1.0 EXECUTIVE SUMMARY

1.1 Brief Description of the Proposed Action

This Draft Environmental Impact Statement (DEIS) has been prepared in response to a Positive Declaration adopted by the Town of Forestburgh Town Board. The Applicant, Lost Lake Resort, Inc. (an affiliate of Double Diamond, Inc.), proposes to construct a residential/recreational resort development called "Lost Lake Resort" on a site of approximately 2079.51 acres located in the Town of Forestburgh, Sullivan County, New York.

The Applicant has applied to the Town Board to designate the site as a Planned Development District (PDD) in accordance with the local PDD regulation. The project site is entirely located in the RR-1 Rural Residential zoning district. The proposed action encompasses development of a planned resort community that will provide an upscale recreational destination consisting of a gated community of single family residence lots, hotel/conference facilities, a cottage and condominium component, and extensive recreational amenities. On-site recreational amenities for residents and guests will include an 18-hole championship golf course and driving range, clubhouse and restaurant, swimming and boating facilities at Lost Lake, tennis courts; a health and wellness spa, and a system of wilderness trails for passive recreation. The project will include development of interior road systems, utilities and stormwater infrastructure, a community water supply, and wastewater treatment facilities.

This DEIS has been prepared to evaluate the potential environmental impacts associated with the Lost Lake Resort PDD (the "proposed action") and has been prepared in accordance with Part 617 regulations implementing the New York State Environmental Quality Review Act (SEQRA). The contents and format of this DEIS generally follow the outline of the Scoping Document for Preparation of a Draft Environmental Impact Statement adopted by the Town of Forestburgh Town Board on June 11, 2009 (included in DEIS Appendix A).

1.1.2 Required Approvals/Permits and Involved Agencies

Regulatory agencies having approval authority over one or more aspects of this application are listed below. State or local agencies having such approval authority are identified as "involved agencies" under SEQRA.

Issuing Agencies and Required Approvals

- Forestburgh Town Board - PDD Approval, Consent to form transportation corporations for sewer and water service
- Planning Board, Town of Forestburgh - Subdivision/Site Plan Approval
- New York State Department of Health - Water Supply
- Sullivan County Department of Public Works - Highway Work Permit
- New York State Department of Environmental Conservation - SPDES Permit for STP Wastewater Discharge, SPDES General Permit for Stormwater, Waiver for >5 acres construction disturbance, Wetlands Disturbance, Stream Disturbance, Sewer Collection, 401 Water Quality Certification, Water Taking.

- Delaware River Basin Commission[1] - Potential Permits for wastewater discharge, groundwater withdrawal, surface water withdrawal
- US Army Corps of Engineers[2] - Section 404 Wetlands Permit

1.1.3 Interested Parties

The following are agencies, persons, or groups have been identified or expressed interest in participating in the review process as interested parties under SEQRA at this time.

- Town Conservation Advisory Board
- Sullivan County Department of Planning
- Monticello School District
- Forestburgh Fire District
- Local Volunteer Ambulance Corps
- New York State Police
- New York State Office of Parks, Recreation, and Historic Preservation
- The Merriewold Club, Inc.
- Lake Joseph Homeowners Association, Inc.

1.1.4 Project Purpose and Need

Project Purpose and Need

The project plans have been developed with consideration of existing planning documents of the Town of Forestburgh and Sullivan County. The Applicant believes the proposed project is consistent with adopted policies and comprehensive plans.

The target market for the single family lots is primarily the investor who may or may not build a home but is interested in purchasing a house lot in the resort to take advantage of the recreational amenities offered at the resort to lot owners. Houses are not built on the single family lots by Lost Lake Resort, Inc., but some individual lot owners may choose to build their second or retirement home here in Sullivan County for recreation and leisure, and as a real estate investment. This demographic is consistent with the Applicant's experience in its other resort projects, in particular at the Eagle Rock Resort in Hazleton, Pennsylvania, which is the most comparable model for Lost Lake Resort.

Resort membership will include the privilege to use the extensive recreational amenities. Use of recreational amenities in Lost Lake Resort will be available for both Resort property owners and the general public.

Benefits of Proposed Action to the Community

The Applicant believes that this project will be very beneficial to the town and the local community compared to a conventional single family subdivision developed according to the existing zoning. The Master Plan and Design Guidelines for Lost Lake Resort embrace the principles set forth in the LEED Green Building Rating System and the NAHB National Green

[1] The DRBC is not defined as an involved agency under SEQRA (it is an interstate compact), although it will need to issue permit(s) as noted.

[2] The USACOE is not defined as an involved agency under SEQRA (it is a federal agency), although it will need to issue permit(s) as noted.

Building Program. Benefits will include: a state-of-the-art, championship-quality, public golf club facility; preservation of open space; recreational resources available to the public; housing supported by its own roads, water and wastewater infrastructure that will sustain itself for many years to come; generate fewer school children and full-time residents than a conventional subdivision, thus minimizing demand for community services; increase property values in the local community; promote tourism in the Town of Forestburgh; develop the site in a manner that is compatible with the character of the community and protective of the natural environment; and generate substantial tax ratables to the town, county and school district.

1.1.5 Site Location and Environmental Setting

Geographic Boundaries and Access

The project site is situated entirely in the Town of Forestburgh, Sullivan County, New York. The north-most site property line is coincident with the town line of the Town of Thompson. The site is south of the NYS Route 17 corridor, the major east-west transportation corridor in the region, known as the "Quickway", and approximately 3.6 miles south of the Village of Monticello.

The project site generally lies between Cold Spring Road (County Route 102) and Forestburgh Road (NY Route 42), two north-south roadways in the Town of Forestburgh. It is generally bisected by St. Joseph's Road (CR 108) that connects the two collector roads. As the property is currently undeveloped, there are no formal access points into the site from any public road. The railroad grade of the former Ontario & Western Railroad line between Monticello and Port Jervis exists on the subject property along the easterly property line.

Description of the Site Environment

Natural Environment

The project site is situated in a largely wooded, sparsely populated portion of Sullivan County characterized by moderately rugged topography, with a pattern of hills and valleys that is very generally north-south in orientation. Surface features in the local area include scattered lakes (some of which are manmade) and a network of county roads with generally short local roads. Of particular note is the existence of the Neversink River Unique Area, sometimes referred to as the Neversink Gorge, located southeast of the project site. The Unique Area is a New York State owned and managed area comprised of 4,881 acres and adjoined by the 585 acre Wolf Brook Multiple Use Area. The 5,466-acre tract contains a great diversity of wildlife habitats, with portions accessible to the public for passive recreational use. The project site is located within the Delaware River Basin and the jurisdiction of the Delaware River Basin Commission (DRBC).

The project site itself is predominantly wooded, with areas of wooded wetlands in pockets and within the central lowland.

Built Environment

There is considerable undeveloped, wooded land in the site vicinity with the exception of clusters of residential activity to the northeast, northwest and southwest of the site. In the vicinity of Rose Valley Road at Cold Spring Road is the Melody Lake community; northwest of the site is the St. Joseph's Lake community; and to the southwest is the Merriewold Lake community.

The project site is located in the RR-1 Rural Residential zoning district as mapped by the Town of Forestburgh, as are the surrounding lands and, in fact, most of the town.

1.1.6 Project Description and Layout

Descriptions of Project Components

Buildings, Lots and Roads

The overall project development plan encompasses a single main entrance, from Cold Spring Road, to a network of interior roads that will provide access to the golf course and other recreational amenities and to all residences on the site. Within the backdrop of the native woodlands, building sites, roads, the golf course and other amenities have been laid out with the intent to preserve the Sullivan County character in a private resort community. Individual residential building lots are laid out along a pattern of curvilinear roads, each with at least two means of access. Building lots are a minimum of 7,000 square feet in size.

No public access is proposed from St. Joseph's Road. In order to cross St. Joseph's Road between the northerly and southerly portions of the project, Phase 1 will include a surface connection at the proposed emergency access for construction and maintenance vehicles, emergency vehicles and golf carts but will not be available for any public use. It will have a restriction (a gate) to prevent public use. In Phase 3, the internal road system will include a tunnel that will provide vehicular, pedestrian, and golf cart access. There are two points of emergency vehicular access from the northerly portion and two from the southerly portion of the development onto St. Joseph's Road.

The Lost Lake Resort is planned as a gated community with a controlled-access entry and 24-hour security. Inside the Gated Entry will be the General Postal Station where property owners pick up their mail as they enter the resort. The entry area will provide a means to limit the amount of commercial traffic within the resort, and a bus stop and turnaround will be provided, with a shelter for inclement weather. The main entrance will also have a Greeting Center, a small Adirondack-style building for resort staff to provide visitors with personal tours of the resort as well as local information about attractions and services located in the resort and in the surrounding communities. The Greeting Center and its parking are set back from the main entry so that as visitors drive in the main road they will view the rustic lodge within the forest landscape setting.

Proposed Site Master Plan

Lost Lake Resort is planned as an upscale residential/recreational resort that will market the sales of individual house lots with membership to an extensive range of recreational amenities located within the resort community. The project infrastructure and amenity components are designed to be built in phases, as lots are sold (according to market demand), with homes sites developed by the individual lot owners over time in accordance with Design Standards and subject to review and approval by the Lost Lake Architectural Control Committee. Based on the experience of Double Diamond at its other resort communities, homesite construction is expected to occur gradually (over several decades), with many privately owned lots remaining undeveloped by owners who purchase one or more lots primarily to use the recreational amenities. Initial resort construction will include a number of townhouse and cottage style residences that will be available for short term rental by lot owners and prospective buyers. While the site plan is designed as a gated community, with a single gated main entrance to the

entire resort, access to the recreational facilities will be open to the public, as will availability of the rental residences.

The Lost Lake Resort master plan is designed for 2,557 single-family residential lots, a cluster of 30 single-family cottages, and 40 multi-family townhouse-style condominium dwellings, for a total of 2627 residences. The proposed zoning for the development is a Planned Development District (PDD) under the Town's recently adopted PDD law. A mix of uses is planned that includes single- and multi-family residences, hospitality services with lodging, restaurant, spa/fitness center and conference facility open to the public, and business offices such as real estate sales, utility services and property management offices, and open / recreational space. The construction of all resort facilities, including stormwater infrastructure, roads, utilities, and amenity building development areas will be implemented by the Applicant, according to an approved site master plan that takes into account stormwater management, construction phasing, wildlife management, and open space protection.

The Sales Office is situated at the main entrance, along with a postal facility, bus stop, and controlled access building.

The Applicant will retain ownership of the recreational amenities and all infrastructure, and will retain responsibility for their operation and maintenance. Lot ownership will include responsibility as set forth in a Property Owners Association (POA) to operate and maintain the common elements associated with the PDD pursuant to bylaws established for the POA. Each lot owner that elects to build a home on a lot will need to do so in full accordance with Design Guidelines that will be set forth in the Offering Plan and POA bylaws, so that the Lost Lake Resort community will maintain its quality, look and aesthetic appeal.

The project developer establishes the design theme and sustainable design and construction philosophy for Lost Lake Resort in its Design Guidelines, where lot owners are encouraged to implement sustainable “green building” design strategies whenever possible. More specifically, the Declaration of covenants and restrictions for the Lost Lake Resort stipulates that all single-family residential dwellings constructed on a lot, and all Hospitality structures within Lost Lake, are required to meet the minimum criteria for the first level of certification as set forth by applicable LEED (Leadership in Energy and Environmental Design) Guidelines (e.g. LEED for Homes, LEED New Construction), or the NAHB (National Association of Home Builder's) Green Building Program Specifications.

"Amenity Village"

As a developer of recreational resorts, Lost Lake Resort, Inc. will offer hospitality services to lot owners and the general public through the development and operation of the resort recreational amenities. For these recreation and leisure services to remain viable, Lost Lake Resort, Inc. will maintain ownership and control the operation of the hospitality facilities to ensure that the quality and reliability of service at all resort amenities is maintained.

Guest room lodging in Lost Lake Resort (the Inn with 32 rooms, 30 cottages and 40 townhouses) is expected to be used primarily by lot owners and prospective lot owners, and secondarily by conference attendees and the public.

Building Architecture

The common buildings in Lost Lake Resort are proposed to be low profile, Adirondack style buildings of primarily one story, with wood and native stone facades and gable roofs. The Inn will be a three story structure. Building interiors will be contemporary in design with a rustic flair, complete with modern conveniences, professionally furnished and decorated in styles compatible with the overall look of the resort.

Open Space and Recreation Component

The Lost Lake Resort master plan preserves approximately 1,045 acres of open space[3] throughout the property (50 percent of the site). Undisturbed wooded areas as well as developed, vegetated areas such as the golf course will exist as open space for the residents of the development to use. A network of wilderness walking trails in the open space area will provide passive recreational opportunities. Open space will include wetlands, lakes, streams, trails, one or more wildlife observation stations, golf course, parks and buffers that conserve natural areas and native wildlife habitats while allowing passive recreational use of the golf course, parks and trails, in keeping with the Town's definition of open space in its PDD regulation.

Internal Circulation and Parking

The project proposes the development of approximately 25 miles of 20-foot wide asphalt paved private roads within 50-foot rights of way. The roads are designed to have roadside swales that are either vegetated or stone lined, depending on slope, on one or both sides to manage runoff from the pavement. These roads will be privately owned, managed and maintained by the POA. Preliminary profiles of the proposed roads indicate that site circulation can be developed with road gradients of less than ten percent. Most roads will have gradients of between one and six percent, with a few areas of up to 9.6 percent. All roadway geometry will be designed in accordance with Town of Forestburgh Street Design regulations.

Project Phasing

The project is planned to be permitted and built in seven primary phases, starting with development at the north end of the property to establish the project main entrance, sales office, and access to house lots and the center of the Amenity Village area. Construction of infrastructure (roads, stormwater management, water supply systems and sewer systems) will commence to service the amenities and dwellings north of St. Joseph's Road. The golf course will be developed early on, concluding with the construction of the golf clubhouse/restaurant and driving range. Subdivision of house lots will be applied for in phases, generally consisting of up to 400 lots at one time, followed by construction of infrastructure to service the approved lots. Construction will continue in the central portions of the property, including construction of the Amenity Village facilities and walking trails. Development of the hotel, health spa and conference center buildings will complete the primary resort amenities. Subdivision of house lots and providing infrastructure in the southern end of the property will complete the implementation of the project master plan.

[3] This document uses the term "open space" as is defined in the Town of Forestburgh Planned Development District Law of 2008, § 85-17 E. Definition of Open Space.

Project Infrastructure Plans

Drainage Plans

Stormwater management systems are proposed for the conveyance and treatment of surface runoff. Appropriate stormwater management infrastructure will be designed using sound engineering practices and meeting the requirements of the Town of Forestburgh and the NYSDEC to minimize impacts to the existing site resources and to control stormwater runoff quantity and quality that could effect downstream resources if not adequately treated.

Erosion Control Plans

The approved plan set for each phase of construction will include erosion control plans developed in accordance with State regulations to ensure there are adequate provisions for erosion and sediment control in the construction area. A conceptual erosion control plan for the Phase 1 area is included.

Water Supply

The project is designed to be serviced by a privately-owned community water supply that derives water from onsite wells. The water supply system will be developed in accordance with Sullivan County, New York State and Delaware River Basin Commission (DRBC) requirements. Sixteen exploratory groundwater wells have been established and/or tested on the site and a pump test has shown there are sufficient water sources for at least Phase 1 development. The applicant is proceeding with developing additional water supply wells and has committed to completing well exploration and well testing at the site that will demonstrate an adequate water supply for the full-build project scenario. The Final EIS for Lost Lake Resort will include this information.

Wastewater Treatment

The project is designed to be serviced by a privately-owned onsite wastewater collection and treatment system with discharge to surface waters of the Bush Kill. The proposed wastewater treatment plant will be built in phases, allowing expandability and adaptability to meet the needs of the project as it grows over time. A NY State transportation corporation will be established to have ownership and be responsible for the operation and maintenance of the wastewater treatment system to comply with all applicable water quality standards and the effluent limits set forth by the NYSDEC in the SPDES Permit.

Electricity, Communications, and Heating Fuel

The common facilities and house lots will be served by underground electric, telephone, and cable connections. There is no natural gas availability in the project area to service this project. Building heating systems will utilize LP gas or oil for fuel.

Golf Course

The proposed golf course will be built to championship-quality specifications and managed in accordance with best management practices for turf management and water conservation. Fairways and greens will be irrigated utilizing surface water drawn from Lost Lake. Given the long term build out anticipated for this project and the small volume of wastewater discharge in

the foreseeable future, use of greywater for irrigation, or any other type of recycling system, is not proposed. Likewise, use of groundwater for irrigation is not being considered as there is sufficient surface water available to provide for golf course irrigation with minimal potential affect upon Lost Lake and downstream tributaries.

A maintenance facility will be located east of the Practice Range designed to accommodate the maintenance materials and equipment necessary for upkeep of the golf course and other Resort grounds. A Preliminary Water Quality Management Plan has been prepared and is included in this document that describes the proposed management and monitoring plans for maintaining the quality of water resources at Lost Lake Resort. This document outlines protocols (otherwise may be referred to as best management practices (BMPs) or standard operating procedures (SOPs)) for turf management, Integrated Pest Management, chemical and petroleum storage, handling and spill response, and surface water and groundwater monitoring applicable to both the construction period and ultimate operational period at Lost Lake Resort. All of the operating requirements set forth in the Management Plan are an integral part of the proposed action.

Landscaping and Lighting Plans

Plans for the project development include providing landscaping and lighting for aesthetic and public safety purposes. Conceptual design concepts for landscaping and lighting have been developed and are shown in the accompanying full size plans. The landscaping includes the planting of street trees, ornamental shrubbery, and ground cover vegetation. The tree and shrub plantings will consist of a combination of native and adaptive plant species.

Minimal street lighting is proposed for the development to retain a rural atmosphere. A street light pole will be selected that complements the wooded character of the resort and provides an illumination source that casts light downward to the road surface with minimal glare or stray light. Posted street signs will be provided for each of the internal roads.

No lighting is proposed for the golf course or driving range as these facilities will only operate during daylight hours. Lighting at the sales office, Amenity Village buildings and associated parking and circulation areas will be provided to appropriate levels for safety and security. Street lighting is proposed within the townhouse and cottage neighborhoods.

The project master plan provides a minimum 50'-wide natural buffer around the entire project parcel. There is a minimum 100'-wide buffer provided on the north and south sides of St. Joseph's Road. Additionally, significant areas of the site that contain regulated wetlands have been set aside for preservation where no disturbance will occur without a State or Federal permit, as applicable.

Covenants and Restrictions on Home Site Development

Lost Lake Resort, Inc. will require strict adherence to its design guidelines for construction of new single-family homes that are binding to all lot owners. The owner of each lot within the resort will be subject to a declaration of exceptions, reservations, covenants, restrictions and conditions for the Lost Lake Resort ("Declaration"), as well as a Builder's Packet outlining information required to be submitted to the Lost Lake Architectural Control Committee for internal review for each proposed lot development.

The developer will establish and incorporate the Lost Lake Property Owners' Association ("Association") as a New York non-profit association, to administer and enforce the easements,

covenants, conditions, restrictions, and limitations set forth in the Declaration. The Association will be authorized to bill and collect annual fees from lot owners for the purpose of managing and maintaining all roads, utilities, and common areas of the development. For the purpose of protecting the value and desirability of the development, the Declaration will run with the land and will be binding on all parties having any right, title or interest in the property or any part thereof.

Design Guidelines

Design Guidelines for Single Family Homes in Lost Lake Resort will be established by Lost Lake Resort, Inc. The Design Guidelines provide specific development guidance for owners of the residential lots within Lost Lake Resort relating to the construction of their homes.

Public Access

While the resort will be a gated community, visitors are welcome and encouraged to use the amenities in the resort. Facilities that are open to the public are identified in the narrative descriptions above for the Amenity Village and the Open Space and Recreation Component.

1.1.7 Overview of Planned Development District Regulation

Development Density

The proposed zoning for the subject property is a Planned Development District pursuant to the Town's PDD law. There is no defined maximum development density in a PDD but rather the regulation allows the density to be defined by the mix of residential units, commercial uses, recreational amenities and open space proposed. The permissible density is initially established with a calculation of various land constraints resulting in an Initial Residential Development Density (IRDD).

Increases in permissible density proposed by the Applicant based upon the unique combination of conservation measures and amenities that are proposed at Lost Lake Resort.

Density Bonuses

In the Applicant's opinion, all of the benefits described herein warrant density bonuses outlined in the Town's PDD law. The proposed master plan addresses the various required components of a PDD in accordance with the Town's law. Further, the Applicant's open space resort theme that encompasses second home residential development and recreation-related commercial uses is consistent and compatible with land use in the surrounding area of the community.

1.2 Potential Impacts and Proposed Mitigation Measures

1.2.1 Geology, Soils and Topography

Potential Impacts - Geology

The specific locations of shallow rock and amount of rock removal required for the proposed project have not been identified on the property. The rock outcrops within 200 feet of St. Joseph's Road will not be disturbed during the construction of the proposed Lost Lake development. These rock outcrops will be conserved due to their visible location near the public

roadway. In spite of design considerations, the evidence of outcrops in many areas of the site indicates that rock removal will be required on the property. Rock removal can often be completed using methods other than blasting. In areas where rock is weathered, hammering, ripping, or chipping with excavators will be used where possible. Blasting will only be used where other options are not feasible. All rock excavated on the site in connection with the proposed development will remain on the project site to be used as road base.

Blasting will be carried out in accordance with the Industrial Code Rule 39 of the New York State, Department of Labor, Industrial Board of Appeals and the applicable section of the New York State Labor Laws. New York State regulations require insurance and licensing for the contractor as well as provide guidelines for the possession, handling, storage, and transportation of all explosives.

The subject property is located in the area where Marcellus Shale is mapped in New York State. The use of the proposed Lost Lake development is not intended to be used for the drilling of natural gas associated with Marcellus Shale. The zoned and intended use for this project is for residential and/or recreational use not for the drilling of natural gas wells.

Potential Impacts - Topography

Impacts to steep slopes are directly related to the potential for soil erosion during construction. The majority of grading for the Lost Lake Development will occur in areas with slopes of less than 25 percent. Impacts to steep slopes of 25 percent or greater are primarily located south of St. Joseph's Road for the construction of the road network as well as grading for stormwater detention basins and homes. This area represents only two percent of the total area of grading. Approximately 14.99 acres of steep slopes will be impacted by the fully built project.

Potential Impacts - Soils

Grading and recontouring of soils is required for the construction of roads, residential dwellings, recreational facilities, the golf course construction, and the storm water detention basins. The total area of grading or site disturbance is estimated to be approximately 601 acres of the site. Therefore, approximately 1478.5 acres of the site will remain undisturbed.

The potential for soil erosion associated with grading work is temporary in nature, as all areas will ultimately be stabilized by impervious cover or landscaping. Any disturbed area that is not developed with impervious surface areas will be graded, seeded and landscaped, including the stormwater management basins. These acreages represent all roads, utility and stormwater infrastructure, amenity buildings and 2,557 single family houses for the fully developed site.

Cut and Fill Estimates

A preliminary estimate for earthwork required to construct Phase 1 roadways, stormwater management features and the main entrance structures is approximately 85,700 cubic yards (cy) of earth cut and the same amount of fill, therefore there is a net balance of earth grading (cut and fill). A preliminary estimate for the total earthwork required to construct the full buildout is approximately 677,500 cy of earth cut and the same amount of fill, therefore there is a net balance of material for the overall project. Crushed rock will be used for roadbed construction or for fill areas where the material is suitable.

There are no areas of steep slope disturbance (25% and greater slopes) for the Phase 1 road network. Given the more gentle topography on the north side of the site, it is excepted that little or no rock excavation will be necessary for Phase 1 construction. The other phases may involve rock excavation. Transition areas back to existing grade at the edges of the roadway section will be graded at 3H:1V or less in most locations. Proximity to properties and steep slopes may warrant slopes of 2H:1V (with slope protection) or 1H:1V in areas of rock cut. Slope protection will be in the form of rolled erosion control protection mats and hydroseeding with tackifier. Excess soil will be stockpiled and skirted with silt fence barrier to prevent sediment transport. Excess rock will be stockpiled for use onsite.

Sub-Soils for the Golf Course

On-site soils within the proposed golf course area are currently Wellsboro and Wurstboro soils (WIC) and Wurtsboro loam (Wu). These soils are primarily characterized by moderately well drained, gravelly fine and sandy loam. Typically, a quality golf course is constructed with a manufactured sand-mix for the sub-soils of the fairways. A peat/sand mixture will be used for green and tee areas. It is expected that the existing soil types will provide adequate base for the manufactured surface mix that will be screened and then brought on site.

Mitigation Measures

Potential erosion and sedimentation will be controlled during the construction period by measures specified and designed in the Preliminary Stormwater Pollution Prevention and Erosion and Sediment Control Report included in this document. The regulations applicable to the project-specific stormwater pollution prevention plan ("the SWPPP"). As part of the SWPPP, an erosion and sediment control plan for Phase 1 has been developed in accordance with the Erosion and Sediment Control Guidelines in the NYSDEC SPDES General Permit for Stormwater Discharges for Construction Activities (Permit No. GP-0-10-001), *Best Management Practices Manual for Erosion and Sediment Control (1991)* and *New York State Standards and Specifications for Erosion and Sediment Control (2005)*. The Phase 1 Preliminary Erosion and Sediment Control/Stormwater Management Plans accompany this document (the SWPPP), which must be approved by NYSDEC prior to commencement of construction. Implementation of the SWPPP will include monitoring and enforcement as required by NYS law and NYSDEC General Permit requirements.

Temporary erosion control measures will include but are not limited to stabilized construction entrances, temporary sediment traps, silt fences/or haybales, temporary seeding and mulching, sedimentation basins, and diversion berm/swales.

Permanent erosion and sediment control measures are also described in the preliminary SWPPP. In general, the permanent erosion and sediment control facilities to be constructed include but are not limited to: rock aprons, storm sewer piping and swales, dry wells, infiltration trenches, detention ponds, and stoned lined outlet protection, and revegetation on all disturbed area that are not proposed to be impervious surfaces. The SWPPP is a document that is often modified in response as site conditions vary. Erosion and sediment control measures are reviewed weekly for appropriateness and effectiveness. Additional measures, that may not be included in the SWPPP, can be called for in the field to address specific concerns.

The purpose of the Erosion and Sediment Control Plans included in the SWPPP is to minimize the erosion of exposed areas of soils and to prevent the migration of sediment into surface waters during construction. The SWPPP will be implemented in construction areas for the

duration of construction on this site to minimize or avoid impact to surface water resources that receive stormwater from the project site following construction.

Construction Sequence for Phase 1 and All Subsequent Phases

During construction of Phase 1 and each subsequent phase of construction of the proposed Lost Lake Resort a sequencing plan will be used to help with erosion/sediment control. The sequencing plans, which are listed on the Phase 1 Preliminary Erosion and Sediment Control/Stormwater Management Plans, follow the following listed guidelines. The construction sequence for Phase 1 and each subsequent phase is also detailed in this EIS.

- Site disturbance (clearing, grubbing and grading) will be limited to those areas necessary for construction in each stage.
- Each stage will be completed before the next stage is initiated.
- At the completion of each earth disturbance activity stabilization will immediately occur to the disturbed areas to protect from erosion.
- Responsibilities for ongoing inspection and maintenance of the erosion and sediment control measures for the duration of the construction are specified on the erosion control plans.

1.2.2 Wetlands

Potential Impacts

Impacts to wetland HA-40 (Wetland ABD), regulated by both NYSDEC and ACOE, will occur as a result of two road crossings. These road crossings will cause a total of approximately 0.44 acres (19,000 square feet) of disturbance to the Class II State-regulated and Federally-regulated wetland. The crossings are located at the narrowest sections of the wetland thereby minimizing disturbance. Each crossing is planned to be a bottomless culvert that will span the stream channel.

Permit Requirements for Regulated Activities within Wetlands

New York State Department of Environmental Conservation

The two road crossings of NYSDEC wetland HA-40 (Wetland ABD) will disturb 0.44 acres of State-regulated wetland and approximately two acres of adjacent area and will therefore require an Article 24 Freshwater Wetlands Permit.

Lost Lake and six streams on the project site are regulated by the NYSDEC. Lost Lake has been designated as a Class B waterbody, which indicates the lake's best usage is swimming and other contact recreation, but not a viable source for drinking water. Waters with classifications A, B, and C may also have a standard of (T), indicating that it may support a trout population, or (TS), indicating that it may support trout spawning (TS). Special requirements apply to sustain these waters that support these valuable and sensitive fisheries resources. The Bush Kill is designated a Class B(T) stream. The other five streams on the project site are currently classified as Class B, but based on stream surveys performed by NYSDEC and TMA staff in September 2009, two of these streams may be reclassified as trout spawning waters.

An Article 15 Protection of Waters Permit will be required for the aforementioned road crossings of NYSDEC wetland HA-40 (Wetland ABD) since it contains a Class B stream and also for an additional four crossings of regulated streams on the project site.

Federal Wetlands / U.S. Army Corps of Engineers (ACOE)

To construct the two road crossings, coverage under the Nationwide Permit will be required from the ACOE for disturbances related to the placement of fill within waters of the United States. The placement of concrete and/or culverts (unless open-bottom) associated with the crossings will be considered filling of federally regulated waters.

In addition, a 401 Water Quality Certification must also be obtained from the NYSDEC. Issuance of a certification means that NYSDEC anticipates that the proposed action will comply with state water quality standards and other aquatic resource protection requirements under the NYSDEC's authority. The 401 Certification can cover both the construction and operation of the proposed action.

Potential Indirect Impacts to Wetlands and Wetland Buffers

Sedimentation During Construction

In order to reduce stormwater induced impacts from the project, the Applicant has designed, and will construct, adequate erosion and sediment control practices to mitigate these potential impacts. Accordingly, an Erosion and Sediment Control Plan, that includes construction sequencing, has been included in the Stormwater Pollution Prevention Plan (SWPPP) prepared for the project.

As specified in the SWPPP, soil erosion and sedimentation control measures, such as silt fencing, will be installed following a pre-construction conference with appropriate agency staff, and prior to any construction activities. All soil erosion and sediment practices have been designed, and will be implemented, in accordance with NYSDEC specifications set forth in the *Standards and Specifications for Erosion and Sediment Control*. In addition, the Applicant will engage a Certified Professional in Stormwater Quality/Erosion and Sediment Control, or equally qualified professional, to oversee implementation of all elements of the SWPPP, including its site specific Erosion and Sediment Control Plan component.

Pesticides and Fertilizers

Construction of the proposed action will convert areas of forested land to maintained lawns, landscaped areas, and golf course. Lawns, landscaped areas, and especially golf courses are often fertilized and treated with commercial pesticides to establish vigorous vegetation growth and maintain vegetative health. Project documents have been developed to minimize or avoid any significant adverse effects related to improper use or over application of pesticides and fertilizers in this project.

Potential for Thermal Impacts

Thermal impacts on receiving waters, through the elimination of vegetation shade trees along stream banks and addition of impervious surfaces in upstream drainage areas, are an important concern in areas where there is a known natural population, or annual stocking, of cold water fish species (i.e., trout). Increases to average annual water temperature may constrain a cold

water fishery. The project design in accordance with NY State standards is intended minimize or avoid any significant adverse effects related to thermal impacts from this project.

*Potential Short-term Impacts to Wetland Function*s

The movement of earth on a large scale can result in the potential for impacts to wetland systems if certain measures are not considered. As noted previously, soil movement and erosion can result in siltation and sedimentation of wetland systems, altering hydrology, substrates for vegetation and smothering of existing plants.

Short-term impacts to wetlands that function as wildlife habitat could occur as construction in areas near wetlands may disturb wildlife and their movement patterns. Since over 99 percent of wetlands are proposed to be preserved, this impact is expected to be short-term as wildlife could move back into the area after construction is completed.

Wetlands that function as points of groundwater recharge are not expected to impacted at any point of the development process.

Short-term wetland and adjacent area impacts associated with construction of the two road crossings will be associated with direct removal of vegetation, grading, and placement of fill within the wetland and buffer areas. These impacts are anticipated to be minimal and will be fully mitigated as approximately 1.01 acres of wetlands will be created by the proposed action.

*Potential Long-term Impacts to Wetland Function*s

The protection of wetlands during construction is anticipated to protect wetland functionality in the long-term as well. Since direct impacts to wetlands and adjacent area are limited to two road crossings and proposed mitigation measures are proposed to prevent indirect impacts, long-term wetland functionality is not anticipated to be negatively affected as a result of the proposed action.

Long-term impacts associated with the two road crossings are expected to be minimal. Loss of less than 0.1 percent of wetland habitat and adjacent area on the project site will result from the permanent road crossings. Mitigation for the loss of wetland and adjacent area will compensate for this loss as approximately 1.01 acres of wetlands will be created by the proposed action.

The development of upland habitat that is critical to adult vernal pool breeding amphibians may negatively impact populations of these species in the long term. While development within these areas may impact the wildlife habitat provided by wetlands containing vernal pools, the impact is not anticipated to be significant since the species will still exist, albeit in smaller populations. Wildlife movement patterns into and out of wetlands could be altered, but will still occur as approximately half of the project site will be preserved as open space. This open space includes tracts of preserved woodland that will allow wildlife to move throughout the site.

Potential Impacts to Wetlands Associated with Stormwater Runoff

Potential indirect impacts that the proposed action may have on wetlands and receiving waters result from post development increases in pollutant loading in stormwater, post development flooding from increases in the volume of stormwater discharged, and bed and bank erosion in receiving watercourses resulting from increased stormwater discharge velocities.

Long-term changes to surface water quality can result once the development is complete and operational. Increased pollutants typically associated with residential land use activities, including stormwater runoff from paved areas, can be expected. Issues related to stormwater management and protection of sensitive site features during construction are addressed in Section 3.5, Water Resources.

Potential Impacts to Neversink River Unique Area

Significant impacts to wetlands within the Neversink River Unique Area (UA) are not anticipated as a result of the proposed action. Connectivity of surface waters and wetlands between the site and the UA is limited to discrete locations. Potential direct effects on the water quality in the streams will be minimized through a number of practical operating and monitoring measures that will be implemented as part of the project, both during construction and during the subsequent operation of the site facilities.

Potential indirect effects of changes to surface water (through sedimentation during construction, pesticide and fertilizer loading, and thermal impacts) will also be minimized or avoided through implementation of project designs and implementation of monitoring procedures. The project incorporates protective measures to minimize such effects to levels that are not expected to result in any significant change to water resources in the UA. Likewise, activities on the project site that will be in closest proximity to the UA lands will be physically separated from direct effect and are therefore not expected to cause any significant impact to the UA lands. No direct impact to wetlands or wetland buffers found within the UA will result from the proposed development.

Mitigation Measures

Creation and Enhancement of Wetlands

Wetlands will be created to mitigate for the loss of wetland on the project site. To mitigate for the loss of wetland (estimated to be 0.44 acres at this time), approximately 1.01 acres of wetland will be created to provide a 2:1 impact to mitigation ratio as is typically required for forested wetlands. The mitigation area will add an additional 1.01 acres of forested wetland to compensate for the loss of vegetation and impairment of wetland function associated with disturbance of forested wetland for the two road crossings.

The creation of stormwater basins, graded and planted in a manner that is consistent with the open marsh portions of the existing wetlands, also contributes to mitigating the potential impacts on the entire wetland corridor. The stormwater basins will be planted with herbaceous wetland vegetation, and provide wetland habitat as well as control of stormwater quality and quantity. While no direct credit is taken for these basins as wetland creation areas, they will in fact perform several wetland functions and result in a net increase of wetland function and benefits on the site following construction.

Erosion and Sedimentation Control

A site specific erosion and sedimentation control plan was developed for Phase 1 construction to assist in preventing degradation of wetlands as a result of the proposed action. The erosion and sediment control plans for each phase will follow the format and content of the Phase 1 Preliminary Erosion and Sediment Control/Stormwater Management Plans that accompany this DEIS. As described in Chapter 3.5 Water Resources and depicted in the preliminary SWPPP,

the erosion and sediment control plan includes elements that will prevent impacts to both on-site and off-site wetlands.

Construction Phasing and Sequencing

The project is designed to be developed in seven discrete construction phases. Each phase will have a site-specific erosion and sediment control plan that specifies the construction sequencing, with each phase including specific erosion controls and site stabilization measures.

Stormwater Quantity and Quality

To mitigate potential impacts to wetland resources associated with stormwater runoff from the proposed action, the project specific SWPPP (Appendix G) was developed in accordance with all applicable NYSDEC regulations and guidelines, including those in the NYSDEC 2008 Stormwater Management Design Manual (the Manual). Specific attention has been paid to maintaining existing drainage divides, attenuating post-development increases in peak stormwater discharge rates and volumes, and using practices that are considered adequate in meeting NYSDEC stormwater quality treatment criteria. The proposed treatment methods include only natural processes, no chemical treatment of the runoff is proposed or permitted.

Pesticides and Fertilizers

To mitigate potential impacts to wetland resources associated with pesticides and fertilizers in stormwater runoff, applications of these materials will meet State regulations in 6 NYCRR Part 325. A water quality management plan has been developed for the golf course and other managed areas to ensure pesticides and fertilizers stay within their intended area of use. A sampling plan has been created to monitor surface water on the site as well. Current data indicates that, if applied correctly, contemporary pesticides will not migrate to any great extent, and will break down shortly after application. Similarly, the future use of herbicides and insecticides at the site in the future is not expected to represent an adverse impact to surface water quality due to the mitigation measures outlined. Based upon the anticipated low levels of pesticides and fertilizers and the proposed stormwater treatment, no significant adverse impacts on wetlands, water bodies, or watercourses is expected.

Mitigating Thermal Impacts

Stormwater management techniques which may be used to limit the temperature rise of runoff water include decreasing retention time in the stormwater management features and limiting the exposure of stormwater to the sun to the runoff. Following construction stormwater discharged from the project site will be conveyed through sections of swales and underground piping prior to discharge to any receiving wetlands through a level spreader. This will allow time for dissipation of collected heat in the water. Further, the stormwater management basins will be located to minimize the potential for solar heating of detained stormwater, to the extent possible and are designed to limit detention times so that standing water has less of a chance to absorb surface heat.

1.2.3 Vegetation

Potential Impacts

Impacts on Endangered, Threatened or Special Concern Plant Species

No federal or state-listed threatened or endangered species of vegetation were observed on the project site during ecological surveys in 2008, therefore no impacts to rare or protected plant species are anticipated.

Impacts to Vegetative Communities

To construct the proposed development, approximately 601 acres will be disturbed either permanently or temporarily during construction. Loss of vegetation within approximately 194 acres for proposed buildings, roads, driveways or parking areas is an unavoidable permanent impact. The loss of this vegetation is not anticipated to result in significant adverse impacts. Loss of vegetation that is ultimately revegetated by lawn, landscaped areas, golf course areas, and stormwater management basins will be temporary impacts to most of the 601 acres developed. The reduction in vegetative cover from the site will reduce the available wildlife habitat on the site, initially by approximately 601 acres that will be largely replaced by urban-type revegetated areas.

Methods of Tree Removal and Disposal

Tree clearing will occur following the establishment of a delineated "limits of disturbance" line in the field, created by construction fencing and signage. Clearing limit lines, as shown on approved site plans, will be marked on the site prior to commencing the construction activity. The establishment of disturbance limit lines is an effective way to contain impacts to the approved areas and keep other portions of a project site undisturbed. Tree clearing will begin along the access roads and expand to the edge of the clearing line. Trees will be cut by logging machines or by handheld power equipment, as appropriate. Depending on the tree type, size and condition, the logged trees will either be loaded onto trucks for off-site processing as timber or shredded on-site for use to provide areas of temporary stabilization for disturbed soils during construction.

Impact of Conversion of Woodland to Residential Development

Approximately 601 acres of the project site will be disturbed as a result of the proposed development and much of the vegetation within this area will be eliminated. Approximately 1,478 acres of existing vegetation will be retained on the property, as well as the addition of about 407 acres of newly vegetated areas for lawns, landscaping, golf course areas, and plantings in stormwater management basins. The proposed development will result in the permanent elimination of vegetation from approximately 194 acres, which will be covered by impervious surfaces.

Few species of vegetation that are considered as invasive species were identified on the site. Most species that are typically considered invasive were found along St. Joseph’s Road. Construction of the Lost Lake Resort will create roadways throughout the project site that will eliminate existing native vegetation and could potentially create areas that can colonize with undesirable species.

The intent of the current plan is to limit the area of disturbance and therefore future maintenance for invasives to the extent practicable. The landscape plans will specify appropriate cover vegetation to be seeded on roadsides, stormwater basins and other vegetated areas. The *Design Guidelines* require the homeowners to stabilize their developed lots and maintain them not only for aesthetics but to minimize situations that may result in establishment of volunteer species. In addition, the Guidelines stipulate strict provisions for preserving existing trees and other vegetation on individual house lots through an internal design review process intended to preserve the forest character in Lost Lake Resort and reduce the potential impact of the conversion of woodland to residential development.

Mitigation Measures

The project is committed to reducing impacts attributed to construction and development within the upland deciduous forested plant community by protecting wetlands and wetland buffer areas on the site. The proposed development plan has been designed to minimize wetland and buffer impacts and by doing so will preserve substantial wooded buffer areas around the more sensitive vegetation habitats. Undisturbed land will remain within the wooded wetland buffer areas, wooded wetlands and wooded stream corridors. In consideration of the following mitigation actions that will be taken to offset the effects of the development, significant adverse impacts to natural resources are not anticipated to result from the completed project. As impacts to vegetation and wildlife on the project site are not considered to rise to the significant level and as none of the species identified on the project site are protected under a law that requires mitigation for their disturbance or loss, no further mitigation is being proposed.

Clearing limit lines will be marked on the site prior to commencing the construction activity. The establishment of disturbance limit lines is an effective way to contain impacts to the approved areas and keep other portions of a project site undisturbed.

Preservation of Existing Vegetation

As per the Town of Forestburgh's Planned Development District (PDD) zoning, at least 50 percent of the total approximate 2,080 acres of the project site must remain as open space. The proposed master plan shows approximately 1,045 acres (50 percent) of the project site to remain as vegetated open space in the form of existing ecological communities, lawns and landscaped areas, golf course, and stormwater management practices.

Proposed Measures to Protect Trees to Remain

No trees in healthy condition beyond the field-identified limits of disturbance will be disturbed. These limits will be delineated by snow fencing or similar methods. Trees near working areas will wrapped at the base by snow fencing to avoid accidental damage to trunks and roots.

There should be no disturbance of any kind within the projected root zone of these trees or within the drip line of the tree foliage. Snow fencing or other highly visible means of marking should be placed around the maximum area of the root system to prevent the destruction of roots by exposure or through the compaction of soils. Construction crews will be notified to exclude all equipment from these protected areas. If necessary, trees will be protected by tree wells in fill areas, and retaining walls in cut areas.

Revegetation and Landscaping

Native and adaptive plant species will be utilized for landscaping purposes and for revegetating the proposed water quality and stormwater detention basins where practical. This preference is based on native plant adaptability to local climatic conditions, including temperature, precipitation and length of the growing season. Many native species selected for landscape use will also be beneficial to indigenous wildlife, especially birds, by providing wildlife benefits such as nesting, cover and food. Typical landscape plantings that will be chosen for their hardiness to the local climate and to the proposed use on the site.

A conceptual landscaping plan has been prepared for the project's community-owned areas (i.e. amenity buildings and golf course) and presents the major evergreen and deciduous and shrub plantings to be installed throughout those portions of the project. The list of vegetation from the *Design Guidelines* was used as a basis for the selection of landscape materials in these common areas.

1.2.4 Wildlife Ecology

Potential Impacts

Impacts to Wildlife Including Transient Migration of Wildlife Species

The project site is currently a part of a large tract of unfragmented forest with minimal development. The site's location within this contiguous tract allows transient wildlife to freely move about the parcel. The addition of roads and development to the project site will impair wildlife movement, however this impact is not anticipated to be significant. The retention of approximately 1,215 acres[4] of upland forest, along with the revegetation of disturbed areas in the form of landscaping, stormwater management practices, and golf course would still allow opportunities for wildlife to move into and out of the project site.

Wildlife movement from this site is expected to be multi-directional since vast tracts of unfragmented forest exist on all sides of the property. It is expected, however, that a majority of the wildlife moving from the site will be to the south and east, towards to Neversink River Unique Area.

During development of the site, construction activities could potentially result in a temporary increase in road mortality rates for some of the species vacating the site. After the proposed development and the alteration of the habitat on the project site, wildlife movements into and out of the project site are likely to be reduced, as the site will offer fewer opportunities for food and cover.

Many bird species are migratory, and therefore have always left the subject property annually. Upon return, most migratory species will adaptively seek other nearby or regionally available environments in response to alterations to this property. Land with similar habitats surrounding the property, specifically within the Neversink River Unique Area located to the south and east, could provide alternative habitat for most of these species. However, these lands are expected to already have established resident wildlife populations and it is not determined whether such areas will be able to support the arrival of new individuals. For this reason, the loss of habitat

[4] This number refers to the total area of undisturbed upland woods after construction, to be distinguished from the term "open space" discussed elsewhere in this document.

associated with the proposed action may result in reduced regional wildlife populations. This loss, however, is expected to be minimal due to the mitigation measures outlined below and the large tracts of contiguous undisturbed and protected land surrounding the project site. The possibility also exists that these adjacent parcels have excess carrying capacity and be able to accommodate additional individuals.

Development of the project site will not likely create any significant adverse impacts to migrating raptors as the high point of the property will still function as part of a ridgeline that may be part of a preferred migratory path.

Wildlife species associated with wetland habitats are not expected to be impacted by the development and will not migrate to upland areas as these areas offer significantly drier habitat than the wetland areas.

After the project development is completed, the composition of the wildlife population on the project site will adjust to the final site conditions. Species better able to adapt to generally open and landscaped environments (such as raccoons, opossum, woodchucks, mice and certain songbirds) will have a greater ability to populate the site in comparison to species that are less tolerant of human activity.

While not as valuable as the existing forested habitat, the proposed landscaping will be planted with species of trees and shrubs that provide wildlife benefits such as forage and nesting sites for birds and small mammals. Denning sites for small mammals will also persist after completion of the project. The preserved habitat areas of the wetlands, watercourses and open field along with the re-vegetated open space areas will continue to be used by deer and other human subsidized species.

Vernal Pool Breeding Amphibians

Impacts to vernal pool breeding amphibians will result from construction of the proposed action. While portions of critical terrestrial habitat associated with all of the productive vernal pools will be maintained, the area being preserved surrounding some of the vernal pools may not be sufficient to maintain amphibian populations at their current levels. The reduction in vernal pool amphibians resulting from a loss of habitat is not expected to be significant at a regional scale since none of the vernal pool dependent species observed on the project site are species of special concern or conservation need, and breeding populations will continue to exist on the project site, albeit likely at lower concentrations. Vernal pools do not have any greater regulatory protection than any other wetland type.

Forest Interior Bird Species

The proposed plan includes preservation of an expanse of the central wetland and buffers surrounding it in contiguous, undisturbed forest cover (comprising approximately 233 acres not counting additional forest left undisturbed on adjoining house lots) that would continue to provide breeding habitat for many forest interior bird species.

Impacts to Endangered, Threatened, or Special Concern Species

Habitat and evidence of species presence was investigated for endangered, threatened, or special concern species on the project site over four seasons of the year. No endangered

species were found. Specific protected species that could utilize this site were investigated, as described below. Special Concern species are not afforded specific protection under State Law. There is habitat or potential habitat for the following investigated species, and some individuals of some of these species were observed on or flying over the site (as described in the Wildlife section), however the project as proposed will retain portions if not all of the utilized habitat areas: wood turtle; timber rattlesnake; hognose snake; bald eagle; pied-billed grebe; northern goshawk; red-shouldered hawk; red-headed woodpecker; sharp-shinned hawk; Cooper's hawk; and osprey. The project site does not contain the habitat needed to support bog turtles. Bald eagle nests are known to exist off the site but nearby, however, it is determined that there will be no need for protective buffer lands for the bald eagle on the subject site. Significant adverse impacts to these species are not anticipated by development of the proposed action since the development will preserve sufficient upland woods and wetland habitats to support their incidental use of the property.

Impacts to On-site Aquatic Species and Species in the Bush Kill and Neversink River

Sedimentation from erosion during construction and development can create potential indirect impacts to aquatic species downstream in the Bush Kill and Neversink River. A soil erosion and sediment control plan will be developed for each phase of construction. All soil erosion and sedimentation controls will be installed prior to other construction activities according to the NYSDEC manual for erosion and sediment plans[5].

Mitigation Measures

The proposed project has been designed to minimize or avoid impacts to natural features as discussed below and to respect the environment to the maximum extent practicable.

Preservation/Protection of Existing Habitat

Approximately 1,215 acres[6] of upland forested habitats will remain after construction of the Lost Lake Resort. Blocks of undeveloped forest strategically placed throughout the project site will serve as habitat for wildlife after construction of the resort.

Construction of internal roadwork throughout portions of the site will necessitate crossing streams and narrow portions of wetlands. Disturbance to wetlands for construction of these roads will be limited, thereby preserving over 99 percent of the wetlands on the project site. To mitigate for this loss of wetlands, approximately 1.01 acres of wetlands will be created on the site.

Restoration or Enhancement of Habitat

The creation of stormwater basins, graded and planted in a manner that is consistent with the open marsh portions of the existing wetlands, also contributes to mitigating the potential impacts on the entire wetland corridor. The addition of a 200-acre golf course will introduce open habitat that is not found on the project site and therefore will attract wildlife species that do not currently inhabit the existing site. Nesting boxes will be placed in appropriate perimeter areas of the golf course to provide a safe nesting area for these species. Larger nesting boxes for the open

[5] NYSDEC. 2005. New York Standards and Specifications for Erosion and Sediment Control - April 2005. http://www.dec.state.ny.us/website/dow/toolbox/escstandards/

[6] This number refers to the total area of undisturbed upland woods after construction, which is but a part of the total "open space" in the project.

habitat-dwelling American kestrel, a species of falcon showing a steady population decline, will be placed as well.

In addition to the placement of nesting boxes within the golf course, nest boxes for larger species will be placed within tracts of preserved forest and within wetlands. Wood ducks are known to successfully utilize nesting boxes in wooded wetland habitats and some species of owls take advantage of nesting boxes within upland forests. The placement of these nesting boxes will be determined in the field by a properly educated biologist after construction within the surrounding area is completed.

Mitigation of Potential Nuisance Wildlife

In the long term, the composition of the wildlife populations will be altered in areas immediately adjacent to the development, as species able to adapt to a more suburbanized environment (such as raccoons, opossum, woodchucks, mice, songbirds, etc.) will have a greater ecological advantage over species that are less tolerant of human activity; this effect is unavoidable. Edge habitats created by encroachment of the development footprint on forested areas could favor such species, but are not expected to substantially increase local populations of “pest” wildlife as these species (raccoons, skunks, opossum, and geese) will be managed, if necessary, by a licensed pest control specialist upon the addition of the proposed residential development.

Landscaping Utilizing Native Vegetation

A landscaping plan will be developed for the proposed action and will utilize native or adaptive vegetation in areas where practical. Trees that are planted will mature in the long-term and will provide some roosting and nesting opportunities for birds that are adaptable to suburban conditions. Coniferous trees and shrubs such as pines, spruces, firs, arborvitae, and junipers provide spring and summer nest sites as well as year-round shelter. Unmown grasses, meadows and stormwater berm plantings provide cover for ground-nesting birds.

Summer-fruiting plants provide food during nesting season. Fall-fruiting plants are important for birds in building up or maintaining fat reserves during migration. Winter-persistent plants provide season-long fruit sources for winter resident species.

Proposed Measures to Protect Trees to Remain

The limits of disturbance will be established in the field. No trees beyond these limits will be disturbed. These limits will be delineated by fencing or similar methods prior to commencing clearing or grading activities. Individual healthy trees identified to be preserved near working areas may be wrapped at the base by snow fencing to avoid accidental damage to the trunk and additional protections implemented to avoid excessive root damage.

1.2.5 Water Resources

Potential Impacts

Wastewater Treatment

The projected average daily flow (ADF) of wastewater for the proposed Lost Lake development is 870,335 gallons per day (gpd) or 604 gallons per minute (gpm). The peak daily flow (PDF) at full build out is projected to be 2,611,005 gpd or 1,813 gpm, using a peaking factor of 3.0.

The proposed sewage treatment system will use a low pressure collection system to direct the wastewater to the treatment facility. Each residence will have a grinder pump. Additionally, three pump stations will be required to move the wastewater to the treatment facility in areas of lower elevation to higher elevation. The locations of the pump stations are shown on the Plan sheets. The entire system will be designed to meet the requirements of the NYSDEC Design Standards Manual.

The proposed Sewage Treatment Plant is to be located approximately 3,000 feet south of St. Joseph's Road and approximately 50 feet from the eastern most property boundary. The effluent from this treatment facility will discharge into the Bush Kill, which is located south of the proposed treatment plant. The system is designed to produce minimal odor and noise impacts, if any at all.

The sewage will be treated by an activated sludge treatment facility. The facility will be a package unit that can be expanded upon as the phases of the Lost Lake development progress. Phase 1 is anticipated to produce a wastewater flow of 128,545 gpd. A NYSDEC State Pollutant Discharge Elimination System (SPDES) Permit will be obtained in connection prior to construction of this facility. Preliminary discharge limits have been obtained from the NYSDEC. The Applicant will request the SPDES permit provide effluent limits for three different flow rates (100,000 gpd, 250,000 gpd, and 550,000 gpd) to account for the increasing amounts of wastewater that will be produced as the construction of the development progresses. Final SPDES limits for the three flow rates will not be determined by the NYSDEC after approval of the final DEIS.

A NY State transportation corporation will have ownership and be responsible for the operation and maintenance of the collection system and the treatment plant proposed for the development. This entity will be responsible to comply with all applicable water quality standards and the effluent limits set forth by the NYSDEC in the SPDES Permit.

Post-Development Stormwater Conditions

Potential impacts to the on- and off-site surface water resources that might be expected to result from the proposed action include sedimentation during construction, post development increases in pollutant loading in stormwater, post development flooding from increased peak rates of stormwater discharge, and bed and bank erosion in receiving watercourses resulting from increased stormwater discharge velocities. The NYSDEC regulations require that all construction activities that disturb greater than five acres of land must prepare a full stormwater pollution prevention plan, including water discharge quality and quantity control components. Accordingly, a conceptual SWPPP has been prepared. A NYS State Pollutant Discharge Elimination System (SPDES) General Permit for Stormwater Discharges for Construction Activities (NYSDEC General Permit No. GP-0-10-001) must and will be obtained.

Sedimentation During Construction

Without appropriate mitigation incorporated into the proposed action, disturbances on the project site will have the potential to increase the volume and velocity of stormwater through land clearing and conversion of existing land forms into impervious surfaces and landscaped areas. If not controlled, these activities may lead to accelerated erosion and sedimentation during and after construction. Sedimentation of the receiving water bodies will likely result in decreased light penetration and nutrient enrichment, increased turbidity, increased transport of

pollutants that are adsorbed to the sediment particles, shielding of pathogens from disinfection, and clogging of gills and filters in aquatic organisms. In order to reduce stormwater-induced impacts from the project, it is essential that the applicant design and construct adequate erosion and sediment control practices to mitigate these potential impacts.

Post-Construction Increases in Pollutant Loading in Stormwater

Conversion of existing vegetated areas into impervious or landscaped areas as a result of the proposed project may, without appropriate mitigation, increase levels of certain pollutants in stormwater. The discharge of these post-construction increases in pollutants may have a adverse impact on water quality in receiving waters and groundwater. Accordingly, the project engineer has prepared the preliminary SWPPP which includes measures to be implemented to treat post-construction increases in pollutants in stormwater discharged from the development. The components of the plan are described in "Mitigation Measures" below.

Groundwater Resources

Project Groundwater Demand

The water demand proposed for the Lost Lake Resort development has been calculated by the project engineer, Alfred Benesch & Company. The average daily demand has been calculated as 897,055 gpd for all seven (7) phases, or using a factor of 2.0 the maximum daily demand is 1,794,110 gpd. The average daily demand for Phase 1 has been calculated to be 132,545 gpd and the maximum daily demand (or twice the average daily demand) was calculated as 265,090 gpd.

The estimated yield of the four tested wells, Well-O, P, DD, and HH, is 468 gpm. The proposed Lost Lake project demand for Phase 1 is calculated as needing an average daily demand of 132,545 gpd or 92 gpm of water, while the maximum daily demand is approximately 265,090 gpd or 184 gpm of water. Since fire flow volume will be provided in the water storage tanks on the site, it is not considered part of project demand. The four (4) wells will be able to provide sufficient water to meet the needs for Phase 1 of the project. At full build out the seven phases will require an average daily demand of approximately 897,055 gpd or 623 gpm, while the maximum daily demand will require approximately 1,794,110 gpd or 1,246 gpm. The current wells on the property will not meet the demands of the full build-out of the Lost Lake development. To meet these demands more wells are being explored and drilled and will be tested with a 72-hour pump test.

The applicant has committed to completing well exploration and well testing at the site that will demonstrate an adequate water supply for the full-build project scenario. The Final EIS for Lost Lake Resort will include this information.

The estimated water demand above is calculated for potable drinking water needs for the proposed homes, club house, sales office, pool, restaurant, cabins, condominiums, tennis courts, hotel, beach and boat dock, spa, conference center, and golf course but does not include the needs for irrigation for the proposed Lost Lake development. Groundwater sources are most suitable for potable drinking water. However, surface water can be used for purposes such as irrigation for the proposed golf course.

The golf course at Lost Lake Resort is projected to require approximately 13,121,000 gallons of water for irrigation, which is proposed to be taken from Lost Lake. A water balance analysis

shows the projected change in the water level of Lost Lake to be -3.7 inches and -3.0 inches in the months of July and August respectively, in drought conditions, and -2.1 inches and -1.4 inches during those months for a normal precipitation year. This minor fluctuation in lake level is not expected to show any discernible effect to the existing flora and fauna around the Lake. Two other potential irrigation sources, however, include the use of wastewater treatment plan effluent and groundwater, the latter being a much less desirable use for groundwater. Treated effluent from the STP in the full build scenario of Phase 1 would be sufficient to augment the irrigation of the golf course. However, given the long term build out anticipated for this type of project and the much smaller volume of STP discharge that would occur in the foreseeable future, use of treated effluent for irrigation is not being considered at this time. Likewise, groundwater will only be used if the first two sources are insufficient and this use is also not being considered at this time. Sufficient surface water is available to provide for golf course irrigation with minimal potential affect upon Lost Lake, its associated wetland fringe and downstream tributaries.

Recharge Analysis

A recharge analysis was completed to estimate the amount of water available for recharge from the Lost Lake Resort property, only. This analysis provides a conservative estimate of available groundwater within the site boundaries. The actual area contributing groundwater to the on-site wells will be larger, due to bedrock fractures extending beyond the property boundaries.

Using a fairly conservative recharge rate of 25 percent (the percentage of precipitation available to recharge groundwater) results in about 1,917,256 gpd available from the site alone or 1,331 gpm. This recharge rate exceeds the full build-out estimated project maximum daily demand of 1,794,110 gpd or 1,246 gpm leaving the post-construction recharge amount to be 123,146 gpd or 86 gpm. The available groundwater resources appears to be adequate for existing onsite water demand, as shown by this recharge analysis.

Under drought conditions, sufficient groundwater will be available for the project, as well as for existing development. The Town of Forestburgh and Sullivan County do not have specific aquifer testing requirements that relate to drought conditions. The Susquehanna River Basin Commission does require an analysis of recharge accounting for 1-in-10 year annual drought conditions or "*60 percent of the average annual recharge rate (which approximates a 1-in-10 year annual drought*)"[7]. A 40 percent reduction in annual recharge will result in 1,661,929 gallons per day available in the contributing drainage area to the project site. This amount is equivalent to 1,154 gallons per minute (GPM). Therefore, the drought condition watershed area recharge rate exceeds the average project water demand of 623 gpm.

Pump Test

Four (4) and tested with a yield of approximately 468 gpm, which proves 268 gpm with the best well out of service. This New York State Department of Health (NYSDOH) typically requires that projects demonstrate the maximum daily demand with the "best well out of service". This cumulative yield was determined from 72-hour pump tests started on November 9, 2009 and December 19, 2009 and the yield of these wells is suitable to provide water through Phase 1 of the proposed Lost Lake Resort property. Further investigation and drilling of wells is underway to provide water supply for the full build out of the project.

[7] Aquifer Testing Guidance, Susquehanna River Basin Commission, Policy No. 2007-1, December, 2007

Geothermal Systems

A geothermal system or geothermal heat pump is defined as a central heating and/or cooling system that pumps heat to or from the ground, depending on the need and the season. This system uses a heat pump to transfer the heat from either the ground into the structure to be heated or to take the heat from the structure and pump it into the ground. The proposed geothermal system for the Lost Lake Resort property is associated with heating the pool. This system will use a closed loop geothermal system so that no pollutants are introduced into the aquifer.

Mitigation Measures

Turf, including home lawns, roadsides, and golf courses, is often the most intensively managed land use in the urban landscape. Substantial inputs of fertilizers and water to maintain turf systems have led to a perception that turf systems are a major contributor to non-point source water pollution. Lost Lake Resort has formulated a Preliminary Water Quality Management Plan. This plan describes a monitoring plan comparing pre to post development to assist in the management of the Golf Course, Lost Lake Recreational Areas, Commercial Zone and the Residential Areas to ensure that no downstream adverse impacts are caused by the development.

Tree removal will be the minimum feasible to construct the required infrastructure and clear the lots for buildings, driveways, roadways and stormwater facilities. Forest buffers of 100 feet will be placed around all regulated wetlands and streams on the site creating an extensive riparian buffer that will remain in perpetuity. This will allow the ecological systems that currently exist to continue to function as they currently do providing woody debris and cover for macro invertebrates, fish and other residing organisms and maintain water temperatures. Natural landscaping mimicking the existing vegetation community types on the site and the local area will be incorporated into replanting plans for the site. On individual house lots, treatment of the area disturbed by construction but outside of the immediate area of typical homeowner activities (called the "Transition Zone" in the Lost Lake Resort Design Guidelines) will be restored to a naturalized state, thereby limiting the creation of lawn. The Design Guidelines stipulate goals for limiting the area of disturbance on house lots, acceptable treatments for the immediate landscape around the house and the transition zone, and preservation of the undisturbed forested areas. Therefore, by minimizing managed lawn areas the likelihood of pollutants entering the Bush Kill will be reduced. Providing a natural forest setting surrounding the homes and roadways will drastically decrease the pollutant loading on the Bush Kill in the same manner as a natural forest: evapotranspiration, interception of rainfall, sequestering of nutrients, etc.

Turfgrass surfaces, such as a golf course, provides enhanced groundwater recharge, decreased runoff, and enhanced biodegradation of synthetic organic compounds. This conclusion is qualified by the assumption that chemical use is performed by well trained and educated golf course superintendents who handle and use the products in accordance with manufacturer instructions.

Based on the evaluation of the proposed development with special focus on the golf course and other managed landscaped areas, the Applicant is of the opinion that there is no unreasonable risk to the surface and ground water quality of the area. Much of the site soils are underlain by a fragipan, which is a hydraulically restrictive soil horizon. It is unlikely that fertilizers and pesticides, applied at minimal rates, will leach into the groundwater. The permanent turfgrass

surface of a golf course is recognized as almost eliminating runoff except during the most intense rainfall events, and provides substantial water quality improvement benefits through the attenuation and biological degradation of many inorganic and organic compounds.

Preliminary Stormwater Pollution Prevention Plan

To mitigate the potential adverse impacts on water resources identified above, the applicant has developed a preliminary SWPPP that is incorporated into the proposed action. The preliminary SWPPP has been prepared to comply with the NYSDEC State Pollution Discharge Elimination System General Permit for Stormwater Discharges GP-0-10-001. Temporary and permanent erosion control facilities are proposed.

The project stormwater management practices will control post construction stormwater discharge to rates lower than pre-development rates during each of the storm events analyzed, and will mitigate the potential for downstream flooding.

Stormwater Runoff Quality

The primary stormwater management practices proposed for Lost Lake Resort were selected from the NYSDEC Design Manual and will meet all State WQv and CPv requirements. Open vegetated channels with check dams (dryswales) and detention ponds are the recommended practices to reduce or remove pollutants in the first flush from impervious surfaces.

The practices designed by the project engineer, including on-lot stormwater management controls, sediment forebays, bio-retention areas, and detention ponds, were selected from the current NYSDEC Design Manual to meet the WQv requirement. The stormwater collected on developed portions of the property will be conveyed to the permanent stormwater detention ponds and treated using these practices to reduce off-site discharge of post development increases in pollutants.

As further mitigation, the applicant will engage a Certified Professional Erosion and Sediment Control Specialist (CPESC) to oversee implementation of the erosion control and stormwater management elements of the SWPPP. An individual with CPESC credentials will also be responsible for inspecting and ensuring the proper maintenance of all stormwater management practices after the project site has been stabilized.

Low Impact Design Mitigation Measures

Due to the character of the development associated with the proposed Lost Lake Resort, it is anticipated that the use of structural practices will be limited to the greatest extent practicable. This goal will be accomplished by implementing several of the design practices outlined in the NYSDEC publication entitled Better Site Design (April 2008). Based on a review of this document, it is believed that the following low impact design (LID) practices can be applied during the development of the Lost Lake Resort.

- Natural Area Conservation - This credit may be granted when undisturbed natural areas are permanently preserved on a site, thereby maintaining their natural hydrologic characteristics.

- Stream and Wetland Buffers - This credit may be granted when stormwater runoff is effectively treated by a stream or wetland buffer that is located substantially within the boundaries of the site.
- Vegetated Open Channels - This credit may be granted when site drainage is achieved using open swales instead of closed conveyance systems. Vegetated swales allow for water quality treatment while extending the time of concentration for the site, lowering peak flows. Only channels with slopes less than 4% may function as a water quality treatment practice, although the project engineer has taken no treatment credit for swales in this project in the engineering design. .
- Overland Flow Filtration to Groundwater Recharge Zones - This credit may be granted when "overland flow filtration zones" are incorporated into a design to receive runoff from rooftops or other small impervious areas. Drywells, or alternatively rain gardens where soils are not conducive to infiltration, located on individual lots will serve as water quality treatments resulting in groundwater recharge.

1.2.6 Zoning, Land Use, and Public Policy

Potential Impacts - Zoning

The site meets the minimum area requirement for consideration as a PDD, which will create a new zoning district on this property. A PDD requires a mix of uses, such as what is planned in the resort. There are no specified bulk requirements or yard setback requirements for a PDD. The proposed action, however, will exceed the bulk and area regulations of the RR-1 zone relative to the site perimeter. A 50'-wide natural woods buffer is proposed around the entire property and a 100'-wide natural woods buffer is proposed on both sides of St. Joseph's Road. No waivers or variances from the PDD regulations are requested for the project as proposed.

Density Bonuses

The Town's PDD regulation identifies criteria for the calculation of increases in the permissible density beyond the IRDD. Each of the applicable criteria is described in this document, outlining the benefits of the Lost Lake Resort proposal and identifying how the amenities and benefits of the project are consistent with the goals of the Town's PDD law.

In the Applicant's opinion, all of the benefits warrant density bonuses outlined in the Town's PDD law. The proposed master plan addresses the various required components of a PDD in accordance with the Town's law. Further, the Applicant's open space resort theme that encompasses second home residential development and recreation-related commercial uses is consistent and compatible with land use in the surrounding area of the community.

Potential Impacts - Land Use

The proposed project will result in a change in use of the project site from vacant, wooded land to a recreational / residential resort community with substantial remaining open space. The Lost Lake development proposes the construction of the resort-residence community within a network of green spaces. While the overall full-build plan will result in substantially more dense development than the surrounding area land use, the proposed plan encompasses the requisite 50 percent of the property in dedicated open space. This plan will include permanent wooded buffers; wooded corridors between lots; the entirely of a wooded wetland and its 100' adjacent

area in the center of the property; Lost Lake and its environs within at least 100 feet of the water and associated wetlands; and numerous additional wetland areas.

Given the sparse pattern of development in the immediate site vicinity, as discussed in Section 3.6.1 Existing Land Use/Surrounding Land Use Patterns, construction of the project will increase the built density in the portion of the Town of Forestburgh in which the site is located, but is not expected to impact the land uses surrounding the project site.

Potential Impacts - Public Policy

The Proposed Action generally conforms with relevant policies contained in the Town's Comprehensive Plan. It will provide new residential development consistent with underlying zoning that will enhance the image of the Town of Forestburgh. No significant adverse impacts to public policy are anticipated. In addition, the policies discussed in the Sullivan 2020 plan ("Sullivan 2020: Defining an Image and Managing Change") are generally supportive of the proposed Lost Lake Resort project.

Mitigation Measures

The Lost Lake Resort project has been designed to become an integral part of the local development and preservation pattern to provide a mix of recreational and residential opportunities in a natural, wooded environment without significant adverse effects on the surrounding area. As no significant impacts to land use, zoning, or public policies have been identified that will result from the development as proposed, no mitigation measures are proposed.

1.2.7 Historic and Archaeological Resources

Potential Impacts

There are no documented prehistoric sites on or within a mile of the project site. Additionally, the identified off-site historic sites will not be affected by the proposed project. Based on the limited potential for the property to contain any cultural remains, the Phase 1A study recommends that a Phase 1B Archaeological Field Reconnaissance Survey be completed for areas that will be impacted by the development. The project archaeologist has formulated a work plan for the Phase 1B survey based on the current State guidance and the latest site master plan that includes sizable areas to remain permanently undisturbed (thus outside of the area of potential effect). Due to the limited sensitivity of this site, the Phase IB investigation is planned to be initiated in Spring 2010.

Should significant cultural remains be discovered in the area of potential impact on this property during the Phase IB investigation, further cultural site evaluation and removal of artifacts to an approved museum or avoidance of that portion of the site in accordance with an approved cultural resources management plan will be required by OPRHP, pursuant to State and Federal laws. Such remedial activities, if required, will become part of the project proposal in order to gain final acceptance by OPRHP, and thus, no significant impacts to prehistoric or historic resources are anticipated to result from the proposed l development.

Mitigation Measures

State and Federal regulations for the protection of historical and archeological resources require that no impacts to such resources be allowed to occur as a result of the development of this project. In the event that prehistoric or historic resources are found to be present within the area of potential development, and if these resources cannot be avoided, the Applicant must prepare and obtain concurrence from the NYS OPRHP for a of a cultural resource mitigation plan prior to the approval of that phase of development. The Applicant will commence said mitigation work prior to any other site disturbance in that phase of the project. No areas that are subject to a cultural resource mitigation plan will be disturbed until the NYS OPRHP has determined the mitigation plan to be fully implemented and complete.

1.2.8 Transportation

Potential Impacts

Site traffic is anticipated to cause noticeable increases of traffic particularly on Cold Spring Road, Rose Valley Road, and Waverly Avenue during summer Friday and Sunday afternoons. These roads allow access from the site to the Broadway commercial center and access toward NYS Route 17. Nevertheless, level of service should remain adequate for studied intersections.

Cold Spring Road to the south is part of the shortest route toward New Jersey and thus is anticipated to see traffic increases as site residents arrive and leave for the weekend. Site area traffic will be the highest at the site access itself. This location is anticipated to need turn lanes as all project traffic will be turning at this location and affecting nearby vehicle speeds on Cold Spring Road. Evaluation for this need is recommended before Phase IV. A sight line survey determined that the available sight distances meet AASHTO stopping distance requirements for the posted speed along Cold Spring Road.

The site could increase the demand on local taxi and limousine services on weekends and construction and maintenance services during the week as the site is developed.

Mitigation Measures

It is recommended that when a turning movement into or out of the site reaches 150 vehicles in one hour the need for a turning lane be reviewed. This should be reduced to 100 vehicles per hour if subsequent large developments occur in the town that increases the through movements on Cold Spring Road past the site. To provide for this possible future mitigation, the project design provides adequate area along the project frontage and along the main entrance road to allow future road widening for turn lanes if determined to be needed. Where possible new utilities along the frontage should be located to avoid the need to move them in the future. In addition, as detailed project design continues, considerations for optimizing sight distances at Cold Spring Road will need to be detailed on the plans.

As the turning volumes increase at the site access, the County may need to consider a speed reduction in this area. This would reduce the speed differential between the majority of vehicles turning into and out of the site and the through Cold Spring Road traffic.
The Applicant will fund up to six speed limit and/or speed warning signs prior to entering Phase IV, if determined to be needed by County. The County could use these funds for purchase of such signs if needed in the section between Monticello and 1000 feet south of Rose Valley Road.

It is recommended that before Phase IV construction, the Applicant will coordinate with the County to evaluate the then-existing traffic conditions. Intersection traffic counts will be submitted for its consideration. If needed, the Applicant will prepare a design plan for turn lanes and any needed land transfers. The concept plan will be used to estimate a bond to ensure future turning lane improvements. These turning lane improvements are anticipated to be a second exiting lane, a right turn-in lane southbound, and a left turn lane northbound. The traffic study shows levels of service C or better with turning lane improvements for Sunday and a more than fifty percent reduction in delay for the site access on Friday.

1.2.9 Fiscal & Employment

For the purposes of the Fiscal analysis, a full build scenario is presented that utilizes a population representing 43% full time residents, which is comparable to the current home ownership trend in the Town of Forestburgh according to the US Census. It is the Applicant's experience, however, that such a scenario will not occur for decades. Therefore, a long term, partial build scenario is also evaluated in which all of the proposed recreation amenities are developed but only 635 single family lots (indicative of all of the lots proposed in Phases 1 and 2), or 24% of the lots, are developed and occupied to conservatively illustrate what can be expected to occur in ten years.

Potential Impacts - Full Build Scenario

Projected Assessed Value - Full Build Scenario

In a full build scenario, it is assumed that all of the single family house lots, cottages and townhouses are built and occupied. Market values and assessed values were determined for each project component using current (2009) rates. The assessed value of each dwelling was determined by multiplying the market value by the Town equalization rate. The projected assessed value of the "Amenity Village" was calculated using the method that the Town of Forestburgh Tax Assessor uses to generate the assessed value for all commercial property in the Town. The total assessed value of the fully built development is projected to be $84,504,650.

Projected Property Tax Revenues - Full Build Scenario

The tax revenues to be generated by Lost Lake Resort commercial component were determined by multiplying the assessed value for the property by the current tax rates for each taxing jurisdiction. Upon completion of the Full Build Scenario, Sullivan County will receive $5,370,271 annually in property tax revenues. At full build out the Town of Forestburgh General/ Highway Fund would receive $4,837,891 annually, of which, based upon current apportionment, an annual $3,193,008 would be available to the Forestburgh Highway Department from the proposed development. The project would generate $190,135 annually in revenues to the E.B. Crawford Memorial Library. Upon completion the project would generate annual property tax revenues of $11,992,023 to the Monticello Central School District, and $659,136 to the Forestburgh Fire District.

Associated Costs - Full Build Scenario

Town of Forestburgh

Based upon the scope of this development at full build out, increased municipal costs would be expected to be incurred by the Town of Forestburgh to accommodate the projected population. The Per Capita Multiplier Method of estimating future municipal costs as defined by noted practitioners Robert Burchell, David Listokin and William R. Dolphin[8] was utilized to determine these costs. The per capita cost, determined by dividing the population into the total residential cost, results in an estimated per capita municipal cost of $1,127. In other words, for each additional full time resident, the Town can be expected to incur $1,127 in expense to be raised by tax revenue.

Analysis based upon population multipliers for typical single family homes[9] (not resort communities) indicates the Town's population could increase by as much as 7,709 persons in a full build scenario. However, in keeping with the Applicant's experience at Eagle Rock Resort where 43% are full time residences (and 57% are used as second homes), the expected year-round population would be 3,315 persons in a full build scenario. Using the estimated annual per capita expense for general municipal services (above), additional municipal costs are projected to total $3,736,005 annually at full build out.

Overall revenues from the proposed development for general municipal services are projected to be $4,837,891. After covering the anticipated cost to the Town, a net benefit in the amount of $1,101,886 per year is projected to the Town of Forestburgh as a result of the project if fully built.

Monticello Central School District

Based on information published by the New York State Education Department[10], the School District's enrollment for the 2009-2010 school year is 3,276 students, and programming cost raised through the tax levy is approximately $9,020 per student. The expected school age children population would be 648 students. The costs associated with a population of this size would be $5,844,960 annually.

At full build out, Lost Lake Resort is projected to generate $11,992,023 in annual property tax revenues to the School District, and the District would see an annual net benefit of up to $6,147,063 from full development of the proposed development.

Potential Impacts - Partial Build Scenario

Current housing data from Eagle Rock Resort that the Applicant has developed in Pennsylvania was used to project potential impacts on the partial build scenario. Eagle Rock has 7,294 lots sold, 764 home sites, or approximately 11% of which have been built upon since 1997. The partial build scenario represents development of the amenities, all the single family lots being sold, and up to 635 of the single family homes completed. In the Applicant's opinion, this 24%

[8] The New Guide to Fiscal Impact Analysis, Robert Burchell and David Listokin, 1986

[9] Rutgers University Center for Urban Policy Research, Demographic Multipliers, June 2006.

[10] New York State Education Department, Property Tax Report Card, Monticello CSD (591401), 2007-2008

build out represents a conservative estimation of conditions which may occur after 10 years from the start of development.

Projected Assessed Value - Partial Build Scenario

The assessed value of the development after ten years is projected to be $40,502,700.

Projected Property Tax Revenues - Partial Build Scenario

Under the Partial Build Scenario Sullivan County would receive $2,573,947 annually in property tax revenues. The Town of Forestburgh General and Highway Fund would receive $2,318,780 annually, of which, based upon current apportionment, an annual $1,530,395 will be available to the Forestburgh Highway Department. Lost Lake Resort would generate $91,131 annually in revenues to the E.B. Crawford Memorial Library, and $5,747,723 to the Monticello Central School District. Under the Partial Build Scenario the total annual tax revenues to the Forestburgh Fire District would be $315,921.

Associated Costs - Partial Build Scenario

Town of Forestburgh

Using the estimated annual per capita expense calculated for general municipal services, additional costs are projected to total $908,362 annually as a result of the long term partial build out. With overall revenues from the proposed development projected to be $2,318,780, a net benefit of $1,410,418 is projected to the Town of Forestburgh after 10 years from the start of development.

Monticello Central School District

School costs typically represent the largest share of costs associated with any residential development. The programming cost to be raised through the tax levy is approximately $9,020 per student. The total number of school-age children to be generated in a long term scenario and accounting for 43% as full time residences, the expected school age children population would be 159 students. The costs associated with a population of this size would be $1,434,180 annually. With generation of $5,747,723 in annual property tax revenues to the school district, the District would see an annual net benefit of approximately $4,313,543 from Lost Lake Resort after ten years.

Mitigation Measures - Taxes

Based upon the anticipated tax revenue and the projected net surplus impact to the Town and School Budgets, no mitigation measures are proposed.

Potential Impacts - Employment

Construction of the Partial Build Scenario including 635 single family homes and amenities in the proposed Lost Lake Resort development is estimated to create 2763 construction jobs over the course of ten years[11]. The residential development is anticipated to continue for decades. The continued residential development is projected to add an additional 2,288 construction jobs

[11] Source: Urban Land Institute, Development Assessment Handbook, TMA 2010.

to the local economy. More than 200 long term jobs will be needed for the operation of the resort amenities. This does not account for the employment opportunities to be created by ancillary development in the local area that is likely to develop to serve the resort population.

Mitigation - Employment

The creation of short term and long term construction jobs and additional long term jobs for operations will benefit the local economy, and no mitigation is warranted.

1.2.10 Community Services

Demography

To assess the impact on community services both Full Build and a Partial Build Scenario have been evaluated. The latter represents the anticipated development over 10 years. Under a full build scenario, the 2,627 dwelling units would house 3,315 persons including 648 school age children, these numbers were calculated subtracting 57% of the population which is assumed to be seasonal. The addition of 3,315 persons to the Town of Forestburgh would result in a total population of 4,186 persons. The Partial Build Scenario, after ten years or more, represents a population of up to 806 full time persons of which up to 159 are projected to be school age.

Potential Impacts & Mitigation - Police Protection

In a full build scenario Sullivan County, would receive $5,370,271 annually in property tax revenues. These revenues could be used to offset any increase in police protection necessitated by the increased demand placed on the County Sheriff by the Lost Lake Resort. The proposed Lost Lake Development project will be a private gated community with one means of public access, a controlled-access entry, that will be manned 24 hours per day. Emergency access points will be gated. Additional on site security will be available during higher activity times.

Potential Impacts - Fire Protection

Full Build Scenario

Based on planning standards of the Urban Land Institute, it is estimated that this project could generate a demand for 5.5 additional fire personnel. The District's current personnel level is more than three times the standard, even after the population increase from the resort if fully built. At full build out, the resort would generate property tax revenues to the Forestburgh Fire District of approximately $659,136 annually. This additional revenue can be used to augment the District's capabilities as necessary.

Partial Build Scenario

Based on planning standards of the Urban Land Institute, it is estimated that the project would generate a demand for 1 additional fire personnel. After ten years, the resort is projected to generate property tax revenues to the Forestburgh Fire District of approximately $315,921 annually. This additional revenue can be used to augment the District's capabilities as necessary.

If mutual aid is needed, the Fire District will be assisted by fire fighters from adjoining districts, particularly the Monticello Fire Company as they have an aerial truck to assist with fires in the taller structures in Forestburgh.

Mitigation Measures - Fire Protection

The proposed internal roads are designed to accommodate fire engines and truck traffic. All proposed roads in Lost Lake Resort will meet the required road standards as per the Town of Forestburgh Code. There are five points of emergency access including the main boulevard entrance off Cold Spring Road and four from St. Joseph's Road, two on the north side and two on the south side of the road. The Property Owners Association (POA) will be responsible for keeping the private roads clear of vehicles and snow for purposes of ensuring adequate emergency access during all times of the year. The proposed project will be supplied water to supply the fire hydrants in the development. The water mains and fire hydrants in Lost Lake Resort will be maintained and serviced regularly in accordance with standards set forth by the Forestburgh Fire Inspector.

Potential Impacts & Mitigation - Emergency Medical Services

Based on the ULI multipliers, the proposed project will not have a measurable impact on emergency services such as hospital care in either the Full Build scenario or the Partial Build scenario.

Potential Impacts - Schools

Students from the Lost Lake Resort will likely attend the Cooke and Rutherford Elementary Schools, and the Monticello Middle and High Schools, all located in Monticello. Enrollments have been declining by about 1.5 percent annually and the School Superintendent indicated this trend is likely to continue thus increasing the available capacity within the District to accommodate Lost Lake Resort.

Full Build Scenario

The total number of school-age children to be generated by the project in a full build scenario is projected to be 648 students. The School District is projected to see an annual net benefit of up to $6,147,063 from development of the full build out of the Lost Lake Resort community.

Partial Build Scenario

The total number of school-age children to be generated by the project under the Partial Build Scenario is projected to be 159 students. The School District is projected to see an annual net benefit of up to $4,313,543 from development of the partial build out of the Lost Lake Resort community.

Mitigation Measures - Schools

The introduction of these students into various grade levels over a period of at least 10 years will allow a gradual assimilation of the increase in School District enrollment associated with this project. Phased construction of this project provides time to allow the Monticello School District time to implement measures for the introduction of new students from this and other area projects. Based upon the gradual introduction of school children and the potential seasonal

usage of more than half of the units, in addition to the net benefit on the school district's budget in either scenario, no adverse impacts are anticipated and no further mitigation is proposed.

Potential Impacts & Mitigation - Public Recreational Facilities

The project proposal is centered around the concept of providing a recreational resource not only for its residents for the public as well. On-site recreational amenities include an 18-hole championship golf course and driving range, swimming and boating facilities, tennis courts, and a system of wilderness trails for walking and passive recreation. In addition, opportunities for passive recreation are proposed in Bushkill Park West and Bushkill Park East. Located close to and accessible from Cold Spring Road, Bushkill Park East will be offered for donation to the Town for public use. No adverse impacts are anticipated with regard to public recreational facilities, and no additional mitigation measures are proposed.

Potential Impacts & Mitigation - Utilities

Water System

Seventy-two hour pump tests have been performed to determine the safe yield of four wells on the site including monitoring to assess the potential impacts to other on-site wells. An analysis that examines recharge, evapotranspiration, and watershed accounting during normal and drought conditions has been performed.

Mitigation measures will include water conservation to reduce the amount of water consumed and turf management and integrated pest management plans. A NY State transportation corporation will be responsible for the operation and maintenance of the proposed water distribution system, treatment and storage facilities.

Wastewater System

The direct impacts on the natural resources at the site will be the clearing of land, construction, and discharge of effluent from the wastewater treatment plant. The yearly mass loading of nutrients in the treatment plant effluent will be dependent on the specific treatment process that is selected, which will be driven by the final effluent limits set by NYSDEC and/or DRBC. An activated sludge Sequencing Batch Reactor (SBR) treatment process is proposed along with ultraviolet disinfection of the effluent.

A NY State transportation corporation will be responsible for the operation and maintenance of the proposed sewage collection system and treatment plant, while the individual grinder pump units on each house lot will be the responsibility of the lot owner.

Potential Impacts & Mitigation - Solid Waste Disposal

The full build project is estimated to generate approximately 6.3 tons of solid waste per day. The partial build scenario is estimated to generate approximately 1.9 tons of solid waste per day. Management of solid waste disposal by established carters utilizing approved methods of disposal at the Sullivan County landfill and County recycling facility will mitigate the waste disposal needs of the proposed development without significant adverse effects. Construction waste generated during project construction will also be managed by private carters using approved methods of disposal and recycling.

1.2.11 Construction-Related Air and Noise Impacts

Potential Impacts

Short-term Construction Related Impacts

Local daytime ambient noise levels will increase both on and off of the project site during construction of the proposed Lost Lake Resort. Construction activities and the operation of construction equipment are an expected and intermittent consequence of any new construction project and cannot be avoided. Thus, some noise impacts will be expected. It is important to note that noise resulting from construction activities is a temporary impact, and will cease upon completion of the project.

Due to the known presence of rock outcrops and bedrock and the proposed grading, the project engineer anticipates that blasting will be required for the proposed development. Although it is anticipated that some bedrock near the site's surface can be removed by mechanical means (i.e. ripping, chipping), blasting will required for limited portions of the proposed development. Blasting will be avoided where another method of rock removal will be effective and is not anticipated for individual lot construction or the golf course.

Blasting, where necessary, will be carried out in accordance with the Industrial Code Rule 39 of the New York State, Department of Labor, Industrial Board of Appeals and the applicable section of the New York State Labor Laws. These regulations require insurance and licensing for the contractor as well as provide guidelines for the possession, handling, storage, and transportation of all explosives.

Operational Noise

Noise levels collected in residential areas surrounding the Lost Lake Resort project site ranged from 46.0 to 56.0 (dBA). The stationary operational noise associated with the proposed residential development for the Lost Lake Resort property will be similar to the noise generated from the existing adjacent residential areas where noise levels were collected.

Mobile Noise Sources

The vehicular noise analysis that was completed for the proposed Lost Lake Resort employed a logarithmic equation to identify if there will be the potential for significant noise impacts as a result of the proposed project. Due to its ease of use, the New York City Environmental Quality Review (CEQR) Manual recommends using this logarithmic equation as the screening analysis technique for the first-level screening purposes for most actions where traffic is the dominant noise source.

The roads on which the noise analysis were conducted are classified using the Federal Highway Administration's definitions of rural road classification. They are as follows:

- Cold Spring Road - Rural Minor Collector, with a functional class of 08, and
- St. Joseph’s Road - Rural Local Road, with a functional class of 09.

To determine the increase in noise levels related to traffic in the Weekday (Friday Peak PM) and Sunday traffic hours for the Build Condition, five noise locations surrounding the Lost Lake Resort project property were used.

Due to the anticipated lengthy build-out for the Lost Lake Resort (anticipated to be decades) a traffic analysis was conducted for both Full Build-out (2021) condition, and an Interim Build (2016) condition representing the construction of Phases 1, 2, and 3 including the private single family residences (corresponding to the Interim Build 2016 assessment for traffic). This Interim Build condition is approximately one-third of the proposed Lost Lake Resort Full Build condition.

Noise Location 5 is shown to have the greatest increase in noise levels due to the proposed single site entrance located at this location along Cold Spring Road. This increase is greatest on Sundays. The decibel increase presented above is only an approximate number. The actual future noise levels may not be as great as estimated in the above tables, based upon several factors such as actual future truck traffic and future total traffic. The Interim 2016 Build and 2021 Full Build traffic numbers were calculated by using general information provided by the NYSDOT associated with the classification of Cold Spring Road and St. Joseph's Road and may not be indicative of the actual amount of trucks on the roads in that specific area. However, further noise monitoring is proposed to mitigate this potential impact. It is proposed that as the construction of the development proceeds, noise monitoring will be conducted at the completion of Phase 3 to determine the actual ambient noise levels and those levels will be evaluated in the context of potential impacts to neighbors.

It is noted that Cold Spring Road in the vicinity of the proposed site entrance, the location of highest estimated noise increase, is sparsely developed with several single family homes on wooded lots. The closest community is the Melody Lake neighborhood which is greater than 1000 feet from Cold Spring Road.

On-Site Activities

The Lost Lake Resort development is proposed as a resort or seasonal development. It is anticipated that many of the homeowners will be occupying the property during the weekend or summer months to take advantage of the golf course and the amenities. It is proposed by the Applicant that no gas powered motorized boats will be allowed on the lake, only non-motorized or electric powered boats will be allowed. This will avoid creating operational noise within the resort. The closest sensitive receptor is a residential community northeast of the property, located approximately 1,500 feet from the northern portion of Lost Lake. The Applicant is also prohibiting the use of snowmobiles and all terrain vehicles (ATV's) to avoid any noise or nuisance from such vehicles.

Truck deliveries are anticipated to occur during normal business hours so to not impact the residences on the property or surrounding the development. These deliveries will be mainly deliveries for supplies for the clubhouse, restaurant, and conference center.

Construction activities associated with single family home construction is anticipated to be ongoing after Phase 1 but will involve only a few houses at any one time. These activities will occur well inside the project site, within a substantial buffer of woodland from off-site receptors. No significant noise is anticipated from any of the recreational or leisure activities in the resort.

Impacts Related to Tree Removal

Trees will be removed within the site for the proposed development. Trees, however, generally do not have a large dampering effect on noise except when there is more than 200 feet of dense trees between the noise source and the receptor. This site, although containing mature forest with many trees, has a clear understory in some places which does not mitigate noise as well as a dense understory. The closest sensitive receptors from the property boundary include a residential community located approximately 1,500 feet from the northeastern property boundary, and a residential community located approximately 1,000 feet from the western property boundary, along St. Joseph's Road. These distances provide enough separation between the proposed development and these receptors to allow for natural noise reduction. Given the distance between the site borders and surrounding development, tree clearing will have no noticeable affect on noise levels for existing project neighbors.

Mitigation Measures

The Town of Forestburgh does not have noise regulations that apply to construction activities. However, the proposed construction on the property will occur during normal working hours with no noise generating activities occurring on normal federal holidays. Once construction is completed the residential homes and the resort center will result in noise levels typical of low density residential development. No mitigation measures are required or proposed.

1.2.12 Visual Quality

Potential Impacts

Proposed Development and Design Guidelines

Construction of Lost Lake Resort will alter views of the site from an undeveloped property with forest and wetlands to a residential and recreational resort development.

The gateway to the project will be a single point of access from site frontage on Cold Spring Road in the northeast corner of the property. A land sales office is located off of the entry road tucked in behind trees lining Cold Spring Road.

The master plan provides for 50 percent of preserved wooded open space throughout the site. Open space will include wetlands, lakes, streams, trails, golf course, parks and buffers. A minimum 50-foot vegetated buffer is provided along the perimeter of the entire site and a 100-foot buffer along both sides of the St. Joseph's Road right-of-way. Additionally, wooded wildlife access corridors run between the backyards of the proposed single-family lots running basically parallel to the residential roads.

Lighting on streets, near recreational, community and lodging facilities and related parking areas will be the minimum necessary for safety, security and reasonable enjoyment of these amenities. Street lights will be located at a few key intersections. There will be no lighting at the driving range. Tennis court lighting will be timed to go off in the late evening. The potential for off-site glare and stray light above the site will be avoided by the distance of these amenities from the site's boundaries, intervening topography and vegetation.

Lost Lake Resort, Inc. will require strict adherence to its Design Guidelines for construction of new single-family homes. The owner of each lot will be subject to a declaration of exceptions,

reservations, covenants, restrictions and conditions for the Lost Lake Resort ("Declaration"). An Architectural Control Committee will review, approve or disapprove all planned improvements on a lot to regulate conformance with the Resort design theme and architectural guidelines.

In relation to potential visual effects of the overall development, single-family home lot development is proposed on all areas of the site yet under specific guidelines. The project sponsor intends to provide a sense that each home will be a retreat into the mountain environment.

Changes in Views from St. Joseph's Road (County Route 108)

The proposed Lost Lake Resort development will be traversed by and therefore visible from the St. Joseph's Road. The heavily wooded road frontage, rock outcrops and undulating topography limit views into the site. These rock outcrops will be conserved due to their unique features.

The proposed design guidelines include natural building materials and colors that will blend into the natural setting, which will further limit any view from the road. Therefore, views of the developed site from St. Joseph's Road are not expected to have a significant visual impact on aesthetic resources.

Changes in Views from Melody Lake Hamlet Area

The proposed main entrance area for Lost Lake Resort is located closest to the Melody Lake Hamlet. Existing conditions in this area show that some 1,000 feet of woods will buffer potential views of the project from the residences in the Hamlet. The available sight line will be limited to Cold Spring Road immediately in front of the Resort main entrance.

Changes in Views from Saint Joseph's Lake

A cross section study prepared to evaluate the potential for a change in the view toward the project site from St. Joseph's Lake, particularly the opposite shoreline where the buildings exist, determined that there will be no visual effect of the development site from St. Joseph's Lake Community.

Changes in Views from Cold Spring Road/Neversink River Unique Area

A cross section study was prepared to evaluate the potential for a change in the view toward the project site from Cold Spring Road and Neversink RIver Unique Area (UA) at the southeastern portion of the project site. From Cold Spring Road at the closest point to the site property line, land will remain wooded to provide a significant visual buffer of any view from the public road into the developed site. From immediately adjoining land in the UA and the area that is proposed to be offered to the Town as parkland (Bushkill Park East), it is possible that glimpses of portions of some houses in the southeastern portion of the resort will be visible, seen through at least 300 feet depth of woods. Given the very limited visibility of the proposed development from this vantage point, and the limited number of potential viewers that will be expected, the view of the developed site is not expected to have any significant visual impact on aesthetic resources of the UA.
Based on the analysis, views of the developed site are not expected to have a significant visual impact on aesthetic resources.

Mitigation Measures

The proposed plan incorporates design elements, preserved wooded areas, tree preservation, landscaping and standards for individual lot development such that the view of development from adjoining lands and roads will be very limited or will blend into the wooded landscape. Since no significant visual impacts to aesthetic resources are anticipated, no further mitigation is proposed.

1.3 Study of Project Alternatives

The DEIS examines six alternatives as follows. The table below summarizes the quantitative impacts associated with the proposed development plan compared to the various alternative layouts, except hotel expansion which is explained in narrative.

1) No Action Alternative
2) Conventional Subdivision Alternative
3) Cluster Residential Subdivision without Amenities
4) Hotel Expansion Alternative under PDD Regulation
5) PDD Subdivision Layout of 735 units, with zero bonus units
6) PDD Subdivision Layout of 1,235 units, with 500 bonus units

Alternative Impact Comparisons
Assumes Full Build Out

Area of Concern	*Proposed Action*	*No Build*	*Conventional Subdivision*	*Cluster Subdivision*	*PDD Base Density*	*PDD with 500 Bonus units*
Development Type	Mixed Use Residential/ Recreation Resort	Vacant Land	Conventional Single Family Lots	Cluster Single Family Lots with Open Space	Cluster Single Family Lots with Recreational Amenities	Cluster Single Family Lots with Recreational Amenities
Residential Units						
Residential Units	2,627	0	491	491	735	1,235
Land Coverage						
Impervious Surfaces (acres)	194	0	80	48	77	111
Dedicated Open Space (acres)	1,045	0	295	1,845	1,734	1,657
Natural Resources						
Total Construction Disturbance (acres)	601	0	249	145	231	333
Wetland Disturbance (acres)	0.4	0	0.3	0	0.3	0.3
Wetland Buffer Disturbance (acres)	2	0	1	0	1	1
Community Resources						
Population	3,315*	0	1,449	1,449	1,004*	3,623*
School-age Children	648*	0	285	285	194*	709*
Traffic generation (PM peak hour trips)	462	0	83	83	125	210
Water Demand/Sewage Flow (Average Daily Flow, gpd)	549,700	0	102,742	102,742	153,799	258,424
Recreation fee in lieu of land (@$200/lot)	$525,400	0	98,200	98,200	147,000	247,000
Net Revenue (or Cost) to the Town after covering expenses.	$1,101,886	0	($791,782)	($774,986)	$621,837	$752,692
Net Revenues (or Cost) to the School District after covering expenses	$6,147,063	0	($485,455)	($443,823)	$2,596,260	$3,564,247

Notes: Estimates are approximate.
* full time residents.
Source: Tim Miller Associates, Inc., 2010.