
ENVIRONMENTAL IMPACT STATEMENT (EIS)

for:

**PROPOSED WIRELESS COMMUNICATIONS FACILITY
NJ-418B
BLOCK 17001, LOT 11.02
26 DEAD TREE RUN ROAD
MONTGOMERY TOWNSHIP, SOMERSET COUNTY, NEW JERSEY**

Prepared for:



SectorSite, LLC
Communications Site Development
53 South Jefferson Road / Suite M
Whippany, New Jersey 07981



**New York SMSA Limited
Partnership d/b/a/ Verizon
Wireless**
*180 Washington Valley Road
Bedminster, New Jersey 07921*

Prepared by:



E2 Project Management LLC
87 Hibernia Avenue
Rockaway, New Jersey 07866

Date Issued: January 2020
E2PM Project No.: P-19-59-01

A handwritten signature in black ink, appearing to read "Michael Muller".

Michael Muller
Senior Environmental Scientist

and

A handwritten signature in black ink, appearing to read "Christopher Lanna".

Christopher Lanna
Manager – Telecom Environmental

CONTENTS

<u>Section</u>	<u>Page</u>
1.0 INTRODUCTION	1
2.0 PROJECT LOCATION AND DESCRIPTION.....	2
3.0 COMPATIBILITY WITH PLANNING DOCUMENTS	3
3.1 TOWNSHIP MASTER PLAN	3
3.2 MONTGOMERY TOWNSHIP NATURAL RESOURCES INVENTORY	3
3.3 MASTERPLAN OF ADJACENT MUNICIPALITIES	3
3.4 SOMERSET COUNTY MASTERPLAN	3
3.5 REGIONAL AND STATE PLANNING GUIDES	4
3.6 OTHER PERTINENT PLANNING DOCUMENTS	4
4.0 AFFECTED ENVIRONMENT	5
4.1 LAND USE.....	5
4.1.1 Existing Conditions.....	5
4.1.2 Probable Impact to Land Use.....	5
4.2 GEOLOGY	5
4.2.1 Existing Conditions.....	5
4.2.2 Probable Impact to Geology	6
4.3 SOILS	7
4.3.1 Existing Conditions.....	7
4.3.2 Probable Impact to Soils	7
4.3.3 Steps to Minimize Adverse Impacts	8
4.4 TOPOGRAPHY.....	8
4.4.1 Existing Conditions.....	8
4.4.2 Probable Impact to Topography.....	9
4.5 VEGETATION	9
4.5.1 Existing Conditions.....	9
4.5.2 Probable Impact to Vegetation	9
4.6 WILDLIFE.....	10
4.6.1 Existing Conditions.....	10
4.6.2 Probable Impact to Wildlife.....	12
4.7 HYDROLOGY/WETLANDS/FLOOD HAZARD AREAS	12
4.7.1 Existing Conditions.....	12
4.7.2 Probable Impacts to Hydrology/Wetlands/Flood Hazard Areas	13
4.8 GROUND WATER/AQUIFER RECHARGE/DISCHARGE AREAS	13
4.8.1 Existing Conditions.....	13
4.8.2 Probable Impacts to Aquifer Recharge/Discharge Areas	14
4.9 DRAINAGE.....	15
4.9.1 Existing Conditions.....	15
4.9.2 Probable Impacts to Drainage.....	15
4.10 WATER QUALITY	15
4.10.1 Existing Conditions.....	15
4.10.2 Probable Impact to Water Quality	15
4.11 HISTORIC RESOURCES	15
4.11.1 Existing Conditions.....	15
4.11.2 Probable Impact to Historic Resources.....	16
4.11.3 Steps to Minimize Adverse Impacts	16

4.12	AESTHETICS	16
4.12.1	Existing Conditions.....	16
4.12.2	Probable Impact to Aesthetics	16
4.12.3	Steps to Minimize Adverse Impacts to Aesthetics	17
4.13	NOISE.....	17
4.13.1	Existing Conditions.....	17
4.13.2	Probable Impact to Noise.....	17
4.14	TRAFFIC.....	17
4.14.1	Existing Conditions.....	17
4.14.2	Probable Impact to Traffic.....	17
4.15	AIR QUALITY.....	18
4.15.1	Existing Conditions.....	18
4.15.2	Probable Impact to Air Quality.....	18
4.16	UTILITIES (SEWER AND WATER) / SOLID WASTE DISPOSAL	18
4.16.1	Existing Conditions.....	18
4.16.2	Probable Impact to Utilities	18
4.17	LIGHTING	19
4.17.1	Existing Conditions.....	19
4.17.2	Probable Impact Associated with Lighting.....	19
5.0	OTHER REQUIRED APPROVALS.....	20
•	LETTER OF INTERPRETATION – LINE VERIFICATION.....	20
6.0	REFERENCES	21

APPENDICES

- A. MAP FIGURES
- B. QUALIFICATIONS of PREPARER of REPORT
- C. NATURAL HERITAGE PROGRAM / LANDSCAPE PROJECT & USFWS IPaC DOCUMENTATION

1.0 INTRODUCTION

The Applicants, SectorSite Communications Site Development (SectorSite) and the New York SMSA Limited Partnership d/b/a Verizon Wireless have contracted E2PM to evaluate the environmental impacts of a new wireless communications facility identified as the NJ-418B site, proposed to be located at 26 Dead Tree Run Road in Montgomery Township, Somerset County, New Jersey. The location of the proposed project is identified on the various map figures presented in Appendix A. This EIS has been prepared and reviewed by the environmental professionals whose resumes are provided in Appendix B of this report.

Montgomery Township requires that an Environmental Impact Statement (EIS) be prepared as part of the approval process associated with the proposed wireless telecommunications facility. As such, this EIS has generally been prepared in accordance with the Township's Ordinances, specifically, Section 16-8 Development Application Review Procedures, 16-8.4 Submission of Preliminary Major Subdivision Plats and Preliminary Major Site Plans, 16-8.4c Environmental Impact Statement.

Documentation used to prepare this report was obtained from currently available public domain databases (Federal, State, and local), Township records, and E2PM's field observations. This report is not an exhaustive environmental impact analysis, and has been prepared specifically for the proposed project as detailed in the following sections. Based on the environmental analysis conducted on the subject site, E2PM has concluded that the proposed wireless telecommunications facility would have a minimal impact on the natural and physical environment. Further, the disruption to the local community would also be minimal. The proposed project offers positive benefits to the community by providing reliable wireless communication for emergency, personal, and business use.

The proposed project will comply with applicable Federal and State regulations and standards. The Applicants, licensee of the Federal Communication Commission, will obtain all applicable/required Federal, State, County, and/or local approvals/permits prior to construction of the proposed wireless communications facility.

2.0 PROJECT LOCATION AND DESCRIPTION

The Applicants proposes to construct a wireless communications facility located at 26 Dead Tree Run Road in Montgomery Township, Somerset County, New Jersey. The property is currently owned by John and Charlotte Johnson, 26 Dead Tree Run Road, Belle Mead, New Jersey, 08502. The property is identified as Block 17001, Lot 11.02 on the Township's tax maps. The property is zoned R2 – Single Family Residential. It is approximately 73.97 acres in size.

The Applicants proposes to construct a new wireless communications facility on the central section of the subject property, proximate to the on-site barns/farm complex. The project proposes construct a 30-foot by 60-foot fenced (8-foot tall chain link) multi-carrier compound. One 135-foot tall stealth (tree) monopole (140-feet to top of branches is proposed to be installed within the center of the compound. A proposed pad-mounted transformer, meter bank, and MESA cabinet are proposed to be installed outside (north side) of the proposed fenced compound and will provide electric and telco service to proposed and future wireless communications equipment installed within the compound area. Verizon Wireless proposes to install wireless communications equipment on the proposed tree monopole (total of nine wireless communications antennas and associated equipment) as well as within (load center, telco cabinet, work light, 30kW propane generator, and 500-gallon propane tank. Utility service is proposed to be obtained from an existing utility pole located southwest of the proposed compound area and routed underground back to the proposed transformer, meter bank, and MESA cabinet. Access to the proposed facility is from Dead Tree Run Road utilizing the existing driveway.

Refer to the Preliminary and Final Site Plans (separate cover) for details. Additional details regarding project design will be provided by the Applicant's professionals, at the public hearings, as required.

3.0 COMPATIBILITY WITH PLANNING DOCUMENTS

3.1 TOWNSHIP MASTER PLAN

The Township's November 1971 Master Plan as well as the August 2017 Periodic Reexamination of the Master Plan and Development Regulations, supplemented by various other sources of documentation (i.e. NJDEP GIS databases) was used to prepare various sections of this EIS.

3.2 MONTGOMERY TOWNSHIP NATURAL RESOURCES INVENTORY

The Township's April 2004 Natural Resources Inventory, supplemented by various other sources of documentation (i.e. NJDEP GIS databases / NHP Landscape Project, USFWS IPaC) as well as on-site investigations was used to prepare various sections of this EIS.

3.3 MASTERPLAN OF ADJACENT MUNICIPALITIES

The subject property/project location is fairly centrally-located within the Township, slightly favoring the eastern side. Given its location, small footprint of disturbance, and low-impact, it is not expected to have an adverse effect on adjacent municipalities.

3.4 SOMERSET COUNTY MASTERPLAN

According to the County's 1987 Masterplan, the section of the Township in which the subject property is located was identified as Growth Management. According to the County's County Investment Framework Map and Summary, which superseded the County's Land Use Management Map and Summary (as set forth in the 1987 Masterplan), the section of the Township in which the subject property is located was identified as PPIA – both Existing Preserved Land and Priority Preservation Investment Area areas where agriculture and the preservation and restoration of environmentally sensitive natural resources are preferred and where investments aimed at resource restoration and protection, and farmland and open space preservation are preferred.

Note that a significant amount of the subject property is Farmland Preserved (hence the Existing Preserved Land status noted above); however, that area on which the project is proposed to be installed was excepted out of the preserved area. Given that the proposed project results in little physical land disturbance, utilizes existing infrastructure to the extent possible, requires no significant utility service (sewer and water), generates no traffic, generates no school-aged children, generates no pollution, and represents a single and complete project that would not result in additional development, it is not expected

to have an adverse effect on the PPIA in which it is located or the adjacent Farmland Preserved areas.

3.5 REGIONAL AND STATE PLANNING GUIDES

Pursuant to review of the NJDEP's GIS databases, the subject property is located within Planning Area (PA) 3 – Fringe. For reasons referenced above (Section 3.4), the proposed project not expected to have an adverse effect on PA3 in which it is located.

3.6 OTHER PERTINENT PLANNING DOCUMENTS

Additional details regarding planning and consistency with applicable planning areas/zone districts will be provided by the Applicant's professionals, at the public hearings, as required.

4.0 AFFECTED ENVIRONMENT

The following sections detail the existing environmental conditions generally associated with the subject property/project location, and when applicable, probable impacts, and steps to minimize adverse impacts.

4.1 LAND USE

4.1.1 Existing Conditions

The subject property is improved with a typical family farm. It contains a single-family dwelling and a number of structures related to farming activities (barns, sheds, grain silo's, etc.). It is access from both Dead Tree Run Road and Bridgepoint Road via gravel driveways. In addition to these improvements, the subject property is comprised of a mosaic of agricultural fields and naturally-vegetated areas. The referenced improvements are generally centrally located on the subject property. The subject property is 73.97 acres in size. As previously referenced, the subject property is located within the R2 – Single Family Residential zone district.

4.1.2 Probable Impact to Land Use

Pursuant to the Township's wireless communications ordinances, wireless communications facilities are permitted to be located within the Township pursuant to two locational priorities – First Priority and Second Priority location – residential zones are not listed under either Priority areas. While construction and operation of the proposed project would have no adverse impact to the subject property or the agricultural operations that occur thereon (facility was sited with landowner input and approval), a use variance will be required for purpose of constructing a wireless communications facility outside of a First and Second Priority location.

The Applicant will request such variances, waivers, permits, approval or licenses that are required by the Township. Additional documentation regarding potential impacts to land use and associated Township approvals will be provided by the Applicant's professionals at the public hearing(s).

4.2 GEOLOGY

4.2.1 Existing Conditions

The site area is located within the Piedmont Geological Province. The Piedmont Province is sometimes referred to as the Piedmont Plateau. The Province is located in New Jersey, east of the New Jersey Highlands, and extends southeast to the Coastal Plain Province. The Province consists of hilly to rolling

plains with elevations increasing to the northwest.

The Piedmont Province includes the Newark Basin Group composed of Triassic/Jurassic aged sedimentary and igneous rock formations, commonly referred to as the Newark Super Group. The Newark Super Group consists of three (3) major rock formations; the Stockton Formation, the Lockatong Formation, and the Brunswick Group.

The Brunswick Group occupies the uppermost position in the Newark Super Group. During the formation of this Triassic-aged sedimentary rock the climate of the North Jersey area was semiarid which stabilized the red iron bearing pigment giving the rocks in the formation their red color.

The Brunswick Group beds are chiefly soft red shale with some interbedded sandstone, which becomes more abundant and somewhat coarser toward the northeast. The uniform presence of finely disseminated mica in the Brunswick Group indicates that the sediments were largely derived from the erosion of the Pre-Cambrian crystalline rocks of the New Jersey Highlands to the northwest.

The sedimentary rocks of the Newark Super Group are associated with Basalt and Diabase intrusions. The Watchung Mountains and the Palisades Dike are examples of these igneous intrusions.

The study area is underlain by rocks of the Passaic Formation (JTrp) of the Brunswick Group. The Formation consists of reddish-brown to brownish-purple and grayish-red siltstone and shale. Maximum thickness is about 11,810 feet.

There are no unique surficial geological features (i.e. ledges) located on the subject property.

4.2.2 Probable Impact to Geology

The proposed project would require excavation of soils for the foundation for the proposed monopole. Excavation depths would be dependent on depth to competent bedrock, if encountered. Should bedrock be encountered, a mat-type foundation with rock anchors will likely be employed, as opposed to a pier-type foundation. Given either scenario, disturbance to underlying geological formations will be minor, given the small footprint associated with the proposed monopole as compared to the overall size of the property.

Final foundation design will be based on geotechnical (subsurface) investigations conducted as part of completion of the construction drawings. Additional documentation pertaining to project design will be provided, as required, by the Applicant's professionals at the public hearing(s).

4.3 SOILS

4.3.1 Existing Conditions

According to the US Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS), Web Soil Survey, soil data for Somerset County, the following soil type underlies the location of the proposed project:

Map Unit: KkoC—Klinesville channery loam, 6 to 12 percent slopes

Component: Klinesville (85%)

The Klinesville component makes up 85 percent of the map unit. Slopes are 6 to 12 percent. This component is on hills on piedmonts. The parent material consists of fine-loamy residuum weathered from shale. Depth to a root restrictive layer, bedrock, lithic, is 10 to 20 inches. The natural drainage class is somewhat excessively drained. Water movement in the most restrictive layer is high. Available water to a depth of 60 inches (or restricted depth) is very low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 1 percent. Nonirrigated land capability classification is 4e. This soil does not meet hydric criteria.

Component: Berks, eroded (5%)

The Berks, eroded soil is a minor component.

Component: Bucks, eroded (5%)

The Bucks, eroded soil is a minor component.

Component: Penn, eroded (5%)

The Penn, eroded soil is a minor component.

Map Unit: PeoB—Penn channery silt loam, 2 to 6 percent slopes

Component: Penn (85%)

The Penn component makes up 85 percent of the map unit. Slopes are 2 to 6 percent. This component is on hills on piedmonts. The parent material consists of fine-loamy residuum weathered from acid reddish shale, siltstone, and fine-grain sandstone. Depth to a root restrictive layer, bedrock, lithic, is 20 to 39

inches. The natural drainage class is well drained. Water movement in the most restrictive layer is moderately high. Available water to a depth of 60 inches (or restricted depth) is low. Shrink-swell potential is low. This soil is not flooded. It is not ponded. There is no zone of water saturation within a depth of 72 inches. Organic matter content in the surface horizon is about 3 percent. Nonirrigated land capability classification is 2e. This soil does not meet hydric criteria.

Component: Klinesville (5%)

The Klinesville soil is a minor component.

Component: Reaville (5%)

The Reaville soil is a minor component.

Component: Bucks (5%)

The Bucks soil is a minor component.

4.3.2 Probable Impact to Soils

Because the location of the proposed project is relatively flat, no significant grading is required. A significant amount of the disturbance is temporary – once the underground utility conduits are installed, the trench will be restored to pre-construction conditions. Because the wireless communications compound is proposed to be located on a previously disturbed section of the subject property, prime agricultural soils would not be adversely impacted. Total amount of disturbance to soils is approximately 6966.85 square feet.

4.3.3 Steps to Minimize Adverse Impacts

Because construction of the project exceeds 5000 square feet of overall land disturbance, Soil Erosion and Sediment Control Plan certification is required. As such, an application will be made to the Somerset-Union SCD for SESC Plan certification. Documentation regarding any potential limited impacts to soils/measures to mitigate same will be provided by the Applicant's professionals, as required, at the Board hearing(s).

4.4 TOPOGRAPHY

4.4.1 Existing Conditions

That section of the subject property whereon the various elements of the project are proposed to be installed is relatively flat. Slope across the location of the proposed wireless communications compound

ranges between two and seven percent. Slope across the alignment of the underground utility conduits is approximately 4 percent.

4.4.2 Probable Impact to Topography

No adverse impacts to topographical features are expected to occur on-site, given the small footprint of the proposed project and the lack of on-site natural topographical features and steep slopes.

4.5 VEGETATION

4.5.1 Existing Conditions

Vegetation located within the proposed limits of disturbance is comprised of a mix of maintained lawn, maintained pasture, and disturbed areas primarily supporting mugwort interspersed with a very limited amount of red cedar saplings and some older, mostly dead, black cherry. The proposed Footprint area contains a significant amount of building and un-vegetated, gravel driveway areas.

Regarding rare (threatened and endangered) plant species, documentation provided by the US Fish and Wildlife Service (FWS) Information, Planning, and Conservation System (IPaC) documentation (Appendix C) indicates that there are no rare plant species or critical habits located on or proximate to the subject property.

According to the NJDEP, Division of Parks and Forestry, Office of Natural Lands Management, Natural Heritage Program (NHP) correspondence dated December 16, 2019 (Appendix C), no rare plants or ecological communities were reported to be located on or within the immediate vicinity of the subject property.

See Appendix C for a copy of the NHP/USFWS documentation.

4.5.2 Probable Impact to Vegetation

No significant area of natural vegetation of any kind is required to be removed/trimmed, or otherwise impacted by construction and/or subsequent operation of the proposed project. As noted previously subsequent to installation of the underground utility conduits, the disturbed area will be restored to pre-construction conditions. Removal of the non-native, invasive stand of mugwort that occupies the majority of the area on which the wireless communications compound is proposed to be installed would not be considered an adverse impact to vegetation. With exception of one small red cedar sapling, no

trees are required to be removed.

4.6 WILDLIFE

4.6.1 Existing Conditions

Because all elements (utility alignment / compound area) of the proposed project are wholly-contained on previously disturbed areas as well as proximate to on-site improvements, no quality wildlife habitat would be adversely impacted. No cover/breeding habitat is located in and around the area of the proposed project. Naturally-vegetated, higher-quality habitats that are located along the perimeter of the subject property, primarily to the north and east, corresponding to Pike Run and Back Brook as well as all on-site agricultural fields will not be impacted.

Regarding rare (threatened and endangered) species, wireless communications projects require compliance with both Federal and State regulations that pertain to both Federally and State-listed species. Documentation provided by the US Fish and Wildlife Service (FWS) (Information, Planning, and Conservation System (IPaC) documentation) indicates that species that may occur on the subject property and/or potentially be affected by the proposed project:

- Indiana Bat – endangered
- Northern Long-eared Bat – threatened

The FWS has established criteria for categorical determination of “not likely to adversely affect” federally listed species in New Jersey, or have any significant impacts on migratory birds or other federal trust wildlife resources. The FWS will not review projects that meet the criteria. The criteria are listed below:

- routine maintenance (e.g. painting, antenna replacement) at existing tower sites or other existing tower support structures;
- repair or replacement of existing towers and/or equipment;
- co-location of new equipment or antennas on an existing structure (e.g. tower, water tank, flagpole, building) where proposed activities will not require the addition of lights or guy wires to an existing structure, or increase the height on an existing structure above 200 feet; and
- construction of new towers without lights or guy wires under 200 feet in height. **Proposed tree monopole is less than 200 feet in height. Height is 140 feet to top of proposed branching.**

Provided that:

1. all ground disturbance is at least 150 feet from any beach or dune. **Project is not located in a coastal area;**

-
2. in areas where the iPac species list includes bog turtle, red knot, Indiana bat, dwarf wedgemussel, swamp pink, Knieskern's beaked-rush, sensitive joint vetch, or Hirst's panic grass: (a) any net gain in impervious surface is < 0.25 acres, AND (b) all ground disturbance is at least 150 feet from any wetland or open water (e.g. river, stream, pond, lake), or is limited to existing developed areas (e.g. rooftops, pavement, gravel, maintained lawn). **Net gain in impervious coverage is less than 0.25 acres and the area on which all elements of the project are proposed to be installed is both previously disturbed and located in excess of any wetland/open water;**
 3. in areas where the iPac species list includes Indiana bat OR northern long-eared bat: (a) total tree clearing is < 0.25-acres (including for access roads) AND (b) removal of trees \geq 3 inches diameter at breast height will only occur within the bat inactive season. (i.e. trees located in municipalities with a hibernation occurrence for either bat species may be cut between November 16 and March 31; trees in all other municipalities may be cut between October 1 and March 31. **Project requires no tree clearing;**
 4. the project is consistent with the Service's National Bald Eagle Management Guidelines. **Project is consistent with the BE Management Guidelines;**
 5. the project is not located in a National Wildlife Refuge. **Project is not located within or near a NWR;**
 6. removal of native vegetation (which provides migratory bird habitat) will not exceed 0.5 acre. **Total area of disturbance is 6966.85 square feet or 0.16 Ac;**
 7. tree clearing will be seasonally restricted from April 1 to August 31 OR, if clearing will occur during that season, all trees will be inspected no more than 24 hours prior to cutting to ensure no active nests of any migratory bird are present. **Project requires no tree clearing;**
 8. new/replacement towers will follow the most current Service recommendations. **Project is consistent with the most current Service recommendations.**

As shown above, the proposed project meets the above criteria. Refer to Appendix C for a copy of the USFWS's Communication Tower and Antenna Consultation in New Jersey data sheet and a copy of the Information, Planning, and Conservation System (IPaC) documentation listing the federally threatened endangered species potentially occurring on-site.

In addition to these three species, the USFWS also identified a total of six (6) migratory bird species of concern that may be affected by the proposed project:

Bald eagle
Blue-winged Warbler
Cerulean Warbler
Prairie Warbler
Rusty Blackbird
Wood Thrush

Species listed above would not be adversely impacted based on the lack of habitat located on or proximate to the location of the proposed project.

Documentation pertaining to rare wildlife species is provided by the NHP under a number of categories. Documentation provided by the NHP/Landscape Project, dated December, 2019 (Appendix C) indicates that there were no rare species located on the project site. The following species were identified as potentially being located within the immediate vicinity of the subject property, based on a search of the Landscape Project 3.3 Species Based Patches:

- | | | |
|--------------------|------------------|-------------------|
| • Bald Eagle | State-endangered | Foraging; |
| • Brown Thrasher | Special Concern | Breeding Sighting |
| • Great Blue Heron | Special Concern | Foraging |

4.6.2 Probable Impact to Wildlife

E2PM expects the project will result in minimal adverse impact to general wildlife resources as well as the listed rare species pursuant to the following:

- the proposed project will meet USFWS guidelines for communications towers;
- project construction does not require any tree clearing/cutting;
- project construction and subsequent operation will not adversely affect any type of suitable/quality wildlife habitat;
- project is located proximate to existing on-site improvements, as opposed to the perimeter of the property away from human activity/disturbance.

4.7 HYDROLOGY/WETLANDS/FLOOD HAZARD AREAS

4.7.1 Existing Conditions

Pursuant to review of the NJDEPs GIS databases, there are no surface water resources (streams, rivers, lakes, ponds, wetlands) located on or within at least 150 feet of the location of the Footprint of Disturbance area. Pike Run is shown to flow along the northeast edge (and comprise part of the property line boundary) of the subject property. Back Brook is shown to flow on and off (meandering) the northern edge of the subject property. Both are classified as FW2-NT C2 surface water resources. The subject property is located within the Millstone River (below incl Carnegie Lake) and the Pike Run (below Cruser Brook) sub-watershed.

According to the FEMA as well as the NJDEP Flood Hazard Mapping, the location of the proposed project (limits of disturbance) is not located in a 100-year or 500-year flood plain, NJFHA, or riparian buffer. Map Figures contained in the Natural Resource Inventory (Figure 17 – FEMA Floodzones and Figure 18 – USGS Floodprone Areas) illustrate that while the northern and eastern edges of the subject property are located within areas of the 100-year flood and are considered flood prone areas, the central section of the subject property as well as the location of the proposed project are not located within a floodplain / flood prone area.

As part of the proposed project, an application for Letter of Interpretation – Footprint of Disturbance is being prepared for submission to the NJDEP Department of Land Use Regulation (DLUR) for purpose of obtaining written verification that no part of the proposed project is located within a jurisdictional area.

4.7.2 Probable Impacts to Hydrology/Wetlands/Flood Hazard Areas

Based on the above, there will be no impact to surface water resources, wetlands, wetland transition areas, floodplain/flood hazard areas, or riparian buffers.

4.8 GROUND WATER/AQUIFER RECHARGE/DISCHARGE AREAS

4.8.1 Existing Conditions

An aquifer is a geologic formation, group of formations, or part of a formation that contains sufficient saturated permeable material to yield significant quantities of water to springs and wells. Groundwater is recharged naturally by rain and snow melt and to a smaller extent by surface water (rivers and lakes).

Two main forces drive the movement of groundwater. First water moves from higher elevations to lower elevation due to the effect of gravity. Second, water moves from areas of higher pressure to areas of lower pressure. Together these two forces make up the driving force behind moving groundwater which is known as the hydraulic head.

Water has the potential to move through four different types of rocks: unconsolidated rock, porous sedimentary rocks, porous volcanic rocks, and fractured rocks. In unconsolidated materials, the particles are not attached to each other in a coherent way (e.g., sand would be unconsolidated but sandstone would be consolidated). Water is able to move through the spaces between particles. Gravel and sand aquifers are common. Because there are more spaces between particles when particles are larger, water moves more quickly through layers of large particles (e.g., gravel) than it does through layers of small particles

(e.g., clay).

Carbonate rocks, such as limestone, are brittle so they tend to fracture and these fractures allow some water movement. More importantly, because water will dissolve carbonate rocks once water is able to enter the fractures, the openings in the rock become larger allowing more water movement. Limestone rocks that have large dissolved openings in them are known as karst.

Aquifer recharge is the process wherein underlying aquifers are replenished via precipitation (infiltration through permeable layers located above the aquifer as well as from surface waters. Recharge may be impeded somewhat by human activities including the introduction of impervious surfaces (pavement/buildings) that cause precipitation to runoff as opposed to infiltrating.

Wetlands help maintain the level of the water table and provide for groundwater recharge and discharge to other waters as well. The extent of groundwater recharge by a wetland is dependent upon soil, vegetation, site, perimeter to volume ratio, and water table gradient. Groundwater recharge occurs through mineral soils found primarily around the edges of wetlands.

Discharge occurs when the aquifer is fully recharged and the hydraulic head is greater than its surroundings. Discharge can occur as seeps and springs. Discharge oftentimes is the source of water associated with wetlands and other surface water resources.

Based on the above, it would appear that most of the subject property, including the area on which the wireless communications facility is proposed to be located, would be suitable for recharge, excepting the buildings and areas of compacted gravel. No typical discharge areas (seeps/springs/wetlands) were observed to be located proximate to the location of the proposed project.

4.8.2 Probable Impacts to Aquifer Recharge/Discharge Areas

Given the small size of the overall land disturbance in relation to the size of the subject property and because very little new impervious surface is proposed, the subject property's potential suitability for recharge will not be adversely affected. Based on the documentation provided in Section 4.8.1 above, discharge areas will not be adversely affected as none are located proximate to the location of the proposed project.

4.9 DRAINAGE

4.9.1 Existing Conditions

Under present conditions, runoff associated with precipitation events drains off the subject property following existing slope, as sheet flow. Within the area of the proposed project, run-off generally flows to the northeast and then east, away from the location of the proposed project / existing on-site improvements.

4.9.2 Probable Impacts to Drainage

Refer to the Stormwater Runoff Quality Calculations report, prepared by E2 Project Management, LLC, dated January 2020 (submitted under separate cover) for details regarding drainage. Additional details regarding drainage will be provided by the Applicant's professionals, as required, at the public hearing(s).

4.10 WATER QUALITY

4.10.1 Existing Conditions

Ambient water quality associated with the subject property is typical of that associated with a parcel that contains little impervious surface (as compared to the overall size of the parcel) and one that is primarily comprised of vegetated areas (both natural and agricultural (fields)) with some associated on-site improvements (dwelling, barns) and gravel driveways and other compacted gravel-overlain areas.

4.10.2 Probable Impact to Water Quality

Because the project results in less than 0.25 acre of impervious coverage, disturbs less than one acre, and because the area proposed to be occupied by the project represents less than one percent of the overall size of the property, water quality (both surface and groundwater) is expected to remain unchanged. The project is not required to comply with the NJDEP's Stormwater Management Regulations set forth at NJAC 7:8. The project does not require the use of any hazardous materials or petroleum hydrocarbons and does not require water or sewer service.

4.11 HISTORIC RESOURCES

4.11.1 Existing Conditions

Pursuant to review of the NJDEP's GIS database, the subject property is identified as being located within (comprising the northern end) the Bridgepoint Historic. The following historic districts/individual properties were identified as being located proximate to the subject property:

-
- Henry Drake House, 377 Bridgepoint Road. Mapped as being located approximately 1270 feet to the west;
 - Harlingen Historic District. Mapped as being located approximately 2450 feet to the northwest;
 - River Road Historic Rural District. Mapped as being located approximately 2600 feet to the southeast, at its closest point to the subject property.

Regarding archaeological resources, the subject property was not illustrated as being located within a mapped archaeological grid.

4.11.2 Probable Impact to Historic Resources

Prior to receiving approval to construct and subsequently operate a wireless communications facility, the Applicants must ensure that the proposed project will not adversely affect (directly or indirectly (visually)) historic resources. The Applicants is in the process of coordinating with the FCC and the NJ State Historic Preservation Office for purpose of determining the project's potential affects to historic and archaeologic resources (full Section 106 review), including consultation with Native American tribes, archaeological review, and coordination with local agencies (i.e. municipal/County historical society's). The Applicants is required to complete this process pursuant to their FCC license. Adverse impacts, if any, to historical and/or archaeological resources will be determined via completion of this process.

4.11.3 Steps to Minimize Adverse Impacts

Any mitigation required to lessen or eliminate direct and indirect impacts to historic and/or archaeologic resources will be determined via the process referenced above.

4.12 AESTHETICS

4.12.1 Existing Conditions

The subject property is located within a section of the Township primarily comprised of a mosaic of naturally-vegetated and agricultural lands interspersed with and surrounded by residential land use, including some very large subdivisions.

4.12.2 Probable Impact to Aesthetics

Issues with aesthetics generally associated with wireless communications projects primarily include visual impacts resulting from the tower (lattice or monopole) and antennas. Potential visual impacts

generated by the proposed tree monopole will be addressed by the professional planner/engineer at the public hearing(s).

4.12.3 Steps to Minimize Adverse Impacts to Aesthetics

Any steps/measures required of the Applicants to minimize potential impacts to aesthetics perceived to result from construction of the proposed project (if any) will be addressed at the public hearing(s) between the Board, the Applicants, the Applicants representatives, and public comment.

4.13 NOISE

4.13.1 Existing Conditions

Noise in the area is generated primarily by traffic using Dead Tree Run Road and Bridgepoint Road as well as farming operations that occur on-site.

4.13.2 Probable Impact to Noise

Operation of the proposed wireless communications facility, once constructed, is expected to be insignificant. A limited amount of noise will be generated from the equipment cabinets. The limited amount of noise generated by the proposed project is expected to be buffered from existing on-site as well as off-site improvements by the distance from it to the property lines and the existing buildings located between it and the surrounding area. The proposed project will be in compliance with the limits of the State and local noise regulations. Additional testimony regarding noise, both ambient and proposed, will be provided at the public meeting(s), as required.

4.14 TRAFFIC

4.14.1 Existing Conditions

Existing traffic patterns and volumes associated with the subject property primarily revolve around the insignificant volume of traffic that typically uses Dead Tree Run Road and Bridgepoint Road.

4.14.2 Probable Impact to Traffic

The proposed wireless communications facility is unmanned. Once constructed, it is generally visited monthly by a technician in a typical pick-up truck/SUV. Once operational, the facility will result in no measureable change/increase in traffic patterns/volumes. Traffic patterns may temporarily increase as a result of construction equipment traversing to and from the property during installation of the facility; however, once constructed, volumes will revert back to those typical of the area. Additional testimony

will be provided by the Applicant's professionals at the public meeting(s), as required.

4.15 AIR QUALITY

4.15.1 Existing Conditions

Ambient air quality conditions are typical of those associated by an agricultural/residential area interspersed within naturally-vegetated (forested) areas. It is likely that, under the USEPA's Air Quality Index (AQI), air quality associated with the subject property and surrounding areas is classified as "good" (generally for ozone) to "moderate" (generally for particles). Under the "good" classification, air quality is considered satisfactory, and air pollution poses little or no risk. Under the "moderate" classification, air quality is considered acceptable; however, associated pollution may pose a moderate health concern for a very small number of individuals.

4.15.2 Probable Impact to Air Quality

Operation of the proposed wireless communications facility would not result in any adverse impacts to ambient air quality. The wireless communications equipment produces no pollutants. Additional testimony will be provided by the Applicant's professionals at the public meeting(s), as required.

4.16 UTILITIES (SEWER AND WATER) / SOLID WASTE DISPOSAL

4.16.1 Existing Conditions

Existing structures located on-site are serviced by an on-site well and individual wastewater disposal (septic) system. It is assumed that refuse generated on-site is collected via a private hauler either contracted by the Township or by individual landowners. No wells or septic systems are located proximate to the location of the proposed project. The existing on-site wireless communications facility requires no sewer or water service. Once constructed, the proposed project generates no solid waste.

4.16.2 Probable Impact to Utilities

Construction of the proposed wireless communications facility will have no effect on existing site utility service of to the Township's utility infrastructure system. The facility is unmanned and requires no water or sewer service. Once constructed, the proposed project generates no solid waste. The Applicant's contractor(s) will remove any excess materials/solid waste, generated by project construction, from the subject property.

4.17 LIGHTING

4.17.1 Existing Conditions

A limited amount of exterior lighting (pole and building-mounted) was observed to be located on-site, in and around the existing single-family residence and farm complex.

4.17.2 Probable Impact Associated with Lighting

One work light is currently shown to be associated with the proposed project. Testimony regarding proposed site lighting will be provided by the Applicant's professionals at the public meeting(s), as required.

5.0 OTHER REQUIRED APPROVALS

In addition to Township's Board of Adjustment's Preliminary and Final Site Plan approval, the following approvals will be required/from other agencies:

Somerset County

- Somerset County Planning Board;
- Somerset-Union SCD.

State of New Jersey

- NJDEP DLUR: Letter of Interpretation – Footprint of Disturbance;
- SHPO – Section 106 Review.

6.0 REFERENCES

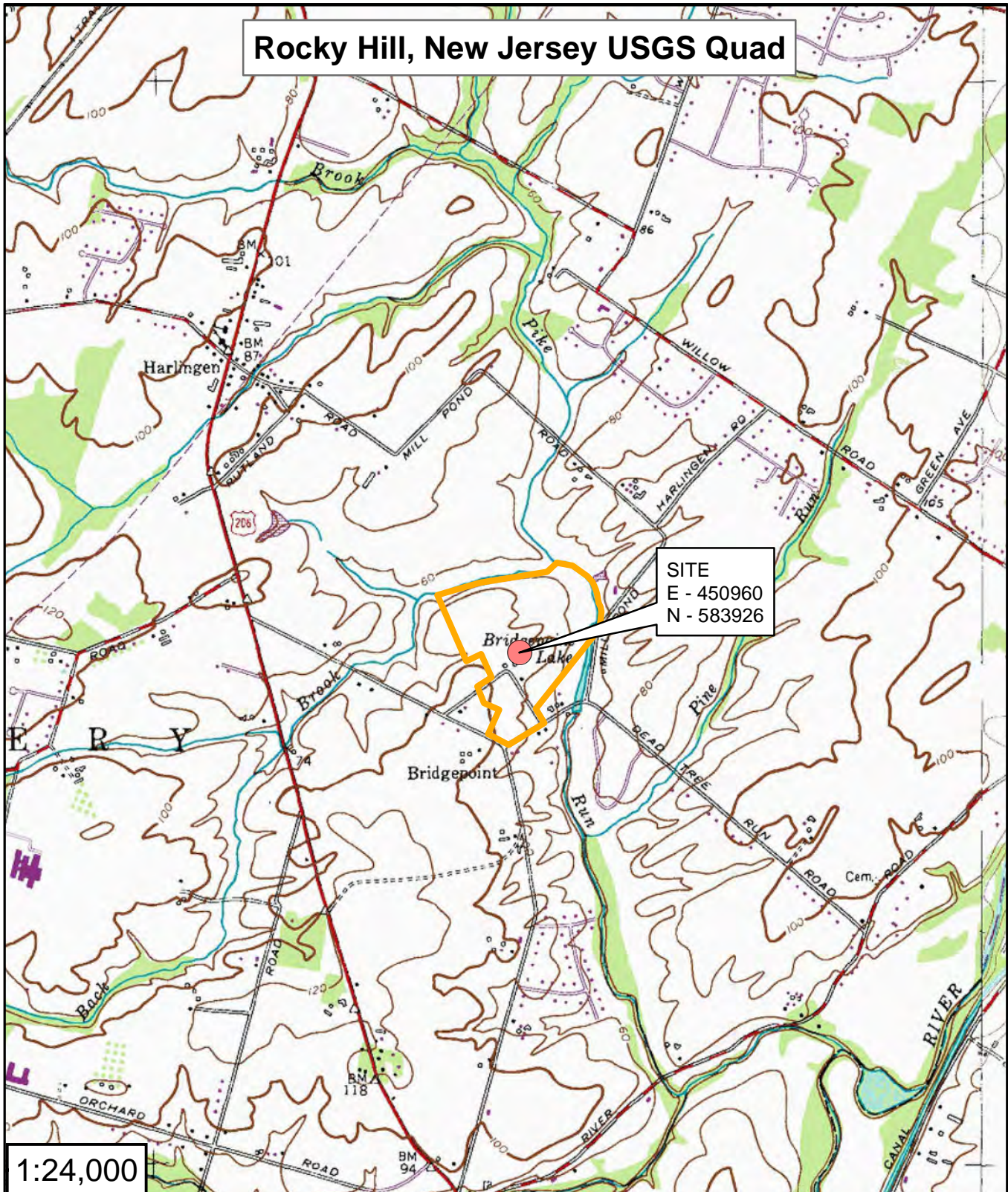
The following is a reference list of pertinent information relating to the project, project site and surrounding area used in the completion of this report:

- E2 Project Management, LLC, Preliminary and Final Site Plans, January 23, 2020, un-revised.
- Natural Resources Conservation Service, United States Department of Agriculture. Web Soil Survey. Accessed December 11, 2019. Available online at <http://websoilsurvey.nrcs.usda.gov>.
- NJDEP, Division of Parks and Forestry, Office of Natural Lands Management, Natural Heritage Program, December 16, 2019, Rare Species Information Correspondence.
- NJDEP, GIS Data and 2002 Aerial Photography, Trenton, New Jersey.
- Township of Montgomery. Land Use Ordinance's, Section 16-8 Development Application Review Procedures, 16-8.4 Submission of Preliminary Major Subdivision Plats and Preliminary Major Site Plans, 16-8.4c Environmental Impact Statement. Accessed online December 11, 2019.
- State of New Jersey, Office for Planning Advocacy. The New Jersey State Development and Redevelopment Plan, 2001.
- Somerset County. Masterplan. 1987.
- Somerset County. Somerset County Investment Framework. 2014.
- Township of Montgomery. Natural Resource Inventory. April 2004.
- United States Environmental Protection Agency, US Fish and Wildlife Service, New Jersey Field Office, Communication Tower and Antenna Consultation in New Jersey. January 2019.
- United States Environmental Protection Agency, US Fish and Wildlife Service, New Jersey Field Office. Information, Planning, and Conservation System site-specific documentation. Accessed December 11, 2019.
- United States Environmental Protection Agency, Office of Air Quality Planning and Standards, Outreach and Information Division. Air Quality Index – A Guide to Air Quality and Your Health. EPA-456/F-14-002. February 2014.
- United States Environmental Protection Agency, AirNow website available at https://cfpub.epa.gov/airnow/index.cfm?action=airnow.local_city&zipcode=08825&submit=Go. Accessed December 11, 2019.
- United States Geologic Survey (USGS), 7.5 Minute Topographic Map, Rocky Hill, NJ Quadrangle.

APPENDIX A –MAP FIGURES

- FIGURE 1 - USGS TOPOGRAPHICAL MAP
- FIGURE 2 – VICINITY (ROAD) MAP
- FIGURE 3 – TAX MAP
- FIGURE 4 – SOIL MAP

Rocky Hill, New Jersey USGS Quad



E2 Project Management



87 Hibernia Avenue
Rockaway, NJ 07866

Phone: 973-299-5200
Fax: 973-299-5059



SectorSite
53 South Jefferson Road
Whippany, New Jersey 07981

Project Number: P-19-59-01
NJ-0418
26 Dead Tree Run Road
Montgomery, New Jersey

USGS Topographic Map



E2 Project Management



87 Hibernia Avenue
Rockaway, NJ 07866

Phone: 973-299-5200
Fax: 973-299-5059



SectorSite
53 South Jefferson Road
Whippany, New Jersey 07981

Project Number: P-19-59-01
NJ-0418
26 Dead Tree Run Road
Montgomery, New Jersey

Road Map



E2 Project Management



87 Hibernia Avenue
 Rockaway, NJ 07866

Phone: 973-299-5200
 Fax: 973-299-5059








SectorSite
 53 South Jefferson Road
 Whippany, New Jersey 07981

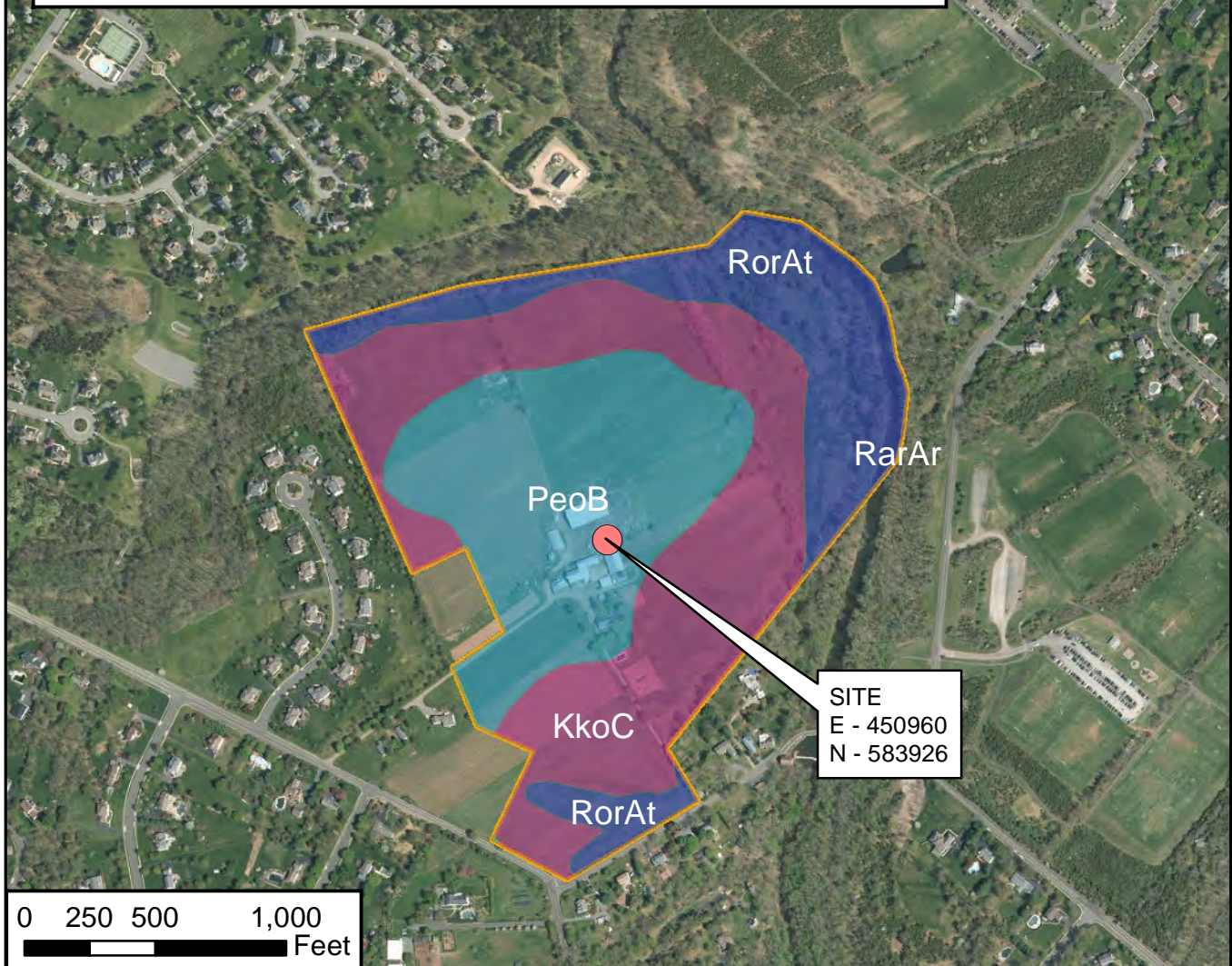
Project Number: P-19-59-01
 NJ-0418
 26 Dead Tree Run Road
 Montgomery, New Jersey

Tax Map

Legend

USDA Soils for Somerset County, New Jersey

-  KkoC *Klinesville channery loam, 6 to 12 percent slopes*
-  PenC *Penn silt loam, 6 to 12 percent slopes*
-  PeoB *Penn channery silt loam, 2 to 6 percent slopes*
-  RarAr *Raritan silt loam, 0 to 3 percent slopes, rarely flooded*
-  RorAt *Rowland silt loam, 0 to 2 percent slopes, frequently flooded*



E2 Project Management



87 Hibernia Avenue
Rockaway, NJ 07866

Phone: 973-299-5200
Fax: 973-299-5059



SectorSite
53 South Jefferson Road
Whippany, New Jersey 07981

Project Number: P-19-59-01
NJ-0418
26 Dead Tree Run Road
Montgomery, New Jersey

Soils Map

APPENDIX B

QUALIFICATIONS of PREPARER of EIS



E2 Project Management LLC

87 Hibernia Avenue
Rockaway, New Jersey 07866
Tel (973) 299-5200 Fax (973) 299-5059

Michael Muller Senior Environmental Scientist

Education: B.S. Environmental Planning and Design
Cook College, Rutgers University

Years of Experience: 27

Qualifications:

For over twenty-seven years, Mr. Muller has provided environmental due-diligence and landscape design services associated with a multitude of projects including residential subdivisions, commercial and industrial site plans, county and municipal roadway improvement projects, bridge replacement projects, utility infrastructure extensions and upgrades, and wireless communications.

Services provided include completion of Phase I Environmental Site Assessments for residential, commercial, and wireless communications projects, federal NEPA Environmental Assessments, State EO-215 EA's and EIS's, and municipal-level EIS's, with expert testimony provided as required. Natural resources permitting includes preparation of numerous freshwater wetlands general and individual permits, transition area waivers, flood hazard area permits, Coastal Permits, and various Highlands Act Exemptions. Conducted threatened and endangered species surveys for a number of rare species. Approved by the NJDEP ENSP as a primary-level construction monitor (relating to timber rattlesnake) as well as a lead principal venomous snake surveyor which provided the opportunity to work as both a monitor and lead surveyor on a number of linear energy infrastructure projects as well as vegetation maintenance projects. Conducted numerous vernal pool surveys, certified several vernal pools, and conducted numerous surveys associated with use of vernal pools by obligate as well as rare species.

Professional Experience:

E2 Project Management, LLC, Rockaway, New Jersey, Senior Environmental Scientist

The Reynolds Group, Inc., Raritan, New Jersey, Environmental Specialist

Avoca Engineers and Architects, LLC, Piscataway, New Jersey, Senior Environmental Specialist

The Edwards and Kelcey Organization, Morristown, New Jersey, Environmental Specialist

JH Crow Company, Hackettstown, New Jersey, Environmental Scientist

Keller and Kirkpatrick, Inc., Morris Plains, New Jersey, Apprentice Landscape Architect

Licenses, Certifications and Relevant Training:

- 40-Hour OSHA HAZWOPER Training and 8-Hour Annual Refresher for HAZWOPER
- Methodology for Delineating Wetlands Certification / Freshwater Wetlands Protection Act Rules
- Wetland Mitigation Wetlands Laws and Regulations
- Threatened and Endangered Species

NJDEP Endangered and Nongame Species Program – Threatened and Endangered Species Work

- | | |
|----------------------------------|---|
| • Amphibian Crossing Surveys | Bobcat Project |
| • Woodland Raptor Surveys | Timber Rattlesnake Den and Gestation Surveys |
| • Copperhead Trapping Project | Allegheny Woodrat Population Assessment Project |
| • Winter Hibernacula Bat Surveys | Summer Bat Trapping Project |
| • Venomous Snake Response Team | USFWS Raptor Banding Program |

Relevant Experience:

Environmental Monitoring and Permit Compliance - Utility Infrastructure Projects

- **Major Electrical Transmission Infrastructure Upgrade Project: Sussex, Warren, and Morris Counties, NJ:** Provided daily on-site environmental monitoring (NJDEP ENSP-approved primary-level monitor) as required by both the NJDEP and the NPS. Monitoring responsibilities included removal of wildlife from the



E2 Project Management LLC

87 Hibernia Avenue
Rockaway, New Jersey 07866
Tel (973) 299-5200 Fax (973) 299-5059

active work space including a number of rare species, primarily venomous snakes. Oversaw compliance with project stormwater management and SESC requirements. Designed, sited (in conjunction with ENSP), and oversaw construction of a total of five man-made artificial snake hibernacula's.

- **NJDEP Endangered and Nongame Species Program (ENSP). Snake Fungal Disease Survey. Warren County, New Jersey:** The ENSP contracted Mr. Muller to systematically survey documented den, backing, and gestation/birthing habitats located in northern New Jersey for snakes exhibiting symptoms associated with SFD, record all observations of all venomous snakes, symptomatic or not, and capture symptomatic snakes for analysis and treatment. Mr. Muller spent a significant amount of time in the field during year 2016 surveying for venomous snakes. Several timber rattlesnakes were captured and, via analysis, were determined to be affected with SFD. All snakes were treated and subsequently returned to their capture sites. In addition to the numerous observations, Mr. Muller identified new, previously undocumented, hibernacula sites located within the study area.
- **NJDOT Interstate Route 80 Rockfall Mitigation Project, Warren County, NJ:** Working as the NJDEP-approved Principal Lead Surveyor, led a team of venomous snake surveyors through the project corridor for purpose of identifying and mapping critical habitat (hibernacula, early basking, gestation/emergence) for both timber rattlesnakes and northern copperhead. Documentation/mapping would be used to avoid the critical habitats as well as to determine the number of monitors potentially required during project construction.
- **Electrical Transmission ROW Maintenance Project, Sussex County, Sparta Township, NJ:** Provided on-site monitoring for a number of rare species, including timber rattlesnake and golden-winged warbler as well as active bird nests during vegetation maintenance (cutting) as part of hot-spot vegetation removal.
- **Natural Gas Transmission Utility Infrastructure Project: Sussex and Passaic Counties, NJ:** Daily monitoring of active work spaces for purpose of capturing and relocating wildlife species that entered the right-of-way, including rare species (timber rattlesnakes, wood turtles), and all species of reptiles and amphibians.
- **Mehoopany Wind Farm Project, Various Township Townships, Wyoming County, PA:** Monitoring activities included continuous "sweeps" of access roads and turbine pad sites for purpose of removing timber rattlesnakes (TR's) and other wildlife species from the active work spaces.
- **Picatinny Arsenal ARDEC SAFER, Rockaway Township, Morris County, New Jersey:** As requested by the NJDEP Endangered and Nongame Species Program and as identified in the Environmental Assessment (EA) that had been completed in support of the project, a number of surveys were required to be completed for purpose of identifying critical timber rattlesnake and northern copperhead habitat, on and within 200m of all proposed work areas. During year 2011, Mr. Muller, as part of a volunteer team led by ENSP Principal Zoologist Kris Schantz, was permitted to pre-survey these areas on a volunteer basis. Several timber rattlesnakes, including a number of neonates, were located and documented as part of this volunteer survey project. During the months of May through June, 2012, venomous snake hibernacula and early basking surveys were conducted by E2 Project Management, LLC (Michael Muller) in conjunction with KT Wildlife, LLC (primarily Kathy Michell) for purpose of providing the additional analysis for this New Jersey endangered species as recommended in the EA. Gestation site surveys were conducted during the month of August 2012. Several timber rattlesnakes as well as northern copperheads were identified during the surveys.

Wetland Delineations, Letters of Interpretations, and Permitting Services

Provided wetland delineations, preparation of Letters of Interpretations, freshwater wetland (general and individual), permitting, transition area waivers, coastal permitting, FHA permitting, and restoration design including but not limited to the projects referenced below:

- **Verizon Wireless, Various Locations Statewide, NJ;**
- **Elizabeth Avenue Reconstruction, Franklin Township, Somerset County, NJ;**
- **State of NJ, GSA, Division of Building and Construction, NJDOT Maintenance Facilities, Statewide**
- **State of NJ, Department of Transportation – Highway Reconstruction/Improvement Projects, Statewide;**
- **NJ Water Supply Authority, No Name Dam No. 31 – Dam Safety Improvements, Hunterdon County, NJ;**
- **Mars Chocolate North America Solar Project, Town of Hackettstown, Warren County, NJ;**
- **Various Private Residential / Commercial Land Development Projects, Various Locations Statewide, NJ.**



E2 Project Management LLC

87 Hibernia Avenue
Rockaway, New Jersey 07866
Tel (973) 299-5200 Fax (973) 299-5059

Environmental Assessments/Environmental Impact Statements

- **US Veteran's Administration, Somerset County Distribution Center, Somerset County, Hillsborough Township, NJ:** Completed a Federal EA for the US Veteran's Administration for the Enhanced Use Lease (proposed change of use) of the VA's Somerset Distribution Center.
- **Various Boards of Education, Various Locations Statewide, NJ:** Prepared numerous Executive Order (EO) 215 Environmental Assessments and Environmental Impact Statements for larger projects, as required.
- **Picatinny Arsenal ARDEC SAFER, Rockaway Township, Morris County, NJ:** Completed various technical studies in support of the EA prepared for the U.S. Army's proposed the construction, operation, and maintenance of an underground Safe Armaments Facility for Energetics Research (SAFER) facility at Picatinny Arsenal.
- **Mount Holly Water Company: 30-Inch Diameter Transmission Main Extension, Township of Eastampton, Burlington County, NJ:** Environmental Assessment (EA) was prepared in support of the proposed diversion of parkland (Green Acres) and expert testimony was provided at the public hearing.
- **Verizon Wireless, Various Locations Statewide, NJ:** Prepared numerous Municipal-level environmental impact statements for numerous projects. Expert testimony provided at public hearings, as required.

Threatened and Endangered Species Surveys

- **Major Electrical Transmission Infrastructure Upgrade Project: Sussex, Warren, and Morris Counties, NJ:** Conducted two years of post-construction emergence and gestation surveys for rare snakes (timber rattlesnakes and northern copperheads) as well as all common snake species for purpose of determining the projects effects on area critical habitats, as required by the NPS.
- **Picatinny Arsenal ARDEC SAFER, Rockaway Township, Morris County, New Jersey:** Completion of on-site surveys for purpose of identifying venomous snake dens and gestation sites on and within 200 meters of the proposed work areas as well as to identify critical timber rattlesnake habitat, if any, on and within 200m of all proposed work areas in support of the EA prepared for the project.
- **MMU - Morristown Municipal Airport, Hanover Township, Morris County, NJ:** Services included diurnal and nocturnal surveys for a number of rare avian, amphibian, reptile, and plant species. General ecological surveys for vegetative cover type and all wildlife species were also conducted.

CHRISTOPHER LANNA

Natural Resources Manager / Telecom Environmental Manager / GIS Specialist

YEARS OF EXPERIENCE: 35+ years

YEARS WITH E2 Project Management: 12 years

TECHNICAL SPECIALTIES

Certified NJDEP UST Subsurface/Closure

EDUCATION

Montclair State University, Montclair, NJ

M.A. Environmental Management, 1988

Ramapo College, Ramapo, NJ

B.S. Ecology, Minor in Land and Water Resources, 1980

Upsala College, East Orange, NJ

Geology/Environmental Science

PROFESSIONAL REGISTRATIONS AND AFFILIATIONS

- One Person Adult CPR
- 8-Hour Annual Refresher for HAZWOPER
- 8-Hour OSHA Supervisor Training
- 40-Hour OSHA HAZWOPER Training
- OSHA – Competent Person in Evacuation
- OSHA – Confined Space Training
- NJEPA – Certified Wetland Professional
- NJDEP - Closure and Subsurface Certification (#0011180)
- NJDEP - Boring Certification
- U.S. Fish & Wildlife Service – *Individual Master Bird Banding Permit*
- NJ Association of Environmental Professionals
- Sandy Hook Raptor Banding Research Station, Director
- Kittatinny Mountain Raptor Research Association, Co-Director
- Society of Wetland Scientists, Member
- Eastern Bird Banding Association, Member

QUALIFICATIONS

Mr. Lanna's professional background spans more than 35 years and includes both private and public projects. He has extensive knowledge of both state and federal environmental regulations. Mr. Lanna has been involved in all aspects of environmental project management including client contact, invoicing, investigating, permitting, groundwater and soil sampling and supervising both office and field personnel. Mr. Lanna oversees all ecological projects which include NEPA screening, Federal EA (EA), Environmental Impact Statements (EIS), NJ Executive Order 215 (EO 215) submissions, threatened and endangered (T&E) species investigations, wetlands and waterfront development permitting, and other land use regulations requirements. He has overseen a multi-year contract for the NY district of the US Army Corps of Engineers. Environmental services included EAs, permitting, blasting effects on fish population, freshwater and salt marsh restoration, and other ecological services.

Mr. Lanna for the last 12 years has managed telecommunication projects for Verizon Wireless, Sprint, MetroPCS, ATT and T-Mobile. Mr. Lanna has overseen all aspect of environmental submittals for telecommunication projects including Phase I, Phase II, NEPA, State Historic Preservation Office (SHPO) consultations and permitting (Highlands, wetlands, stream encroachment, CAFRA). Mr. Lanna has been the main contact for Verizon Wireless projects for E2PM and is the main contact for Highlands permits for telecom sites.

Additionally, Mr. Lanna has performed Phase I and Phase II Environmental Site Assessments (ESAs) on a variety of facilities from residential apartments to large industrial complexes for both lending institutions and industrial clients. The assessments include: on-site physical inspection, off-site usage, federal and state data base searches, sampling and report preparation. Has performed all aspects of hazardous waste application submittals. This work included preparation of Preliminary Assessments/Site Investigations (PA/SI), initial site inspections, sampling plans, Remedial Action Workplans (RAWP), Remedial Action Reports (RAR) and overseeing the remedial site work. Mr. Lanna is certified by the NJDEP for Closure and Subsurface Investigation for Underground Storage Tank (UST) work, and has overseen numerous UST Closure cases from the initial closure submittals to supervision of tank removals and post excavation soil and groundwater sampling. Mr. Lanna has provided oversight of environmental insurance claims for major



insurance companies. Oversight included determining third party damage; working with the claimants to insure the proper work is performed in conjunction with the NJDEP; and reviewing all invoices being presented to the insurance companies for payment.

Mr. Lanna is an expert in the field of raptor research and has participated in numerous T&E species and wildlife delineations and permitting applications.

PROFESSIONAL HISTORY

E2 Project Management, LLC, Rockaway, NJ - *Natural Resources/Telecom Environmental Manager*

Managed the Natural Resources Department. Provide environmental compliance for major wireless companies, including wetlands permitting, CAFRA permits, Phase I, Phase II, flood hazard permits on over 300 projects a year. Perform wetlands delineations and permitting on a variety of public and private projects. Performs and oversees T&E research and habitat evaluations. Oversees the Cultural Resources division of E2PM.

Tetra Tech EM Inc., Rockaway, NJ - *Natural Resources Manager*

Managed the Natural Resources Department. Services included environmental permitting and Environmental Assessment for multiple projects at Picatinny Arsenal. Provided environmental compliance for major wireless companies, including wetlands permitting, CAFRA permits, Phase I, Phase II, flood hazard permits. Performed wetlands delineation and permitting on a variety of public and private projects. Performed T&E research and habitat evaluations.

MATRIX Environmental and Geotechnical Services, Inc. Florham Park, NJ - *Administration Ecological Services/Senior Project Manager*

Managed the ecological division of the company. Performed wetlands delineation and permitting on a variety of public and private projects. Provided environmental compliance for major wireless companies, including wetlands permitting, CAFRA permits, Phase I, Phase II, flood hazard permits. Oversaw a multi-million dollar US Army Corp of Engineers contract which included wetland delineation, permitting and mitigation projects and environmental assessments on various military bases. Performs T&E research and habitat evaluations.

The Entech Group, Inc. Denville, NJ - *Senior Environmental Scientist*

Responsible for the oversight for UST removal and site remediation projects. Provided oversight of homeowner remediation project for major insurance companies. Performed wetlands delineation and permitting on a variety of public and private projects.

J M Sorge, Inc., Sommerville, NJ - *Senior Project Manager*

Performed wetlands delineation and permitting on a variety of public and private projects. Provided oversight for UST removal and site remediation projects.

Direct Environmental, Inc., Hopelawn, NJ - *Director of Environmental Consulting Services*

Directed the environmental remediation and permitting department. Provided oversight and performed wetlands delineation and permitting on a variety of public and private projects.

Connolly Environmental, Inc., Denville, NJ - *Environmental Specialist and Wetland Analyst*

Responsible for environmental impact statements (EISs) for residential developments, wetlands delineation and permitting for various location throughout NJ. Provided environmental and ecological advise and review to several municipal planning boards.

PPE, Morris Plains, NJ - *Environmental Specialist and Wetland Analyst*

Responsible for wetland delineations; preparation of Statewide General Freshwater Wetland Permits and Transition Area Waiver, preparation of Individual Permits and Wetland Mitigation Plans; environmental monitoring, soil permeability tests.

The Raptor Trust, Millington, NJ - *Environmental Specialist*

Provided raptor education programs throughout NJ and NY. Performed raptor research and rehabilitation.

County of Essex, Roseland, NJ - *Environmental Specialist and Naturalist*

Provided environmental educational program to schools throughout NJ. Provided environmental resources to other County agencies and managed the County's geological museum.

PROFESSIONAL EXPERIENCE

Environmental Assessment (EA), T&E Species Studies and Wetlands Delineations for the US Army, US Air Force and US Army Corps of Engineers: The projects included the preparation of an EA for various project within the Picatinny Arsenal complex. These assessment analyzed all environmental impacts of the proposed construction and operation of the project area. These proposed facility has been designated as a key component supporting Homeland Security initiatives for this country, and is supported by NJ and the US Department of Defense. Using Army Regulations (AR) 200-1 (Environmental Protection and Enhancement) and AR 200-2 (Environmental Effects of Army Actions) as guidance, the EA were prepared for each project. The EA included a natural resource and habitat evaluation, cultural resource evaluation, and wetlands evaluation/delineation of wetland habitats found within and surrounding the subject property, and was further incorporated within the design of the proposed



facilities. The assessment included a thorough site inspection of the subject property, Picatinny Arsenal/government records reviews, and Picatinny Personnel interviews, relating to past and present conditions of the property. Through each source of information, recognized environmental impacts of the proposed actions, recommended mitigation measures and conclusions for the proposed facility were developed and were addressed within a final EA report. The projects also included the delineation of adjacent wetlands, lake and stream, the preparation of NJDEP permits and Indiana bat survey within the proposed project area. Specific projects included:

- Construction of a Homeland Defense Technologies and Security Readiness Center, Picatinny Arsenal, Rockaway, NJ
- Construction of a Hi- Tech Research and Development Park Facility, Picatinny Arsenal, Rockaway, NJ
- Demolition and Reconstruction of a New Post Chapel and Renovation of Building 3050, Picatinny Arsenal, Rockaway, NJ
- Construction of an Outdoor Firing Range within the G-2 Area, Picatinny Arsenal, Rockaway, NJ
- US Army Corps of Engineering, Community Activities Center, US Military Academy (USMA), West Point, NY
- US Army Corps of Engineers, Utility Privatization, USMA, West Point, NY
- US Air Force, McGuire Air Force Base, Re-Alignment of Under Ground Utilities

Phase I, Phase II and Various Permitting for Retrofitting Utility Towers for Telecommunication Facilities: Natural Resource Manager for over 12 year working with various telecommunication companies (Verizon Wireless, Sprint, T-Mobile, Metro PCS and ATT) for the retrofitting of utility company's (PSEG, JCP&L/GPU/First Energy, and Sussex Rural Electric Cooperative) towers and sub-station for wireless communication facilities. Work included Environmental Assessments, Phase One and Two investigations, PCB, Lead and Asbestos Surveys, Highlands Permitting, Wetlands Delineation and Permitting, Threatened and Endangered Species Investigation, Flood Hazard Permitting and Expert Testimony. Also provided communication between the Utility Companies, the Wireless Companies and State and local authorities to help the project through the environmental regulatory process and to ensure the project is completed and approved in a timely manner.

NEPA Compliance/Phase I/Phase II/SHPO Compliance/Wetlands Permits/Coastal Permits/Other various Permits Various locations NJ and NY, Verizon Wireless/Sprint/T-Mobile/MetroPCS/ATT: Mr. Lanna prepared NEPA and Phase I Documentation for proposed cellular communication tower sites located throughout NJ and NY. The purpose of the studies was to address NEPA requirements which include: wilderness areas, wildlife preserves, T&E species habitat, historical resources, Indian religious sites and floodplains. Studies included literature and record searches, field investigations. Mr. Lanna assessed indicators of significance (factors to consider) in conformance with NEPA Guidelines. Phase II investigations and various types of environmental permits were also performed.

NJ Turnpike Authority (NJTA), Multiple Projects, Statewide. As Project Manager, oversaw all aspects of the project including the preparation of a Sampling and Analysis Plan (SAP) to evaluate the potential for hazardous contamination in the area of the proposed site improvements. The SAP is intended to assess the potential contaminated conditions that may be encountered during proposed construction activities. An EO 215 Report, which is required by the NJDEP, was prepared for this project. The NJDEP issued EO 215 to give guidance on the form and content of EAs for transportation projects and for the evaluation of the significance of their projected environmental impacts on the surrounding communities. A site reconnaissance was conducted as the first element of the EO 215. This phase was followed by the collection of relevant existing documentation, files, maps, photographs, and other pertinent information. The EA Report was prepared for submission to the NJHA and for NJDEP review.

A Hazardous Waste Screening (HWS) was prepared for the project area. The HWS will be included as part of the E.O. 215 report. The HWS identified Environmental Sensitive Parcels (ESP) within the study area (approximately one square mile) that could impact the proposed improvements. Historical information, current conditions, and operations pertaining to the study area were reviewed. The HWS is being performed in accordance with the NJ Department of Transportation (NJDOT) Procedures Manual. The scope of work for the HWS was executed which included a visual reconnaissance of the study area; review of readily available Federal, state, and local regulatory records; examination of historical information; an evaluation of current and past operations and activities within the study area. Upon completion a written report documenting the HWS was prepared.

Wetland investigations were conducted. The investigation included the field delineation of all potential wetland areas within 150 feet of the proposed improvements. Upon completion of the field investigation A wetland delineation report was prepared to be submitted to the NJDEP for verification of the wetland areas. Based upon this report a determination will be made on what type of permits, if any, would be required to be obtained from the NJDEP to complete this project. Specific projects included:

- Grand Street Ramp Widening Project, Jersey City, NJ
- GSP Interchange 123 Improvements, Sayreville, NJ

Road/Bikeway Improvement Scoping Studies, Passaic, Somerset and Bergen Counties, NJ: Project Manager and Senior Environmental Scientist for the HWS associated with various multi-county road or bikeway improvement projects. The HWS identified ESPs within study areas that could impact the proposed improvements. Historical information, current conditions, and operations pertaining to the study area were reviewed. The HWS was performed in accordance with the NJDOT Procedures Manual. The scope of work was executed for the HWS which included a visual reconnaissance of the study area; review of readily available Federal, state, and local regulatory records; examination of historical information; an evaluation of current and past

operations and activities within the study area. Upon completion, a written report documenting the HWS was prepared and submitted. Specific projects included:

- Two Bridges Improvements, Passaic County, NJ
- Chimney Rock Road and Route 22 Improvements, Somerset County, NJ
- Route 17/ Passaic Street Scoping Project, Bergen County, NJ
- Hazardous Materials, Screening/Preliminary Assessment (PA), Two Bridges Project, Wayne, NJ
- County of Passaic/NJDOT, Fairfield and Lincoln Park, NJ,
- NJDOT, Route 29 Bikeway Project, Adjacent to Delaware River, Trenton, NJ

Lead and Asbestos Investigation/Geotechnical Investigation/Subsurface Environmental Investigation, Clifton Bus Facility, Clifton, NJ, NJ Transit: Project Manager and Senior Environmental Scientist for the lead/asbestos sampling and investigation, geotechnical investigation, and the preliminary subsurface sampling and analysis investigation associated with the Clifton Bus Facility project. The Clifton Bus Facility is the first of several NJ Transit fast track projects. Lead and asbestos investigation were conducted of a building proposed to be raised as part of this project. Samples were obtained to verify the existence of lead-based paint (LBP) or asbestos containing material (ACM). Once the investigation was complete a report was prepared, specification for the removal of the LBP and ACM were prepared prior to the building being raised.

A geotechnical investigation program was developed to acquire information and data that will be included in the development of design alternatives. Existing published data was compiled and reviewed, available data and geotechnical reports from relevant projects in the subject area and developed a subsurface exploration program. A geotechnical field investigation was performed which included obtaining soil samples and information, blow counts and rock core data. All of this information was compiled into a report which included footing design parameters and site constraints.

A preliminary subsurface environmental investigation was performed which included a detailed technical review of all available and relevant documentation for the **proposed site relative to environmental concerns as well as information generated by NJ Transit's** Environmental Services Unit. As Project Manager, oversaw all aspects of this portion of the project including the submission to NJ Transit of a SAP that evaluated the potential for hazardous contamination in the area of the proposed site improvements. The SAP was intended to assess the potential contaminated conditions that may be encountered during proposed construction activities. A subsurface environmental field investigation was completed which included obtaining soil and groundwater samples. All of the information was compiled into a report used by NJ Transit in the preparing costs for the final design of the project.

Wolpert Trust/Heterene Chemical, Paterson, NJ: Project Manager for the removal of numerous USTs and a groundwater investigation which included the installation of groundwater monitoring wells, groundwater sampling, development of groundwater contour mapping and the preparation of a groundwater cleanup plan.

NYC Department of Transportation (NYCDOT) - Staten Island Ferry Terminal: Project Manager for the NYCDOT project involving the removal of two 15,000 gallon No. 6 fuel oil USTs. The two USTs were located adjacent to the footings of the Ferry Terminal Building and 20 feet inside a bulkhead adjacent to NY Harbor. Removal activities included site dewatering, contaminated soil excavation, backfilling and groundwater treatment. The project also included the design, setup, maintenance and sampling of a groundwater treatment system to remove #6 fuel oil from the groundwater adjacent to the Ferry Terminal building. Provided written reports and updates to the NYC Department of Environmental Protection (NYCDEP) and the NYCDOT. Successful in remediating both soil and groundwater contamination and closing out the site with the NYCDEP.

Texaco Service Station - Fort Lee, NJ: Project Manager for a national petroleum company to perform a turnkey removal and remedial operation at a former gasoline station. The project included providing the client with all necessary local and state permits, removal of six gasoline and waste oil USTs, backfilling and site restoration. Extensive soil and groundwater contamination were encountered at the site, resulting in the local fire department and the county HAZMAT team needed on-site in case of an emergency. Six USTs, plus an additional four USTs not previously known to exist at the site, were removed. Large quantities of gasoline contaminated soil were stockpiled and removed off-site. The safe removal of the USTs, contaminated soil and groundwater was overseen and managed.

LR Metals, Edison, NJ: Project Manager providing services to a mid-sized metal treatment establishment in response to a study of an adjacent property with identified groundwater contamination. The client was named in the report as a potential source and thus required the services of a qualified groundwater consultant to access the property and review the claims of the consultant for the adjacent facility. The investigation of chlorinated solvents in the groundwater was performed to determine the source of the contamination. The installation of groundwater monitoring well, groundwater sampling, historical data research and report preparation was performed.

United Steel Products, East Orange, NJ: Project Manager to a large steel forming company providing Industrial Site Recovery Act (ISRA) submission and UST removal, contaminated soil removal, soil remediation and reports to the NJDEP. The client received an ISRA clearance from the NJDEP.

United Steel Products, Newark, NJ: Project Manager to a large steel forming company providing environmental investigation services to locate areas of concern which included former hazardous material storage, former USTs and other areas of concern so the owner could prepare the facility for sale.

Cardinal Glove, Clifton, NJ: Project Manager to a former glove manufacturing facility providing ISRA submissions, groundwater studies, soil remediation and report submissions.



APPENDIX C

NATURAL HERITAGE PROGRAM / LANDSCAPE PROJECT & USFWS DOCUMENTATION



State of New Jersey

MAIL CODE 501-04

DEPARTMENT OF ENVIRONMENTAL PROTECTION

DIVISION OF PARKS & FORESTRY

NEW JERSEY FOREST SERVICE

OFFICE OF NATURAL LANDS MANAGEMENT

P.O. BOX 420

TRENTON, NJ 08625-0420

Tel. (609) 984-1339 Fax (609) 984-0427

PHILIP D. MURPHY

Governor

SHEILA Y. OLIVER

Lt. Governor

CATHERINE R. McCABE

Commissioner

December 16, 2019

Michael Muller
E2 Project Management LLC
87 Hibernia Avenue
Rockaway, NJ 07866

Re: NJ-418B
Block(s) - 17001, Lot(s) - 11.02
Montgomery Township, Somerset County

Dear Mr. Muller:

Thank you for your data request regarding rare species information for the above referenced project site.

Searches of the Natural Heritage Database and the Landscape Project (Version 3.3) are based on a representation of the boundaries of your project site in our Geographic Information System (GIS). We make every effort to accurately transfer your project bounds from the topographic map(s) submitted with the Natural Heritage Data Request Form into our Geographic Information System. We do not typically verify that your project bounds are accurate, or check them against other sources.

We have checked the Landscape Project habitat mapping and the Biotics Database for occurrences of any rare wildlife species or wildlife habitat on the referenced site. The Natural Heritage Database was searched for occurrences of rare plant species or ecological communities that may be on the project site. Please refer to Table 1 (attached) to determine if any rare plant species, ecological communities, or rare wildlife species or wildlife habitat are documented on site. A detailed report is provided for each category coded as 'Yes' in Table 1.

We have also checked the Landscape Project habitat mapping and Biotics Database for occurrences of rare wildlife species or wildlife habitat in the immediate vicinity (within ¼ mile) of the referenced site. Additionally, the Natural Heritage Database was checked for occurrences of rare plant species or ecological communities within ¼ mile of the site. Please refer to Table 2 (attached) to determine if any rare plant species, ecological communities, or rare wildlife species or wildlife habitat are documented within the immediate vicinity of the site. Detailed reports are provided for all categories coded as 'Yes' in Table 2. These reports may include species that have also been documented on the project site.

The Natural Heritage Program reviews its data periodically to identify priority sites for natural diversity in the State. Included as priority sites are some of the State's best habitats for rare and endangered species and ecological communities. Please refer to Tables 1 and 2 (attached) to determine if any priority sites are located on or in the immediate vicinity of the site.

A list of rare plant species and ecological communities that have been documented from the county (or counties), referenced above, can be downloaded from <http://www.state.nj.us/dep/parksandforests/natural/heritage/countylist.html>. If suitable habitat is present at the project site, the species in that list have potential to be present.

Status and rank codes used in the tables and lists are defined in EXPLANATION OF CODES USED IN NATURAL HERITAGE REPORTS, which can be downloaded from http://www.state.nj.us/dep/parksandforests/natural/heritage/nhpcodes_2010.pdf.

Beginning May 9, 2017, the Natural Heritage Program reports for wildlife species will utilize data from Landscape Project Version 3.3. If you have questions concerning the wildlife records or wildlife species mentioned in this response, we

NHP File No. 19-4007446-18344

recommend that you visit the interactive web application at the following URL,
<https://njdep.maps.arcgis.com/apps/webappviewer/index.html?id=0e6a44098c524ed99bf739953cb4d4c7>, or contact the
Division of Fish and Wildlife, Endangered and Nongame Species Program at (609) 292-9400.

For additional information regarding any Federally listed plant or animal species, please contact the U.S. Fish &
Wildlife Service, New Jersey Field Office at <http://www.fws.gov/northeast/njfieldoffice/endangered/consultation.html>.

PLEASE SEE 'CAUTIONS AND RESTRICTIONS ON NHP DATA', which can be downloaded from
<http://www.state.nj.us/dep/parksandforests/natural/heritage/newcaution2008.pdf>.

Thank you for consulting the Natural Heritage Program. The attached invoice details the payment due for processing this
data request. Feel free to contact us again regarding any future data requests.

Sincerely,



Robert J. Cartica
Administrator

c: NHP File No. 19-4007446-18344

Table 1: On Site Data Request Search Results (6 Possible Reports)

<u>Report Name</u>	<u>Included</u>	<u>Number of Pages</u>
1. Possibly on Project Site Based on Search of Natural Heritage Database: Rare Plant Species and Ecological Communities Currently Recorded in the New Jersey Natural Heritage Database	No	0 pages included
2. Natural Heritage Priority Sites On Site	No	0 pages included
3. Rare Wildlife Species or Wildlife Habitat on the Project Site Based on Search of Landscape Project 3.3 Species Based Patches	No	0 pages included
4. Vernal Pool Habitat on the Project Site Based on Search of Landscape Project 3.3	No	0 pages included
5. Rare Wildlife Species or Wildlife Habitat on the Project Site Based on Search of Landscape Project 3.3 Stream Habitat File	No	0 pages included
6. Other Animal Species On the Project Site Based on Additional Species Tracked by Endangered and Nongame Species Program	No	0 pages included

Table 2: Vicinity Data Request Search Results (6 possible reports)

<u>Report Name</u>	<u>Included</u>	<u>Number of Pages</u>
1. Immediate Vicinity of the Project Site Based on Search of Natural Heritage Database: Rare Plant Species and Ecological Communities Currently Recorded in the New Jersey Natural Heritage Database	No	0 pages included
2. Natural Heritage Priority Sites within the Immediate Vicinity	No	0 pages included
3. Rare Wildlife Species or Wildlife Habitat Within the Immediate Vicinity of the Project Site Based on Search of Landscape Project 3.3 Species Based Patches	Yes	1 page(s) included
4. Vernal Pool Habitat In the Immediate Vicinity of Project Site Based on Search of Landscape Project 3.3	Yes	1 page(s) included
5. Rare Wildlife Species or Wildlife Habitat In the Immediate Vicinity of the Project Site Based on Search of Landscape Project 3.3 Stream Habitat File	No	0 pages included
6. Other Animal Species In the Immediate Vicinity of the Project Site Based on Additional Species Tracked by Endangered and Nongame Species Program	No	0 pages included

**Rare Wildlife Species or Wildlife Habitat Within the
Immediate Vicinity of the Project Site Based on Search of
Landscape Project 3.3 Species Based Patches**

Class	Common Name	Scientific Name	Feature Type	Rank	Federal Protection Status	State Protection Status	Grank	Srank
<i>Aves</i>								
	Bald Eagle	Haliaeetus leucocephalus	Foraging	4	NA	State Endangered	G5	S1B,S2N
	Brown Thrasher	Toxostoma rufum	Breeding Sighting	2	NA	Special Concern	G5	S3B,S4N
	Great Blue Heron	Ardea herodias	Foraging	2	NA	Special Concern	G5	S3B,S4N

**Vernal Pool Habitat
In the Immediate Vicinity of
Project Site Based on Search of
Landscape Project 3.3**

Vernal Pool Habitat Type

Vernal Pool Habitat ID

Potential vernal habitat area

1747

Total number of records: 1



United States Department of the Interior



FISH AND WILDLIFE SERVICE
New Jersey Ecological Services Field Office
4 E. Jimmie Leeds Road, Suite 4
Galloway, NJ 08205
Phone: (609) 646-9310 Fax: (609) 646-0352

<http://www.fws.gov/northeast/njfieldoffice/Endangered/consultation.html>

In Reply Refer To:
Consultation Code: 05E2NJ00-2020-SLI-0356
Event Code: 05E2NJ00-2020-E-00636
Project Name: Sectorsite NJ-418B

December 16, 2019

Subject: List of threatened and endangered species that may occur in your proposed project location, and/or may be affected by your proposed project

To Whom It May Concern:

The enclosed species list identifies threatened, endangered, proposed, and candidate species that may occur in your proposed action area and/or may be affected by your proposed project. This species list fulfills the requirements of the U.S. Fish and Wildlife Service (Service) under Section 7(c) of the Endangered Species Act (ESA) of 1973, as amended (16 U.S.C. 1531 *et seq.*)

If the enclosed list indicates that any listed species may be present in your action area, please visit the New Jersey Field Office consultation web page as the next step in evaluating potential project impacts: <http://www.fws.gov/northeast/njfieldoffice/Endangered/consultation.html>

On the New Jersey Field Office consultation web page you will find:

- habitat descriptions, survey protocols, and recommended best management practices for listed species;
- recommended procedures for submitting information to this office; and
- links to other Federal and State agencies, the Section 7 Consultation Handbook, the Service's wind energy guidelines, communication tower recommendations, the National Bald Eagle Management Guidelines, and other resources and recommendations for protecting wildlife resources.

The enclosed list may change as new information about listed species becomes available. As per Federal regulations at 50 CFR 402.12(e), the enclosed list is only valid for 90 days. Please return to the ECOS-IPaC website at regular intervals during project planning and implementation to obtain an updated species list. When using ECOS-IPaC, be careful about drawing the boundary of your Project Location. Remember that your action area under the ESA is not limited to just the footprint of the project. The action area also includes all areas that may be indirectly affected

through impacts such as noise, visual disturbance, erosion, sedimentation, hydrologic change, chemical exposure, reduced availability or access to food resources, barriers to movement, increased human intrusions or access, and all areas affected by reasonably foreseeable future that would not occur without ("but for") the project that is currently being proposed.

We appreciate your concern for threatened and endangered species. The Service encourages Federal and non-Federal project proponents to consider listed, proposed, and candidate species early in the planning process. Feel free to contact this office if you would like more information or assistance evaluating potential project impacts to federally listed species or other wildlife resources. Please include the Consultation Tracking Number in the header of this letter with any correspondence about your project.

Attachment(s):

- Official Species List
 - USFWS National Wildlife Refuges and Fish Hatcheries
 - Migratory Birds
 - Wetlands
-

Official Species List

This list is provided pursuant to Section 7 of the Endangered Species Act, and fulfills the requirement for Federal agencies to "request of the Secretary of the Interior information whether any species which is listed or proposed to be listed may be present in the area of a proposed action".

This species list is provided by:

New Jersey Ecological Services Field Office

4 E. Jimmie Leeds Road, Suite 4

Galloway, NJ 08205

(609) 646-9310

Project Summary

Consultation Code: 05E2NJ00-2020-SLI-0356

Event Code: 05E2NJ00-2020-E-00636

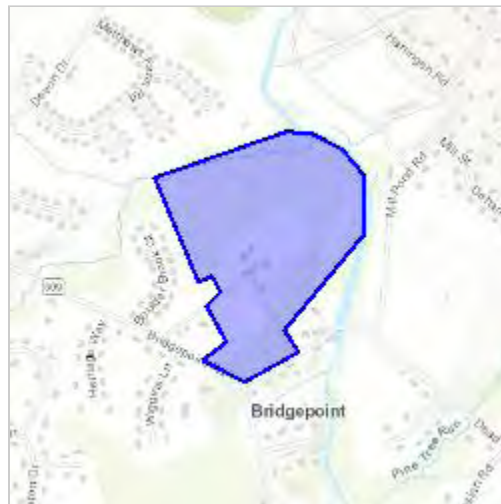
Project Name: Sectorsite NJ-418B

Project Type: COMMUNICATIONS TOWER

Project Description: Proposed New Wireless Communications Facility

Project Location:

Approximate location of the project can be viewed in Google Maps: <https://www.google.com/maps/place/40.43647081373432N74.64775776317522W>



Counties: Somerset, NJ

Endangered Species Act Species

There is a total of 2 threatened, endangered, or candidate species on this species list.

Species on this list should be considered in an effects analysis for your project and could include species that exist in another geographic area. For example, certain fish may appear on the species list because a project could affect downstream species.

IPaC does not display listed species or critical habitats under the sole jurisdiction of NOAA Fisheries¹, as USFWS does not have the authority to speak on behalf of NOAA and the Department of Commerce.

See the "Critical habitats" section below for those critical habitats that lie wholly or partially within your project area under this office's jurisdiction. Please contact the designated FWS office if you have questions.

-
1. [NOAA Fisheries](#), also known as the National Marine Fisheries Service (NMFS), is an office of the National Oceanic and Atmospheric Administration within the Department of Commerce.

Mammals

NAME	STATUS
Indiana Bat <i>Myotis sodalis</i> There is final critical habitat for this species. Your location is outside the critical habitat. Species profile: https://ecos.fws.gov/ecp/species/5949	Endangered
Northern Long-eared Bat <i>Myotis septentrionalis</i> No critical habitat has been designated for this species. Species profile: https://ecos.fws.gov/ecp/species/9045	Threatened

Critical habitats

THERE ARE NO CRITICAL HABITATS WITHIN YOUR PROJECT AREA UNDER THIS OFFICE'S JURISDICTION.

USFWS National Wildlife Refuge Lands And Fish Hatcheries

Any activity proposed on lands managed by the [National Wildlife Refuge](#) system must undergo a 'Compatibility Determination' conducted by the Refuge. Please contact the individual Refuges to discuss any questions or concerns.

THERE ARE NO REFUGE LANDS OR FISH HATCHERIES WITHIN YOUR PROJECT AREA.

Migratory Birds

Certain birds are protected under the Migratory Bird Treaty Act¹ and the Bald and Golden Eagle Protection Act².

Any person or organization who plans or conducts activities that may result in impacts to migratory birds, eagles, and their habitats should follow appropriate regulations and consider implementing appropriate conservation measures, as described [below](#).

-
1. The [Migratory Birds Treaty Act](#) of 1918.
 2. The [Bald and Golden Eagle Protection Act](#) of 1940.
 3. 50 C.F.R. Sec. 10.12 and 16 U.S.C. Sec. 668(a)

The birds listed below are birds of particular concern either because they occur on the [USFWS Birds of Conservation Concern](#) (BCC) list or warrant special attention in your project location. To learn more about the levels of concern for birds on your list and how this list is generated, see the FAQ [below](#). This is not a list of every bird you may find in this location, nor a guarantee that every bird on this list will be found in your project area. To see exact locations of where birders and the general public have sighted birds in and around your project area, visit the [E-bird data mapping tool](#) (Tip: enter your location, desired date range and a species on your list). For projects that occur off the Atlantic Coast, additional maps and models detailing the relative occurrence and abundance of bird species on your list are available. Links to additional information about Atlantic Coast birds, and other important information about your migratory bird list, including how to properly interpret and use your migratory bird report, can be found [below](#).

For guidance on when to schedule activities or implement avoidance and minimization measures to reduce impacts to migratory birds on your list, click on the PROBABILITY OF PRESENCE SUMMARY at the top of your list to see when these birds are most likely to be present and breeding in your project area.

NAME	BREEDING SEASON
Bald Eagle <i>Haliaeetus leucocephalus</i> This is not a Bird of Conservation Concern (BCC) in this area, but warrants attention because of the Eagle Act or for potential susceptibilities in offshore areas from certain types of development or activities. https://ecos.fws.gov/ecp/species/1626	Breeds Sep 1 to Jul 31
Blue-winged Warbler <i>Vermivora pinus</i> This is a Bird of Conservation Concern (BCC) only in particular Bird Conservation Regions (BCRs) in the continental USA	Breeds May 1 to Jun 30

NAME	BREEDING SEASON
Cerulean Warbler <i>Dendroica cerulea</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska. https://ecos.fws.gov/ecp/species/2974	Breeds Apr 28 to Jul 20
Prairie Warbler <i>Dendroica discolor</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 1 to Jul 31
Rusty Blackbird <i>Euphagus carolinus</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds elsewhere
Wood Thrush <i>Hylocichla mustelina</i> This is a Bird of Conservation Concern (BCC) throughout its range in the continental USA and Alaska.	Breeds May 10 to Aug 31

Probability Of Presence Summary

The graphs below provide our best understanding of when birds of concern are most likely to be present in your project area. This information can be used to tailor and schedule your project activities to avoid or minimize impacts to birds. Please make sure you read and understand the FAQ “Proper Interpretation and Use of Your Migratory Bird Report” before using or attempting to interpret this report.

Probability of Presence (■)

Each green bar represents the bird's relative probability of presence in the 10km grid cell(s) your project overlaps during a particular week of the year. (A year is represented as 12 4-week months.) A taller bar indicates a higher probability of species presence. The survey effort (see below) can be used to establish a level of confidence in the presence score. One can have higher confidence in the presence score if the corresponding survey effort is also high.

How is the probability of presence score calculated? The calculation is done in three steps:

1. The probability of presence for each week is calculated as the number of survey events in the week where the species was detected divided by the total number of survey events for that week. For example, if in week 12 there were 20 survey events and the Spotted Towhee was found in 5 of them, the probability of presence of the Spotted Towhee in week 12 is 0.25.
2. To properly present the pattern of presence across the year, the relative probability of presence is calculated. This is the probability of presence divided by the maximum probability of presence across all weeks. For example, imagine the probability of presence in week 20 for the Spotted Towhee is 0.05, and that the probability of presence at week 12

(0.25) is the maximum of any week of the year. The relative probability of presence on week 12 is $0.25/0.25 = 1$; at week 20 it is $0.05/0.25 = 0.2$.

3. The relative probability of presence calculated in the previous step undergoes a statistical conversion so that all possible values fall between 0 and 10, inclusive. This is the probability of presence score.

Breeding Season (■)

Yellow bars denote a very liberal estimate of the time-frame inside which the bird breeds across its entire range. If there are no yellow bars shown for a bird, it does not breed in your project area.

Survey Effort (|)

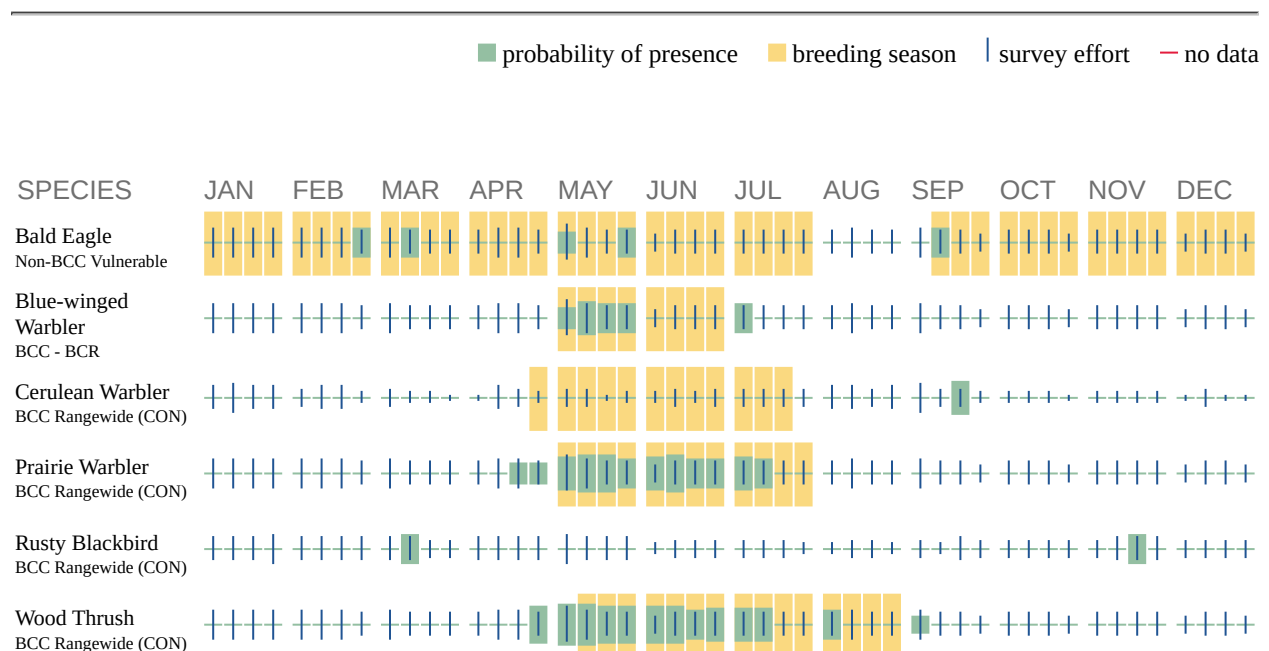
Vertical black lines superimposed on probability of presence bars indicate the number of surveys performed for that species in the 10km grid cell(s) your project area overlaps. The number of surveys is expressed as a range, for example, 33 to 64 surveys.

No Data (—)

A week is marked as having no data if there were no survey events for that week.

Survey Timeframe

Surveys from only the last 10 years are used in order to ensure delivery of currently relevant information. The exception to this is areas off the Atlantic coast, where bird returns are based on all years of available data, since data in these areas is currently much more sparse.



Additional information can be found using the following links:

- Birds of Conservation Concern <http://www.fws.gov/birds/management/managed-species/birds-of-conservation-concern.php>
- Measures for avoiding and minimizing impacts to birds <http://www.fws.gov/birds/management/project-assessment-tools-and-guidance/conservation-measures.php>
- Nationwide conservation measures for birds <http://www.fws.gov/migratorybirds/pdf/management/nationwidestandardconservationmeasures.pdf>

Migratory Birds FAQ

Tell me more about conservation measures I can implement to avoid or minimize impacts to migratory birds.

[Nationwide Conservation Measures](#) describes measures that can help avoid and minimize impacts to all birds at any location year round. Implementation of these measures is particularly important when birds are most likely to occur in the project area. When birds may be breeding in the area, identifying the locations of any active nests and avoiding their destruction is a very helpful impact minimization measure. To see when birds are most likely to occur and be breeding in your project area, view the Probability of Presence Summary. [Additional measures](#) and/or [permits](#) may be advisable depending on the type of activity you are conducting and the type of infrastructure or bird species present on your project site.

What does IPaC use to generate the migratory birds potentially occurring in my specified location?

The Migratory Bird Resource List is comprised of USFWS [Birds of Conservation Concern \(BCC\)](#) and other species that may warrant special attention in your project location.

The migratory bird list generated for your project is derived from data provided by the [Avian Knowledge Network \(AKN\)](#). The AKN data is based on a growing collection of [survey, banding, and citizen science datasets](#) and is queried and filtered to return a list of those birds reported as occurring in the 10km grid cell(s) which your project intersects, and that have been identified as warranting special attention because they are a BCC species in that area, an eagle ([Eagle Act](#) requirements may apply), or a species that has a particular vulnerability to offshore activities or development.

Again, the Migratory Bird Resource list includes only a subset of birds that may occur in your project area. It is not representative of all birds that may occur in your project area. To get a list of all birds potentially present in your project area, please visit the [AKN Phenology Tool](#).

What does IPaC use to generate the probability of presence graphs for the migratory birds potentially occurring in my specified location?

The probability of presence graphs associated with your migratory bird list are based on data provided by the [Avian Knowledge Network \(AKN\)](#). This data is derived from a growing collection of [survey, banding, and citizen science datasets](#).

Probability of presence data is continuously being updated as new and better information becomes available. To learn more about how the probability of presence graphs are produced and how to interpret them, go the Probability of Presence Summary and then click on the "Tell me about these graphs" link.

How do I know if a bird is breeding, wintering, migrating or present year-round in my project area?

To see what part of a particular bird's range your project area falls within (i.e. breeding, wintering, migrating or year-round), you may refer to the following resources: [The Cornell Lab of Ornithology All About Birds Bird Guide](#), or (if you are unsuccessful in locating the bird of interest there), the [Cornell Lab of Ornithology Neotropical Birds guide](#). If a bird on your migratory bird species list has a breeding season associated with it, if that bird does occur in your project area, there may be nests present at some point within the timeframe specified. If "Breeds elsewhere" is indicated, then the bird likely does not breed in your project area.

What are the levels of concern for migratory birds?

Migratory birds delivered through IPaC fall into the following distinct categories of concern:

1. "BCC Rangewide" birds are [Birds of Conservation Concern](#) (BCC) that are of concern throughout their range anywhere within the USA (including Hawaii, the Pacific Islands, Puerto Rico, and the Virgin Islands);
2. "BCC - BCR" birds are BCCs that are of concern only in particular Bird Conservation Regions (BCRs) in the continental USA; and
3. "Non-BCC - Vulnerable" birds are not BCC species in your project area, but appear on your list either because of the [Eagle Act](#) requirements (for eagles) or (for non-eagles) potential susceptibilities in offshore areas from certain types of development or activities (e.g. offshore energy development or longline fishing).

Although it is important to try to avoid and minimize impacts to all birds, efforts should be made, in particular, to avoid and minimize impacts to the birds on this list, especially eagles and BCC species of rangewide concern. For more information on conservation measures you can implement to help avoid and minimize migratory bird impacts and requirements for eagles, please see the FAQs for these topics.

Details about birds that are potentially affected by offshore projects

For additional details about the relative occurrence and abundance of both individual bird species and groups of bird species within your project area off the Atlantic Coast, please visit the [Northeast Ocean Data Portal](#). The Portal also offers data and information about other taxa besides birds that may be helpful to you in your project review. Alternately, you may download the bird model results files underlying the portal maps through the [NOAA NCCOS Integrative Statistical](#)

[Modeling and Predictive Mapping of Marine Bird Distributions and Abundance on the Atlantic Outer Continental Shelf](#) project webpage.

Bird tracking data can also provide additional details about occurrence and habitat use throughout the year, including migration. Models relying on survey data may not include this information. For additional information on marine bird tracking data, see the [Diving Bird Study](#) and the [nanotag studies](#) or contact [Caleb Spiegel](#) or [Pam Loring](#).

What if I have eagles on my list?

If your project has the potential to disturb or kill eagles, you may need to [obtain a permit](#) to avoid violating the Eagle Act should such impacts occur.

Proper Interpretation and Use of Your Migratory Bird Report

The migratory bird list generated is not a list of all birds in your project area, only a subset of birds of priority concern. To learn more about how your list is generated, and see options for identifying what other birds may be in your project area, please see the FAQ “What does IPaC use to generate the migratory birds potentially occurring in my specified location”. Please be aware this report provides the “probability of presence” of birds within the 10 km grid cell(s) that overlap your project; not your exact project footprint. On the graphs provided, please also look carefully at the survey effort (indicated by the black vertical bar) and for the existence of the “no data” indicator (a red horizontal bar). A high survey effort is the key component. If the survey effort is high, then the probability of presence score can be viewed as more dependable. In contrast, a low survey effort bar or no data bar means a lack of data and, therefore, a lack of certainty about presence of the species. This list is not perfect; it is simply a starting point for identifying what birds of concern have the potential to be in your project area, when they might be there, and if they might be breeding (which means nests might be present). The list helps you know what to look for to confirm presence, and helps guide you in knowing when to implement conservation measures to avoid or minimize potential impacts from your project activities, should presence be confirmed. To learn more about conservation measures, visit the FAQ “Tell me about conservation measures I can implement to avoid or minimize impacts to migratory birds” at the bottom of your migratory bird trust resources page.

Wetlands

Impacts to [NWI wetlands](#) and other aquatic habitats may be subject to regulation under Section 404 of the Clean Water Act, or other State/Federal statutes.

For more information please contact the Regulatory Program of the local [U.S. Army Corps of Engineers District](#).

Please note that the NWI data being shown may be out of date. We are currently working to update our NWI data set. We recommend you verify these results with a site visit to determine the actual extent of wetlands on site.

FRESHWATER EMERGENT WETLAND

- [PEM1/SS1A](#)
- [PEM1/SS1Ah](#)

FRESHWATER FORESTED/SHRUB WETLAND

- [PFO1Ah](#)
- [PSS4A](#)

FRESHWATER POND

- [PUBHh](#)

RIVERINE

- [R4SBA](#)
 - [R2UBH](#)
-

COMMUNICATION TOWER AND ANTENNA CONSULTATION IN NEW JERSEY

The U.S. Fish and Wildlife Service's (Service) New Jersey Field Office recognizes that individual project review by the Service is not required under certain conditions. The Service provides the following comments in accordance with provisions of the Endangered Species Act of 1973 (ESA) (87 Stat. 884, as amended; 16 U.S.C. 1531 *et seq.*), the Bald and Golden Eagle Protection Act of 1940 (16 U.S.C. 668-688d), and the National Environmental Policy Act of 1969 (83 Stat. 852; 42 U.S.C. 4321 *et seq.*).

Migratory birds are a Federal trust resource. Communication towers may pose a hazard to migrating birds and to birds nesting in the area. Risk factors include tower height, physical design, lighting, and site location relative to migratory corridors and bird concentration areas. In addition, certain communication towers may adversely affect federally listed threatened and endangered species through direct disturbance of listed plants and animals, impacts to their habitats, and/or creation of a collision hazard for listed birds and bats.

The Service has determined that the following proposed actions are not likely to adversely affect federally listed species in New Jersey, nor have any significant impacts on migratory birds or other wildlife resources under Service jurisdiction:

- routine maintenance (*e.g.*, painting, antenna replacement) at existing tower sites or other existing tower support structures;
- repair or replacement of existing towers and/or equipment;
- co-location of new equipment or antennas on an existing structure (*e.g.*, tower, water tank, flagpole, building), where proposed activities will not require the addition of lights or guy wires to an existing structure, or increase the height of an existing structure above 200 feet; and
- construction of new towers without lights or guy wires, under 200 feet in height

PROVIDED that:

- (1) all ground disturbance is at least 150 feet from any beach or dune;
- (2) in areas where the IPaC species list¹ includes bog turtle, red knot, Indiana bat, dwarf wedgemussel, swamp pink, Knieskern's beaked-rush, sensitive joint-vetch, **or** Hirsts' panic grass: (a) any net gain in impervious surface is <0.25 acre, **and** (b) all ground disturbance is at least 150 feet from any wetland or open water (*e.g.*, river, stream, pond, lake) or is limited to existing developed areas (*e.g.*, rooftops, pavement, gravel, maintained lawn);
- (3) in areas where the IPaC species list¹ includes Indiana bat **or** northern long-eared bat: (a) total tree clearing is <0.25 acre (including for access roads), **and** (b) removal of trees ≥3 inches diameter at breast height will only occur within the bat inactive season. (*i.e.* Trees located in municipalities² with a hibernation occurrence for either bat species may be cut between November 16 and March 31; trees in all other municipalities may be cut between October 1 and March 31);
- (4) the project is consistent with the Service's National Bald Eagle Management Guidelines;³
- (5) the project is not located in a National Wildlife Refuge;⁴
- (6) removal of native vegetation (which provides migratory bird habitat) will not exceed 0.5 acre;
- (7) tree clearing will be seasonally restricted from April 1 to August 31 **or**, if clearing will occur during that season, all trees will be inspected no more than 24 hours prior to cutting to ensure no active nests of any migratory bird are present; and
- (8) new/replacement towers will follow the most current Service recommendations (attached).

Do not contact this office for review of projects that meet the above criteria. This document may be used as the Service's concurrence with an ESA determination of "not likely to adversely affect" federally listed species for projects in New Jersey that meet the above criteria.

¹ Information, Planning, and Conservation System, <http://ecos.fws.gov/ipac/>

² See the list of bat municipalities at <https://www.fws.gov/northeast/njfieldoffice/pdf/battowns.pdf>

³ <http://www.fws.gov/northeast/ecologicalservices/pdf/NationalBaldEagleManagementGuidelines.pdf>

⁴ Refuge boundary mapping is available at <https://www.fws.gov/gis/data/national/index.html>