

Reducing Mercury in Tryon

This is the first in a series of articles about mercury contamination in our environment and the mercury issues with Tryon's wastewater.

Federal and state law mandates very strict water quality standards for treated wastewater entering natural waterways. Water discharged from the Town of Tryon wastewater treatment plant into Vaughn's Creek must be limited to below 0.03 parts per billion of mercury. This amount equals roughly one thimbleful in all of Lake Lanier. Since 1997, the Town has had difficulty meeting this water quality standard for mercury.

Efforts already have been made in Tryon to comply with the mercury standard and include many positive steps: better control of likely industrial sources entering the wastewater system, operational improvements at the wastewater treatment plant to remove mercury, improved wastewater sampling and monitoring, and identification of trace sources of mercury in the system. Thirteen Tryon businesses have already signed a voluntary pledge to reduce the use of mercury containing items in their businesses.

"We need to work together to assure that the quality of our environment is protected in Tryon."

Mayor Bob Neely

While the Town is doing all that it can to reduce "known" sources of mercury in the wastewater system, it has not been successful in consistently meeting water quality standards. There continue to be occurrences of mercury in the sewer system from unidentified sources. Mercury can enter the sewer system from common household uses such as a broken thermometer in your bathroom sink. We need to recognize, control, or eliminate other commercial sources of mercury contamination, so far unestablished.

Learning about Mercury --

What is it? Mercury (Hg) has intrigued mankind for many millennia. The only metallic element which is a liquid at room temperature, mercury flows in shiny, silver droplets with high surface tension. It seems to fit its nickname, "quicksilver".

Where is it in our surroundings? Mercury finds its way into the atmosphere in nature through volcanic eruptions, groundwater seepage, evaporation from the oceans, but *mainly* from human activities. Most mercury generated by humans results from combustion of fossil fuels and incineration of municipal and medical waste. Once released into the environment, mercury can be recirculated through the air, soils, and water for periods as long as hundreds of years.

Why should we care about mercury? Metallic mercury is relatively non-toxic, but other derivatives of mercury are threats to public health. When mercury is released into the environment, the action of bacteria may convert some portion into methyl mercury, a

potent neurotoxin. This chemical can bioaccumulate and concentrate in the systems of certain game fish to levels that are unsafe for consumption by birds and mammals, including humans. The greatest impact of mercury poisoning is on the developing fetus, but the physiological effects of mercury poisoning in adults can also be severe. In high concentrations, mercury is capable of damaging the adult central nervous system and brain.

Where do we find mercury in everyday uses?

Certain common products contain mercury. Because of its physical properties and some chemical properties, mercury is uniquely suited for use in thermometers, barometers, fluorescent lights, electrical switches, dental fillings, button cell batteries and older household batteries (produced before 1991).

Efforts are in progress to reduce the level of mercury in our surroundings. Growing awareness of the health hazards of mercury has led to establishing very low state and federal limits for mercury in municipal water supplies. In response, progress has already been made in many applications to use less mercury or to substitute mercury-free alternatives in consumer products. For example, electronic thermostats are now available to replace mercury thermostats. Digital thermometers are unbreakable and safer than mercury thermometers.

The Town of Tryon Needs Your Help to Reduce Mercury!

Things You Can Do to Reduce Mercury:

- ⇒ Participate in a Mercury Collection Day on May 19th (see back for information)
- ⇒ Keep mercury away from your drains
- ⇒ Purchase and use digital thermometers
- ⇒ Use electronic thermostats
- ⇒ Recycle or properly dispose of old latex paint that could contain mercury compounds
- ⇒ Properly dispose of old dry cell batteries
- ⇒ Use “low-mercury” fluorescent lamps
- ⇒ Properly manage mercury containing electronic equipment
- ⇒ Notify the Town of Tryon Wastewater Plant if you know of other mercury sources (Joel Burrell, 859-5626)
- ⇒ Educate fellow citizens about these issues

Mercury Collection Day – May 19, 2001: To minimize mercury contamination, the Town of Tryon will sponsor a mercury collection event on May 19, 2001 at the Palmer Street Parking Lot (across from Brock’s Cleaners) in Tryon. Residences and businesses are encouraged to bring mercury containing items to the collection event. For more information on the Mercury Collection Day, call the Town Hall at 859-6654.