D1600.125
August 27, 2025

Ms. Kate Zellers
Advanced Transmission Forestry Specialist
FirstEnergy Corp.
798 S. Main Street
Forked River, NJ
VIA EMAIL

Re: Tree Survey Summary
NJCEC Clarksville – Lawrence Upgrade Project
Lawrence Township, Mercer County, New Jersey

Dear Ms. Zellers,

As per your request, a tree survey has been prepared associated with the proposed tree removal area within the specified limits in the vicinity of the Lawrence Substation associated with the Clarksville to Lawrence 230kV transmission line right-of-way (ROW) within Lawrence Township, Mercer County, New Jersey. This includes the required tree clearing area for clearance associated with a total of four (4) new steel monopoles required for the upgrade of the existing Clarksville – Lawrence transmission line. Property boundaries were not observed, only estimated in the field. The survey was conducted consistent with the tree removal application/Ordinance requirements pursuant to Chapters 541 of the Code of the Lawrence Township.

Per the Township Ordinance "*A survey of the size (8" caliper or larger), species and quantity of trees which are to be removed is needed. Where the area to be surveyed is greater than 10,000 square feet, a representative wooded rectangular area 100' x 100' may be surveyed and its results extrapolated to the remaining wooded area. A minimum of one sample plot per five (5) acres of total wooded area identified for the tree removal project shall be surveyed. The location of the sample plots shall be subject to the approval of the Board engineer, who may seek recommendations from the Board's planning consultant and/or the Township Shade Tree Advisory Committee. Notwithstanding the above, the tree survey shall individually locate each specimen tree on the entire site. [Ord. 1585-00, 9/7/1999]"* The total approximate area to be cleared, to accommodate wire clearances for the upgrade project, is 2.88 acres. Therefore, one (1) 100' x 100' plot needed to be surveyed. DuBois provided a map of the proposed tree survey plot to the Project team, to provide Lawrence Township for their approval. Since the clearing limit is 50' wide, a 50' x 200' plot was proposed. The Lawrence Township Assistant Municipal Engineer indicated the size/dimensions of the plot was acceptable, but the location needed to be shifted slightly to the area directly behind the residences. As such, the plot was shifted to accommodate this request.

DuBois and Associates, LLC (DuBois) located, measured, and identified all trees eight (8) inches (") or greater within the specified tree survey plot and all specimen trees (trees 30' or greater" throughout the entire proposed tree clearing area. The surveyed tree plot associated with the proposed clearing areas are illustrated on the map set prepared by DuBois entitled "Tree Survey Plot Map (Overall).

The methodology utilized for the tree survey included first identifying the species of the tree followed by measuring the Diameter Breast Height (DBH) of the tree with diameter tape. The surveyed trees were also located utilizing a Trimble GeoXT 6000 series GPS unit with high quality Tempest antenna.

DuBois qualified personnel conducted the tree survey in August 2025. A total of 20 trees were surveyed and mapped within the tree survey plot. A total of eight (8) specimen trees were surveyed within the entire proposed tree clearing limits including one (1) within the surveyed tree plot. Tree species and DBH's varied. A total of six (6) different species of trees were identified within the tree survey plot and /or were specimen trees, and DBH's ranged from 9" to 35". Refer to the "Tree Survey Results Map". If extrapolating based off the 10,000 square foot plot, there are approximately 251 trees subject to removal. That number is based on 20 trees per 10,000 square feet. Since the proposed tree clearing area is 2.88 acres or 125,452 square feet that means approximately 12.55 plots (10,000 square foot plots) would make up the proposed tree clearing area. Therefore, 20 trees per the 12.55 plots equals approximately 251 trees.

Removal of these trees/species is required for overhead clearance requirements required for the new proposed steel monopole structures to support the transmission line upgrade project to support the New Jersey Clean Energy Corridor (NJCEC) initiative. This project and need for tree removal will be presented as part of the Township site plan application submission, as required. Portions of the tree clearing areas are in regulated wetland, transition areas, riparian zones, and flood hazard areas and are also subject to New Jersey Department of Environmental Protection (NJDEP) freshwater wetland and flood hazard area Individual Permit review and approval pursuant to the Freshwater Wetland Rules (N.J.A.C.7:7A) and Flood Hazard Area Rules (N.J.A.C.7:13).

The surveyed tree locations, species and proposed tree removal area in the vicinity of the Lawrence Substation that is part of the Clarksville to Lawrence utility line upgrade is depicted on the "Tree Survey Plot Map". Please also refer to the spreadsheet attached for specific tree survey data, including reference number, size, species, and associated condition/notes for those trees to be removed. The Shapefile information of the tree clearing limits is also provided attached to this summary letter, and tree locations can be provided if required. The tree survey was conducted by DuBois personnel with experience and expertise in tree surveys for Municipal review and approval throughout New Jersey, and exhibit the educational and professional experience as a qualified botanist, as provided on the attached Statement of Qualifications.

Should you have any questions or require additional information, please do not hesitate to contact this office.

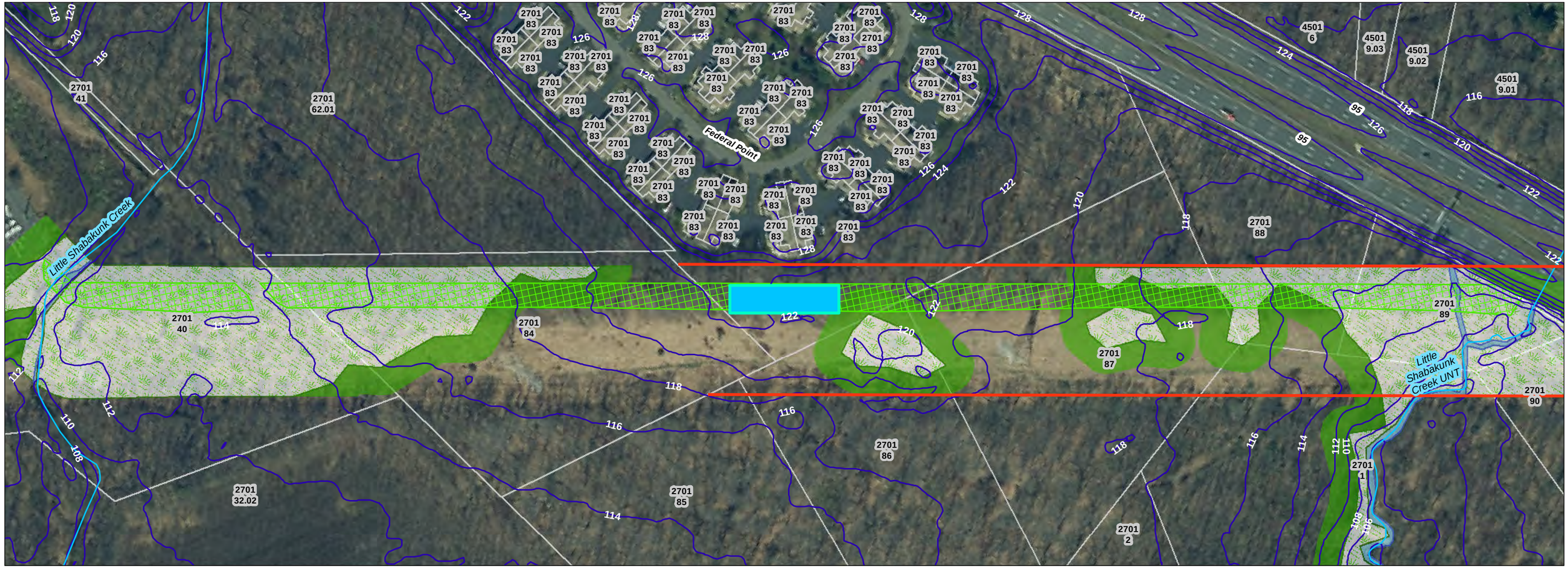
Sincerely,

Israel Berrios
Sr. Biologist/Environmental Scientist

Doc: 08D600LawrenceTreeSurveyLtr125

FID	Project Name	Survey Type	Feature Type	Feature ID	Common Name	Scientific Name	DBH	Condition	Notes
0	NJCEC Clarksville - Lawrence Upgrade Project	Tree Survey	Point	T1	American Beech	Fagus grandifolia	35	Good	Specimen Tree
1	NJCEC Clarksville - Lawrence Upgrade Project	Tree Survey	Point	T2	Tulip Poplar	Liriodendron tulipifera	34	Good	Specimen Tree
2	NJCEC Clarksville - Lawrence Upgrade Project	Tree Survey	Point	T3	American Beech	Fagus grandifolia	32	Good	Specimen Tree
3	NJCEC Clarksville - Lawrence Upgrade Project	Tree Survey	Point	T4	Red Maple	Acer rubrum	13	Good	
4	NJCEC Clarksville - Lawrence Upgrade Project	Tree Survey	Point	T5	American Beech	Fagus grandifolia	27	Good	
5	NJCEC Clarksville - Lawrence Upgrade Project	Tree Survey	Point	T6	American Beech	Fagus grandifolia	28	Good	
6	NJCEC Clarksville - Lawrence Upgrade Project	Tree Survey	Point	T7	Red Maple	Acer rubrum	14	Good	
7	NJCEC Clarksville - Lawrence Upgrade Project	Tree Survey	Point	T8	Red Maple	Acer rubrum	11	Good	
8	NJCEC Clarksville - Lawrence Upgrade Project	Tree Survey	Point	T9	Tulip Poplar	Liriodendron tulipifera	17	Good	
9	NJCEC Clarksville - Lawrence Upgrade Project	Tree Survey	Point	T10	Red Maple	Acer rubrum	19	Good	
10	NJCEC Clarksville - Lawrence Upgrade Project	Tree Survey	Point	T11	American Beech	Fagus grandifolia	15	Good	
11	NJCEC Clarksville - Lawrence Upgrade Project	Tree Survey	Point	T12	Mockernut Hickory	Carya tomentosa	11	Good	
12	NJCEC Clarksville - Lawrence Upgrade Project	Tree Survey	Point	T13	American Beech	Fagus grandifolia	11	Good	
13	NJCEC Clarksville - Lawrence Upgrade Project	Tree Survey	Point	T14	American Beech	Fagus grandifolia	30	Good	Specimen Tree
14	NJCEC Clarksville - Lawrence Upgrade Project	Tree Survey	Point	T15	American Beech	Fagus grandifolia	27	Good	
15	NJCEC Clarksville - Lawrence Upgrade Project	Tree Survey	Point	T16	Red Maple	Acer rubrum	10	Good	
16	NJCEC Clarksville - Lawrence Upgrade Project	Tree Survey	Point	T17	Red Maple	Acer rubrum	9	Good	
17	NJCEC Clarksville - Lawrence Upgrade Project	Tree Survey	Point	T18	Red Maple	Acer rubrum	13	Good	
18	NJCEC Clarksville - Lawrence Upgrade Project	Tree Survey	Point	T19	Red Maple	Acer rubrum	20	Good	
19	NJCEC Clarksville - Lawrence Upgrade Project	Tree Survey	Point	T20	Red Maple	Acer rubrum	9	Good	
20	NJCEC Clarksville - Lawrence Upgrade Project	Tree Survey	Point	T21	Sweet Birch	Betula lenta	9	Good	
21	NJCEC Clarksville - Lawrence Upgrade Project	Tree Survey	Point	T22	American Beech	Fagus grandifolia	10	Good	
22	NJCEC Clarksville - Lawrence Upgrade Project	Tree Survey	Point	T23	Red maple	Acer rubrum	11	Good	
23	NJCEC Clarksville - Lawrence Upgrade Project	Tree Survey	Point	T24	American Beech	Fagus grandifolia	35	Good	Specimen Tree
24	NJCEC Clarksville - Lawrence Upgrade Project	Tree Survey	Point	T25	American Beech	Fagus grandifolia	33	Good	Specimen Tree
25	NJCEC Clarksville - Lawrence Upgrade Project	Tree Survey	Point	T26	Black Oak	Quercus veluntina	31	Good	Specimen Tree
26	NJCEC Clarksville - Lawrence Upgrade Project	Tree Survey	Point	T27	Red Maple	Acer rubrum	33	Good	Specimen Tree

Within Survey Plot



Legend

- Approximate Easement Boundary
- Proposed Tree Survey Plot (50'x200')
- 2-ft Contours
- Approximate Proposed Tree Clearing Area (Approximately 2.88 acres)
- Parcel Boundary (Block & Lot)

0 100 200 400 Feet

DuBois & ASSOCIATES
190 N. Main Street
Manahawkin, NJ 08050
Phone: 609-488-2857
Website: www.denviro.com

FirstEnergy
101 Crawfords Corner Road, Building 1
Holmdel, New Jersey 07733
Phone: 732-212-4203
Website: www.firstenergycorp.com

Tree Survey Plot Map (Overall)

FirstEnergy Corporation
NJCEC Clarksville - Lawrence Upgrade Project
Lawrence Township, Mercer County, NJ

Project No.: D1600.125	*Date:* 8/26/2025
Drawn By: IB	*Designed By:* AS
Scale: 1 inch = 175 feet	*Checked By:* AJ

Figure 1

Document Path: S:\JOBS NUMBERS\D1600.113\Tree Clearing\Lawrence Tree Permitting\Tree Survey Plot Map.mxd

Legend

- Approximate Easement Boundary
- Proposed Tree Survey Plot (50'x200')
- Approximate Proposed Tree Clearing Area (Approximately 2.88 acres)

Common Name

- American Beech
- Black Oak
- Mockernut Hickory
- Red Maple
- Sweet Birch
- Tulip Poplar

N

0 25 50 100 Feet

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Tree Survey Results Map

FirstEnergy Corporation
NJCEC Clarksville - Lawrence Upgrade Project
Lawrence Township, Mercer County, NJ

Project No.: D1600.125	*Date:* 8/26/2025
Drawn By: IB	*Designed By:* AS
Scale: 1 inch = 50 feet	*Checked By:* AJ

Figure 2

Document Path: S:\JOBS NUMBERS\D1600.113\Tree Clearing\Lawrence Tree Permitting\Tree Survey Results Map.mxd

Photo 1: View of specimen tree T1, located within the proposed tree clearing area.

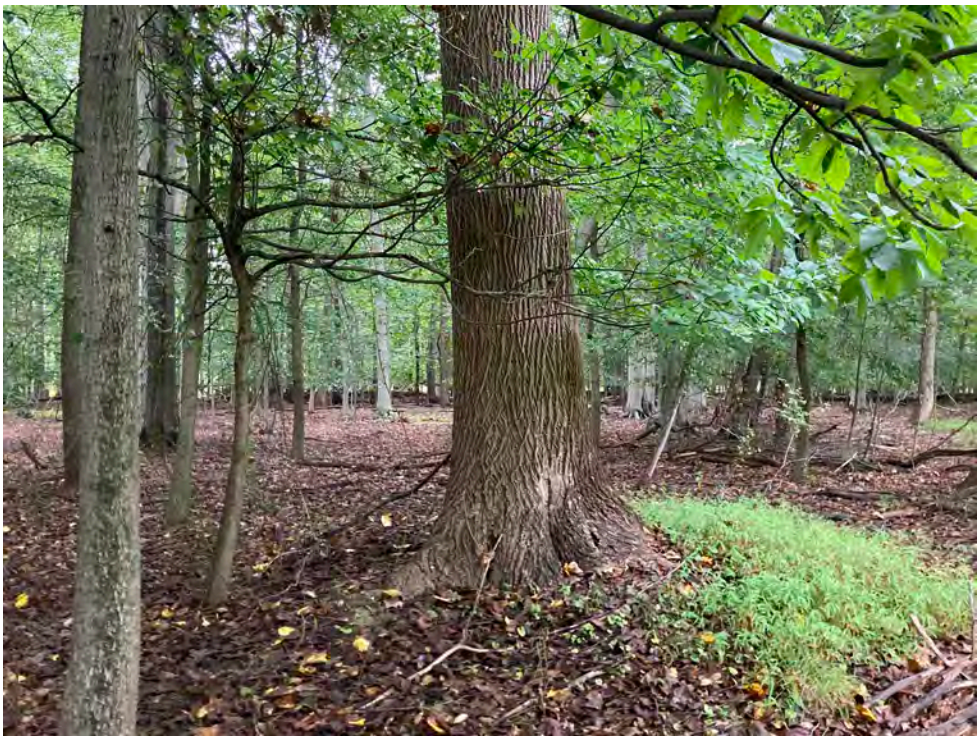

Photo 2: View of specimen tree T2, located within the proposed tree clearing area.

Photo 3: View of specimen tree T3, located within the proposed tree clearing area.

Photo 4: Representative view of the survey plot, on the northeastern extent.

Photo 5: View of the survey plot.

Photo 6: View of specimen tree T14, located within the survey plot.

Photo 7: View of specimen tree T24, located within the proposed tree clearing area.

Photo 8: View of specimen tree T25, located within the proposed tree clearing area.

Photo 9: View of specimen tree T26, located within the proposed tree clearing area.

Photo 10: View of specimen tree T27, located within the proposed tree clearing area.

Israel Berrios
Environmental Scientist
iberrios@denviro.com

190 N. Main Street
Manahawkin, NJ 08050
609-488-2857

Education:

B.S. Biology with a Concentration in Ecology
West Chester University – 2014

Certifications:

USFWS Qualified Bog Turtle Surveyor – NJ

PA DCNR Wild Plant Management Permittee Permit#23-842

Delaware DNREC Sediment & Stormwater Program Blue Card Certification B 2018/12/13 004

State of Maryland Erosion & Sediment Control Certification No. RPC015013

Continuing Education:

N.J. Conservation Foundation & P.P.A: Fundamentals of Pinelands Botany

N.J. Department of Agriculture – State Soil Conservation Committee: N.J. Soil Erosion & Sediment Control Standards Training Course

Swamp School LLC
USACOE Hydric Soils Indicators Online Training Course

Rutgers N.J. Agricultural Experiment Station Office of Continuing Professional Education – Vegetation Identification for South N.J.

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

Career Positions:

DuBois & Associates, Manahawkin, NJ – Environmental Scientist 2015 – Present

Fields of Competence:

Mr. Berrios has 7 years of experience in the fields of regulatory land use, botany, wetland science, soil science, biology and ecology.

Professional Experience:

Mr. Berrios is a biologist and environmental scientist with the firm of DuBois & Associates. He is responsible for assisting with faunal and floral sampling investigations, site assessments, monitoring, and threatened/endangered species habitat assessments. Furthermore, Mr. Berrios has participated in conducting studies on various species throughout New Jersey, the Pinelands of New Jersey, and Pennsylvania. Mr. Berrios also performs biological/environmental construction monitoring associated with utility projects throughout New Jersey. Furthermore, Mr. Berrios assists in performing annual wetland mitigation monitoring to document vegetation performance and including the documentation of herbaceous species make-up within vegetative plots throughout the sites.

In addition to the above responsibilities, Mr. Berrios has assisted in plant surveys within various vegetation communities, which have included numerous species considered rare or listed as protected in New Jersey and Pennsylvania. Mr. Berrios 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, Maryland Department of Natural Resources, 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.

In conjunction with performing surveys for a variety of environmental/ecological assessments, Mr. Berrios 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 vegetation communities and survey results.

Projects of Relevance

New Jersey

- *Rare, threatened or endangered species botanical surveys*
    - Jersey Central Power & Light
        - Colts Neck – Atlantic Substation Vegetative Management: Monmouth County
    - Atlantic City Electric
        - Newport – Millville - Silica Taps Pole Maintenance: Cumberland County
        - Silver Lake Substation Project: Camden County
        - Monroe – DaCosta Guy Grounding & Corrective Maintenance Project: Camden, Gloucester, & Atlantic Counties

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Maryland

- *Rare, threatened or endangered species botanical surveys*
  - Delmarva Power & Light
    - 6727 Lynch – Massey REA Rebuild Project: Kent County
    - 6775 North Salisbury – Hebron Rebuild Project: Wicomico County

Pennsylvania

- *Rare, threatened or endangered species botanical surveys*
  - PPL Electric Utilities
    - Segment C15: Siegfried to Hauto Transmission Line Rehabilitation Project: Lehigh & Carbon Counties

Education:

Mr. Berrios received a Bachelor of Science degree in Biology with a concentration in Ecology in December of 2014. While attending West Chester University, Mr. Berrios selected upper-level classes including Freshwater Ecology, Botany, Plant Physiology, and Population Biology. All classes were supplemented with hands-on laboratory experience using professional techniques, as well as site-specific trips for fieldwork.

Continuing education with focus on plants include the Pinelands Preservation Alliance: Fundamentals of Pinelands Botany, Rutgers Vegetation Identification for South NJ, and classes presented by the Native Plant Trust of Massachusetts.

Christian Pucci
Environmental Scientist
cpucci@denviro.com

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

Education:

B.S. in Environmental Studies
Portland State University - 2020

Minor in Geography
Portland State University - 2020

Continuing Education

Rutgers N.J. Agricultural Experiment Station Office of Continuing Education - Hydric Soils

Rutgers N.J. Agricultural Experiment Station Office of Continuing Education – Vegetation Identification for Wetland Delineation

Rutgers N.J. Agricultural Experiment Station Office of Continuing Education – Methodology of Wetland Delineation

Rutgers N.J. Agricultural Experiment Station Office of Continuing Education – Identification of Wetland Plants in Winter Form

Certifications:

The Rutgers University Wetland Delineation Certificate

Delaware DNREC Sediment & Stormwater Program Blue Card

Career Positions:

LAN Associates,
Midland Park, NJ –
Environmental Technician,
2023 – 2024

DuBois & Associates,
Manahawkin, NJ –
Environmental Scientist,
2024 – Present

Professional Experience:

Mr. Christian Pucci is an Environmental Scientist with the firm of DuBois & Associates. He is responsible for wetland investigations and delineations, environmental compliance monitoring, environmental site assessments, and the organization and execution of various environmental reports, applications, and permits. He also assists with any technical support needed in various rare, threatened and endangered species studies. Since starting at DuBois & Associates, Mr. Pucci has assisted in habitat and visual surveys for Bog Turtles, Pine Snakes, Red Headed Woodpeckers, Ospreys, Bald Eagles, and Swamp Pink in New Jersey. Additionally, he has assisted in conducting tree surveys for various municipalities throughout the state.

In conjunction with performing surveys for a variety of environmental/ecological assessments, Mr. Pucci 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 wetland and state open water boundaries/locations, as well as species such as turtles, bats and snakes.

Mr. Pucci also performs biological/environmental construction monitoring associated with utility projects in regulated areas throughout New Jersey. Environmental oversight ensures the project is conducted in an environmentally responsible manner and in accordance with all applicable regulatory requirements, SESC standards, and best management practices. Biological oversight in and around sensitive habitats ensures that the project does not have any adverse impacts to sensitive habitats or rare faunal and floral species.

Projects of Relevance:

Environmental Compliance Monitoring for several projects within Middlesex, Mercer, Monmouth, and Ocean Counties, NJ: Mr. Pucci has been involved in an array of environmental compliance for monitoring in association with regulated features, soil erosion and sediment control, and threatened and endangered species throughout the State of New Jersey. Monitoring activities have been performed for utility upgrade, maintenance, and construction projects. All projects were coordinated with the NJDEP and local SESC entities.

Phase 1 and Phase 2 Bog Turtle Surveys for utility upgrade projects within Monmouth and Ocean Counties, NJ: 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 NJDEP.

Habitat Assessment and Vocalization associated with Red-headed Woodpecker for projects within Burlington and Mercer Counties, NJ: Performed habitat assessment and vocalization red-headed woodpecker surveys under the supervision of a qualified red-headed woodpecker surveyor. Assessed numerous woodlands for red-headed woodpecker habitat suitability and performed vocalization surveys within areas determined to contain suitable habitat parameters. These surveys were coordinated with the NJDEP and New Jersey Pinelands Commission.

Christian Pucci
Environmental Scientist
cpucci@denviro.com

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Education:

Mr. Pucci received a Bachelor of Science degree from Portland State University in Environmental Studies in March of 2020. While attending Portland State University Mr. Pucci completed high level courses dealing with land and resource management, species surveys, and ecological restoration.