

# Our Aquifers

## *Long Island's Drinking Water Source*

- Long Island's drinking water comes from underground aquifers - unconsolidated layers of sand, gravel and water formed by retreating glaciers at the ends of the ice ages. The aquifers are replenished by rain and melting snow.
- There are three aquifers underlying Long Island - the Upper Glacial, the Magothy and the Lloyd. In many places, the Upper Glacial Aquifer is too polluted to use as a drinking water supply. Most Long Islanders get their water from wells drilled into the Magothy Aquifer, which lies from 200 to 800 feet below the surface.
- Cesspools and poorly maintained septic systems discharge human waste pollutants, including nitrogen and pathogens, into the ground where they seep into the aquifers. Nitrogen from human waste is a significant groundwater pollution problem on Long Island.
- Where groundwater mixes with surface waters, nitrogen pollution can cause harmful algal blooms, resulting in closed beaches and contaminated shellfish beds.
- Sewer systems with state-of-the-art wastewater treatment plants and nitrogen capture technologies on septic systems can significantly reduce nitrogen pollution.
- Pollution of our aquifers also comes from motor oil, gasoline, pesticides, fertilizers, solvents, pet waste, pharmaceuticals and other hazardous chemicals that migrate into the aquifers, carried by rain and snow melt.
- Contaminants of high concern include PFAS, chromium-6 (hexavalent chromium) and 1,4-dioxane. Levels of 1,4-dioxane in our drinking water are some of the highest in the country. Since products using detergents can contribute to these high levels, choose cleaning products carefully, including liquid laundry detergents and soaps, shampoos and body washes.
- Over-pumping or excessive water use during summer months can lead to salt water intrusion in water supply wells, forcing them to be closed permanently.

# Help Protect Our Water!

*We drink our groundwater.*

*We swim, boat and fish in our surface waters.*

- 1. Don't put hazardous chemicals down drains.**
- 2. Stop using pesticides and high-nitrogen fertilizers on your lawn.**
- 3. Don't flush pharmaceuticals down the toilet.**
- 4. If you have a septic system, have it checked and pumped regularly.**
- 5. Pick up pet waste, as this contributes to ground and surface water pollution.**
- 6. Conserve water around the house:**
  - Don't leave the water running while brushing your teeth or washing dishes.
  - Only run the washing machine and dishwasher when they are full.
  - Reduce shower time to five minutes or less.
  - Cut your grass at 3 inches or higher to reduce the need for water.
  - Adjust sprinkler systems to deliver only 1 inch of water per week, and water early in the day. Never water between 10 am and 4 pm when evaporation rates are highest.
  - Purchase water-saving EPA-certified "Water Sense" plumbing fixtures when building a new house or renovating.



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