

E. GROUNDWATER

Groundwater is an important resource of any community. Many residents rely on groundwater as a source of drinking water through the use of individual wells or by hook-up to a public water supply system whose source is a single production well or series of wells. The conservation and protection of groundwater quality is very important because many years may be required to replace hastily pumped water and treatment of contaminated groundwater is costly and sometimes not possible.

Within the study area, the depth to seasonal high groundwater is shown on Exhibit II-E-1. In general, the depth varies from zero (0) to four (4) feet and over four (4) feet. As shown on the Exhibit, the majority of the lands within the study area have a seasonal groundwater table in excess of four (4) feet from the surface.

Due to the presence of silty soils associated with glacial till, the study area is not regarded as a site of a primary aquifer (Exhibit II-E-2). Primary aquifers are defined by the NYSDEC as sources of groundwater which can yield in excess of ten (10) gallons per minute on a steady basis. The presence of these soils also limits the recharge of the groundwater in this area by reducing the permeability of the soil and preventing downward percolation. Due to the soil limitations, stormwater which is unable to percolate quickly runs off to surface streams and is carried from the area. The only notable exception to this situation occurs in the southwestern portion of the Town (Maplewood area) where the presence of drumlinized till enhances percolation and the area is therefore considered a recharge area.

Impacts and Mitigation Measures

Future development within the study area has the potential to impact groundwater. Excavations for road or building construction can require cutting below the groundwater table. This is especially true in the areas where groundwater is less than four (4) feet below the surface. This situation can expose groundwater to sources of contamination and also allow for the free flow of groundwater out of the ground resulting in a lowering of the water table.

In an effort to minimize the potential for impacts to groundwater, the Town should consider certain factors when reviewing development plans. These factors should include the identification of areas that will require excavation below the water table and the identification of land uses which could have the potential to store contaminants on-site. When potential impact situations are identified, specific mitigation measures should be employed. These include: require minimum separation of two (2) feet between the seasonal high water table and basement foundations; require slab-on-grade construction when the above referenced separation is not practicable; if standard septic system construction is not feasible in areas of seasonal high groundwater, fill systems meeting Albany County DOH standards should be required; require curtain or french drains around proposed septic systems in appropriate areas; to maintain road integrity, require underdrain in appropriate areas; if private water supplies are desired for single family residences require verification of groundwater quality and quantity from on-site pump testing; and require proper containment for contaminants associated with any new development during pre and post construction periods, i.e., containment for above ground tanks and proper design for underground tanks.