Indiana Gazette

NATURALLY: Evergreen Conservancy works to protect Indiana County's streams

- By CINDY ROGERS Special to the Gazette
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Cindy Rogers

Evergreen Conservancy has dataloggers in over 25 streams in Indiana County to check the quality of the water in our watersheds.

A watershed is an area of land that drains into a common body of water. The dataloggers are small devices that are cabled to the bank and are located in streams. The loggers continuously check water temperature, conductivity, and depth, each of which plays a major role in aquatic ecosystems.

Conductivity refers to the ability of water to pass an electrical current. If it is high, it may suggest the presence of harmful substances from industrial runoff, sewage discharge, or mining activities. It can also affect water's taste, appearance, and mineral balance, potentially leading to health risks and corrosion in plumbing. Mid-range conductivity (200 to 1000 µS/cm) is the normal background for most major rivers. Conductivity outside this range could indicate that the water is not suitable for certain species of fish or aquatic insects.

There are hundreds of different streams in our county that make up the 11 Indiana County watersheds. Our county, like our state, has an abundance of flowing freshwater. In fact, the Commonwealth of Pennsylvania has 86,000 miles of streams — more streams than any other U.S. state apart from Alaska.

Water is one of Pennsylvania's most important natural resources.

According to the Pennsylvania Department of Environmental Protection, 33% of Pennsylvania's streams are polluted. One-third of our state's streams do not meet water quality standards for drinking water, aquatic life, recreation, or fish consumption.

Over the last century and a half, Indiana County streams were put at risk by extensive logging, deep coal mines, and strip mines. Heavy logging, which took place in our area from 1880 to 1930, increases the speed of rainwater runoff, causing increased streambank erosion and sedimentation. It can also raise water temperature, change acidity, and cause nutrient losses.

Mining also takes a toll on water quality, primarily due to abandoned mine drainage (AMD), which is water that has become contaminated by passing through a physical environment affected by past coal mining. After coal is removed from underground, water seeps into the newly emptied areas and eventually makes its way back to the surface, now polluted. Water that runs through slag piles left from strip mines also becomes polluted.

AMD lowers water quality by increasing acidity and introducing high concentrations of metals, elevated sulfates, and suspended solids.

Contaminated water seeping from coal mine areas is the most severe water pollution problem in the eastern United States, including the coalfields of Pennsylvania. Indiana, Cambria, and Clearfield counties are the top three counties in our state with abandoned mine water discharges.

Though there is still much work to be done, thanks to the ongoing efforts of many people in both the public and nonprofit sectors, Indiana County water quality is improving. However, there are many sources of water pollution, both old and new, that we need to monitor.

There is occasional water pollution from road and farm runoff. Recently, our county has seen the introduction of Marcellus shale projects, which could introduce new water quality problems if we don't stay alert and head off pollution problems that, in the past, seemed to catch us off guard.

All of our drinking water is processed through a water treatment system, of course, but if there is pollution, it is more costly for the water to be treated — and water users ultimately pay the cost.

The Conservancy is very fortunate to have a group of volunteers who download the dataloggers about every two weeks and email the data to our staff. All of the data is entered into a database that covers western Pennsylvania. If there is a pollution event, we send that information to the appropriate person or agency, who will go out to check the stream. We have been fortunate in the county that there have been very few incidents over the many years that we have been monitoring our streams.

Evergreen Conservancy's water monitoring project depends on volunteers — and we need more people who are interested in learning about our streams to help out!

Anyone who would like to volunteer to go to a local stream and download data may contact *evergreenconservancy@gmail.com*. It is easy to do. Our volunteers enjoy being outside and like knowing that they are helping to monitor water quality in the county's streams. The volunteer takes a laptop to the stream, plugs the logger into the laptop, downloads the data, and then emails the data to the Evergreen Conservancy.

Cindy Rogers is president of the Evergreen Conservancy and a member of the Environmental Committee of the League of Women Voters. The Naturally columns are brought to you each month by the Indiana Gazette and Friends of White's Woods to showcase the wonders of nature in our area.