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ENVIRONMENTAL IMPACT STATEMENT
FOR
AREA 1 BELLE MEAD PLANNED UNIT DEVELOPMENT
PIKE RUN PLAZA PORTION
BLOCK 5023, LOTS 2 AND 3
TOWNSHIP OF MONTGOMERY
SOMERSET COUNTY, NEW JERSEY

Prepared for:

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I. EXECUTIVE SUMMARY – PIKE RUN PLAZA

Country Club Meadows, LLC of Woodbridge, New Jersey, is proposing construction of a commercial development on a 21.9± acre site known as Block 5023, Lots 2 and 3 and Block 5016, Lot 3 in the Township of Montgomery, Somerset County, New Jersey. The site is located at the intersection of Belle Mead - Griggstown Road and Route 206. The site is characterized by upland successional woodlands and an existing upland stormwater detention basin. Two on-site soil stockpiles near the detention basin were recently moved to the Country Club Meadows Single Family project site across Route 206 from the Pike Run residential development. The Pike Run Plaza site is bordered to the north and east by the Pike Run residential development, to the south by Belle Mead - Griggstown Road, and to the west by Route 206. The site is within the Millstone River watershed and the Raritan River Drainage Basin.

This portion of the Belle Mead PUD project consists of a commercial development consisting of 102,000± square feet (SF) of commercial space in six buildings. An 8,000 SF +/- maintenance building to serve the Pike Run residential community is also proposed. The site will be accessed from Route 206 and from Belle Mead - Griggstown Road. There will also be access directly from the existing Pike Run residential community via Delmarvia Drive.

Stormwater from impervious surfaces will be collected by a series of catch basins and inlets and conveyed via subsurface piping to a stormwater basin (wet basin or pond) to be located at the southwest corner of the site. This stormwater basin will be linked via piping under Belle Mead - Griggstown Road to another wet basin to be constructed in association with Belle Mead Plaza, another portion of the PUD proposed south of Belle Mead - Griggstown Road. This stormwater management system will outlet to an existing wetlands area on the Pike Run Plaza property. This existing wetlands area ultimately drains through an existing culvert under Route 206 to an unnamed tributary of Cruser Brook.

This stormwater system has been designed to release stormwater at a controlled rate so that the peak post-development rate of discharge does not exceed the peak pre-development rate of discharge. The system will also meet the water quality treatment requirements of the NJDEP by detaining stormwater such that sediments and associated pollutants can settle out of the water column. Consistent with NJDEP requirements, the stormwater management system will also utilize infiltration to address ground water recharge requirements.

The principal impacts of the proposed plan of development are those associated with a change in land use from upland successional woodlands and upland stormwater detention basin to commercial development. Long-term impacts to the site include an increase in impervious surfaces

and the loss upland successional woodlands and associated wildlife habitat. Temporary impacts will occur during the construction phase of the project and include soil loss, and increased noise and dust levels. All impacts will be minimized through appropriate mitigation procedures and best management practices. The project is located on a site designated for commercial development in association with higher density residential development.

This Environmental Impact Statement (EIS) has been prepared by EcolSciences, Inc. of Rockaway, New Jersey in accordance with Montgomery Township's EIS Ordinance No. 16-8.4(c) (Environmental Impact Statement), and is intended to support site plans prepared by Paulus, Sokolowski, and Sartor. LLC, (PS&S) of Warren, New Jersey. The following chapters provide a project description, an inventory of existing environmental conditions on and around the site, an assessment of potential impacts associated with the proposed construction, a description of performance controls designed to mitigate adverse impacts, and a listing of required permits and approval.

II. DESCRIPTION OF THE DEVELOPMENT PLAN – PIKE RUN PLAZA

A. General Description

Country Club Meadows, LLC of Woodbridge, New Jersey, is proposing construction of a commercial development to be known as Pike Run Plaza on a 21.9± acre site known as Block 5023, Lots 2 and 3 and Block 5016, Lot 3 in the Township of Montgomery, Somerset County, New Jersey. The site is located at the intersection of Belle Mead - Griggstown Road and Route 206 with an arm of the property extending up to Pike Run Road. Block 5023, Lot 3 and Block 5016, lot 3 were formerly the location of a proposed Route 206 by-pass. The by-pass has been since been relocated further north on Route 206. The site is characterized by upland successional woodlands and an upland stormwater detention basin. Two on-site soil stockpiles near the detention basin were recently moved to the Country Club Meadows Single Family project site across Route 206 from the Pike Run residential development. The Pike Run Plaza site is bordered to the north and east by the Pike Run residential development, to the south by Belle Mead - Griggstown Road, and to the west by Route 206. The site is within the Millstone River watershed and the Raritan River Drainage Basin.

The Pike Run Plaza project consists of approximately 102,000 square feet (SF) of commercial development in six proposed buildings with associated parking. In addition, an 8,000 SF maintenance building is proposed on the site for the existing Pike Run residential development. The site will be accessed from Route 206 and from Belle Mead - Griggstown Road. The Route 206 access will be located across from an access to Route 206 for the Country Club Meadows Single Family project. There will also be access directly from the existing Pike Run residential community via Delmarvia Drive.

B. Master Planning and Zoning

The Pike Run Plaza site is located within the Belle Mead Node, one of two areas of the Township chosen for concentrated land uses including relatively intense non-residential development and relatively dense residential development. The Montgomery Township Master Plan was amended in 2014 to allow a Planned Unit Development (PUD) on the lands in the Belle Mead Node owned by Country Club Meadows LLC. The amendment is part of efforts between the applicant and the Township to end current litigation and prevent future litigation concerning the Belle Mead Node area. As defined in the Municipal Land Use Law at N.J.S.A 40:55D-6, a Planned Unit Development means:

"An area with a specified minimum contiguous or noncontiguous acreage or 10 acres or more to be developed as a single entity according to a plan, containing one or more contiguous clusters or noncontiguous clusters or planned unit residential developments and one or more public, quasi-public, commercial or industrial areas in such ranges of ratios of nonresidential uses to residential uses as shall be specified in the zoning ordinance."

The applicant has proposed a PUD project that is designed to meet the specifications of the Land Use Plan Amendment and other applicable land use development ordinances. Several variances will be required and details concerning them are on the plans and other application materials prepared by PS&S.

In the New Jersey State Development and Redevelopment Plan, (hereafter referred to as the State Plan), the site is mapped in the Suburban Planning Area (PA2). This Planning Area, having utility infrastructure, is expected to accommodate much of the market demand for future growth and new development in the state (New Jersey State Planning Commission, 1997, 2001). The State Plan encourages centers as the focus for development; however, any development in the environs (areas outside centers) should be planned and located to maintain the existing character of the environs.

C. Sanitary Sewage

Wastewater for the project will be conveyed to Montgomery Township's Pike Run Wastewater Treatment plant for treatment via connection to the existing line along Belle Mead - Griggstown Road. It is estimated that the Pike Run Plaza portion of the PUD development will generate 21,363 gallons per day (average daily flow) of wastewater (PS&S). The treatment plant has capacity for these increased flows and a "will serve" letter for the project will be obtained.

D. Potable Water Supply

Potable water for the proposed residential development will be obtained from the New Jersey American Water Company (NJAWC) by a connection to existing lines located beneath Belle Mead - Griggstown Road. The estimated demand for potable water for the proposed Pike Run Plaza development is 18,938 gpd (average daily demand) (PS&S). There is available water supply for these increased flows and a "will serve" letter for the project will be obtained.

E. Stormwater Management Facilities

Stormwater from paved surfaces will be collected by a series of inlets to a wet stormwater basin or pond located at the southwest corner of the site. This pond was approved as part of earlier site plan application for the Country Club Meadows – Belle Mead Plaza projects. This stormwater basin will be linked via piping under Belle Mead - Griggstown Road to another wet basin to be

constructed in association with Belle Mead Plaza, another portion of the PUD proposed south of Belle Mead - Griggstown Road. The retention basin system was approved as part of the Belle Mead Plaza development application. This stormwater management system will discharge to the outlet ditch from the existing detention basin on the Pike Run Plaza property which is connected to an unnamed tributary of Cruser Brook via an existing culvert under Route 206.

The stormwater management system has been designed to be in compliance with the requirements of the NJDEP's Stormwater Management Rules, and the Montgomery Township Stormwater Ordinance. The New Jersey Department of Environmental Protection stormwater management measures consist of four primary requirements. (1) Implementing non-structural stormwater strategies, (2) provide groundwater recharge facilities, (3) provide enhanced water quality treatment, and (4) provide reductions to peak runoff rates for erosion and flood control.

The proposed wet basin system is designed as an extended detention basin. This design conforms to the proposed state standards to reduce the post-construction rate of runoff for the two, 10 and 100 year storm events. The basin will also serve to improve water quality by reducing total suspended solids (TSS) by 80 percent, therefore meeting the water quality improvement requirements. Groundwater recharge for this site, the Belle Mead Plaza site and a portion of the Country Club Meadows residential site will be maintained by an underground recharge system on the Pike Run Plaza site. For specific details regarding the proposed stormwater management system, refer to the Stormwater Management Report prepared for the project by PS&S.

F. Utilities Plan

Utilities to be provided to the proposed development include water, sewer, electricity, gas, and communications. Utility lines will connect to existing lines located along Route 206, Belle Mead - Griggstown Road and Delmarvia Drive. All utilities will be located underground.

G. Solid Waste Plan

If market conditions are favorable, the applicant intends to recycle construction related concrete and asphalt waste. Trees to be removed will be chipped and utilized as landscape mulch. All other construction debris generated on-site will be removed and transported to an approved disposal site by a licensed waste hauler, in accordance with State and local requirements.

Solid waste generated by the proposed development will be collected by a private hauler and transported to an approved landfill for disposal. Recycled materials will also be collected by a private hauler.

III. INVENTORY OF EXISTING NATURAL RESOURCES – PIKE RUN PLAZA

A thorough inventory of environmental conditions is a fundamental prerequisite to an understanding of a land tract's ecological and cultural history, current condition, and suitability for alternative future uses. The inventory of existing environmental conditions in this chapter is divided into systematic and logical subsections that treat each aspect of the site and vicinity in detail, and collectively define the constraints to future land use. The focus of this inventory is the portion of the site that is being developed. It does not include of the "finger" of the former Route 206 By-Pass parcel that extends up to Township Line Road where no activities are proposed.

A. Geology

The portions of New Jersey that have similar sequences of rock types, geological structures, and geological history have been characterized as Physiographic Provinces - major areas of the state that have experienced specific geological histories and that have similar characteristics at present. From northwest to southeast across the State, the major physiographic provinces are: Appalachian Ridge and Valley, Highlands, Piedmont, and Coastal Plain. Each of these physiographic provinces has regional subdivisions, and each is also a continuation of larger regions in the northeastern United States (Widmer, 1964; Robichaud and Buell, 1973).

The site is situated in the Newark Basin, located within the Piedmont Physiographic Province. The western edge of the Newark Basin is formed by the Highlands escarpment extending from Mahwah through Boonton and Morristown to Gladstone, and separating the Highlands from the Piedmont province. Mud, clays, silts, and gravel were washed from the Highlands slopes and surrounding upland areas and deposited in broad alluvial fans on the basin floor. These deposits compacted and hardened to form the characteristic sedimentary reddish-brown sandstones, siltstones, shales, and conglomerates of the Brunswick Group. The Brunswick Group also contains igneous basalt units, which are the result of three major volcanic eruptions that spread lava across the Newark Basin (Morris County Planning Board, 2000).

The site is underlain by the Passaic Formation, which is characterized by siltstone and shale (Owens, J.P. et. al. 1998). The Passaic Formation, with a maximum thickness of 11,810 feet, was formed approximately 150 to 225 million years ago during the Triassic Period of the Mesozoic Era. Continental drift caused the creation of rift valleys, formed on the margins of the continent. The Newark Basin is one such rift valley, and dominated the area of Somerset County during this period. Material eroded from the surrounding highlands was, over time, deposited in this rift valley (Widmer, 1964 and Owens, J.P. et. al. 1998).

Millions of years of floodplain deposits, intermittent tectonic activity, and faulting resulted in the deepening of the basin and the creation of ancient Lake Lockatong. This lake once extended across all of central New Jersey and eastern Pennsylvania. The lake eventually dried up, leaving extensive poorly drained mudflats and sluggish drainages that were subsequently covered with the characteristic red, iron-rich sands, silts, and muds of the Brunswick Group (Somerset County Natural Resource Inventory, 1983). The Passaic Formation occurs over most of the lowland region of the county, referred to locally as the Somerville Lowlands. The Passaic Formation is structurally weak and is easily shattered into thin flakes or fragments (Somerset County Natural Resource Inventory, 1983).

B. Topography

The topography of a site or area is a description of the variation in elevation of the land surface with horizontal distance; topography is generally described by contour maps where points of equal elevation are connected by smooth contours. The surficial topography of a site or area reflects the underlying geology as altered by geomorphological processes; the surficial topography, in turn, directly influences the drainage patterns, watercourses, soils, and biological communities evolving on the particular site.

The site is relatively level to gently sloping with elevations ranging from approximately 98 feet at the northeast part of the proposed developed area of the site to approximately 78 feet where the detention basin outlet feature is culverted beneath Route 206. See the plans prepared by PS&S for details.

C. Soils

Soils are formed through the interaction of a variety of physical, chemical, and biological factors that include climate, parent material, topography, biological activities, and time. The degree to which any or all of these factors affect the local soil characteristics is quite variable, generally leading to the formation of a mosaic of soil types in any particular locality. The United States Department of Agriculture has, through the Soil Conservation Service, mapped soils in detail; for New Jersey, the results of these soil surveys are issued for each county.

According to the USDA Somerset County Soil Survey (USDA, 2008) (Figure 3), six soil types representing three soil series occur on the site: Klinesville channery loam, 6 to 12 percent slopes (KkoC), Penn channery silt loam, 2 to 6 percent slopes (PeoB), and Reaville silt loam 2 to 6 percent slopes (RehB). Table 1 provides soil characteristics, limitations, and suitabilities. A brief description of each soil per the SCS is provided as follows:

Klinesville Series (KkoC) - The Klinesville series consists of shallow, somewhat excessively drained soils formed in residuum derived from red shale, siltstone, slate, and fine-grained sandstone. They are on dissected uplands. Slopes range from 3 to 80 percent. Saturated hydraulic conductivity is high. The depth to bedrock varies from 2.0 feet to 6.5 feet and the seasonal high water table is more than 6.5 feet.

Penn Series (PeoB) - This soil series consists of moderately deep, well drained soils ranging from nearly level to strongly sloping occurring on undulating and rolling uplands. They formed in material weathered from shale, siltstone, and fine-grained sandstone. Permeability and the available water capacity are moderate. The depth to bedrock varies from 1.5 to 3.5 feet and the seasonal high water table is at a depth of greater than 5.0 feet.

Reaville Series: The Reaville series consists of moderately deep, moderately well, and somewhat poorly drained soils on uplands. They formed in material weathered from interbedded triassic red shale and siltstone. Typically, these soils have a reddish brown, channery silt loam surface layer 9 inches thick. The mottled subsoil from 9 to 15 inches is reddish brown channery silt loam. The mottled substratum from 15 to 25 inches is dusky red, very channery silt loam. Bedrock is at 25 inches. Slopes range from 0 to 15 percent.

Table 1: Soil Characteristics, Limitations, and Suitabilities – Pike Run Plaza

Parameter	Klinesville (KkoC)	Penn (PeoB)	Reaville (RehB)
Texture	Loam	Silt loam	Silt loam
Slope (%)	6-12	2-6	2-6
Depth to Bedrock (ft.)	1.0 – 1.5	1.5 – 3.5	1.5 – 3.5
Depth to Seasonal High Water Table (ft.)	> 4	> 5	0.5 - 3
pH	4.5-6.0	5.1-5.5	5.1-5.5
Erosion Hazard	Moderate	Severe in plowed or cultivated areas	Slight
Limitations for Dwellings without Basements	Moderate: rippable bedrock at 1.0 – 1.5 feet.	Moderate: frost action potential	Severe: high frost action potential
Limitations for Local Roads and Streets	Severe: rippable bedrock at 1.0 – 1.5 feet.	Moderate: frost action potential	Severe: seasonal high water table at a depth of 0.5 – 3 feet; high frost action potential

Source: USDA, 2008

D. Ground Water Quantity and Quality

Ground water 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. Ground water resources are often functionally linked to overlying land areas and surface water bodies; ground water 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 ground water yields of any particular geological formation are a function of the porosity and permeability of the material comprising the formation (consolidated rock or unconsolidated deposits). 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.

The project site is underlain by the shales and sandstones associated with the Brunswick Group. This formation, consisting of a series of tabular beds of varying thickness, extends to depths of approximately 8,000 feet. Little water is available from the formation's primary porosity; the voids are too small to allow sufficient permeability for transmitting water to a well. Ground water is mainly stored and transmitted along horizontal bedding planes and nearly vertical joints and fractures, in what is termed secondary porosity. Ground water recharge is derived primarily from the local region. Recharge comes from precipitation falling on outcrop areas, vertical leakage from surface runoff, and infiltration from adjacent waterbodies.

Reported yields of industrial and public supply wells (wells greater than six inches in diameter) from various areas in the Brunswick Group range up to 1,000 gallons per minute (gpm), with average yields ranging from 100 to 140 gpm. According to the New Jersey Geologic Survey, recharge rates to the Brunswick Group range from 350,000 gpd per square mile during a normal year to 225,000 gpd per square mile during a dry year (NJDEP, 1974). According to information contained in the United States Geological Survey website, typical yields for wells located within the Precambrian granite/gneiss range between 5 to 50 gallons per minute and may exceed 400 gallons per minute (USGS, 2000). Ground water obtained from the Brunswick Group is considered to have good natural water quality, with hardness and iron content the main aesthetic problems (NJDEP, 1997). The site is mapped with a Rank C well yield (100 to 250 gallons per minute) (Mark French, NJGS/BWR, 2005) (Figure 4).

The site is primarily mapped with a Rank B (11 to 14 inches per year) ground water recharge rate (Mark French, NJGS/BWR, 2005) (Figure 4). The southeastern corner of the site is mapped as Rank D (0-8 inches per year) (Mark French, NJGS/BWR, 2004). Per the Montgomery Township Natural Resources Inventory, this portion of the township has an aquifer recharge rate of 5.5 inches per year (2004).

E. Surface Water Quantity and Quality

Surface waters include lakes, rivers, ponds, and streams - water bodies at the surface of the land. These waters serve as valuable habitats for aquatic organisms; collect, store and distribute water from rainfall; and serve as important aesthetic and recreational features.

Overland runoff is mainly toward the southwest. The existing stormwater detention basin outlets to an existing wetlands area on the Pike Run Plaza property which connects to an unnamed tributary of Cruser Brook via an existing culvert beneath Route 206. Cruser Brook is a tributary to Pike Run, which drains into the Millstone River. Cruser Brook has been classified by the NJDEP as a FW2-NT (non-trout) waters (NJDEP, 2012).

The NJDEP has adopted a 300-foot buffer (Special Water Resource Protection Area (SWRPA)) adjacent to all Category 1 (C1) waterbodies and their mapped upstream tributaries within the associated Hydrologic Unit Code – 14 (HUC-14) drainage basin. The site is mapped within one HUC-14 drainage basin. No Category One waters are located downstream of the site within the same HUC-14 drainage basin. Therefore, the site is not subject to the 300-foot SWRPA.

The NJDEP (July 2014) published a "New Jersey 2012 Integrated Water Quality Monitoring and Assessment Report (Integrated Report)", which is intended to provide an effective tool for maintaining high quality waters and improving the quality of waters that do not attain their designated uses. The Integrated Report describes attainment of the designated uses specified in New Jersey's Surface Water Quality Standards (N.J.A.C. 7:9B), which include: aquatic life, recreation, drinking water, fish consumption, shellfish consumption, industrial and agricultural (NJDEP, December 2006). The Integrated Report includes management strategies, including Total Maximum Daily Loads (TMDLs), under development to achieve surface water quality standards and attain the designated uses of the waters (NJDEP, December 2006). TMDLs represent the assimilative or carrying capacity of the receiving water taking into consideration point and nonpoint sources of pollution, natural background, and surface water withdrawals (NJDEP, December 2006).

The primary goal of the Integrated Report is the Integrated List, which identifies the use attainment and assessment status of all waters of the State (NJDEP, December 2006). The Integrated List is generated by placing all of the State's waterbodies into one of five possible categories or lists (New Jersey uses the term Sublists) based upon the following considerations: 1) the degree of attainment of the designated uses, 2) how much information is available to determine use attainment, and 3) the cause(s) and source(s) of non-attainment. Sublist 2 is defined as "The designated use is assessed and attained but one or more designated uses in the assessment unit are not attained and/or there is insufficient information to make a determination" (NJDEP, December 2006). Sublist 3 is defined as "Insufficient data is available to determine if the designated use is attained" (NJDEP, December 2006). Sublist 4A is defined as "The designated use is not attained or threatened; however development of a TMDL is not required because a TMDL has been completed for the pollutant causing non-attainment" (NJDEP, December 2006). Sublist 5 is defined "The designated use is not attained or is threatened by a pollutant(s) and a TMDL is required" (NJDEP, December 2006).

The site is approximately one mile upstream of the Pike Run (below Cruser Brook) monitoring area (NJDEP, July 2014). This station was placed on Sublist 2 for Drinking Water Supply, Agricultural Water Supply, and Industrial Water Supply and Sublist 3 for Secondary Contact Recreation and Fish Consumption (NJDEP, July 2014). This station was placed on Sublist 4A for Primary Contact Recreation because of non-attainment of fecal coliform and Sublist 5 for Aquatic Life because of levels of total phosphorus (NJDEP, 2014).

By definition, FW-2 waters are suitable for public potable water supply after required treatment. This classification requires that waters be acceptable for primary contact recreation, industrial and agricultural use, and maintenance and migration of the established biota. The Non-Trout (NT) suffix indicates that the waters do not possess the properties suitable for the maintenance of trout species, i.e., high dissolved oxygen levels, relatively low summer temperatures, and low pollutant loadings. However, more tolerant fish species, particularly warm-water species, may flourish in such waters.

The U.S. Geological Survey (USGS) also conducts water quality monitoring. The USGS does not maintain any water quality monitoring stations along Cruser Brook. However, the USGS maintains one station along Pike Run in Rocky Hill (USGS 01401700). This station is approximately 5 miles downstream of the site. Water quality data obtained at the Middle Valley station from October 2005 to September 2006 are summarized in Table 2. The data for the Pike Run at the Rocky Hill monitoring station showed periodic contraventions of FW2-NT standards for phosphorus, fecal coliform, and ammonia (USGS, 2007).

Table 2: 2006 Water Quality Data for Pike Run at Rocky Hill

Water Year October 2005 to September 2006 – Pike Run Plaza

PARAMETER	FW2-NT STANDARD	AVERAGE	RANGE
Flow (cfs)	-	None given	None given
PH	6.5 – 8.5	7.8	7.4 – 8.4
DO (mg/l) minimum	5 (24 – hr. avg.)	11.0	8.3 – 15.8
BOD (mg/l)	-	<1.0	<1.0 -<1.2
Fecal Coliform (MPN/100ml)	200 (geom. Mean)	476	80 - 800
Chloride (mg/l)	250	37	27 - 55
Total Phosphorus (mg/l)	0.1	0.07	0.023 – 0.165
Suspended Solids (mg/l)	40	10	<1 - 22
Total Dissolved Solids (mg/l)	500	202	178 - 221
Sulfate (mg/l)	250	43	37 - 55
Temperature (C)	Not to exceed 30	14.1	3.7 – 22.4
Total Nitrogen (mg/l)	-	3.5	2.4 – 4.6
Ammonia unionized (mg/l)	0.05	0.03	0.004 – 0.092

Source: USGS, 2007

F. Vegetation

Vegetation is the plant life or the total plant cover that is found in a specific area, whether indigenous or introduced by humans. The Piedmont Physiographic Province of New Jersey contains a moderately diverse mixture of major terrestrial plant habitats, including freshwater marshes, swamps and floodplains, upland valleys and slopes, upland ridges, and rock outcrops (Robichaud and Buell, 1973). This habitat diversity results in a mosaic of plant communities occurring in small areas, a situation rather different from the more homogeneous habitat conditions and plant communities found in more southern portions of the state, and less inherently "patchy" than habitats of more severe topographic relief in the Highlands and Ridge and Valley provinces to the north.

The NJDEP has mapped general vegetation communities and land uses throughout the state using the 2002 aerial photographs. Based upon this mapping, vegetation communities and land uses were mapped for the site including forest, wetlands, agriculture and urban. According to this mapping, the wooded portions of the site are mapped as Forest land cover and the stormwater detention basin is mapped as Urban land use.

Based upon species composition, soils, and apparent hydrology noted during the field investigation, the site consists of upland successional woodland and maintained lawn in the stormwater detention basin. An area of a wetland ditch also occurs in association with the stormwater detention basin. These communities are briefly described below.

Maintained Lawn - This vegetative community characterizes the detention basin and areas around the drainage into it. The community is dominated by turf grasses in association with hop clover, English plantain, old field cinquefoil, white clover and yarrow.

Upland Successional Woodland - This vegetative community characterizes most of the site. The canopy is generally dominated by pin oak with associates of Eastern red cedar, American elm, white ash and black cherry. The woody understory is generally sparse with multiflora rose and Japanese honeysuckle common. The herb layer includes jewelweed, jack-in-the-pulpit, Japanese honeysuckle and Japanese stiltgrass.

Wetland Ditch - This community is located at the outfall from the storm drainage system from Delmarvia Drive. The ditch is maintained by mowing. Common vegetation consists of marsh purslane, umbrella sedge, spikerush, barnyard grass, old field cinquefoil, white clover, and other grasses.

G. Wildlife

The utility of an area as wildlife habitat depends on many factors. All wildlife species require food, water, cover, and space. The relative abundance or lack of these resources in relation to each species' particular requirements will, in part, determine the species composition and distribution of a particular area. In addition, the types of vegetative communities present, the size, shape, and complexity of the habitat(s), and the surrounding land uses will further interact to determine the success of various wildlife species at the location being considered. Some wildlife species have demonstrated great adaptability and tolerance to the human presence; others are less able to tolerate such activities and are displaced to more suitable habitats, if such are available and accessible.

The NJDEP Landscape Project (Version 3.1), the use of which was adopted by NJDEP on July 15, 2002, is a wildlife habitat mapping program that is used to identify and map critical wildlife habitats for endangered, threatened, and special concern species. The Landscape Project provides mapping for five distinctive land cover types: forest, emergent wetlands, forested wetlands, grasslands, and beach/dune. The maps are based on land use classification and rare species locations. Each mapped area appears as a shaded color from light to dark (5 Ranks) indicating its relative priority ranking. Rank 1 is the lowest priority ranking, while Rank 5 is the highest priority ranking. Rank 1 meets the minimum area requirement, but no data exists for the presence of priority species (NJDEP, 2002). This is the NJDEP's lowest priority ranking and is defined as areas meeting the minimum size requirements but with no documented sightings of threatened or endangered species. Rank 2 contains records for priority species, which are species of special concern. Ranks 3, 4, and 5 indicate that the identified land cover type has been identified as providing habitat for State threatened (Rank 3), State endangered (Rank 4), or Federally threatened or endangered (Rank 5) species.

The Landscape Project mapping (Version 3.1) shows the eastern parts of the property are not mapped as habitat (Figure 5). Areas of Rank 1 forest are mapped in the southwest and northern parts of the site. Rank 1 habitats do not include any documented records for threatened or endangered species.

The site has a limited potential to support a large and diversified wildlife population due to the adjacent roads and development. However, the site does contain habitat that can be utilized by wildlife tolerant of moderate human presence. The upland woodlands covering most of the site appears to serve as habitat for large and small mammals such as white-tailed deer, opossum, raccoon, skunk, squirrels, chipmunks, and mice. The woodland also provides nesting, feeding, and resting habitat for resident birds and feeding and resting habitat for migrating birds. The trees and

snags may provide nesting sites for cavity-nesting birds and mammals. Insect species seeking cover and feeding upon leaves, wood, or other insects provide food for insectivorous birds. Overall, the site provides habitat for relatively common wildlife species that are tolerant of the human presence.

H. Critical Environmental Features

There are certain features of any tract of land that either have more inherent environmental value, or are more susceptible to perturbation, or both that are generally termed "critical environmental features". Such critical environmental features may be special habitats such as wetlands; they may also be features that require special planning and permitting (floodplains, or bedrock outcrops). The existing properties of such features are summarized in the following subsections:

1. Wetlands

EcolSciences, Inc. conducted a field investigation on the site during which small areas of freshwater wetlands or waters were identified on the site. A Letter of Interpretation (LOI) was issued by the NJDEP on January 8, 2015 (File No. 1813-03-0002.2) for Lot 2 confirming the presence of a wetland ditch on that lot. Wetland ditches are not subject to wetland transition areas or buffers and they can be filled as authorized under Statewide General Permit No. 7.

Wetlands were also identified on Lot 3 associated with part of the outlet ditch from the stormwater detention basin on Lot 2. In addition, there is a wetland ditch in the northern part of Lot 3 consisting of the outlet of an off-site detention basin near Pike Run Road. An LOI was issued by the NJDEP on November 4, 2015 (File No. 1813-15-0004.1) for Lot 3 confirming the wetlands and waters delineation and classifying the wetlands as intermediate and ordinary resource value with a standard transition area or buffer of 50 and 0 feet respectively. In addition, Statewide General Permits and a Transition Area Waiver – Averaging Plan approved by the NJDEP on April 12, 2011 (File No. 1813-05-0004.2) included approval to fill a portion of the ordinary resource value ditch from the outlet of the stormwater detention basin. Currently, the plans do not include any encroachment in the outlet ditch.

2. Floodways and Floodplains

The area inundated by the flood waters of a river or stream is termed the floodplain. Within the floodplain can be found several subdivisions: the channel, where normal, non-floodplain flow is confined; the floodway, or terrestrial areas on the margins of the channel that show permanent terracing effects of repeated flooding; and the flood fringe, or areas landward of the floodway that may be inundated during more severe (and less frequent) storms. Taken together, these areas constitute the flood hazard area around a river or stream.

There are no streams or water bodies on the Pike Run Plaza site. According to FEMA mapping (Community Panel No. 34035C02331E, Effective September 27, 2007), prepared for FEMA, the site is not located within a FEMA mapped flood-prone area and is included within an "X Zone" or "Areas outside the 0.2% annual chance floodplain."

On November 5, 2007, the NJDEP adopted Flood Hazard Area Control Act Rules (N.J.A.C. 7:13 et seq). As part of these rules, a riparian zone adjacent to all regulated waters is required. These regulations expand the preservation of near-stream vegetation (previously protected within 25 or 50 feet of streams) by implementing new riparian zones that are 50, 150 or 300 feet in width along each side of surface waters throughout the State. The riparian zone width depends on the environmental resources being protected, with the most protective 300-ft riparian zone applicable to waters designated as C1 and certain upstream tributaries. Certain waters supporting trout, or habitats of threatened or endangered species critically dependent on the watercourse to survive, or watercourses which flow through areas that contain acid-producing soil deposits, receive a 150-ft riparian zone. Regulated waters not identified above would have a 50-foot riparian zone.

The site drains to the unnamed tributary of Cruser Brook located on the Country Club Meadows Single Family project site across Route 206 via the outlet ditch from the stormwater detention basin. The outlet ditch has a drainage area that is less than 50 acre and is not regulated under the Flood Hazard Area Control Act Rules and is not subject to a riparian zone. Cruser Brook is a tributary to Pike Run, which drains into the Millstone River. Cruser Brook has been classified by the NJDEP as a FW2-NT (non-trout) waters (NJDEP, 2012).

3. Bedrock Outcrops

Bedrock formations are generally found beneath well-developed soil layers. However, there are areas where, because soils have been eroded or scraped away by glacial activity or because bedrock strata have been uplifted by tectonic processes, bedrock is exposed as "outcrop" areas. Such areas may serve as important ground water recharge or discharge areas; these areas also present special constraints to site development.

According to the Somerset County Soil Survey (USDA, 2008), the Klinesville soils (KkoC,) have a depth to bedrock from 1.0 to 2.0 feet. The Penn Series (PeoB) have a bedrock from 2.0 to 3.5 feet and the Reaville Series (RehB) have a depth to bedrock of 1.5 to 3.5 feet. According to New Jersey GeoWeb (NJDEP, 2013 update), no bedrock outcrops are mapped and none were observed by EcolSciences within the site.

I. Air Quality

The Federal and State environmental regulatory agencies have established permissible concentrations, termed air quality standards, for common airborne pollutants such as carbon monoxide, hydrocarbons, nitrogen oxides, photochemical oxidants, and lead. These standards have been shown to reduce to an acceptable level the risk of health effects to vulnerable human populations, primarily the young, the elderly, and those with respiratory ailments. Primary standards define air quality levels intended to protect the public health with an adequate margin of safety. The secondary standards define levels of air quality intended to protect the public welfare from any known or anticipated adverse effects of a pollutant.

The Township of Montgomery is located within the New Jersey/New York/Connecticut Air Quality Control Region. The EPA has classified this area as Priority 1, meaning that violations of established standards for each criterion pollutant have been recorded at monitoring sites within the region. New Jersey as a whole is in violation of the ozone standard and the concern over the abatement of this air contaminant is regional (i.e., spanning several northeastern states).

Three air quality monitoring stations are located in the general vicinity of the project area: Rutgers University, New Brunswick, and Flemington. The Rutgers University station monitors ozone and nitrogen dioxide and the New Brunswick station monitors particulate material. The Flemington station monitors ozone. The summary data for the year 2013 indicate no contravention of standards for particulate material or nitrogen dioxide. For ozone, there were 10 days in 2013 during which the current standard (8 hour, 0.075 ppm) was exceeded in the State of New Jersey. The Flemington station violated ozone levels on 1 day, and Rutgers University stations had no violations. New Jersey as a whole is in violation of the ozone standard and the concern over the abatement of this air contaminant is regional (i.e., spanning several northeastern states).

The NJDEP annual air quality reports also provide information on longer-term trends in the state, providing summary data for all monitoring locations. Data indicates that the percentage of sampling locations reporting violations of the primary sulfur dioxide and lead standards has been low over a 30-year interval, that violations of the primary carbon monoxide standard have exhibited a decline, and that violations of the ozone standard have shown a somewhat erratic downward trend.

These trends in air quality have been occurring despite significant population increases in the central and southern regions of the state, and the increase in vehicular traffic associated with population growth. These countervailing trends appear to be the result of more effective emissions controls on vehicle exhausts and on industrial emissions, the net result of which is a decline in overall air loadings over the past 30 years (NJDEP 2005).

J. Sound Characteristics and Levels

Sound is conducted through air as a series of pressure waves having kinetic energy. The kinetic energy of these sound waves can be quantified in decibels - scalar units that are geometrically related to the energy of the sound at the receptor. A doubling in the sound energy will yield an increase of 6 dBA. 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; a quiet residential street may have noises in the 55-60 dBA range, while heavy street traffic generates noises in the 85-95 dBA range (EPA, 1976). The "A" suffix means that the sound energy characteristics have been weighted to emphasize the upper audible frequency ranges (A-weighting).

The project site is located in a suburban/commercial area with a mix of residential and commercial uses. Most sound in the vicinity of the site will result from traffic from Route 206 (70-85 dBA). Sound levels in other areas adjacent to the site are likely to be typical of a normal suburban area, in the range of 53-57 dBA (EPA, 1976).

K. Demography

The demographic characteristics of a municipality define the characteristics of the human population living in this municipality - the population size, rate and direction of change in size, age structure, etc. These characteristics provide a perspective for assessing the degree to which a proposed development will affect the municipality.

According to the 2010 Census, Montgomery Township had a population of 22,254, a 27.3 % increase over the 2000 population of 17,481 people. This translates into a 6.2% annual increase for this particular time period, considerably higher than the Somerset County growth rate of 2.2% per year. (State of New Jersey Department of Labor, 2012).

L. Distinctive Scenic and/or Historic Resources

According to the Township Natural Resource Inventory (The Montgomery Township Planning Board, 2004), ridgelines, streams, forested and riparian areas are considered scenic elements. The Sourland Mountain is one of the prominent scenic resources in Montgomery Township. Historic resources are man-made or man-modified features of the environment, including objects, structures, site and districts deemed to be of cultural significance. Such resources may be pre-historic or historic in age, and are often worthy of preservation to provide present and future generations with a sense of the peoples who once lived and worked in a particular locality.

The site is undeveloped except for the stormwater detention basin and two soil stockpiles that were recently removed. The site is predominantly characterized upland successional woodlands. According to the Natural Resource Inventory (The Montgomery Township Planning Board and Banisch Associates, Inc., 2004), no ridgelines are located on or near to the site. The Sourland Mountain is not located on or near the site (The Montgomery Township Planning Board and Banisch Associates, Inc., 2004).

According to the extensive archaeological and historic architectural studies of the Country Club Meadows PUD conducted by Cultural Resources Consulting Group, the J.B. Stryker farmstead is located on the site. No additional archaeological testing was recommended in the area of the J. B. Stryker farmstead (Pike Run Plaza site) because these areas had been investigated in 1983. Based on those investigation, the State Historic Preservation Office made a Determination of Eligibility to be listed on February 12, 1985.

Statewide General Permits and a Transition Area Waiver – Averaging Plan were issued by the NJDEP for the Belle Meade PUD project area in 2011 (File No. 1813-05-0004.2). As part of the State Historic Preservation Office (SHPO) review of that application, a Phase 1B Archaeological Survey and Architectural Effects Assessment dated April 6, 2011 was prepared for the project by Richard Grubb Associates. That report identified a number of resources, including the J. B. Stryker farmstead, all of which were investigated as required, and SHPO authorization granted for the entire project, including the Pike Run Plaza portion.

IV. ASSESSMENT OF ENVIRONMENTAL IMPACT – PIKE RUN PLAZA

This chapter addresses the potential impacts to the environmental resources of the site and surrounding areas that could result from the proposed development. Potential impacts are first discussed generally, then according to the specific topics set forth in the preceding chapter that inventoried environmental characteristics of the site. The incorporation of mitigation measures during construction and operational phases of the proposed project are cited here in the context of the potential impacts; reference is made again to these mitigating measures in the following chapter.

In general, the principal environmental impacts associated with the construction phase of a development result from temporary disturbances to soils and vegetation. In the absence of appropriate control measures, clearing of vegetated tracts of land for construction and access to construction sites could reduce the productivity of the soil and lead to sedimentation and dust. Precipitation falling on disturbed areas could tend to erode fine soil particles and, in the absence of appropriate controls, increase sediment loadings to areas receiving stormwater runoff. As will be detailed below, these potential adverse effects will be minimized by adherence to the Soil Erosion and Sediment Control Plan, as approved by the local district of the Soil Conservation Service.

The principal environmental impact associated with the operational phase of the proposed project would be the change in land use and the direct and indirect influences on the surrounding communities associated with the use of the site as a commercial development. Construction of the development will convert approximately 16.4 acres (limit of disturbance) of upland successional woodland and upland detention basin to commercial use. This use is consistent with the 2014 Land Use Plan Amendment for the Belle Mead Node area.

Potential impacts on specific natural or human resources are discussed in the following sections.

A. Geology

Potential impacts to the site's geological integrity are typically related to the location and extent of bedrock disturbance resulting from the construction phase. According to information contained with the Somerset County Soil Survey (SCS, 1976), the mapped Klinesville, Penn, and Reaville soils may have the upper layers of bedrock occurring within 1-3.5 feet of the ground surface. However, the underlying shallow bedrock - the upper stratum of the Brunswick Formation - is "rippable", and can be excavated using standard excavation equipment and techniques. Thus, no significant impacts to the project area's geological integrity are anticipated from the construction of the proposed development.

B. Topography

Potential impacts to the topography of the site are related to the extent of excavation and/or filling required to achieve the desired topography for construction of the buildings and associated features and utilities. The topography within the area of proposed development is of relatively level to gentle relief. As indicated on the grading plan, some modifications to the existing topography are proposed. Cutting and grading will be required at the proposed retention pond.

Throughout the site, soil erosion and sediment control measures in accordance with the Somerset-Union Soil Conservation District will minimize soil loss and erosion wherever grading is proposed. Where changes to existing topography are planned, the proposed contours will be graded to meet the existing contours. Overall, the grading plan calls for no significant change to the existing site conditions; the general topographic and drainage characteristics of the site will be retained.

C. Soils

In the absence of appropriate control measures, construction activities may result in both short-term and long-term impacts related to soil loss. Removal of topsoil and organic layers could reduce the productivity of the soils, remove ground cover vegetation, and lead to sedimentation. During construction, the potential for soil disturbance will be minimal and will be limited to the area surrounding the proposed retail development. During the entire construction period, soil loss and associated adverse impacts will be minimized by strict adherence to the measures specified in the Soil Erosion and Sediment Control Plan, as approved by the Somerset-Union Soil Conservation District.

These soil erosion measures include the use of crushed stone tracking pads at construction roadway entrances, installation of inlet sediment traps for the catch basins, and installation of silt fences around the limit of disturbance. Immediately following rough grading, all disturbed soils will be protected from erosion and soil loss by temporary seeding and mulching. Permanent vegetation will be established as soon as possible after final grading, as specified in the site plans. In areas where grading is necessary, rapid stabilization of all disturbed soil areas will minimize adverse effects related to soil loss or erosion. For a complete description of the soil erosion and sediment control measures, please refer to the plans prepared by PS&S (2015).

No long-term effects on the soils of the site are anticipated. The rapid stabilization of soils with vegetative cover, and the replacement of existing vegetation with landscaped areas, will minimize long-term soil losses from the site.

D. Ground Water Quantity and Quality

Recharge to ground water reservoirs comes from precipitation percolating through overlying soil and rock strata; thus, the quality of ground water is in part a function of the land use in recharge areas of ground water aquifers. Many communities of northern New Jersey rely heavily on groundwater aquifers for domestic water supplies, and the perpetuation of good water quality in those aquifers is an environmental concern of high priority.

Construction of the proposed development is not expected to have an adverse impact on the ground water resources of the project area. No ground water withdrawal or wastewater disposal is proposed within the site, and no private wells will be used to supply potable water for the project. Potable water for the proposed development will be provided by the New Jersey American Water Company. The average daily water demand from the development will be approximately 18,938 gpd (PS&S).

Wastewater generated by the development, estimated to be 21,363 gpd (average daily flow), will be exclusively domestic and will be conveyed to the Montgomery Township's Sewage Treatment Plant for treatment. This off-site treatment of wastewater by a municipal facility will eliminate the potential for contamination of ground water by wastewater effluent.

There will be an increase in impervious surfaces as a result of the proposed development; therefore, the potential recharge to ground water reserves will be decreased within the site. However, as required by NJDEP's Stormwater Management Rules, existing groundwater recharge volumes will be maintained following development. Groundwater recharge for this site, the Belle Mead Plaza site and a portion of the Country Club Meadows residential site will be maintained by an underground recharge system on the Pike Run Plaza site. For specific details regarding the proposed stormwater management system, refer to the Stormwater Management Report prepared for the project by PS&S.

E. Surface Water Quantity and Quality

The construction of Pike Run Plaza is expected to have a minimal impact to surface waters. Potential short-term impacts to surface water quality are generally associated with soil loss, erosion, and sedimentation during construction activities. As previously described in Section C (Soils) of this chapter, soil disturbance will be largely confined to areas surrounding the proposed buildings and parking lots. Any adverse impacts will be minimized by the installation and maintenance of proven soil erosion and sediment control measures presented in the plans. These measures will retain disturbed soil sediment within the areas of construction, and will mitigate the potential for sediment being transported to the off-site tributary.

Stormwater will be collected by a proposed stormwater management system. The stormwater management system has been designed to be in compliance with the requirements of NJDEP's Stormwater Management Rules, and the Montgomery Township Stormwater Ordinance. The design conforms to the proposed state standards to reduce the post-construction rate of runoff for the two, 10 and 100-year storm events. The pond will also serve to improve water quality by reducing total suspended solids (TSS) from the water quality storm by 80 percent, therefore meeting the water quality improvement requirements. Groundwater recharge for this site, the Belle Mead Plaza site and a portion of the Country Club Meadows residential site will be maintained following development by an underground recharge system on the Pike Run Plaza site. For specific details regarding the proposed stormwater management system, refer to the Stormwater Management Report prepared for the project by PS&S (2015).

F. Vegetation

Construction for the proposed development will require removal of existing forest vegetation from the site. As indicated in the site plans, a landscaping plan will be implemented to enhance the aesthetic features of the development.

G. Wildlife

The construction of the proposed development is not expected to have a significant adverse large and diversified wildlife population. Noise, heavy equipment, and human activity during the construction phase of the project will cause most mobile wildlife species to move from the site into adjacent undeveloped areas. However, impacts to wildlife are expected to be minimal because, as noted previously, the wildlife species likely to be present on the site are those tolerant of the human presence. These species are generally common in suburban areas of New Jersey. The undeveloped part of the site will continue to offer habitat for these species.

H. Critical Environmental Features

1. Wetlands

As part of the project, there will be some minor encroachment into wetlands and wetland buffers. A Statewide General Permit No. 7 is required from the NJDEP to fill a wetland ditch that is part of the drainage system to the existing stormwater detention basin on the site. In addition, a Statewide General Permit No. 11 is needed for encroachment into the wetland buffer for the outfall from the proposed stormwater retention system. These permits require that the encroachments into the regulated areas meet strict conditions and the activities have been designed to comply with the applicable permit conditions. In addition, Statewide General Permits and a Transition Area Waiver – Averaging Plan approved by the NJDEP on April 12, 2011 (File No. 1813-05-0004.2) included

approval to fill a portion of the ordinary resource value ditch from the outlet of the stormwater detention basin. Currently, the plans do not include any encroachment in the outlet ditch.

2. Floodways and Floodplains

The proposed project is not located within a mapped floodplain and there will be no impacts to floodways or floodplains.

3. Bedrock Outcrops

No bedrock outcrops occur on the site.

I. Air Quality

Short-term air quality impacts during construction are related to production of fugitive dust and generation of emissions from exhausts of construction vehicles. Mitigating measures, including dust control practices and the use on construction equipment of efficient air pollution control devices meeting applicable State/Federal specifications, will minimize adverse effects on local air quality.

Long-term air quality impacts will be related primarily to automobile exhaust emissions, primarily carbon monoxide (CO), hydrocarbons, and nitrogen oxides (NO_X). However, the magnitude of the environmental effects attributable to the automotive traffic associated with the proposed project will not affect regional air quality.

J. Sound Characteristics and Levels

Short-term generation of noise levels elevated over existing ambient levels will be generated during the construction of the proposed development. Sound levels generated during the construction phase can be expected in the range of 66 to 78 dBA at a distance of 50 feet from construction equipment, based upon the use of best available technology for noise reduction (EPA, 1976). The construction equipment included in this range consists of backhoes, concrete mixers, bulldozers, pavers, and trucks. To minimize adverse impacts to ambient noise levels during the construction period, construction equipment will only be operated during construction periods permitted by local law.

During the operational phase of the development, the principal sources of sound will be vehicular traffic, fixed mechanical equipment (e.g., air conditioning units), lawn maintenance equipment (e.g. lawn mowers and leaf blowers), and human voices.

K. Demography

The proposed commercial development is estimated to result in employment opportunities for approximately 125 people, some of whom may relocate to Montgomery Township.

L. Distinctive Scenic and/or Historic Resources

Statewide General Permits and a Transition Area Waiver – Averaging Plan were issued by the NJDEP for the Belle Mead PUD project area in 2011 (File No. 1813-05-0004.2). As part of the State Historic Preservation Office (SHPO) review of that application, a Phase 1B Archaeological Survey and Architectural Effects Assessment dated April 6, 2011 was prepared for the project by Richard Grubb Associates. That report identified a number of resources, including the J. B. Stryker farmstead, all of which were investigated as required, and SHPO authorization granted for the entire project, including the Pike Run Plaza portion.

V. ENVIRONMENTAL PERFORMANCE CONTROLS – PIKE RUN PLAZA

A number of potential impacts associated with construction and operation of the proposed project were identified in Chapter IV. Environmental protective measures that can minimize or eliminate environmental impacts are summarized below. Some have already been included in the project plans; others will be implemented during the construction phases. Many of the measures identified below have already been discussed in the preceding chapter, in the context of the particular environmental features in which they are identified.

A. Drainage Plan and Soils Erosion

- Existing topography will be maintained to the greatest extent possible in the site planning to minimize the amount of grading required.
- Crushed stone-tracking pads will be installed at the site exits to reduce tracking of sediment onto adjacent roadways during construction activities.
- Sediment filter fences will be erected around and/or down slope of disturbed areas to prevent sediment from being transported into the on-site wetland areas.
- Upon completion of final grading, all disturbed areas will receive a final seeding and mulching in accordance with the Soil Erosion and Sediment Control Plan.
- All side slopes shall be protected from erosion by top soiling, seeding, and mulching as soon as possible after final grading.
- All soil erosion and sediment control measures shall be kept in place until construction is complete and/or the disturbed area is stabilized.
- All work will be done in accordance with the Standards for Soil Erosion and Sediment Control in New Jersey.

B. Sewage Disposal Techniques

Wastewater generated by the development, estimated to be 21,363 gpd (average daily flow), will be exclusively domestic and will be conveyed to the Montgomery Township's Sewage Treatment Plant for treatment. This off-site treatment of wastewater by a municipal facility will eliminate the potential for contamination of ground water by wastewater effluent.

C. Water Supply and Water Conservation Proposals

Construction of the proposed development is not expected to have an adverse impact on the ground water resources of the project area. No ground water withdrawal or wastewater disposal is proposed within the site, and no private wells will be used to supply potable water for the project. Potable water for the proposed development will be provided by the New Jersey American Water

Company. The daily water demand from the development will be approximately 18,938 gpd (average daily demand) (PS&S).

D. Energy Conservation

The proposed project has been designed with consideration of energy conservation. All building materials, windows, insulating material, and heating/cooling fixtures will be in accordance with applicable local building codes and Building Officials Code Administrators standards.

E. Noise Reduction Techniques

- To minimize noise generated by construction equipment, mufflers or similar noise abatement devices will be in good operating condition on all construction machinery.
- Silencers, shields, or enclosures will be used around all stationary noise-generating equipment.
- Operation of machinery will be limited to work periods permitted by local law.

VI. LIST OF LICENSES, PERMITS AND OTHER APPROVALS – PIKE RUN PLAZA

The following constitutes a list of licenses, permits and approvals required for the development application:

Table 3: List of Licenses, Permits, or Other Approvals Needed – Pike Run Plaza

Granting Authority	License, Permit, or Approval	Status
Montgomery Township Planning Board	Preliminary and Final Site Plan and Subdivision Approval	Subject of this application
Montgomery Township Municipal Utilities Authority	Sanitary Sewer Connection	To be submitted
Somerset County Planning Board	Preliminary and Final Site Plan and Subdivision Approval	To be submitted
Somerset-Union Soil Conservation District	Soil Erosion and Sediment Control Plan Certification	To be submitted
NJDEP	Freshwater Wetlands Statewide General Permits 7 & 11	To be submitted
	Freshwater Wetlands Statewide General Permit 7	Approved File No. 1813-05-0004.2
	Flood Hazard Area Verification and Individual Permit	To be submitted
	TWA (Sewer) Permit	To be submitted
Delaware and Raritan Canal Commission	Plan Certification	To be submitted
New Jersey American Water Company	Water Main Extension Permit	To be submitted

VII. REFERENCES – PIKE RUN PLAZA

Coppola & Coppola Associates. April 1998. Township of Montgomery, Somerset County, New Jersey Master Plan and Development Regulations, Periodic Reexamination Report

Federal Emergency Management Agency (FEMA). Effective September 27, 2007. Flood Insurance Rate Map: Somerset County, New Jersey Community Panel No. 34035C0241E

French, Mark NJGS/BWR. 2004. Ground-Water Recharge for Somerset County, NJ.

Listokin, D. with I. Voicu, W. Dolphin, and M. Camp. 2006. Who Lives in New Jersey Housing? A Quick Guide to New Jersey Residential Demographic Multipliers. Center for Urban Policy Research, Edward J. Bloustein School of Planning and Public Policy, Rutgers, The State University of New Jersey, New Brunswick, New Jersey. 35 pp.

Montgomery Township Planning Board and Banisch Associates, Inc. April 2004. Natural Resource Inventory, Montgomery Township, Somerset County, New Jersey

Montgomery Township Engineering Department. April 19, 2004. North West Buffer Map Critical Area Map For Use With Zoning Permits and Building Permits And Septic Testing For Information Purpose Only"

New Jersey Department of Environmental Protection (NJDEP) 1974. Land Oriented Reference Data System, New Jersey Geological Survey Bulletin 74.

NJDEP. 1997. New Jersey 1996. State Water Quality Inventory Report

NJDEP 2001. Freshwater Wetlands Protection Act Rules, N.J.A.C. 7:7A. Division of Coastal Resources, Trenton, New Jersey.

NJDEP. 2005. 2004 Air Quality Report.

NJDEP. 2014. 2013 Air Quality Report.

NJDEP. 2006. Surface Water Quality Standards.

NJDEP. December 2013. New Jersey Integrated Water Quality and Monitoring Assessment Report 2012.

NJDEP Last Updated August 6, 2007. New Jersey and National Registers of Historic Places http://www.state.nj.us/dep/hpo/1identify/nrsr_lists.htm.

NJDEP 2007. 2005 Year-to-date Data: Ground-level ozone, 8-hour exceedances. http://www.state.nj.us/dep/airmon.

REFERENCES (continued)

NJDEP, Division of Fish and Wildlife, Endangered & Nongame Species Program. 2012. The Landscape Project, Version 3.1.

New Jersey State Planning Commission 1997. New Jersey State Development and Redevelopment Plan.

New Jersey State Planning Commission 2001. New Jersey State Development and Redevelopment Plan.

Owens, James P. *et al.* 1998. Bedrock Geologic Map of Central and Southern New Jersey.

Robichaud, B., and M. F. Buell. 1973. Vegetation of New Jersey: A Study of Landscape Diversity. Rutgers University Press, New Brunswick, New Jersey.

Somerset County Planning Board. 1983. Natural Resource Inventory of Somerset County, New Jersey

Stanford, Scott D., Ronald W. Witte, and David P. Harper 1990, last revised 2003. Hydrogeologic Character and Thickness of the Glacial Sediment of New Jersey

State of New Jersey Department of Labor. 2001. Total Population: 1990-2000, New Jersey Municipalities. State of New Jersey Website: http://www.wnjpin.state.nj.us.

Tarbuck, E.I. and F.K. Lutgens. 1987. The Earth: An Introduction to Physical Geology. Merrill Publishing Company, Columbus, Ohio. 591 pp.

United States Environmental Protection Agency (EPA). 1976. Direct Environmental Factors at Municipal Wastewater Treatment Works. EPA-430/9-76-003.

USDA, NRCS, 2008. SSURGO Database for Somerset County, NJ.

United States Geological Survey (USGS). 1995. Rocky Hill, New Jersey Quadrangle.

USGS 2000. website http://nj.usgs.gov/gw/table_1.html.

USGS 2007. Surface-Water Data and Statistics from U.S. Geological Survey Data-Collection Networks in New Jersey on the World Wide Web USGS Fact Sheet FS-109-02 http://nj.usgs.gov/flowstatistics

United States Soil Conservation Service (SCS). 1989. Soil Survey of Somerset County.

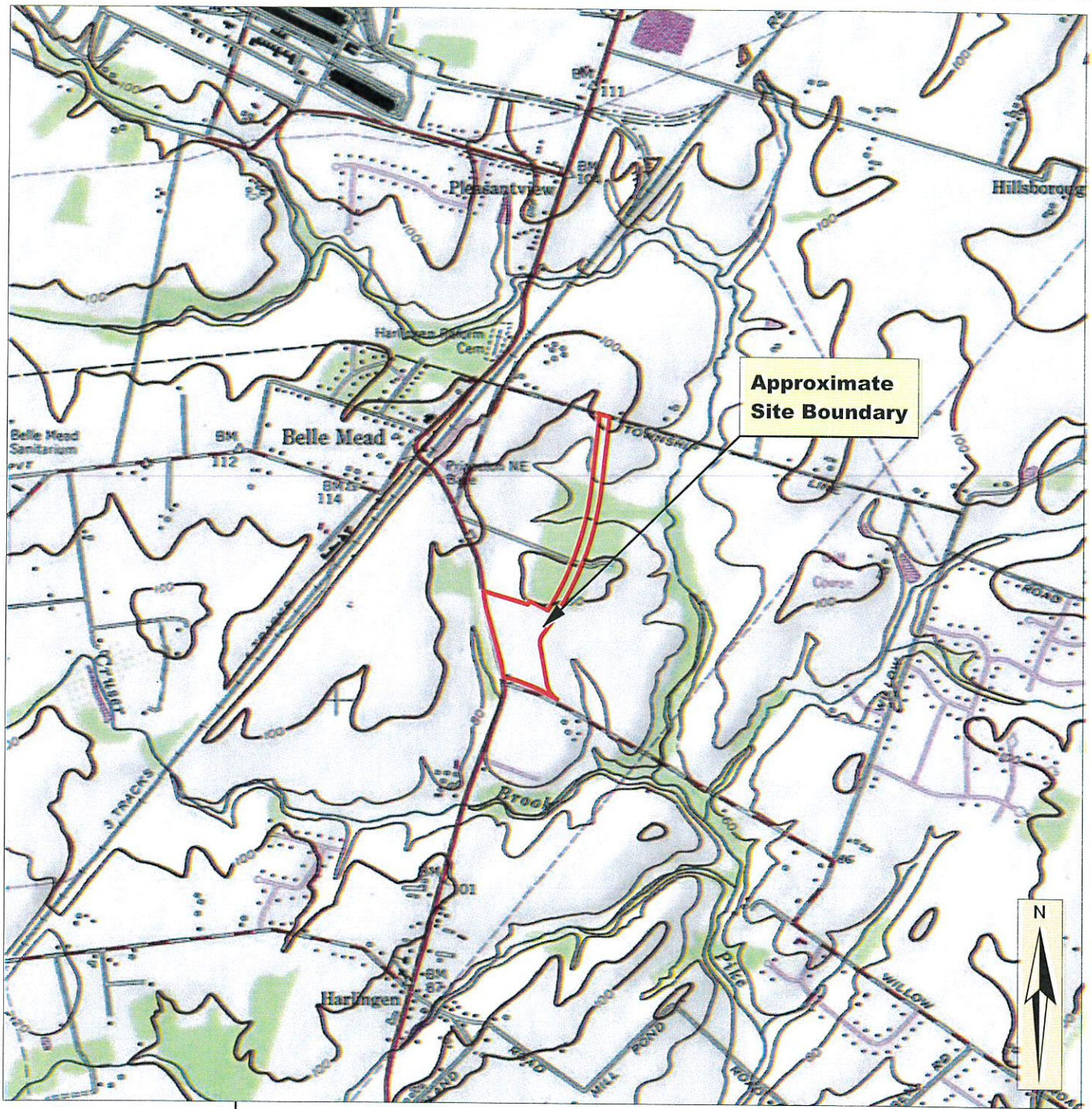
Paulus, Sololowski & Sartor (PS&S). 2015. Site Plans for Pike Run Plaza.

Widmer, K. 1964. The Geology and Geography of New Jersey. D. Van Nostrand Company, Inc., Princeton, New Jersey.

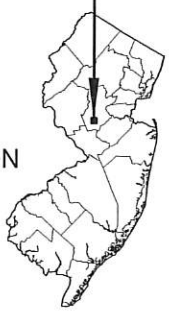
ATTACHMENT A

Figures – Pike Run Plaza

EcolSciences, Inc.
Environmental Management & Regulatory Compliance



SITE LOCATION



State Plane Coordinates (New Jersey NAD 83)
448,711' E; 593,885' N

FIGURE 1: USGS SITE LOCATION

Proposed Pike Run Plaza
Township of Montgomery
Somerset County, New Jersey

EcolSciences, Inc.
Environmental Management & Regulatory Compliance

Date: 12/10/15

Scale 1:24,000

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0 750 1,500 Feet

Approximate site boundary

FIGURE 2: 2012 AERIAL IMAGERY

Proposed Pike Run Plaza
Township of Montgomery
Somerset County, New Jersey

Source: NJOIT, OGIS. 2013. NJ 2012 - 2013 High Resolution Orthophotography.

EcolSciences, Inc.
Environmental Management & Regulatory Compliance

Date: 12/10/15

Scale 1:9,000

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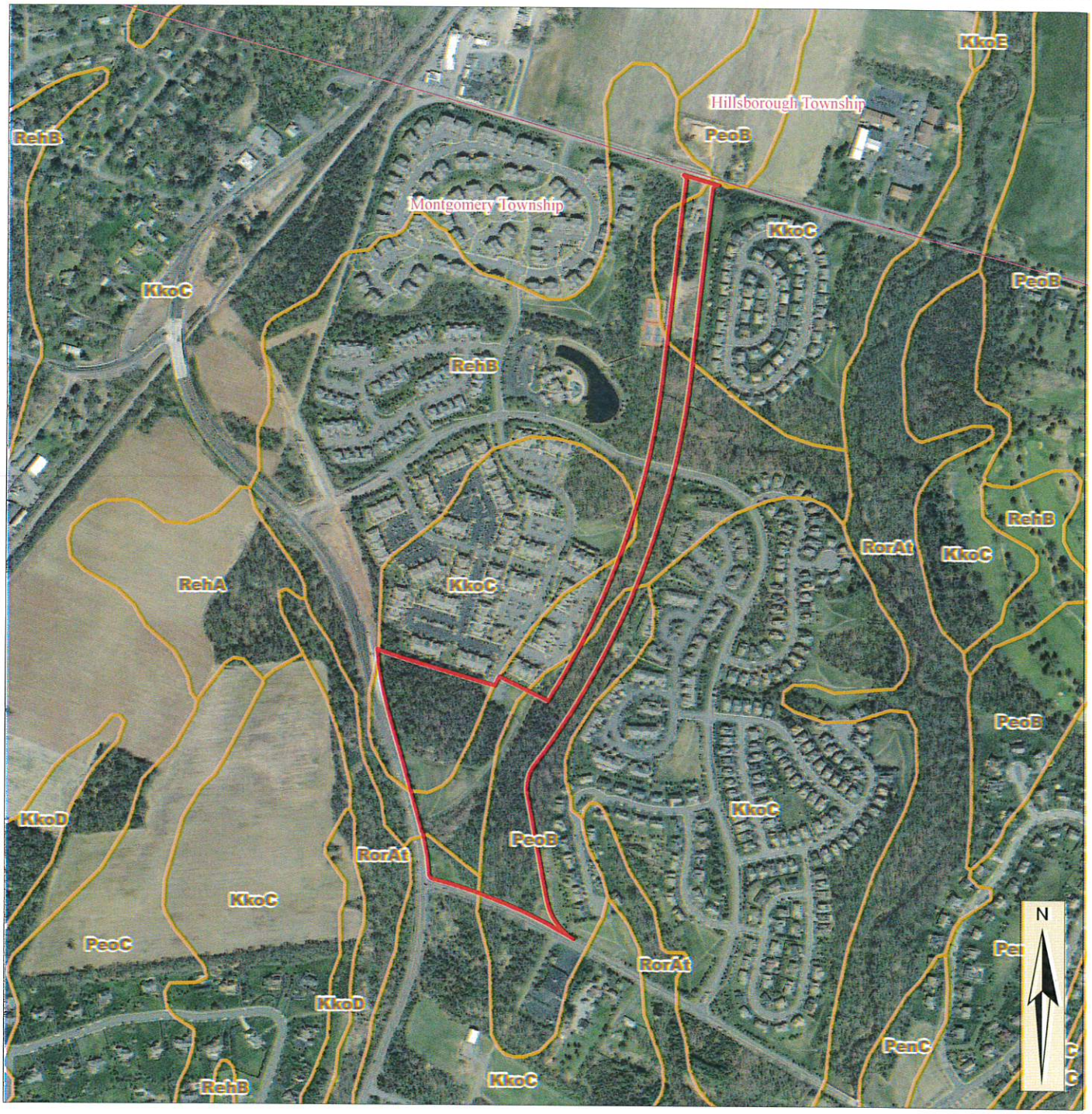

Approximate Site Boundary

Soil Boundary

0 750 1,500 Feet

On - Site Soils	
Soil Unit	Description
PeoB	Penn channery silt loam, 2 to 6 percent slopes
KkoC	Klinesville channery loam, 6 to 12 percent slopes
RehB	Reaville silt loam, 2 to 6 percent slopes

FIGURE 3: SOILS MAP

Proposed Pike Run Plaza
Township of Montgomery
Somerset County, New Jersey

Sources:
USDA, NRCS. 2008. SSURGO Database for Somerset County, NJ.
NJOIT, OGIS. 2013. NJ 2012 - 2013 High Resolution Orthophotography.

EcolSciences, Inc.
Environmental Management & Regulatory Compliance

Date: 12/10/15

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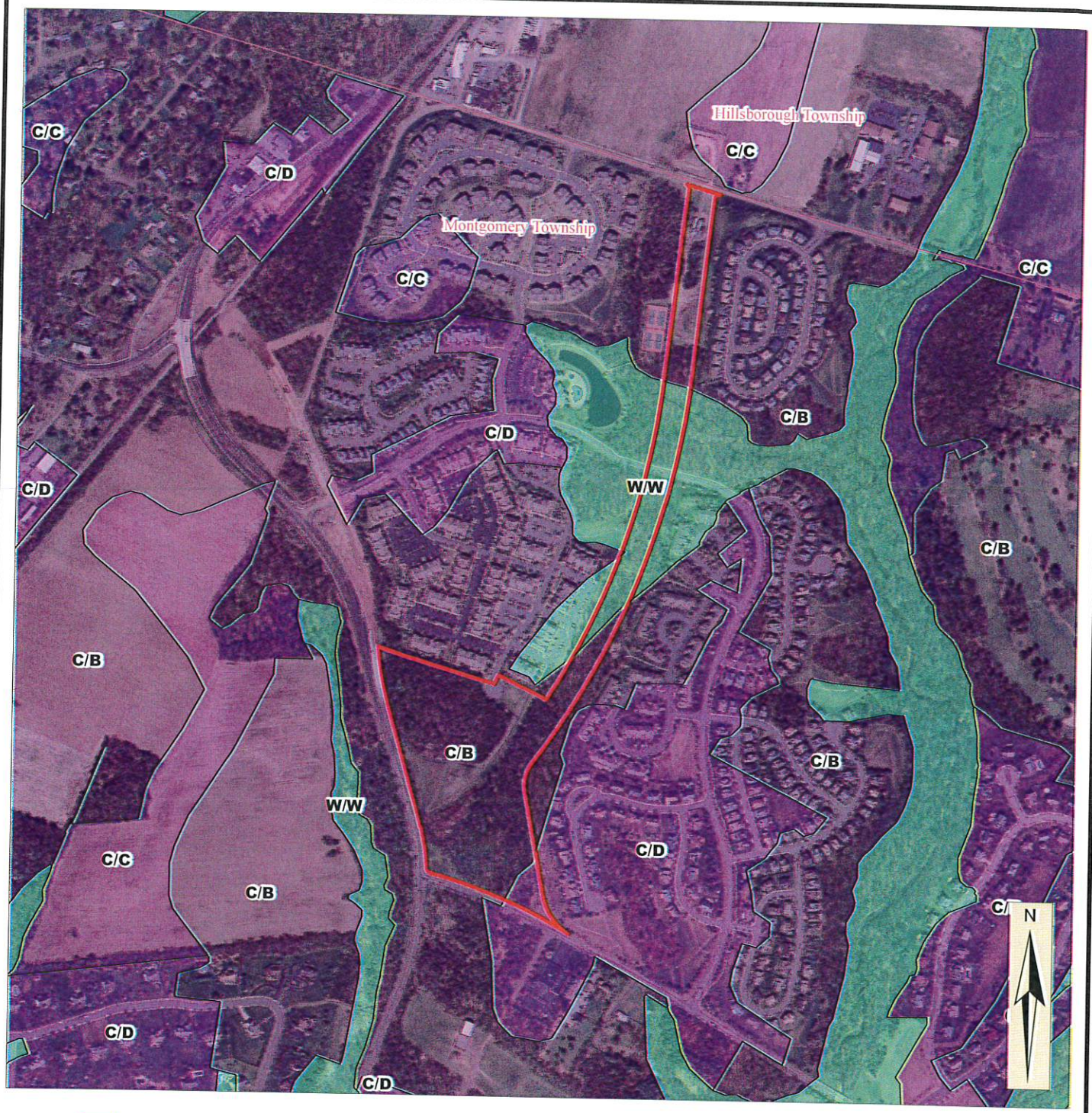

Approximate site boundary

Aquifer Recharge Potential - AQRNK/GWRNK

Groundwater Recharge Rank GWRNK	Water Table Aquifer Rank AQRNK: A - Yield > 500 gpm	B - 250 - 500 gpm	C - 100 - 250 gpm	D - 25 - 100 gpm	E - Yield < 25 gpm
A 15 - 18 in/yr					
B 11 - 14 in/yr					
C 9 - 10 in/yr					
D 1 - 8 in/yr					
E 0 in/yr					

L - Hydric soils (no recharge calculated)

W - Wetlands and waters (no recharge calculated)

X - no recharge calculated

0 750 1,500 Feet

N

FIGURE 4: WELL YIELDS/ GROUND WATER RECHARGE

Proposed Pike Run Plaza
Township of Montgomery
Somerset County, New Jersey

Sources:
NJDEP, NJGS, BWR, Mark French. 2005. Aquifer Recharge Potential for Somerset County, NJ.
Source: NJOIT, OGIS. 2013. NJ 2012-13 High Resolution Orthophotography.

EcolSciences, Inc.
Environmental Management & Regulatory Compliance

Date: 12/10/15

Scale 1:9,000

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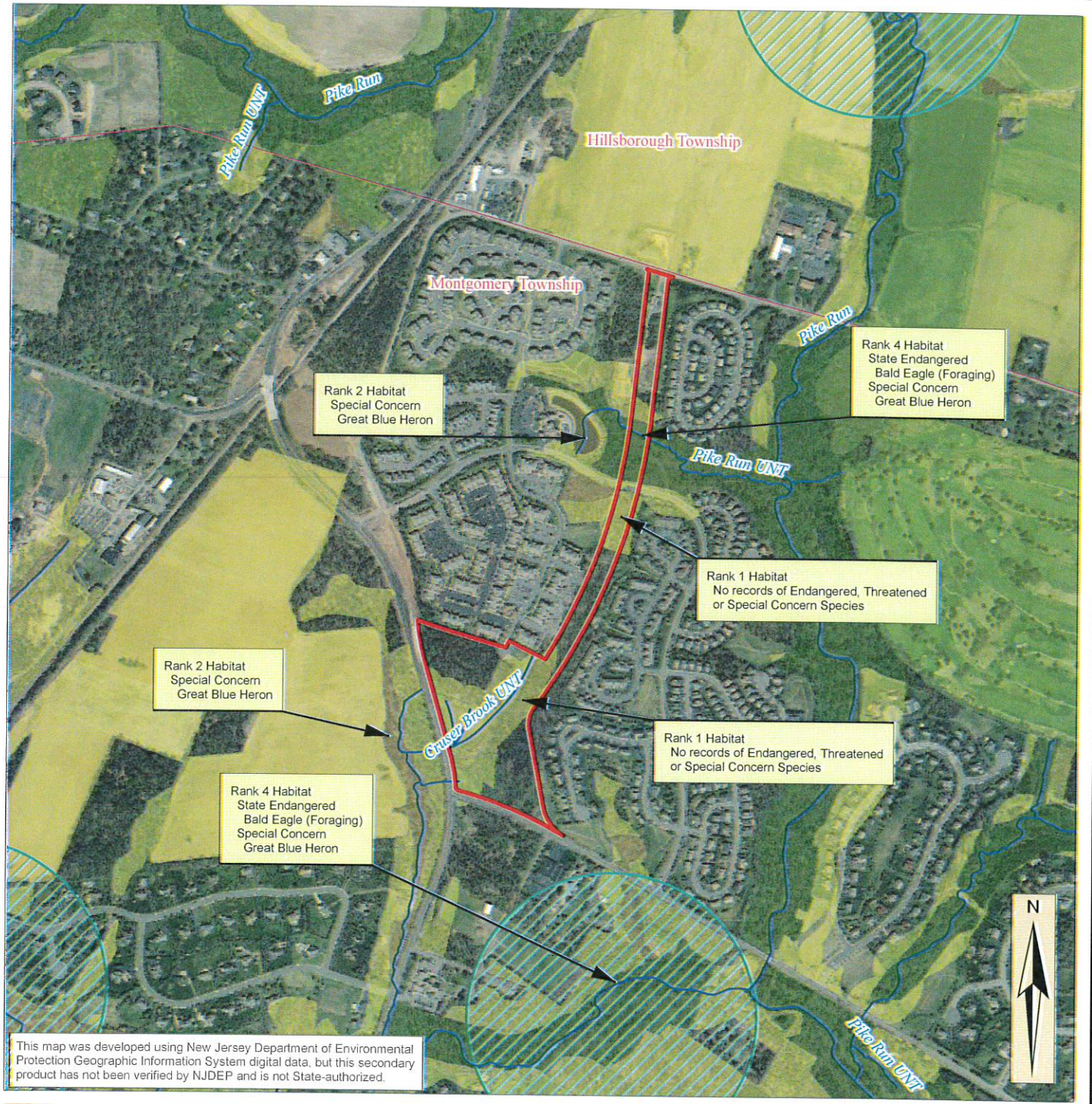

Approximate site boundary

Vernal Habitat

VERNAL HABITAT TYPE

- Potential vernal habitat area
- Vernal habitat area

Species-Based Habitat - Piedmont Plains

RANK

- Rank 1 - Habitat specific requirements
- Rank 2 - Special Concern
- Rank 3 - State Threatened
- Rank 4 - State Endangered
- Rank 5 - Federal Listed

0 1,000 2,000 Feet

FIGURE 5: LANDSCAPE PROJECT

Proposed Pike Run Plaza
Township of Montgomery
Somerset County, New Jersey

Sources:
NJDEP, DFW, ENSP. 2012. New Jersey's Landscape Project (Version 3.1).
NJOIT, OGIS. 2013. NJ 2012 - 2013 High Resolution Orthophotography.

EcolSciences, Inc.
Environmental Management & Regulatory Compliance

Date: 12/10/15

Scale 1:12,000

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ATTACHMENT B

Correspondence – Pike Run Plaza

EcolSciences, Inc.
Environmental Management & Regulatory Compliance

State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Division of Land Use Regulation
Mail Code 501-02A, P. O. Box 420
Trenton, New Jersey 08625-0420
www.state.nj.us/dep/landuse

CHRIS CHRISTIE
Governor

KIM GUADAGNO
Lt. Governor

BOB MARTIN
Commissioner

Pike Run LLC
40 Pike Run Rd.
Belle Mead, NJ 08502

RE: Letter of Interpretation: Line Verification
File No.: 1813-03-0002.2
Activity Number: FWW110001
Applicant: Pike Run, LLC
Block 5023 Lot 2
Montgomery Township, Somerset County

Dear Sir:

This letter is in response to your request for a Letter of Interpretation to have Division of Land Use Regulation (Division) staff verify the boundary of the freshwater wetlands and/or State open waters on the referenced property.

In accordance with agreements between the State of New Jersey Department of Environmental Protection, the U.S. Army Corps of Engineers Philadelphia and New York Districts, and the U.S. Environmental Protection Agency, the NJDEP, the Division is the lead agency for establishing the extent of State and Federally regulated wetlands and waters. The USEPA and/or USACOE retain the right to reevaluate and modify the jurisdictional determination at any time should the information prove to be incomplete or inaccurate.

Based upon the information submitted, and upon site inspections conducted by Division staff on February 8, 2012, and May 1, 2012, the Division has determined that the wetlands and waters boundary lines as shown on the plan map entitled: **"Pike Run PRD Block 5023, Lot 2 Montgomery Township Somerset County, New Jersey Wetlands Delineation Plan", consisting of one sheet, dated September 30, 2011, last revised July 2, 2012, and prepared by Paulus, Sokolowski and Sartor, LLC**, is accurate as shown.

Wetlands Resource Value Classification ("RVC")

Intermediate: WA-1 to WA-3, WB-1 to WB-5 [50 foot wetland buffer]

Ordinary: A-1 to A-24. [No wetland buffer]

State Open Water: SOW-1 to SOW-8, SOW-1A to SOW-7A. [No wetland buffer]

RVC may affect requirements for wetland and/or transition area permitting. This classification may affect the requirements for an Individual Wetlands Permit (see N.J.A.C. 7:7A-7), the types of Statewide General Permits available for the property (see N.J.A.C. 7:7A-4) and any modification available through a transition area waiver (see N.J.A.C. 7:7A-6). Please refer to the Freshwater Wetlands Protection Act (N.J.S.A. 13:9B-1 et seq.) and implementing rules for additional information.

Wetlands resource value classification is based on the best information available to the Department. The classification is subject to reevaluation at any time if additional or updated information is made available, including, but not limited to, information supplied by the applicant.

Under N.J.S.A. 13:9B-7a(2), if the Division has classified a wetland as exceptional resource value, based on a finding that the wetland is documented habitat for threatened and endangered species that remains suitable for use for breeding, resting or feeding by such species, an applicant may request a change in this classification. Such requests for a classification change must demonstrate that the habitat is no longer suitable for the documented species because there has been a change in the suitability of this habitat. Requests for resource value classification changes and associated documentation should be submitted to the Division at the address at the top of this letter.

General Information

Pursuant to the Freshwater Wetlands Protection Act Rules, you are entitled to rely upon this jurisdictional determination for a period of five years from the date of this letter unless it is determined that the letter is based on inaccurate or incomplete information. Should additional information be disclosed or discovered, the Division reserves the right to void the original letter of interpretation and issue a revised letter of interpretation.

Regulated activities proposed within a wetland, wetland transition area or water area, as defined by N.J.A.C. 7:7A-2.2 and 2.6 of the Freshwater Wetlands Protection Act rules, require a permit from this office unless specifically exempted at N.J.A.C. 7:7A-2.8. The approved plan and supporting jurisdictional limit information are now part of the Division's public records.

This letter in no way legalizes any fill which may have been placed, or other regulated activities which may have occurred on-site. This determination of jurisdiction extent or presence does not make a finding that wetlands or water areas are "isolated" or part of a surface water tributary system unless specifically called out in this letter as such. Furthermore, obtaining this determination does not affect your responsibility to obtain any local, State, or Federal permits which may be required.

Appeal Process

In accordance with N.J.A.C. 7:7A-1.7, any person who is aggrieved by this decision may request a hearing within 30 days of the date the decision is published in the DEP Bulletin by writing to: New Jersey Department of Environmental Protection, Office of Legal Affairs, Attention: Adjudicatory Hearing Requests, P.O. Box 402, Trenton, NJ 08625-0402. This request must include a completed copy of the Administrative Hearing Request Checklist found at www.state.nj.us/dep/landuse/forms. Hearing requests received after 30 days of publication notice may be denied. The DEP Bulletin is available on the Department's website at www.state.nj.us/dep/bulletin. In addition to your hearing request, you may file a request with the Office of Dispute Resolution to engage in alternative dispute resolution. Please see the website www.nj.gov/dep/odr for more information on this process.

Please contact me by e-mail at andy.clark@dep.nj.gov or (609) 633-6563 should you have any questions regarding this letter. Be sure to indicate the Department's file number in all communication.

Sincerely,

Andrew Clark
Northeast Region Supervisor
Division of Land Use Regulation

c: Montgomery Township Clerk
Montgomery Township Construction Official
Thomas Auffenorde, EcolSciences, Inc. (original)

State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION
Division of Land Use Regulation
Mail Code 501-02A, P. O. Box 420
Trenton, New Jersey 08625-0420
www.state.nj.us/dep/landuse

CHRIS CHRISTIE
Governor

KIM GUADAGNO
Lt. Governor

BOB MARTIN
Commissioner

Kevin Hayes
Pike Run, LLC
90 Woodbridge Center Dr.
Woodbridge, NJ 07095

RE: Freshwater Wetlands Letter of Interpretation: Line Verification
File No.: 1813-15-0004.1
Activity Number: FWW150001
Applicant: PIKE RUN, LLC
Block(s): 5023 and Lot(s): 3
Montgomery Twp., Somerset County

Dear Mr. Hayes,

This letter is in response to your request for a Letter of Interpretation to have Division of Land Use Regulation (Division) staff verify the boundary of the freshwater wetlands and/or State open waters on the referenced property.

In accordance with agreements between the State of New Jersey Department of Environmental Protection, the U.S. Army Corps of Engineers Philadelphia and New York Districts, and the U.S. Environmental Protection Agency, the NJDEP, the Division is the lead agency for establishing the extent of State and Federally regulated wetlands and waters. The USEPA and/or USACOE retain the right to reevaluate and modify the jurisdictional determination at any time should the information prove to be incomplete or inaccurate.

Based upon the information submitted, and upon a site inspection conducted by Division staff on September 17, 2015, the Division has determined that the wetlands and waters boundary line(s) as shown on the plan map entitled: "PIKE RUN PRD BLOCK 5032, LOT 3 MONTGOMERY TOWNSHIP SOMERSET COUNTY, NEW JERSEY WETLANDS DELINEATION PLAN", consisting of 1 sheet(s), dated March 30, 2015, unrevised, and prepared by PS&S is accurate as shown.

Wetlands Resource Value Classification ("RVC")

In addition, the Division has determined that the resource value and the standard transition area or buffer required adjacent to the delineated wetlands are as follows:

Intermediate: SOW-1 to WA-1 and then to WA-3; WB-1 to WB-5 [50 foot wetland buffer]

Ordinary: 3A-1 to 3A-4 and then to 3-4 to 3-1 [No wetland buffer]

State Open Water: SOW-1 to SOW-7; and WB-5 to SOW-1A and then to SOW-7A [No wetland buffer]

In addition, waters regulated under the Flood Hazard Area Control Act Rules at N.J.A.C. 7:13-2.2 are present as shown on the approved plan within the wetland boundary line. It should be noted that these waters will require a riparian buffer under the Flood Hazard Area Control Act Rules at N.J.A.C. 7:13-4.1.

RVC may affect requirements for wetland and/or transition area permitting. This classification may affect the requirements for an Individual Wetlands Permit (see N.J.A.C. 7:7A-7), the types of Statewide General Permits available for the property (see N.J.A.C. 7:7A-4) and any modification available through a transition area waiver (see N.J.A.C. 7:7A-6). Please refer to the Freshwater Wetlands Protection Act (N.J.S.A. 13:9B-1 et seq.) and implementing rules for additional information.

Wetlands resource value classification is based on the best information available to the Department. The classification is subject to reevaluation at any time if additional or updated information is made available, including, but not limited to, information supplied by the applicant.

Under N.J.S.A. 13:9B-7a(2), if the Division has classified a wetland as exceptional resource value, based on a finding that the wetland is documented habitat for threatened and endangered species that remains suitable for use for breeding, resting or feeding by such species, an applicant may request a change in this classification. Such requests for a classification change must demonstrate that the habitat is no longer suitable for the documented species because there has been a change in the suitability of this habitat. Requests for resource value classification changes and associated documentation should be submitted to the Division at the address at the top of this letter.

General Information

Pursuant to the Freshwater Wetlands Protection Act Rules, you are entitled to rely upon this jurisdictional determination for a period of five years from the date of this letter unless it is determined that the letter is based on inaccurate or incomplete information. Should additional information be disclosed or discovered, the Division reserves the right to void the original letter of interpretation and issue a revised letter of interpretation.

Regulated activities proposed within a wetland, wetland transition area or water area, as defined by N.J.A.C. 7:7A-2.2 and 2.6 of the Freshwater Wetlands Protection Act rules, require a permit from this office unless specifically exempted at N.J.A.C. 7:7A-2.8. The approved plan and supporting jurisdictional limit information are now part of the Division's public records.

This letter in no way legalizes any fill which may have been placed, or other regulated activities which may have occurred on-site. This determination of jurisdiction extent or presence does not make a finding that wetlands or water areas are "isolated" or part of a surface water tributary system unless specifically called out in this letter as such. Furthermore, obtaining this determination does not affect your responsibility to obtain any local, State, or Federal permits which may be required.

Appeal Process

In accordance with N.J.A.C. 7:7A-1.7, any person who is aggrieved by this decision may request a hearing within 30 days of the date the decision is published in the DEP Bulletin by writing to: New Jersey Department of Environmental Protection, Office of Legal Affairs, Attention: Adjudicatory Hearing Requests, P.O. Box 402, Trenton, NJ 08625-0402. This request must include a completed copy of the Administrative Hearing Request Checklist found at www.state.nj.us/dep/landuse/forms. Hearing requests received after 30 days of publication notice may be denied. The DEP Bulletin is available on the Department's website at www.state.nj.us/dep/bulletin. In addition to your hearing request, you may file a request with the Office of Dispute Resolution to engage in alternative dispute resolution. Please see the website www.nj.gov/dep/odr for more information on this process.

Please contact Tina Wolff of our staff by e-mail at Tina.Wolff@dep.nj.gov or (609) 984-3813 should you have any questions regarding this letter. Be sure to indicate the Department's file number in all communication.

Sincerely,

Richard C. Reilly

Richard C. Reilly, Manager
Bureau of Inland Regulation
Division of Land Use Regulation

c: Municipal Clerk
Municipal Construction Official
Agent (original)

State of New Jersey
DEPARTMENT OF ENVIRONMENTAL PROTECTION

CHRIS CHRISTIE
Governor

KIM GUADAGNO
Lt. Governor

Division of Land Use Regulation
Mail Code 501-02A
P.O. Box 420
Trenton, New Jersey 08625-0420
www.state.nj.us/dep/landuse

BOB MARTIN
Commissioner

APR 12 2011

Mr. Thomas Auffenorde
EcolSciences, Inc.
75 Fleetwood Drive – Suite 250
Rockaway, NJ 07866

RE: **Freshwater Wetlands Statewide General Permits No. 7 & 10A, Transition Area Waiver Averaging Plan, and Water Quality Certification**
DLUR File No.: 1813-05-0004.2, FWW080001 (TAW-avg.), FWW080002 (GP-7), FWW080003 (GP-10A)
Applicant Name: Country Club Meadows, LLC
Block(s): 4001; Lots: 33
5002; 4 - 6
5003; 1
5023; 2
6001; 1
Township of Montgomery, Somerset County

Dear Mr. Auffenorde:

The Division of Land Use Regulation has reviewed the referenced applications pursuant to the requirements of the Freshwater Wetlands Protection Act Rules at N.J.A.C. 7:7A.

The blocks and lots in question have received the following Letters of Interpretation:

- 1813-05-0004.1, LOI – Line Verification Re-Issuance, August 22, 2005, Block 4001, Lot 33
- 1813-06-0012.1, LOI – Presence/Absence Re-Issuance, July 28, 2006, Block 5002, Lot 5
- 1813-06-0012.3, LOI – Line Verification, January 5, 2009, Block 5002, Lots 4 & 6
- 1813-06-0012.2, LOI – Presence/Absence, January 5, 2009, Block 5003, Lot 1
- 1813-03-0002.2, LOI – Presence/Absence Re-Issuance, August 14, 2006, Block 5023, Lot 2
- 1813-03-0002.3, LOI – Presence/Absence, January 5, 2009, Block 6001, Lot 1

The proposal to fill wetlands ditches in order to construct a mixed use commercial/multi-family residential development, is authorized by a Statewide General Permit No. 7, which authorizes activities in freshwater wetlands that are human-made ditches or in freshwater wetlands that are swales.

The proposal to construct two driveways within State open waters, wetlands, and transition areas on-site is authorized by a Statewide General Permit No. 10A, which authorizes activities in freshwater wetlands, transition areas, and/or State open waters, which allows for the construction of one or more new road crossings, including attendant features such as shoulders, sidewalks, and embankments in freshwater

wetlands, transition areas, and/or State open waters.

The proposal to modify the standard 50-foot freshwater wetlands transition area on-site, based on the wetlands lines verified in the above-referenced Letter of Interpretation Line Verifications, for the construction of a mixed use commercial/multi-family residential development, is authorized by a Transition Area Waiver - Averaging Plan.

Limit of Authorized Disturbance

Based on the approved plans entitled **"BELLE MEAD STATION, BLOCK 4001 LOT 33, BLOCK 5002 LOTS 4, 5 & 6, BLOCK 5003 LOT 1, BLOCK 5023 LOT 2, BLOCK 6001 LOT 1, MONTGOMERY TWP., SOMERSET CO., NJ," dated August 1, 2008, unrevised, and prepared by PS&S,**

"WETLANDS PERMITTING PLAN, OVERALL PLAN, SHEET 1 OF 3,"
"WETLANDS PERMITTING PLAN, PLAN A, SHEET 2 OF 3,"
"WETLANDS PERMITTING PLAN, PLAN B, SHEET 3 OF 3."

the authorized areas of disturbances are:

- **20,995 sq. ft. (0.482 acres)** of freshwater wetlands via a Statewide General Permit #7;
- **1,160 sq. ft. (0.027 acres)** of freshwater wetlands/open waters via a Statewide General Permit #10A, and;
- **16,170 sq. ft. (0.371 acres)** of freshwater wetlands transition areas via a Transition Area Waiver Averaging Plan. This impact will be compensated for by the expansion of **16,205 sq. ft. (0.372 acres)** of transition areas on-site.

Permit Conditions

In addition to the standard conditions noted at N.J.A.C. 7:7A-5.7, N.J.A.C. 7:7A-5.10, and N.J.A.C. 7:7A-6, the following special conditions must be met for the activities authorized under Statewide General Permits #7 & 10A and the transition area waiver, respectively. Failure to comply with these conditions shall constitute a violation of the Freshwater Wetlands Protection Act (N.J.S.A. 13:9B-1 et seq.).

1. *Prior to the commencement of activities on-site*, the permittee shall apply for and obtain a Flood Hazard Area Permit from the Division for this project. Should the project change as a result of achieving compliance with the FHA Rules, the permittee may need to apply for either a modification to these Freshwater Wetlands Permits or new Freshwater Wetlands Permits. **No construction activities may commence on-site until the permittee possesses a valid Flood Hazard Area Permit.**

2. *Prior to the commencement of activities on-site*, the following revisions must be made to the report *Phase IB Archaeological Survey and Architectural Effects Assessment, Belle Mead Station Development, Montgomery Township, Somerset County, New Jersey," dated November 2010, and prepared by Richard Grubb & Associates,* and the report must be sent to the Division for approval. Please contact Vincent Maresca at the Historic Preservation Office (HPO), 609-633-2395, with any questions.

    a. Please revise p. 7-1, 1st paragraph: Four prehistoric artifacts were recovered, not two. Two came from STPs and two from surface collecting.

b. Site registration forms should be updated for revisited archaeological sites. Site form updates do not always need to be appended to survey reports, but the updates should at least be mentioned in the project methods section of the report.

3. The proposed development will have no adverse effect on the Belle Mead Railroad Station Complex or the Delaware & Bound Brook (Reading) Railroad Historic District, provided that context sensitive design treatments are developed and that these plans and specifications (including landscape plans) are submitted to the HPO for review and approval.

4. If the project is modified to include work to any existing or newly constructed buildings on the Belle Mead Railroad Station Complex or the Delaware & Bound Brook (Reading) Railroad Historic District sites, plans and specifications for this work shall be sent to HPO for review and approval.

5. A silt fence and a debris barrier fence shall be installed along the limit of disturbance on-site prior to site preparation and/or construction. The fences shall be maintained until such time as any disturbed surfaces have re-established stabilizing vegetation.

6. The applicant shall make specific arrangements to ensure the continuous maintenance and efficient operation of all proposed stormwater management measures onsite. This includes the inspection (and cleaning where necessary) of any and all constructed swales, basins, inlets, and mechanical treatment devices at least four times per year and after every major storm totaling 1 inch of rainfall or more, the use of appropriate soil conservation practices onsite, and any other reasonable effort required to maintain the stormwater management system in good working order.

7. Additional drawings approved for this project are sixteen (16) sheets prepared by PS&S, LLC, dated August 1, 2008 unless otherwise note, entitled:

"BELLE MEAD STATION, BLOCK 4001 LOT 33, BLOCK 5002 LOTS 4, 5 & 6, BLOCK 5003 LOT 1, BLOCK 5023 LOT 2, BLOCK 6001 LOT 1, MONTGOMERY TOWNSHIP, SOMERSET CO., NJ"

"LAYOUT, GRADING & UTILITY PLAN A" sheet no. C-8,

"LAYOUT, GRADING & UTILITY PLAN B" sheet no. C-9,

"LAYOUT, GRADING & UTILITY PLAN C" sheet no. C-10,

"LAYOUT, GRADING & UTILITY PLAN D" sheet no. C-11,

"LAYOUT, GRADING & UTILITY PLAN E" sheet no. C-12,

"LAYOUT, GRADING & UTILITY PLAN F" sheet no. C-13,

"LAYOUT, GRADING & UTILITY PLAN G" sheet no. C-14,

"LAYOUT, GRADING & UTILITY PLAN H" sheet no. C-15,

"LAYOUT, GRADING & UTILITY PLAN I" sheet no. C-16,

"UTILITY DETAILS" sheet no. C-21 & C-22,

"OUTLET STRUCTURE DETAILS" sheet no. C-23,

"RECHARGE SYSTEM DETAILS" sheet no. C-24, revised July 23, 2009,

"OVERALL UTILITY PLAN" sheet no. UT-1, dated July 15, 2009,

"LAYOUT, GRADING & UTILITY RECHARGE SYSTEM #1 & #2," sheet nos. R-1 and R-2, dated July 15, 2009.

8. The permittee shall sign a Division approved conservation restriction for the entire transition area on the subject parcel(s) in accordance with N.J.A.C. 7:7A-6.1(h). The restriction shall be included on the deed, and recorded in the office of the County Clerk (the REGISTRAR OF DEEDS AND MORTGAGES), in the county wherein the lands included in the permit are located. The restriction shall run with the land and be binding upon all successive owners. All individual lot surveys shall show the approved boundaries of the restricted area. **Any regulated activities undertaken on the site before a copy of the recorded restriction is submitted to the Division will be considered in violation of this permit.** Please submit a copy of the draft restriction to Becky Ehrenfeld of the Division for review and written approval prior to filing. Once the Division approved restriction is recorded, send a copy of the recorded conservation restriction before beginning regulated activities.

9. The authorization of activities under Freshwater Wetlands Statewide General Permits #7 & 10A includes a transition area waiver that allows encroachment only in that portion of the transition area that has been determined by the Division to be necessary to accomplish the authorized activities. In addition, these permits to conduct a regulated activity in a wetland or open water includes the Division's approval of a Water Quality Certificate for these activities.

10. This authorization is valid for five (5) years from the date of this letter unless more stringent standards are adopted by rule prior to this date. The permittee shall allow an authorized Division representative the right to inspect the construction site.

11. All fill and other earth work on the lands encompassed within this permit authorization shall be stabilized in accordance with "Standards for Soil Erosion and Sediment Control in New Jersey" to prevent eroded soil from entering adjacent waterways or wetlands at any time during and subsequent to construction.

12. This permit is revocable in accordance with the NJDEP regulations and State law.

13. The issuance of this permit shall not be deemed to affect in any way other actions by the Division on any future application.

14. The activities shown on the approved plans shall be constructed and/or executed in conformity with any notes and details on said plans and any conditions stipulated herein.

15. No change in plans or specifications shall be made except with the prior written permission of the Division.

16. The granting of this authorization shall not be construed to in any way affect the title or ownership of the property, and shall not make the Division or the State a party in any suit or question of ownership of the property.

17. This permit is not valid and no work shall be undertaken pursuant to this authorization until all other required federal, state, and local approvals, licenses and permits necessary for commencement of work on site have been obtained.

18. A complete, legible copy of this permit shall be kept at the work site and shall be exhibited upon request of any person.

19. Acceptance of this decision and all conditions shall be assumed, unless the permittee requests an adjudicatory hearing to contest the permit and/or permit conditions, in accordance with the requirements of the Freshwater Protection Act rules at N.J.A.C. 7:7A-1.7.

Appeal of Decision

In accordance with N.J.A.C. 7:7A-1.7, any person who is aggrieved by this decision may request a hearing within 30 days after notice of the decision is published in the DEP Bulletin by writing to: New Jersey Department of Environmental Protection, Office of Legal Affairs, Attention: Adjudicatory Hearing Requests, 401 East State Street, P.O. Box 402, Trenton, NJ 08625-0402. This request must include a completed copy of the Administrative Hearing Request Checklist. If a person submits the hearing request after this time, the Department shall deny the request. The DEP bulletin is available through the Department's website at www.state.nj.us/dep.

Please contact Becky Ehrenfeld of our staff at 609-777-0454, or by email at Becky.Ehrenfeld@dep.state.nj.us, should you have any questions regarding this letter. Be sure to indicate the Division's file number in all communication.

Sincerely,

Andrew Clark
Northeast Region Supervisor
Bureau of Inland Regulation

cc. Township of Montgomery Construction Official
Applicant

ATTACHMENT C

Qualifications of Preparers

EcolSciences, Inc.
Environmental Management & Regulatory Compliance

ECOLSCIENCES, INC.
CORPORATE HISTORY

EcolSciences, Inc., was founded in 1973 in response to the growing need for responsible environmental planning, as mandated by NEPA, The National Environmental Policy Act. EcolSciences specializes in performing environmental investigations relating to permit acquisition and regulatory compliance, demonstration of "due diligence", waste management, impact analysis, mitigation, and remediation. EcolSciences' strength is a proficiency in current environmental and waste management laws, regulations, and policies, coupled with a practical problem-solving approach to analyzing the environmental consequences of projects.

During its forty-one years under the same management, EcolSciences has successfully completed more than 10,000 studies for private, quasi-public and public clients. Over the years EcolSciences was awarded a number of "Mission Contracts" wherein EcolSciences worked as USEPA's surrogate in preparing EPA Environmental Impact Statements in Region II, Region II and Region V. In addition, EcolSciences was contracted to provide training on the regulatory process associated with NEPA to USEPA employees and State Environmental Agency employees in all ten USEPA regions. Personnel involved in that work remain part of EcolSciences' team. EcolSciences has represented many of the country's leading industries, corporations, developers, and financial institutions including AT&T, American Cyanamid Company, Lucent Technologies, Merck, Johnson & Johnson, Hartz Mountain Industries, Exxon, K. Hovnanian Companies, Roseland Property Company, Trammell Crow Company, Principal Real Estate Investors, PNC Bank, The Bank of New York and JP Morgan Chase. Among the many utilities that EcolSciences has served are Jersey Central Power & Light, New Jersey Natural Gas Company, Verizon Wireless, Sprint, Elizabethtown Gas Company, Essex and Hudson County Improvement Authorities, Ocean County Utilities Authority, and numerous municipal utilities authorities. Representative government agency clients, in addition to the U.S. Environmental Protection Agency, include New York City Economic Development Corporation, New York City Department of Design and Construction, and New York City Department of Sanitation.

EcolSciences' interdisciplinary staff of environmental engineers, geologists, biologists and scientists has extensive experience in a diversity of studies related to biological assessment and toxic and hazardous materials management. EcolSciences has performed environmental assessments and has acquired appropriate permits and approvals under a wide variety of federal, state, regional, and local jurisdictions. These include, but are not limited to: federal Section 404 and Section 10 authorizations; New York SEQRA and CEQR approvals; New Jersey CAFRA, Waterfront Development, and Freshwater Wetlands Protection Act permits (both general and individual); NJ Pinelands Commission certifications; Hackensack Meadowlands Development Commission (HMDC) approvals; and Delaware & Raritan Canal Commission approvals. EcolSciences' senior staff is experienced in the delivery of expert testimony; senior staff of the firm have testified in public hearings, Administrative Law proceedings, and county, regional and municipal planning boards.

The ecological\biological staff of EcolSciences has conducted over 5,000 wetland delineations and environmental assessments throughout the eastern and central portions of the United States. Our staff is skilled in all technical aspects of wetland identification and delineation methodologies established by the ACOE, USFWS, EPA and SCS; the assessment of wetland functions and values using techniques such as HEP, WET, and IVA; the assessment of development-related wetland impacts; the acquisition of wetland permits; and the development and implementation of mitigation plans. Key members of our staff are certified as Professional Wetland Scientists and provisionally certified by the ACOE. Additionally, EcolSciences' biologists routinely perform specialized studies related to federally- and state-listed threatened and endangered plant and animal species, wildlife habitat surveys, and the assessment of development-related impacts. Five of EcolSciences' biologists are USFWS Qualified bog turtle surveyors and two are NJDEP Qualified Ornithologists.

Since the promulgation of the New Jersey Environmental Cleanup Responsibility Act (ECRA) and it successor, the Industrial Site Recovery Act (ISRA), EcolSciences has been involved in the implementation of the entire ECRA/ISRA program for its industrial clients. More recently, as the demonstration of "due diligence" has become a lending industry standard, EcolSciences has completed numerous Phase I environmental audits per ASTM E1527-05 and AAI and follow-up Phase II studies to clarify the level of environmental risk and liability associated with past and current practices at a particular site or facility. These audits typically include such activities as hazardous materials inventories, building and site inspections, subsurface soil investigations, groundwater monitoring, tank testing, asbestos bulk sampling, development of remediation plans and supervision of cleanup activities. The firm and technical staff members are also certified by the NJDEP for the performance of underground storage tank installation, closure, and subsurface evaluation. All work is conducted under the supervision of a licensed professional engineer.

EcolSciences is a multi-disciplinary firm that has the experience and capabilities to provide a full range of environmental services. Studies are conducted in a manner that emphasizes the balance of environmental, engineering and cost factors. This approach provides the information necessary for sound and practical project decisions.

THOMAS M. AUFFENORDE

EDUCATION:	*M.S., 1982, Botany* *Ohio University* *B.S., 1980, Biology* *University of Alabama in Huntsville*
AREAS OF EXPERTISE:	*Wetlands Identification, Ecology and Mitigation* *Environmental Analysis and Impact Assessment* *Environmental Compliance - Construction* *Threatened and Endangered Species* *Stormwater Pollution Prevention Plan (SWPPP) Compliance*
PROFESSIONAL AFFILIATIONS:	*Society of Wetland Scientists*
PROFESSIONAL CERTIFICATIONS:	*Society of Wetland Scientists - Professional Wetland Scientist* *USEPA Wetland Delineation Methodology* *Certified Stormwater Pollution Prevention Plan (SWPPP) Preparer* *Certified Compliance Inspector of Stormwater*

EXPERIENCE:

Mr. Auffenorde is a Vice President and has been employed at EcolSciences, Inc. since 1987. He has directed or participated in over 1,500 construction-related environmental studies for a wide range of clients including the development, legal, engineering and financial professions, as well as local, state and federal government agencies. During his employment with EcolSciences, Inc., his responsibilities have included construction-related wetland regulatory analysis and compliance, environmental impact assessment, Stormwater Pollution Prevention Plan (SWPPP) preparation and compliance, and threatened / endangered species studies. Mr. Auffenorde's project experience also includes extensive client contact, project management, and expert testimony pursuant to the municipal development approval process. Mr. Auffenorde has also been accepted as an expert in wetland regulatory compliance in New Jersey Superior Court. A summary of Mr. Auffenorde's relevant project experience includes:

Environmental Compliance - Construction

Reviewed hundreds of construction site plans for environmental compliance including preparation, submittal, and follow-up on State and Federal wetland permitting. Prepared hundreds of Environmental Impact Statements for the New Jersey municipal development approval process. Involved in the preparation of SWPP Plans and provided construction oversight of SWPPP compliance

- Provided SWPPP compliance oversight for a major utility on a 2-year 44-mile electric transmission line upgrade project in northern New Jersey.

- Active in preparation of SWPP Plans and in an oversight capacity on SWPPP compliance for residential and commercial construction projects

Wetland Studies

Directed and participated in more than 1,000 field studies in NJ, NY and PA for wetland regulatory compliance. Representative experience includes:

- The evaluation of more than 5,000 acres in the New Jersey Highlands.
- The evaluation of more than 2,000 acres in the complex red-shale soils of the New Jersey Piedmont.
- The evaluation of more than 1,000 acres in the sandy soils of the New Jersey Coastal Plain.
- The design and implementation of water table/soil saturation monitoring programs to determine the presence or absence of wetland hydrology in drained organic and mineral soils.

Wetlands Mitigation

Participated in the design, implementation, and monitoring of wetlands mitigation projects pursuant to regulatory violations and to compensate for wetland losses from approved wetland fills. Representative project experiences include:

- Design and coordination with state environmental agency personnel for a 20-acre wetlands restoration/enhancement project required pursuant to a settlement agreement involving wetland disturbances in Mt. Olive, New Jersey. The project involves hydrologic manipulation, extensive wetland plantings, and enhancement of wildlife habitat.
- Design, implementation, monitoring and coordination with state environmental agency personnel of a one acre wetlands restoration project pursuant to authorized wetland disturbances for clean-up of hazardous materials, Holmdel, New Jersey. Project is in the monitoring phase.
- Design, implementation, monitoring and coordination with state environmental agency personnel of a 2-acre wetlands creation project pursuant to authorized wetland fills for a Toys "R" Us warehouse, Mt. Olive, New Jersey. Project is in the monitoring phase.
- Design, implementation and coordination with state environmental agency personnel of a 3-acre wetlands restoration project for Exxon Research and Engineering Company, Florham Park, New Jersey. Project has received agency approval.

- Preparation and implementation of a one acre wetland creation project pursuant to authorized wetland fills for a residential development in Roxbury, New Jersey. Project has received agency approval.

Corridor/Utility Experience

- Designed, directed and participated in ecological studies, regulatory assessment and regulatory compliance for more than 200 linear miles of road corridors, gas and electric transmission right of ways and sewer and water alignments. Studies have been performed for the New Jersey DOT, Public Service Electric and Gas, Jersey Central Power and Light, New Jersey Natural Gas, and numerous local governments.

- Conducted and/or managed comprehensive investigations of regulated wetlands/waters and threatened and endangered species for the Public Service Electric and Gas 44-mile Susquehana – Roseland electric transmission line upgrade project. Provided regulatory support for environmental permitting. Managed environmental compliance during construction, interfacing with management for the oversight contractor and construction contractor. Duties included troubleshooting soil erosion and sediment control discharge issues, installation of functional wildlife crossings, working with contractors to minimize environmental impacts of construction, and design reviews of plan changes for environmental compliance and minimization of impacts.

- Investigation of Public Service Electric and Gas electric transmission lines for wetlands/waters and threatened or endangered species for vegetation maintenance activities. Worked collaboratively in the field with vegetation maintenance contractors and PSE&G right-of-way managers to ensure compliance with environmental permits and to minimize environmental impacts.

Threatened and Endangered Species Studies

Active in the design and implementation of numerous field studies for rare plant and animal species including, but not limited to: Bog Turtle, Wood Turtle, Pine Barrens Treefrog, Northern Pine Snake, Barred Owl, Coopers Hawk, Grasshopper Sparrow, Savannah Sparrow, Swamp Pink, Knieskern's Beaked Rush, and the plants listed in the Pinelands Comprehensive Management Plan.

- Performed an evaluation of eight NJ Superfund sites to determine the potential occurrence of the federally threatened plant species, Swamp Pink and Knieskern's Beaked-rush, for the USEPA.

- Participated in the design and implementation of a comprehensive threatened and endangered plant and animal studies on numerous large and small holdings in southern New Jersey and southern New York. Conducted field surveys for target Federal and State listed species identified by regulatory agencies, including the New Jersey Pinelands Commission, leading the botanical survey and plant identification efforts. Applied the timed-meander search

technique for threatened and endangered plant species. A partial list of species surveyed for include: Swamp Pink, Knieskern's Beaked-rush, Spreading Globeflower, Sickle-leaved Golden Aster, Pine Barrens Reedgrass, Southern Twayblade, Little Ladies Tresses, Broom Crowberry, Yellow Asphodel, Curly Grass Fern, Fairy Wand, Hookers Orchid, Puttyroot, and Globe-flowered Ludwigia.

Avifaunal Studies

- Intensive avifaunal field and literature studies associated with the preparation and implementation of a Bird Deterrent Plan required by the Federal Aviation Administration for a proposed ash-bypass landfill in Onondaga County, NY.

- Wintering/migratory bird field studies for the proposed redevelopment of Flushing Airport by the NY City Economic Development Corporation (formerly Ports and Trade).

- Assessment of the vegetation and surrounding landscape characteristics of long-eared owl (*Asio otus*) winter roosts in central New Jersey.

Commercial/Industrial/Residential Studies

- Wetlands delineation, impact assessment and mitigation for more than 1000 commercial, industrial and residential development projects in NJ, NY and PA for use in site planning, U.S. Army Corps of Engineers 404 permit acquisition, and acquisition of State wetland permits.

- Preparation of municipal EIS's for major developments in New Jersey for use in planning board submissions. Major issues commonly include wetlands, endangered or threatened species, stormwater drainage and floodplains.

- Expert testimony on wetlands delineation, regulatory compliance and environmental impact analysis.

Special Environmental Studies

A wide range of ecological studies have been conducted for various private clients, the USEPA and other government agencies. Representative studies include:

- An evaluation of the impacts of peat extraction on the functions and values of peatlands in the Pocono Mountain area of Pennsylvania for the USEPA, Region III.

- Conducted field studies, prepared the report and presented the results of the study at a public meeting for the Advance Identification of Wetlands along Moshannon Creek near Philipsburg, PA for the USEPA, Region III.

- Conducted field studies and prepared a report for the Advance Identification of Wetlands in Silkmans Swamp near Scranton, PA for the USEPA, Region III.

- Prepared a sampling plan, established permanent quadrats and prepared a report for the first year in a NJDEP-mandated 20-year study of the effects of the removal of groundwater upon the existing plant communities of Budd Lake Bog due to the construction of sanitary sewerage facilities. Budd Lake Bog is known to harbor several species of rare plants and is the northernmost occurrence of the Federally-threatened plant, Swamp Pink.

PUBLICATIONS:

Moskowitz, D.P. and T.M. Auffenorde. 2003. Bird Use of Two Simulated-Tree Cellular Towers in New Jersey. Records of New Jersey Birds 28(4): 88-91.

Moskowitz, D.P. and T.M. Auffenorde. 2000. Persistence of Skunk Cabbage (*Symplocarpus foetidus*) in a Drained Wetland. Wetland Journal 12(3): 23-29.

Moskowitz, D., T. Auffenorde and M. Kovacs. 1997. Vegetation and surrounding landscape characteristics of long-eared owl (*Asio otus*) winter roosts in central New Jersey. Records of New Jersey Birds 23(1): 2-6.

Auffenorde, T.M. and W.A. Wistendahl. 1985. The composition, structure and phenology of the vegetation at the O. E. Anderson Compass-Plant Prairie in unglaciated southeastern Ohio. Ohio Journal of Science 85:50-59.

Auffenorde, T. M. 1983. Demography and persistence of *Silphium laciniatum* at the O. E. Anderson Compass-Plant Prairie in southeastern Ohio. Proceedings of the Eighth North American Prairie Conference, R. Brewer (ed.), Department of Biology, Western Michigan University, p. 30-32.