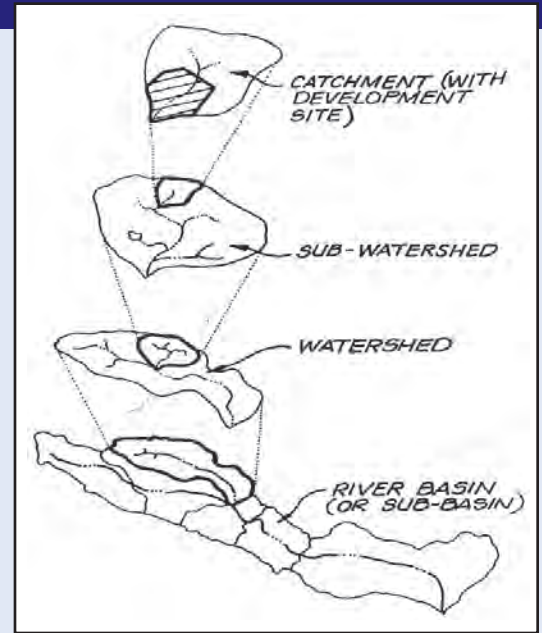


LANCASTER COUNTY WATERSHED BASICS

What is a Watershed?

A watershed is the area of land that drains to a specific body of water: a stream, pond, lake, wetland, river or ocean. A watershed area can be as large as portions of several states or as small as a backyard. Everyone lives in a watershed!

Watersheds are broken down even further into *Watershed Management Units*. The largest Watershed Management Unit is a **Basin**. A basin drains to a major receiving water body. (large river, estuary, or lake) The drainage areas of basins typically exceed several thousand square miles and usually include major portions of a single state or a group of states. Within each basin are **Sub-basins**. Sub-basins extend over several hundred square miles and are composed of what we call **Watersheds**.



Watershed Management Units



Watersheds are broken down further into smaller geographic units called **Sub-watersheds**. Sub-watersheds typically have a drainage area of 2-15 square miles. Sub-watersheds usually drain to second or third order streams (small streams) which are usually a little larger than headwater streams. Finally, within sub-watersheds are **Catchments**, which are the smallest units in a watershed. Catchments are defined as the area that drains an individual development site to its first intersection with a stream.

Do you know what watershed you live in, or your “watershed address?” Just like your home address is broken down from country to state to city to street, your watershed address can be found the same way. (Ocean, Estuary, River basin, Sub-basin, Watershed, Sub-watershed, and Catchment area) Why is this information important? Whatever we do in Lancaster County will eventually affect the water quality of our friends and neighbors downstream. Remember **WE ALL LIVE DOWNSTREAM!!**

Aerial view of Chesapeake Bay

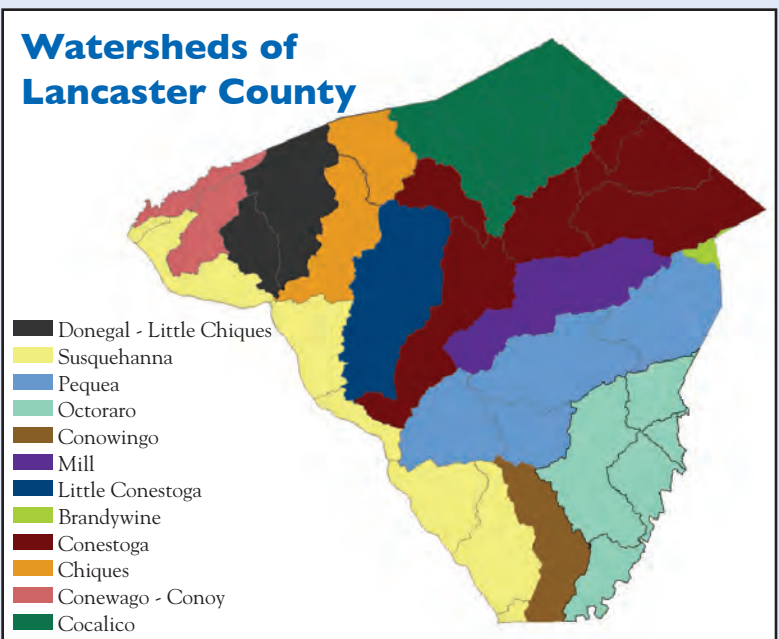
What are the Watersheds of Lancaster County?

The Basin in which most of Lancaster County empties into is the Chesapeake Bay Drainage Basin. One of the many sub-basins for the Chesapeake Bay is the Susquehanna River Sub-basin which Lancaster County is part of. Continuing “upstream” within Lancaster County are 4 Watersheds; **Chiques**, **Conestoga**, **Pequea**, and the **Octoraro**. Finally, there are 11 Sub-Watersheds within the county. (see map) It should be noted that several small streams along the Susquehanna River Watershed drain into the river so this is considered one of the county’s sub-watersheds.

Also, there is a small area in Eastern Lancaster County that actually drains to the Delaware Bay Basin, the Delaware River Sub-basin, Brandywine Watershed, and the West Branch Brandywine Sub-Watershed.

Watersheds & Sub-Watersheds of Lancaster County

Watersheds of Lancaster County

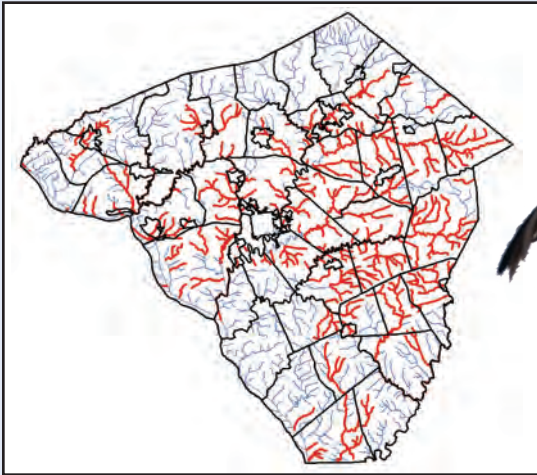


What is the Water Quality of Lancaster County Streams?

Lancaster County has over 1,400 miles of streams traversing our vast topography. The majority of our streams flow from Northeast to Southwest through the county and enter into the Susquehanna River. Along the way our streams are bombarded with numerous pollution sources which can affect the overall water quality of the stream. Sometimes the stream can handle these sources of pollution but occasionally they can not. Pennsylvania is required to report those streams in the state that are impaired or degraded and require attention to fix. In Lancaster County, nearly 700 miles (47%) are listed on Pennsylvania's polluted list. (see map) This simply means that the stream is impacted by some sort of pollution issue and requires attention to fix the problem.



Example of an impaired Lancaster County stream



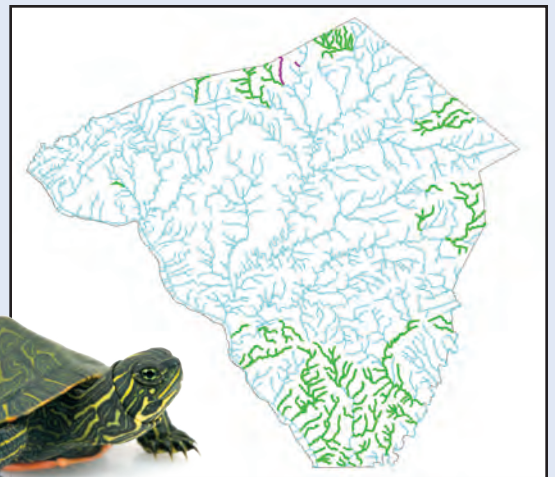
Impaired or degraded streams in Lancaster County



Did You Know...

The Susquehanna River watershed supplies roughly 50% of the freshwater to the Chesapeake Bay.

On the brighter side of watershed health, Pennsylvania also lists those streams that have very good water quality and should be protected for future generations. In Lancaster County, we have nearly 300 miles (20%) of streams that are either classified in the upper echelon as far as water quality is concerned. These streams are called either High Quality or Exceptional Value. (see map) The rest of the county's approximately 500 miles of streams is either not polluted but also not excellent in regards to water quality.



Exceptional Value or High Quality streams in Lancaster County

Fishing Creek an exceptional value Lancaster County stream

What can you do to protect Lancaster County's Watersheds?

There are many ways residents of Lancaster County can protect the water quality of our streams, rivers, lakes, ponds, and wetlands. The simplest thing we all can do is let Mother Nature take care of herself. Altering a flowing stream by straitening it or constricting its flow only creates water quality and flooding problems downstream. In addition, mowing the vegetation next to a stream increases stormwater flows and reduces the ability of filtering pollutants before they enter the water body.



A stream straighten by man

Did You Know...

Pennsylvania has over 83,000 miles of streams and rivers.



Mowing vegetation adjacent to a stream decrease water quality

A better option instead of mowing next to the stream is to plant native vegetation that will increase water quality, provide food and cover for wildlife, protect stream banks, slow stormwater runoff, and trap and filter excess nutrients and sediments.



Studies have shown the best way to protect and enhance a stream ecosystem for water quality and wildlife is to plant native trees and shrubs. This vegetation creates what's called a Riparian Buffer. A **Riparian Buffer** is an area of vegetation maintained along the shore of a water body. These forested buffers more than any other vegetative buffer provide a full complement of water quality and ecological benefits. In a best case scenario buffers have been shown to remove nearly 97% of sediments, 80% of nitrogen, and 77% of phosphorous from entering the stream. Add in wildlife benefits and one can see the true value of a riparian buffer.

Did You Know...

80% of the earth's water is surface water. The other 20% is either groundwater or atmospheric water vapor.



Top Left: A mature riparian buffer improving water quality

Bottom Left: Trout fry need clean, cool water which riparian buffers provide



For more information check out; www.lancasterwatersheds.org

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Alcoa*foundation*



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