



Engineering  
& Design

# Environmental Impact Assessment

January 2025

## Deserted Village Enhancements

Portion of Block: 5005, Lot 1

Township of Berkeley Heights, Union County, New Jersey

Prepared for:

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CED Project No. 24012642A

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## Introduction

### Purpose of Document

This report has been prepared in accordance with the Environmental Impact Assessment Requirements of the Green Acres Program Park Development Application which requires the preparation and submittal of an Environmental Impact Assessment (EIA) for certain applications.

Union County is seeking \$2,100,000 in grant funding, with an additional 50% match commitment of \$2,100,000, for a total project budget of \$4,200,000, to enhance the Deserted Village at Watchung Reservation. The reservation is located at Glenside Avenue in Berkeley Heights, New Jersey (Block 5001, Lot 1; Block 5004, Lot 1, Block 5005, Lot 1). The proposed project will improve parts of the Deserted Village at the Watchung Reservation, consisting of 408.44 acres of the total 2,130.297-acre reservation. The property is owned by Union County and the project locations currently feature Masker's Barn and the village cemetery. These amenities serve residents, businesses, and organizations in the surrounding community of Berkeley Heights, as well as visitors from all over the region.

This EIA documents environmental resources on the project site, potential impacts to these resources resulting from the proposed activities and measures to avoid or reduce impacts.

### Methods

Various sources of background information including databases, maps, plans, and reports referenced herein were utilized in preparing the EIA. The New Jersey Department of Environmental Protection's (NJDEP) NJ-GeoWeb (NJDEP, 2024) database was an important source of information in this EIA. Background information was supplemented with observations from Colliers Engineering and Design staff regarding site characteristics and biological resources observed during field visits. Land use related areas of investigation include, but are not limited to, natural resources, community resources, water quality (stormwater management), and assessment of impacts from the proposed development.

Staff from Colliers Engineering and Design (CED) visited the subject property on December 18, 2024, to make field observations regarding site character and biological resources. CED staff (**Appendix B**) utilized the information gathered from the field visits and background sources to develop the descriptions, analyses, and interpretations provided herein.

Report figures including maps are presented in Appendix A; photographs are presented in Appendix C; and the results of a Natural Heritage Program Database search are pending.

### Site Location and Characteristics

The subject site, Deserted Village, is a public park in Township of Berkeley Heights, Union County, New Jersey. Site access is provided by Cataract Hollow Road. The Deserted Village is within the Watchung Reservation. The Deserted Village is approximately 408.44 acres in area within the total Reservation of 2,130.297-acres. See **Figures 1-3** in Appendix A for Site Location.



## Zoning and Land Use

### **Zoning**

The site is depicted within the Open Land Zone (ARE-3) per the Township of Berkeley Heights Zoning Map (**Figure 4**).

The proposed stewardship activities are allowed in the OL Zone as it is a public use in an existing public park owned by Union County.

### **Present Land Use**

The Site, Deserted Village, currently exists as a public park. The State Planning Area Map indicates that the project site is located within the Parks and Natural Areas (PA-8) (**Figure 5**).

## Project Description

### Project Objectives

Union County is seeking \$2,100,000 in grant funding, with an additional 50% match commitment of \$2,100,000, for a total project budget of \$4,200,000, to enhance the Deserted Village at Watchung Reservation. The reservation is located at Glenside Avenue in Berkeley Heights, New Jersey (Block 5001, Lot 1; Block 5004, Lot 1, Block 5005, Lot 1). The proposed project will improve parts of the Deserted Village at the Watchung Reservation, consisting of 408.44 acres of the total 2,130.297-acre reservation. The property is owned by Union County and the project locations currently feature Masker's Barn and the village cemetery. These amenities serve residents, businesses, and organizations in the surrounding community of Berkeley Heights, as well as visitors from all over the region.

### **Licenses/Permits**

Permits or approvals from Local, State, and/or Federal departments or agencies may be required for the proposed project, examples of which included the following:

- Soil Conservation District for Soil Erosion and Sediment Control Plan Certification
- Berkeley Heights Tree removal permit

## Description of Proposed Improvements

Union County proposes the following improvements:

- **Meadow Restoration:**
  - Removal of invasive trees, shrubs, and plants will be undertaken to restore the natural meadow ecosystem.

- **Type of Improvement:** Rehabilitation of an existing natural area.
- **Reasoning:** Enhances biodiversity, supports native species, and improves the ecological health of the reservation.
- **Green Infrastructure Installation:**
  - Stormwater storage systems will be implemented to manage runoff effectively and reduce flooding.
  - **Type of Improvement:** New addition to the site.
  - **Reasoning:** Improves water management and sustainability while mitigating environmental impacts.
- **Tree Removal and Cemetery Restoration:**
  - Approximately 24 mature trees will be removed to allow for the restoration of the cemetery to an open grassed area. New Dogwood trees will be planted to enhance the aesthetic and historical significance of the site.
  - **Type of Improvement:** Rehabilitation of an existing facility.
  - **Reasoning:** Preserves historical elements while creating a more accessible and visually appealing space.

## Environmental Setting

The environmental setting of a region is the sum of the physical and biological features and processes that characterize the region. The physical conditions including the location, topography, geology, soils, water resources, and other features directly influence the overlying biotic communities that occur in an area. The constraints on the property resulting from the interaction of physical and biological features directly influence the design of the development plan proposed for the site and analyzed herein. An aerial map of the site is included in Appendix A (**Figure 6**).

Photographs of the subject property and project area can be found in **Appendix C**.

## Physical Resources and Conditions

### Physiographic Landscape

Areas that have similar rock types, geologic structures, landforms, and histories are organized into regions called Physiographic Provinces. New Jersey has four provinces, which make it a rather complex state for its small size. From northwest to southeast across the State, the provinces are (1) Ridge and Valley, (2) Highlands, (3) Piedmont, and (4) Coastal Plain. The project area is situated within the **Piedmont** Physiographic Province of New Jersey.

The **Piedmont Province** is characterized as a low rolling plain divided by a series of higher ridges and makes up approximately one-fifth of the state (Dalton 2003). It is mainly underlain by slightly

folded and faulted sedimentary rocks of Triassic and Jurassic age, and igneous rocks of Jurassic age (Dalton 2003).

Based on site observations, there are no bedrock formations at or near the surface in the project area, which is expected for this physiographic province. There are no critical geological areas located on the project site.

### **Landform/Topography**

Deserted Village is partially developed and therefore, the natural topography has partially been altered. The location of proposed activities is generally flat with elevations of 300 to 350 feet.

### **Geologic Characteristic**

The bedrock geology for the entire subject property is characterized by the Feltville formation (Jps) (**Figure 7**).

The Feltville Formation can be characterized as a continuation of the Passaic Formation, which is mostly playa and alluvial fan deposits resulting from the rifting of Pangea. The primarily red color of this formation is often evidence that the sediments were deposited in arid conditions. However, the Feltville Formation differs from the Passaic Formation in that it contains a more significant portion of non-red layers, which were laid down by deep lakes present during wetter periods.

### **Soils**

The Natural Resource Conservation Service (NRCS) Web Soil Survey (WSS) provides soil data and information produced by the National Cooperative Soil Survey, including information that is useful at the planning level to draw general conclusions about the suitability of a site for certain land uses.

A review of the Web Soil Survey shows the proposed project area is underlain by the following soil type described below (**See Figure 8**):

**Amwell silt loam, 2 to 6 percent slopes:** The Amwell series consists of deep and very deep, somewhat poorly and moderately well drained soils on uplands. They formed mainly in colluvial material derived from basic igneous rocks. Slopes range from 0 to 15 percent. Mean annual air temperature is about 50 degrees F. Near the type location and mean annual precipitation is about 40 to 48 inches.

### **Hydrology and Drainage**

The project site is located in the Green Brook sub-watershed of the Raritan River Watershed of the Atlantic Coast drainage basin (**Figure 9**).

### **Groundwater Quality and Quantity**

Groundwater is all water within the soil and subsurface strata that is not at the surface of the land. It includes water that is within the earth that supplies wells and springs. It includes groundwater basins

and water in perched water tables that lies above restrictive subsurface layers. Groundwater resources are often functionally linked to overlying land areas and surface water bodies; groundwater is often recharged through “outcrop” areas at the land surface and ground water discharges (“seeps”) may contribute to base flows of streams and rivers.

The groundwater yields of any particular geological formation or soil horizon are a function of the porosity and permeability of the material comprising the formation (consolidated rock or unconsolidated deposits and soils). Porosity describes the water-containing spaces between individual mineral grains, while permeability is the ease or difficulty with which water is transmitted through interconnecting spaces in the formation. Formations lacking open spaces between the mineral grains have both low porosity and low permeability. Weathering and cracking of the parent bedrock can induce secondary porosity in the formation; water can accumulate and move through these fractures in the primary rock formation.

Brunswick aquifer system (Ba) is mapped for the subject property by NJ-GeoWeb (**Figure 10**). Ba is with the Newark group of aquifers. Aquifers in the Newark Group, present in the Piedmont physiographic province, consist of shale and sandstone. Water generally is present in weathered joint and fracture systems in the upper 200 or 300 ft (Barksdale and others, 1958). Below a depth of 500 ft, fractures are fewer and smaller, and water availability is reduced, depending on rock type. In coarse-grained sandstones, groundwater also is present in intergranular pore spaces. In several counties, the shale and sandstone of the Newark Group are the most productive aquifers and yield as much as 1,500 gal/min (Carswell and Rooney, 1976; Nemickas, 1976).

### **Surface Water Quality**

No waterways and/or streams are present in the vicinity of the project site.

## **Biological Resources**

Impacts to biological resources on-site are expected as a result of the proposed development. The proposed development is largely concentrated in an area that has been previously disturbed with its current development. Unavoidable adverse impacts to biological resources include loss of native vegetation and wildlife habitat. Information on the biological resources of the project area was compiled from previous reports, database searches, and personal observation from field visits conducted by staff members from Colliers Engineering & Design.

### **Vegetation**

The vegetation of the site is influenced by and reflects the geographic location (Piedmont Physiographic Province), topography and exposure, bedrock geology and soils, landscape processes, hydrogeology (i.e., the streams, ponds, high water tables, etc.), and land use history.

Deserted Village is an active and passive recreational park. The area of the proposed improvements is in the passive recreational area of the park. Mature trees will be removed as part of the restoration of the graveyard. Please see the restoration plan for additional details.

## **Wildlife**

The term wildlife pertains to zoological (non-plant) resources, such as insects and animals. Terrestrial wildlife includes insects and animals that are not primarily aquatic. Terrestrial wildlife includes species that primarily occur on land and also includes avian species.

The project site is currently developed as a public park. Based on the disturbed nature of the site and surrounding disturbances associated with roadways and development, wildlife species that may utilize the site are expected to be common and somewhat tolerant of human disturbances. An Natural Resource Inventory (NRI) was reviewed for Township of Berkeley Heights. The NRI identifies common wildlife found in New Jersey and specifically in Union County or Township of Berkeley Heights.

The inventory identifies common mammals found in New Jersey which includes but is not limited to various species of shrews, moles, bats, squirrels, mice, rats, foxes, raccoon, opossum, eastern chipmunk, and white-tailed deer.

Birds identified within this region include but are not limited to various species of the following: ducks, geese, doves, hummingbirds, rails, hawks, owls, woodpeckers, flycatchers, vireos, swallows, wrens, warblers, and sparrows.

Common amphibians and reptiles of this region consist of various species of snakes, turtles, frogs, and salamanders; This includes but is not limited to the following species: eastern gartersnake, northern brownsnake, eastern painted turtle, musk turtle, northern gray treefrog, bullfrog, green frog, spotted salamander, and red-backed salamander.

## **Rare Species and Species of Special Concern**

A request was sent to the Natural Heritage Program (NHP) for a list of rare plant and/or wildlife species that may occur on or within the vicinity of the project site. A response is currently pending.

The New Jersey Landscape Project data accessed through the NJ-GeoWeb (**Figure 12**) identified Barred Owl, Eastern Long tailed Salamander, NJ Chorus Frog, Silver-haired Bat, Wood Thrush, Wood Turtle and Woodland Box Turtle habitats as potentially being present on site. No threatened or endangered species were observed during field visits.

## **Critical Environmental Resources and Features**

Critical or “sensitive” environmental resources and features are those that either have more inherent environmental value, or are more susceptible to perturbation, or both. These resources and features include those with special ecosystem functions such as wetlands; those with special regulatory status such as endangered species; those with special permitting needs such as steep slopes to be graded or floodplains planned for development; and those with special socio-economic value such as long-established trails for public access and view sheds.

## Wetlands/Waters

Wetlands are those areas that are inundated or saturated with surface water or groundwater at a frequency and duration sufficient to support, and that under normal circumstances do support, a prevalence of vegetation typically adapted to life in saturated soil conditions. Wetlands generally include swamps, marshes, bogs and similar areas. Wetlands are recognized for their many important ecosystem functions and socio-economic values and are provided protection pursuant to the New Jersey Freshwater Wetlands Protection Act of 1987.

The NJ-GeoWeb does not depict wetlands on or within the vicinity of the project site (**Figure 13**). The site reconnaissance performed confirmed no wetlands and/or their associated transition areas will constrain the proposed stewardship activities.

## Critical Wildlife Habitat

The New Jersey Landscape Project uses geographic information system (GIS) technology to map critical wildlife habitat throughout the State based on species location data, land cover data and species life history and habitat requirements. Habitat patches are assigned a numbered rank based on the criteria listed below.

- Rank 5 is assigned to patches containing one or more occurrences of at least one wildlife species listed as endangered or threatened on the Federal list of endangered and threatened species.
- Rank 4 is assigned to patches with one or more occurrences of at least one State endangered species.
- Rank 3 is assigned to patches containing one or more occurrences of at least one State threatened species.
- Rank 2 is assigned to patches containing one or more occurrences of species considered to be species of special concern.
- Rank 1 is assigned to patches that meet habitat-specific suitability requirements such as minimum size criteria for endangered, threatened or priority wildlife species, but that do not intersect with any confirmed occurrences of such species.

A request was sent to the Natural Heritage Program (NHP) for a list of rare plant and/or wildlife species that may occur on or within the vicinity of the project site. A response is currently pending.

The New Jersey Landscape Project data accessed through the NJ-GeoWeb (**Figure 12**) identified Barred Owl, Eastern Long tailed Salamander, NJ Chorus Frog, Silver-haired Bat, Wood Thrush, Wood Turtle and Woodland Box Turtle habitats as potentially being present on site. No threatened or endangered species were observed during field visits.

## Floodplains

The geomorphic area inundated by flood waters of rivers or streams is the floodplain, which has a series of structural subdivisions defined largely by elevation, position and the periodicity of inundation. Floodplains provide important ecosystem functions and socio-economic values including the dissipation of flood waters, groundwater recharge, water quality improvement, wildlife habitat, etc.

Flood Insurance Rate Map (FIRM) Map Number 34039C0018F, effective 9/20/2006 prepared by the Federal Emergency Management Agency (FEMA), identifies the project area within Flood Zone X, an area of minimal flood hazard (**Figure 14**).

## Cultural and Aesthetic Resources

### Historic and Archaeological Resources

A review of the NJ-GeoWeb mapping identifies the site as being within the Feltville historic district. (**Figure 15**).

### Aesthetic Features

Aesthetics of the park will improve with the stewardship activities proposed.

## Community Resources and Conditions

### Population Density and Distribution

Due to the non-residential nature of the proposed project, the proposed stewardship activities within the existing park is not expected to have an impact on the local population density and distribution.

### Social and Economic Effects

The proposed project would generate construction jobs during peak construction. No significant socioeconomic effects are anticipated with the proposed project construction and operation.

### Traffic and Transit

The proposed stewardship activities within the existing recreational park is not anticipated to cause a significant increase in traffic. The proposed construction would have a very minor impact on the surrounding area in terms of traffic when compared to the No-Build Conditions.

## Schools

The proposed project involves the stewardship activities within an existing public park. This use will not generate any school age children; therefore, no impacts to private or public schools are anticipated.

## Public Safety

Negligible impacts are anticipated for police, fire, and rescue services.

## Assessment of Environmental Impacts

The proposed development will result in some temporary and permanent impacts to existing land covers/land uses and natural resources. Potential impacts are identified below according to specific site characteristics set forth in the previous sections of this document. Mitigation measures to avoid or minimize these impacts are identified for the construction and operational phases of the proposed project and are also summarized in the following section on steps to minimize environmental impacts.

## Impacts to Physical Conditions

### Topography, Geology, and Soils

Deserted Village is partially developed as a public park and therefore, the natural topography has partially been altered.

The topography and existing soils of the project site will be further altered as part of the proposed stewardship activities through grading and placement of green infrastructure. Considering the geographic location of the site, no bedrock outcrops exist on the site. The NJ-GeoWeb does not show any bedrock outcrop existing onsite; therefore, impacts to these features are not anticipated.

Should acid soils be encountered during construction, the guidelines recommended by the Soil Conservation Service will be followed when handling these soils. The implementation of a Soil Erosion and Sediment Control Plan during the construction phase followed by the placement of either impervious surface or grass cover will reduce the potential for erosion.

Impacts to topography, soil, and geology, as a result of the development, are expected to be minor and typical of this type of development project.

### Effects on Hydrology/Water Quality

The proposed stewardship activities will improve water quality with the proposed stormwater management/green infrastructure.

No long-term, adverse water quality impacts are expected to affect surface water or groundwater because of the proposed project.



Temporary short-term impacts to surface water quality during construction will be minor when erosion, runoff, and sedimentation are controlled. The temporary impacts on surface water quality will be minimized by implementing standard construction methods that control stormwater runoff and sediment and soil erosion, prevent soil compaction, and reduce non-point source pollution. Construction activities will follow an approved Soil Erosion and Sediment Control Plan to avoid adverse impacts of displaced soil and sediment on adjacent land, particularly the wetlands and surface water. Grading activities will be staged during construction to minimize the amount of bare soil exposed at any one time.

### **Groundwater**

Impacts to groundwater quality as a result of the proposed activities are not expected. The proposed project also does not include any thermal discharges to surface water or groundwater. Thus, no environmental effects from thermal discharges are anticipated.

## **Impacts to Biological Resources**

### **Vegetation and Flora**

Impacts to 24 mature trees are anticipated as part of the restoration of the graveyard on site.

### **Aquatic and Terrestrial Wildlife**

Significant impacts to wildlife species are not expected as a result of the stewardship activities.

The proposed project does not include any discharges to surface water, and construction will be outside of critical environmental resources. Temporary short-term impacts to surface water quality during construction will be minor when erosion, runoff, and sedimentation are controlled.

No long-term adverse impacts related to noise, dust, lighting, and turbid discharges to surface water are expected to affect aquatic and terrestrial wildlife because of the proposed project.

### **Rare Species and Species of Special Concern**

A request was sent to the Natural Heritage Program (NHP) for a list of rare plant and/or wildlife species that may occur on or within the vicinity of the project site. A response is currently pending.

The New Jersey Landscape Project data accessed through the NJ-GeoWeb (**Figure 12**) identified Barred Owl, Eastern Long tailed Salamander, NJ Chorus Frog, Silver-haired Bat, Wood Thrush, Wood Turtle and Woodland Box Turtle habitats as potentially being present on site. No threatened or endangered species were observed during field visits.

Adverse impacts to rare wildlife species and/or their habitats are not anticipated as the proposed stewardship activities will enhance habitats i.e. meadow restoration and green infrastructure.

## Impacts to Critical Environmental Resources

### Wetlands

No wetlands or their associated transition areas were identified on the project site.

### Critical Wildlife Habitat

A request was sent to the Natural Heritage Program (NHP) for a list of rare plant and/or wildlife species that may occur on or within the vicinity of the project site. A response is currently pending.

The New Jersey Landscape Project data accessed through the NJ-GeoWeb (**Figure 12**) identified Barred Owl, Eastern Long tailed Salamander, NJ Chorus Frog, Silver-haired Bat, Wood Thrush, Wood Turtle and Woodland Box Turtle habitats as potentially being present on site. No threatened or endangered species were observed during field visits.

Adverse impacts to rare wildlife species and/or their habitats are not anticipated as the proposed stewardship activities will enhance habitats i.e. meadow restoration and green infrastructure.

### Floodplains

The project avoids encroachments into the flood hazard area and riparian zone. The proposed project will not be impacted by sea level rise.

### Aquifer Recharge Areas

Recharge areas will not be impacted by the stewardship activities.

## Impacts to Cultural Resources

The stewardship activities will enhance the current cultural resources on site.

Should additional historic/cultural resources be found to exist onsite during construction, the State Historic Preservation Office will be notified.

## Impacts to Aesthetic Resources

The proposed stewardship activities will improve the aesthetic resources of the park.

## Impacts to Air Quality

The proposed stewardship activities may have minor impacts on air quality during the construction phase. The overall impact to air quality in the local atmosphere is expected to be negligible.

Minor, localized, short-term effects on air quality will occur during the construction phase of the proposed project. Potential air pollutants generated during the construction phase include carbon

monoxide (CO) from the exhaust of vehicles and construction equipment and particulates from dust generated during construction activities. Earth moving and excavation have the highest engine emissions and dust generation (SAEFL, 2004). The levels of CO and particulates are expected to be greatest during the land clearing and site preparation stages of the construction phase, which is when diesel construction vehicles and heavy equipment will be the most prevalent. The CO and particulate levels are expected to diminish upon completion of earthwork and during the construction phase of the project. The minor impacts to air quality during the construction phase are not anticipated to be significant.

The acceptable air quality standards are not anticipated to be impacted by the proposed project due to its relatively small scale. While air quality may be locally impacted during construction and operation, no significant net-impacts to air quality are anticipated to result from the proposed project.

Measures that can be taken to minimize air quality impacts during the construction phase include:

- Dust control
- No vehicle idling policy
- Maintenance of vehicles and equipment in accordance with manufacturer's specifications
- Use of licensed and experienced contractors

Once the project is complete, and during the operational phase, the anticipated outdoor air pollution will primarily be that of vehicle exhaust from those entering and leaving the park, which is consistent with existing impacts associated with the site and surrounding land uses.

## Steps to Minimize Environmental Impacts

### Development Schedule and Construction Phase

The areas designated for clearing of vegetation, earthwork, and land disturbances has been minimized to the smallest possible extent in order to reduce adverse impacts, as described elsewhere in this EIA. Construction activities will follow an approved Soil Erosion and Sediment Control Plan to avoid adverse impacts of displaced soil and sediment on adjacent land.

Construction noise will cause a temporary and short-term increase to the ambient sound environment within the affected area. Noise levels could be expected to temporarily increase to approximately 90 decibels during construction. Noise generated during construction will be limited to daylight hours in accordance with Township of Berkeley Heights ordinances, and the contractor will comply with OSHA noise level requirements. Dust particulates generated by heavy construction equipment if the weather is dry during construction will be mitigated by best management practices and appropriate controls (e.g., wetting, covers, etc.) to control fugitive dust.

### Planning Phase Measures

The planning phase is perhaps the most important aspect of proposing measures or controls that will minimize or eliminate negative impacts. All proposed stewardship activities will enhance the existing

park.

## Construction Phase Measures

Construction phase impacts may include noise, dust, traffic, environmental safety, and other short-term potential impacts. Some measures to reduce construction phase impacts include, but are not limited to:

- Implementation of the Soil Erosion and Sediment Control Plan;
- Designated construction vehicle access routes;
- Dust control;
- Vehicle idling policies;
- Construction in accordance with local ordinances and requirements, including work hours;
- Adherence to OSHA and other required workplace safety protocols;
- Construction in accordance with local, State, and/or Federal permits and conditions
- If any resources are discovered during excavations and grading of the site, the State Historic Preservation Office will be contacted for guidance.

## Construction Traffic

Construction traffic will consist of typical truck and heavy equipment that will utilize local roadways and enter and exit the site from a stabilized construction entrance in accordance with the "Standards for Soil Erosion and Sediment Control in New Jersey".

## Precautions Taken

All necessary precautions and preventative measures will be implemented during construction to prevent adverse environmental impacts to the greatest extent practicable. An approved Soil Erosion and Sediment Control Plan will be followed to reduce erosion and sedimentation. The Contractors, during dry weather, will water areas prone to dust, especially areas used by trucks, to control dust. Construction will be performed in accordance with local, State and Federal OSHA safety regulations.

### **Noise Levels**

Short-term impacts on sound levels will be related to the operation of construction equipment. The decibel (dBA) scale ranges from 0 for the threshold of perception of sound to approximately 130 dBA for the threshold of pain at the ear. To minimize adverse impacts to ambient noise levels, construction equipment will be operated during daylight hours only.

Most construction equipment will maintain a noise level of 75 dB(A). Pneumatic tools, scrapers and pavers may be as loud as 80 dB(A). Occupational noise levels of 90 dB(A) for periods of eight hours are permitted. All Township ordinances dictating the times and conditions for such activities will be complied with. The use of construction equipment will be limited to the hours permitted by Township of Berkeley Heights.

## Operational Phase Measures

Operation phase impacts include traffic, noise, environmental health and safety, landscape maintenance, and other long-term potential impacts. The project will maintain all landscaping, setbacks, and buffers for the maximum aesthetic effect including replacement of landscape and buffer trees and other plantings as needed.

## Unavoidable Adverse Impacts

Unavoidable adverse impacts are those residual impacts that remain after the implementation design control measures and specific mitigation measures, as listed and discussed herein, to reduce or eliminate, as feasible, the identified adverse impacts. Unavoidable, residual adverse impacts can include alteration of soils, topography and vegetation, loss of vegetation, and minor impacts to freshwater wetland buffers.

Short-term impacts to air quality may occur during the construction phase of the project which will be mitigated by best management practices and appropriate controls. Site development would also result in short-term localized increases in noise from construction, heavy machinery, and temporary construction-related traffic. Noise generated during construction will be limited to daylight hours in accordance with Township of Berkeley Heights ordinances, and the contractor will comply with OSHA noise level requirements.

Other than these impacts, no significant or long-term adverse impacts to environmental resources are anticipated from the proposed stewardship activities.

## Negative Impacts

The project site currently exists as a public park. Therefore, there are no negative impacts associated with the proposed stewardship activities.

## Beneficial Impacts

The construction phase will generate short term job opportunities which will stimulate the local economy. Due to the short duration of the construction phase of the project, construction workers will likely not seek permanent housing and therefore not result in long-term or permanent changes to the demographics of the community. However, construction workers are expected to contribute to the local economy on a short-term basis through procurement of goods and services from the local community, examples of which may include the purchase of short-term housing, food and entertainment, construction equipment, and building materials. The project will also enhance water quality and park user experience.

## Alternatives

The proposed stewardship activities are consistent with the current site use and have been designed to be constructed away from critical environmental resources. The site development layout reflects best management practices to avoid or minimize adverse impacts to environmental resources and wildlife habitat on the Site. The site currently exists as a developed public park and therefore, an alternate site would cause more disturbance than the proposed site. A no action alternative would deny the applicant and property owner fair, reasonable use of the property that would benefit the public.

## Conclusion

The following stewardship activities will greatly enhance the user experience at the Deserted village.

- **Meadow Restoration:**
  - Removal of invasive trees, shrubs, and plants will be undertaken to restore the natural meadow ecosystem.
  - **Type of Improvement:** Rehabilitation of an existing natural area.
  - **Reasoning:** Enhances biodiversity, supports native species, and improves the ecological health of the reservation.
- **Green Infrastructure Installation:**
  - Stormwater storage systems will be implemented to manage runoff effectively and reduce flooding.
  - **Type of Improvement:** New addition to the site.
  - **Reasoning:** Improves water management and sustainability while mitigating environmental impacts.
- **Tree Removal and Cemetery Restoration:**
  - Approximately 24 mature trees will be removed to allow for the restoration of the cemetery to an open grassed area. New Dogwood trees will be planted to enhance the aesthetic and historical significance of the site.
  - **Type of Improvement:** Rehabilitation of an existing facility.
  - **Reasoning:** Preserves historical elements while creating a more accessible and visually appealing space.

**Community Impact:**

- These improvements will strengthen the ecological and historical value of Watchung Reservation, ensuring it remains a cherished natural and cultural resource.
- The project supports equitable access to high-quality green spaces, promoting environmental stewardship and fostering a sense of community connection.

The Watchung Reservation – Deserted Village project exemplifies a commitment to preserving natural and historical resources while addressing environmental challenges. Through thoughtful restoration efforts and sustainable infrastructure improvements, this initiative enhances the ecological health of the area and reinforces its value as a cherished community asset for Berkeley Heights and surrounding communities.

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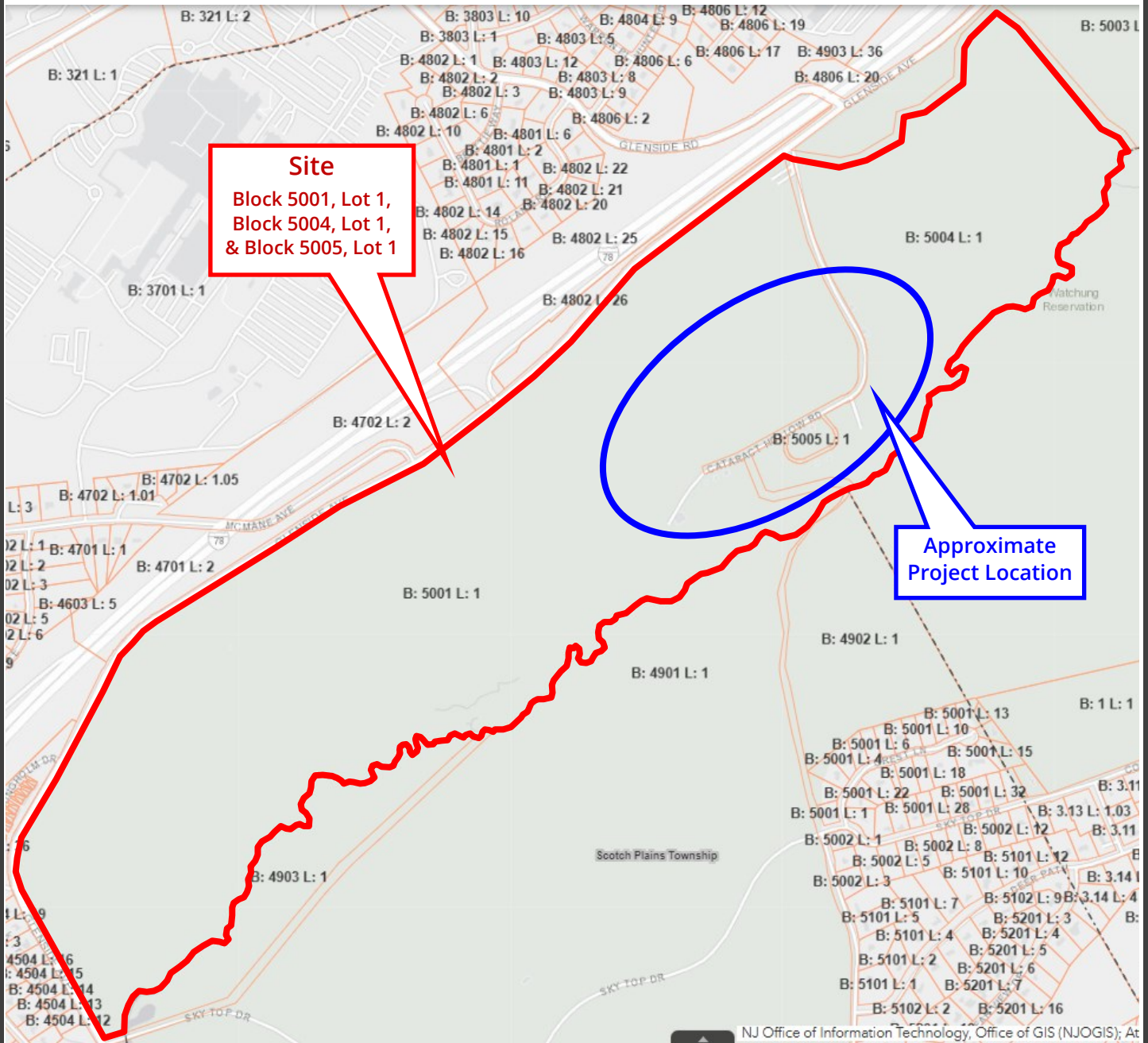


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# Appendix A

## Report Figures

- Figure 1: Tax Map
- Figure 2: Road Map
- Figure 3: U.S.G.S. Map
- Figure 4: Zoning Map
- Figure 5: State Planning Area Map
- Figure 6: Aerial Map
- Figure 7: Bedrock Geology Map
- Figure 8: Soil Survey Map
- Figure 9: HUC14 & C1 Waters Map
- Figure 10: Bedrock Aquifer Map
- Figure 11: Groundwater Recharge Map
- Figure 12: Landscape Project Map
- Figure 13: State Wetlands & Waters Map
- Figure 14: FEMA Flood Insurance Rate Map
- Figure 15: Historical Resources Map



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Figure 1: Parcel Map

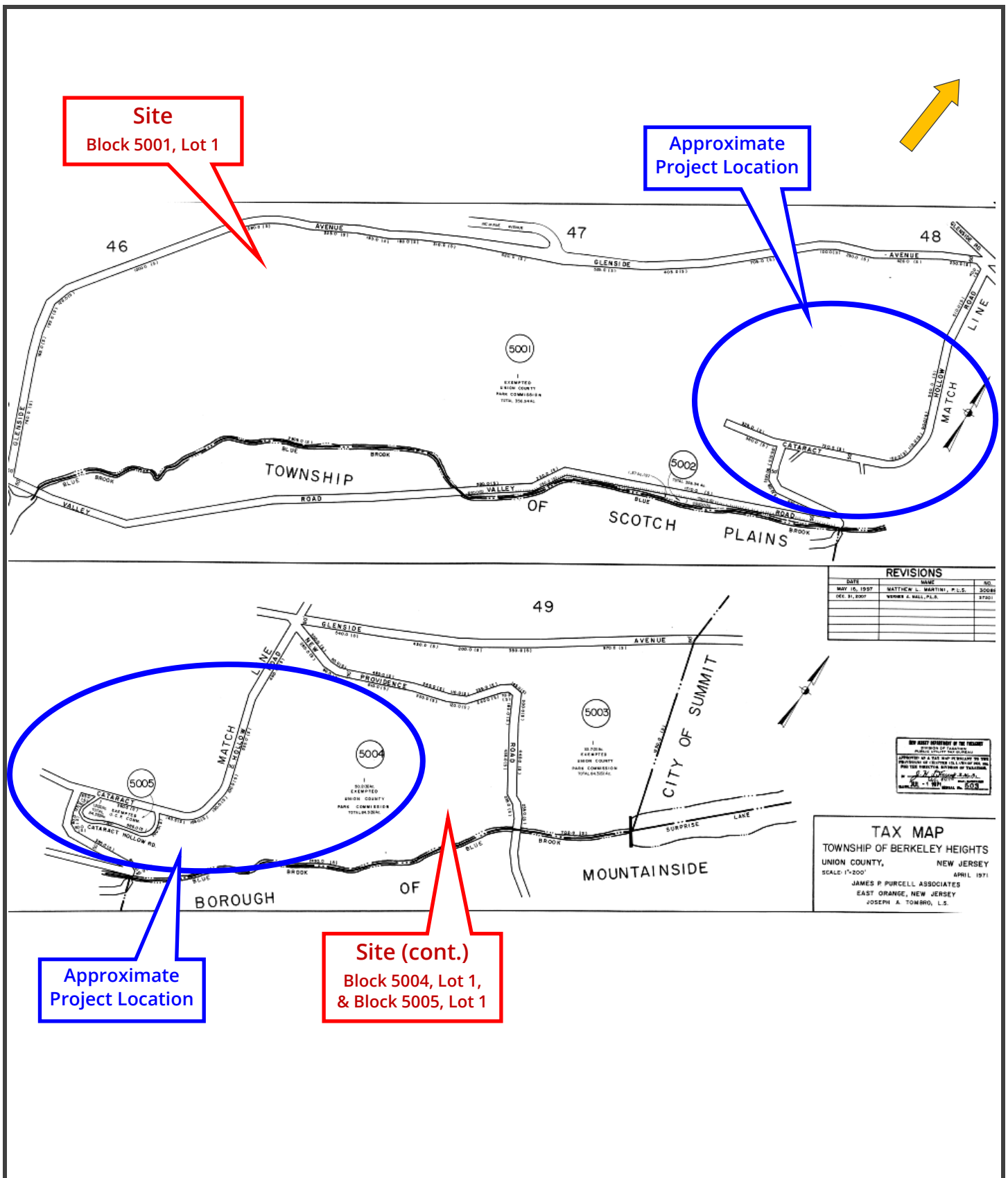
Watchung Reservation Deserted Village  
Berkeley Heights Township, Union County, NJ

Source: NJ-GeoWeb

Scale: Not to Scale

Date: December 18, 2024

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Figure 1A: Tax Map

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Berkeley Heights Township, Union County, NJ

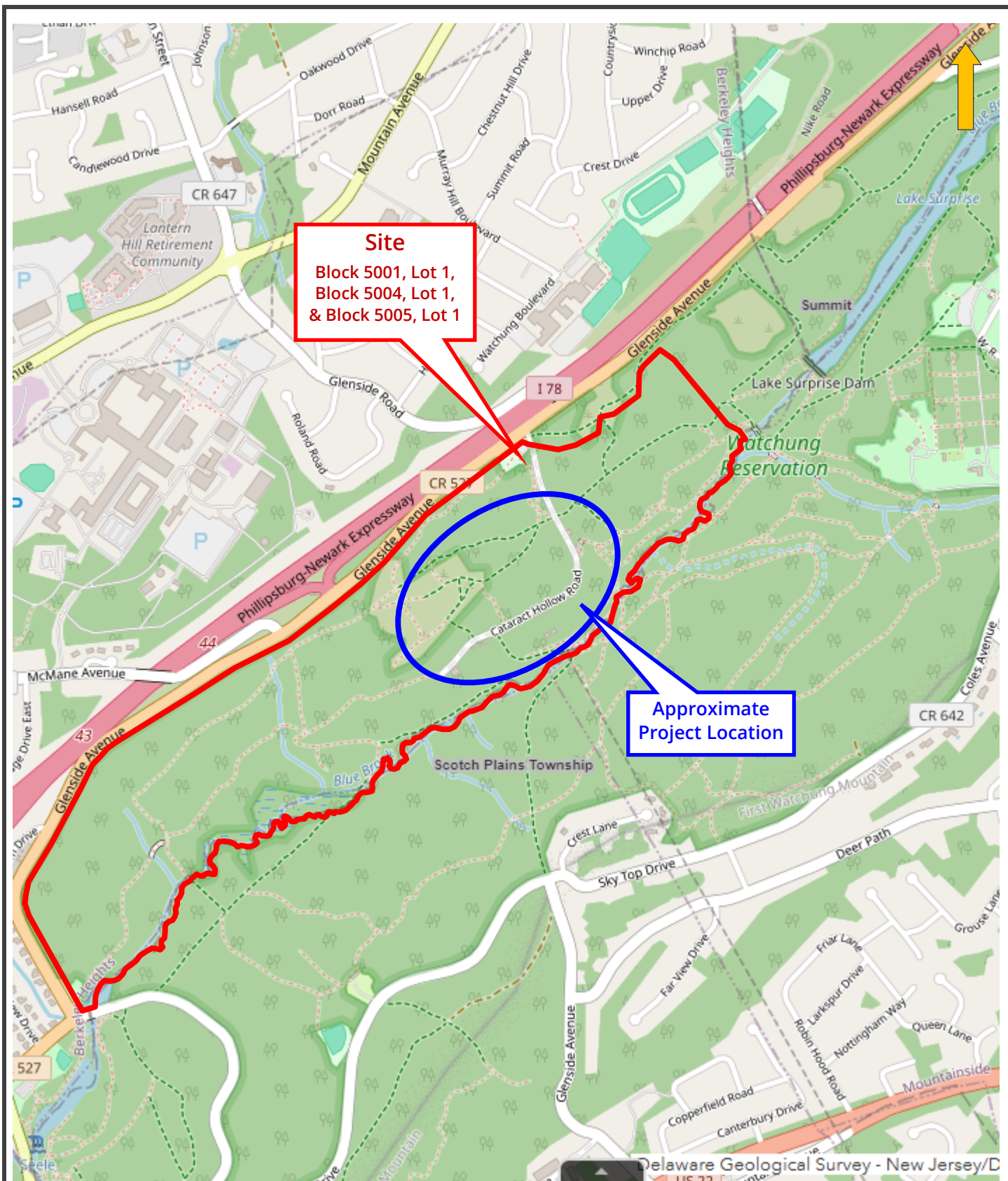
Source: Berkeley Heights Twp. Tax Map Sheet 50

Scale: Not to Scale

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**Figure 2: Road Map**

**Watchung Reservation Deserted Village**  
Berkeley Heights Township, Union County, NJ

Source: NJ-GeoWeb

Scale: Not to Scale

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Figure 3: USGS Map

Watchung Reservation Deserted Village  
Berkeley Heights Township, Union County, NJ

Source: USGS Chatham, NJ Quadrangle 2023

Scale: Not to Scale

Date: December 18, 2024

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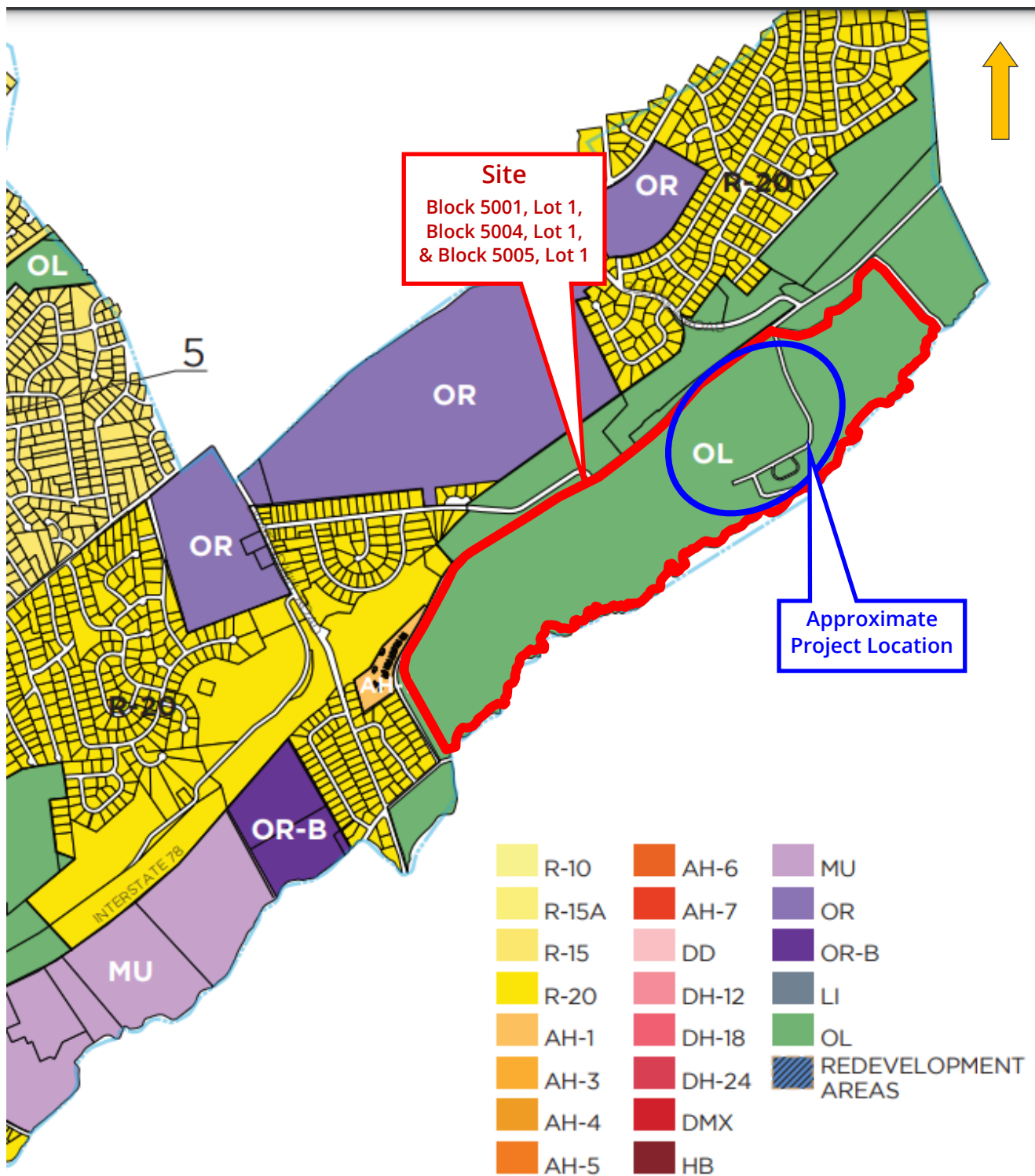


Figure 4: Zoning Map

Watchung Reservation Deserted Village  
Berkeley Heights Township, Union County, NJ

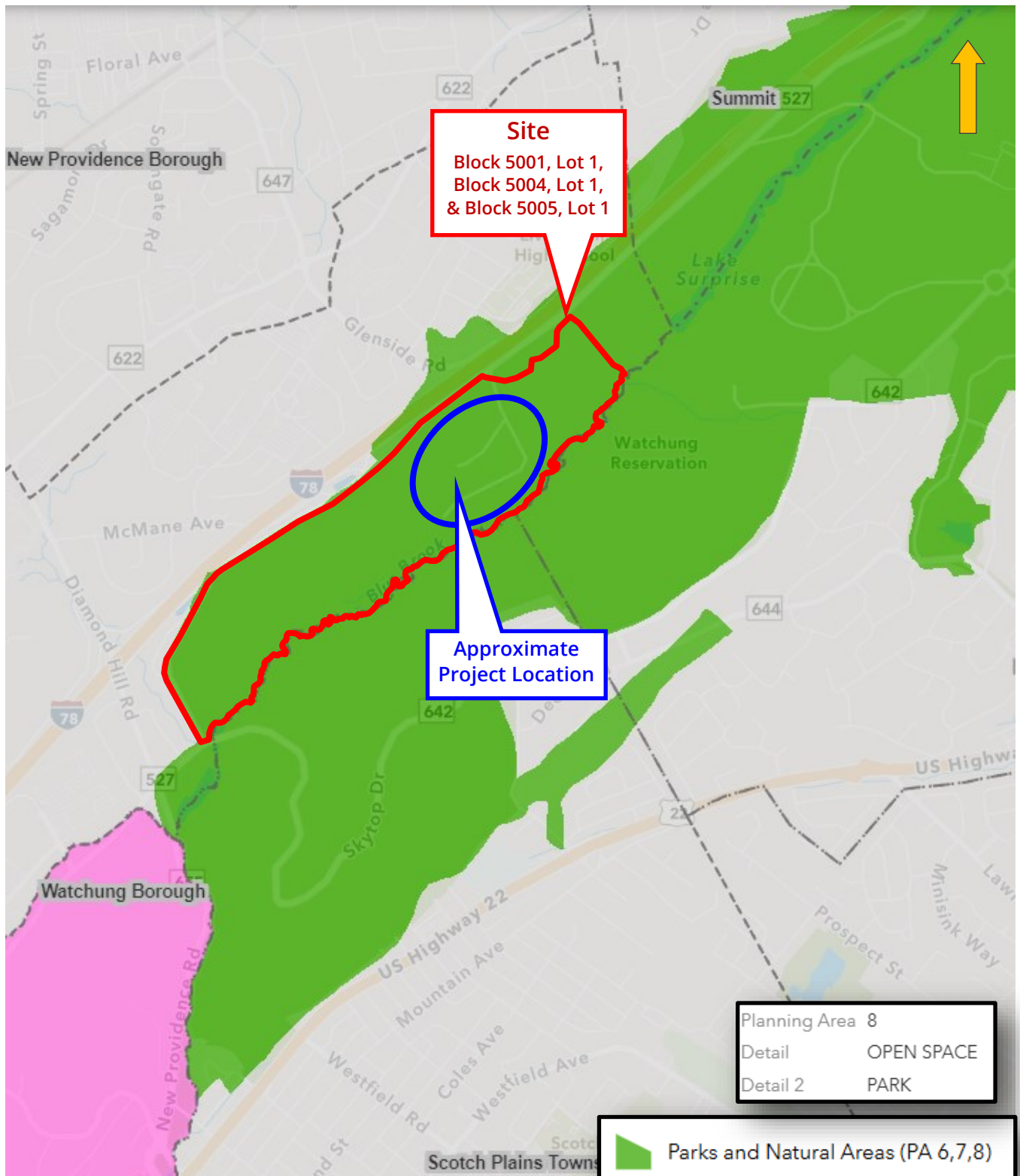
Source: Berkeley Heights Township Zoning Map

Scale: Not to Scale

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**Figure 5: State Planning Area Map**  
Watchung Reservation Deserted Village  
Berkeley Heights Township, Union County, NJ

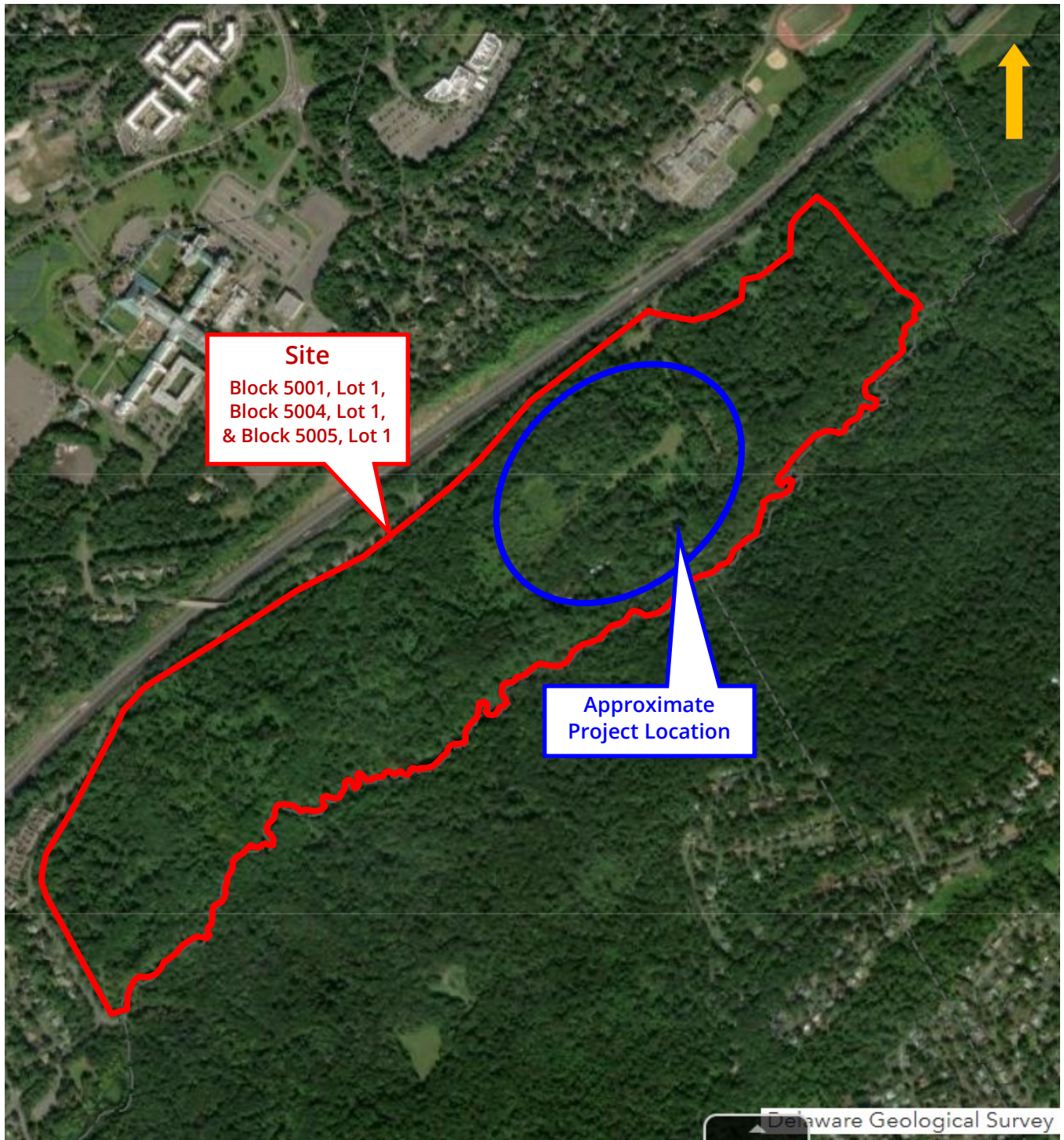
Source: NJ-GeoWeb

Scale: Not to Scale

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**Figure 6: Aerial Map**

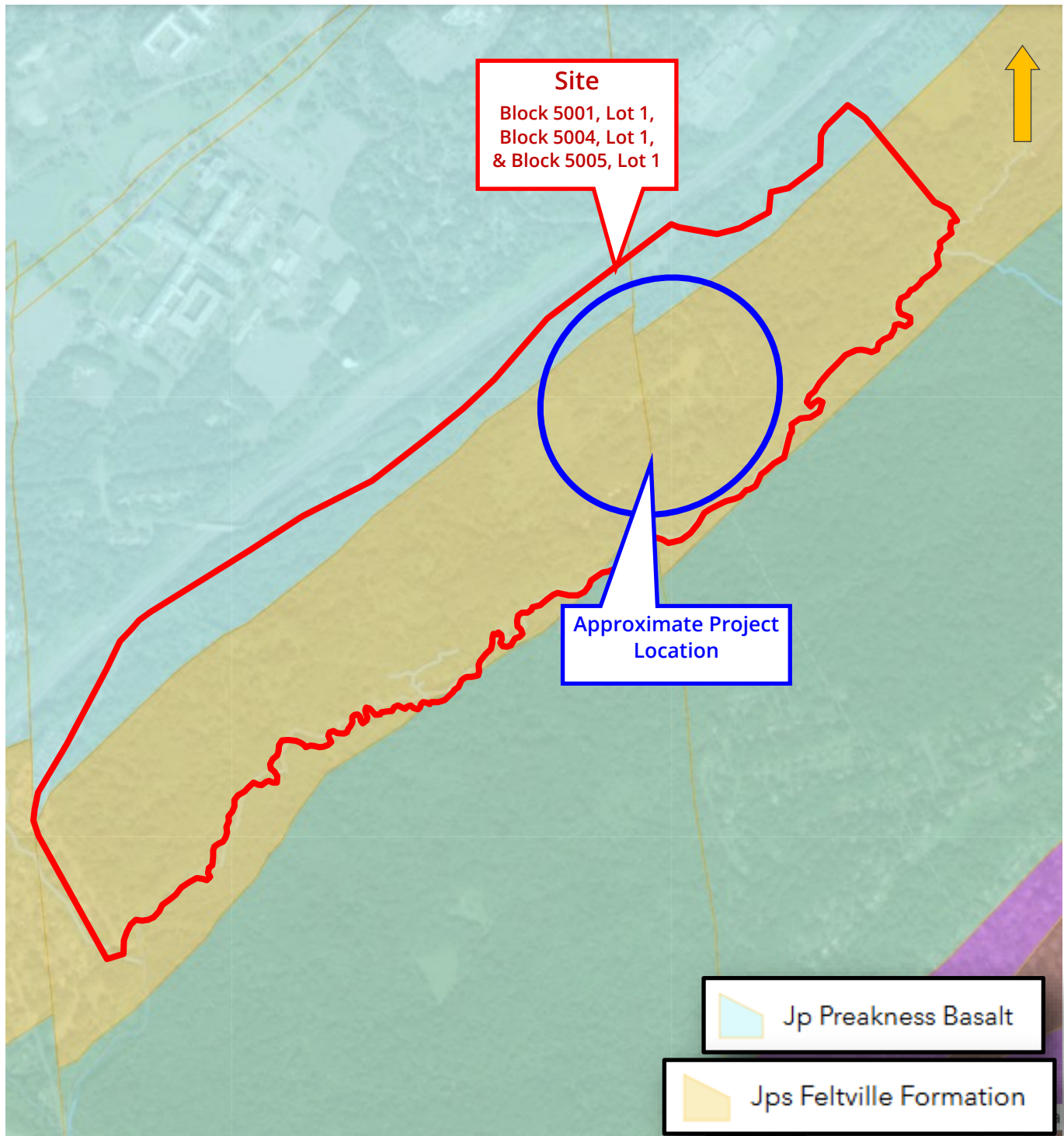
Watchung Reservation Deserted Village  
Berkeley Heights Township, Union County, NJ

Source: NJ-GeoWeb

Scale: Not to Scale

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**Figure 7: Bedrock Geology Map**  
Watchung Reservation Deserted Village  
Berkeley Heights Township, Union County, NJ

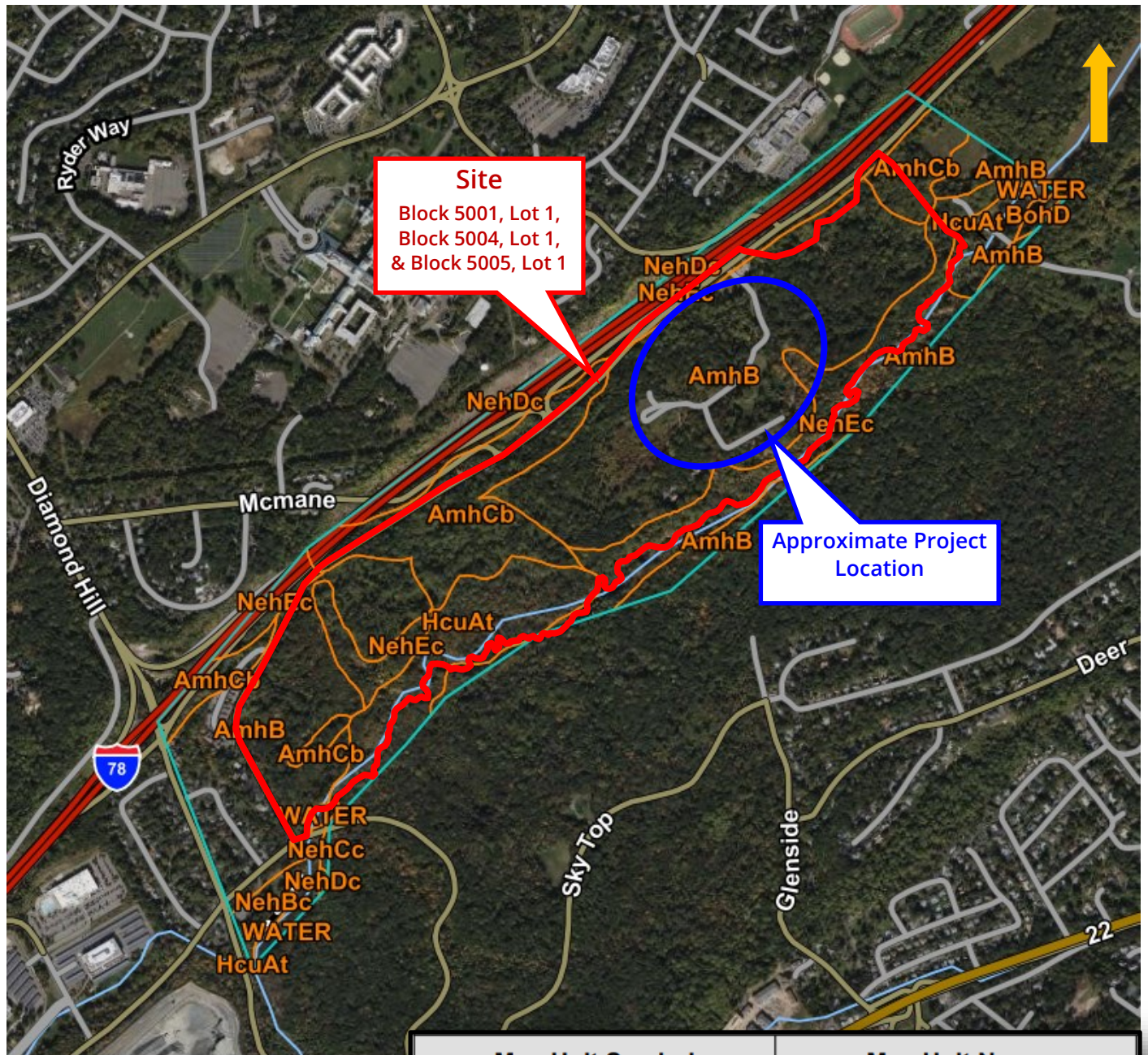
Source: NJ-GeoWeb

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Map Unit Symbol	Map Unit Name
AmhB	Amwell silt loam, 2 to 6 percent slopes



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Figure 8: Soil Survey Map

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Berkeley Heights Township, Union County, NJ

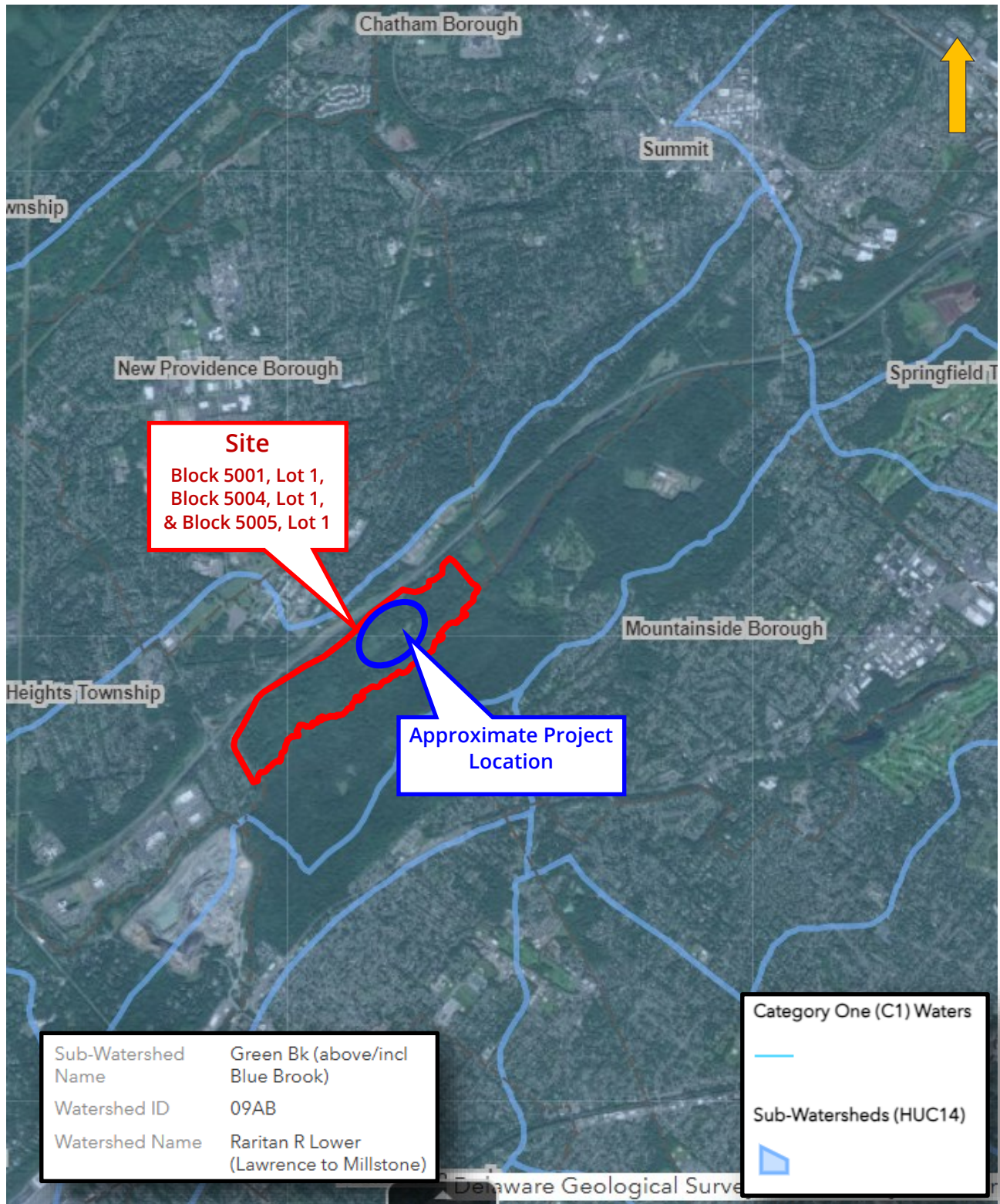
Source: USDA NRCS Web Soil Survey

Scale: Not to Scale

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Figure 9: HUC14 & C1 Waters Map  
Watchung Reservation Deserted Village  
Berkeley Heights Township, Union County, NJ

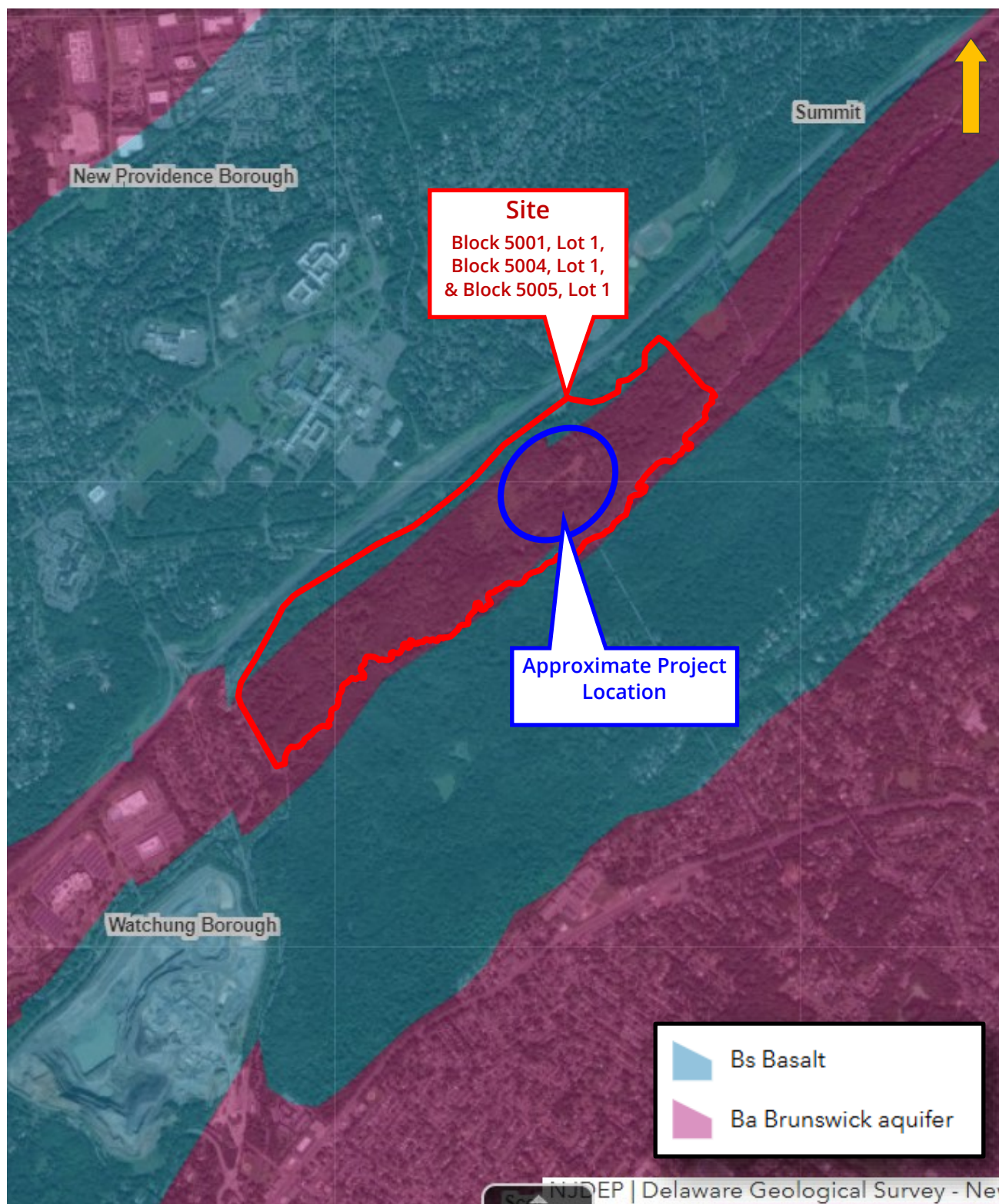
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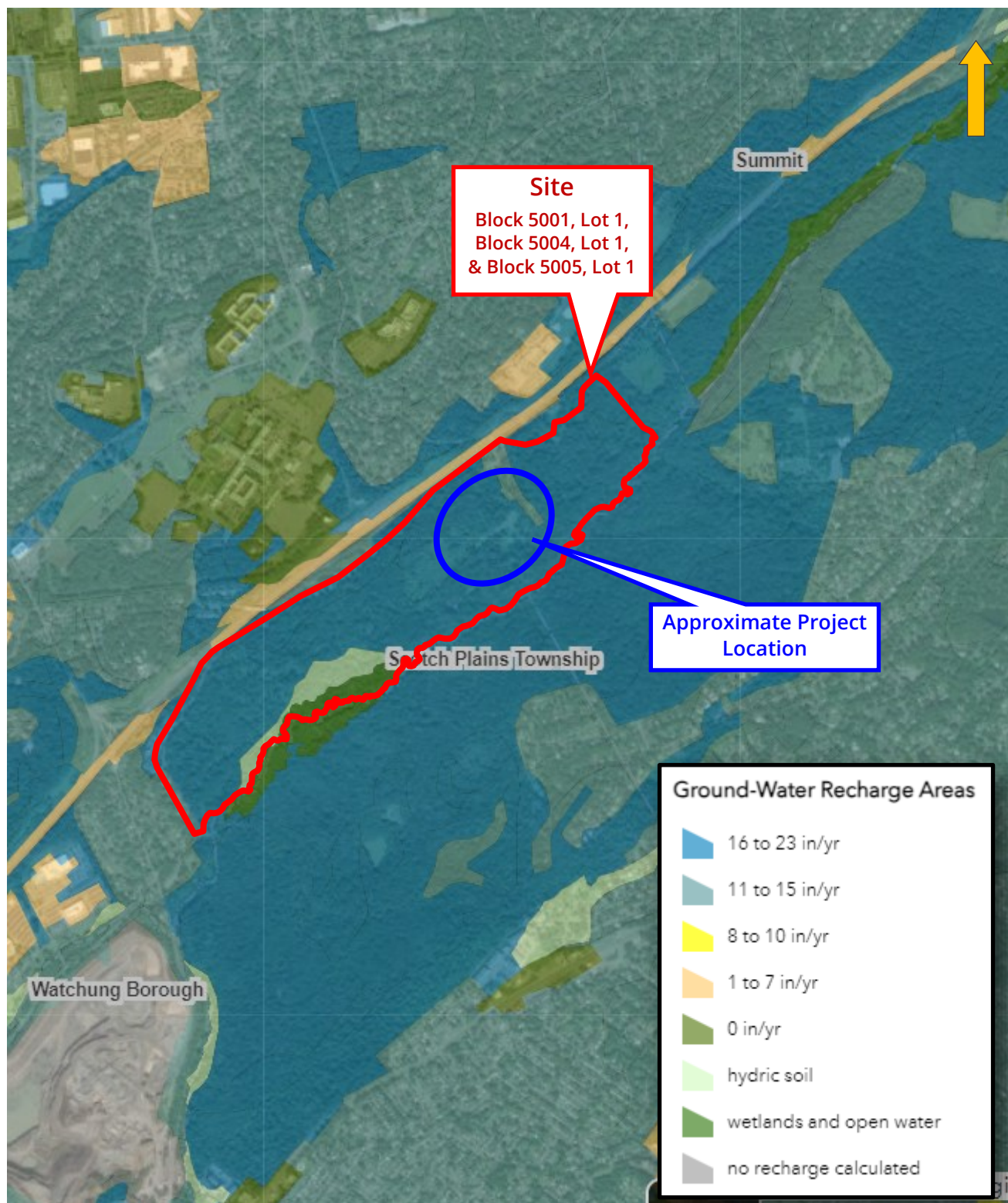
**Figure 10: Bedrock Aquifer Map**  
Watchung Reservation Deserted Village  
Berkeley Heights Township, Union County, NJ

Source: NJ-GeoWeb

Scale: Not to Scale

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**Figure 11: Groundwater Recharge Map**  
Watchung Reservation Deserted Village  
Berkeley Heights Township, Union County, NJ

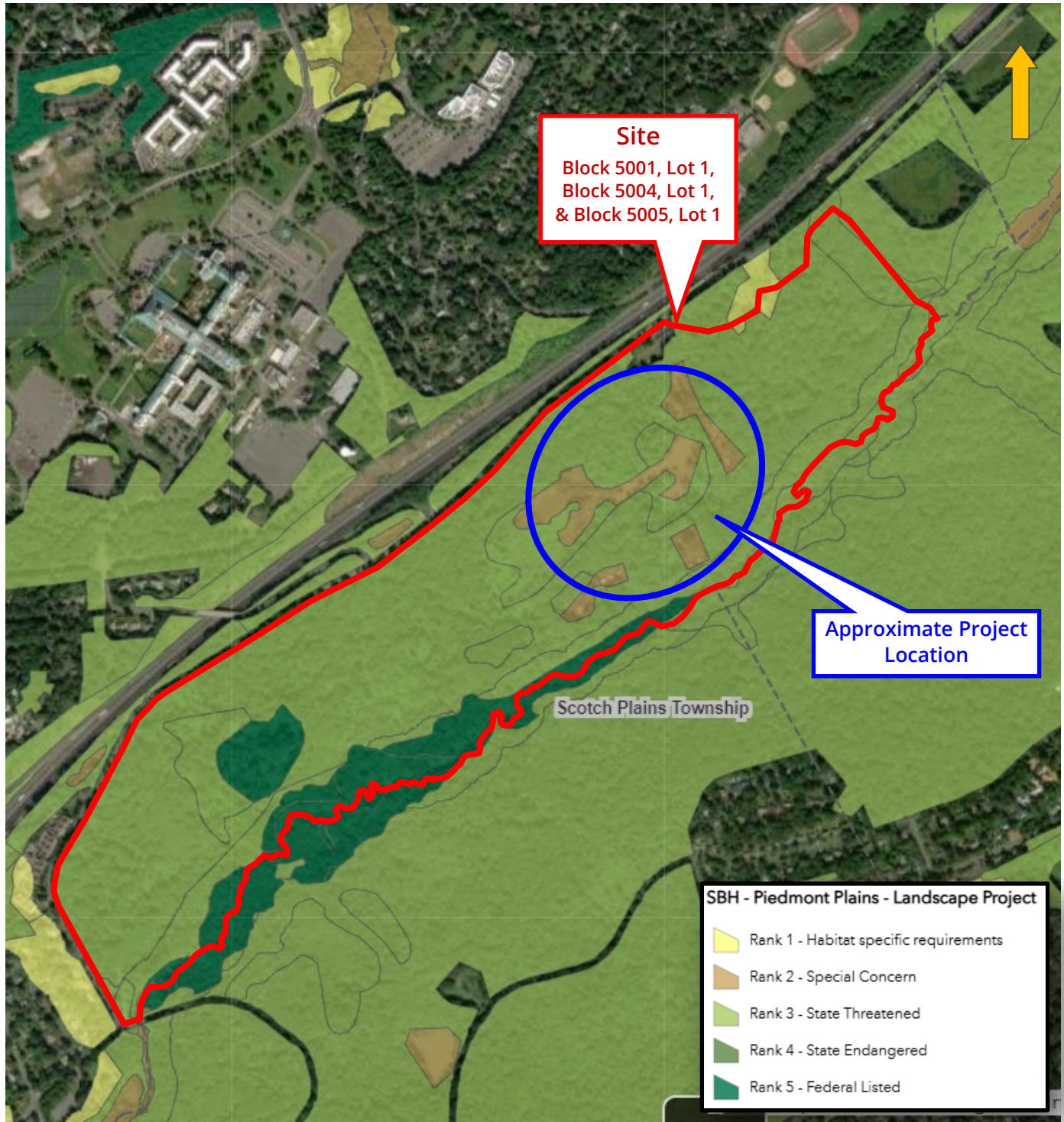
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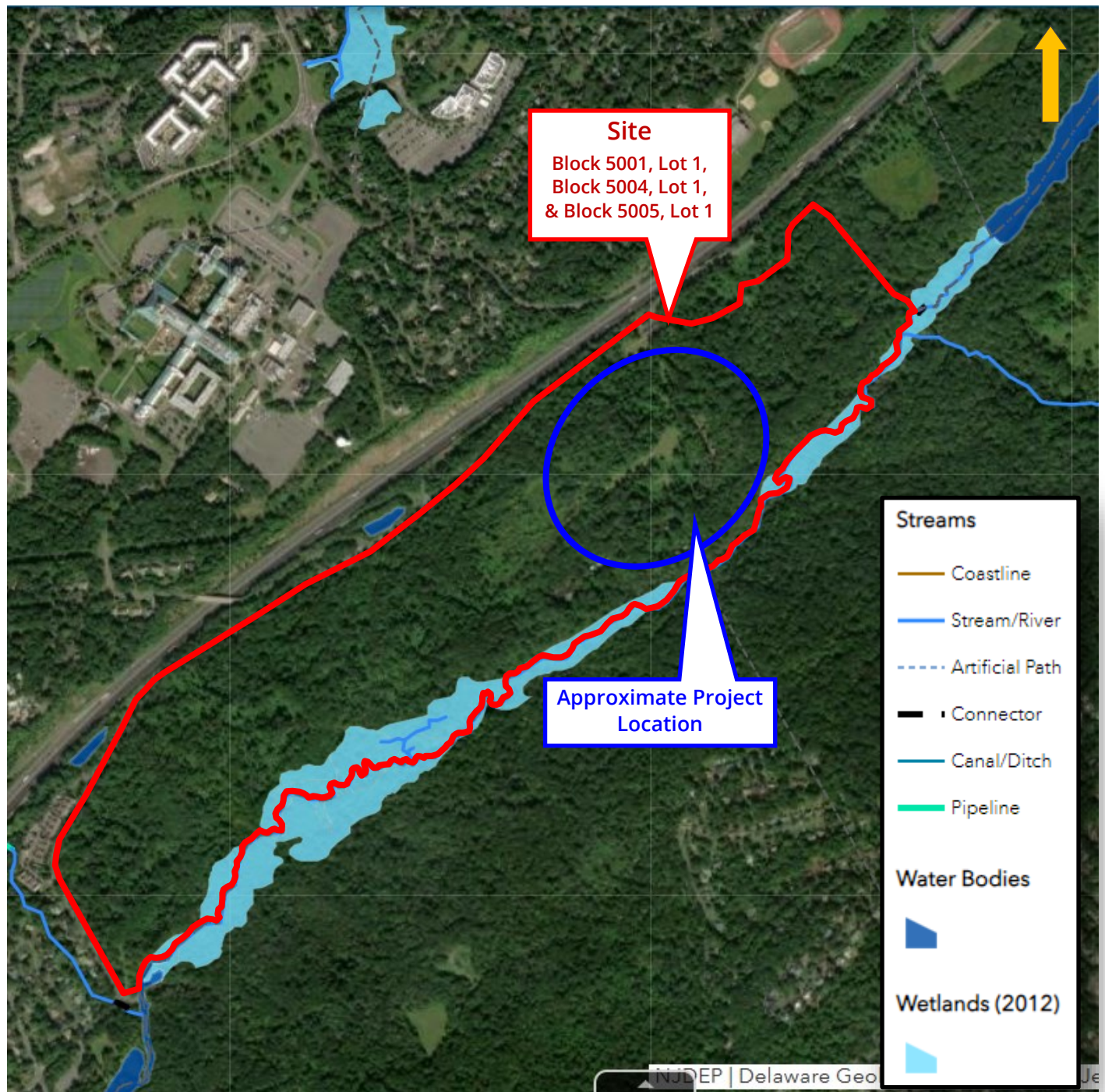
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**Figure 13: State Wetlands & Waters Map**  
Watchung Reservation Deserted Village  
Berkeley Heights Township, Union County, NJ

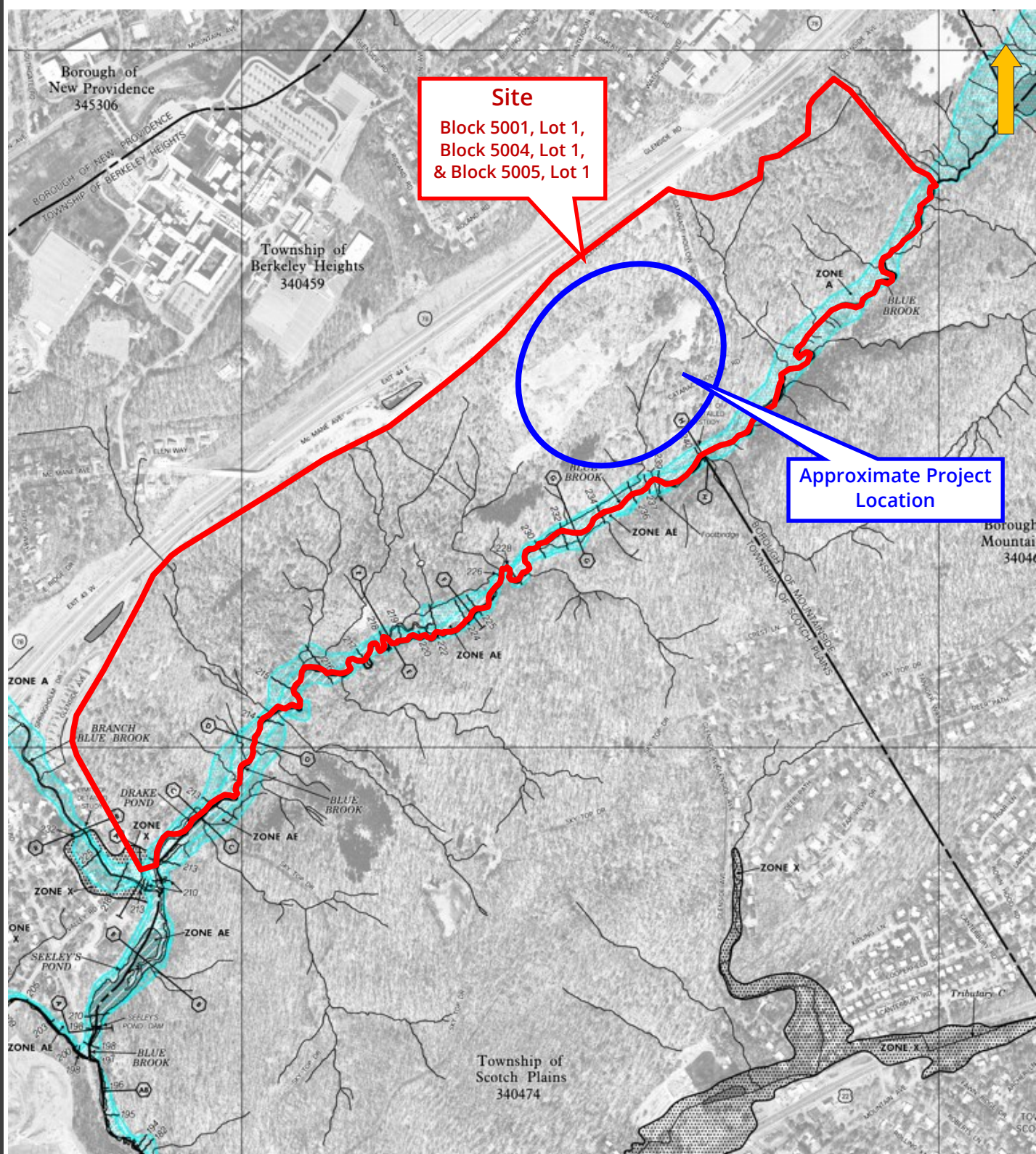
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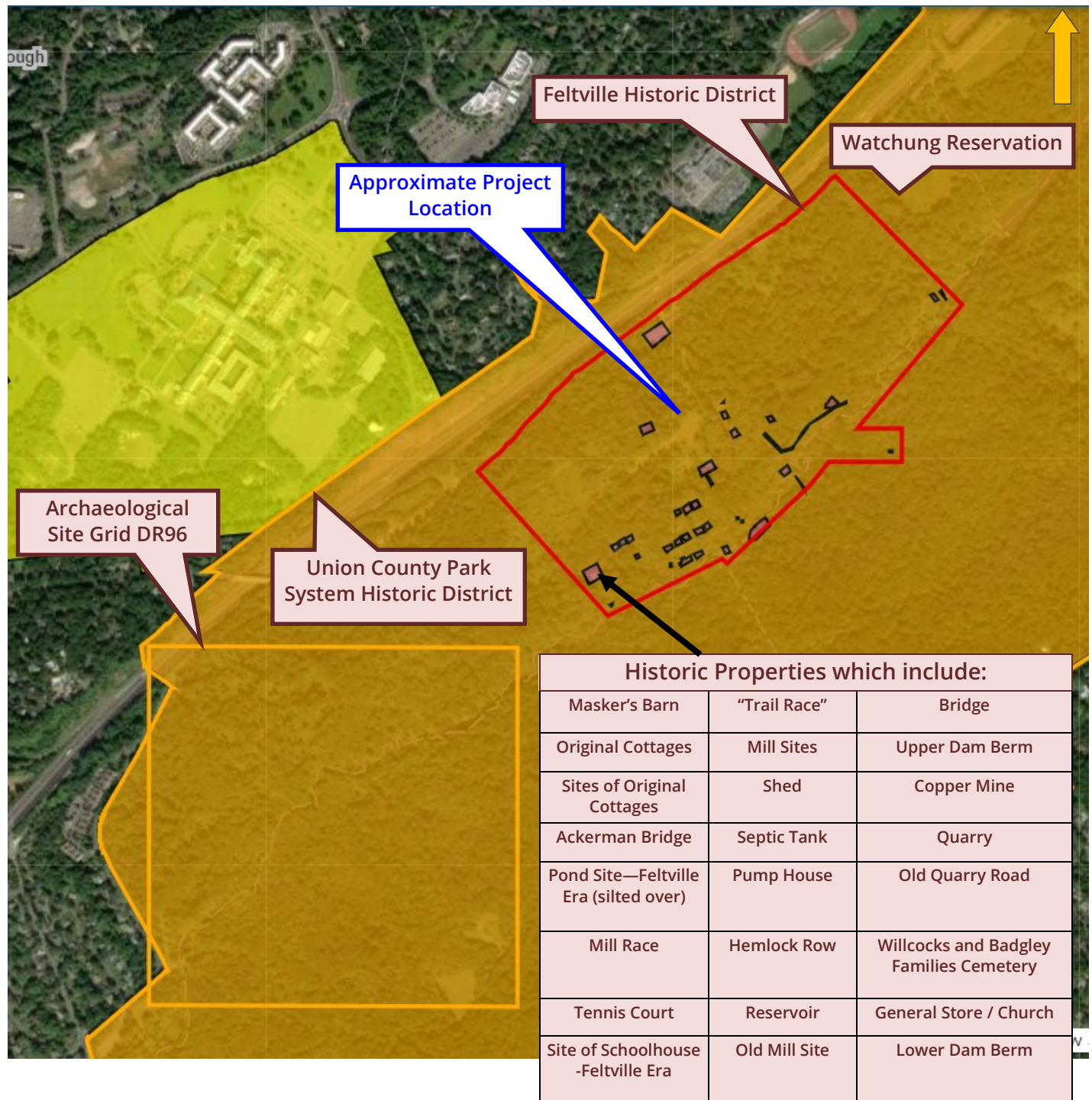
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Figure 15: Historic Resources Map  
Watchung Reservation Deserted Village  
Berkeley Heights Township, Union County, NJ

Source: NJ-GeoWeb

Scale: Not to Scale

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# Appendix B

## Qualifications of Preparers

## Courtney Rybak

Environmental Technician | Natural Resources

### Experience

Ms. Rybak is an Environmental Technician with 4 years of experience in ecological and regulatory consulting. She specializes in wetland assessment and delineation, environmental impact analyses, and environmental permitting and compliance at the local, state, and federal levels.

As an Environmental Technician, Ms. Rybak has prepared applications to secure permit authorizations for public and private residential, commercial, and industrial projects. This includes U.S. Army Corps of Engineers Permits, and New Jersey Department of Environmental Protection Freshwater Wetland Permits, Freshwater Wetland Transition Area Waivers, Individual Permits, Waterfront Development Permits and CAFRA Permits. She has hands-on ecological field experience surveying suitable bog turtle habitat and previously working as a student research assistant at Rowan University studying the effects of urbanization on aquatic turtle populations.

With the aforementioned experience and technical skills acquired, Ms. Rybak has successfully assisted clients with regulatory compliance.

### Representative Projects

#### *Wetland Investigations & Delineation Projects*

#### **Wetland Delineations, Various Clients**

**Locations visited in NJ include Spotswood, West Caldwell, Monroe, Vernon, Hazlet, Hamilton, Sewaren, Howell, Mansfield**

Assisted in the identification and delineation of freshwater wetlands and waters throughout New Jersey to obtain general permitting compliance. The assessment of wetland value (resource classification) was involved for many of these wetlands.

#### *Permitting & Compliance Projects*

#### **Wildwood Boardwalk Rehabilitation**

##### **City of Wildwood, Cape May County, NJ**

Prepared NJDEP CAFRA Individual Permit application for the proposed boardwalk rehabilitation from East Oak Avenue to East 26<sup>th</sup> Avenue.

#### **Point Pleasant Wildlife Management Area Boat Ramp & Fishing Access** **Borough of Point Pleasant, Ocean County, NJ**

Prepared NJDEP CAFRA Individual Permit and Waterfront Development Individual Permit application along with a U.S. Army Corps of Engineers Permit application for proposed boat ramp and fishing access improvements.

#### **Mosquito Landing - Tuckahoe Wildlife Management Area** **Township of Upper, Cape May County, NJ**

### Education

B.S. Biological Sciences, minor in Environmental Science, Rowan University, 2019

### Professional Certifications

Wetland Delineation Certification, Rutgers University, The New Jersey Agricultural Experiment Station Office of Continuing Professional Education, 2021

### Internship & Volunteer Experience

Aquatic Turtle Population Structure Research, Rowan University, (2018-2019)

Manalapan Township Environmental Commission Projects (2018-2019)

### Affiliations & Memberships

Member of Association of State Wetland Managers

### Speaking Engagements

Rowan University's Student Scholars Symposium (RUSSS). Rowan University, Glassboro, New Jersey. *Effects of Urbanization on Aquatic Turtle Population Structure in Southern New Jersey*; 2019.

## Resume

Prepared NJDEP CAFRA Individual Permit and Waterfront Development Individual Permit application and U.S. Army Corps of Engineers Permit application for the replacement of the existing boat ramp and bulkhead and construction of a new barrier free dock and fishing access improvements.

### **Residences at Bancroft**

#### **Borough of Haddonfield, Camden County, NJ**

Prepared NJDEP Freshwater Wetlands General Permits and Transition Area Waivers application for residential redevelopment consisting of 90 townhomes including 10 affordable housing units.

### **White Street Bridge D4.108**

#### **Township of Mount Holly, Burlington County, NJ**

Prepared NJDEP Waterfront Development Individual Permit, Freshwater Wetland General Permit and Flood Hazard Area Individual Permit application and U.S. Army Corps of Engineers Permit application for the rehabilitation of the historic bridge that has been classified as in poor condition.

### *Threatened & Endangered Species*

#### **Bog Turtle Surveying**

##### **2602 NY-17M - Town of Goshen, Orange County, NY**

##### **2300 NY-300 - Town of Wallkill, Ulster County, NY**

Provided pre-construction surveying services for proposed commercial/industrial development within freshwater wetlands that were determined to be suitable habitat for bog turtle in accordance with freshwater wetland permit conditions.

### *Environmental Impact Statements and Assessments*

#### **Commercial Development**

##### **Township of Hamilton, Mercer County, NJ**

Prepared Environmental Impact Assessment (EIA) and site location maps for the development of a 245,670 SF single-loaded warehouse building located on property containing approximately 35.7 acres of land.

#### **Residential Development**

##### **Township of Jackson, Ocean County, NJ**

Prepared Environmental Impact Statement (EIS) along with site location maps for the development of 465 residential townhome units located on property containing approximately 117.8 acres of land.

#### **Commercial Development**

##### **Borough of Tinton Falls, Monmouth County, NJ**

Prepared Environmental Impact Report (EIS) along with site location maps for the development of 29 buildings, consisting of 6-18 units, along with a 4,500 SF clubhouse located on approximately 47.3 acres of land.

### **Training/Continuing Education**

Vegetation Identification for Wetland Delineation – North, Rutgers University.  
Methodology for Delineating Wetlands, Rutgers University.

## Joseph P. Layton

Principal Associate | Discipline Leader | Natural Resources

### Experience

Mr. Layton is an Environmental Scientist with over 24 years of experience including an extensive background and expertise in environmental sciences. His expertise includes an emphasis on wetland delineation, regulatory permitting and compliance, environmental assessment, environmental impact analysis, and soil evaluation. His diversified experience also includes natural resource evaluations, ecological research, watershed management, subsurface explorations, underground storage tank exploration and removal, soil classification systems, and environmental sampling design and protocol in accordance with State and Federal regulations. He utilizes Geographic Information Systems (GIS) and Global Positioning Systems (GPS) in environmental sampling and studies, including site remediation design and sampling, groundwater and surface water quality monitoring and management, and lake rehabilitation and restoration.

As Assistant Department Manager, Mr. Layton has utilized the aforementioned experience and technical skills to successfully assist clients with litigation support and regulatory compliance and has been deemed an expert in the field by various Planning and Zoning Boards while providing testimony regarding the same. His proven dedication to client satisfaction has resulted in long standing professional relationships. His client base includes private development and redevelopment companies, municipalities, county governments, infrastructure authorities, daycare facilities, higher education institutions, financial institutions, utility companies, and law firms.

### Representative Projects

#### Groundwater Quality Monitoring/ Management

Responsible for designing, implementing, and preparing groundwater monitoring and management plans. A sampling of representative projects includes the following:

- **New Jersey National Golf Club Groundwater Quality Monitoring Plan**  
**Township of Bernards, Somerset County, NJ**  
Responsible for determining location and depth of monitoring wells; coordinating and supervising well installation; sampling and analyzing results; and determining groundwater flow and fate of contaminants.
- **Leisure Glen Retirement Community**  
**Township of Manchester, Ocean County, NJ**  
Responsible for determining the location, depth and sampling parameters of groundwater monitoring wells in a 2,500-unit retirement and 18-hole golf course community widening, complete

### Education

B.S. Environmental Planning and Natural Resource Management, Rutgers University, Cook College, 1992

### Professional Certifications

NJDEP Certified Subsurface Evaluator, License #229606

NJDEP Certified Underground Storage Tank Closure

Environmental Assessment Association - Certified Environmental Specialist

Certified Remediation Specialist

Radon Measurement Specialist #MES11066

40 Hr NJ/EPA Model Lead Inspector/Risk Assessor

OSHA 40 Hr HAZWOPER Training

8-Hour OSHA HAZWOPER Refresher Training

### Affiliations & Memberships

Ecological Society of America

Society of Wetland Scientists



## Resume

resurfacing of all 13 miles of existing roadway, safety improvements and implementation, as well as construction of IVHS systems in this corridor.

- **Trump National Hudson Valley Golf Club Groundwater Quality Monitoring Plan  
Township of Bernards, Somerset County, NJ**

Responsible for determining location and depth of monitoring wells; coordinating and supervising well installation; sampling and analyzing results; and determining groundwater flow and fate of contaminants.

### **Watershed Management /Lake Restoration**

Responsible for determining sources of non-point pollution using available mapping and field reconnaissance, determining watershed boundaries, and preparing best management practices manuals.

- **The Great Swamp National Wildlife Refuge Watershed Management Study, Morris & Somerset Counties, NJ**
- **Wemaconk Lake Restoration, Borough of Englishtown, Monmouth County, NJ**

### **Wetland Delineation**

Involved in the identification and delineation of numerous freshwater and tidal wetlands (over 10,500 acres) in New Jersey and New York. The assessment of wetland value (resource classification) was involved for many of these wetlands.

- **Runyon Interceptor Trunk Sanitary Sewer Line Alignment  
Township of Old Bridge, Middlesex County, NJ**  
Determined alignment of two miles of sanitary sewer on a 400-acre+ site using aerial photography and site inspections minimizing impacts to numerous wetland communities.
- **Oakwood at Old Bridge  
Township of Old Bridge, Middlesex County, NJ**  
Delineated freshwater wetlands on a 235-acre site, half of which was wetlands.
- **Ashland/Former Hercules Plant  
Parlin, Middlesex County, NJ**  
Delineated freshwater wetlands on a 300-acre site formerly utilized as a munitions plant in 1930s-1960s.
- **MEC Power Generating Facility  
Sayreville Borough, Middlesex County, NJ**  
Delineated freshwater and tidal wetlands on a 40-acre site formerly utilized as a landfill. Site recently delisted as a Superfund site and will be developed as an electric power generating facility.
- **Gates Landfill  
Jersey City, Hudson County, NJ**  
Delineated freshwater and tidal wetlands on a 60-acre site formerly utilized as a fly-ash landfill of a PSEG power generating facility. Site recently delisted as a Superfund site and will be developed as an electric power generating facility.

### **Permit Applications**

Prepared environmental permits for private residential, commercial and industrial projects. This has included U.S. Army Corps of Engineers Permits and New Jersey Department of Environmental Protection

## Resume

Freshwater Wetland Permits, Freshwater Wetland Transition Area Waivers, Individual Permits, Waterfront Development Permits, and CAFRA Permits.

- **National Lead Redevelopment**  
**Borough of Sayreville, Middlesex County, NJ**  
Determined alignment of two miles of sanitary sewer on a 400-acre+ site using aerial photography and site reconnaissance minimizing impacts to numerous wetland communities.
- **Transcontinental Gas Pipeline Armoring**  
**Township of Hopewell, Mercer County, NJ**  
Prepared and obtained an Individual Permit from the NJDEP-LURP to permanently disturb a stream and its associated wetland to construct armoring to protect a Transcontinental Gas Pipeline.
- **The Hills Development**  
**Township of Bernards, Somerset County, NJ**  
Prepared and obtained majority of wetland permitting for a 5,300 residential unit, 400,000 SF of commercial and professional office space and an 18-hole golf course planned development in an environmentally sensitive ecosystem.
- **Apple Cove Development Township of Middletown, Monmouth County, NJ**  
Prepared and obtained freshwater wetland and CAFRA permits for single-family, residential subdivision located along a tidally influenced watercourse.
- **Trump National Pine Hill Golf Club**  
**Pine Hill, Camden County, NJ**  
Prepared and obtained freshwater wetland Individual permits for redeveloping a former amusement park into a premier golf course. Rehabilitating/reconstructing the only remaining native Brook trout stream in southern New Jersey was required as part of permit approval.
- **Frenchtown Nishisakawick Creek Stream Bank Restoration**  
**Borough of Frenchtown, Hunterdon County, NJ**  
Through funding by the U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS), the Borough of Frenchtown sought to restore and stabilize eroded streambanks along Nishisakawick Creek, a highly protected water in the state of New Jersey. Mr. Layton provided oversight and management of the ecological team. The scope included delineation of wetlands and open waters, restoration design oversight, and prepared applications to the NJDEP for a Freshwater Wetlands Individual Permit and Flood Hazard Area Individual Permit.

### Environmental Assessments/Regulatory Compliance

Prepared and conducted Environmental Phase I Assessments for residential, commercial, and industrial property transfers in accordance with ASTM and Fannie Mae guidelines. Also prepared and conducted Preliminary Assessments, Site Investigations, Remedial Investigations, and Remedial Action Work Plans in accordance with N.J.A.C. 7:26E.

- **Heavenly Farms**  
**Township of East Brunswick, Middlesex County, NJ**  
Prepared and performed Preliminary Remedial Investigation/Action to obtain a "Letter of No Further Action" for a 230-acre farm with contaminated soils for development of recreational fields.

**Resume**

- **Marlboro Psychiatric State Hospital  
Marlboro Township, Monmouth County, NJ**  
Consultant to the Township of Marlboro regarding the municipality purchasing a 411-acre State-owned psychiatric hospital. Responsible for identifying areas of environmental concern, review of environmental investigation and remediation reporting generated by State contractors and making recommendations to the municipality regarding environmental concerns and purchase of the property.
- **Columbian Chemicals Mapico Iron Oxide Plant  
South Brunswick Township, Middlesex County, NJ**  
Prepared and performed preliminary assessment/site investigation, remedial Investigation/Action and Baseline Ecological Evaluation to obtain a "Letter of No Further Action" from the NJDEP to develop an 86-acre former chemical plant in a residential land use. Extensive soil and groundwater contamination was remediated.
- **The Villas at Shoregate  
City of South Amboy, Middlesex County, NJ**  
Prepared and performed Preliminary Assessment/Site investigation to obtain a "Letter of No Further Action" for a 16-acre, former dredge disposal area adjacent to the Raritan Bay.
- **Rolling Acres Subdivision  
Monroe Township, Middlesex County, NJ**  
Prepared and performed Preliminary Assessment, Site Investigation, and Remedial Investigation/Action to obtain a "Letter of No Further Action" for a 168-acre farm with contaminated soils.
- **Stewart International Airport  
Town of New Windsor, Orange County, NY**  
Consultant to potential leaseholders to the Port Authority New York and New Jersey to determine potential environmental areas of concern to development. This included Phase I and Phase II investigations in accordance with ASTM standards.

**Subsurface Exploration/Evaluation**

Capable of evaluating soils in accordance with NJDEP's Chapter 199 for subsurface sewage disposal systems. Able to establish depth of water tables, evaluate suitability of sites for subsurface disposal systems, perform percolation tests, basin flood tests, pit bail tests and tube permeameter tests. Capable of evaluating subsurface conditions utilizing the Burmister classification system, USDA Soil Taxonomy terminology and the Unified classification system.

**Environmental Impact Assessment**

Prepared numerous environmental impact statements and assessments for a wide variety of projects, including residential and commercial developments for both the public and private sector.

- **Taconic Homes Site Bog Turtle Survey and Wildlife Inventory  
Village of Pleasant Valley, Dutchess County, NY**  
Performed survey for bog turtle on a 76± acre tract using Phase II survey methods. Also performed a limited wildlife inventory during the spring season. This work was performed to satisfy lead agency requirements under the NY SEQRA.

## Resume

- **Middlesex County Educational Services Commission Special Education Facility  
Borough of Sayreville, Middlesex County, NJ**  
Provided environmental services to conduct a Phase I environmental assessment associated with professional engineering services for a 65,000 SF special education facility with a pool, a future building, associated parking lot, and a playground. Tasks included a historical review of project site, industrial / commercial historical review, site visit to identify obvious visual signs of contamination and use of hazardous materials, project approval status review, review of existing, local, state and federal records, review of adjacent lands, preparation of site location map, and report preparation.
- **Capodagli Property Company Phase I Assessment  
North Arlington Borough, Bergen County, NJ**  
Provided environmental services to delineate wetlands, prepare an application for a Letter of Interpretation to the New Jersey Department of Environmental Protection, and prepare a Phase I Environmental Assessment for the property that is between .5 to 1.0 acres and adjacent to the Passaic River, and regulatory permitting (NJDEP upland waterfront development and waterfront development, NJDEP tidelands conveyance, and US Army Corps of Engineers Section 10 – installation of outfall structure).
- **New Gregory Elementary School (NJSCC Funded)  
City of Long Branch, Monmouth County, NJ**  
Provided site design, civil, and environmental engineering services for a proposed three-story, 45,000 SF elementary school to accommodate children from pre-kindergarten through 5th grade located on a six-acre tract of land. Environmental services included wetlands evaluation, preliminary assessment (PA), site investigation (SI), and environmental impact statement (EIS)/ EO 215, and environmental regulatory permitting (NJDEP statewide general, and NJDEP treatment and water works). The preliminary assessment (PA) report indicated four areas of Concern (AOC). Three UST's, waste piles (plastic bottles, plastic bags, aluminum cans, etc.), one pole mounted electrical transformer and capacitor, and a former railroad easement adjacent to property with inactive rail lines with possible polynuclear aromatic hydrocarbons (PAHs). A site investigation (SI) will be performed to evaluate the presence or absence of soil and groundwater impact associated with UST's and the former railroad easement. A report will be prepared containing all lab results and recommendations for further investigation and/or remedial action as well as projected cost estimates for remedial investigation and cleanup.
- **Diversified Developers, LLC – Retail Store and Day Care Facility  
Jackson Township, Ocean County, NJ**  
Provided environmental services to conduct a Phase I environmental assessment associated with the site design and civil engineering services associated with the development of a 35,000 SF retail facility including a day care facility along with typical appurtenant site improvements on approximately 3.8-acres of land. Services included historical review to evaluate past conditions of sites as they relate to existing and proposed uses, industrial/commercial historical review, site visit to identify all obvious visual signs of contamination and the use of hazardous materials, review existing local, State, and federal records, review of adjacent lands, prepared site location map depicting the approximate parcel boundaries, and an area of at least one-mile radius around the site.

## Resume

- **Thomas Associates – Site Assessment Proposed School Site  
City of Bordentown, Burlington County, NJ**

Provided environmental services for a Phase I Environmental Assessment for a 75-acre parcel of land previously historically farmed for a proposed new school facility. Services included preliminary assessment, SI & RI historical review, industrial and commercial historical review, review of existing local, state and federal records, review of adjacent lands, preparation site location map, preliminary soil screening, delineation of wetlands and LOI and regulatory permitting (stream encroachment, land use regulations freshwater wetlands and soil erosion and sediment control), Colonial Pipeline Crossing/Encroachment and Environmental Impact Statement (EIS).

### **Continuing Education**

Methodology for Delineating Wetlands, Cook College

Vegetation Identification for Wetland Delineation, Cook College

Hydrology of Wetlands, Cook College

Endangered & Threatened Species of New Jersey, Cook College

Lake Management, Cook College

Soils and Site Evaluation for Septic Disposal Systems & Stormwater BMP's , Cook College

Site Remediation Basics, Cook College

Remedial Decision Making, Cook College

Ecological Risk Management, Cook College

# Appendix C

## Site Photographs



# Site Photographs

Deserted Village  
Township of Berkeley Heights, Union County, New Jersey

CED Project No. 24012642A





# Site Photographs

Deserted Village  
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Engineering  
& Design





# Site Photographs

Deserted Village  
Township of Berkeley Heights, Union County, New Jersey

CED Project No. 24012642A



Engineering  
& Design





# Appendix D

## Natural Heritage Database



State of New Jersey  
Department of Environmental Protection  
Natural Heritage Data Request Form

The New Jersey Natural Heritage Program - Office of Natural Lands Management  
Mail Code 501-04, P.O. Box 420, Trenton, New Jersey 08625-0420  
Phone: (609) 984-1339; Fax: (609) 984-1427



**Please print clearly. All sections are required.**

1. Name: \_\_\_\_\_ Agency/Company: \_\_\_\_\_  
Billing Address: \_\_\_\_\_ City, State, Zip: \_\_\_\_\_  
Phone: \_\_\_\_\_ E-mail: courtney.rybak@colliersengineering.com  
cc: daniel.geran@colliersengineering.com on results/invoices
2. Project Name &/or Project Address: \_\_\_\_\_  
Municipality(ies): \_\_\_\_\_ County(ies): \_\_\_\_\_  
Block(s): \_\_\_\_\_ Lot(s): \_\_\_\_\_  
Coordinates (NAD 1983 State Plane feet [6 digits] or Lat/Long):  
E(x) / Longitude: \_\_\_\_\_ N(y) / Latitude: \_\_\_\_\_
3. Project Description: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_
4. Mapping Information: Please provide a map showing the project boundary (e.g., USGS quad, aerial imagery, street map, tax or parcel map with block and lot, etc.). Responses will be delayed if site locations are not clearly delineated. Alternatively, you may submit electronic GIS data (e.g., shapefile, geodatabase, \*.kml/kmz, etc.) by attaching it to your email submittal.  
Site Location Map Included: Yes \_\_\_ No \_\_\_  
Electronic GIS Data Files Included: Yes \_\_\_ No \_\_\_  
USGS quad name (if known): \_\_\_\_\_
5. Riparian Zone or FHACA Is this request submitted as part of a Riparian Zone width determination (e.g., Flood Hazard Area Control Act application N.J.A.C. 7:13)? Yes \_\_\_ No \_\_\_
6. Acknowledgement & Signature Any material supplied by the Office of Natural Lands Management will not be published without crediting the Natural Heritage Database as the source of the material. It is understood that there will be a charge of \$70.00 per hour for the services requested. An invoice will be sent with the request response. **Please pay by check or money order (credit card not accepted) payable to: "DEP – Office of Natural Lands Management" (please do not reference "NJ State Treasury").**  
Signed: Courtney Rybak Date: \_\_\_\_\_

**Time Frame for Response:**

**Data requests are processed in the order in which they are received; PLEASE ALLOW AT LEAST 30 DAYS FOR A RESPONSE.**  
**All responses will be emailed to the address provided above unless other arrangements are specifically requested.**

**Please Submit Completed Forms And Attachments To The Following Email Address: [NATLANDS@DEP.NJ.GOV](mailto:NATLANDS@DEP.NJ.GOV)** You may also fax your data request to: (609) 984-1427. If you would like to send in your data request via regular mail, please use the following address:

NJDEP Office of Natural Lands Management  
Mail Code 501-04, PO Box 420  
Trenton, NJ 08625-0420

**FOR OFFICE USE ONLY**

Item Code: REG \_\_\_ ST \_\_\_ NC \_\_\_ Hrs: \_\_\_\_\_  
Project Code: 2 - Inv.#: \_\_\_\_\_

Revised February 2022



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