July 14, 2025
D1045.038

COPES GRAY TREEFROG & PINE BARRENS TREEFROG PRESENCE/ABSENCE SURVEY REPORT

VENUE AT SUMMERS CORNER
BLOCK 286; 287 * LOTS 3, 5, 6; 5 & 7
LITTLE EGG HARBOR TOWNSHIP, OCEAN COUNTY, NJ

PREPARED FOR:

ARH ASSOCIATES, INC.
215 BELLEVUE AVENUE
HAMMONTON, NJ 08037

PREPARED BY:

DuBois & ASSOCIATES
190 North Main Street
Manahawkin, NJ 08050

BRYON DUBOIS
PRINCIPAL BIOLOGIST

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1.0 INTRODUCTION

This report summarizes the survey methodologies, findings, and conclusions of a summer 2025 Cope's Gray treefrog (*Hyla chrysoscelis*) and Pine Barrens treefrog (*Dryophytes andersonii*) survey on and within the immediate vicinity of 146.45-acre tract of land situated in between Route 9 South and Center Steet within Little Egg Habor Township, Ocean County, New Jersey. The Cope's Gray treefrog and Pine Barrens treefrog are each listed as state-threatened amphibian species, and populations and their habitat are afforded protection under the New Jersey Department of Environmental Protection (NJDEP) guidelines and regulations of threatened and endangered species. The NJDEP and municipal land use ordinance of Little Egg Habor Township specify that no development shall be carried out unless it is designed to avoid irreversible adverse impacts on habitats that are critical to the survival of any local populations of those threatened or endangered animal species designated by the NJDEP at N.J.S.A. 23:2A-1 et seq.

DuBois & Associates, LLC (DuBois), on behalf of ARH Associates, LLC (ARH), have been retained to conduct a vocalization survey on the referenced site for state-threatened anurans. Information is sought by the client to determine if target treefrog species are present on or within the vicinity of the site. DuBois performed treefrog surveys on and within the vicinity of the subject site during the breeding season (June through July) to determine if any treefrogs are inhabiting regulated features associated with the site, specifically the Cope's Gray treefrog and Pine Barrens treefrog. The project applicant is proposing to redevelop the site with residential development. The project includes 199 single family dwellings, 216 triplex units and associated site amenities, including a clubhouse building, pool, tennis courts, stormwater management facilities, etc.

The methodology used by DuBois biologists for the presence/absence survey was the technique/survey methodology outlined in the *Protocols for the Establishment of Exceptional Resource Value Wetlands Pursuant to the Freshwater Wetlands Protection Act (N.J.S.A. 13:9B-1 Et Seq.) Based on Documentation of State or Federal Endangered or Threatened Species*, last updated January 2023, as prepared by the NJDEP Land Use Regulation Program, Office of Natural Lands Management, Division of Parks & Forestry and The Division of Fish, Game & Wildlife Endangered and Nongame Species Program.

2.0 SITE DESCRIPTION

2.1 Location

The site is located at as Block 286, Lots 3, 5 and 6 and Block 287, Lots 5 and 7. The project site is in the western portion of Little Egg Harbor Township, with approximately 2,400-feet of frontage along Center Street (refer to *Figure 1: New Jersey Road Map*). The site can be found on the NW Tuckerton NJ United States Geological Survey (USGS) Quadrangles with NAD 1983 state plane coordinates (feet) of E(x) 530,304 and N(y) 277,198 at the approximate center of the site (refer to *Figure 2: NW Tuckerton NJ U.S.G.S Quadrangle Map*).

2.2 Land-Use/Land Coverage

The site can be characterized as an undeveloped oak-pine upland community. Freshwater wetlands can be found in the southern and western central portions of the site. Several dirt paths traverse throughout the forested land. Historical excavation in several areas associated with mining operations remain along the western property boundary. Refer to *Appendix A: Site Photographs* and *Figure 3: Aerial Map* for a depiction of the proposed project area and surrounding landscape.

Surrounding land use is dominated by single family residential developments, and includes a Tractor Supply Co. retail development to the north and forested land to the west.

2.3 Freshwater Wetlands/Hydrology

According to the geographic information systems (GIS) data layer entitled "NJDEP Wetlands 2012", published by the NJDEP, freshwater wetlands are mapped along the southern property boundary of the site (refer to *Figure 4: NJDEP Freshwater Wetland Map*). A field investigation revealed that this area does consist of freshwater wetlands more extensive than what is mapped by NJDEP. Freshwater wetlands were also identified along the western site boundary in the central portion of the site. The site is located in the Barnegat Bay Watershed Management Area (WMA 13), the Lower Little Egg Harbor Bay tribs watershed, and the Tuckerton Creek (below Mill Branch) sub watershed (HUC 14: 02040301140030). The nearest mapped waterway is the Wills Creek located 40-feet to the south of the site.

2.4 Vegetation

The site is characterized as an oak-pine upland biotic community that is relatively uniform of local region. The forest is canopy stratum is dominated by black oak (*Quercus velutina*) and white oak (*Quercus alba*), pitch pine (*Pinus rigida*), and also contains additional species such as sassafras (*Sassafras albidum*). The understory and subcanopy is dominated by dense swathes of mountain laurel (*Kalmia latifolia*) but includes additional species such as lowbush blueberry (*Vaccinium angustifolium*), oak saplings (*Quercus spp*.), pine saplings (*Pinus spp*.), American holly (*Ilex opaca*), black huckleberry (*Gaylussacia baccata*), bayberry (*Myrica pensylvanica)* and roundleaf green briar (*Smilax rotundifolia*).

The wetland areas in the southern and western portions of the site are emergent areas consisting of herbaceous vegetation that includes common reed (*Phragmites australis*), woolgrass (*Scirpus cyperinus*), switchgrass (*Panicum virgatum*), broomsedge (*Andropogon virginicus*) and soft rush (*Juncus effusus*).

Refer to *Appendix A: Site Photographs* which depict the existing vegetation conditions of the site and adjacent wetlands.

3.0 TARGET SPECIES DESCRIPTION

Cope's Gray Treefrog (*Hyla chrysoscelis),* State Threatened

In New Jersey, the southern (Cope's) gray treefrog is limited to Cape May, Cumberland, Atlantic and Ocean Counties. Within this area, most populations are located in Middle and Lower Townships of southern Cape May. Cope's gray treefrogs occur in both wetland and terrestrial habitats. They breed along the water's edge in vernal ponds, gravel pits, retention basins, floodplain corridors, bogs, weedy lakes, cattail or sedge marshes, and farm ponds (Liguori 2003). Roadside ditches have also been reported. A breakdown of 80 confirmed sites in southern New Jersey yielded 26 man-made borrow pits, 23 natural vernal ponds, 22 stream floodplain corridors, five retention/detention ponds, and four man-made pond/lakes (Zappalorti and Dowdell 1991b). Breeding areas are located within or near deciduous or mixed forested woodlands and scrub-shrub wetland habitats where trees and shrubs grow in or near water. They breed from May through July, however they frequently call on warm rainy days outside the breeding season.

Following the breeding season, Cope's gray treefrog remain in terrestrial habitat where they are primarily arboreal. They rest during the day and emerge at night to forage. They feed on flying insects as well as those hidden amid branches and leaves. Radio telemetry has demonstrated that Cope's gray treefrogs in New Jersey are capable of long distance movements away from breeding pools following the breeding season. Distances up to 401 meters have been documented by NJDEP ENSP biologists (N.J. Division of Fish and Wildlife 2012). Winter retreats include rotten stumps and logs, leaf litter, underground burrows, tree cavities, and beneath the loose bark of trees. Gray treefrogs are able to withstand freezing and thawing due to glycerol produced in their blood and body tissue. The glycerol acts like an 'antifreeze' to prevent ice crystals from forming in their cells.

Pine Barrens Treefrog (*Dryophytes andersonii),* State Threatened

Pine Barrens treefrogs are known to prefer acidic waters associated with Atlantic white-cedar wetlands of the New Jersey Pine Barrens. Maple-gum wetlands with favorable water chemistry (pH) may also harbor breeding Pine Barrens treefrogs. Early successional and vernal pools are preferred breeding habitat where specimens typically call from trees standing in or near water. Following breeding, they return to a more terrestrial environment. This species is mainly restricted to core Pine Barrens habitat within Burlington, Ocean, Atlantic, Gloucester, and Camden counties.

Pine Barrens treefrogs require both aquatic and terrestrial habitats. Generally, Pine Barrens treefrogs have been reported to breed in seepage bogs, cranberry bogs, small and ephemeral ponds, streamlets, Atlantic white cedar (*Chamaecyparis thyoides*) swamps, and pitch pine lowlands (NJDEP 2013). Plant species found at breeding sites include those mentioned above as well as highbush blueberry, greenbriar (*Smilax* spp), red maple, swamp azalea, swamp magnolia (*Magnolia virginiana*), viburnums (*Viburnum* spp.), inkberry (*Ilex glabra*), mountain laurel, sheep laurel (*Kalmia angustifolia*), blackjack oak (*Q. marilandica*), scrub oak (*Q. ilicifolia*), sundew (*Drosera* ssp.), pitcher plant (*Sarracenia purpurea*), sweet pepperbush, and various orchids (*Habaneria* spp). Structural characteristics of preferred habitats include an open canopy, a dense shrub layer, and heavy ground cover. Soil types include sands and muck (Liguori 2003).

Pine Barrens treefrogs move into upland areas adjacent to breeding ponds during July and August. The species has been identified while calling from pitch pines, cedars, oaks and highbush blueberry thickets (Hulmes et al. 1980).

4.0 TREEFROG SURVEY

4.1 Treefrog Call Playback Survey Methodology

Targeted field surveys were conducted from the vicinity of suitable ponded wetlands on and within the immediate vicinity of the site to determine if treefrogs are utilizing these features. Call-playback vocalization surveys to elicit responses from state-listed treefrogs were performed from six (6) centralized locations by broadcasting taped treefrog calls. Locations were chosen in relation to suitable features observed by DuBois. Recordings from "The Calls of Frogs and Toads", by Lang Elliot, were broadcast toward wetland and adjacent terrestrial survey areas using a handheld digital audio player connected to a portable amplification speaker. Dates were selected when the temperature for the early evening was forecasted to be warm (≥ 70°F) with high humidity (≥ 70%).

Wetland complexes in the southwestern portion of the site were determined to contain potentially suitable treefrog habitat as a result of DuBois' Threatened and Endangered Species Habitat Assessment (DuBois, 2024). Albeit suitable, these wetlands are disturbed in association with historical operations on/adjacent to the site and located in close proximity anthropogenic features. Each of the six (6) calling locations contained one or more of the following variables: open canopy, ponded surface waters, a dense shrub layer, and/or heavy ground cover. As such, these calling locations were targeted utilized to elicit the referenced species. Refer to *Figure 5: Callplack Survey Location Map* for a depiction of the location of survey areas described below. Calling Location 1 focused on several man-made stormwater facilities and depressional areas along the western property boundary in the central portion of the site. Similar features were targeted in association with CL 2. Water levels within regulated features in this portion of the property varied throughout the survey season, with influxes following storm events. CL 3 targeted a common reed depressional area that was created by historic operations on the adjacent property. Water levels within this area fluctuated throughout the survey season. Call Location 4 is located on the property boundary facing a stormwater facility which holds a significant amount of water. Standing water was observed within this feature on all survey dates. Call Locations 5 and 6 are associated with the wetland complex/riparian corridor which runs along the southern property boundary. This feature continues off-site in each direction and is piped underneath the man-made access path at the southern boundary. Water levels fluctuated within this feature throughout 2025. The broadcasts were followed by approximately two minutes of listening time. The total survey time expenditure at each calling location lasted approximately 15 minutes. The player speaker was placed facing the wetland area. Each of the survey locations were visited a minimum of four times.

In addition to call playback surveys, concurrent with site-wide visual surveys, the ponded areas on the redevelopment site were visually searched for the presence of adult frogs on nearby vegetation, as well as tadpoles or egg masses in the water. Dip nets were used to sample the tadpole assemblage from ponded areas. On the majority of survey nights, DuBois noted significant frog activity from these features prior to encroaching on the survey/wetland area.

4.2 Treefrog Survey Results

Data logs for the Treefrog survey events are provided below:

Table 1: Dates and conditions for Pine Barrens Treefrog vocalization surveys

Date	Surveyors	Survey Time	Conditions	Results/Notes
06/05/2025	Bryon DuBois Ben Rochat	7:00pm – 11:00pm	74°F, clear, 71% RH, Sunset @ 8:23pm	CGTF callbacks heard from all CL other than CL4. No PBTF heard. Green/Bull Frogs heard from CL1, Cl3, CL4. Fowlers Toads heard at CL3 and 4.
06/18/2025	Amy Jones Ben Rochat	7:00 pm – 9:00 pm	77°F, cloudy, 82% RH, Sunset @ 8:29pm	CGTF callbacks heard from all CL other than CL4. No PBTF heard. Green/Bull Frogs heard from CL1, Cl3, CL4. Fowlers Toads heard at CL3 and 4.
07/03/2024	Ben Rochat Bryon DuBois	9:30pm – 10:30pm	74°F, cloudy Rain at end of survey 71% RH, Sunset @ 8:30pm	CGTF callbacks heard from all CL other than CL4. No PBTF heard. Green/Bull Frogs heard from CL1 & CL4. Fowlers Toads heard at CL3 and CL4.

Date	Surveyors	Survey Time	Conditions	Results/Notes
07/09/2025	Bryon DuBois Ben Rochat	8:00pm – 10:00pm	80°F, cloudy, 92% RH, Sunset @ 8:27pm	CGTF callbacks heard from all CL other than CL4. No PBTF heard. Green/Bull Frogs heard from CL1, Cl3, CL4. Fowlers Toads heard at CL3 and 4.

*CGTF = Cope's Gray Treefrog *NGTF = Northern Gray Treefrog *PBTF = Pine Barrens Treefrog

As previously mentioned, water levels varied throughout the survey season in all surveyed features. A significant amount of water was noted within the off-site stormwater facility targeted with CL4. There were no positive occurrences of Cope's gray treefrogs at this location.

Each of the remaining features targeted by DuBois' vocalization regime produced positive results for the Cope's gray treefrog. These features are significantly degraded and situated in between existing development.

There were no positive occurrences of Pine Barrens treefrogs heard or observed at any of the calling locations throughout the duration of the survey period. Other anurans heard throughout the survey period include green frog (*Lithobates clamitans*), bull frog (*Lithobates catesbeianus*), and fowlers toad (*Anaxyrus fowleri*). The observation of the documented species on and within the vicinity of the site alludes to unsuitable conditions for the Pine Barrens Treefrog. In DuBois' experience, Pine Barrens treefrogs typically utilize undisturbed features that tend to be more acidic. Literature states that pH levels typically range from 3.38 to 5.9. The pH preference of this species aids in the reduction of competition with more generalist species (like the bull and green frogs). These opinions are supported by the results of DuBois' survey and the basic nature of the wetlands on and within the vicinity of the site.

5.0 CONCLUSION

DuBois confirmed the presence of Copes Grey treefrog in each wetland on and within the immediate vicinity of the site, except for the pond west of CL4 (off-site). No evidence of Pine Barrens treefrog was observed on or within the vicinity of the site. It is the opinion of this firm that suitable habitat characteristics (pH levels and vegetation composition) are absent from the site and its immediate vicinity. These conclusions are supported by the documented species on site. Locations of the occupied Cope's Gray treefrog wetland features have been presented on *Figure 6: Vocalization Survey Results Map*. These wetlands are regulated as part of the FWW Rules at N.J.A.C.7:7A and should be classified with Exceptional Resource Value.

The state-threatened Cope's grey treefrog is currently utilizing disturbed features on and within the immediate vicinity of the site. Several of these features are man-made and can be described as disturbed. Accordingly, it is the opinion of this firm that additional disturbance outside of the wetland areas does not pose adverse impacts to this local population. Additionally, the 150-foot Exceptional Resource Value wetland buffer associated with the occupied habitat offers protection for the permanent disturbance.

6.0 REFERENCES

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Hulmes, D., P. Hulmes, and R.T. Zappalorti. 1980. An ecological study of the Pine Barrens treefrog (Hyla andersonii) Baird. In southern New Jersey, with especial notes on habitat description. Part II. Unpublished report to the NJDEP, Division of Fish, Game, and Wildlife, Endangered and Nongame Species Program. by Herpetological Associates. 42pp.

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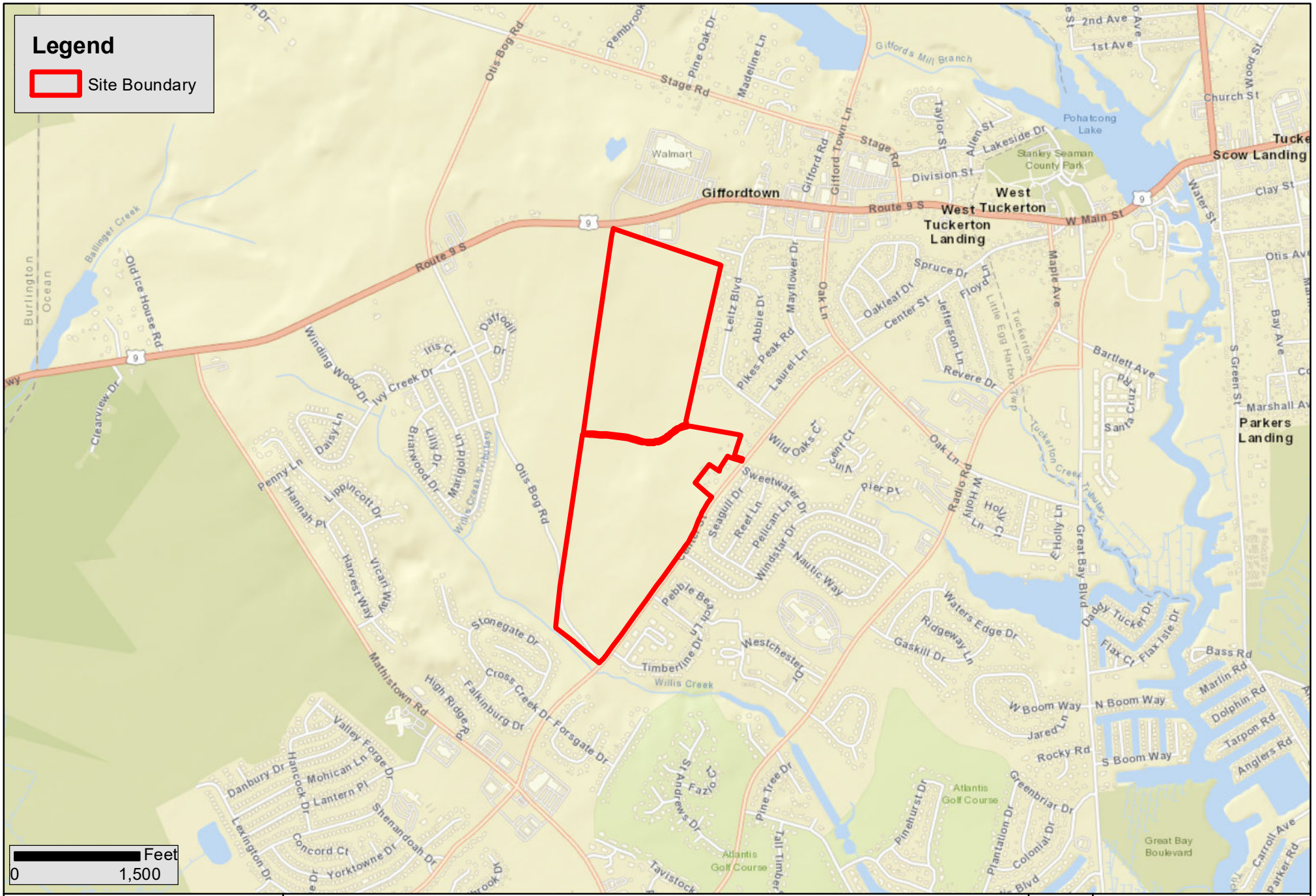
FIGURES



DuBois & ASSOCIATES

New Jersey Road Map

Block 286 * Lots 3, 5 & 6; Block 287 * Lots 5 & 7
Little Egg Harbor Township, Ocean County, NJ

NORTH

Figure 1

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Scale: 1 in = 1,500 ft
Date: 8/22/2024
Drawn By: HJ

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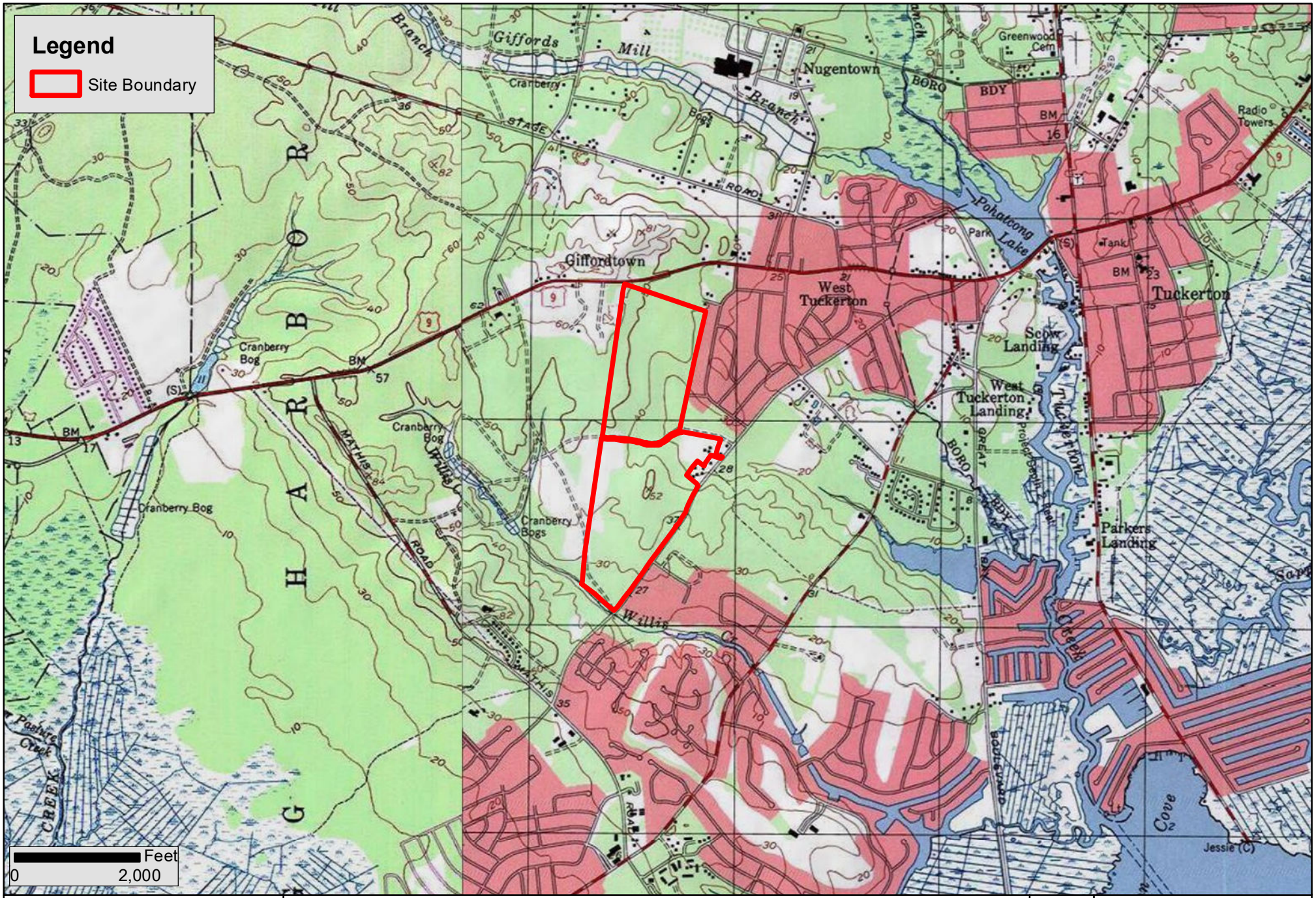
This map was developed using Geographic Information Systems Digital Data. This map is for visual display purposes only and all locations are approximate.



DuBois & ASSOCIATES

NW Tuckerton USGS Quadrangle Map

Block 286 * Lots 3, 5 & 6; Block 287 * Lots 5 & 7
Little Egg Harbor Township, Ocean County, NJ

NORTH

Figure 2

Job No.: D1045.038
Scale: 1 in = 2,000 ft
Date: 8/22/2024
Drawn By: HJ

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DuBois & ASSOCIATES

Aerial Map

Block 286 * Lots 3, 5 & 6; Block 287 * Lots 5 & 7
Little Egg Harbor Township, Ocean County, NJ

NORTH

Figure 3

Job No.: D1045.038
Scale: 1 in = 800 ft
Date: 8/22/2024
Drawn By: HJ

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DuBois & ASSOCIATES

NJDEP Freshwater Wetlands Map

Block 286 * Lots 3, 5 & 6; Block 287 * Lots 5 & 7
Little Egg Harbor Township, Ocean County, NJ

NORTH

Figure 4

Job No.: D1045.038
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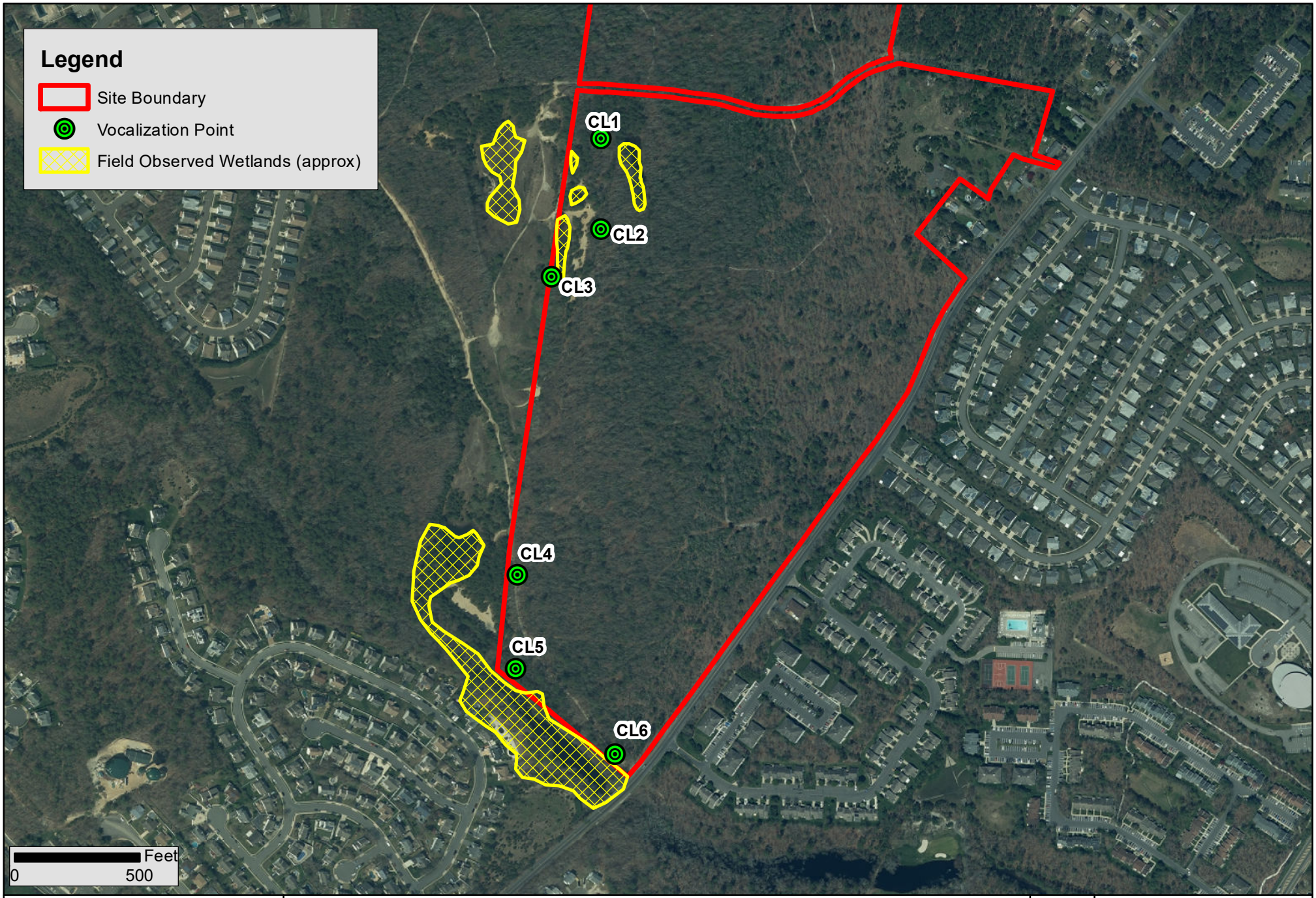

Call Playback Survey Location Map

Block 286 * Lots 3, 5 & 6; Block 287 * Lots 5 & 7
Little Egg Harbor Township, Ocean County, NJ

DuBois & ASSOCIATES

NORTH

Figure 5

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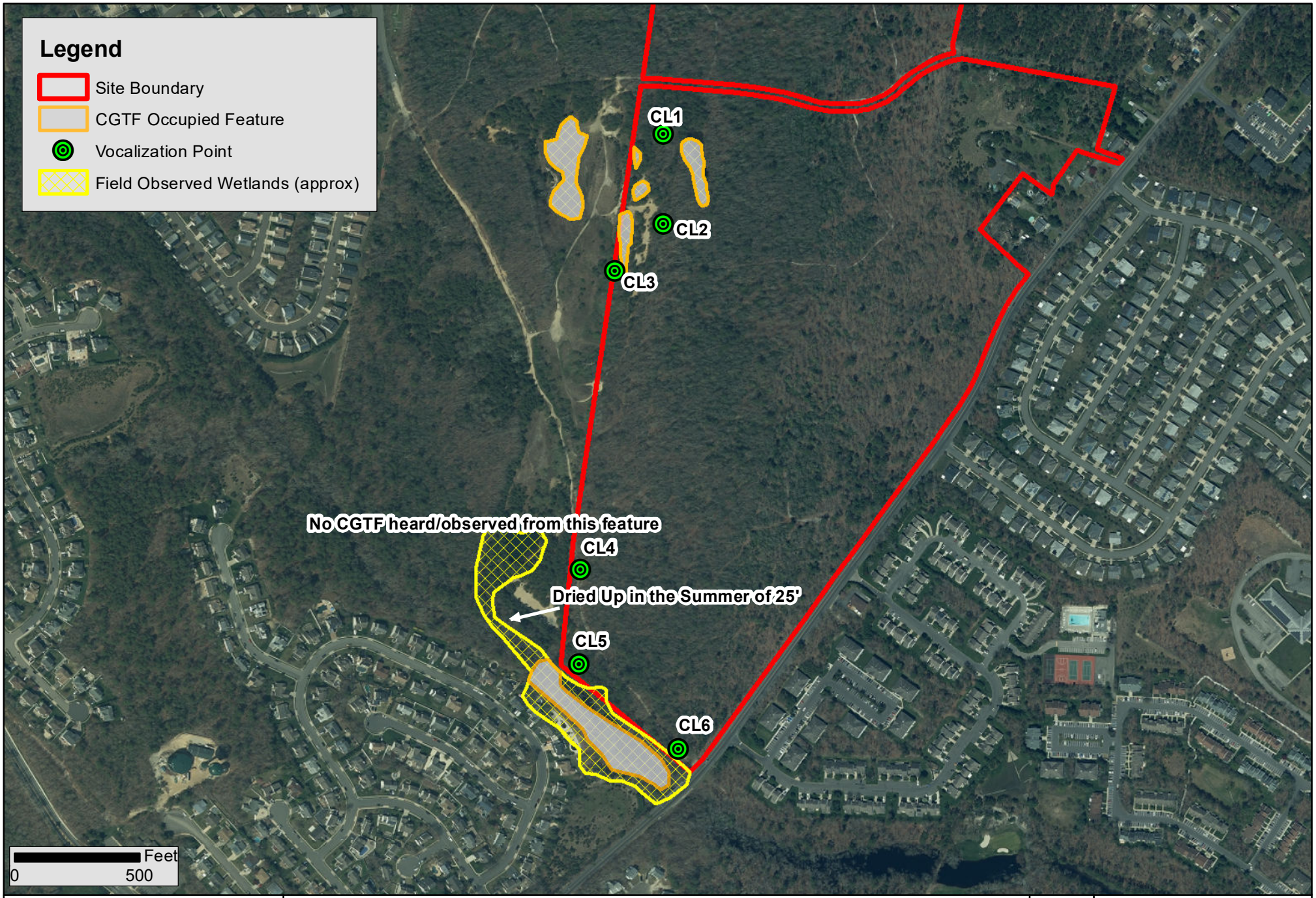

DuBois & ASSOCIATES

Vocalization Survey Results Map

Block 286 * Lots 3, 5 & 6; Block 287 * Lots 5 & 7
Little Egg Harbor Township, Ocean County, NJ

NORTH

Figure 6

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This map was developed using Geographic Information Systems Digital Data. This map is for visual display purposes only and all locations are approximate.

APPENDIX A

SURVEY PHOTOGRAPHS

Site Photographs
Center Street Project
Little Egg Harbor Township, Ocean County, New Jersey

Photo 1: Representative view of the feature targeted at Calling Location 1.

Photo 2: View of the depressional area associated with Call Location 2.

Photo 3: View of the flooded, depressional area associated with CL3. Water levels varied within this feature throughout the survey season.

Photo 4: View of the off-site basin associated with CL4. No evidence of state-listed species was documented within this feature.

Photo 5: View of the wetland complex associated with CL5 and CL6. Water levels varied throughout the 2025 survey season.

Photo 6: View of a Cope's grey treefrog observed by DuBois near CL 5.

Photo 7: View of a bull frog observed near CL 3 on June 5th.

Photo 8: View of the fowlers toad within the ponded area associated with CL3.

Photo 9: Additional view of a fowlers toad observed along the edge of CL3.

APPENDIX B

STATEMENT OF QUALIFICATIONS

Bryon DuBois
Principal Senior Biologist
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609-488-2857

Education:

B.S. Biology & Ecology,
West Chester University, 1993

Professional Affiliations:

NJ Department of Environmental Protection Wetland Mitigation Council 2003 – 2013; 2016 - Present

New Jersey Builders Association 1999 – Present

Shore Builders Association 2001 – 2013

Builders League of South Jersey 2013 - Present

Member: Society of Wetland Scientists 1997 – Present

Member: The Ecological Society of America 1998 – Present

Member: New Jersey Division of Fish, Game and Wildlife Conservation Corps. 2000 – Present

Member: Pine Beach Environmental Commission 1995 – 2003

Association of N.J. Environmental Commission (ANJEC) 1995 – 2010

N.J. Concrete & Aggregate Society 2003 – 2013

Southern Ocean County Chamber of Commerce 2014 - Present

Fields of Competence:

Mr. Bryon DuBois has over 30 years' experience in the fields of regulatory compliance, ecology, biology, wetland science, wildlife management, hydrology and habitat restoration. He has managed numerous large-scale projects through the approval process in New Jersey, Pennsylvania, Maryland and Delaware. Mr. DuBois is highly respected by the regulatory agencies in N.J. and Pennsylvania. He has made positive contributions to policies effecting protected species (both state and federal), wetland mitigation, regulation and coastal zone policies through NJDEP, PAFBC, MDDNR, DEDNR and ACOE. These contributions have also been through invited participation and professional guidance provided in regulatory agency stakeholder processes.

Professional Experience:

After seven (7) early years in the consulting business Mr. Bryon DuBois created an environmental consulting firm in 2000 that focused on ecological and environmental issues that the regulated community was facing. Mr. DuBois has applied logical and objective solutions to some of the most difficult environmental projects and has constantly found a balance between environmentalists and developers alike. Mr. DuBois currently operates the firm and ensures successful completion of projects through management and coordination of numerous like minded employees. Mr. DuBois operates the firm to promote the client's interest while providing the regulatory agencies with the documentation they require for approvals. The end result is typically a project or product that is both environmentally sound and in the best interest of the client.

Mr. DuBois has been requested to present topics related to environmental regulations at the Atlantic City Builders Convention, the Eastern Regional Airports Conference in Hershey, Pennsylvania, the U.S. Fish and Wildlife Bog Turtle Conventions, the N.J. Pinelands Commission, the Louisiana Fish and Game and dozens of planning boards in towns across N.J. and P.A. His diverse experience has made him a respectable candidate to speak publicly on projects that require many different issues from ecology to water quality.

Mr. DuBois is responsible for performing wetland delineations under the jurisdiction of multiple agencies and has more than 30 years of experience performing wetland delineations on more than 5000 projects over three states. Mr. DuBois authors Freshwater Wetland Delineation Reports and has prepared more than 3,000 Freshwater Wetland Letter of Interpretation applications for submittal to the NJDEP for verification of the delineated wetland limits.

In 1998 Mr. DuBois began designing and managing the construction of wetland mitigation projects tailored to a specific habitat type or land use. Over the years his projects were approved and exceeded the standard requirements without increasing costs for the client. These mitigation projects helped Mr. DuBois become nominated to the State of New Jersey's Wetland Mitigation Council in 2003 by the Governor of New Jersey. Mr. DuBois has reviewed and received approval for numerous mitigation related projects and banks in New Jersey, Pennsylvania and Maryland since that time.

Ecologically, from 2003 to the present-day Mr. DuBois has successfully managed, designed and received approval for projects ranging from airports to industrial centers, wastewater management facilities and large commercial areas along with thousands of residential dwellings. This has involved performing numerous long-term studies on several influential species such as Bog Turtles, Pine Snakes, and Indiana Bats along with assessments of habitat and creation of mitigation measures. Mr. DuBois has held over 400 scientific collecting permits for surveys performed within the Mid-Atlantic States, many of which involve a telemetry component.

Mr. DuBois also has extensive experience coordinating with various utility companies to provide wetland, ecological surveys and monitoring services necessary to support utility line improvement and upgrade projects, which also involves regulatory agency coordination

Bryon DuBois
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Certifications:

Professional Wetland Scientist # 1219 Society of Wetland Scientist

Sr. Ecologist, The Ecological Society of America

Recognized Qualified Bog Turtle Surveyor – N.J., N.Y., P.A., D.E., M.D.

Recognized Qualified Indiana and Northern Long Eared Bat Surveyor – N.J., N.Y., P.A.

Recognized Qualified Delmarva Fox Squirrel Surveyor – M.D., D.E.

Pennsylvania Qualified Herpetologist for Numerous Species

Pinelands Qualified Biologist for Numerous Species

through implementation of both Pennsylvania Fish and Boat Commission and New Jersey Department of Environmental Protection standards

The projects of relevance presented below have been successfully completed through the management and coordination of Mr. DuBois with the client and regulatory agencies.

Projects of Relevance:

NEW JERSEY:

- *NJ DOT Permitting and Threatened and Endangered Species*
  - Route 206 – NJDOT, Atlantic County, NJ
  - Route 46 - NJDOT, Warren County, NJ
- *Ecological Monitoring, Threatened/Endangered Species Studies & Wetlands Assessments*
  - South Jersey Multiple Transmission Line Upgrades
    - BL England Transmission Line Upgrade, Atlantic, Burlington & Salem Counties
    - Cove Road Transmission Line Upgrade, Cape May County
    - Orchard to Lewis Transmission Line Upgrades, Atlantic County
    - Oyster-Creek Cardiff Transmission Line Wetland Mitigation, Ocean County
- *Threatened/Endangered Species Studies & Permitting- Pinelands*
  - NJNG Southern Reliability Line – Townships of Manchester, Jackson, Lakehurst, Plumsted, Chesterfield, and North Hanover, Ocean and Burlington Counties, NJ
  - Shulton Property, Glidden Sand Mine & Woodmansie Sand Mine – Ocean and Burlington Counties, NJ
  - Cutt Brothers Farm Service Restoration project- Burlington County
- *Federal Involvement/Federal Oversight*
  - Swamp Pink Monitoring at Various Sites – Atlantic, Warren Counties, NJ
  - Various Distribution Center Applications; Bat Studies – Warran Township, Montville Township, Morris Co, NJ, Mt. Pocono, Northampton Co, PA.
  - Bear Creek Construction Monitoring- Burlington County, NJ.
- *Wetland Mitigation Approvals/Monitoring*
  - GEHR Mitigation Bank - Gloucester County, NJ
  - MBB Mitigation Bank – Monmouth County, NJ
  - Bell Labs – Riparian Mitigation - Monmouth County, NJ
  - Bamm Hollow – Wetland Mitigation - Monmouth County, NJ

PENNSYLVANIA:

- *Threatened/Endangered Species Studies*
  - Westtown Lake Turtle Relocation, Westtown School, Chester County, PA
  - Haverford College Red Bellied Turtle Relocation, Delaware County, PA
- *Threatened/Endangered Species Studies & ACOE Permitting*
  - Scudder Falls Bridge Replacement, Yardley, PA
- *Permitting and Jurisdictional Determinations*
  - Brookdale – 1200 Acre wetland delineation, Monroe County PA
  - Shartlesville – 520-acre wetland delineation in Berks County, PA
  - 2016 Reliability Project – Surveyed approximately 100 Miles of PPL Right of way throughout Lancaster, Lebanon and Berks County.

DELAWARE:

- *Threatened/Endangered Species Studies, Permitting & Wetlands*
  - Church to Wye Mills Transmission Line Upgrade, Kent County, DE
  - DE- MD Transmission Line Upgrades from 2009-2014 Kent County to Sussex County DE

MARYLAND:

- *Threatened/Endangered Species Studies, Permitting & Wetlands*
  - Bald Eagle Hazing and Nest Construction, Brandywine MD.
  - Kent County Wetland Mitigation Project, Delineation and Assessment

Amy Jones
Senior Biologist/Project Manager
ajones@denviro.com

190 North Main Street
Manahawkin, NJ 08050
609-488-2857

Education:

B.S. Ecology
Juniata College – 2000

Certifications:

Professional Wetland Scientist-
Society of Wetland Scientists

Qualified Specialist (Ecologist & Ornithologist) able to certify ESA Protection Plans

USFWS Recognized Qualified Bog Turtle Surveyor – NJ

NJDEP ENSP Recognized Qualified Venomous Snake Monitor

Continuing Education:

Rutgers University
Methodology for Delineating Wetland & Wetland Vegetation Identification

Threatened and Endangered Species of Northern and Southern New Jersey (field and classroom courses)

Richard Stockton College of NJ
Ornithology

Shepherd College
Shorebird Management & Ecology

Bowman's Hill Wildflower Preserve
Identification of Cool Season Grasses, Sedges and Rushes
Plant Stewardship Index (PSI)

Professional Affiliations:

The Wildlife Society
-National Member
-NJ Chapter Member
-NJ Chapter Secretary
2007 – 2014
-NJ Chapter Board Member
2014 – 2016
-NJ Chapter Newsletter Editor
2017 – present

Fields of Competence:

Amy Jones has over 25 years of experience in the fields of biology, ecology, wetland science, and land use regulatory compliance. She conducts various environmental site assessments, development feasibility studies, wetland delineations, rare species habitat evaluations and population surveys. She has extensive experience in managing a variety of projects from the initial field study stage through various regulatory application and approval processes, including extensive coordination with regulatory personnel. Mrs. Jones has a respected professional relationship with various municipal and county agencies, NJDEP, USFWS and USDA NRCS personnel.

Professional Experience:

Mrs. Jones is a senior biologist and project manager with the firm of DuBois and Associates. She manages all aspects of a project and coordinates specifically with a variety of clients to organize projects and proposals. Mrs. Jones manages each individual project to ensure all appropriate and applicable regulations and tasks are implemented to facilitate successful completion/approval of the project.

Mrs. Jones is responsible for conducting development feasibilities, wetland delineations, natural resource inventories, threatened/endangered species habitat assessments and directed surveys, and monitoring activities. Mrs. Jones has extensive experience with the survey and sampling protocols required under the jurisdiction of the USFWS, NJDEP, PAFBC, and Pinelands Commission for threatened and endangered species surveys. This survey work includes experience in various snake and salamander species drift fence trapping, numerous raptor and woodpecker nest investigations and breeding vocalization broadcast surveys, shorebird and colonial waterbird nesting and monitoring surveys, opportunistic and visual encounter turtle surveys, amphibian monitoring and call detection/playback surveys, and bat studies. Mrs. Jones has received numerous scientific collection permits from regulatory agencies as both the primary permittee and sub-permittee.

Specific experience and responsibilities include ecological and environmental monitoring activities for various linear development and improvement projects. This monitoring oversight and coordination ensures the construction activities are in compliance with county, state, and federal conditions and standards, and all best management practices are implemented as required. Monitoring activities also serve to ensure the construction activities will not result in adverse impacts to environmentally sensitive areas, or rare faunal or floral habitats and/or populations.

Mrs. Jones conducts vegetation inventories within a variety of biotic communities throughout New Jersey. These have included species specific surveys for numerous target plants considered rare or State and/or Federally listed. Mrs. Jones has conducted numerous botanical investigations for rare plant species within the jurisdiction of the Pinelands Commission and NJDEP. Specifically, these directed evaluations have included surveys for the Federally listed swamp pink, seabeach amaranth, and Knieskern's beaked rush plants, results of which have been accepted by all regulatory state agencies and the USFWS.

Mrs. Jones is responsible for performing wetland delineations under the jurisdiction of multiple agencies, which are conducted pursuant to the interagency evaluation procedures. This includes expertise in analyzing the vegetation and technical indicators of hydrology and soils. She authors Freshwater Wetland Delineation Reports and prepares Freshwater Wetland Letter of Interpretation applications for submittal to the NJDEP for verification of the delineated wetland limits.

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NJ Builders Association
-Environmental Commission
2016 – present

The Society of Women Environmental Professionals
-Greater Philadelphia
2017 - present

Career Positions:

U.S. Fish & Wildlife Service
E.B. Forsythe NWR
Brigantine, NJ-
Wildlife Biologist
2000-2002

Habitat Management & Design, Inc.
Trenton, NJ-
Sr. Environmental Consultant
2002-2007

Water's Edge Environmental, LLC
Ocean City, NJ-
Senior Biologist
2007-2014

DuBois and Associates, LLC
Manahawkin, NJ –
Sr. Biologist/Environmental Scientist
2014 – Present

Mrs. Jones coordinates directly with professional engineers, attorneys, clients, and regulatory agencies to evaluate compliance and design of projects pursuant to various environmental regulations, inclusive of the Freshwater Wetlands Protection Act Rules, Flood Hazard Area Control Act Rules, and coastal/waterfront development regulations. Based on these permit analyses and project designs, she prepares the applicable permit applications pursuant to the NJDEP and USACOE regulations.

Mrs. Jones has also conducted numerous volunteer survey efforts in coordination with the NJDEP, NJ Audubon Society, and NJ Conserve Wildlife Foundation. These survey efforts include State directed Bog Turtle surveys, participation in grassland bird surveys as part of the Landowner Incentive Program, the Calling Amphibian Monitoring Program (CAMP), and regional Wood Turtle monitoring surveys.

Representative Projects of Relevance:

Burlington County Park Projects
Ecological and environmental work was completed to assist Burlington County in conducting environmental constraints evaluations and permit analyses for improvements on numerous County owned park and greenway projects. Mrs. Jones works directly with the landscape architects and engineers in assisting with design of the project to ensure compliance of proposed improvements pursuant to State waterfront development, freshwater wetlands, and flood hazard regulations. Mrs. Jones also coordinates with the NJDEP and USACOE with regard to permit requirements and to ensure no adverse impacts to documented state and federal threatened and endangered species habitat, including the bald eagle and bog turtle. Mrs. Jones prepared all necessary permit applications and ensured continued cooperative coordination with the regulatory agencies to ensure receipt of the applicable permit approvals for the park projects. Mrs. Jones has respected professional relationship with Burlington County and is involved in ongoing and future park improvement projects.

Holly Realty Project
Conducted red-headed woodpecker, barred owl, red-shouldered hawk, and northern long eared bat surveys in order to determine presence/absence and evaluate compliance with the New Jersey coastal regulations. These included nest cavity searches and call playback surveys for the red-headed woodpecker, barred owl, and red-shouldered hawk, and mist net surveys for the northern long-eared bat. These surveys were conducted pursuant to accepted state and federal survey methods. Survey methodology and results summaries have been prepared for the client and state agency review for continued impact and mitigation review.

New Jersey Department of Transportation Roadway Improvement Projects
Coordination with the NJDOT and project engineer to conduct the necessary field investigations and prepare full permit applications pursuant for various roadway and bridge improvement and development projects throughout the state. This has included wetland delineations, vegetation and wildlife inventories, and preparation and submission of state wetland and flood hazard permit and waiver applications, USACOE permit applications, and coastal and waterfront development permit applications.

Atlantic Cape Community College – Cape May Campus
Mrs. Jones conducted extensive monitoring of habitat mitigation measures implemented as part of CAFRA approval for construction the Cape May campus facilities. This included eastern tiger salamander trapping to evaluate success of the constructed breeding pond on the site. Monitoring resulted in the positive capture and identification of juvenile tiger salamanders, demonstrating success of the breeding pond. Additional monitoring and surveys included barred owl call playback surveys and long term avian point count surveys to evaluate impacts.

Ben Rochat
Staff Biologist
brochat@denviro.com

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Manahawkin, NJ 08050
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Certifications:

DEP Certified Venomous snake monitor (Tertiary)

Delaware DNREC Sediment & Stormwater Program Blue Card Certification

State of Maryland Erosion & Sediment Control Certification No. RPC015013

Career positions:

DuBois & Associates,
Manahawkin, NJ
Field Biologist 2019 – Present

Professional Affiliations:

Member: The Wildlife Society National Member/NJ Chapter

Volunteer: Wildlife Conservation Corps

Volunteer: New Jersey Conservation Foundation

Volunteer: NJ Rattlesnake Response Team

Member: Northeast Partners in Amphibian and Reptile Conservation

Volunteer: Pinelands Commission

Volunteer: Rutgers University Research Project

Continuing Education:

Pinelands Plant Course – Fundamentals. 2023

Native Plant Trust of Massachusetts - Exploring the Rushes: Identification and Taxonomy Webinar. 2021

Northeast Partners of Amphibian and Reptile Conservation -
Annual Conferences

Fields of Competence:

Mr. Rochat has over 8 years of experience in the fields of herpetology, ecology, and biology, and over 4 years of experience in soil science.

Professional Experience:

Mr. Rochat is a Biologist and environmental scientist with the firm of DuBois and Associates. He is responsible for conducting faunal and floral sampling investigations, and environmental site assessments. He also provides technical support in various rare, threatened, and endangered species studies. Mr. Rochat also performs biological/environmental construction monitoring.

Mr. Rochat has assisted with studies on several fauna and flora species such as northern red-bellied cooter, osprey, and bald eagle, and other state listed raptors. These activities include helping with directed visual surveys, implementation of data collection and habitat analysis. Additionally, Mr. Rochat has participated in numerous vocalization surveys for a variety of wildlife species including Pine Barrens treefrog, Cope's gray treefrog, barred owl, black rail, red-shouldered hawk, and red-headed woodpecker.

Mr. Rochat has over 8 years of experience performing surveys for rare snakes in the pinelands. He has performed surveys to identify nesting areas, hibernacula, shed stations and other areas of sensitive habitat for northern pine snakes, timber rattlesnakes, and corn snakes. Additionally, He has experience performing radio telemetry on a state listed snake species. Mr. Rochat has also been responsible for the maintenance and operation of multiple ecological trapping arrays, including drift fence-box funnel trap arrays and artificial cover surveys designed to capture threatened and endangered snake species.

Mr. Rochat also performs biological/environmental construction monitoring associated with utility right-of-ways throughout New Jersey. Environmental oversight ensures the project is conducted in an environmentally responsible manner and in accordance with all applicable SESC standards and best management practices. Biological oversight in and around environmentally sensitive and regulated areas ensures that the project does not have any adverse impacts to critical habitats, rare faunal and floral species, or environmentally regulated areas. Mr. Rochat is recognized by the NJDEP as a qualified venomous snake monitor.

Mr. Rochat has assisted in habitat and visual surveys for Bog Turtles in Pennsylvania. These activities include helping with directed visual surveys, implementation of data collection and habitat analysis.

In conjunction with performing surveys for a variety of environmental/ecological assessments, Ben Rochat has gained experience using ESRI Arc Map Geographic Information Systems (GIS) software and global positioning systems (GPS). Maps are created to depict a visual representation for clients of site-specific characteristics in relation to various projects. These tools are also used in mapping species movements such as turtles, bats, and snakes.

Mr. Rochat has assisted in/conducted numerous botanical investigations for rare plant species within the jurisdiction of the New Jersey Pinelands Commission, the New Jersey Department of Environmental Protection, and the Pennsylvania Department of Conservation of Natural Resources. Many projects include botanical surveys along existing transmission line rights-of-ways; investigations have led to the delineation and protection of rare plant occurrences while permitting utilities to perform upgrades and maintenance operations within their easements.

Mr. Rochat is also responsible for the organization and execution of various environmental reports including Letters of Interpretation (LOIs), feasibility studies, site assessments, field, and lab analysis of soils, and permitting for a wide variety of projects.

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Staff Biologist
brochat@denviro.com

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Manahawkin, NJ 08050
609-488-2857

Education:

Washington Township High School graduate 2001

Projects of Relevance:

Transmission line upgrades, A. C. Electric Co., Several Locations within Atlantic, Cape May, Salem, Camden, and Gloucester Counties, NJ: Conducted ecological services for transmission line upgrades at several locations throughout NJ. Tasks included preliminary habitat suitability assessments for Federal and state listed T&E flora and fauna; performed surveys for northern pine snake, barred owl, Pine Barrens and Cope's gray tree-frogs, osprey, bald eagle, red-shouldered hawk, various colonial waterbirds, and swamp pink, which are all identified on the States T&E Species List; delineated T&E plant populations for protective initiative during construction phases of the proposed project and aided in environmental monitoring of these sites. Coordinated with the USFWS, NJDEP and New Jersey Pinelands Commission to ensure compliance with all applicable regulations. All surveys were performed in accordance with USFWS Section 7 consultation and State protocols.

Transmission line upgrades, First Energy Corp., Several Locations within Monmouth and Ocean Counties, NJ: Conducted ecological services for transmission line upgrades at several locations throughout NJ. Tasks included preliminary habitat suitability assessments for Federal and state listed T&E flora and fauna; performed surveys for northern pine snake, corn snake, barred owl, Pine Barrens and tree-frogs, osprey, bald eagle, and swamp pink, which are all identified on the States T&E Species List; delineated T&E plant populations for protective initiative during construction phases of the proposed project and aided in environmental monitoring of these sites. Coordinated with the USFWS, NJDEP and New Jersey Pinelands Commission to ensure compliance with all applicable regulations. All surveys were performed in accordance with USFWS Section 7 consultation and State protocols.

Stavola Concrete plant Pine Snake Trapping, Ocean County NJ: Constructed, maintained, and surveyed drift fence and box trap arrays for the state threatened pine snake and state endangered corn snake. Each array consisted of 2,000 ft. of silt fence lined with funnel/box traps spaced evenly along the fence. Additionally, an artificial cover survey consisting of tin and boards placed on habitats identified as sensitive for snake usages, along with nesting and hibernacula surveys. These projects functioned as presence/absence surveys prior to construction or expansion of existing operations. USFWS, NJDEP and New Jersey Pinelands Commission were coordinated with to ensure compliance with all applicable regulations.

Phase 1 and Phase 2 Bog Turtle Surveys along Several Transmission Line Upgrade Projects within Lancaster, Northampton, Lebanon, and Berks Counties, PA: Performed phase 1 and phase 2 bog turtle surveys under the supervision of a qualified bog turtle surveyor. Assessed numerous wetlands for bog turtle habitat suitability and performed phase 2 surveys within wetlands determined to contain suitable habitat parameters. These surveys were coordinated with the USFWS, the PA Fish and Boat Commission, and the NJDEP.