The Incorporated
Village *of* Hempstead

Village of Hempstead Water Department
GROUNDWATER INFORMATION

Groundwater Information

Over 50% of the United States population depends on groundwater for drinking water. On Long Island, it is the sole source of water supply for more than 3 million people. Groundwater levels and aquifer storage are affected by large-scale groundwater pumpage, installation of sewer systems, and changes in precipitation.

Challenges to Our Ground Water Supply

· Ground-Water Depletion: Long-term water-levels can drop if groundwater is pumped out more rapidly than it can be replaced by rainfall. Shoreline areas such as Great Neck and Long Beach face the threat of salt water intrusion, which would require expensive desalination treatment. The NYSDEC can limit the withdrawals from wells through the Water Supply Well Permit program.

· Pollutants: Groundwater contamination occurs when man-made products such as gasoline, oil, road salts and chemicals get into the groundwater and cause it to become unsafe and unfit for human use without expensive treatment. Materials such as chemicals, pesticides, fertilizers, and road salt can all move through the soil and potentially end up in the groundwater.

How is Groundwater Used?

· Pumping: Below a certain depth, the ground is saturated with water. The zone beneath the saturated ground is an aquifer, which is a huge storehouse of water. Wells can be drilled into the aquifers and water can be pumped out.
· Treatment: After the water is pumped from the aquifers, it needs to be treated to remove certain contaminants or chlorinated to prevent growth of bacteria in the water. This treatment ensures that the groundwater that is distributed to everyone is safe to drink and use.
· Distribution: After the groundwater has been pumped and treated, it is pumped to the water mains and elevated water storage tanks. When the water in needed, it flows from the water towers to the houses and other buildings in the area.

Cross Section View of Long Island Geology