

From Developer's Environmental Impact Report

2.2 Site Description

The subject property primarily consists of Block 20002, Lot 3, and a number of smaller out parcels in the Borough of Hopatcong, Sussex County, New Jersey as depicted in Figure 3. The parcel is approximately 305+ acres in size and is outlined on the U.S. Geological Survey map shown in Figure 4. The project site is located in one of the most highly developed portions of Sussex County, the Stanhope/Netcong/Hopatcong metropolitan area, and is located in close proximity to major transportation networks such as Interstate Route 80. The proposed project is intended to serve the residents of this metropolitan area.

The tract has frontage on Stanhope/Sparta Road (see Figure 5) and adjoins a number of local roads. There are residential, recreational and commercial uses to the east and south of the site. An industrial use is also present on land located south of the site. Vacant, wooded land is present to the north and to the west across Stanhope/Sparta Road. **SEE MAP A**

Site visits were conducted in the Summer of 2003 and freshwater wetlands were been delineated in the northern portion of the site along the corridor of a permanent tributary to Lubbers Run. Two small, isolated wetlands were also found on the property. The first is located near the southwestern boundary corner and the second near the southeastern boundary. A Red Maple Swamp occupies wetlands along the tributary to Lubbers Run along the northern property boundary of the site. A Chestnut-Oak and Mixed Hardwood Forest occupies the remainder of the site. These community types are common to this section of New Jersey and to the Northeastern United States Region.

Like most of the Borough of Hopatcong, the site contains steep slopes, rock outcrops, ridgetops, and areas with thin soils. The Master Plan for the Borough of Hopatcong recognizes that this type of terrain is common throughout the Borough and that the Borough contains few areas of , easily developable land.

3.8 Topography

The project site is located along the border between two Physiographic Provinces within New Jersey. These are the Highland Physiographic Province and the Ridge and Valley Physiographic Province (Robichaud and Buell 1983). The topography of the site is characterized by a series of ridges and valleys that are oriented in a general north-south direction. The relief ranges from a high of approximately 1177 feet, mean sea level, in the central portion of the site, to lows of approximately 920 feet in the west, 860 feet in the north along Lubbers Run, 990 feet in the east, and 940 feet in the south. The highest elevations in the central portion of the property form a "peninsula" shaped ridgetop separated from lower elevation areas to the east and west by steep slopes. The steep slopes consist of three different formations; exposed rock faces, conglomerates of large boulders, and soiled slopes. Steep slopes occur at other locations on the property but are more disjunctive and not as continuous as those surrounding ridgetop.

Slopes throughout the remainder of the site range from gentle to steep. The general relief of the site and its relationship to the proposed development is shown on the attached Environmental Inventory Plan. **SEE MAP B**

3.9 Slopes

Additional discussion of critical and steep slopes is contained in *Section 2.19.2 Critical and Steep Slopes*.

3.10 Vegetation

The project site is forested and contains both wetland and upland communities common to northern New Jersey. The upland communities include a Dry-Mesic Mixed Oak Forest dominated by Chestnut oak (Chestnut-oak forest), and a more mesic, Mixed Hardwood Forest dominated by Sugar maple, Sweet birch, American beech, and hickories. The wetlands and stream corridor, located in the northern portion of the site, contain an Inland Red Maple Swamp dominated by Red maple.

The Chestnut-Oak Forest community occupies higher elevation, steep slopes, and ridgetops that typically feature a shallow depth to bedrock and/or excessively drained stony soils. The archaeological features on the site and in the immediate vicinity of the site. The results of the search indicated that no known archeological resources have been recorded for the project site. A copy of the search results can be found in Appendix C.

3.19 Critical Areas

3.19.1 Streams, Stream Corridors and Wetlands

A stream and associated wetlands are present in the northerly portion of the site. A tributary to Lubbers Run, which discharges to the Musconetcong River, flows across a portion of the project site.

3.19.2 Critical and Steep Slope Areas

Critical slope areas are defined in the Code of the Borough of Hopatcong (2003) as " any slope having a grade of 25 percent or more.. ." The definition includes areas mapped in the Soil Survey of Sussex County as the Rockaway very stony loam (RpE) and the Rockaway steep outcrop (RvE). The latter two soils are mapped for the project site. Steep slopes include slopes between 15 percent and 25 percent, as well as the following soil types: the Hibernia very stony loam (HnD), the Rockaway very stony loam (RpD) and the Rockaway outcrop (RrD). The Environmental Inventory Plan depicts critical and steep slopes based on the topographic survey of the site.

3.19.3 Highly Acidic or Highly Erodible Soils

The Soil Survey of Sussex County does not characterize any of the onsite soils as highly acidic. Many of the onsite soils are characterized by slopes greater than 15 percent Where such slopes are present, soils may be subject to erosion, when exposed.

3.19.4 Areas of High Water Table

According to the Soil Survey of Sussex County, the seasonal high water table can be found at or near the surface in the Carlisle Muck (Ca), which is mapped in the northeasterly corner of the site. A high water table may also be present in the Whitman soils, which occurs south of the stream corridor in the north-central portion of the site. The remaining soil types possess a fragipan, which is a relatively impermeable layer at the base of the soil profile. A perched water table is possible in these soils; however, only testing by a soils expert can determine if the

4.5 Groundwater Impacts

Groundwater is the most significant natural resource located on the site. Approximately 123,800 gallons of potable water per day will be obtained from on-site wells to provide an adequate water supply for the project site (Maser Consulting 2003). Recharge for this water supply will be provided from on-site infiltration and will not impact groundwater supplies for other wells in the area or any regional aquifers.

As part of the Preliminary and Final Site Plan approval process for each phase of the project, the applicant will submit a separate report detailing those mitigation measures that will be implemented for any impacts to groundwater resulting from this project.

4.6 Impacts to Hydrology and Water Quality

As described above, the property contains a northern and a southern watershed divided by a ridge that runs from east to west. Precipitation that falls on the northern portion of the site either infiltrates through the soil or ends up as surface water runoff that flows in a northerly direction into Lubbers Run. This tributary originates in headwater wetlands located just to the northeast of the . project site and flows across the northerly portion of the site. Freshwater wetlands are mapped and delineated along and within the stream corridor of this watercourse.

Precipitation that falls on the southern portion of the site either infiltrates through the soil for ends up as surface water runoff that flows in a southern direction into one of two unnamed tributaries to Lake Musconetcong which are located off-site. There are no on-site stream corridors or wetlands associated with these drainage features.

No significant impact to water quality is expected as a result of this development Potential impacts to surface water hydrology include an increase in impervious surface area normally associated with land development. Impervious surfaces will increase to approximately 44 percent of each developed lot. An increase in the volume and rate of storm water runoff will occur as a result, because increasing the impervious cover on a site will decrease infiltration and the time it takes for a particle of water to travel over the land surface to a streambed. Total runoff volume is also increased but not as significantly as the peak runoff rate.