

# Stillwater River TMDL Questions and Answers



## TMDL - Total Maximum Daily Load

A TMDL studies the health of rivers and streams in an area or region. It finds which streams are healthy, and which are polluted. For streams that are polluted, the TMDL estimates how much pollution needs to be reduced to restore the stream to good health.

## Is the Stillwater polluted?

Yes and no. Some areas of the Stillwater River and its tributaries have good water quality and healthy populations of fish and other aquatic

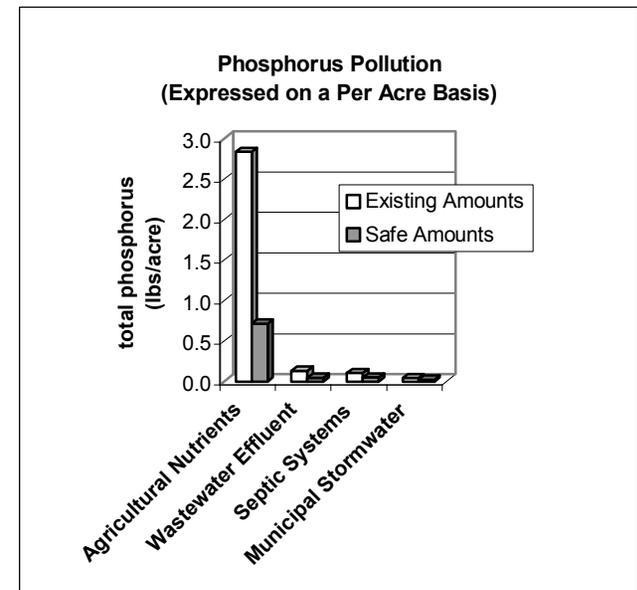
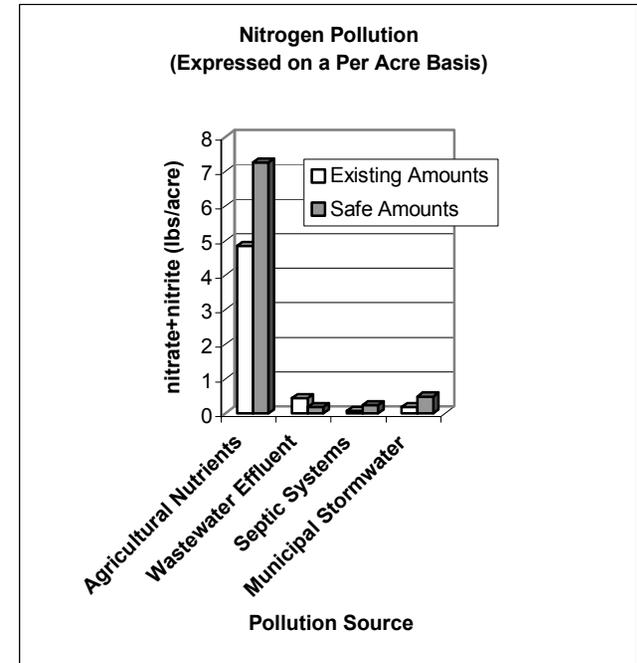
life. The Stillwater River mainstem downstream from Covington is in good shape, as are most of Greenville Creek and its tributaries. Other areas are not so fortunate. Painter Creek and Ballinger Run are polluted by municipal sewage. Swamp Creek, Indian Creek, the North Fork and the Stillwater River upstream from Ansonia are polluted by fertilizers. Failing home septic systems pollute some streams in very localized areas of Indian Creek, Greenville Creek and the Wayne Lakes area.

Stream ditching for farm drainage is another form of pollution because it contributes excess soil to the stream and destroys the home for fish and other aquatic life. Most of the small streams in the Stillwater River basin have been ditched for agricultural drainage. Soil washed away from these ditches hurts the Stillwater River from Ansonia to Covington.

## How much pollution should be removed?

The amount of phosphorus and nitrogen in water gives an indication of how polluted the water is. Phosphorus enters streams bound to soil particles. Both phosphorus and nitrogen enter the stream as part of human sewage, animal manure, and fertilizer. The bar charts here show that

nitrogen amounts are within acceptable levels, but phosphorus needs to be reduced significantly.



*No vegetation along the banks of Indian Creek lead to severe bank erosion and allow runoff to enter stream.*



*Vegetated banks and trees near streams minimize erosion and filter soil and fertilizers from the Stillwater River.*



### **What can or is being done to reduce pollution?**

The community is making steps toward reducing pollution in the Stillwater River basin. Large municipal wastewater treatment plants in the basin modernized in the late 1980s and the water quality improved as a result. Also, many conservation measures were adopted to reduce soil getting into the river.

We recently created TMDL plans that identify measures to reduce pollution. Some elements of these plans are already occurring. For example, a survey of failing home septic systems is underway in Darke and Miami counties. The village of Arcanum is separating storm and sanitary sewers to eliminate raw sewage overflows into Painter Creek. The villages of Bradford and Ansonia have similar plans for their sewers.

The community has created plans to address pollution from agriculture. These plans target pollution using best management practices such as:

- increase conservation tillage
- increase filter strip coverage
- manure management plans for each and every AFO
- promote and fund best technologies to manage animal waste

- reduce frequency of ditch maintenance

### **The Stillwater Watershed Project**

The Stillwater Watershed Project's (SWP) goal is to protect and enhance ground and surface water resources through voluntary land use practices.

A total of \$1,061,241 went to landowners within the Stillwater River basin for best management practices; additional monies funded educational programs and a watershed coordinator. Through these efforts, resource management plans cover 70,182 acres which saves 421,089 tons of soil; nutrient management plans cover 37,855 acres which reduces commercial fertilizer application by 2,271,300 lbs.

### **What Can You Do?**

- Learn about issues affecting the Stillwater River basin
- Participate in SWP meetings, events, and activities; become a volunteer
- Receive SWP newsletters
- Get to know other SWP members
- Share ideas for farming conservation

If you are interested in joining, call Nikki Reese, Project Coordinator at 937-548-1715, ext #3. The SWP Joint Board meets the last Tuesday of every month at 9 am at Darke County nature or Brukner nature center.