

## **CLEAN WATER IS HEALTHY WATER...Learn about your septic system**

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Clean lakes provide places for people to swim, fish and enjoy life. Clean lakes provide habitat for fish and wildlife and because of this people living in the watershed of Wrighter Lake have a special role. **To ensure the lake's water quality, you the property owners must maintain your home's septic system.**

**A conventional septic system is made up of two parts.** The septic tank and the drain field. Raw sewage enters the waterproof tank and separates into 3 layers. Solids move to the bottom. While fats, oils and other floating waste goes to the top. In between is water. Natural bacteria breaks down the wastes in the tank converting it to sludge. The liquid portion (called Effluent) moves out of the tank to a drain field.

**Drain fields** consist of a network of perforated pipes buried in sand, earth and crushed stone. The soil acts as a filter to purify the liquid as it is used by vegetation or seeps into the ground water.

**It's important to maintain the shoreline area septic systems because the soil conditions around this lake are less efficient in treating waste water.** Most of the soil around Wrighter Lake is a Morris type channery loam. Morris type soil is poorly drained soil formed in glacial till. Overloading or faulty systems are the major source of water pollution.

I see at the lakes I cover older cottages being renovated to year round houses. People spend time and money on what they see and sometimes forget about the septic systems. Failing systems are the source of between 5 to 10% of the phosphorus that reach the lakes. Nutrients (particularly phosphorus) cause excessive weeds and algae growth. One pound of phosphorus grows 500 pounds of weed material. Liquid wastes from your septic that reach the lake increase the possibility that swimmers near your shore could catch a variety of ailments/diseases. Nitrogen loading from leaking or failed systems adversely affect the balance by allowing algae to

grow. Algae clouds the water and blocks sunlight to underwater plants. When algae dies it uses up oxygen needed by fish often killing them.

### **What makes a system not work properly?**

Most often, **NOT** pumping /cleaning the tank will cause sludge and scum to leave the tank and flow onto the ground surface or clog the drain field.

Typical older systems have small metal tanks with little or no drain field.

Most of the lake properties I visit for repairs have anything from a 55 gallon drum to a 300 gallon metal tank (that is rusted and filled with holes) and drain fields that consist of a couple of lengths of pipe that end in a buried pile of rocks. Many times the pipe used is the old Orangeburg style pipe.

Orangeburg pipe is made out of coal tar and wood fibers. This style pipe has a tendency to collapse and fail with age. These old systems worked when they were built for that seasonal lake cottage of the 1950's and 1960's but fail today as property owners tend to use their houses more (often year round).

Trees and brush roots near a drain field can block pipes and interfere with the process of a properly working absorption area.

**Signs of a failing system...**Odor, standing water, slow running drains and bright green grass over the leach field. Unfortunately there is no visible sign of phosphorus treatment failure. The number one reason I am called to the lake properties is the collapsed of a metal septic tank.

**Foam in the lake water...**not necessarily a as a sign of pollution. Foam can be naturally occurring because of decomposing plants and fish. One way to tell the difference is by smell. Natural foam has an earthy or fishy smell.

Detergent foam has a noticeable perfume scent.

**You think you may have a problem?** Call me, I will look at the site and generally, other than a collapsed tank, tell you to have the tank pumped out making sure all the sludge and water is removed. Cut back on your water usage and see if the problem returns. If it does then we will dig some of the drain field up and see if it is clogged. We try to repair the system if possible. There are alternative systems that can be installed that solve most problems. However, always remember that we must adhere to DEP regulations when doing a repair.

**Alternative Systems...**In Preston Township there are two properties on lakes that are installing an alternative Ecoflo system. This system uses a “plastic” tank as a filter to treat the effluent. What comes out of this tank is pure water. The tank contains filter media composed of shredded coconut hulls. It requires little maintenance and is very cost effective. In the township we also have one lake property that installed a “drip” system that treats the effluent with computer timed, measured doses of liquid that slowly drips into an at grade absorption area. Aerobic systems are available using chlorine, UV rays and computer technology to work. The Eljen Company manufactures a system that uses sand, stone and a filter mat to treat effluent in areas where there is not enough soil as required by the Department of Environmental Protection. **There are solutions!**

### **What would happen if the lake deteriorates?**

Your property values decline as “word” spreads that the Lake has a problem. Your investment becomes an anchor that drowns you. The legal system will condemn properties and financial institutions will not loan money to sites whose septic systems do not conform to the DEP regulations. Lake front property is not a commodity that can be manufactured. There is no more. The value (generally) does not go down. However, pollution of your lake kills more than plants and fish. Pollution robs everyone here in this room and is a thief that cannot be seen.

### **A few preventive maintenance tips:**

- Inspect your tank
- Pump your tank every two to three years
- Keep a grease can handy and put cooking oil etc in it and send it to a landfill
- Conserve water 1.6 gal toilets, faucet and shower heads that are low volume
- Spread out your laundry washing.
- Avoid doing all the wash in one day.
- Try not to overload your system.
- Avoid chlorine bleach, it kills the necessary bacteria in your tank that breaks down the solids
- Mark the area where your septic system is located

- Keep trees and shrubs away from the drain field
- Try to use nontoxic cleaning products.

**A few things NOT to do:**

- Don't use a garbage disposal.
- Don't pour grease or oil down the drain
- Don't drive on your septic system
- Don't flush non-biodegradable products into your system
- Don't buy and use septic system additives. They cause more problems than they cure. Natural bacteria is all that is needed.
- If you use Clorox-pump your tank annually
- **Don't discharge your washer's gray water on your lawn. It's against the law in Pennsylvania. The fines are heavy for people that pollute the Commonwealth's water.**

**What can we do as an association?**

- Consider having your tanks pumped every two years.
- As a group, contact the septic pumping companies and put the process out to bid. Remove all the old 55 gal drum and steel tanks and replace them with concrete or “plastic” tanks.
- On those lake lots too small or where the soil is not good, install holding tanks. Holding tanks are not a curse. I personally like them as they serve a specific purpose that allows you to continue living and using your lake shore property. Holding tanks prevent most if not all chances of sewage entering the lake.

**Consider your Association creating “cluster systems” or possibly a small flow treatment system for everyone to use...** Lake Underwood, in Preston Township, did this years ago. Their group system services about 15 (+/-) properties. It is set up away from the lake and practically guarantees no sewage enters the lake. While the initial costs may be high, this concept offers long term protection for your environment. Considering what your properties are worth, this cost is more of an investment. It represents a

tremendous marketing point should you decide to sell your property.

**Please do not let your septic system get so bad or too old that you risk having a failure.** Update, repair or replace before the environment suffers. DEP has several new regulations they are considering. Be proactive and take the steps necessary to correct any problems before the regulatory agencies get involved. Fines are an expense that you cannot write off. If you spend money on your septic system you will know that you are maintaining the watershed and protecting your investment at Wrighter Lake.

**I am a consultant hired and paid by Wayne and Suquehanna Counties. Which means that I work for you the taxpayer.** Call me, use my services and if you have questions or problems we have some great people and Agencies to help us out. I use a Soil Scientist out of Penn State (private consultant), manufacturing representatives to visit our properties to get more and better ideas about solving problems. If I don't know the answer I will find someone who does.

**Final Thoughts...** Everyone work together to upgrade the old systems. There should be an atmosphere of cooperation between the property owners, the Townships and the Department of Environmental Protection. **The decision to keep and maintain the high level of the Wrighter Lake watershed is up to you the property owners.**

**Credits:**

The University of Maine  
Pennsylvania Department of Environmental Protection (Wilkes-Barre)  
The Wayne County Conservation District (Honesdale)