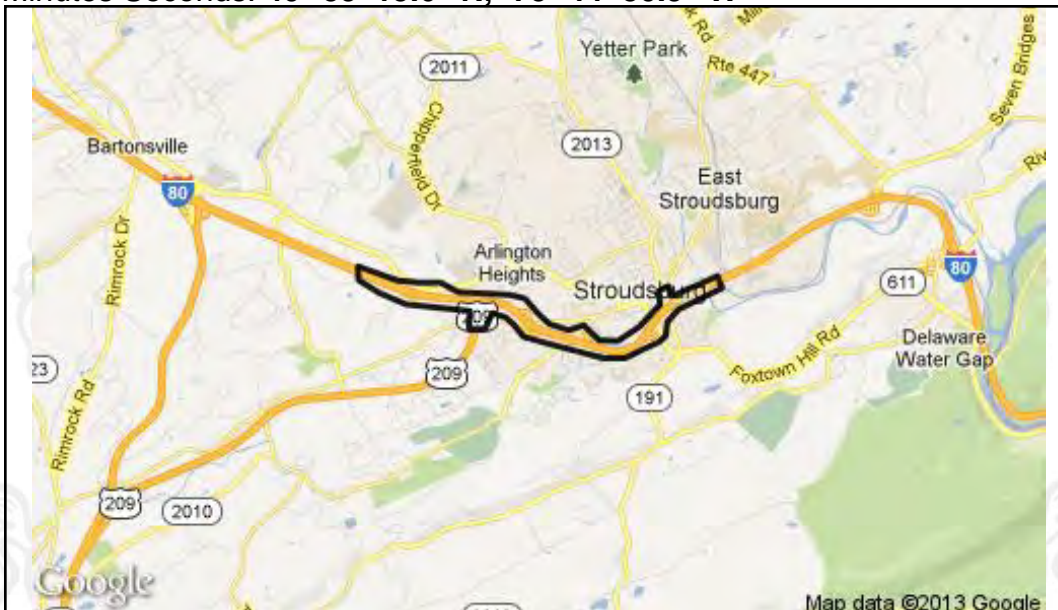
Project Area: **417.0** acres

County: **Monroe** Township/Municipality: **Stroudsburg,East Stroudsburg,Stroud**

Quadrangle Name: **STROUDSBURG** ~ ZIP Code: **18301,18360**

Decimal Degrees: **40.987673 N, -75.197467 W**

Degrees Minutes Seconds: **40° 59' 15.6" N, -75° 11' 50.9" W**



# 2. SEARCH RESULTS

Agency	Results	Response
PA Game Commission	Potential Impact	<b>FURTHER REVIEW IS REQUIRED, See Agency Response</b>
PA Department of Conservation and Natural Resources	Potential Impact	<b>FURTHER REVIEW IS REQUIRED, See Agency Response</b>
PA Fish and Boat Commission	Potential Impact	<b>FURTHER REVIEW IS REQUIRED, See Agency Response</b>
U.S. Fish and Wildlife Service	Potential Impact	<b>FURTHER REVIEW IS REQUIRED, See Agency Response</b>

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 in certain counties (Adams, Berks, Bucks, Carbon, Chester, Cumberland, Delaware, Lancaster, Lebanon, Lehigh, Monroe, Montgomery, Northampton, Schuylkill and York) must comply with the bog turtle habitat screening requirements of the PASPGP.

## RESPONSE TO QUESTION(S) ASKED

**Q1:** "Will the entire project area (including any discharge), plus a 300 feet buffer around the project area, all occur in or on an existing building, parking lot, driveway, road, road shoulder, street, runway, paved area, railroad bed, maintained (periodically mown) lawn, crop agriculture field or maintained orchard?"

Your answer is: **2. No**

**Q2:** Will the entire project occur within an existing building, parking lot, driveway, road, street, or maintained (periodically mowed) lawn?

Your answer is: **2. No**

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

**PGC Species:** (Note: The PNDI tool is a primary screening tool, and a desktop review may reveal more or fewer species than what is listed below.)

**Scientific Name:** *Myotis septentrionalis*

**Common Name:** Northern Myotis

**Current Status:** Special Concern Species\*

**Proposed Status:** Special Concern Species\*

### PA Department of Conservation and Natural Resources

**RESPONSE:** Further review of this project is necessary to resolve the potential impacts(s). Please send

project information to this agency for review (see WHAT TO SEND).

**DCNR Species:** (Note: The PNDI tool is a primary screening tool, and a desktop review may reveal more or fewer species than what is listed below. After desktop review, if a botanical survey is required by DCNR, we recommend the DCNR Botanical Survey Protocols, available here: [http://www.gis.dcnr.state.pa.us/hgis-er/PNDI\\_DCNR.aspx](http://www.gis.dcnr.state.pa.us/hgis-er/PNDI_DCNR.aspx).)

**Scientific Name:** Polygonum ramosissimum

**Common Name:** Bushy Knotweed

**Current Status:** Special Concern Species\*

**Proposed Status:** Special Concern Species\*

**Scientific Name:** Satyrodes eurydice

**Common Name:** Eyed Brown

**Current Status:** Special Concern Species\*

**Proposed Status:** Special Concern Species\*

## PA Fish and Boat Commission

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

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

**Scientific Name:** Stygobromus allegheniensis

**Common Name:** Allegheny Cave Amphipod

**Current Status:** Special Concern Species\*

**Proposed Status:** Special Concern Species\*

## U.S. Fish and Wildlife Service

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

\* 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, send the following information to the agency(s) seeking this information (see AGENCY CONTACT INFORMATION).

**Check-list of Minimum Materials to be submitted:**

- \_\_\_ **SIGNED** copy of this Project Environmental Review Receipt
- \_\_\_ 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.
- \_\_\_ Project location information (name of USGS Quadrangle, Township/Municipality, and County)
- \_\_\_ USGS 7.5-minute Quadrangle with project boundary clearly indicated, and quad name on the map

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

- \_\_\_ A basic site plan (particularly showing the relationship of the project to the physical features such as wetlands, streams, ponds, rock outcrops, etc.)
- \_\_\_ 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. For cases where a "Potential Impact" to threatened and endangered species has been identified before the application has been submitted to DEP, the application should not be submitted until the impact has been resolved. For cases where "Potential Impact" to special concern species and resources has been identified before the application has been submitted, the application should be submitted to DEP along with the PNDI receipt. The PNDI Receipt should also be submitted to the appropriate agency according to directions on the PNDI Receipt. DEP and the jurisdictional agency will work together to resolve the potential impact(s). See the DEP PNDI policy at <http://www.naturalheritage.state.pa.us>.



### 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](http://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  
 Fax:(717) 772-0271

**U.S. Fish and Wildlife Service**  
 Endangered Species Section  
 315 South Allen Street, Suite 322, State College, PA.  
 16801-4851  
 NO Faxes Please.

**PA Fish and Boat Commission**  
 Division of Environmental Services  
 450 Robinson Lane, Bellefonte, PA. 16823-7437  
 NO Faxes Please

**PA Game Commission**  
 Bureau of Wildlife Habitat Management  
 Division of Environmental Planning and Habitat Protection  
 2001 Elmerton Avenue, Harrisburg, PA. 17110-9797  
 Fax:(717) 787-6957

### 7. PROJECT CONTACT INFORMATION

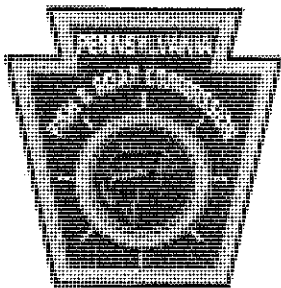
Name: Christopher Salvatico, GISP  
 Company/Business Name: AECOM  
 Address: 1700 Market Street, Suite 1600  
 City, State, Zip: Philadelphia, PA 19103  
 Phone:( 215 ) 735-0832 Fax:( 215 ) 735-0883  
 Email: christopher.salvatico@aecom.com

### 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.

<p><b>Salvatico,</b>                  applicant/project prop  <b>Christopher</b></p>	<p>Digitally signed by Salvatico,                  Christopher                  DN: cn=Salvatico, Christopher,                  dc=na, ou=AECOMUsers,                  ou=USMid-Atlantic, ou=USPHL1,                  Date: 2014.10.15 18:26:24 -04'00'</p>	<p>April 17, 2013                  _____                  date</p>
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# Pennsylvania Fish & Boat Commission

Division of Environmental Services  
450 Robinson Lane  
Bellefonte, PA 16823-9620

established 1866

May 7, 2013

**IN REPLY REFER TO**  
SIR # 40692

AECOM  
ATTN: CHRISTOPHER SALVATICO  
1700 MARKET STREET, SUITE 1600  
PHILADELPHIA, PA 19103

**RE: Species Impact Review (SIR) - Rare, Candidate, Threatened and Endangered Species**  
**PNDI Search Number (if available): 20130327397134**  
**SR 0080, SECTION 17M - INTERSTATE 80 RECONSTRUCTION PROJECT**  
**STROUDSBURG, EAST STROUDSBURG, STROUD Townships, MONROE County, Pennsylvania**

This responds to your inquiry about a Pennsylvania Natural Diversity Inventory (PNDI) Internet Database search "potential conflict" or a threatened and endangered species impact review. These projects are screened for potential conflicts with rare, candidate, threatened or endangered species under Pennsylvania Fish & Boat Commission jurisdiction (fish, reptiles, amphibians, aquatic invertebrates only) using the Pennsylvania Natural Diversity Inventory (PNDI) database and our own files. These species of special concern are listed under the Endangered Species Act of 1973, the Wild Resource Conservation Act, and the Pennsylvania Fish & Boat Code (Chapter 75), or the Wildlife Code.

***NO ADVERSE IMPACTS EXPECTED FROM THE PROPOSED PROJECT***

Except for occasional transient species, rare, candidate, threatened or endangered species under our jurisdiction are not known to exist in the vicinity of the project area. Therefore, no biological assessment or further consultation regarding rare species is needed with the Commission. Should project plans change, or if additional information on listed or proposed species becomes available, this determination may be reconsidered.

An element occurrence of a rare, candidate, threatened, or endangered species under our jurisdiction is known from the vicinity of the proposed project. However, given the nature of the proposed project, the immediate location, or the current status of the nearby element occurrence(s), no adverse impacts are expected to the species of special concern.

This response represents the most up-to-date summary of the PNDI data and our files and is valid for two (2) years from the date of this letter. An absence of recorded species information does not necessarily imply species absence. Our data files and the PNDI system are continuously being updated with species occurrence information. Should project plans change or additional information on listed or proposed species become available, this determination may be reconsidered, and consultation shall be re-initiated.

If you have any questions regarding this review, please contact the biologist indicated below:

Jordan Allison 814-359-5236      Kathy Gipe 814-359-5186      Bill Savage 814-359-5145  
 Nevin Welte 412-586-2334      Bob Morgan 814-359-5129      Dave Spotts 814-359-5115

Thank you in advance for your cooperation and attention to this important matter of species conservation and habitat protection.

SIGNATURE: Jordan Allison     DATE: 5-7-13

**Our Mission:**

[www.fish.state.pa.us](http://www.fish.state.pa.us)

*To protect, conserve and enhance the Commonwealth's aquatic resources and provide fishing and boating opportunities.*



COMMONWEALTH OF PENNSYLVANIA  
**Pennsylvania Game Commission**

2001 ELMERTON AVENUE  
HARRISBURG, PA 17110-9797

*"To manage all wild birds, mammals and their habitats  
for current and future generations."*

**ADMINISTRATIVE BUREAUS:**

ADMINISTRATION.....	717-787-5670
HUMAN RESOURCES.....	717-787-7836
FISCAL MANAGEMENT.....	717-787-7314
CONTRACTS AND PROCUREMENT.....	717-787-6594
LICENSING.....	717-787-2084
OFFICE SERVICES.....	717-787-2116
WILDLIFE MANAGEMENT.....	717-787-5529
INFORMATION & EDUCATION.....	717-787-6286
WILDLIFE PROTECTION.....	717-783-6526
WILDLIFE HABITAT MANAGEMENT.....	717-787-6818
REAL ESTATE DIVISION.....	717-787-6568
AUTOMATED TECHNOLOGY SERVICES.....	717-787-4076

[www.pgc.state.pa.us](http://www.pgc.state.pa.us)

Division of Environmental  
Planning and Habitat  
Protection  
717-783-5957

April 23, 2013

PNDI Number: 20130327397134

Mr. Christopher Salvatico  
AECOM  
1700 Market Street, Suite 1600  
Philadelphia, PA 19103

PNDI Number: 20130327397134

Re: SR 80, Section 17M – Interstate 80 Reconstruction  
Stroud, East Stroudsburg, and Stroudsburg Borough/Townships, Monroe County, PA

Dear Mr. Salvatico,

Thank you for submitting the Pennsylvania Natural Diversity Inventory (PNDI) Environmental Review Receipt Number 20130327397134 for review. The Pennsylvania Game Commission (PGC) screened this project for potential impacts to species and resources of concern under PGC responsibility, which includes birds and mammals only.

**Potential Impact Anticipated**

PNDI records indicate species or resources of concern are located in the vicinity of the project. The PGC has received and thoroughly reviewed the information that you provided to this office, as well as PNDI data, and has determined that there are no known occurrences of state listed **threatened or endangered** bird or mammal species associated with your project. However, potential impacts to **species of special concern** may be associated with your project, and as a result, additional measures are recommended to avoid potential impacts to the species listed below.

**Conservation Measure**

The following is a mammal species of special concern, and therefore, are not a target species for a survey:

Scientific Name	Common Name
<i>Myotis septentrionalis</i>	Northern Long-eared Bat

However, because of their ecological significance, the following seasonal timber restriction is suggested to avoid potential impacts to roosting and foraging northern long-eared bats: All trees or dead snags greater than 5 inches in diameter at breast height that need to be harvested to

*facilitate the project (including any access roads or off - R.O.W. work spaces) shall be cut between November 1 and March 31.*

This response represents the most up-to-date summary of the PNDI data files and is valid for two (2) years from the date of this letter. An absence of recorded information does not necessarily imply actual conditions on site. Should project plans change or additional information on listed or proposed species become available, this determination may be reconsidered.

Should the proposed work continue beyond the period covered by this letter, please resubmit the project to this agency as an "Update" (including an updated PNDI receipt, project narrative and accurate map). If the proposed work has not changed and no additional information concerning listed species is found, the project will be cleared for PNDI requirements under this agency for two additional years.

This finding applies to impacts to birds and mammals only. To complete your review of state and federally-listed threatened and endangered species and species of special concern, please be sure that the U.S. Fish and Wildlife Service, the PA Department of Conservation and Natural Resources, and/or the PA Fish and Boat Commission have been contacted regarding this project as directed by the online PNDI ER Tool found at [www.naturalheritage.state.pa.us](http://www.naturalheritage.state.pa.us).

Sincerely,



Tracey Librandi Mumma  
Division of Environmental Planning & Habitat Protection  
Bureau of Wildlife Habitat Management  
Phone: 717-787-4250, Extension 3614  
Fax: 717-787-6957  
E-mail: [tlibrandi@pa.gov](mailto:tlibrandi@pa.gov)

A PNHP Partner



TLM/tlm



# United States Department of the Interior



FISH AND WILDLIFE SERVICE  
Pennsylvania Field Office  
315 South Allen Street, Suite 322  
State College, Pennsylvania 16801-4850

May 3, 2013

Christopher Salvatico  
AECOM  
1700 Market Street  
Suite 1600  
Philadelphia, PA 19103

RE: USFWS Project #2013-0652  
PNDI #20130327397134

Dear Mr. Salvatico:

This responds to your letter of April 17, 2013, requesting information about fish and wildlife resources within the area affected by the proposed I-80, Section 17M, reconstruction project located in Stroud Township; Stroudsburg and East Stroudsburg Boroughs, Monroe County, Pennsylvania. The Pennsylvania Department of Transportation (PennDOT) proposes to reconstruct 3.5 miles of roadway, including five interchanges to relieve congestion, alleviate safety issues, and bring the roadway up to current standards.

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 and the Migratory Bird Treaty Act (MBTA, 16 U.S.C. 703-712; Ch. 128; July 13, 1918; 40 Stat. 755, as amended) to ensure the protection of migratory bird species.

## Federally Listed and Proposed Species

The proposed project is within the known range of the bog turtle (*Clemmys muhlenbergii*), a species that is federally listed as threatened. Bog turtles inhabit shallow, spring-fed fens, sphagnum bogs, swamps, marshy meadows, and pastures characterized by soft, muddy bottoms; clear, cool, slow-flowing water, often forming a network of rivulets; high humidity; and an open canopy. Bog turtles usually occur in small, discrete populations occupying suitable wetland habitat dispersed along a watershed. The occupied "intermediate successional stage" wetland habitat is usually a mosaic of micro-habitats ranging from dry pockets, to areas that are saturated with water, to areas that are periodically flooded. Some wetlands occupied by bog turtles are located in agricultural areas and are subject to grazing by livestock.

Because wetlands occur within the project area, their potential suitability as bog turtle habitat should be assessed, as described under “*Bog Turtle Habitat Survey*” (Phase 1 survey) of the enclosed *Guidelines for Bog Turtle Surveys*. This Phase 1 survey should evaluate all wetlands within the project action area. The project “action area” includes all areas that will be directly or indirectly affected by the proposed project (including all phases of multi-phased projects) and all project-associated features, such as roads, water and sewer lines, utility lines, stormwater and sedimentation basins, buildings and other structures, driveways, parking lots, yards/lawns, and wells.

*Due to the skill required to correctly identify potential bog turtle habitat, we recommend that the Phase 1 survey be done by a qualified surveyor (see enclosed list). Survey results should be submitted to the Service for review and concurrence. If the Phase 1 survey is done by someone who is not on this list, it is likely that a site visit by a Fish and Wildlife Service biologist will be necessary to verify their findings. Due to the limited availability of staff from this office, such a visit may not be possible for some time. Use of a qualified surveyor will expedite our review of the survey results.*

If potential bog turtle habitat is found in the project action area, efforts should be made to avoid any direct or indirect impacts to those wetlands (see enclosed *Bog Turtle Conservation Zones*). Avoidance of direct and indirect effects means no disturbance to or encroachment into the wetlands (e.g., filling, ditching or draining) for any project-associated features or activities. Adverse effects may also be anticipated to occur when lot lines include portions of the wetland; when an adequate upland buffer is not designated around the wetland (see *Bog Turtle Conservation Zones*); or when roads, stormwater/sedimentation basins, impervious surfaces, or wells affect the hydrology of the wetland.

If potential habitat is found, submit (along with your Phase 1 survey results) a detailed project description and detailed project plans documenting how direct and indirect impacts to the wetlands will be avoided. If adverse effects to these wetlands cannot be avoided, a more detailed and thorough survey will be necessary, as described under “*Bog Turtle Survey*” (Phase 2 survey) of the *Guidelines*. The Phase 2 survey should be conducted by a qualified biologist with bog turtle field survey experience (see enclosed list of qualified surveyors). Submit survey results to the Service for review and concurrence.

In cases where adverse effects to federally listed species cannot be avoided, further consultation with the Service would be necessary to avoid potential violations of section 9 (prohibiting “take” of listed species) and/or section 7 (requiring federal agencies to consult) of the Endangered Species Act. Information about the section 7 and section 10 consultation processes (for federal and non-federal actions, respectively) can be obtained by contacting this office or accessing the Service’s Endangered Species Home Page (<http://endangered.fws.gov>).

#### Assessment of Risks to Migratory Birds

The Service is the principal Federal agency charged with protecting and enhancing populations and habitat of migratory bird species. The Migratory Bird Treaty Act (MBTA) prohibits the taking, killing, possession, transportation, and importation of migratory birds, their eggs, parts,

and nests, except when specifically authorized by the Department of the Interior. While the MBTA has no provision for authorizing incidental take, the Service recognizes that some birds may be killed even if all reasonable measures to avoid take are implemented.

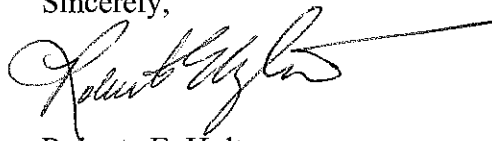
The potential exists for avian mortality from habitat destruction and alteration within the project boundaries. Site-specific factors that should be considered in project siting to avoid and minimize the risk to birds include avian abundance; the quality, quantity and type of habitat; geographic location; type and extent of bird use (e.g. breeding, foraging, migrating, etc.); and landscape features. Please review the enclosed information for general recommendations for avoiding and minimizing impacts to migratory birds within and around the project area. Please be aware that since these are general guidelines, some of them may not be applicable to the current project design or they may have already been included in the project design.

This response relates only to endangered and threatened species under our jurisdiction, based on an office review of the proposed project's location. No field inspection of the project area has been conducted by this office. Consequently, this letter is not to be construed as addressing other potential Service concerns under the Fish and Wildlife Coordination Act or other authorities.

*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 questions regarding this matter, please contact Jennifer Kagel of my staff at 814-234-4090.

Sincerely,

A handwritten signature in black ink, appearing to read "Roberta E. Hylton", with a long horizontal line extending to the right.

Roberta E. Hylton  
Acting Field Office Supervisor

Enclosures

April 23, 2013

**PNDI Number: 20130327397134**

Christopher Salvatico  
AECOM, Inc.  
1700 Market Street, Suite 1600  
Philadelphia, PA 19103  
Email: [christopher.salvatico@aecom.com](mailto:christopher.salvatico@aecom.com) (Hard copy not to follow)

Re: Interstate 80 (widening and improvement project)  
Borough of Stroudsburg, East Stroudsburg Township, Stroud Township, Monroe County, PA

Dear Mr. Salvatico,

Thank you for the submission of the Pennsylvania Natural Diversity Inventory (PNDI) Environmental Review Receipt Number **20130327397134** for review. PA Department of Conservation and Natural Resources screened this project for potential impacts to species and resources of concern under DCNR's responsibility, which includes plants, terrestrial invertebrates, natural communities, and geologic features only.

### **No Impact Anticipated**

PNDI records indicate species or resources under DCNR's jurisdiction are located in the vicinity of the project. However, based on the information you submitted concerning the nature of the project, the immediate location, and our detailed resource information, DCNR has determined that no impact is likely. No further coordination with our agency is needed for this project. As a voluntary measure, please clean all construction equipment before it is brought on site; this will remove invasive plant seeds from the equipment that has been picked up from other sites and will help control invasive plant spread into adjacent riparian and woodland habitats. As a voluntary measure, if revegetating an area, please use seed mixtures that do not contain invasive species, including crown vetch.

### **Conservation Measure—Voluntary Action**

The following species of concern is known to occur in the area and potential habitat exists in the area; however, this species is not listed in PA: A conservation measure is suggested to be mindful of the potential presence of the following species that may utilize the following habitats:

- *Lethe eurydice* (eyed brown)—habitat is open sedge meadows, freshwater meadows, slow-moving streams, and cord-grass swales—for more information, please see <http://www.natureserve.org/explorer/servlet/NatureServe?searchName=Satyrodes+eurydice>

This response represents the most up-to-date review of the PNDI data files and is valid for **two years** only. If project plans change or more information on listed or proposed species becomes available, our determination may be reconsidered. For PNDI project updates, please see the PNHP website at [www.naturalheritage.state.pa.us](http://www.naturalheritage.state.pa.us) for guidance. As a reminder, this finding applies to potential impacts under DCNR's jurisdiction only. Visit the PNHP website for directions on contacting the Commonwealth's other resource agencies for environmental review. Should you have any questions or concerns, please don't hesitate to contact me at 717.705.2819 or [c-frsechle@pa.gov](mailto:c-frsechle@pa.gov).

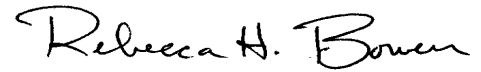
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BUREAU OF FORESTRY

Sincerely,



Frederick C. Sechler, Jr, Ecological Information Specialist  
Pennsylvania Natural Heritage Program  
Bureau of Forestry, Ecological Services Section



Rebecca H. Bowen, Section Chief  
Pennsylvania Natural Heritage Program  
Bureau of Forestry, Ecological Services Section





AECOM  
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215-735-0832 tel  
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April 23, 2014

United States Fish and Wildlife Service  
Suite 322  
315 South Allen Street  
State College, PA 16801

Attention: Mr. Robert Anderson

Reference: PENNDOT District 5-0  
Interstate 80 Reconstruction Project  
SR 0080, Section 17M  
Monroe County, PA

Subject: Phase 1 - Bog Turtle (*Clemmys muhlenbergii*) Habitat Assessment

Dear Mr. Anderson:

On behalf of the Pennsylvania Department of Transportation (PENNDOT) District 5-0, please find enclosed one (1) copy of the Phase 1 - Bog Turtle (*Clemmys muhlenbergii*) Habitat Assessment for the above referenced project, for your review and comment. SR 0080, Section 17M is a 3.5-mile long roadway reconstruction including five interchanges traversing through three municipalities (Stroud Township, Stroudsburg Borough & East Stroudsburg Borough).

Twenty-three (23) wetlands were identified within the action area. Four (4) wetlands were found to possess suitable bog turtle habitat. As such, we are recommending those four for Phase II investigations.

If you have any questions or requests for additional information, please feel free to contact me at (215) 606-0412 or christine.howsare@aecom.com. Thank you for your assistance.

Sincerely,

Chris Howsare  
Sr. Environmental Scientist

Enclosure: As stated

cc (letter only): Heather Heeter, PennDOT District 5-0  
Jerry Neal, PennDOT District 5-0  
Tom Cushman, AECOM

**From:** Kagel, Jennifer [jennifer\_kagel@fws.gov]  
**Sent:** Monday, June 30, 2014 2:02 PM  
**Subject:** Fwd: I 80, Section 17M reconstruction.

Chris:

This email acknowledges the receipt of your Phase I bog turtle information the the Interstate 80 Reconstruction Project.

In speaking with Jerry Neal of PennDOT (District 6-0) last week, I understand that the Department is committed to conducting a Phase II survey next spring. However, it is unclear which wetlands will be included in that Phase II; all of them or just specific ones. Please clarify which wetlands will be included in the survey. Thank you.

Jennifer Kagel  
Fishery Biologist  
U.S. Fish and Wildlife Service  
Pennsylvania Field Office  
315 South Allen Street, Suite #322  
State College, PA 16801,it  
814/234-4090 ext, 232

# **Appendix B**

## **Photographs**



**Wetland 2-05** View from Village Dr looking north across Designated Survey Area (DSA) towards I-80.



**Wetland 2-05** View from I-80 looking southeast across DSA toward Village Drive.





**Wetland 2-06** View from Village Dr looking north across DSA towards I-80.



**Wetland 2-06** View looking northeast across DSA toward I-80.





**Wetland 3-02** View looking southeast across DSA with I-80 exit to north.



**Wetland 3-02** View looking southwest across DSA.





**Wetland 3-02** View looking southeast from I-80 exit, across open water area with DSA in background.



**Wetland 3-10** View looking east across DSA.