The following is an environmental evaluation for the property known as Block 14001, Lot 1, Montgomery Township, Somerset County, New Jersey. Based on the New Jersey tax data, Block 14001, Lot 1, the total assessed value is $48,800 and the 2025 real tax is $1,672.82. The property consists of approximately 21 acres, and the owner of record is Shadow Hill Farm, Inc. with a legal address of 213 Grandview Road, Skillman, New Jersey 08558.

USGS Map

A review of the mapping available indicates that there are no streams present onsite.

Soils:

The site consists of the following soils as identified on the attached Soils map

Soil Symbol	Soil Type	Area (AC)
BucC2	Bucks silt loam, 6 to 12 percent slopes, eroded	3.6
LdmB	Lawrenceville silt loam, 2 to 6 percent slopes	4.4
LdmC	Lawrenceville silt loam, 6 to 12 percent slopes	12.4
	Total	20.4

The Bucks soils series consists of deep, well-drained soils on divides and rolling uplands. These soils are gently sloping or strongly sloping. They are in high positions of the landscape. They formed mainly in a silty mantle and in the underlying material which was weathered from red shale, siltstone or fine grained sandstone. These soils are strongly acid or very strongly acid. Natural fertility is medium. The effective rooting zone is deep. Permeability is moderate or moderately slow and the available water capacity is high.

Nearly all of the acreage of Bucks soils has been cleared for farming. The native vegetation consists of forests of such hardwood trees as white, red and black oaks; yellow-poplar; ash; birch; maple; and hickory. Eastern redcedar in prolific in abandoned farmland. The soils are well suited to all general crops, including corn, soybeans, small grains, and vegetables. They are also well suited to fruits, nursery lants, and other specialized crops.

BucC2—Bucks silt loam, 6 to 12 percent slopes, eroded

This sloping soil is on side slopes between ridges on the undulating uplands. The surface layer is low in organic matter content because it is eroded, but it is generally easy to till. Runoff is rapid, and the hazard of erosion is moderate. This soil is used mainly for corn, soybeans, wheat, oats, and alfalfa. Diversion terraces, contour strip cropping and minimum tillage are needed to control runoff and erosion and to maintain a good tilth and the organic matter content in cultivated areas.

- *Elevation:* 50 to 1,300 feet
- *Mean annual precipitation:* 30 to 64 inches
- *Mean annual air temperature:* 46 to 79 degrees F
- *Frost-free period:* 131 to 178 days
- *Farmland classification:* Farmland of statewide importance

Properties and qualities

- *Slope:* 6 to 12 percent
- *Depth to restrictive feature:* 39 to 59 inches to lithic bedrock
- *Drainage class:* Well drained
- *Runoff class:* Medium
- *Capacity of the most limiting layer to transmit water (Ksat):* Moderately high to high (0.20 to 2.00 in/hr)
- *Depth to water table:* More than 80 inches
- *Frequency of flooding:* None
- *Frequency of ponding:* None
- *Available water supply, 0 to 60 inches:* Moderate (about 8.0 inches)

The Lawrenceville series consists of deep, moderately well-drained soils that have an extremely firm, brittle fragipan in the lower part of the subsoil. These soils are gently sloping to sloping. Natural fertility and the organic matter content is medium. These soils are easy to till. The effective rooting depth is restricted by the fragipan. Permeability is moderately slow in the fragipan, and the available water capacity is moderate. These soils have a seasonal perched water table at a depth of 1 ½ to 4 feet late in the fall, in winter and early in spring. Plowing and cultivating are delayed in spring and following heavy rain.

Most areas of Lawrenceville soils have been cleared for farming. The native vegetation consists of forests of such hardwood trees as white, red and black oak; yellow-poplar; beech, ash; maple; and hickory. If adequately drained, the soils are well suited to corn, soybeans, small grains, and vegetables and to fruit, nursery plants, and other specialized crops. In undrained areas small grains and alfalfa are subject to frost heaving and winterkill.

<u>LdmB - Lawrenceville silt loam, 2 to 6 percent slopes</u>

This soil is used mainly for corn, soybeans, hay, and pasture. Runoff is slow and the hazard of erosion is slight. Contour farming, strip-cropping, alternating of crops and use of diversion terraces are needed to control erosion.

- *Elevation:* 100 to 1,100 feet
- *Mean annual precipitation:* 30 to 64 inches
- *Mean annual air temperature:* 46 to 79 degrees F
- *Frost-free period:* 131 to 178 days
- *Farmland classification:* All areas are prime farmland

Properties and qualities

- *Slope:* 2 to 6 percent
- *Depth to restrictive feature:* More than 80 inches; 48 to 60 inches to lithic bedrock
- *Drainage class:* Moderately well drained
- *Runoff class:* Low
- *Capacity of the most limiting layer to transmit water (Ksat):* Moderately high (0.20 to 0.60 in/hr)
- *Depth to water table:* About 18 to 36 inches
- *Frequency of flooding:* None
- *Frequency of ponding:* None
- *Available water supply, 0 to 60 inches:* Low (about 5.7 inches)

LdmC - Lawrenceville silt loam, 6 to 12 percent slopes

Seeps and lower slope areas remain wet during the early part of the growing season. This soil is used mainly for corn, soybeans, hay and pasture plants, and as woodlands. Runoff is medium, and the hazard of erosion is moderate. Erosion control and drainage are needed where areas are farmed intensively. Diversion terraces and strip cropping can be used to control erosion and reduce wetness.

- *Elevation:* 130 to 900 feet
- *Mean annual precipitation:* 30 to 64 inches
- *Mean annual air temperature:* 46 to 79 degrees F
- *Frost-free period:* 131 to 178 days
- *Farmland classification:* Farmland of statewide importance

Properties and qualities

- *Slope:* 6 to 12 percent
- *Depth to restrictive feature:* 24 to 37 inches to fragipan; 39 to 60 inches to lithic bedrock
- *Drainage class:* Moderately well drained
- *Runoff class:* Medium
- *Capacity of the most limiting layer to transmit water (Ksat):* Moderately high (0.20 to 0.60 in/hr)
- *Depth to water table:* About 18 to 36 inches
- *Frequency of flooding:* None
- *Frequency of ponding:* None
- *Available water supply, 0 to 60 inches:* Low (about 5.6 inches)

Land Use Land Cover Map, Environmental Features Map and Wetlands Map:

These maps identify that the site consists of the following land uses:

Land Use	Area (Ac)
Agriculture	19.916
Urban	0.396
Forest	0.106
Water	0.000
Wetlands	0.000

No acid producing soils are present on site.

No stream, lakes or wetlands are mapped on the site as per the GIS data available.

The property is located outside of an approved sewer service area and NJ Public Community Water Purveyor Service Area.

Landscape Project

The Landscape Project was designed to provide users with peer-reviewed, scientifically sound information that transparently documents threatened and endangered species habitat. Landscape Project data is easily accessible and can be integrated with the planning, protection and land management programs of non-government organizations and private landowners and at every level of government – federal, state, county and municipal. Landscape maps and overlays provide a foundation for proactive land use planning, such as the development of local habitat protection ordinances, zoning to protect critical wildlife areas, management guidelines for imperiled species conservation on public and private lands, and land conservation projects. The maps help increase predictability for local planners, environmental commissions, and developers, and help facilitate local land use decisions that appropriately site and balance development and habitat protection. The Landscape Project maps allow the regulated public to anticipate potential environmental regulation in an area and provide some level of assurance regarding areas where endangered, threatened or species of special concern are not likely to occur, affording predictability to the application and development process. Thus, Landscape Project maps can be used proactively by regulators, planners and the regulated public in order to minimize conflict and protect imperiled species. This minimizes time and money spent attempting to resolve after-the-fact endangered and threatened species conflicts.

The project site is located within the Piedmont Plains Landscape Region. This landscape region also combines two of New Jersey's physiographic regions, the Piedmont and the Inner Coastal Plain. It encompasses all or parts of Burlington, Camden, Gloucester, Salem, Mercer, Middlesex, Monmouth, Hunterdon, Somerset, Union, Essex, Hudson, Passaic, and Bergen counties. It is dominated by the Delaware and Raritan rivers and is characterized by farmed areas, extensive

grasslands, fragmented woodlands and productive tidal marshes. Imperiled species within this landscape include grassland birds such as the endangered upland sandpiper and raptors such as the American kestrel and barred owl.

On the site, the following species were noted:

Rank 1	Habitat Specific Requirements	
Rank 2	Special Concern	
	Eastern Red Bat	Active Season Sighting, Inactive Season Sighting
Rank 3	State Threatened	
	Bobolink	Breeding Sighting
	Grasshopper Sparrow	Breeding Sighting
	Eastern Meadowlark	Breeding Sighting
	Savannah Sparrow	Breeding Sighting
Rank 4	State Endangered	
	Little Brown Myotis	Active Season Sighting
	Tri-colored bat	Active Season Sighting

Within a mile radius of the subject property the following species were identified:

Rank 1	Habitat Specific Requirements	
Rank 2	Special Concern	
	Big Brown Bat	Active Season Sighting, Maternity Colony
	Eastern Red Bat	Active Season Sighting, Inactive Season Sighting
	Veery	Breeding Sighting
	Spotted Salamander	Vernal Pool Breeding
	Wood Thrush	Breeding Sighting
	Great Blue Heron	Foraging
	Bald Eagle	Foraging
	Canada Warbler	Breeding Sighting
Rank 3	State Threatened	
	Bobolink	Breeding Sighting
	Barred Owl	Non-Breeding Sighting; Breeding Sighting
	Grasshopper Sparrow	Breeding Sighting
	Eastern Meadowlark	Breeding Sighting
	Savannah Sparrow	Breeding Sighting
	Wood Turtle	Occupied Habitat
	Eastern Copperhead	Occupied Habitat

Rank 4 State Endangered

Little Brown Myotis	Active Season Sighting
Tri-colored bat	Active Season Sighting

Rank 5 Federally Listed

Northern Myotis	Active Season Sighting

The Wood Turtle is a threatened and endangered species that is critically dependent on regulated waters for their survival. In order to determine compliance with the NJ Flood Hazard Area Control Act Rules at NJAC 7:13, each application for a flood hazard verification, individual permit, or general permit must include an analysis of the project's status with regard to the Landscape Project and natural heritage program.

In 2001, ENSP partnered with Rutgers University Center for Remote Sensing and Spatial Analysis (CRSSA) to develop a method for mapping potential vernal pools throughout New Jersey. Through an on-screen visual interpretation of digital orthophotography, CRSSA identified over 13,000 potential pools throughout the state. A subset of these pools was field verified and confirmed, with an 88% accuracy rate, to meet the physical characteristics to qualify as a vernal pool. In accordance with N.J.A.C. 7:7A-1.4, the term "vernal habitat" includes a vernal pool - or the area of ponding - plus any freshwater wetlands adjacent to the vernal pool. Vernal habitat areas mapped in the Landscape Project rely upon those data developed by the DEP and CRSSA to identify sites that should be field checked for possible identification as vernal habitat areas. DEP staff is in the process of field-verifying these pools. The Department also maps vernal habitat areas based upon on-the-ground assessment of sites not captured by the CRSSA mapping. The Landscape Project includes all of the CRSAA-identified sites, as well as sites identified by on-the-ground reconnaissance, categorized as either "potential vernal habitat areas" or "vernal habitat areas" as defined below. Note that the occurrence area is not intended to suggest or correspond with any specific regulatory requirement. Rather, the area added around the point accounts for variations in the size of individual vernal pools, variations in the width of freshwater wetlands adjacent to the pool, plus adjacent habitats sufficient to include the estimated home range for vernal pool obligate species. If there is an overlap between areas mapped around two or more nearby points, the boundaries are conjoined to generate contiguous patches. If the resulting patch contains areas mapped as "vernal habitat area" and areas mapped as "potential vernal habitat areas," the entire patch is labeled as a "vernal habitat area."

There are areas of Potential Vernal Pool Habitat identified within a one-mile radius of the subject property.

Other areas of investigation revealed:

- No Freshwater Mussel Habitat is on or in the vicinity of the property boundaries.
- There are no historic properties within the one (1) mile radius of the subject property
- There are no Natural Heritage Priority Sites within a mile of the property.
- There are two (2) Historic Districts identified within a mile radius of the property:

    - Delaware and Bound Brok (Reading) Railroad Historic District
    - New Jersey State Village for Epileptics Historic District (NJ Neuro Psychiatric Institute)
- There are no rare plant species or rare ecological community habitat in the project vicinity or within 1.5 miles as based on the Natural Heritage Grid (Refer to Grid M, Grid S or Both on the Landscape map).

  Grid S means the location of an occurrence of a rare plant species or ecological community is precisely known and falls somewhere within the grid cell.

  Grid M means the location of a rare plant species or ecological community occurrence is not precisely known, there may be up to 1.5 miles of uncertainty in the mapped location.

  BOTH – means both precisely known (S) and less precise (M) occurrences for rare plant species or ecological communities are found within the same.