

Pesticides are also carried into the lake through runoff. These chemicals are toxins; the purpose of a pesticide is to kill certain organisms; often they kill, or cause mutations of, creatures that are not the target of the product - including aquatic animals.

Storm drains empty into lakes and streams eventually. Many driveways lead to the street and into the storm drainage system. Most of us wash our cars and homes during the warmer months, and many of today's car wash and power wash soaps contain phosphorus. Check the labels for the ingredients and choose those products which are non-phosphate, or "green".

1. DO NOT use the storm drain for disposal of motor oil, antifreeze, paints, brake fluids, etc. Once in the storm drain system, it enters the lake.

2. Grass clippings contain dissolved phosphorus if you fertilize, and leaves create nitrogen when they break down. They should be removed from roadway gutters. Drains need to be clear of sticks, leaves and other debris, so **Adopt a Drain** and keep a drain near you cleared. Storm waters need to enter the drains to prevent direct entrance into the lake. If the water in a drain is above the pipe, call the appropriate town officials and let them know.

Gray Water is discharged from washing machines, dishwashers, tubs and showers. This water is laden with soaps which usually contain phosphate "whiteners". There is evidence of this type of water being discharged into Lake Pocotopaug. Please check your current sewer hookups and make sure all water exits your home

through the sewer system.

Land development, home additions and expansions have greatly added to the amount of impervious (water doesn't penetrate) surfaces in the watershed. Consider using pervious materials when installing or replacing driveways and walks. Rain water from roofs will carry pollutants to the lake eventually. Consider using spreaders, dry wells or rain gardens to control the flow. **A spreader** is a device which converts concentrated water flow into "sheet" flow to be discharged in vegetated areas, resulting in increased stability, water filtration, and enhanced wildlife habitat. **A dry well** is a system is designed to draw excess water away from a low spot or water-laden area, such as a downspout. It consists of a buried drain pipe that leads to a collection container. **A rain garden** is an area planted with native plants. It collects water, thus reducing the amount of storm water that ends up in our streams and lakes, and helps to improve water quality by filtering it through plants and soil.

Landscaping with native species plants is a great way to protect the lake. Find them at:

Paul & Sandy's

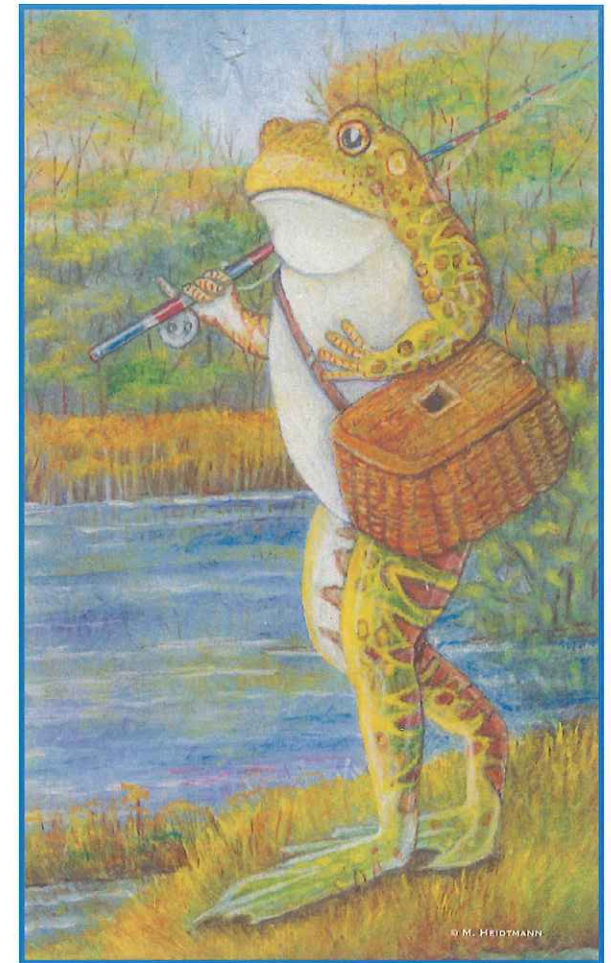
93 East High Street
East Hampton, CT 06424
860-267-0143

Ballek's Garden Center

90 Maple Ave.
East Haddam, CT 06423
860-873-8878

Blackledge River Nursery

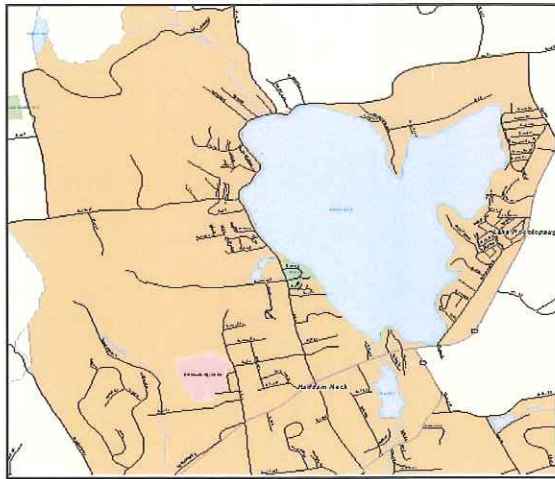
155 Jerry Daniels Road
Marlborough, CT 06477



The Lake Pocotopaug Watershed: An Owner's Manual



Town of East Hampton Connecticut
Conservation/Lake Commission
Inland Wetlands and Watercourse Agency



The Lake Pocotopaug Watershed

encompasses 2,381 acres. It generally follows Route 66 to Lake Road, then up into Seven Hills. It goes across Mott Hill Road to the Marlborough line. Then it follows Midwood Farm Road, crosses Clark Hill Road going southeasterly to St. Patrick Church.



Like most property owners, residents who live in the watershed area want the perfect, beautiful green lawn. While this may look great, it may not be good for the health of Lake Pocotopaug or the waters that flow into it. Property owners along this route should consider alternatives to traditional landscaping and lawn care.

Traditional landscaping, with its reliance on phosphorus-laden chemical fertilizer, allows water runoff to carry unabsorbed nutrients (nitrogen and phosphorus) directly into the lake, resulting in the yearly algae blooms. Algae love phosphates!!



Lake health depends on the proper balance of nutrients, including nitrogen and phosphorus. Lake Pocotopaug has exceeded its phosphorus tolerance limit, causing the annual algae blooms and resulting green water. Additional input from the watershed will tip the scales, leading to increasingly severe blooms.

Phosphorus is an essential nutrient for plants and animals. However, excess phosphorus in streams and surface waters can cause accelerated plant growth and algae blooms which then cause rapid oxygen depletion in the water. The end product is water with low dissolved oxygen which cannot support aquatic life including certain fish, invertebrates, and other aquatic animals (Center for Earth and Environmental Science).

Blue-green algae are actually bacteria. As more algae and plants grow, others die, which

creates a cycle: dead organic matter becomes food for bacteria which increase in number and use up the dissolved oxygen in the water, resulting in a dead area. Some species of algae produce neurotoxins, which may cause severe biological impacts on wildlife (Science Daily).

A major contributor to external phosphorus loading is the use of phosphate-heavy fertilizers.

Fertilizer labels should be carefully read, and a soil test should be taken BEFORE choosing a fertilizer. The labels on the fertilizer bags identify the amounts of nitrogen, phosphorus and potash. A bag of 25 – 4 – 5 fertilizer contains 25% nitrogen, 4% phosphorus, and 5% potash (University of Wisconsin).

Application of phosphorus-laden fertilizers is necessary ONLY when installing a new lawn – established lawns require little or no phosphorus. In addition, surface applied phosphorus is largely wasted. Unless the lawn is aerated, the chemical moves poorly through the soil. However, it does dissolve in storm runoff. The phosphorus then enters the lake via streams and storm drains. (Univ. of Wisconsin).

pH is a measure of the acidity/alkalinity of water. The pH scale ranges from 0 to 14. A pH of 7 is considered to be neutral. Substances with pH of less than 7 are acidic; substances with pH greater than 7 are basic. The pH of water determines the solubility (amount that can be dissolved in the water) and biological availability (amount that can be utilized by aquatic life) of chemical constituents such as nutrients phosphorus, nitrogen. In addition to affecting how much and what form of phosphorus is most abundant in the water, pH may also determine whether aquatic life can use it.